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Where Do I Look?

Online Help
- Program
- Form
- Field

Guides

Technical Foundation
System Administration and Environment Fundamentals
- Understanding Your Environment
- Creating and Maintaining Environments
- Setting Up Security
- Upgrading Your System

Common Foundation
Prerequisite J.D. Edwards Software Fundamentals
- Using Menus
- Getting Help
- Customizing Data
- Reporting
Important Note for Students in Training Classes

This guide is a source book for online helps, training classes, and user reference. Training classes may not cover all the topics contained here.
Welcome

About this Guide

This guide provides overviews, illustrations, procedures, and examples for release A7.3 of J.D. Edwards software. Forms (screens and windows) shown are only examples. If your company operates at a different software level, you might find discrepancies between what is shown in this guide and what you see on your screen.

This guide includes examples to help you understand how to use the system. You can access all of the information about a task using either the guide or the online help.

Before using this guide, you should have a fundamental understanding of the system, user defined codes, and category codes. You should also know how to:

- Use the menus
- Enter information in fields
- Add, change, and delete information
- Create and run report versions
- Access online documentation

Audience

This guide is intended primarily for the following audiences:

- Users
- Classroom instructors
- Client Services personnel
- Consultants and implementation team members

Organization

This guide is divided into sections for each major function. Sections contain chapters for each task or group of related tasks. Each chapter contains the information you need to accomplish the task, run the program, or print the report. Chapters normally include an overview, form or report samples, and procedures.
When it is appropriate, chapters also might explain automatic accounting instructions, processing options, and warnings or error situations. Some chapters include self-tests for your use outside the classroom.

This guide has a detailed table of contents and an index to help you locate information quickly.

**Conventions Used in this Guide**

The following terms have specific meanings when used in this guide:

*Form* refers to a screen or a window.

*Table* generally means “file.”

We assume an “implied completion” at the end of a series of steps. That is, to complete the procedure described in the series of steps, either press Enter or click OK, except where noted.
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Glossary

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J.D. Edwards Overview

Signing On and Off

To sign on

From the Sign On menu:

1. Key your User ID in the User field
2. Key your Password in the Password field
3. Press Enter

To sign off

On the Selection line:

1. Key a double period ( . ) or a 90
2. Press Enter
### Standard Menu Function Keys

<table>
<thead>
<tr>
<th>AS/400 Keyboard</th>
<th>PC Keyboard</th>
<th>Function</th>
</tr>
</thead>
<tbody>
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<td>F4</td>
<td>F4</td>
<td>Command Entry Prompt</td>
</tr>
<tr>
<td>F8</td>
<td>F8</td>
<td>Access Menu Word Search</td>
</tr>
<tr>
<td>F9</td>
<td>F9</td>
<td>Retrieve previous command</td>
</tr>
<tr>
<td>F12</td>
<td>F12</td>
<td>Return to previous menu</td>
</tr>
<tr>
<td>F13</td>
<td>F1+Shift</td>
<td>Fast Path Commands</td>
</tr>
<tr>
<td>F14</td>
<td>F1+Shift</td>
<td>Menu Selection Detail</td>
</tr>
<tr>
<td>F16</td>
<td>F1+Shift</td>
<td>Display Menu List window</td>
</tr>
<tr>
<td>F18</td>
<td>F1+Shift</td>
<td>Access processing options</td>
</tr>
<tr>
<td></td>
<td>F6</td>
<td>Type desired menu selection and press F18</td>
</tr>
<tr>
<td>F24</td>
<td>F12</td>
<td>List available Function Keys</td>
</tr>
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## Standard Screen Function Keys

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<th>AS/400 Keyboard</th>
<th>PC Keyboard</th>
<th>Function</th>
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<tbody>
<tr>
<td>F1</td>
<td>F1</td>
<td>Display JDE field level help</td>
</tr>
<tr>
<td>F3</td>
<td>F3</td>
<td>Exit</td>
</tr>
<tr>
<td>F4</td>
<td>F4</td>
<td>Display Fold Area (more detailed information)</td>
</tr>
<tr>
<td>F7</td>
<td>F7</td>
<td>View error message text</td>
</tr>
<tr>
<td>F22</td>
<td>Shift F10</td>
<td>Clear screen</td>
</tr>
<tr>
<td>F24</td>
<td>Shift F12</td>
<td>Display available functions window</td>
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## Additional Differences

<table>
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<th>PC Keyboard</th>
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<tr>
<td>Field Exit</td>
<td>Enter</td>
</tr>
<tr>
<td>Enter</td>
<td>Ctrl</td>
</tr>
<tr>
<td>Reset</td>
<td>Alt</td>
</tr>
<tr>
<td>Roll Up</td>
<td>Page Down</td>
</tr>
<tr>
<td>Roll Down</td>
<td>Page Up</td>
</tr>
<tr>
<td>Help</td>
<td>Scroll Lock</td>
</tr>
<tr>
<td>Attn</td>
<td>Esc</td>
</tr>
</tbody>
</table>
Frequently Used Hidden Selections

To access, key the desired Hidden Selection number on the Selection or Command line and press Enter.

<table>
<thead>
<tr>
<th>Selection</th>
<th>Description</th>
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<tr>
<td>33</td>
<td>Display Submitted Jobs</td>
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<tr>
<td>34</td>
<td>Display User Messages</td>
</tr>
<tr>
<td>42</td>
<td>Display User Job Q</td>
</tr>
<tr>
<td>43</td>
<td>Display User Print Q</td>
</tr>
<tr>
<td>39</td>
<td>Change User Print Q</td>
</tr>
<tr>
<td>82</td>
<td>Hold Submitted Jobs</td>
</tr>
<tr>
<td>85</td>
<td>Display User Defaults</td>
</tr>
<tr>
<td>90</td>
<td>Sign Off</td>
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</tbody>
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<th>Selection</th>
<th>Description</th>
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<td>27</td>
<td>Advanced Operations</td>
</tr>
<tr>
<td>29</td>
<td>Technical Operations</td>
</tr>
<tr>
<td>97</td>
<td>Install History Display</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Selection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Menu Specifications</td>
</tr>
<tr>
<td>40</td>
<td>File Field Description</td>
</tr>
</tbody>
</table>

Type HS on a Selection or Command line to display a list of available Hidden Selections.
J.D. Edwards Product Line

The following is a list of products available from J.D. Edwards:

**Financials**

General Accounting  
Accounts Payable  
Accounts Receivable  
Fixed Assets  
Financial Modeling and Budgeting  
Multi-Currency, Multi-Language, Multi-National Processing  
Flexible Reporting Tools  
Address Book/Electronic Mail  
Human Resources  
Payroll  
Time Accounting

**Distribution/Logistics**

Sales Order Management  
Configuration Management  
Advanced Pricing  
Forecasting  
Requirements Planning  
Enterprise Facility Planning  
Purchase Management  
Inventory Management  
Advanced Warehouse Management  
Transportation Management  
Data Collection  
EDI/Electronic Commerce
Manufacturing

Product Data Management
Configuration Management
Plant and Equipment Maintenance
Shop Floor Control
Forecasting
Requirements Planning
Enterprise Facility Planning
Capacity Requirements Planning
Finite Scheduler
Environmental Management System
Data Collection

Energy and Chemical

Process Manufacturing/Lube Oil Blending
Equipment Management
Inventory Management
Bulk Stock Control
Distribution Contracts
Sales Order Management and Pricing
Load and Delivery Management
Forecasting
Enterprise Facility Planning
Purchase Management

Architecture, Engineering, Construction, and Real Estate

Job/Project Cost Accounting
Work Order Management
Project Change Management
Contract Management
Contract Billing
Engineering and Service Billing
Equipment Management
Homebuilder Management
Real Estate Management

Public Services: State and Local Governments, Education, and Utilities

Financial Administration and Reporting
Budget Administration
Fund and Encumbrance Accounting
Grant and Endowment Management
Purchasing and Material Management
Warehousing and Central Stores Management
Human Resources Management
Service and Word Order Management
Capital Project and Construction Management
Contract Management
Plant, Equipment, and Fleet Maintenance
Customer Information and Billing Administration
Assessment and Property Tax Administration

Other Integrated Solutions

Bar Coding/Data Collection
Connectivity/Network Solutions
Development Tools
Distributed Data Processing
EDI/Electronic Commerce
Enterprise Information Systems
Facsimile Management
PC Integration
# J.D. Edwards Regional Offices and Worldwide Offices

The following is a list of all J.D. Edwards offices:

<table>
<thead>
<tr>
<th>Office</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headquarters</td>
<td>Denver, Colorado</td>
</tr>
</tbody>
</table>
| Regional U.S. Offices   | East Rutherford, New Jersey  
                         | Herndon, Virginia  
                         | Atlanta, Georgia  
                         | Oak Brook, Illinois  
                         | Denver, Colorado  
                         | Costa Mesa, California  
                         | Foster City, California  
                         | Dallas, Texas  
                         | Houston, Texas  
                         | U.S. Satellite Offices  
                         | Waltham, Massachusetts  
                         | Beachwood, Ohio  
                         | Trumbull, Connecticut  
                         | Buffalo, New York  
                         | Melville, New York  
                         | New York, New York  
                         | Fair Oaks, California  
                         | Seattle, Washington  
                         | West Conshohocken, Pennsylvania  
                         | Bloomington, Minnesota  
                         | Milwaukee, Wisconsin  
                         | Lake Oswego, Oregon  
                         | St. Louis, Missouri  
                         | Tampa, Florida  
                         | Fort Lauderdale, Florida  
                         | Regional Canada  
                         | Willowdale, Ontario  |
| North and South American Affiliates | Canada  
                         | Mexico  
                         | Venezuela  
                         | Argentina  |
| European Offices        | Frankfurt, Germany  
                         | Bruxelles, Belgium  
                         | Paris, France  
                         | Milano, Italy  
                         | United Kingdom  
<pre><code>                     | Bourne End, U.K.  |
</code></pre>
<table>
<thead>
<tr>
<th>Office</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>European Affiliates</td>
<td>United Kingdom</td>
</tr>
<tr>
<td></td>
<td>Ireland</td>
</tr>
<tr>
<td></td>
<td>Sweden</td>
</tr>
<tr>
<td></td>
<td>Germany</td>
</tr>
<tr>
<td></td>
<td>The Netherlands</td>
</tr>
<tr>
<td></td>
<td>Belgium</td>
</tr>
<tr>
<td></td>
<td>Austria</td>
</tr>
<tr>
<td></td>
<td>Switzerland</td>
</tr>
<tr>
<td></td>
<td>Spain</td>
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<tr>
<td></td>
<td>Portugal</td>
</tr>
<tr>
<td></td>
<td>Portugal</td>
</tr>
<tr>
<td></td>
<td>Denmark</td>
</tr>
<tr>
<td>Australian Office</td>
<td>Chatswood, Australia</td>
</tr>
<tr>
<td>Middle East Affiliates</td>
<td>Israel</td>
</tr>
<tr>
<td></td>
<td>Jordan</td>
</tr>
<tr>
<td></td>
<td>Bahrain</td>
</tr>
<tr>
<td></td>
<td>Egypt</td>
</tr>
<tr>
<td>Asia/Pacific Rim Affiliates</td>
<td>Japan</td>
</tr>
<tr>
<td></td>
<td>China–Hong Kong City</td>
</tr>
<tr>
<td></td>
<td>Philippines</td>
</tr>
<tr>
<td></td>
<td>Malaysia</td>
</tr>
<tr>
<td></td>
<td>Singapore</td>
</tr>
<tr>
<td></td>
<td>Australia</td>
</tr>
<tr>
<td></td>
<td>New Zealand</td>
</tr>
</tbody>
</table>
Application Development Cycle

World CASE covers the entire spectrum of the application development life cycle, including design tools, code generation, automatic documentation generation, prototyping, repositories and other productivity improvement tools for the development, operation and maintenance of flexible, business application software.

The Application Development Cycle (A/D Cycle) can be discussed in three levels as follows:

Level 1

The Application Platform which represents the *Technical Foundation* class.

Level 2

The Design Platform which represents the *Advanced Programming Concepts and Skills* class.

Level 3

The Development Platform which represents the *CASE* class.

Universal Building Blocks of J.D. Edwards Software

World CASE covers the entire spectrum of the application development life cycle, including:

- Design tools
- Code generation
- Automatic documentation generation
- Prototyping
- Repositories
- Other productivity improvement tools
Separate Modules that Contribute to the Functioning of a J.D. Edwards Program
J.D. Edwards Training Environment

The Student Library Setup

To help you to understand the Training Environment that has been setup for your learning experience. The following is a list of signon naming conventions, library naming conventions, what that library contains and what files are shared among you and your classmates.

Signon Naming Conventions

Your signon depends upon where you are located.

For example: In the Denver Headquarters Office, we have several classroom numbers, so the structure of signons are as follows:

Library Naming Conventions

Identifies each set of paired students

Designates Student Signon

Classroom Number

Your library names depends upon where you are located.

For example: In the Denver Headquarters Office, we have several classroom numbers and those libraries are structured for that classroom. You will also have your own student library, that library will take on the naming conventions of your student number. Other libraries that are contained in your library list are libraries which are standard to all J.D. Edwards class environments.
The library list at a J.D. Edwards facility will appear as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTEMP</td>
<td>IBM temporary library</td>
</tr>
<tr>
<td>COMMON</td>
<td>Common library for training. Used for all J.D. Edwards Training Environments. It contains files that all training classes can share. For example: Help Files, Message Files, Field Reference Files</td>
</tr>
<tr>
<td>ST&lt;sub&gt;x&lt;/sub&gt;&lt;sub&gt;y&lt;/sub&gt;OBJ (xx=classrm #) (yy=student #)</td>
<td>Students object library. Used for the student to compile custom objects into. It will only contain programs that a student may have had to modify in a class exercise.</td>
</tr>
<tr>
<td>JDFOBJ</td>
<td>Common object library for training. Contains all of J.D. Edwards execution programs. All J.D. Edwards training environments use this library.</td>
</tr>
<tr>
<td>ST&lt;sub&gt;x&lt;/sub&gt;&lt;sub&gt;y&lt;/sub&gt;DTA (xx=classrm #) (yy=student #)</td>
<td>Students data library. Used for the students custom data files. It will only contain files that a student may have had to modify in a class exercise.</td>
</tr>
<tr>
<td>xxSHARE (xx=classrm #)</td>
<td>Classroom shared library. Is shared for that particular classroom environment. It contains files that the students will all share. For example: Data Dictionary File</td>
</tr>
<tr>
<td>TRNSHARE</td>
<td>Shared library for all training. Used for all J.D. Edwards Training Environments. It contains files that all training classes can share. For example: Word Search Files</td>
</tr>
<tr>
<td>ST&lt;sub&gt;x&lt;/sub&gt;&lt;sub&gt;y&lt;/sub&gt; SRC (xx=classrm #) (yy=student #)</td>
<td>Students Source Library. Used for the student to write custom source programs into. It will only contain programs that a student may have had to modify in a class exercise.</td>
</tr>
<tr>
<td>JDFSRC</td>
<td>Common Source Library for Training. Contains all of J.D. Edwards source code programs. All J.D. Edwards training environments use this library.</td>
</tr>
<tr>
<td>QGPL</td>
<td>IBM general purpose library</td>
</tr>
</tbody>
</table>
The library list at an on-site location will appear as follows:

<table>
<thead>
<tr>
<th>Name</th>
<th>Contents</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTEMP</td>
<td>IBM temporary library</td>
</tr>
<tr>
<td>STUDSHARE</td>
<td>Contains files that will be shared for all students in class</td>
</tr>
<tr>
<td>STUDENTxD ($x$=student 1–6)</td>
<td>Contains files that will not be shared. Files are unique for each student.</td>
</tr>
<tr>
<td>STUDENTxO ($x$=student 1–6)</td>
<td>Contains any programs or objects that the student modifies in class (custom objects)</td>
</tr>
<tr>
<td>STUDENTxS ($x$=student 1–6)</td>
<td>Contains any source code that the student modifies in class (custom source)</td>
</tr>
<tr>
<td>JDETRAIN</td>
<td>Contains all J.D. Edwards execution programs</td>
</tr>
<tr>
<td>QGPL</td>
<td>IBM general purpose library</td>
</tr>
</tbody>
</table>

### Classes

Classes consist of lecture and hands-on experiences. The hands-on experiences are in the form of exercises. While each exercise is a separate task, they ultimately build upon each other to create a new program. It is imperative, therefore, that each student fully understand each exercise before continuing. At the end of the class, there will be Case Studies which will further enforce what you have learned by having you, the student, apply the information from this class to specific programming situations.
APCS System Overview

Features

Advanced Programming Concepts & Skills (APCS) focuses on the following *World CASE* features:

- Data Dictionary Repository
- Project Management (Software Action Request System)
- CASE Profiles
- SAR Log Inquiry
- Creating a Development Environment
- Software Versions Repository
- Data Modeling
- File Design Aid
- Screen Design Aid
- Report Design Aid
- J.D. Edwards Programming Standards
- File Servers and Functional Servers
- User Spaces and User Indexes
- Group Jobs
- Programming Modifications
- Source Debugger
- Programming Impacts from Software Upgrades
Version Control

Objectives

To create a development environment
To work with program management
To create libraries
To copy data files to the development environment

About Version Control

Use the J.D. Edwards Version Control system to manage the movement of software between various environments, such as ones you have set up for software development, testing, and production.
The Version Control system works with the Software Action Request (SAR) system and the SAR logging system. It performs three general functions:

Groups source code members (such as RPG and CL programs, and physical and logical tables) and control file data (such as data dictionary and menus) together as a project.

Defines a promotion path, which specifies library information about the project’s current environment and the environment to which it will be moved.

Promotes the project from the current environment to the target environment as defined by the promotion path.

The following diagram shows how the version control process divides the tasks.

To set up a software development project for development and promotion, you must:

Create the SARs that you want to promote, and define promotion paths.

Link the project to the SARs that are associated with it, and assign a promotion path to it.
All additions or changes you make to programs and control file data are logged in the SAR Log (F9810). Use this log to update the SARs, which are in the Work Order Detail table (F4802).

After you finish developing the software, you promote the software from the Project Elements form to the next environment.

Work with the following areas:

- Version Control
- Programming Tools
- Programming Standards
- Group Jobs
- Universal File Converter
Version Control Process Flow

1. **Set Up the SAR System**
   - Create record type codes
   - Define record type titles
   - Create SARs

2. **Activate SAR Logging**
   - Activate SAR logging (CASE profile)

3. **Develop Software**
   - Begin to create or change code related to the project using $VR

4. **Define a Promotion Path**
   - Add a promotion path
   - Assign the ‘From’ and ‘To’ environments to source code members and control tables

5. **Define a Project**
   - Add a project
   - Assign promotion paths and SARs to the project

6. **Update the SARs by Using the SAR Log**
   - Update the Work Order Detail table (F4802)

7. **Validate the promotion paths**

8. **Promote a Project**
   - Validate the promotion paths
   - Promote the project to the next environment from the Project Elements form

9. **Use Version Control for Project Updates**
   - Perform version control procedures for a project update
Version Control Menu Overview

Version Control Menu

G9261                      J.D. Edwards & Company                    JDED
Daily Operation               Version Control

... BASIC OPERATIONS  ... SETUP
2. Software Versions Repository  14. Record Type Codes
3. Manage Promotion Paths  15. Record Type Titles
4. Manage Projects  16. CASE Profiles

... Double Byte Mandatory Options ... INQUIRIES
7. Analysis Process  19. SAR Inquiry by Reference
8. C9822 Conversion  20. Inquiry by SAR, Proj and Path

... QA FUNCTIONS ... PURGE DATA FILES
11. Edit and Promote  23. Purge SAR Log File
12. Super SAR

Selection or command

Thur, Apr 18, 1996             A7.3 Development                 LA5595234
8:55:51am              (C) J.D.Edwards & Co 1985,1996          QPADEV0014
Development Environment

About Development Environments

A development environment contains objects and data being tested and edited. It is different from your production environment because it should not contain any of your live data files.

Rules for Creating Development Environments

When creating development libraries, J.D. Edwards has some rules to follow.

- Do not begin library names with Q, JDF, or JDE because of the upgrade process.
- Create custom libraries for custom modifications.
- Library names should be a maximum of 9 characters in length because of the upgrade process.
- Do not use JDFDATA for your own test data or for your live data because of the upgrade process.
- Do not include JDFDATA in a live user’s library list.

To create a Development Environment complete the following tasks:

- Create Libraries
- Define Access for User Profiles
- Copy Data to Your Development Environment
About Creating Libraries

J.D. Edwards Libraries

Five libraries are delivered with J.D. Edwards software. They are:

Source Library (JDFSRC)

The source library that contains source code. Within the JDFSRC library, J.D. Edwards has three multi-member source files.

Source code for:

- RPG Programs
- Printer files
- Display files
- CL Programs
- DDS for logical files
- DS for physical files

Source code for common subroutines

Object Library (JDOBJ)

The object library that contains executable objects for your J.D. Edwards software

- RPG programs
- CL programs
- Display files
- Report files
Data Library (JDFDATA)

The data library that contains data files for your J.D. Edwards software (files in this library contain test data provided by J.D. Edwards).

Install Library (JDEINSTAL)

The install library used to install programs and software to upgrade J.D. Edwards software

Plans Library (JDFINS)

The library used to plan upgrading J.D. Edwards software

Security Library (CLTSEC)

You may create a Security library that will be shared across all environments. The benefit of having a security library is that a user profile will only have to be entered once to have access to any environment. The following files must exist in the security library:

- User library list (F0092)
- Library list control (F0093)
- Library list master (F0094)
- User Preference (F00921)

In addition, all logical files associated with the above files must also exist in the security library.
Production and Development Examples

There are many ways to set up a production and development environment. The following are some examples.

**Basic Production Environment**

<table>
<thead>
<tr>
<th>Library</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTEMP</td>
<td>IBM Temporary data files</td>
</tr>
<tr>
<td>CLTOBJ</td>
<td>Client’s objects</td>
</tr>
<tr>
<td>JDFOBJ</td>
<td>J.D. Edwards objects</td>
</tr>
<tr>
<td>CLTCOM</td>
<td>Client’s common files</td>
</tr>
<tr>
<td>CLTDTA</td>
<td>Client’s data files</td>
</tr>
<tr>
<td>CLTSEC</td>
<td>Client’s security files</td>
</tr>
<tr>
<td>QGPL</td>
<td>IBM general public library</td>
</tr>
</tbody>
</table>

**Basic Development Environment**

<table>
<thead>
<tr>
<th>Library</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTEMP</td>
<td>IBM Temporary data files</td>
</tr>
<tr>
<td>DEVOBJ</td>
<td>Development objects</td>
</tr>
<tr>
<td>CLTOBJ</td>
<td>Client’s objects</td>
</tr>
<tr>
<td>JDFOBJ</td>
<td>J.D. Edwards objects</td>
</tr>
<tr>
<td>DEVCOM</td>
<td>Development common files</td>
</tr>
<tr>
<td>DEVDTA</td>
<td>Development data files</td>
</tr>
<tr>
<td>CLTSEC</td>
<td>Client’s security files</td>
</tr>
<tr>
<td>DEVSRC</td>
<td>Development source files</td>
</tr>
<tr>
<td>CLTSRC</td>
<td>Client’s source files</td>
</tr>
<tr>
<td>JDFSRC</td>
<td>J.D. Edwards source files</td>
</tr>
<tr>
<td>QGPL</td>
<td>IBM general public library</td>
</tr>
</tbody>
</table>

All modifications and tests are performed in the Development Environment with the program’s object and source residing in DEVOBJ and DEVSRC. After the testing is completed the program’s object is moved from DEVOBJ to CLTOBJ and source is moved from DEVSRC to CLTSRC. It is necessary to create a separate data and common library (DEVDTA & DEVCOM) in order to assure that any data changes during testing in the Development Environment does not affect live data in the Production Environment.
No Source in Production Environment and a Common Shared Library

<table>
<thead>
<tr>
<th>Library</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTEMP</td>
<td>IBM Temporary data files</td>
</tr>
<tr>
<td>CLTOBJ</td>
<td>Client’s objects</td>
</tr>
<tr>
<td>JDFOBJ</td>
<td>J.D. Edwards objects</td>
</tr>
<tr>
<td>CLTCOM</td>
<td>Client’s common files</td>
</tr>
<tr>
<td>COMMON</td>
<td>Common unchanged files</td>
</tr>
<tr>
<td>CLTDTA</td>
<td>Client’s data files</td>
</tr>
<tr>
<td>CLTSEC</td>
<td>Client’s security files</td>
</tr>
<tr>
<td>QGPL</td>
<td>IBM general public library</td>
</tr>
</tbody>
</table>

Basic Development Environment with a Shared Common

<table>
<thead>
<tr>
<th>Library</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTEMP</td>
<td>IBM Temporary data files</td>
</tr>
<tr>
<td>DEVOBJ</td>
<td>Development objects</td>
</tr>
<tr>
<td>CLTOBJ</td>
<td>Client’s objects</td>
</tr>
<tr>
<td>JDFOBJ</td>
<td>J.D. Edwards objects</td>
</tr>
<tr>
<td>DEVCOM</td>
<td>Development common files</td>
</tr>
<tr>
<td>COMMON</td>
<td>Common unchanged files</td>
</tr>
<tr>
<td>DEVDTA</td>
<td>Development data files</td>
</tr>
<tr>
<td>CLTSEC</td>
<td>Client’s security files</td>
</tr>
<tr>
<td>DEVSRC</td>
<td>Development source files</td>
</tr>
<tr>
<td>CLTSRC</td>
<td>Client’s source files</td>
</tr>
<tr>
<td>JDFSRC</td>
<td>J.D. Edwards source files</td>
</tr>
<tr>
<td>QGPL</td>
<td>IBM general public library</td>
</tr>
</tbody>
</table>

No source libraries exist in the Production Environment since source is not necessary to run J.D. Edwards programs. This makes the Production Environment easier to maintain. The only consideration is that users in the Production Environment would not be able to view source code. Another difference is that a third shared common library (COMMON) has been added to the environments. This library contains common files whose data will not be changed during the testing process (Ex. F98HELP). By having this type of common library not only are the environments easy to maintain, but a considerable amount of machine resource will be saved.
One Development Source and Object Library

<table>
<thead>
<tr>
<th>Library</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>QTEMP</td>
<td>IBM Temporary data files</td>
</tr>
<tr>
<td>CLTMOD</td>
<td>Client’s source and objects under modification</td>
</tr>
<tr>
<td>CLTOBJ</td>
<td>Client’s objects</td>
</tr>
<tr>
<td>JDFOBJ</td>
<td>J.D. Edwards objects</td>
</tr>
<tr>
<td>DEVCOM</td>
<td>Development common files</td>
</tr>
<tr>
<td>COMMON</td>
<td>Common unchanged files</td>
</tr>
<tr>
<td>DEVDATA</td>
<td>Development data files</td>
</tr>
<tr>
<td>CLTSEC</td>
<td>Client’s security files</td>
</tr>
<tr>
<td>CLTSRC</td>
<td>Client’s source files</td>
</tr>
<tr>
<td>JDFSRC</td>
<td>J.D. Edwards source files</td>
</tr>
<tr>
<td>QGPL</td>
<td>IBM general public library</td>
</tr>
</tbody>
</table>

DEVOBJ and DEVSRC have been combined into one library called CLTMOD. This library will contain both source and objects for programs while they are being modified and tested. After testing, the program objects will be moved to CLTOBJ and source will be moved to CLTSRC. The purpose of having one object/source library like CLTMOD is to simplify the development library list by having one place where all modifications and testing takes place.

Creating Libraries

Create the following libraries:

- Common libraries
- Development object libraries
- Development source libraries

If you created a common library (DEVCOM), be sure to specify it each time you create the other development libraries. If you do not specify the common library each time, the files will be created in your development library.

Your common library should contain files with data that does not change because of development activities (ex. Help Instructions Master). If there is a possibility of the data changing, the file should be placed into your test data library (DEVDATA). By doing this you are insulating the end users from the changes done in the development environment.

See Appendix A for a list of common files and production files.
Creating Common and Data Libraries

Create the libraries that are going to contain common data files (DEVCOM).
Create the libraries that are going to contain test data files (DEVDTA).

To create common and data libraries

1. You can perform both of these steps from the Data Base Management menu by selecting Data Libraries.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>FROM Library field</td>
<td>The library containing the data to be copied.</td>
</tr>
<tr>
<td>TO Production</td>
<td>Because you are creating development libraries, type the development library name.</td>
</tr>
<tr>
<td>TO Common Library</td>
<td>If you want to create a common library, you must specify the common library name. If you leave this field blank, the system creates the common files in the development Library you specified in the above step.</td>
</tr>
</tbody>
</table>

2. Complete the Create User Data Libraries form

Once you correctly complete the form and press enter, the job (J98102) is submitted to batch.
3. Repeat the above step for each of the development data libraries you have.

The program automatically:

- Creates your libraries
- Creates the physical and logical files that should be maintained in your common library
- Creates the physical and logical files necessary for operations control in your development library
- Creates the physical and logical files for various applications in your development library
- Generates reports to identify all the physical, logical, and join files created and to identify where they were created
- Generates a report to identify all the optional files. The report explains why the files are optional so that you can determine if they should be deleted

Creating Development Object Libraries

To create your development object library (DEVOBJ)

Type the command Create Library (CRTLIB) and press F4.

```
Create Library (CRTLIB)
Type choices, press Enter.
Library . . . . . . . . . . . .   DEVOBJ   Name
Library type . . . . . . . . . .   *TEST   *PROD, *TEST
Text 'description' . . . . . . .   *BLANK
```

F3=Exit   F4=Prompt   F5=Refresh   F10=Additional parameters   F12=Cancel
F13=How to use this display   F24=More keys
### Understanding Development Source Libraries

The development source library contains the Program Source File (JDESRC). All J.D. Edwards source programs are located in the JDESRC file.

To create the development source library:

- Create a source environment (library)
- Create a source physical file (JDESRC)

There are two possible methods to create the JDESRC file. You must determine if you have the J.D. Edwards Program Generator and then choose the appropriate method.
Creating a Development Source Library

To create a development source library (DEVSRC)

1. Type the command create library (CRTLIB) and press F4.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Library</td>
<td>Your development object library name</td>
</tr>
<tr>
<td>Library Type</td>
<td>*PROD or *TEST</td>
</tr>
<tr>
<td>Text Description</td>
<td>The description of your library</td>
</tr>
</tbody>
</table>
Creating JDESRC with J.D. Edwards Program Generator

When a program is moved into production at J.D. Edwards, the record length is 92 bytes. If you have J.D. Edward’s Program Generator product, the program source file format must be 142 bytes long to allow for the Program Generator Serial Number and additional required data.

To create JDESRC with J.D. Edwards Program Generator

1. Type the Copy File command (CPYF) and press F4 to copy an existing file with the correct format (F93002).

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>From file</td>
<td>The file and library containing the data to be copied. The file is F93002 and the library can default to *LIBL.</td>
</tr>
<tr>
<td>To file</td>
<td>The name of the source file and your development source library. Generally, the file is JDESRC and the library is DEVSRC.</td>
</tr>
<tr>
<td>From member</td>
<td>The member name that will be the beginning of the copy process. Generally, this value is *FIRST.</td>
</tr>
<tr>
<td>To member or label</td>
<td>The member name that will be the beginning of the receiving process. Generally, this value is *FIRST.</td>
</tr>
</tbody>
</table>
Field |
--- |
Replace or add records |
Create file |
Print format |

**Field Explanation**

Replace or add records
- Specifies whether the records copied should replace or be added to the records in the *To* file. In this case since the *To* file does not exist, this value is *NONE.*

Create file
- Specifies whether the *To* file does not exist and needs to be created. This value is *YES.*

Print format
- Specifies whether the characters are printed in character or character and hexadecimal format. This option only applies if the *To* file is *PRINT.*

2. Type the Remove Member command (RMVM) and press F4 to remove the empty member copied from JDESRC.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data base file</td>
<td>Type the source file and your development source library that contains the record to be removed. Generally, this file is JDESRC and the library is DEVSRC.</td>
</tr>
<tr>
<td>Member</td>
<td>Type the name of the record that is to be removed. This is F93002.</td>
</tr>
</tbody>
</table>
Creating JDESRC Without the Program Generator

If you do not have J.D. Edward’s Program Generator product, the program source file format may remain at 92 bytes long, as it is when a program is moved into production at J.D. Edwards. To create the JDESRC file with a 92 byte record format, you can execute the Create Source Physical File command (CRTSRCPF).

To create JDESRC without the Program Generator

1. Type the Create Source Physical File command (CRTSRCPF) and press F4.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>File</td>
<td>The source file and your development source library that contains the record to be removed. Generally, this file is JDESRC and the library is DEVSRC.</td>
</tr>
<tr>
<td>Record Length</td>
<td>The number of bytes in the length of the records to be stored in the source file. This value is 92.</td>
</tr>
<tr>
<td>Member, if desired</td>
<td>The member to be added to the source file. Generally, this member is left to *NONE.</td>
</tr>
<tr>
<td>Text ‘description’</td>
<td>The description of your source file.</td>
</tr>
</tbody>
</table>
About User Profiles

You must create profiles that allow users to have access to new environments.

There are two separate methods to defining access to an environment. The method you choose depends upon whether the User Profile accesses J.D. Edwards software using J98INITA or J98INIT.

Defining Access for a User Profile using J98INITA

If you are allowing access to your Development Environment for a User Profile that is using J98INITA, you must define a Development Environment Library List name. In addition, the User Signon List must contain the Development Environment Library List name.

To define access for a user profile using J98INITA

1. From the Library List Control menu (G944), select Library List Revisions.
2. Select User Signon List Revisions from the Library List Control menu (G944), to assign the library list to each user.

<table>
<thead>
<tr>
<th>Seq</th>
<th>Library</th>
<th>Sign-on</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.00</td>
<td>PRISTINE</td>
<td>A92</td>
<td>MASTER PRISTINE DATA LIBL</td>
</tr>
<tr>
<td>10.00</td>
<td>A52DEV</td>
<td>A92</td>
<td>A5.2 Case Cert &amp; G Development</td>
</tr>
<tr>
<td>11.00</td>
<td>PGMGEN</td>
<td>A92</td>
<td>Testing A52 Program Generator</td>
</tr>
<tr>
<td>20.00</td>
<td>TECROG</td>
<td>A92</td>
<td>* List Name Not in Master File</td>
</tr>
<tr>
<td>30.00</td>
<td>TECOV</td>
<td>A92</td>
<td>Testing A52 Tech Foundations</td>
</tr>
<tr>
<td>55.00</td>
<td>KBGCASE</td>
<td>A92</td>
<td>* List Name Not in Master File</td>
</tr>
</tbody>
</table>
Defining Access for a User Profile Using J98INIT

If you are allowing access to your development environment for a User Profile that is using J98INIT, you must define a new library list.

To define access for a User Profile using J98INIT

1. From the Security Officer menu (G94), select User Information (User Keys).

   ![Security Officer Menu](image)

Each user profile for the J.D. Edwards software must have an IBM profile. To define an IBM profile, use the command, Create User Profile (CRTUSRPRF).
Copying Data to Your Development Environment

There are several methods to copy data to your Development Environment. The method you choose should depend upon how much data you need to copy to your Development Environment. You may copy the following:

- Libraries
- Files
- Records
- JDE Record Types

Copying a Library

If you need to duplicate several files in your Development Environment you can copy one or more libraries.

To copy a library

1. Type the Copy Library command (CPYLIB) and press F4 to display the parameters.

If you use CPYLIB your access paths will need to be rebuilt. Any files that are in use will not be copied.
### Field | Explanation
--- | ---
Existing Library | The library to be copied in your Production Environment.
New Library | The new library that will be used in your Development Environment.
Create Library | Specifies whether the New Library does not exist and needs to be created.

## Copying a File

If you need to copy specific files from a library in your Production Environment to a library in your Development Environment, you use the J.D. Edwards copy file utility.

**To copy a file**

1. From the Data Base Management menu (G9645), select Copy Data files.
2. Enter the system code, the library to copy the data from, and the library to copy the data to.
3. Then type a 1 next to the files you wish to copy.

```
98101                      Copy Data Files
Enter System Code. . . 01  Address Book
Library Name: From . . JDFDATA To . . PROD
Sel File Name  File Type Description
  1 F0070  PHYSICAL  Country Constants Master File
  1 F0091  PHYSICAL  Word Search Occurrence Master
  1 F0101  PHYSICAL  Address Book Master
  1 F0101A PHYSICAL  Address Book Master File Audit Log
  1 F0101XX PHYSICAL  Address Book Master File Audit Log
  1 F0101Z1 PHYSICAL  Address Book - Batch File
  1 F01090 PHYSICAL  Supplemental Data Base - CORE
  1 F01092 PHYSICAL  Supplemental Data Base - Code
  1 F01093 PHYSICAL  Supplemental Data Base - Narrative
  1 F01094 PHYSICAL  User Sequence Preference
  1 F0111  PHYSICAL  Address Book - Who’s Who
  1 F0114  PHYSICAL  Address Book Memo/Text Information
  1 F0114W PHYSICAL  WF - Memo Information Work File
  1 F0116  PHYSICAL  Address Book Locations
  1 F01800 PHYSICAL  Address Book Word Search Master

Opt: 1=Copy Data File
```

All records in those specified files will be copied.

When using this utility, be sure to copy all related files.
Copying a Record

If you wish to copy a file with only selected records, use the Copy File command (CPYF).

To copy a record

1. Type the Copy File command (CPYF).

   
   
<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>From file</td>
<td>The file and library containing the data to be copied.</td>
</tr>
<tr>
<td>To file</td>
<td>The name of the file and your development library the data will be copied to.</td>
</tr>
<tr>
<td>From member</td>
<td>The member name that will be the beginning of the copy process.</td>
</tr>
<tr>
<td>To member or label</td>
<td>The member name that will be the beginning of the receiving process.</td>
</tr>
<tr>
<td>Replace or add records</td>
<td>Specifies whether the records copied should replace or be added to the records in the To file.</td>
</tr>
<tr>
<td>Create file</td>
<td>Specifies whether the To file does not exist and needs to be created.</td>
</tr>
</tbody>
</table>
Field Explanation

Print format Specifies whether the characters are printed in character or character and hexadecimal format. This option only applies if the To file is *PRINT.

Copy from record number Specifies the record number from which to start the copy.

3. Scroll up and enter the record number of the record you wish to copy to.

   The Copy to record number is the field in which you specify the record number of the last record to be copied.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy to Record Number</td>
<td>Specifies the record number of the last record to be copied.</td>
</tr>
<tr>
<td>Copy from Record Key</td>
<td>Only applies when copying a file with keyed fields.</td>
</tr>
</tbody>
</table>
Copying J.D. Edwards Record Types

You may copy any of the following record types:

- Vocabulary Overrides
- Data Dictionary
- Software Inventory Revisions
- User Defined Code
- DREAM Writer
- Menu
- Generic Rate/Msg

To copy a J.D. Edwards record type

From the Developer’s Workbench menu (G9362) or Repository Services select Copy DD,VO,DW,UDC,SVR,Menus.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>From Library</td>
<td>The library containing the data to be copied.</td>
</tr>
<tr>
<td>To Library</td>
<td>The library in your Development Environment to receive the data.</td>
</tr>
<tr>
<td>Field</td>
<td>Explanation</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Dictionary Item</td>
<td>The name of the Data Dictionary item to be copied.</td>
</tr>
<tr>
<td>Vocabulary Overrides</td>
<td>The name of the screen or report record to be copied. All records for soft coding will be copied.</td>
</tr>
<tr>
<td>DREAM Writer Form</td>
<td>The name of the DREAM Writer Form ID to be copied. All versions of the specified form will be copied.</td>
</tr>
<tr>
<td>User Defined Codes</td>
<td>The system code and type of the table to be copied. All values for the specified table will be copied.</td>
</tr>
<tr>
<td>Software Versions Rep.</td>
<td>The record of the Software Versions Repository member to be copied.</td>
</tr>
<tr>
<td>Menu Identification/</td>
<td>The menu ID and the display language of the record to be copied.</td>
</tr>
<tr>
<td>Language/Appl Ovr.</td>
<td></td>
</tr>
</tbody>
</table>

Only one item may be entered and copied at a time. If the item exists in the To Library, it will be replaced.
Project Management

About Project Management

To manage projects you may use Work Order Processing. Perform the following tasks:

- Understand Work Order Processing
- Create Work Orders
- Understand and access the Scheduling Workbench
- Add or change record types

Understanding Work Order Processing

The Software Action Request System (SAR) is shipped to clients under the name of Work Order Processing.

The Work Order system allows you to:

- Create and classify work orders with simple budgets or estimates
- Schedule and expedite work orders
- Perform cost accounting by specific work orders or family of work orders.

Unlike jobs which are often preplanned and thoroughly budgeted, work orders are often completed without the prior knowledge of the accounting department. Work orders are typically spontaneous and of short duration.

If clients have purchased system 48 (Work Order Processing), they will have all of the programs associated with Work Orders (SARs). If clients have not purchased the Work Order Processing system, they will only have the programs from the Work Order Processing system that are defined as being part of the General Back Office System (00).
Creating Work Orders

There are only three required fields when creating a new work order:

- **Work Order Number** (can be assigned by next numbers)

  If you do not provide a work order number, the system assigns one automatically.

- **Description** (short)

- **Charge to Business Unit**

  To create work orders

  Select Single Task Details from the Simple Project Management menu (G4812).

![Single Task Details](image)

**What You Should Know About**

**Accessing the W.O. Detail form**

To access the W.O. Detail form, choose More Description.

**Searching for address numbers**

To search for address numbers for the Customer Number and Manager fields, choose More Keys, then Exit to Name Search.
<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parent W.O. No</td>
<td>Through parent work order number, you can group work orders together based on one parent work order, such as the installation of a computer and its associated electrical wiring, which may involve more than one customer or manager.</td>
</tr>
<tr>
<td>Action Code</td>
<td>One character field used to indicate the action that the user wants to take on the record requested. Inquire on a record before you attempt to change it.</td>
</tr>
<tr>
<td>Work Order Number (req)</td>
<td>The work order identification number.</td>
</tr>
<tr>
<td>Description (req)</td>
<td>A name or brief description.</td>
</tr>
<tr>
<td>Status Comment</td>
<td>This line allows status comments or further description of the work.</td>
</tr>
<tr>
<td>Charge to BU (req)</td>
<td>The business unit that is responsible for charges incurred. Must be a valid business unit setup in the Business Unit Master file (F0006).</td>
</tr>
<tr>
<td>Search X–Ref</td>
<td>Any number or characters that will be used to cross-reference work orders.</td>
</tr>
<tr>
<td>Cost Code</td>
<td>The subsidiary account responsible for incurred charges.</td>
</tr>
<tr>
<td>Est. Hours</td>
<td>Total number of hours estimated for the work order.</td>
</tr>
<tr>
<td>Est. Amount</td>
<td>The estimated cost of the work order.</td>
</tr>
<tr>
<td>Start Date</td>
<td>The initial date the work is scheduled to begin. Will default from system date or you can enter a date.</td>
</tr>
<tr>
<td>Planned Comp</td>
<td>The date the work is scheduled to be completed.</td>
</tr>
<tr>
<td>Phase</td>
<td>A user defined code describing a stage or category in the development of a project.</td>
</tr>
<tr>
<td>Completed</td>
<td>The date the work order was completed.</td>
</tr>
<tr>
<td>Type</td>
<td>User defined code describing the work order type.</td>
</tr>
<tr>
<td>Priority</td>
<td>A user defined code used to assign the priority of the work order: for example, high, medium, or low.</td>
</tr>
<tr>
<td>Status</td>
<td>A user defined code used to describe the current state of affair of the work order: for example, planned, started, or completed.</td>
</tr>
<tr>
<td>Customer No</td>
<td>The Address Number of the customer. Must be a valid number in the Address Book Master file (F0101).</td>
</tr>
<tr>
<td>Manager</td>
<td>The Address Number of the manager in charge of the work order. Must be a valid number in the Address Book Master File (F0101).</td>
</tr>
</tbody>
</table>
**Field** | **Explanation**
---|---
Transaction | The date the work order was entered. Defaults from system date or you can enter a date.
Date Assigned | Date the work was assigned to a person to begin work.
Tax Expl Code | A code attached to a customer/vendor that controls how tax is distributed to the GL revenue and expense accounts.
Tax Rate/Area | A code explaining the tax of a specific rate or an area. For example: state, county, city, luxury. Must be a valid code in the Tax Area Master file (F4008)
Subledger Inact. | A code indicating the status of a subledger, active or inactive. For example: jobs that are closed, assets that have been disposed of.

**Processing Options**

There are processing options associated with the Single Task Details program that allow you to default the value for the Type, Priority, Status, Phase, Category Code 2, Category Code 3, and Manager fields. To see the processing options, type the selection number for Single Task Details and press F18.
Function Keys from Single Task Details

F5 – Detailed Specifications

Allows user to enter additional detailed information about their work order. Each detail screen is based on Record Type. Record Type A provides room for more description to be entered. Other Record Types may be customized to fit your requirements. The steps to add and change Record Types are discussed later in this chapter.

<table>
<thead>
<tr>
<th>Selection</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – Insert</td>
<td>Insert a blank line for additional text.</td>
</tr>
<tr>
<td>9 – Delete</td>
<td>Delete a line of text</td>
</tr>
</tbody>
</table>
F8 – Category Codes

Allows user to update other work order values.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>W.O. Number</td>
<td>The work order identification number. This value defaults from the Single Task Details.</td>
</tr>
<tr>
<td>W.O. Flash Message</td>
<td>A highlighted message that will be attached to the work order.</td>
</tr>
<tr>
<td>Phase</td>
<td>A user–defined code describing a stage or category in the development of a project. This value defaults from the Single Task Details.</td>
</tr>
<tr>
<td>Category 02–10</td>
<td>Category Codes that are user defined values associated with the work order.</td>
</tr>
<tr>
<td>Originator</td>
<td>Address Number of the person who entered the work order. Must be valid in F0101.</td>
</tr>
<tr>
<td>Supervisor</td>
<td>Address Number of the work order supervisor. Must be in F0101.</td>
</tr>
<tr>
<td>Std. Desc.</td>
<td>A user defined code describing instructional information. Must be valid in F0101.</td>
</tr>
<tr>
<td>Search X–Ref</td>
<td>Any number or characters that will be used to cross–reference work orders. This value will default from the Single Task Defaults screen.</td>
</tr>
</tbody>
</table>
F9 – Name Search

Allows the user to search for a specific address book number.

F15 – Work Order Search Window

Allows user to search for work order descriptions. It will only return the description.

F21 – Print Work Order

Allows user to print the work order, including all of the associated record types.
Understanding the Scheduling Workbench

The Scheduling Workbench program allows you to review and update work orders. You can retrieve information about work orders in multiple ways. After retrieving the work orders that meet your search criteria, you can update selected fields in those work orders directly from the Scheduling Workbench form.

Accessing the Scheduling Workbench

To access the Scheduling Workbench

From the Simple Project Management menu select Scheduling Workbench

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category Codes</td>
<td>User Defined Code fields. Can define whatever 10 categories are important to your business: for instance, the work order’s phase, status, type, priority, and whether you want to display model work orders.</td>
</tr>
<tr>
<td>Job or BU</td>
<td>The Business Unit responsible for charges incurred</td>
</tr>
<tr>
<td>Originator</td>
<td>The Address Number of the originator of the work order must be a valid number in the Address Book Master File (F0101)</td>
</tr>
<tr>
<td>Customer</td>
<td>The Address Number of the customer must be a valid number in the Address Book Master File</td>
</tr>
</tbody>
</table>
### Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manager</td>
<td>The Address Number of the manager assigned to the work order must be a valid number in the Address Book Master File (F0101)</td>
</tr>
<tr>
<td>Supervisor</td>
<td>The Address Number of the supervisor assigned to the work order must be a valid number in the Address Book Master File (F0101)</td>
</tr>
<tr>
<td>Parent W.O. No</td>
<td>The parent work order number which groups work orders together in a “family”</td>
</tr>
<tr>
<td>Type</td>
<td>A User Defined Code describing Work Order/ECO Type</td>
</tr>
<tr>
<td>Model</td>
<td>Determines whether model work orders will be displayed on the screen</td>
</tr>
<tr>
<td>Search X–Ref</td>
<td>The cross reference or secondary reference number, typically the customer order or job number, used in selecting work orders</td>
</tr>
<tr>
<td>Cost Code</td>
<td>The subsidiary account responsible for incurred charges</td>
</tr>
<tr>
<td>Number</td>
<td>The work order identification number</td>
</tr>
<tr>
<td>Description</td>
<td>The name or brief description of the work order</td>
</tr>
<tr>
<td>X–Ref No</td>
<td>The cross reference or secondary reference number, typically the customer order or job number</td>
</tr>
<tr>
<td>ST</td>
<td>A user defined code describing the status of the work order</td>
</tr>
<tr>
<td>Status Comment</td>
<td>Allows for further description of the work or the addition of any comments</td>
</tr>
<tr>
<td>Type</td>
<td>A User Defined Code describing the work order type</td>
</tr>
<tr>
<td>Prior</td>
<td>A User Defined Code defining the priority of the work order: for example, high, medium, or low</td>
</tr>
</tbody>
</table>

**F4 – More Detail**

Displays additional information concerning each work order that is hidden in the Fold Area.
Field | Explanation
--- | ---
Planned Comp | The date the work is scheduled to be completed
Hours Scheduled | The hours of work that has been scheduled
Est. Hours | Total number of hours estimated for the work
Start Date | The initial date the work is scheduled to begin
W.O. Flash Message | Causes a flash message to appear on the Work Order Entry screen
W.O. Date | The date the work order was entered.

Selection Exits from the Scheduling Workbench

Selection 1 — Work Order Entry

Takes the user to the Work Order Entry screen and automatically inquires on the selected work order
Processing Options

There are some processing options associated with the Scheduling Workbench program that allow you to default a Work Order Status Range and a Work Order Type. In addition, you may choose to call either Project Task Details (P48014) or the Equipment Work Orders (P48011) when the W.O. Entry option is selected. Be aware that Equipment Work Orders (P48011) is part of the Work Order Processing system (48). To see the processing options, type the selection number for Scheduling Workbench and press F18.

Adding Record Types

To add a record type

1. Select Detail Spec. Types from the Misc Additional Features menu (G4841).

   00051                       Detail Spec. Types
   Install System Code. . . . 00
   User Defined Codes . . . . RT
   Action Code. . . . . . I
   Work Order Detail Specs.

   Code   Description
   A   Full Description of Request
   B   Final Disposition Remarks
   C   Tool and Equipment Instruct.
   D   Safety Provisions
   E   Plan and Drawing Reference
   F   Equipment Down Time

   F5=Code Types  F14=Memo  F15=Where Used  F18=Language  F21=Print  F24=More Keys

2. Add your specified record type and description to the table.
Changing Record Types

You may want to change the format of your record type.

To change a record type

1. Select Detail Spec. Over Titles from the Misc Additional Features menu (G4841).

   48002 Detail Spec. Over Titles
   Action Code... F
   Record Type... F

   Sub-Title 1
   Equipment
   Number

   Sub-Title 2
   Production
   Time Out

   Sub-Title 3
   Production
   Time In

   F24=More Keys

2. Enter the heading text of each column you wish to add to the format of your Record Type.

   Work Order (SAR) file is F4801
   Detail Record Type file is F4802
   Method of tracking programming projects

This is a brief overview of the Work Order Processing system. For more information, consult the J.D. Edwards User Guide entitled Work Orders.

Exercises

See the exercises for this chapter.
Work with SAR

About SAR System Setup

To set up a project, you must assign SARs and promotion paths to it. You create the SARs and define promotion paths first because the version control process uses the definitions.

After you set up your SAR system, you can develop the software. The SAR logging program keeps track of your changes as you have specified. While you develop the software, you also can define promotion paths and projects, and attach SARs to projects.

After you finish developing the software, you must update the SARs by using the SAR log before you promote the SAR.

Complete the following tasks:

- Create record type codes
- Define record type titles

Before You Begin

- The SAR system uses the Work Order files (F4801 and F4802). If your production environment uses these files, and if the F4802 file has different record types than what version control needs, define a separate library that contains these files for version control purposes only.

See Also

Defining a Promotion Path

Creating Record Type Codes

The Work Order Instructions table (F4802) has an essential role in the version control process. It identifies and captures, for promotion purposes, all the source code members and control table data associated with a SAR. The Version Control system assigns a record type code to each source code member or control table data item, which classifies it for promotion. You must create record type codes that your Work Order Instructions table does not have currently.
To create record type codes

1. From the Version Control menu (G9261), choose Record Type Codes.
2. On User Defined Code Revisions

Enter the following character codes and descriptions:

<table>
<thead>
<tr>
<th>Character Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Original Request</td>
</tr>
<tr>
<td>C</td>
<td>Members Affected</td>
</tr>
<tr>
<td>D</td>
<td>Menu Modifications</td>
</tr>
<tr>
<td>E</td>
<td>Automatic Accounting Instructions</td>
</tr>
<tr>
<td>F</td>
<td>Software Inventory Record Updates</td>
</tr>
<tr>
<td>G</td>
<td>Processing Options/DREAM Writer</td>
</tr>
<tr>
<td>H</td>
<td>Vocabulary Override Changes</td>
</tr>
</tbody>
</table>
Defining Record Type Titles

For each record type code you create, you also must define record type titles, which appear as column headings on the W.O. Detail Entry form.

Before You Begin

- Create record type codes before you define record type titles. See Creating Record Type Codes.

To define record type titles

From the Version Control menu (G9261), choose Record Type Titles.

On Record Type Titles
48002                    Record Type Titles

Action Code. . . I
Record Type. . . D  Menu Modifications

<table>
<thead>
<tr>
<th>Sub-Title 1</th>
<th>Sub-Title 2</th>
<th>Sub-Title 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menu</td>
<td>Option</td>
<td>Job To</td>
</tr>
<tr>
<td>Name</td>
<td>Number</td>
<td>Execute</td>
</tr>
</tbody>
</table>

F24=More Keys
For each record type you created, complete the following fields with the information in the chart that follows:

<table>
<thead>
<tr>
<th>TITLE</th>
<th>SUB-TITLE 1</th>
<th>SUB-TITLE 2</th>
<th>SUB-TITLE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Member Name</td>
<td>Source Library</td>
<td>Object Library</td>
<td></td>
</tr>
<tr>
<td>D Menu Name</td>
<td>Option Number</td>
<td>Job To Execute</td>
<td></td>
</tr>
<tr>
<td>E AAI Company No</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>F CL_Program</td>
<td>Program</td>
<td>Video/Rpt</td>
<td></td>
</tr>
<tr>
<td>G Form Name</td>
<td>Version No</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H Scr/Rpt Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>K Help Start</td>
<td>Help Stop</td>
<td></td>
<td></td>
</tr>
<tr>
<td>M Sys Code DTAI Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N Sys Code Rec Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O SAR No SAR No SAR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q Sys Code Rec Type</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>S</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U Reference ID/Code Attachment Needed Y/N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>W Program Name</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Z Release ID PTF Date Included</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 System Code Line Action Code</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
What You Should Know About

| Verifying the record type titles | After you define the record type titles, you can view them to verify their accuracy. On Single Task Details, choose More Description. On W.O. Detail Entry, locate a record type you want to view by using the Record Type field. To access Single Task Details, see *Creating SARs*. |

---

*Advanced Programming Concepts and Skills*

2–46

Release A7.3 (June 1996)
Work with Software Versions Repository

A master directory of all files, programs, screens, reports, and copy modules.

Stores the member locations for each member master record.

Working with Software Versions Repository (SVR)

One of the Software Versions Repository’s primary purposes is to indicate what environments a requested member is located in and whether the environment is a production or development environment. The file is used extensively for documentation and plays an important role in J.D. Edwards Design and Development tools.

The Software Versions Repository is the natural starting point for all programming and software inquiry functions. It provides exits to the following features:

- SEU
- SAR (Software Action Request) Detail Entry
- Screen Design Aid
- Report Design Aid
- File Design Aid
- The Program Generator
- Precompiler Commands
Repository Services
  Data Dictionary
  Menus
  Vocabulary Overrides
  Function Key Definitions
  DREAM Writer Versions
  Processing Options
  User Defined Codes
  Edit System Helps
  CASE Profiles
  SAR Log Inquiry
  Copy DD, VO, DW, UDC, SVR, Menus

Optional Files Feature
Programmer Checklists
Where Used Facility
Flowchart Programs/Illustrate File Models
Source Modifications Editor

In addition, it provides access to the following functions:

  Copy Source
  Print Source
  Submit Creation of Object
  Generate Program Source and Help
  Edit Help Instructions
  Delete Source
  Print Help Instructions
Accessing the Software Versions Repository

The Software Versions Repository serves as the front-end for all J.D. Edwards design aids and programming utilities. You may also utilize this screen as your own inventory file.

To access the Software Versions Repository

From the Computer Assisted Design menu, select Software Versions Repository.

The top portion of the screen identifies the member and its attributes. This information is stored in the Software Versions Repository master file (F9801).
Member Identifiers

The first two fields identify the member.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member ID</td>
<td>Unique ID for a particular member.</td>
</tr>
<tr>
<td>Description</td>
<td>Identifying information of the member, such as Trial Balance by Business Unit. Associated programs, screens, and reports should share the same description.</td>
</tr>
</tbody>
</table>

The description associated with each member is used to further identify the purpose of the member.

Physical files should have a description that explains the purpose of the file.

Screens, reports, and CL programs should have the same description as the associated RPG program.

Logical files should be designated as follows: \texttt{LF – filename, filename, filename; where \text{filename} is a key field.}

Join files should be designated as follows: \texttt{JF – filename/filename/filename – filename, filename; where filename is a file over which the join is built and filename is the key field joining the files.}

Work files should be designated as follows: \texttt{WF – filename; where filename is the file that the work file accesses.}

Copy modules carry their own unique descriptions.

File Server programs should be designated as follows: \texttt{File Server – filename; where filename is the file being served.}
## Type, Use, and Associated Systems

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function Code</td>
<td>Designates the object type such as display file, physical and logical file. Use F1 in the field to view available types.</td>
</tr>
<tr>
<td>Function Use</td>
<td>Indicates how the member is being used.</td>
</tr>
<tr>
<td>System Code</td>
<td>Designates the system number associated with the member. The configuration of installation media and the install process itself are driven by this install system code. Use F1 in the field to view valid codes.</td>
</tr>
<tr>
<td>Reporting System</td>
<td>Designates the system number for reporting purposes. This rarely differs from the Install System. Exceptions occur for data files used by more than one system.</td>
</tr>
</tbody>
</table>
Member Relationship and Compiling Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base Member Name</td>
<td>This field simply allows for logical grouping of members. For screens, reports, RPG programs and CL jobs, this name is usually the RPG program name associated with a particular member. For logical files, this name is the physical file it is based on and is required.</td>
</tr>
</tbody>
</table>
| Omit Option            | Designates items in the Software Versions Repository file that would be bypassed for a new release. These codes are as follows:  
  H — Held from all releases  
  X — Omit from all releases  
  S — Omit Source from all releases  
  O — Omit Execution Object from all releases |
| Generation Severity    | Allows the user to designate a severity level when compiling a member. Because some J.D. Edwards programs contain messages that appear in the compile listing as a severity level 10 error, it is suggested that you override the IBM default of a severity level 9 to a level 20 for all programs. To do this, enter the following on any command line:  
  CHGCMDDFT CMD(CRTRPGPGM) NEW DFT(‘GENLVL(20)’)  
  For those specific programs that must override the new default severity level of 20, you can enter the override value in the Generation Severity field. |
| Maint/RSTDSP           | Either designates the type of maintenance on a logical file or how a screen will be processed.                                                                                                                |

Maintenance on a Logical File

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No maintenance; or the logical is created dynamically</td>
</tr>
<tr>
<td>1</td>
<td>Logical will be immediately updated when physical is updated.</td>
</tr>
<tr>
<td>2</td>
<td>Logical update will be delayed until the next time it is opened. — USE WITH CAUTION</td>
</tr>
</tbody>
</table>

— USE WITH CAUTION
### Processing a Screen

<table>
<thead>
<tr>
<th>Value</th>
<th>Field Values</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1     | RSTDSP = *NO (Restore Display)  
      | DFRWRT = *YES (Defer Write)     | Use with OVERLAY. Do not use with PUTOVR/OVRDTA  
      |                                   | All writes to the video field/file formats will be collected and written at one time |
| A     | RSTDSP = *NO  
      | DFRWRT = *NO               | Overlay  
      |                                   | Each write statement will be written to the screen |
| B     | RSTDST = *YES  
      | DFRWRT = *NO                | Use with PUTOVER to clear and write screen at field level |
| S     |               | Used when compiling SQL, RPG, and PL1 programs. For example, if SQL statements exist within an RPG program, the compiler:  
      |                                   | 1) Executes a create SQL program statement  
      |                                   | 2) Executes the SQL statements (converts them to calls)  
      |                                   | 3) Comments them out  
      |                                   | 4) Executes a create RPG program statement and continues as normal |

### File Information

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Prefix</td>
<td>This field indicates the prefix associated with a file. Use F1 to display all file prefixes in use. Each physical file should have a unique file prefix.</td>
</tr>
<tr>
<td>Copy Data (Y/N)</td>
<td>Used to indicate when a database file must be copied with or without data. The Create User Data Libraries (2/A9645) utility accesses this field to determine if the file copied will be copied with data.</td>
</tr>
<tr>
<td>Optional File</td>
<td>Indicates the file may be optional in your production environment. F8 provides a list of optional files.</td>
</tr>
</tbody>
</table>
### Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common File</td>
<td>Indicates when a file should exist in the common library or user production library. The Create User Data Libraries (2/A9645) utility accesses this field to determine if the file should be placed in the specified common library or production library.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Library</td>
<td>The source library where the source file for the object is maintained. This library is usually JDFSRC (for J.D. Edwards) or CLTSRC (for the client) for production and DEVSRC for development.</td>
</tr>
<tr>
<td>Object Library</td>
<td>The library where the compiled object resides. For program, display file, and printer file objects, the library location is the same (usually JDFOBJ for J.D. Edwards and, CLTOBJ, or DEVOBJ for the client). For all physical and logical files, the object library is the data file library (usually JDFDATA for J.D. Edwards and, CLTDTA or DEVDTA for the client). Leave the object library name blank for copy modules since they are not compiled objects.</td>
</tr>
</tbody>
</table>

Where Are Members Maintained?

The bottom half of the screen lists the libraries in which the member is maintained. This information is stored in the Software Versions Repository Detail file (F9802).
Field | Explanation
---|---
Source File | The source file containing the source member. At J.D. Edwards, three source files reside inside of JDFSRC library.

They are:
- JDECPY for copy modules
- JDESRC for other source code
- F98CRTCMD for precompiler commands.

SAR Number | The most recent Software Action Request (SAR)/Work Order number associated with the member. This number must be valid, and if the status of the SAR number is complete, you should enter a new SAR to perform additional development work on the member. A basic version of the Work Order system is sent to clients who have purchased the Computer Assisted Design (CAD) system and serves as a means for the client to keep track of their projects.

If a PPAT number is specified on the User Information screen (F0092 file), that number will show as the default for the window that comes up when F1 is pressed on this field.

The edit for this field is controlled by the SAR information entered in CASE Profiles.

Version ID | Identifies the release level of the member in the designated environment.

Validated against User Defined Codes 98/RL.

SC | Status Code
Indicates the status of the software, that is, whether it is in production or development. These codes are as follows:
1 – Production/Pristine
2 – Development
3 – Test Version
4 – Custom

DP | Development Progress Code.
Indicates the progress of modifications done to the member.

User ID | User ID that last modified the member (automatically updated).

Date–Modified | The date the member was last updated (automatically updated).
Each subfile line represents a record in the Software Versions Repository detail file (F9802).

Keying ‘D’ in the Action Code will delete the member from:

- Software Versions Repository Master file (F9801)
- Software Versions Repository Detail file (F9802)
- Source and Object, if applicable
- Data Dictionary (F9200, F9203, F9816, F98163)
- Vocabulary Overrides (F9220)
- Function Key Definition (F9601,F9611)
- DREAM Writer forms (F98301, F9831, F98311, F98312)
- Cursor Sensitive Helps (F9620, F9621)
- Processing Options (F98302)
- Program Generator, if applicable
Naming Conventions

The following forms show how the report and CL program share the same Description and Base Member as the program name. The same convention is true for the CL program and the special form.

<table>
<thead>
<tr>
<th>9801</th>
<th>Software Versions Repository</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Code. . .</td>
<td>I</td>
</tr>
<tr>
<td>Member ID. . .</td>
<td>P42565</td>
</tr>
<tr>
<td>Description. . .</td>
<td>Sales Order Invoices Print</td>
</tr>
<tr>
<td>Function Code. . .</td>
<td>RPG Programs</td>
</tr>
<tr>
<td>Function Use . .</td>
<td>164 Special Forms</td>
</tr>
<tr>
<td>System Code. . .</td>
<td>42 Sales Order Processing</td>
</tr>
<tr>
<td>Reporting System</td>
<td>42 Sales Order Processing</td>
</tr>
<tr>
<td>Base Member Name</td>
<td>P42565</td>
</tr>
<tr>
<td>Maint/RSTDSP . .</td>
<td>Omit Option. . .</td>
</tr>
<tr>
<td>Copy Data (Y/N).</td>
<td>N Optional File. . .</td>
</tr>
<tr>
<td>DREAM Writer Form Exists</td>
<td>N Common File. . .</td>
</tr>
<tr>
<td>O Source</td>
<td>Object</td>
</tr>
<tr>
<td>Library</td>
<td>Library</td>
</tr>
<tr>
<td>File</td>
<td>Number</td>
</tr>
<tr>
<td>ID</td>
<td>SAR</td>
</tr>
<tr>
<td>Version</td>
<td>SD</td>
</tr>
<tr>
<td>User</td>
<td>Date</td>
</tr>
<tr>
<td>JDFSRC</td>
<td>JDFOBJ</td>
</tr>
<tr>
<td>JDESRC</td>
<td>685935</td>
</tr>
<tr>
<td>A71</td>
<td>1</td>
</tr>
<tr>
<td>JDE</td>
<td>11/12/93</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>9801</th>
<th>Software Versions Repository</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Code. . .</td>
<td>I</td>
</tr>
<tr>
<td>Member ID. . .</td>
<td>R42565</td>
</tr>
<tr>
<td>Description. . .</td>
<td>Sales Order Invoices Print</td>
</tr>
<tr>
<td>Function Code. . .</td>
<td>Printer Files</td>
</tr>
<tr>
<td>Function Use . .</td>
<td>164 Special Forms</td>
</tr>
<tr>
<td>System Code. . .</td>
<td>42 Sales Order Processing</td>
</tr>
<tr>
<td>Reporting System</td>
<td>42 Sales Order Processing</td>
</tr>
<tr>
<td>Base Member Name</td>
<td>P42565</td>
</tr>
<tr>
<td>Maint/RSTDSP . .</td>
<td>Omit Option. . .</td>
</tr>
<tr>
<td>Copy Data (Y/N).</td>
<td>N Optional File. . .</td>
</tr>
<tr>
<td>DREAM Writer Form Exists</td>
<td>N Common File. . .</td>
</tr>
<tr>
<td>O Source</td>
<td>Object</td>
</tr>
<tr>
<td>Library</td>
<td>Library</td>
</tr>
<tr>
<td>File</td>
<td>Number</td>
</tr>
<tr>
<td>ID</td>
<td>SAR</td>
</tr>
<tr>
<td>Version</td>
<td>SD</td>
</tr>
<tr>
<td>User</td>
<td>Date</td>
</tr>
<tr>
<td>JDFSRC</td>
<td>JDFOBJ</td>
</tr>
<tr>
<td>JDESRC</td>
<td>672721</td>
</tr>
<tr>
<td>A71</td>
<td>1</td>
</tr>
<tr>
<td>JDE</td>
<td>11/08/93</td>
</tr>
</tbody>
</table>
A coded naming structure identifies and describes major components of J.D. Edwards & Company software. The first character of the name indicates the type of component, such as program or data file. The second and third characters denote the system and are referred to extensively throughout the software. The fourth, fifth, and sixth characters represent the component group type, such as the function to be performed by the indicated component. The seventh through the tenth characters identify component versions. File names vary from four to eight characters in length, while all other component names are at least six characters long. The following diagram illustrates this naming structure.
The Naming Conventions for Objects

Use the following chart as your guide when naming objects.

**First digit — Component**
- C — Common subroutine
- I — Data structure; record formats
- J — CL program
- P — RPG program
- R — Report
- S — Special form
- T — Temporary work files
- V — Video screen display file
- X — Scrub and Edit Server
- XF — Input/Output File Server
- XS — Input only/Caching Server

**Second and third digits — System Code**
- 00 — World Foundation Environment
- 01 — Address Book
- 03 — Accounts Receivable
- 55 — Reserved for clients

**Fourth, Fifth, and Sixth Digits — Group Type**
- 000 to 099 — File maintenance
- 100 to 199 — Transaction processing
- 200 to 299 — Inquiry only
- 300 to 399 — Input registers and journals
- 400 to 499 — Operating reports
- 500 to 599 — Special purpose reports
- 600 to 799 — Standard management reports
- 800 to 999 — Housekeeping
- DS — Data structure
- Other — Window designations

The CL program, RPG program and Display / Printer file may have identical names with different prefixes.

For example: P01051, J01051, V01051 (Address Book Revisions)
The Naming Conventions for Files

First digit — Component
F — Data file (physical or logical)

Second and third digits — System Code
00 — Operations Control/Back Office
01 — Address Book
03 — Accounts Receivable

Fourth and Fifth Digits — Group Type
01 — Master
02 — Balance
11 — Transaction

Sixth through Tenth Digits — Identifying Suffixes
These digits differentiate component versions.
Example — Programs that perform similar functions
but vary distinctly in specific processing.
WF — Work File
LA thru LZ — Logical File Designations
JA thru JZ — Join Logical File Designations
Version ID — 3 digit number appended to saved
DREAM Writer logical file name
The following shows the names for different types of programs and files.

**Maintenance program**

The maintenance program for a file has the same name with a different prefix.

For example, F9220 is P9220 or F9601 is P9601.

**Logical files**

For logical files over one physical, the logical file has the same name as the physical followed by an L, followed by A thru Z.

For example, F0101 has logistics F0101LA, F0101LB, F0101LC, and F0101LD.

**Join logical files**

Join Logical files have the same name as the principal based-on file, a suffix of J followed by A thru Z.

For example, the system names the join of F0006 and F0911 as F0006JA.

**Temporary files**

Batch jobs use T files doing a CRTDUPOBJ. The job then removes the object after completion.

- Usually Physical Files
- Begin with T
- Found in JDFOBJ

**Dynamic work files**

Dynamic work files are usually FASTR processing requirements. Dynamic work files create and delete after the job is complete.

- Usually logical files
- Have same name as program
The J.D. Edwards System Codes

When used in menus, the system code follows the letter in the menu name. Shown below are the system codes for the standard AS/400 systems:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>00</td>
<td>World Foundation Environment</td>
</tr>
<tr>
<td>01</td>
<td>Address Book</td>
</tr>
<tr>
<td>02</td>
<td>Electronic Mail</td>
</tr>
<tr>
<td>03</td>
<td>Accounts Receivable</td>
</tr>
<tr>
<td>04</td>
<td>Accounts Payable</td>
</tr>
<tr>
<td>05</td>
<td>Stand-Alone Time Accounting</td>
</tr>
<tr>
<td>06</td>
<td>Payroll “Enhanced”</td>
</tr>
<tr>
<td>07</td>
<td>Human Resources</td>
</tr>
<tr>
<td>08</td>
<td>General Accounting</td>
</tr>
<tr>
<td>09</td>
<td>Financial Reporting</td>
</tr>
<tr>
<td>10</td>
<td>Multi Currency/Cash Basis</td>
</tr>
<tr>
<td>11</td>
<td>Fixed Assets</td>
</tr>
<tr>
<td>12</td>
<td>Equipment/Plant Management</td>
</tr>
<tr>
<td>13</td>
<td>Modeling, Planning, &amp; Budgeting</td>
</tr>
<tr>
<td>14</td>
<td>Commercial Property Management</td>
</tr>
<tr>
<td>15</td>
<td>Resident Property Management</td>
</tr>
<tr>
<td>16</td>
<td>Property Management Base</td>
</tr>
<tr>
<td>17</td>
<td>Deal Management</td>
</tr>
<tr>
<td>18</td>
<td>Energy Base</td>
</tr>
<tr>
<td>19</td>
<td>Product Data Management</td>
</tr>
<tr>
<td>20</td>
<td>Shop Floor Control</td>
</tr>
<tr>
<td>21</td>
<td>Configuration Management</td>
</tr>
<tr>
<td>22</td>
<td>Capacity Requirements Planning</td>
</tr>
<tr>
<td>23</td>
<td>DRP/MRP/MPS</td>
</tr>
<tr>
<td>24</td>
<td>Enterprise Facility Planning</td>
</tr>
<tr>
<td>25</td>
<td>Technical Foundation Systems</td>
</tr>
<tr>
<td>30</td>
<td>Contract Management</td>
</tr>
<tr>
<td>31</td>
<td>Advanced Price Adjustments</td>
</tr>
<tr>
<td>32</td>
<td>Warehouse Management</td>
</tr>
<tr>
<td>33</td>
<td>Electronic Data Interchange</td>
</tr>
<tr>
<td>34</td>
<td>Work Order Processing</td>
</tr>
<tr>
<td>35</td>
<td>Load and Delivery</td>
</tr>
<tr>
<td>36</td>
<td>Job Cost Base</td>
</tr>
<tr>
<td>37</td>
<td>Job Cost Accounting</td>
</tr>
<tr>
<td>38</td>
<td>Job Cost Billing</td>
</tr>
<tr>
<td>39</td>
<td>Change Management</td>
</tr>
<tr>
<td>40</td>
<td>Inventory/OP Base</td>
</tr>
<tr>
<td>41</td>
<td>Inventory Management</td>
</tr>
<tr>
<td>42</td>
<td>Sales Order Processing</td>
</tr>
<tr>
<td>43</td>
<td>Purchasing Order Processing</td>
</tr>
<tr>
<td>44</td>
<td>Contract Management</td>
</tr>
<tr>
<td>45</td>
<td>Advanced Price Adjustments</td>
</tr>
<tr>
<td>46</td>
<td>Warehouse Management</td>
</tr>
<tr>
<td>47</td>
<td>Electronic Data Interchange</td>
</tr>
<tr>
<td>48</td>
<td>Work Order Processing</td>
</tr>
<tr>
<td>49</td>
<td>Load and Delivery</td>
</tr>
<tr>
<td>50</td>
<td>Job Cost Base</td>
</tr>
<tr>
<td>51</td>
<td>Job Cost Accounting</td>
</tr>
<tr>
<td>52</td>
<td>Job Cost Billing</td>
</tr>
<tr>
<td>53</td>
<td>Change Management</td>
</tr>
<tr>
<td>54</td>
<td>Inventory/OP Base</td>
</tr>
<tr>
<td>55</td>
<td>Client Use</td>
</tr>
<tr>
<td>56</td>
<td>JDE Internal Custom Programming</td>
</tr>
<tr>
<td>57</td>
<td>Multi-National Products</td>
</tr>
<tr>
<td>58</td>
<td>Client/Server Applications</td>
</tr>
<tr>
<td>59</td>
<td>World Vision</td>
</tr>
<tr>
<td>60</td>
<td>CS — A/P Entry</td>
</tr>
<tr>
<td>61</td>
<td>CS — Pay Time Entry</td>
</tr>
<tr>
<td>62</td>
<td>CS — Sales Order Entry</td>
</tr>
<tr>
<td>63</td>
<td>CS — Training and Development</td>
</tr>
<tr>
<td>64</td>
<td>Canadian Payroll</td>
</tr>
<tr>
<td>65</td>
<td>CS — Translation</td>
</tr>
<tr>
<td>66</td>
<td>COBOL Translator</td>
</tr>
<tr>
<td>67</td>
<td>DREAM Writer</td>
</tr>
<tr>
<td>68</td>
<td>World Writer</td>
</tr>
<tr>
<td>69</td>
<td>Management Reporting — FASTR</td>
</tr>
<tr>
<td>70</td>
<td>Distributive Data Processing</td>
</tr>
<tr>
<td>71</td>
<td>Custom Programming</td>
</tr>
<tr>
<td>72</td>
<td>Electronic Document Interchange</td>
</tr>
<tr>
<td>73</td>
<td>Miscellaneous Tech</td>
</tr>
</tbody>
</table>
Examples of Program and File Names

Data Files

Account Master File
Component (File) F 09 01
System Code (General Accounting)
Component Group Type (Master)

Account Master Alternate Logical
Component (File) F 09 01 LA
System Code (General Accounting)
Component Group Type (Master)
Version Identification (Logical)

Videos (Screens)

Component (Video) V 09 01
System Code (General Accounting)
Component Group Type (File Maintenance)

RPG Programs

Component (RPG Program) P 09 01
System Code (General Accounting)
Component Group Type (File Maintenance)

CL Programs

Component (CL Program) J 09 01
System Code (General Accounting)
Component Group Type (File Maintenance)
Optional Files Workbench

The Optional Files Workbench provides better access to optional files. When you delete optional files they are logged. If you reinstall, those files are not put back into the system. Each file has an explanation about the circumstances that make it optional.

If you need the deleted files you can remove them from the logged optional files and copy them from JDFDATA.

<table>
<thead>
<tr>
<th>File ID</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F00021</td>
<td>Next Numbers by Company/FY – Automatic</td>
</tr>
<tr>
<td>F00021LA</td>
<td>Next Numbers by Company/FY – Automatic – Logical Key Co,Seq</td>
</tr>
<tr>
<td>F0006JA</td>
<td>JF – BILLING ONLY – F0006/F0911 – Cost Center</td>
</tr>
<tr>
<td>F0006JE</td>
<td>JF – Profit Recognition F0006/F5144 (Cost Center)</td>
</tr>
<tr>
<td>F0006LC</td>
<td>LF – JOB COST ONLY – Level of Detail, Cost Center</td>
</tr>
<tr>
<td>F0006LG</td>
<td>Business Unit Master</td>
</tr>
<tr>
<td>F0006LH</td>
<td>LF – JOB COST ONLY – Company, Desc Compressed, Cost Center</td>
</tr>
<tr>
<td>F0013</td>
<td>Currency Codes</td>
</tr>
<tr>
<td>F0018LD</td>
<td>LF – OneWorld – Document Typ, Document No, Key Co,</td>
</tr>
<tr>
<td>F0030LG</td>
<td>LF – OneWorld – Type, Account ID, Cost Center</td>
</tr>
<tr>
<td>F0030LH</td>
<td>LF – OneWorld – Decending Unique ID</td>
</tr>
<tr>
<td>F0031</td>
<td>Cross Over Rules</td>
</tr>
<tr>
<td>F0031LA</td>
<td>LF – domestic file, foreign file, foreign field</td>
</tr>
<tr>
<td>F0031LB</td>
<td>LF – domestic file, foreign file, dom reference field</td>
</tr>
<tr>
<td>F0040</td>
<td>PC Batch Entry – Error File</td>
</tr>
</tbody>
</table>

Opt: 1=Explanation  2=SVR  4=Delete  F2=Cmd Entry  F5=View Log  F24=More
Logical Files

The Member ID for logical files ends with Lx, where x is the next available letter in alpha sequence.

The Object Library is usually JDFDATA.

The Description should list the key fields for the view.

The Maint/RSTDSP is 1 for permanent system logicals.

The Base Member Name is the physical file the logical view is over.

9801 Software Versions Repository

Action Code... A
Member ID... F0911LA
Description... LF - Doc Type, Doc, Key Co, G/L Date(##YYMMDD), Line #, Ext
Function Code... LF Logical Files
Function Use... T30 Transaction Files
System Code... 00 Technical Foundation
Reporting System 09 General Accounting
Base Member Name F0911
File Prefix... GL
Maint/RSTDSP... 1 Omit Option...
Generation Sev...
Copy Data (Y/N)... N Optional File...
Common File...

O Source Object Source SAR Version SD User Date
P Library Library File Number ID C P ID Modified
JDFSRC JDFDATA JDESRC 591710 A61 A JDE 03/22/93

Release A7.3 (June 1996)
Join Logical Files

The Description lists the files over which the join is built.
The Base Member Name is the primary file in the join.
Physical files must exist in the same library.

9801                      Software Versions Repository
Action Code...  I
Member ID......  P0006JA
Description..... BP - BILLING ONLY - P0006/P0911 - Business Unit
Function Code... LF Logical Files
Function Use....  210 Master Files
System Code....  00 Technical Foundation
Reporting System 00 Technical Foundation
Base Member Name P0006 File Prefix..  MC
Maint/RSTDSP...  A Omit Option...  Generation Sev.
Copy Data (Y/N).  N Optional File..  N Common File..  N

<table>
<thead>
<tr>
<th>O</th>
<th>Source</th>
<th>Object</th>
<th>Source</th>
<th>SAR</th>
<th>Version</th>
<th>S D</th>
<th>User</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Library</td>
<td>Library</td>
<td>File</td>
<td>Number</td>
<td>ID</td>
<td></td>
<td>C P</td>
<td>ID</td>
</tr>
<tr>
<td></td>
<td>JDFSRC</td>
<td>JDPDATA</td>
<td>JDESRC</td>
<td>493167</td>
<td>A61</td>
<td>1</td>
<td>JDE</td>
<td>03/05/93</td>
</tr>
</tbody>
</table>
Copy Modules

The Member ID begins with C, I, E, D, G.
The Source File is JDECPY.
The Description describes the function of the module.
The Function Code is COPY.
Windows

The Member ID begins with V, the system number, then an alphabetic identifier as shown in the example below.

The Description describes the function of the window.

Maint/RSTDSP is left blank to allow the window to appear in front of text from the calling screen.

9801 Software Versions Repository

Action Code... I
Member ID... V09ACCT
Description... Account Master Additions Window
Function Code... DSPF Video Display Files
Function Use... 111 File Maintenance
System Code... 09 General Accounting
Reporting System... 09 General Accounting
Base Member Name... P09ACCT
Maint/RSTDSP... Omit Option...
Copy Data (Y/N)... N
Optional File... N
Common File... N

O Source Object Source SAR Version SD User Date
P Library Library File Number ID CP ID Modified
       JDFSRC JDFOBJ JDESRC 552868 A61 1 _ JDE 12/08/92
Navigation Functions

The following Function keys facilitate navigating within the Software Versions Repository.

**F6 – Access Repository Services**

You can access the Repository Services window using F6. This window provides access to the other repository services within J.D. Edwards.

Use selection 1 to select the available services.

**F9 – Automatic Reinquiry**

Once the system has accepted the changes you made to a member and cleared the screen, you can automatically inquire on that member by pressing F9.

**F17 – Position Cursor to Action Code**

When you inquire on a member, the system positions the cursor in the subfile for the screen. To reposition your cursor in the Action Code field, press F17.

**F19 – Previous Member**

To access the member stored before the current member, press F19.
F20 – Next Member

To access the member stored after the currently displayed member, press F20.

Other Function Keys

F2 – J.D. Edwards Command Line

To access a command line in order to enter a J.D. Edwards or IBM command without having to exit to Command Entry or a menu.

Calls a J.D. Edwards program and not the IBM Command Entry.

If you are secured out of Command Entry or Menu Traveling, you will still receive this command line but you will *not* be able to execute commands or menu travel.

F8 – Optional Files

The system displays the optional files.

F10 – Checklists

Displays a user defined checklist. Opt 1 – displays additional job information.

F13 – Member Category Codes

Displays additional category code information for each member. The category code values can be cross-referenced to the Software Versions Search program (23/G91).

F14 – Member Parameter/Key List

Identifies the access path for keyed files. For future use with the Everest CASE tool.

F15 – Where Used Facility

You can access the Where Used facility using Function key 15. Use this facility to determine every location that a particular member is used.
Below is an example form displaying every program that uses the Business Unit Master form:

![Example Form]

To use this facility, you must run the Cross Reference Rebuild.(6/G9642)

**F23 – Flow Programs / Illustrate File Models**

To display a flowchart if the member is a program or a Data Model if the member is a file.

Only functional for programs and files.
## Selection Exits from the Software Versions Repository

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| 1      | Browse SEU member  
|        | Displays the SEU Member in browse mode. |
| 2      | Edit using SEU  
|        | Displays the SEU Member in update mode. |
| 3      | Copy/Add entry/source member  
|        | Copies the source member to another member.  
|        | Adds master and detail record for the member being copied to if they do not already exist.  
|        | Copies pre-compiler commands and Vocabulary Overrides.  
|        | Copies program generator specifications if requested. |
| 5      | Work with SAR detail  
|        | Displays the SAR/Work Order Detail Entry screen, defaulting to the members affected portion of the SAR/Work Order. |
| 8      | Print source  
|        | Prints a spooled file of the member. |
| 9      | Delete/ remove source  
|        | Deletes the detail record and removes the source member from the source file.  
|        | The same IBM authority that applies to the command RMVM applies to this function.  
|        | Will delete the object if requested by the user. If you do not remove the source member, you will not be allowed to delete the object. |
| 10     | Exit to design aid  
<p>|        | Determines what type of member you are accessing and then exits to the correct J.D. Edwards design tool; that is, SDA/RDA/FDA/Program Generator. |</p>
<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
</table>
| 11     | Precompiler commands for J.D. Edwards compiler.  
Accesses the source code for the precompiler commands associated with a program.  
A highlighted message, *Precompiler Commands Exist*, indicates when they exist for the member.  
Contains information for steps that need to be completed prior to compiling the program.  
Example: P09101.  
NOTE: Only one person can view the same pre–compiler commands. |
| 14     | Submit object creation  
Compiles the member and generates an object. |
| 15     | Generate program source and help  
Submits the member to the program generator in order to generate source and related helps.  
Only applicable to CASE users. |
| 17     | Edit help instructions  
Accesses the help instructions for a particular program in update mode utilizing SEU. |
| 18     | Generate & rebuild help instructions  
Submits the helps for generation and rebuilds them into their final form once they have been entered. |
| 20     | Browse SDA/RDA  
Accesses SDA or RDA in browse mode. |
| 21     | Print help  
Prints the help instructions for the member. |
| 25     | Print illustration  
Prints an illustration of printer files, display files, or data base files. |
| 30     | Source modifications editor  
Allows you to view the source modifications made to the member through SEU after source was generated. Stored in the F93002 file.  
Only applicable to CASE users. |
Exercises
See the exercises for this chapter.
CASE Profiles

About CASE Profiles

CASE profiles are user defined values that can pertain to individual users or to one *PUBLIC user profile.

Information is stored in the CASE profiles file (F98009).

These profiles are used to define the overall CASE operating environment.

Various processing control parameters are defined by the user including:

- Default development libraries
- Compile job queue
- Program Generator source generation job queue
- Compile print options
- SAR logging options
The user should immediately update the record for User ID *PUBLIC.

When entering information for *PUBLIC, all fields are required.

Default CASE Profile values are maintained in a record with the User ID *PUBLIC. CASE Profile values for individual users should be entered only if overrides to the *PUBLIC values are needed.

When entering values for individual users, all fields may be left blank except for the specific values being overridden.

**Accessing CASE Profiles**

To access CASE Profiles

Select one of the following two methods to access CASE Profiles:

From menu G92 select CASE Profiles
From the Repository Services window select CASE Profiles.

The new CASE Profiles screen appears. The program will attempt to automatically inquire on your User ID. If your ID is not set up, an error will occur. You may inquire on *PUBLIC.
## Default Development Environment

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source File</td>
<td>The default source file name where source is to be stored within the source library. Must reside within the source library specified.</td>
</tr>
<tr>
<td>Source Library</td>
<td>The default library where source will be stored. The source file specified above must reside within this library.</td>
</tr>
<tr>
<td>Object Library</td>
<td>The default library where compiled objects will be stored.</td>
</tr>
<tr>
<td>CL Source File</td>
<td>The default library where source for CL programs will be stored. The value specified must reside within the source library specified.</td>
</tr>
<tr>
<td>Data File Library</td>
<td>Used to specify the test (or development) library for physical and logical files. Used as the default object library for the Software Versions Repository when copying source code for physical or logical files.</td>
</tr>
</tbody>
</table>
| SAR Number          | An abbreviation for software action request (SAR). *NONE = the SAR number will not be validated in any of the CAD/CAP programs and can be left blank.  
|                     | If a SAR number is entered, it is used in conjunction with the SAR Delivery Type of *DFT (default).                                              |
| Version ID          | The software version number to be defaulted in the Software Versions Repository file.                                                        |
| Status Code         | Determines the status of the software as well as where it resides in production. It will specify that the software is in production, in development, or in a release. |

If you create anything custom put 2, 3, or 4 in user defined codes. If you have “1” (production) the system will think it is a J.D. Edwards file and write over it during the Software Version Repository Merge in an upgrade.
Program Creation Options

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compile Job Queue</td>
<td>Specifies which job queue will be used when submitting programs to compile.</td>
</tr>
<tr>
<td></td>
<td>Used for programs with a function code of RPG, CBL, PLI, C, and SYSC.</td>
</tr>
<tr>
<td>Program Generator Job Queue</td>
<td>Specifies which job queue will be used when submitting jobs for the Program Generator.</td>
</tr>
<tr>
<td></td>
<td>These jobs include the source code generation and the source code monitor from SEU.</td>
</tr>
<tr>
<td>Compile Target Release</td>
<td>Used by various AS/400 compilers (RPG, CLP, COBOL, C) to compile an object compatible with a specified IBM target release.</td>
</tr>
<tr>
<td></td>
<td>A value of *CURRENT compiles an object compatible to the release of the machine at compile time.</td>
</tr>
<tr>
<td></td>
<td>A value of *PRV compiles an object compatible with both one release back and the current release.</td>
</tr>
<tr>
<td>Print Option</td>
<td>Used to designate whether or not a report will be generated when an object is compiled.</td>
</tr>
<tr>
<td></td>
<td>0 = no print.</td>
</tr>
<tr>
<td></td>
<td>1 = print.</td>
</tr>
<tr>
<td></td>
<td>2 = print and hold spool file.</td>
</tr>
<tr>
<td></td>
<td>3 = print only – does not generate an execution object (applies to COBOL and RPG only).</td>
</tr>
<tr>
<td></td>
<td>4 = print when creation or compile fails.</td>
</tr>
<tr>
<td>Cross–Reference Listing</td>
<td>Specifies whether a cross–reference listing will be generated for variables and fields in a program’s compile listing.</td>
</tr>
</tbody>
</table>

Make sure you have a job queue called COMPILE for COMPILE JOB QUEUE to compile programs or use a valid job queue.
SAR Options

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAR File Library</td>
<td>Specifies the library where the Software Action Request (SAR) file for software development exists.</td>
</tr>
<tr>
<td></td>
<td>If left blank, the user's library list will be used.</td>
</tr>
<tr>
<td></td>
<td>You can specify *NONE in the SAR number field if you do not want any SAR number editing.</td>
</tr>
<tr>
<td>SAR Delivery Type</td>
<td>Associated with SAR logging. SAR logging is a feature which tracks all activities related to modifying J.D. Edwards' software.</td>
</tr>
<tr>
<td></td>
<td>*NONE = no logging.</td>
</tr>
<tr>
<td></td>
<td>*LOG = log to SAR #00000000 (no SAR number is used for logging).</td>
</tr>
<tr>
<td></td>
<td>*DFT = log to a default SAR number (specified in the SAR Number field).</td>
</tr>
<tr>
<td></td>
<td>*PROMPT = log and prompt the user for the SAR number to be used and allow the user to enter the revision notes.</td>
</tr>
</tbody>
</table>

Miscellaneous

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source Gen Opt</td>
<td>For future use.</td>
</tr>
<tr>
<td>Helps Maint Opt</td>
<td>For future use.</td>
</tr>
</tbody>
</table>

Function Key Exits From the CASE Profiles Program

**F6 – Access Repository Services**

This window provides access to the other repository services, except for CASE profiles.

**F9 – Previous Profile**

Allows the user to re-inquire on the last record updated.
Summary of CASE Profiles

The CASE Profiles file is F98009.

The user will need to update the *PUBLIC record as well as add any additional individual records desired.

The user cannot delete the *PUBLIC record.

When entering information for the *PUBLIC record, all fields are required.

The record for User ID *PUBLIC contains the values that will be used as the defaults for all users unless individual user profiles have been set up.

When entering values for individual profiles, all fields are left blank EXCEPT for the specific values being overridden on the *PUBLIC profile.

SAR Number and SAR Delivery type work together to determine what type of SAR logging should occur.

*NONE = no SAR logging at all.

*LOG = no SAR number will be included as part of the SAR logging.

*DFT = the SAR number specified will be used for the SAR logging.

*PROMPT = the user will be prompted for a SAR number and revision notes when an entry is about to be made to the SAR log.

Exercises

See the exercises for this chapter.
Work with SAR Log

About SAR Log

After you create the SARs, you must activate SAR logging, which automatically keeps track of the SARs as you develop the software.

The SAR Log Inquiry program allows you to review information in the SAR Log file (F9810).

You can also change the SAR Number and Revision Notes for individual log records.

Complete the following tasks:

- Set up user input options for SAR logging
- Select types of SAR information to log
- Access SAR Log Inquiry

Before You Begin

- Create SARs before you activate SAR logging.

From the Version Control menu (G9261), choose CASE Profiles.
Setting Up User Input Options for SAR Logging

To set up user input options for SAR logging

On CASE Profiles

1. Complete the following fields:
   - SAR File Library
   - SAR Delivery Type

   The SAR file library contains the Work Order system files (F4801 and F4802). If you currently use these files, and if the F4802 file has different record types than what version control needs, you must create a library that contains new F4801 and F4802 files for version control purposes only. Specify this new library name in the SAR File Library field.

2. Complete the following optional field:
   - SAR Number
What You Should Know About

**SAR number and delivery type combinations**

The information you provide for the SAR Number and SAR Delivery Type fields affects how the system handles SAR logging.

If you do not provide a SAR number, and set the SAR Delivery Type field to *PROMPT, the Maintain User Default SAR Information form prompts you for the SAR number whenever you change a source code member or control table.

If you provide a SAR number, and set the SAR Delivery Type field to *DFT, the system creates SAR log entries automatically without your input.

If you provide a SAR number, and set the SAR Delivery Type field to *PROMPT, the Maintain User Default SAR Information form prompts you to change the SAR number, if necessary, whenever you change a source code member or control table.

**Invalid SAR delivery types**

*LOG and *NONE are not valid for the SAR Delivery Type field when you use the Version Control system.

If you set the SAR Delivery Type field to *PROMPT, the Maintain User Default SAR Information form appears whenever you change a source code member or control table.

If you provided a SAR number on CASE Profiles, it appears on this form. If you did not provide a SAR number, provide one on this form.

If the Transfer field on Maintain User Default SAR Information is set to 1, the Version Control system can promote the change. If it is set to 0, the system cannot promote the change.
Selecting Types of SAR Information to Log

To select types of SAR information to log

In addition to setting up user input options for SAR logging, select the types of SAR information you want to log.

1. From the Version Control menu (G9261), access the processing options for Edit and Promote.
2. Make the following changes:

**SAR Logging (1)**

Specify Y if you want to track SARs that are associated with J.D. Edwards source code and control file development only. Specify N if you want to track SARs that are associated with all software development. Leave this processing option blank to disable SAR logging and, therefore, version control.

If you specify Y, the SAR log keeps track of development automatically. It tracks changes to menus that start with ‘A’ or ‘G’ only. For DREAM Writer, it tracks changes to XJDE or ZJDE versions only. When you transfer these versions, the user ID associated with them changes to DEMO.

In addition, the SAR logging program runs a double-byte analysis against your RPG programs if you set this processing option to Y.

If you specify Y, you also must indicate the name of the library that contains your SAR files. The default library name is JDCOMDATA.

**DREAM Writer Copy (2)**

Specify Y to track changes to DREAM Writer versions (XJDE and ZJDE versions only). Specify N to not track these changes. If you track changes, the user ID changes to DEMO automatically when you transfer the versions.
Accessing SAR Log Inquiry

The SAR Log Inquiry includes several functions:

- Inquiry by user ID or SAR number with date range
- Exit to a maintenance program for the record type
- Exit to SAR detail
- Print option that allows for DREAM Writer selection

There are two ways to access the SAR Log Inquiry.

► To access the SAR Log Inquiry

1. Select one of the following methods to access the SAR Log Inquiry.
   Select SAR Inquiry from Menu G9362
   Select SAR Log Inquiry from the Repository Services window

G9362 Sr Programmers J.D. Edwards & Company JDED
1. Generic Record Copy 13. Pre-compiler Commands
2. Software Scan & Replace 14. Compile Multiple Objects
5. Message Tester 17. Copy ADW Files to Production
6. Copy DD,VO,DW,UDC,SVR,Menus 18 Generate Pgm Specs from ADW
7. File Field Description
8. SAR Log Inquiry

Selection or command

---
The new SAR Log Inquiry Screen appears.

2. Complete one or more of the following:

   User ID
   SAR number
   Date range

Records matching the search criteria will then be displayed.
### Field | Explanation
--- | ---
**AC** (Action) | The action that was taken on this record.  
The standard action code values apply.

**Ty** (Record Type) | The type of record that was updated.  
Use F1 to display all valid record types stored in User Defined Code 98/RT.

**Item** | The identification number (program number, file number, report number) assigned to any element of the software. These items are the members that reside in the Software Versions Repository or other repositories such as the Data Dictionary, Vocabulary Overrides etc.

**SAR Number** | The SAR number under which this change was made.  
This field can be updated on this video.

**Revision Note** | A user defined description field to further clarify the change made.  
This field can be updated on this video.

**Time** | The time at which the change was made.

**Date** | The date on which the change was made.

**User** | The user who made the change.

---

### Selection Exits from the SAR Log Inquiry

| Exit | Explanation |
--- | --- |
2 – Edit | Allows for maintenance of the record type.  
What program is accessed is based on the record type. For example, if the record type is ‘DD’, this exit will take the user to the Data Dictionary program.

5 – Work SAR | Exits to the SAR associated with the SAR log entry.

9 –Delete | Allows the user to delete entries from the SAR log.

---

If the user entered this program from the Repository Services window from the Software Versions Repository program, a selection exit 2 will not function with record types ‘SV’ or ‘PG’ as these record types attempt to call the Software Versions Repository which causes a recursive call error.
Function Key Exits from the SAR Log Inquiry

**F5 – ASI Entry**
Exits to Application Specific Instructions for use during a software upgrade. You need the F0098 file to do this.

**F6 – Access Repository Services**
This window provides access to the other repository services, except for SAR Log Inquiry.

**F21 – Print**
Allows the user to print a SAR log report.
Exits to a DREAM Writer versions list.

Summary of the SAR Log Inquiry

Uses the file F9810.

If the user does not want to use the SAR Logging feature at all, they need to specify *NONE in the **SAR Delivery Type** field for all CASE Profile records.

To use the SAR Logging feature, the user must specify a value of *LOG, *DFT, or *PROMPT in the **SAR Delivery Type** field for all CASE Profile records.

The SAR Logging feature will record any changes that the user makes to the Data Dictionary, Vocabulary Overrides, User Defined Codes, etc.

The **SAR Log Inquiry** program allows the user to see what changes they made to any of the above.

The **SAR Log Inquiry** program has Function Keys and Selection Exits which allow the user to change the SAR Log records in the SAR Log file (F9810) or to exit to the maintenance program for the change they made.

For example: Exit to the Data Dictionary program if the record indicates a Data Dictionary item was added/updated.

Exercises
See the exercises for this chapter.
Work with Promotion Paths and Projects

Working with Promotion Paths and Projects

A promotion path defines how a project’s source code members and control file data will move from one environment to another. An environment consists of source code members and control file data. For source code members, the environment consists of:

- A source file
- A source library
- An object library

For control file data, the environment consists of a data library.

Perform the following tasks:

- Understand promotion paths
- Define a promotion path
- Define a project
- Assign promotion paths
- Assign project SARs
- Promote a project
Understanding Promotion Paths

A promotion path specifies the current locations of source code members and control file data and where they will be moved. For example, promoting a project’s source code members and control file data from a development environment to a test environment could look similar to the following illustrations.

Each move between two environments requires that you define a unique promotion path.
A project, is a collection of software and data you want to group together for promotion. A project is defined by the following characteristics:

- SARs that are associated with the project
- Promotion paths that determine the movement of the project software and data between environments
- Other projects that are attached to the project

Before You Begin

- Verify that the SARs and promotion paths you want to associate with a project have been set up.

- The SAR system uses the Work Order files (F4801 and F4802). If your production environment uses these files, and if the F4802 file has different record types than what version control needs, define a separate library that contains these files for version control purposes only.
Defining a Promotion Path

Several steps are involved in defining promotion paths. Complete the following tasks:

- Locate a promotion path
- Add a promotion path
- Define a promotion path for source code members
- Define a promotion path for control tables

From the Version Control menu (G9261), select Manage Promotion Paths.

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Release</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>JDF73 Transfer to JDF73</td>
<td>A73</td>
</tr>
<tr>
<td>2</td>
<td>‘T’ file transfer to JDF73</td>
<td>A73</td>
</tr>
<tr>
<td>3</td>
<td>Transfer to JDF73 SECURE</td>
<td>A73</td>
</tr>
<tr>
<td>4</td>
<td>Transfer to JDF71</td>
<td>A71X</td>
</tr>
<tr>
<td>5</td>
<td>Transfer to JDX71</td>
<td>A71X</td>
</tr>
<tr>
<td>6</td>
<td>Utility CIS – PCCPY</td>
<td>A71X</td>
</tr>
<tr>
<td>7</td>
<td>Utility CIS – PCCPY</td>
<td>A71X</td>
</tr>
<tr>
<td>8</td>
<td>Utility CIS – PCCPY</td>
<td>A71X</td>
</tr>
<tr>
<td>9</td>
<td>Utility CIS – PCCPY</td>
<td>A71X</td>
</tr>
<tr>
<td>10</td>
<td>Utility CIS – PCCPY</td>
<td>A71X</td>
</tr>
<tr>
<td>11</td>
<td>Utility CIS – PCCPY</td>
<td>A71X</td>
</tr>
<tr>
<td>12</td>
<td>UQF build for A6.2</td>
<td>A62</td>
</tr>
<tr>
<td>13</td>
<td>UQF build</td>
<td>A71</td>
</tr>
<tr>
<td>14</td>
<td>Version control training</td>
<td>A71</td>
</tr>
</tbody>
</table>

Opt: 1=Change  2=Members  3=Ctl Files  F5=Add Path  F24=More Keys
To locate a promotion path

Select one of the following methods to locate a promotion path:

On a blank Manage Promotion Paths form, press Enter.

The screen displays a complete list of promotion paths.

On Manage Promotion Paths enter the path name in the Promotion Path field.

The screen displays the path name. If the promotion path does not exist, the screen displays the path name that is closest alphabetically.

To add a promotion path

1. Press F5 (Add Path) on the Manage Promotion Paths form.
2. Complete the Promotion Path form.
   - Add a new path name, a path description, and a release level.
   - Use the Code 1–5 fields for additional classifications.
     - Code 1–5 fields are user defined in system 92, types E1, E2, E3, E4, and E5.
   - Specify the status of the promotion path in the Code 4 field.
   - Field-sensitive help (function key F1) provides valid values for the Code 4 and 5 fields.
   - Specify the type of promotion environment in the Code 5 field.

   To define a promotion path for source code members

1. Locate Promotion Path Members using one of the following methods:
   - From the Manage Promotion Paths form, locate the promotion path you want to define.
   - Then enter 2 (Members) in the OP (Option) field next to the promotion path name.
   - From the Promotion Path form, press F10 (Members).

The From Environment area on the Promotion Path Members form shows the current locations of the source and object code. The To Environment area shows the locations to which the code will be moved.
2. Specify source files and library names for each member type you list on this screen.

To display valid member types and their descriptions, press F1 while your cursor is in a Mbr Type field. The member types are defined in the Function Codes user defined code table (98/FN).

To copy source file and library names from one member type to another, type 1 (Copy) in the OP (Option) field next to the member type you want to copy. Type 2 (Target) in the OP fields next to the member types you want the information copied to, and press Enter. You can specify multiple targets.

The following chart shows some of the function keys available on this screen.

<table>
<thead>
<tr>
<th>KEY</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>F9</td>
<td>Redisplays the record for the previously-changed path.</td>
</tr>
<tr>
<td>F11</td>
<td>Displays the Promotion Path Control Files screen.</td>
</tr>
<tr>
<td>F13</td>
<td>Displays the CASE Profiles screen.</td>
</tr>
<tr>
<td>F14</td>
<td>Retrieves the source file, source library, and object library from your CASE profile and fills in the From environment. This overwrites any information currently in the fields.</td>
</tr>
<tr>
<td>F15</td>
<td>Duplicates the source file and library names from the first member type to the remaining member types.</td>
</tr>
</tbody>
</table>

**What You Should Know About**

**Copying an existing promotion path**
If you copy an existing promotion path to create a new path, be sure that the source files and library names for the members are correct for the new path.

**Changing library names**
To change library names, enter the new library names over the current ones.
To define a promotion path for control tables

1. Locate the Promotion Path Control Files using one of the following methods:
   - From Manage Promotion Paths, locate the promotion path you want to define and enter 3 (Ctl Files) in the OP (Option) field next to the promotion path name.
   - From the Promotion Path screen, press F11 (Ctl Files).
   - From the Promotion Path Members screen, press F11 (Ctrl Files).

The From Data Libr column on the Promotion Path Control Files form shows the current location of the data records. The To Control Lib column shows the location to which the data records will be moved.

2. Specify library names for each record type listed on this form.

The following chart shows some of the function keys available on this form.

<table>
<thead>
<tr>
<th>KEY</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>F9</td>
<td>Redisplays the record for the previously-changed project.</td>
</tr>
<tr>
<td>F10</td>
<td>Displays the Promotion Path Members screen.</td>
</tr>
<tr>
<td>F13</td>
<td>Displays the CASE Profiles screen.</td>
</tr>
</tbody>
</table>
To copy library names from one record type to another, type 1 (Copy) in the OP (Option) field next to the record type you want to copy. Type 2 (Target) in the OP fields next to the record types you want the information copied to, and press Enter. You can specify multiple targets.

**Guidelines**

If you copy an existing promotion path to create a new path, be sure the library names for the control files are correct for the new path.

To change library names, enter the new library names over the current ones.

**Defining a Project**

Complete the following tasks:

- Locate a project
- Add a project
- Assign promotion paths
- Assign project SARs

From the Version Control menu (G9261), choose Manage Projects.
To locate a project

Locate a project using one of the following methods:

- On a blank Manage Projects form, press Enter.
  
  A complete list of projects appears.

- On the Manage Projects form, enter the project name in the Project field.
  
  The project name appears on the form. If the project does not exist, the project name that is closest alphabetically appear on the form.
To add a project

1. On Manage Projects  select Add Project.

The Software Development Project form appears.

2. Complete the Software Development Project form.
   - Enter a new project name.
   - Enter a project description.
   - Enter any other information you want to associate with the project.
   - Complete the Code 1–5 fields for additional classifications.
     - The Code 1–5 fields are user defined in system 92, types P1, P2, P3, P4, and P5.

3. If you want to attach this project to a parent project, specify the parent project name in the Parent Project field.
The following chart shows some of the function keys available on this form.

<table>
<thead>
<tr>
<th>KEY</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>F9</td>
<td>Redisplays the record for the previously-changed project.</td>
</tr>
<tr>
<td>F10</td>
<td>Displays the Project Promotion Paths screen.</td>
</tr>
<tr>
<td>F11</td>
<td>Displays the Project Elements screen.</td>
</tr>
<tr>
<td>F14</td>
<td>Displays the generic text associated with this project, and gives you access to text model selections.</td>
</tr>
</tbody>
</table>

You must assign promotion paths and SARs to the project you set up here. The following sections explain how to assign them.

**To assign promotion paths**

1. Locate the project to which you want to assign promotion paths using one of the following methods.
   - On Manage Projects locate the project to which you want to assign promotion paths.
   - Enter 2 (Paths) in the OP (Option) field next to the project name.
   - On Software Development Project, press F10 (Promotion Paths).
2. Specify the promotion paths you want to assign to this project.

   To display the available promotion paths, press F1 (Help) while the cursor is in a Promotion Path field.

The following chart shows some of the function keys available on this screen.

<table>
<thead>
<tr>
<th>KEY</th>
<th>RESULT</th>
</tr>
</thead>
<tbody>
<tr>
<td>F9</td>
<td>Redisplays the record for the previously-changed project.</td>
</tr>
<tr>
<td>F11</td>
<td>Displays the Project Elements screen.</td>
</tr>
</tbody>
</table>

The following chart shows options available on this screen.

<table>
<thead>
<tr>
<th>OPTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Edit the promotion path details.</td>
</tr>
<tr>
<td>2</td>
<td>Edit the promotion path members.</td>
</tr>
<tr>
<td>3</td>
<td>Edit the promotion path control files.</td>
</tr>
</tbody>
</table>
To assign project SARs

SARs are elements of a project, and other projects can also be elements of a project.

1. Access the Project Elements form using one of the following methods:
   - From the Version Control, choose Edit and Promote.
   - From the Manage Projects, locate the project to which you want to assign elements.
     - Then enter 3 (SARs) in the OP (Option) field next to the project name.
   - From the Software Development Project screen, press F11 (Project SARs).
   - From the Project Promotion Paths screen, press F11 (Project SARs).

The Project Elements screen displays the elements (usually SARs) assigned to the project.

2. Specify the elements (usually SARs) you want to assign to this project. You can also assign projects, which have SARs associated with them, as elements on this screen.
   - In the TY (Type) fields, specify the corresponding element types (S for SARs, and P for projects). The following chart shows some of the function keys available on this screen.
The following chart shows options available on this screen.

<table>
<thead>
<tr>
<th>OPTION</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Display or edit the SAR detail.</td>
</tr>
</tbody>
</table>
| 2      | Display or edit the SAR log.  
The SAR Log Transfer screen appears, which lets you edit the SAR log and update the project SARs. For more information about updating the SARs by using this log, see *Update the SARs* in this publication. For information about the SAR log, refer to the *Computer Assisted Design Reference Guide*. |
| 3      | Display the Pre-Promotion Edit History screen.  
For information about this function, see *Promote a SAR* in this publication. |
| 4      | Promote a project.  
For information about this function, see *Promote a SAR* in this publication. |
| 5      | Display the promotion history of a SAR ('Z' record). |
| 6      | Display or edit notes associated with a SAR (for J.D. Edwards environments only; '*' record). |
Promote a Project

Promoting a Project

After you create a project, link promotion paths and SARs to it, and complete project development, you are ready to begin the promotion process. The promotion process has three parts.

Complete the following tasks:

- Update the SARs (F4802) by using the SAR log
- Validate the SAR for promotion by performing a pre-promotion edit
- Promote the SAR

Before You Begin

- The SAR system uses the Work Order files (F4801 and F4802). If your production environment uses these files, and if the F4802 file has different record types than what version control needs, define a separate library that contains these files for version control purposes only.

See Also

*Defining a Promotion Path*
Updating the SARs

From the Version Control menu (G9261), choose Edit and Promote.

To update the SARs

The SARs, which are contained in the Work Order Header file (F4801), have detailed information in the Work Order Detail file (F4802). You must update the information in the SARs to reflect software developments that are recorded in the SAR log.

When you developed the software, the changes were recorded in the SAR log automatically. You now must update the F4802 file.

1. From the Edit and Promote screen, inquire on the project you want to promote.

2. In the OP (Option) field next to the project SAR you want to update, enter 2 (SAR Log).

The SAR Log Transfer screen appears, which lists all added or changed records logged in the SAR log (F9810) according to record type. The SAR Detail Sts field shows whether the record has been updated in the F4802 file.
If this screen lists many SAR log records, you can narrow your search by entering information in the Record Type and the and/or Member fields.

NOTE: If you want to view the details of a SAR log item, enter 1 (Details) in the OP (Option) field next to the item. From the screen that appears, you can edit the SAR details. If the SAR logging system does not log an item that you want to include, press F5 (Add) from the SAR Log Transfer screen to add it.

3. To update the F4802 file, press F10 (Update SAR).

IMPORTANT: Before you update a SAR, verify that each SAR log record should be transferred with the SAR. Change or delete those that are associated incorrectly with the SAR. To display all records with data that can be transferred (TR field value is 1) or with test data (TR field value is 0), press F16 (Display Update Capable/All Items). Update only those records that should be transferred with this SAR.

The system creates or updates the records in the SAR file that is located in the SAR library you indicated in the Edit and Promote processing options (not the SAR library appearing in your library list).

Validating a Promotion Path

Before you promote a SAR, you must perform a pre-promotion edit, or validation, against the promotion path that will be used for this SAR.
To validate a promotion path

1. From the Edit and Promote screen, inquire on the project you want to promote.
2. In the Promotion Path field, type the name of the promotion path you want to use for your project.
3. In the OP (Option) field next to the project SAR you want to update, enter 3 (Edit).

NOTE: If you did not choose a promotion path for the project, the Project Promotion Paths window lists all promotion paths defined for the project.

<table>
<thead>
<tr>
<th>Path Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A62CUM</td>
<td>Transfer to current A62 Cum</td>
</tr>
<tr>
<td>A62PC000TI</td>
<td>User based pricing</td>
</tr>
<tr>
<td>A71CUM</td>
<td>Transfer to current A71 Cum</td>
</tr>
<tr>
<td>A72CUM</td>
<td>Transfer to current A72 Cum</td>
</tr>
<tr>
<td>JDF62</td>
<td>Transfer to JDF62</td>
</tr>
<tr>
<td>JDF62TEC</td>
<td>Transfer to JDF62–SECURE</td>
</tr>
<tr>
<td>JDF71</td>
<td>Transfer to JDF71</td>
</tr>
<tr>
<td>JDF71TEC</td>
<td>Transfer to JDF71–SECURE</td>
</tr>
</tbody>
</table>

In the O (Option) field next to the promotion path you will use to promote the project, enter 4 (Select). If you have run pre-promotion edits previously for this SAR, the Pre-Promotion Edit History screen lists them. Otherwise, this screen is blank.
NOTE: To view the errors associated with a pre-promotion edit, enter 1 (Details) in the OP (Option) field next to the desired history record.

4. From the Pre-Promotion Edit History screen, press F5 (Perform Edit) to perform the pre-promotion edit.

5. Correct any errors and perform the edit until no errors occur. You do not need to resolve warnings that may occur.

The following table shows a partial list of errors and how to resolve them.
<table>
<thead>
<tr>
<th>Error Code</th>
<th>Cause and Resolution</th>
</tr>
</thead>
</table>
| 0020       | **Cause:** A ‘From’ library you entered does not exist or you are not authorized to use it.  
**Resolution:** Either correct the library name, create the library, or get authorization to use it. |
| 0092       | **Cause:** A database table or member could not be opened because it did not exist, a conflicting lock state held by another job exists, or you are not authorized to open it.  
**Resolution:** Check your job log messages. |
| 1046       | **Cause:** An XJDE or ZJDE version was expected but not found.  
**Resolution:** If an XJDE or ZJDE version should exist, create it. If not, then change the processing option for form ID P926304. |
| 1370       | **Cause:** A ‘From’ table you entered does not exist or you are not authorized to use it.  
**Resolution:** Review the ‘From’ library for the promotion path control table. Either correct the library name or create the table. |
| 1371       | **Cause:** A ‘To’ table you entered does not exist or you are not authorized to use it.  
**Resolution:** Review the ‘To’ library for the promotion path control table. Either correct the library name or create the table. |
| 1372       | **Cause:** A key you wanted to copy from the ‘From’ library does not exist.  
**Resolution:** Review the ‘From’ library for the promotion path control table. Either correct the library name or re-enter the data record. |
| 2892       | **Cause:** A ‘From’ library name is the same as the corresponding ‘To’ library name.  
**Resolution:** Review the ‘From’ and ‘To’ libraries for the promotion path control table. Make the appropriate changes. |
Promote a Project

4395  **Cause:** No records exist in the Promotion Path Members table (F92401) for the promotion path you specified.

**Resolution:** Complete the Promotion Path Members form for the promotion path.

4396  **Cause:** No records exist in the Promotion Path Members table (F92401) for the promotion path you specified.

**Resolution:** Complete the Promotion Path Control Files form for the promotion path.

4397  **Cause:** No records exist in the SAR Log table (F9810) for the project you specified.

**Resolution:** In the project master record, change the based-on table for the Pre-Promotion Edit to the SAR Detail table (F4802), then manually update the SAR Detail records for the members and control table records updated by this project.

4400  **Cause:** No record exists in the Promotion Path Members table (F92401) for the function code of the member you want to promote.

**Resolution:** For the specified promotion path, enter the environment for the function code of the member.

4402  **Cause:** No record exists in the Promotion Path Control Files table (F92402) for the control table you want to promote.

**Resolution:** For the specified promotion path, enter the environment for the control table of the record.

4439  **Cause:** An error occurred while you attempted to copy a source code member.

**Resolution:** Check for valid library, table, and member names, as well as options in the CPYF command. Check the job log for the error message ID.
Promoting a Project

The promotion process involves transferring members and copying control file data.

Before You Begin

☐ Before you promote the project, be sure you have edited all items that appear on the SAR Log Transfer screen. Otherwise, the SAR Log Transfer screen appears when you attempt to promote the project.

☐ You must update all SAR log records associated with the SAR before you promote it.

☐ You also must resolve all errors (not warnings) before you promote the SAR.

► To promote a project

1. From the Promote a Project screen, inquire on the project you want to promote.
2. In the OP (Option) fields next to the project elements you want to promote, enter 4 (Promote).

   NOTE: Press F14 to select all project elements automatically for promotion.

   The Project Promotion Paths window appears.

3. In the O (Option) field next to the promotion path you want to use, enter 4 (Select).
4. In the OP (Option) fields next to the member IDs, specify whether to transfer:

   Both source and object code (option 1)

   Source code only (option 2), or

   Object code only (option 3)

NOTE: To override the From Environment and To Environment object libraries before you transfer the members, press F6 before you enter options 1, 2, or 3. Enter the names of the object libraries to which you want the members transferred.

The system transfers the members you selected to the target environment.

NOTE: You can review the batch job that was submitted by this transfer program from the J.D. Edwards command line. To display the command line, press F2.

If your promotion is successful, the system deletes all SAR log records for transferred items. It also creates a new SAR log record for each transferred item and associates it with the target library.

5. To copy control file data, press F5 (Control Files) from the Software Transfer screen.
6. In the OP (Option) fields next to the items you want to copy, enter 1 (Copy to target library).

   NOTE: Press F13 to select all items automatically for copying.

   The system copies the items you selected to the target environment.
Promote Project Updates

Promoting Project Updates

The version control process for project updates includes the following general steps.

Create the transfer library
Prepare the SAR system
Define promotion paths
Define a project
Update the SARs
Validate the promotion path
Promote a SAR
Save the transfer library to tape (or to a save file for a network)
Restore the transfer library from tape (or from the save file)
Print the transfer library report
Load the transfer library

NOTE: You can merge entire control files or individual records.
Creating the Transfer Library

To create the transfer library

1. From the Software Install menu (G9262), choose Build Transfer Library.

**WARNING!!!**
If you specify a library that already exists on your system to be used as a software transfer library it will be cleared prior to use. All data and objects in that library will be lost.

If the library you specify does not exist it will be created for you.

( F6 – Execute )

2. After you read the warning message, press F6 (Execute).

---

**98312**
Build Transfer Library
Form ID. . . . P92414
Version. . . . ZJDE0001
Build Skeleton Transfer Library
Display Level. 4

This job has various options described below. Enter the desired values and press ENTER to continue.

Enter the name of the transfer library to be created. If the library already exists it will be CLEARED before use.

MYLIBRARY

F5=Printer Overrides
3. In the processing option field, enter a name for the transfer library you want to create.

► To prepare the SAR system

To prepare your SAR system, see Prepare the SAR System in this publication.

► To define a promotion path

From the Version Control menu (G9261), choose Manage Promotion Paths. Use the project update library name as your promotion path name. For information about defining a promotion path, see Define Promotion Paths in this publication.

► To define a project

To define a project, see Define a Project in this publication.

► To update the SARs

From the Software Install menu (G9262), choose Edit and Promote. For information about updating a SAR, see Update the SARs in Promote a SAR in this publication.

► To validate the promotion path

From the Software Install menu (G9262), choose Edit and Promote. For information about validating a promotion path, see Validate the Promotion Path in Promote a SAR in this publication.

► To promote the project

From the Software Install menu (G9262), choose Edit and Promote. For information about promoting a SAR, see Promote the Project in Promote a SAR in this publication.

Saving the Transfer Library to Tape

► To save the transfer library to tape

1. From the Software Install menu (G9262), choose Save Library to Tape.
2. In the Library field, type the name of your transfer library.

3. In the Device field, enter the name of your tape device.
Restoring the Transfer Library from Tape

To restore the transfer library from tape

1. From the Software Install menu (G9262), choose Restore Library from Tape.

2. In the Saved Library field, type the name of your transfer library.

3. In the Device field, enter the name of your tape device.
Printing the Transfer Library Report

1. From the Software Install menu (G9262), choose Print Transfer Report.

   A processing options screen appears. Use the roll keys to display additional processing options.
Promote Project Updates

2. In the first processing option field, type the name of your transfer library.
3. In the remaining processing option fields, select the types of control files for which you want to print information.
4. To print the report, press Enter.
An example of the Print Install Records report (P924143) follows. It provides the total number of records for each type of control file. It also shows whether the transfer record exists already in your control file.

<table>
<thead>
<tr>
<th>Record Type</th>
<th>Primary Item</th>
<th>Secondary Item</th>
<th>Description</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Menus</td>
<td>G9261</td>
<td></td>
<td>Version Control</td>
<td>Changed</td>
</tr>
<tr>
<td>Menus</td>
<td>G9262</td>
<td>Software Install</td>
<td>Changed</td>
<td></td>
</tr>
<tr>
<td>DREAMwriter / PO</td>
<td>P00PURGE</td>
<td>ZJDE0024</td>
<td>Payee Control File Purge</td>
<td>Changed</td>
</tr>
<tr>
<td>DREAMwriter / PO</td>
<td>P92412</td>
<td>ZJDE0001</td>
<td>Promote a Project</td>
<td>Changed</td>
</tr>
<tr>
<td>DREAMwriter / PO</td>
<td>P92413</td>
<td>ZJDE0001</td>
<td>Manage Projects</td>
<td>Changed</td>
</tr>
<tr>
<td>DREAMwriter / PO</td>
<td>P92414</td>
<td>ZJDE0001</td>
<td>Build Skeleton Transfer Library</td>
<td>Changed</td>
</tr>
<tr>
<td>DREAMwriter / PO</td>
<td>P924143</td>
<td>ZJDE0001</td>
<td>Control File Changes to be Ins</td>
<td>Changed</td>
</tr>
<tr>
<td>DREAMwriter / PO</td>
<td>P924147</td>
<td>ZJDE0001</td>
<td>Load Transfer Software</td>
<td>Changed</td>
</tr>
<tr>
<td>DREAMwriter / PO</td>
<td>P924801</td>
<td>ZJDE0001</td>
<td>SAS Inquiry by Reference</td>
<td>Changed</td>
</tr>
</tbody>
</table>

Loading the Transfer Library

Before You Begin

- Before you load the transfer library, you must create new target libraries for the objects, source code, and data files you will transfer. In your target source library, you must create the following multi-member source files:

  JDESRC
  JDECPY
  F98CRTCMD

To load the transfer library

Load the contents of your transfer library into your target libraries. The process merges control file records into your library files. You also can transfer control file records individually. For more information, see Transfer Individual Control File Records following this procedure.
1. From the Software Install menu (G9262), choose Load Transferred Library.

**WARNING!!!**

This program will transfer source code, objects and new data files into the libraries you name in the processing options. It will also add to or replace data in the control files in your current library list.

It is recommended that you first run the 'Print Transfer Report' to view control file changes.

( F6 – Execute )

2. After you read the warning message, press F6 (Execute).

A processing options screen appears. Use the roll keys to display additional processing options.

```
98312                   Load Transferred Library    Form ID. . . . P924147
Load Transfer Software                               Display Level. 4
This job has various options described below. Enter the desired values and
press ENTER to continue.

Enter name of Transfer Library or blank for no transfer. MYLIBRARY

Enter name of Target Object Library or blank for no transfer. MYOBJ

Enter Name of Target Source Library or blank for no transfer. MYSRC

Enter Name of Target New Files Library or blank for no transfer. MYDATA

More...                                         +
F5=Printer Overrides
```
3. In the first processing option field, specify the name of your transfer library.
4. In the next three fields, specify the libraries you created for the source code, objects, and data files you will transfer.
5. In the remaining fields, select the control files you want the system to transfer.
6. To begin the transfer, press Enter.

**IMPORTANT:** The system merges the control files into the target data library. For non-control files, the system adds the file if it currently does not exist in the
target data library. If the file does exist in the target data library, the system does not transfer the file or any data. After the transfer process completes, you must change these files manually based on information in the Print Install Records report (P924143).

NOTE: Even though you can include next numbers in the transfer library and display information about them in the Print Install Records report, the system will not transfer them automatically. This protects your next number tables. After the transfer process completes, you must change them manually based on information in the report.

**Transferring Individual Control Table Records**

1. From the Software Install menu (G9262), choose Copy DD,VO,DW,UDC,SVR,Menus.

```
99630                       Copy DD,VO,DW,UDC,SVR,Menus
From Library . . . . . . MYLIBRARY   To Library . . . . . . MYDATA
Dictionary Item. . . . . . Language . . . . . . . Appl Ovr . . . . . . .
Vocabulary Overrides . . . . . Language . . . . . . . Appl Ovr . . . . .
DREAM Writer Form. . . . . . Language . . . . . . .
User Def Codes Sys . . . . Type . . . .
Software Versions Rep. .
Menu Identification . .
Generic Rate/Msg Sys . . Type . .
```

2. In the From Library, type the name of your transfer library.
3. In the To Library, type the name of the target data file library.
4. In the appropriate fields, enter information that is specific to the control file record you want to transfer.
Programming Tools

Objectives

To work with data modeling
To understand the Software Versions Repository
To set up user defined values
To retrieve information
To create data description specifications
To design and maintain display forms
To design reports

About Programming Tools

Perform the following tasks:

☐ Work with Data Modeling
☐ Work with Software Versions Repository
☐ Work with the Object Cross-Reference Repository
☐ Work with Data Dictionary
☐ Work with Data File Design Aid
☐ Work with Screen Design Aid
☐ Work with Report Design Aid
Work with Data Modeling

Working with Data Modeling

The Data Modeling feature provides graphic representation of the relationships of different files. The important aspects of J.D. Edwards Data Modeling feature are:

- It is graphical in its presentation.
- It allows you to narrow the amount of information you view so you can better analyze the file and data relationships.
- It is integrated back to the data dictionary and other cross reference tools.
- Because data models only display files for those systems you have installed at your location, the examples in this section may vary from the ones at your company.
- In order to create a data model, you must run the Data Model rebuild.
Accessing Data Modeling

There are two ways to access Data Modeling.

To access data modeling

1. Use one of the following two methods to access Data Modeling.

   Inquire on the file through the Software Versions Repository and then press F23
   Select Data Modeling from Model Relations

   The Data Model Diagrammer displays models from Base Files stored in the Entity Relationship Tracking file (F9604). When using the Data Model Diagrammer for the first time, rebuild the Cross Reference Index of the menu G9642. This rebuild will create data in the Entity Relationship Tracking file and allow file relationships to be built.

   (F6 – Execute)

A menu message screen appears suggesting the sample data you can use to view a supplied data model.

2. Press F6 to continue.
The Data Modeling screen appears with the cursor positioned in the field where the user enters a file name.

```
98042                            Data Modeling           Max Levels .  08
Base File                        Function Use  230
                                      Display Dupl  1
                                      In Sys  00 02 03 04

Opt:  1=Move Top 5=Display 7=Where Used  8=Fields  F11=Install/Reporting
```

3. To view the Data Model, enter a file name and press Enter.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Levels</td>
<td>Determines what level of detail you want to view in terms of file relationships. Level 1 represents the highest level and level 10 represents the lowest level. The default value is level 08. Level 01 shows only those files that are directly related to the data model file.</td>
</tr>
<tr>
<td>Function Use</td>
<td>Displays the files that either match or have a function use less than the specified function use you specify.</td>
</tr>
<tr>
<td>Display Dupl</td>
<td>Determines whether you want to display duplicate relationships or not. The valid values are: 1 – no duplicates (default value) 2 – first logical only 3 – all files</td>
</tr>
<tr>
<td>In Sys</td>
<td>Limits your model to only those files from the specified install or reporting system codes. To toggle to reporting system codes, you press F11, Install/Reporting.</td>
</tr>
</tbody>
</table>
4. To narrow the amount of file information displayed specify values in the four fields appearing in the upper right of the screen.
Detailed Explanation of a Line

Business Unit Master is the primary file (F0006)
Company Constants is the secondary file (F0010)

<m:1> – There is a many to one, two way direction relation between the files

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantifier</td>
<td>The quantifier notation indicates the following:</td>
</tr>
<tr>
<td></td>
<td>M:1 – many to one</td>
</tr>
<tr>
<td></td>
<td>1:M – one to many</td>
</tr>
<tr>
<td></td>
<td>M:M – many to many</td>
</tr>
<tr>
<td></td>
<td>M:N – many to zero or many</td>
</tr>
<tr>
<td></td>
<td>N:M – zero or many to many</td>
</tr>
<tr>
<td></td>
<td>1:N – one to zero or many</td>
</tr>
<tr>
<td></td>
<td>1:1 – one to one</td>
</tr>
<tr>
<td>Direction</td>
<td>The three direction notation are as follows</td>
</tr>
<tr>
<td></td>
<td>-&gt; refers to</td>
</tr>
<tr>
<td></td>
<td>&lt;- referred to</td>
</tr>
<tr>
<td></td>
<td>&lt;-&gt; two way relation</td>
</tr>
<tr>
<td>Type</td>
<td>Used to distinguish between prototype and permanent files</td>
</tr>
<tr>
<td>Subfile portion of screen</td>
<td>Displays the key fields that relate these two files together</td>
</tr>
</tbody>
</table>
Function Key Exits from Data Modeling

**Install/Reporting**

Allows the user to toggle between displaying install or reporting system codes.

**Rebuild A File Relationship**

To rebuild a data model.

Exits to a DREAM Writer versions list.

The rebuild is fundamentally based upon the program finding a connection between data items.

For example:

If you create new data items in the Data Dictionary and use those data items when creating a new file, you will not get a graphic representation for that file because the data items do not exist in any other file. In order to create and present file relationships, there must be at least one data item in the primary file that also resides in some other file as well.

Selection Exits from Data Modeling

**Selection 1 – Move Top**

To select a file in the current data model and move it to the top to view its data model.

**Selection 5 – Display**

To view the file relationships

The Define a File Relationship screen appears displaying the relationship detail for the two files.
Selection 7 – Where Used

Exits to the Object Cross Reference Repository and displays all the programs that access the particular file.

<table>
<thead>
<tr>
<th>980014</th>
<th>Cross Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Object:</strong> Name . . .</td>
<td>F0006</td>
</tr>
<tr>
<td><strong>Type . . .</strong></td>
<td><strong>F</strong></td>
</tr>
<tr>
<td><strong>To Display</strong></td>
<td><strong>F</strong></td>
</tr>
<tr>
<td><strong>Funct Cd .</strong></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>O</th>
<th>Name</th>
<th>Description</th>
<th>Field Attr</th>
<th>T Start</th>
<th>Upd</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td></td>
<td></td>
<td>Len</td>
<td>Dec</td>
<td>Y</td>
</tr>
<tr>
<td>1</td>
<td>PJON</td>
<td>Jon Nugent Test</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>P0006</td>
<td>Business Unit Master Revisions - Single</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>P0006A</td>
<td>Business Unit Structure Revisions</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>P0006ISS</td>
<td>File Conversion - Plug the default value</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>P0006P</td>
<td>Business Unit Master Print</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>P0006QD</td>
<td>Update Bill Code If Business Unit Type = C</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>P00061</td>
<td>Job Master Revisions</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>P00062</td>
<td>Property/Building Revisions</td>
<td>Y</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>P00071</td>
<td>Work Day Calendar</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>P0012</td>
<td>Automatic Accounting Instructions Revisi</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>P0013QD</td>
<td>Convert Amounts to Domestic Decimal</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>P0013</td>
<td>Tax File Revisions</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>P0018</td>
<td>Tax File Revisions by Tax Authority</td>
<td>N</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Opt: 1=SVR  2=Create Object  3=Field Explanation  F21=Print  F16=Regenerate
Selection 8 – Fields

To access the File Field Description window for any file displayed in the Data Model.

Presents all the fields in a file, the field type, their size and their position in the file.

<table>
<thead>
<tr>
<th>98042 Data Modeling</th>
<th>Max Levels . 08 Function Use 230</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base File</td>
<td>Display Dupl 1</td>
</tr>
<tr>
<td>F0010 Company Constants</td>
<td>In Sys 00 09 03 04</td>
</tr>
<tr>
<td>a &lt;1:M&gt; F0006 F0006LB Business Unit Master</td>
<td></td>
</tr>
<tr>
<td>-</td>
<td>-M:1&gt; F0901 F0901LB Account Master</td>
</tr>
<tr>
<td>-</td>
<td>-M:M&gt; F4801 F4801LB Work Order Master File</td>
</tr>
<tr>
<td>-</td>
<td>-M:1&gt; 98FFD------File-Field-Descriptions--------S/FMT</td>
</tr>
<tr>
<td>-</td>
<td>File and Libr: F0006 TEST PF</td>
</tr>
<tr>
<td>-</td>
<td>I0006 - Business Unit Master File</td>
</tr>
<tr>
<td>-</td>
<td>MCMCU K01 Business Unit . . . A 12 1</td>
</tr>
<tr>
<td>-</td>
<td>MCDL01 Description . . . A 30 13</td>
</tr>
<tr>
<td>-</td>
<td>MCDC Description - Compre A 25 43</td>
</tr>
<tr>
<td>-</td>
<td>MCLDM Level of Detail . . A 1 68</td>
</tr>
<tr>
<td>-</td>
<td>MCAN8 Address Number . . S 8 0 69</td>
</tr>
<tr>
<td>-</td>
<td>MCCO Company . . . . A 3 77</td>
</tr>
<tr>
<td>-</td>
<td>MCSTYL Type Business Unit . A 2 80</td>
</tr>
<tr>
<td>-</td>
<td>MCRP01 Division x . . . A 3 82</td>
</tr>
<tr>
<td>-</td>
<td>MCRP02 Region . . . . A 3 85</td>
</tr>
<tr>
<td>Opt: -2=Dictionary--4=Sel--F15=Resequence--F3=Return</td>
<td></td>
</tr>
<tr>
<td>Opt: 1=Move Top 5=Display 7=Where Used 8=Fields F11=Install/Reporting</td>
<td></td>
</tr>
</tbody>
</table>
Work with the Object Cross Reference Repository

Working with the Object Cross Reference Repository

The Object Cross-Reference Repository locates all the objects associated with a particular member or object. When you add a new member to the Software Versions Repository, run the Rebuild Cross-Reference job to have the new member included in the display. You must have source on your machine to run this rebuild and display this option.

Complete the following tasks:

- Access the Object Cross–Reference Repository
- Conduct an Object Cross–Reference Repository search

Accessing the Object Cross–Reference Repository

To access the Object Cross–Reference Repository

Select one of the following methods.

From the Master Directory, select the Technical and Advanced Operations menu. From the Technical and Advanced Operations menu (G9), select Documentation Services. From the Documentation Services menu (G91), select Object Cross Reference Repository.

From Software Version Repository use F15 to access the Object Cross Reference Repository.
Example

The screen below displays all programs using the file F0006.

The first four fields on this screen relate to the object being cross-referenced. The remainder of the screen lists the members found during the cross-reference search.

Conducting a Search

All members of the Software Versions Repository are cross-referenced, and you can search for these relationships in different ways.

To conduct an Object Cross-Reference Repository search

From the Documentation Services menu (G91), select Object Cross Ref. Repository.

The following screen displays the statistics for program P0006.
1. To conduct an object cross-reference repository search, enter an object Name, Type code and To Display code. To narrow the search, enter a Funct Cd.

If you are unfamiliar with the Cross-Reference Relationships codes, type an asterisk (*) in the Type field, as shown below. Press Enter.

The window opens, and the Cross Reference Relationships codes appear.
81QM User Defined Codes Window
98 XR Cross-Reference Relationships
Skip To Code . . . . . . . . .
_/D All data fields in /COPY
_/F All files in /COPY
_/I Program invocations from /COPY
_/P Programs containing /COPY
_/CP All Programs using command
_/DF All files using data field
_/DP All programs using data field
_/EP Error messages in a program
_/P All /COPY members using file
_/FD All data fields in file
Opt: 4=Select  F9=Glossary  F14=Memo

2. Enter 4 in the single character field to the left of the desired code. The window closes and the Object Cross Ref. Repository screen displays with the selected codes.

980014 Object Cross Ref. Repository
Object: Name . . . F0006 Business Unit Master
Type . . . F All data fields in file
To Display . D
Funct Cd . O

<table>
<thead>
<tr>
<th>O</th>
<th>Name</th>
<th>Description</th>
<th>Field</th>
<th>Attr</th>
<th>T</th>
<th>Start</th>
<th>Upd</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>MCMCU</td>
<td>Business Unit . . . . . . . . . . . . . . . . . . . . .</td>
<td>12</td>
<td>A</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCSTYL</td>
<td>Type Business Unit . . . . . . . . . . . . . . . . . . . .</td>
<td>2</td>
<td>A</td>
<td>13</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCDC</td>
<td>Description - Compressed. . . . . . . . . . . . . . . .</td>
<td>40</td>
<td>A</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCLDM</td>
<td>Level of Detail. . . . . . . . . . . . . . . . . . . . . .</td>
<td>1</td>
<td>A</td>
<td>55</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCCO</td>
<td>Company. . . . . . . . . . . . . . . . . . . . . . . . . . .</td>
<td>5</td>
<td>A</td>
<td>56</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCAN8</td>
<td>Address Number. . . . . . . . . . . . . . . . . . . . . . .</td>
<td>8</td>
<td>S</td>
<td>61</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCAN8O</td>
<td>Owner/Receivable Address. . . . . . . . . . . . . . . . . .</td>
<td>8</td>
<td>0</td>
<td>S</td>
<td>69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCCNTY</td>
<td>County. . . . . . . . . . . . . . . . . . . . . . . . . . . .</td>
<td>3</td>
<td>A</td>
<td>77</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCADDs</td>
<td>State. . . . . . . . . . . . . . . . . . . . . . . . . . . .</td>
<td>3</td>
<td>A</td>
<td>80</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCDL01</td>
<td>Description. . . . . . . . . . . . . . . . . . . . . . . . . . .</td>
<td>30</td>
<td>A</td>
<td>83</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCDL02</td>
<td>Description 02. . . . . . . . . . . . . . . . . . . . . . . . . .</td>
<td>30</td>
<td>A</td>
<td>113</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCDL03</td>
<td>Description 03. . . . . . . . . . . . . . . . . . . . . . . . . .</td>
<td>30</td>
<td>A</td>
<td>143</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MCDL04</td>
<td>Description 04. . . . . . . . . . . . . . . . . . . . . . . . . .</td>
<td>30</td>
<td>A</td>
<td>173</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Opt: 1=SVR 2=Create Object 3=Field Expl  F21=Print  F16=Regenerate
Data Dictionary Repository

About the Data Dictionary Repository

The Data Dictionary is singularly the most powerful element in all of J.D. Edwards’ software offerings. We define all data items used by J.D. Edwards programs in the Data Dictionary. By requiring this up-front definition, the Data Dictionary enforces uniformity, consistency, and accuracy across all J.D. Edwards applications.

The Data Dictionary represents a centralized glossary of all:

- Field definitions
- Program error messages, both interactive and batch
- Menu messages
- Work fields
- User Defined Help instructions
- Program and field descriptions accessed by the Help facility

Complete the following tasks:

- Understand the Data Dictionary structure
- Locate a data item name
- Work with the Data Dictionary
- Work with data item alias revisions
- Work with Data Dictionary glossary
- Work with user defined help instructions
- Work with data field descriptions
- Work with the next numbers facility
- Locate the field reference rebuild
Understanding the Data Dictionary Structure

Eight separate files comprise the Data Dictionary Repository.

The following diagram illustrates the relationships between these files.

Data Item Master (F9200)
This is the master file for the Data Dictionary. Every data item has a record in this file.

Data Field Specifications (F9201)
This file contains database fields, which is a glossary group of “D” or “S,” work fields, glossary group “U,” and categories, glossary group “C.” This file contains the base display/validation rules for all file and data items.
Data Field Display Text (F9202)

This file lets you define multiple row descriptions and column titles for each data item, based upon language and/or reporting system — application override. You may add a language value for each language translation required for the row description and column title. The reporting system code allows the entry of jargon or company terminology.

Data Item Alpha Descriptions (F9203)

This file contains the alpha and compressed descriptions for all data items. This allows users to perform a Data Dictionary search by description. You may also specify separate alpha descriptions by language preference and reporting system. Every data item has a record in this file.

Data Item Aliases (F9204)

This file only contains database fields, which is a glossary group of “D” or “S”. This file contains multiple aliases for both a COBOL alias and a C alias for each data item.

Error Message Program ID (F9205)

This file contains error messages that have a program, video, or report ID attached to them. The user exits to this program, video, or report when he/she receives the error. For example, if a user receives a user defined code error, he/she could exit to User Defined Code Revisions program to modify a value.

Glossary Text File (F9816)

This file contains the glossary text for every data item. Each line of text in the glossary is one record.

Key Index File (F98163)

This file contains key information to link the data items to their glossary and to specific items.
Locating A Data Item Name

The system uses data items to define the parameters of a field or message. For example, AT1 defines the field Search Type. The system maintains each data item used in a file or retrieved for a form or report based on a data item name, such as AT1. To work with the Data Dictionary functions you need to know this name.

To locate a data item name

The J.D. Edwards field-level help displays data item names.

Position the cursor on any field and press F1.

For example, position the cursor in the Search Type field on the Address Book Revisions form and press F1. The User Defined Codes form displays for the Search Type field. In the upper right corner of this form is the data item name for the Search Type field, which is AT1.

The data item name is always in the upper right corner of the help form, no matter which help form displays, such as the User Defined Codes form or the field explanation form.
Working with the Data Dictionary

The Data Dictionary provides many useful abilities. You can create data item aliases for other programming languages, work with the glossary, add or change user-defined help instructions, and locate data field descriptions.

To work with the Data Dictionary

From menu G92, choose Data Dictionary. The Data Dictionary form displays.

You will find the Data Dictionary selection on several J.D. Edwards menus and repository services.

Also display Data Dictionary by entering the mnemonic DD in the Selection line of any J.D. Edwards menu.

Use the following fields where applicable:

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Release Number</td>
<td>The release number as defined in the Software Versions Repository file.</td>
</tr>
<tr>
<td>Data Field – Parent</td>
<td>A data item which becomes the template from which other data items are created. For example: AC (Category Codes) is the parent to AC01.</td>
</tr>
</tbody>
</table>
### Field Explanation

**Data Item**
The RPG data name. This data field has been set up as a 10-byte field for future use. Currently, it is restricted to 4 bytes so that, when preceded by a 2-byte table prefix, the RPG data name will not exceed 6 bytes.

Within the Data Dictionary, all data items are referenced by this 4-byte data name. As they are used in database tables, a 2-character prefix is added to create unique data names in each table specification (DDS). Special characters are not allowed as part of the data item name, with the exception of #, @, $.

You can create protected data names by using $xxx and @xxx, where you define xxx.

**Glossary Group**
A code which designates a type of data used to select data dictionary terms for printing. See User Defined Codes, system code '98', record type 'GG'.

The data item names for error messages are assigned automatically.

The data item name for a non-database field (used on a video or report but not in a file – glossary group U) must begin with a #.

**Description–Alpha**
Categorizes data item names. Enter text in upper and lower case. The system uses this field to search for similar data items. To enter an alpha description, follow these conventions:
- Dates – Begin all Date fields with Date -
- Amounts – Begin all Amount fields with Amount -
- Units – Begin all Unit, Quantity, and Volume fields with Units -
- Name – Begin all 30-byte description fields with Name -
- Prompt – Begin any Y/N prompting field with Prompt -
- Address Number – Begin all address numbers (employee, customer, owner) with Address Number

**System Code/Reporting**
A code that designates the system number for reporting and jargon purposes. See UDC 98/SY.

**System Code**
A user defined code (98/SY) that identifies a J.D. Edwards system.

**Data Item Type**
The type of data. The data item types are defined in User Defined Codes, system code ‘98’, record type ‘DT’. Note: All amount fields should be entered as 15 bytes, 0 decimals, and data item type should be P (packed).

**Data Item Size**
The field size of the data item.

**Data File Decimals**
The number of positions to the right of the decimal of the data item.
<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Item Class</td>
<td>Data item class. A class defines the essential attributes and characteristics of a data item. Informational only.</td>
</tr>
<tr>
<td>Number of Array Elements</td>
<td>In setting up a data item in the data dictionary, you may specify a number of array elements. This will cause the automatic creation of one additional data item for each array element. The array data item names are restricted to certain lengths depending on the number of array elements: 3 bytes – 1 to 9 elements 2 bytes – 10 to 99 elements 1 byte – 100 to 999 elements</td>
</tr>
<tr>
<td>Data Display Decimals</td>
<td>Use this parameter to designate the number of decimals in the currency, amount, or quantity fields the system displays. For example, U.S. Dollars would be 2 decimals, Japanese Yen would be no decimals, and Cameroon Francs would be 3 decimals.</td>
</tr>
<tr>
<td>Row Description</td>
<td>Creates the title on text and reports. It is used in a manner similar to the column description in the query facility. It should be less than 35 characters. Use abbreviations whenever possible. For example: U/M Units of measure YTD Year-to-date MTD Month-to-date PYE Prior year end QTY Quantity G/L General ledger A/P Accounts payable DEPR Depreciation</td>
</tr>
<tr>
<td>Column Title 1 – XREF build</td>
<td>The first line of description that will be used in column headings on a report or form. This description should be no larger than the data item size, if possible. If the column heading is only one line, it should be placed in this column. Use the second line of the Column Title when one is not clear.</td>
</tr>
<tr>
<td>Value for Entry – Default</td>
<td>Used as the initial value on the data entry screen for the associated data item. The value entered must be the exact same length as the data item size. Place single quotes around the value if it contains any embedded blanks. The keywords *BLANKS and *ZEROS can be used as the default value. When entering a numeric data item with default values, the redisplay of the data item suppresses all leading zeros. CAUTION: If a blank entry is allowed, default values should not be used.</td>
</tr>
<tr>
<td>Field</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Data Display Rules</td>
<td>Keywords which describe a formatting technique applied when data is displayed. The developer can override these rules at the time of program creation. The current list of these rules is kept in the User Defined Codes table 98/DR.</td>
</tr>
<tr>
<td>Data Edit Rules</td>
<td>Keywords which describe an editing technique applied when data is entered. Validation applied to the data after Enter is pressed. The rule will be applied as specified in the F9207 table at the screen/report and/or the action code as desired. The developer can override these rules at the time of program creation. The current list of these rules is kept in the User Defined Codes at SYSTEM = 98 and RECORD TYPE = ER.</td>
</tr>
</tbody>
</table>
| Help Text Program             | The Help Text Program field is used to call a program when the function key - F1 is pressed on its Data Item. When F1 is pressed, the program entered in this field will be executed. If this field is left blank, the glossary will be used. If you wish the User Defined Code window to appear when F1 is pressed, enter ‘*UDC’ in this field (this is the default when ‘UDC’ is entered in the Data Edit Rules field). If you do not want the UDC window to appear and you have ‘UDC’ in the Data Edit Rules field, change this field to be blank. Program Requirements: For your text program to work correctly, you must allow it to accept three standard parameters:  
   PARM 1  
   Field Name, size 10, type alpha  
   PARM 2  
   Return Value, size 30, type alpha  
   PARM 3  
   Return Description, size 30, type alpha |
| System Code – Next Numbers    | Designates the system number for the Next Number retrieval. See User Defined Codes, system code ’98’, record type ’SY’.                        |
| Next Numbering Index Number   | The array element number retrieved in the Next Number Revisions program. For example, the next voucher number is array element ‘02’ of system ’04’. |
What You Should Know About

Data Dictionary Security

Once a system is operational, you must be particularly careful to secure the integrity of the Data Dictionary. Two facilities are provided to aid you with the security:

Operational systems coding — System numbers and names are defined in User Defined Codes, system code 98, record type SY. If you place an X in the second line of description for a particular system, it will be designated as operational. Once a system has been set up as operational, all data fields coded to this system are protected from modifications. This control, however, can be violated by removing the X in User Defined Codes.

Action Code Security — A more prudent form of control is to assign change/delete authority to only one individual, the database administrator. If you choose to use this control, you should restrict access to the Data Dictionary program (P9201) in Action Code Security. See Working with Action Code Security. All users must be set up with add authority only. The database administrator would be set up with add/change/delete authority.

The Function Keys for the Data Dictionary

The following function keys are available from the Data Dictionary form.

F4 — A data item search facility. If you are a double-byte user, you must provide a search description for each data item you create or change in order for the search facility to function properly. Enter the search text in the Search Description field on the Data Dictionary screen.

F6 — Repository Services

F8 — User Defined Code Tables

F9 — Automatic Reinquiry

F15 — A data item cross reference
Advanced Programming Concepts and Skills

Working with Data Item Alias Revisions

Use the Data Item Alias form to assign alias names to a data item that other programming languages will use. When adding a data item of glossary group “D” or “S,” you must enter an alias for that field. This window automatically appears on an Add function when the alias is not unique. The alias defaults from the alpha description.

► To work with data item alias revisions

From Data Dictionary Repository

1. Press F5. The Data Field Alias form displays.

   9201                      Data Dictionary Repository    Rls Last Chg __________
   Item Parent.
   Action Code. . . I
   Data Item. . . . . AT1
   Glossary Group . . D
   - - - - - - - - - - -
   Alpha Desc . . . Search
   Reporting System . . OL
   System Code. . . . .
   Data Item Class. .
   Data Item . . . . AT1
   - - - - - - - - - -
   Action Code. . . I
   Data Item. . . . . AT1
   Reporting System . 01
   Search Type
   Row Description . Search
   Column Title. . . S
   - - - - - -
   Defa
   Default Value. .
   Data Display Rules ______
   Data Edit Rules. . UDC 01
   Search Program . .
   Next Nbr System. .
   Next Number Index . .
   F4=Search  F8=UDC  F9=Prev  F10=Glossary  F11=Descriptions  F15=Where Used

   9204                      Data Field Alias
   9201
   Action Code. . . I
   Data Item. . . . . AT1
   Glossary Group . . D
   - - - - - - - - - - -
   Alpha Desc . . . Search
   Reporting System . . OL
   System Code. . . . .
   Data Item Class. .
   Data Item . . . . AT1
   - - - - - - - - - -
   Action Code. . . I
   Data Item. . . . . AT1
   Reporting System . 01
   Search Type
   Row Description . Search
   Column Title. . . S
   - - - - - -
   Defa
   Default Value. .
   Data Display Rules ______
   Data Edit Rules. . UDC 01
   Search Program . .
   Next Nbr System. .
   Next Number Index . .
   F4=Search  F8=UDC  F9=Prev  F10=Glossary  F11=Descriptions  F15=Where Used

2. Enter an alias type and name.

   An alias name must be unique to the system or the system will not let you exit from the Data Field Alias form.

   Current alias types required:

   1 = PL1 or COBOL
   2 = C language

   An alias needs to adhere to J.D. Edwards’ syntax rules of the ‘C’ language.
Working with the Data Dictionary Glossary

What are the Data Dictionary Glossary Groups?

The Data Dictionary consists of several glossary groupings that define the data item in the J.D. Edwards software. All glossary groups typically have associated text. The glossary stores this text. The major glossary groups follow:

**E**
- J.D. Edwards interactive error messages
  - J.D. Edwards defines interactive error messages with numbers less than 5000 and with numbers from 000A to 999Z. For example, 0001 or 595C
  - Client defines interactive error messages with numbers from 5001 to 9999

**M**
- Menu Messages
  - J.D. Edwards defines menu message data items as MENUMSGxxx, where xxx represents a number. For example, MENUMSG044
  - Client defines menu message data items as MENUCLTxxx, where xxx represents a number

**J**
- J.D. Edwards batch error messages
  - J.D. Edwards defines batch error messages with JDExxxx, where xxxx represents a number less than 7000. For example, JDE0001 or JDE5000
  - Client defines batch error messages with JDExxxx, where xxxx represents a number greater than 7000 and less than 9000
  - The QJDEMSG message file contains batch error messages
  - A J.D. Edwards program found on Rebuilds and Global Updates (G9642) must build the batch error messages files QJDEMSG

**C**
- Data Item Functions Categories
  - Groups common data elements
  - For example, CURRENCY
**D or S**  
Primary or Secondary Data Items
- Used for validations
- Text on Videos
- Text on Reports
- Field Reference Files – F98FRFA–Z $ and @
  For example, AC for a D data item; AC01 for an S data item

**F**  
Files

**G**  
General Narrative — use to add information about a specific data item

**H**  
User Defined program Helps
- Client use only for adding custom helps for J.D. Edwards programs
  For example, U00MENU

**L**  
Report Messages — messages or warnings for certain procedures, or letters written and produced through DREAM Writer

**N**  
Program Notes
- Used by programmers to type notes about a program in the system
- Add the notes to the glossary in the Data Dictionary
  Create notes for a program, add a data item with an “N” as a prefix in front of the program name. For example, N01051 for program notes about Address Book Revisions
  View the notes using F9 off the Help Task List form for the Address Book Revisions form

**P**  
Program Purposes
- Used in the general summary help instructions
- Used for the Program Generator Product
  For example, P01051

**R**  
Report Data Elements — the majority of these data items are letters produced through DREAM Writer
Terms

These data items are definitions of commonly used terms. The prefix of the data item name is “TERM.” For example, the AAI definition is in the glossary under the data item TERMAAI.

For work fields that a program utilizes

Begin with #
For example, #AA

To work with the glossary


If your glossary group is E, H, J, or M, this form automatically displays when you press Enter on the main Data Dictionary form.

A user defined code (system 01, type ST) that identifies the kind of Address Book record you want the system to select when you do name or message searches. Examples:

- E - Employees
- X - Ex-Employees
- V - Vendors
- C - Customers
- P - Prospects
- M - Mail Distribution Lists

F4=Search F9=Redisplay Prev F19/F20=Prev/Next Item F24=More
2. Do the following that applies:

   Use the Language, Applic Override, and Scrn/Rpt fields for jargon. See About Language and Jargon for details.

   Use Roll keys to see additional text lines.

   When entering an “E” glossary group item, which is an interactive error message, use F5 to define a program, video, or report to reference when the system displays the error message.

   On double-byte machines, this form displays the Search Desc field. To ensure the data item search facility will function properly, you must enter a search description for each data item you create or change. You can enter it on this form or on the Data Dictionary form.

3. Always leave the last two character positions of each text line blank.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Item</td>
<td>If you are adding an error message, this field must be left blank. The system assigns the error message number using next numbers. The name appears on a successful add. You should assign interactive error message numbers greater than 5000.</td>
</tr>
</tbody>
</table>
| Glossary Group  | NOTE: If you need to assign your own error message numbers, use 4 digit numbers greater than ‘5000’.

   For help text (glossary group H), the data dictionary “Inquiry/Revision Program” field may be used to specify the name of a follow-on item.

   To create your own messages for the IBM message file (glossary group J), begin the data item name with your own three characters (e.g., CLT0001). |
Working with User Defined Help Instructions

The easiest way to modify help instructions is to utilize the User Defined Instructions in Data Dictionary.

To work with user defined help instructions

From Data Item Glossary Revisions

J.D. Edwards provides an example record (U00MENU) in your system.

1. Enter a program name in the Data Item field, replacing the “P” with “U.” For example, for program P01051, create a data item U01051.

2. Enter H in the Glossary Group field. The H Glossary Group defines user defined help. J.D. Edwards will not replace H Glossary Group data items during an upgrade.

3. Perform an add or change.

From the Help Task List form, F5= User Inst displays if you wrote your own User Defined Help instructions
Working with Data Field Descriptions


   ![Data Field Descriptions Form]

   To work with data field descriptions


   2. Enter specific jargon or language descriptions for each data item. See About Language and Jargon in Technical Foundation for details.

Working with the Next Numbers Facility

The Next Number facility controls the automatic numbering for such items as new G/L account numbers, voucher numbers, address numbers. It allows you to specify what numbering system you want to use and gives you a method of incrementing numbers to reduce transpositions and keying errors.

Complete the following tasks:

Locate the Next Numbers facility
Work with Next Numbers by company and fiscal year
To locate the Next Numbers facility

From menu G00, choose Next Numbers.

<table>
<thead>
<tr>
<th>Use</th>
<th>Next Number</th>
<th>Check Digit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Next Account ID</td>
<td>21831</td>
<td></td>
</tr>
<tr>
<td>Journal Entries</td>
<td>1946</td>
<td></td>
</tr>
<tr>
<td>Consol Accounts</td>
<td>90000234</td>
<td></td>
</tr>
</tbody>
</table>

CAUTION:
Changing the data on this screen may make it impossible to retrieve previously added addresses and may result in attempts to assign duplicate numbers.

What You Should Know About

Next Numbers

The next numbers file is F0002

10 element array
1 record per system
Modulus 11 check optional

Once set, don’t change

Has an impact on system performance
Will not duplicate numbers. When it reaches max, starts over
Cannot change position of user or add new entry without programming modifications

Ties with the Data Dictionary

Data Item in Data Dictionary points to the Next Number System. For example, System Code 09 AID Data Item
To work with Next Numbers by company and fiscal year

1. From Next Numbers, press F8.

   00021                     Next Numbers by Company/Fiscal
   Action Code. . . _        Next Number Constant . _
   Skip to Company / Sequence . . . . . . . . . . . . . .
   Skip to Fiscal Year. . . . . . . . . . . . . . . .

   Doc   Seq   Do Sm      Description               Fisc I   Next   C   Auto
   Co   Number  Ty As ______________________________ Year D  Number  D  Reset
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   _____ _______ __ __                                ____ _ ________ _ ________
   F24=More

2. Set the Next Number constant field to maintain next numbers by
   Company
   Company and Fiscal Year

   Use Next Number by Company for these original documents:
   Journal Entries
   Accounts Payable Vouchers
   Accounts Receivable Invoices
   Sales Orders
   Purchase Orders
About the Field Reference File

What is the Field Reference File?

The Field Reference File contains the specifications for each data item in the J.D. Edwards Data Dictionary. Because the J.D. Edwards Data Dictionary is different from the standard IBM data dictionary, each data item record needs to be translated from the J.D. Edwards standard to the IBM standard.

When building the Field Reference File, J.D. Edwards groups the data items. Items that begin with “A” are translated into the IBM-readable format and stored in file F98FRFA. Data items that begin with “B” are in F98FRFB. Each letter of the alphabet has a corresponding F98FRF file. Client data items are stored in F98FRF$ and F98FRF@. You can rebuild one file at a time. You can also build the message file in alternate languages.

What Happens with the Rebuild?

The system does the following:

- Rebuilds F98FRFA–Z, $, and @
- Picks up Data Dictionary data item glossary groups D and S
- Rebuilds the message file (QJDEMSG) in QGPL. Uses a processing option — Form ID J98DDMSGF to determine which library to build the QJDEMSG file. The default is QGPL
- Does not rebuild the J.D. Edwards message file if entering a single field reference file to be built
- Builds a separate message file for each language installed. Enter ** for all languages installed on the system.

Always rebuild the files in the same library as previously built.

About the J.D. Edwards Message File

What is the J.D. Edwards Message File?

The J.D. Edwards Message (QJDEMSG) file contains all the messages that are coded Glossary Group J. The programs access the messages from this file. If a client adds messages with Glossary Group J, a rebuild is necessary to correctly add the new messages to the J.D. Edwards Message (QJDEMSG) file.
What Happens When Only Rebuilding the J.D. Edwards Message File?

The system does the following:

Rebuilds the message file (QJDEMSG) in QGPL. Uses a processing option — Form ID J98DDMSGF to determine which library to build the QJDEMSG file. The default is QGPL.

Picks up Data Dictionary data item glossary group J

Enter a value from UDC table 01/LP to generate a message file for a single language. Enter ‘**’ for all languages installed on the system.

Locating the Rebuild FRF and JDE Msg File Form

To locate the Rebuild FRF and JDE Msg File form

From menu G9642, choose Rebuild FRF & JDE Msg File

98FRF       Rebuild FRF & JDE Msg File

The Field Reference Files are facsimiles of the J. D. Edwards Data Dictionary and are vital for the creation of all data base files. The version of the Data Dictionary upon which they are based determines the type and characteristics of all application data elements. This procedure will recreate these files based upon the Data Dictionary files found in the library specified, placing the DDS source in the JDESRC source file the Source Library selected, with the Field Reference Files being created in the Data Library selected.

Base Field Ref Files on Data Dictionary in Library ________

Create Field Ref source in Source Library ________

Create Field Ref Files in Data Library ________

Single field ref($, @, A–Z or blank=all) ______

Language for message file (** for all) ______

NOTE: Generation of Field Reference and Message File is submitted to batch. No data files may be created during this generation process.

Press Enter to Rebuild Field Reference Files       F3=Exit without Rebuild

Exercises

See the exercises for this chapter.
Data File Design Aid

About the Data File Design Aid

J.D. Edward Data File Design Aid provides a simple mechanism for creating Data Description Specifications (DDS) for physical and logical files.

J.D. Edwards does not allow any file changes through SEU in order to enforce standards. Changes must be done through File Design Aid.

What You Should Know About

<table>
<thead>
<tr>
<th>Enforced Prefixes</th>
<th>Throughout the Data Dictionary, J.D. Edwards makes extensive use of the data item name. Within files, these data item names are qualified with a prefix to make them unique. Every data file in J.D. Edwards software is assigned a two-character prefix. For example:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Business Unit Master file is MC</td>
</tr>
<tr>
<td></td>
<td>Address Book Master is AB</td>
</tr>
<tr>
<td></td>
<td>The data name MCU in the Business Unit Master file is MCMCU</td>
</tr>
<tr>
<td></td>
<td>The data name in the Address Book file is ABMCU</td>
</tr>
<tr>
<td></td>
<td>Use of prefixes ensure that data item names are both consistent and unique.</td>
</tr>
</tbody>
</table>

| Enforced naming conventions | At J.D. Edwards, file names begin with an F prefix and the format within that file begins with an I prefix. |

| Data Dictionary validation | All data fields defined in files are verified against the Data Dictionary. Programmers cannot enter data names without first creating and documenting them in the Data Dictionary. Prefixes of $ and @ are reserved for client use. |
Automatic reference to Field Reference Files

J.D. Edwards uses IBM’s Field Reference File (FRF) technology for all files. When creating the DDS for a file, you need to enter the Data Dictionary data item name. Data File Design Aid automatically enters the correct keywords for referring to the FRFs.

If data items are added to the Data Dictionary, the user needs to run the rebuild for the Field Reference Files before using Data File Design Aid.

Resequencing

A sequence number allows you to rearrange data items within a file while you are designing.

About Assigning the File Prefix

File prefixes are assigned through the Software Versions Repository.

```
9801                      Software Versions Repository
Action Code... I
Member ID... F92801
Description... SDM Item Master File
Function Code... FF
Function Use... A10
System Code... 92
Reporting System 92
Base Member Name F92801
File Prefix... QX

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Besign 14=Crt  F24=More
```

The Q series is reserved for clients.

If creating a new logical, the prefix will default from the based on physical.

To view all file prefixes currently in use, press F1 on the File Prefix field. Note that a file prefix may display in this list more than once if it is attached to more than one file.

F10 from this window will display all file prefixes that should not be used.
F10 – User Defined Code Window

Displays the User Defined Code Window to see which prefixes you should not use.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>File Description</td>
<td>Description of the file. Defaults in from the Software Versions Repository.</td>
</tr>
</tbody>
</table>

The information in this window comes from a logical file built over the Software Versions Repository.

The information in this window is updated automatically whenever the user adds/updates/deletes software version repository record(s) for files.

Programmers are responsible for not assigning the same prefix to files that may be used in the same program.

Entering Data File Design Aid

You must have access to the source file to enter FDA.

▶ To enter Data File Design Aid

1. Inquire on a physical file.
2. Copy the production source down to a development environment.
3. Select Option 10 to take you to the appropriate Design Aid screen based on the members Function Code value.

A PF or LF value will take you to File Design Aid.
### Field Description
Description of the file. Defaults in from the Software Versions Repository.

### Unique Keys (Y/N)
Specifies if the data file contains unique keys.
- If you say yes, Data File Design Aid puts the unique keyword in the DDS. As a result, no two records may have duplicate keys.
- If you say no, Data File Design Aid leaves the UNIQUE keyword out of the file DDS.

### Member ID
The name assigned to the file. Defaults in from the Software Versions Repository.

### File Prefix
The prefix assigned to the file. Defaults in from the Software Versions Repository.

### Src Library
The library where the source for the data file resides. Defaults in from the Software Versions Repository.

### Source File Name
The name of the file within the source library that contains the source member. Defaults in from the Software Versions Repository.

### Based on File
Designates the physical file on which a logical file is based.
- Defaults in from the Software Versions Repository and only displays for logical files.

---

**Data Item, Data Field Desc., K/S Function Specifications, Seq No**

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Data Field Desc.</th>
<th>K/S</th>
<th>Function Specifications</th>
<th>Seq No</th>
</tr>
</thead>
<tbody>
<tr>
<td>I92801</td>
<td>Item ID</td>
<td>K</td>
<td>REFQD/IT</td>
<td>1.00</td>
</tr>
<tr>
<td>XIT</td>
<td>Description</td>
<td></td>
<td>REFQD/XDS</td>
<td>2.00</td>
</tr>
<tr>
<td>XDS</td>
<td>Item Type</td>
<td></td>
<td>REFQD/XTY</td>
<td>3.00</td>
</tr>
<tr>
<td>XTY</td>
<td>Date Last Ship</td>
<td></td>
<td>REFQD/XDT</td>
<td>4.00</td>
</tr>
<tr>
<td>XDT</td>
<td>Quantity - On Hand</td>
<td></td>
<td>REFQD/X001</td>
<td>5.00</td>
</tr>
<tr>
<td>X001</td>
<td>Item Unit of Measur</td>
<td></td>
<td>REFQD/X002</td>
<td>6.00</td>
</tr>
<tr>
<td>X002</td>
<td>Item Category Code</td>
<td></td>
<td>REFQD/X003</td>
<td>7.00</td>
</tr>
<tr>
<td>X003</td>
<td>Item Category Code</td>
<td></td>
<td>REFQD/X004</td>
<td>8.00</td>
</tr>
<tr>
<td>X004</td>
<td>Item Category Code</td>
<td></td>
<td>REFQD/X005</td>
<td>9.00</td>
</tr>
<tr>
<td>X005</td>
<td>Item Category Code</td>
<td></td>
<td>REFQD/XIT</td>
<td>10.00</td>
</tr>
<tr>
<td>XIT</td>
<td>Item ID</td>
<td>K</td>
<td></td>
<td>11.00</td>
</tr>
<tr>
<td>XUM</td>
<td>Item Unit of Measur</td>
<td></td>
<td></td>
<td>12.00</td>
</tr>
<tr>
<td>XDS</td>
<td>Description</td>
<td></td>
<td></td>
<td>13.00</td>
</tr>
<tr>
<td>XDY</td>
<td>Date Last Ship</td>
<td></td>
<td></td>
<td>14.00</td>
</tr>
</tbody>
</table>

F3=Exit/Save  F16=Search by File  F1=Search by Name  F4=Field Attributes
## Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| Data Item           | The Data Dictionary name of the field or the record format name.  
                      The file prefix is added to create unique data names in each file specification if a data item is entered in this field.  
                      The record format line is automatically defaulted in.  |
| Data Field Desc     | The description of the data item entered in the previous field.  
                      Comes from the Row Description field in the Data Dictionary.  |
| K/S (Key/Select)    | Identifies the DDS Type indicating whether the field is a format name, key field, select logic field or omit logic field. It may be used in conjunction with information that appears in the Function Specifications field.                                                                                       |
| Function Specifications | Used with the DDS Type specified in the K/S column.  
                      If it is a record format name:  
                      It is blank for physical files  
                      Contains the PFILE(Filename) statement for a logical file and you enter: **JFILE** (Filename Filename) statement for join files listing all the files involved in the join. Right below the **JFILE** statement, you use the **JFLD** (Field Field) statement to list the fields that are used to construct the join.  
                      If you are defining a normal data item and you want the FRF field designation pulled in, you leave it blank.  
                      If you are defining Select/Omit logic on a field, you enter the logic itself.  
                      If you are defining a key data item, you may leave the Function Specifications field blank or you may enter any valid DDS function keyword (DESCEND, RENAME, SIGNED, ZONE, etc.) |
| Seq No              | Determines the order of the fields in the file.                                                                                                                                                                                                                                  |

There is a fold area which includes additional information: data item type, data item size, and number of display decimals.
Sample — Logical File

J.D. Edwards logicals contain all fields from the PF, only keys are specified.

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Data Field Desc.</th>
<th>K/S</th>
<th>Function Specifications</th>
<th>Seq No</th>
</tr>
</thead>
<tbody>
<tr>
<td>I92801</td>
<td>Business Unit</td>
<td>K</td>
<td>PFILE(F92801)</td>
<td>1.00</td>
</tr>
<tr>
<td>XIT</td>
<td>Item ID</td>
<td>K</td>
<td></td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.00</td>
</tr>
<tr>
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<td>6.00</td>
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<td>7.00</td>
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<td>12.00</td>
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<td>13.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14.00</td>
</tr>
</tbody>
</table>

F3=Exit/Save   F16=Search by File   F1=Search by Name  F4=Field Attributes

Sample — Logical File with Selects

This example represents an AND condition for the selects.

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Data Field Desc.</th>
<th>K/S</th>
<th>Function Specifications</th>
<th>Seq No</th>
</tr>
</thead>
<tbody>
<tr>
<td>I0911</td>
<td>Account ID</td>
<td>K</td>
<td>PFILE(F0911)</td>
<td>1.00</td>
</tr>
<tr>
<td>AID</td>
<td></td>
<td></td>
<td></td>
<td>2.00</td>
</tr>
<tr>
<td>LT</td>
<td>Ledgert Type</td>
<td></td>
<td></td>
<td>3.00</td>
</tr>
<tr>
<td>DOI</td>
<td>DOI Sub</td>
<td></td>
<td></td>
<td>4.00</td>
</tr>
<tr>
<td>SBL</td>
<td>Subledger</td>
<td></td>
<td></td>
<td>5.00</td>
</tr>
<tr>
<td>DSV</td>
<td>Date – Service/Tax</td>
<td></td>
<td></td>
<td>6.00</td>
</tr>
<tr>
<td>DSVV</td>
<td>Date – Service/Tax</td>
<td></td>
<td></td>
<td>7.00</td>
</tr>
<tr>
<td>DSVM</td>
<td>Date – Service/Tax</td>
<td></td>
<td></td>
<td>8.00</td>
</tr>
<tr>
<td>DSVD</td>
<td>Date – Service/Tax</td>
<td></td>
<td></td>
<td>9.00</td>
</tr>
<tr>
<td>DCT</td>
<td>Document Type</td>
<td></td>
<td></td>
<td>10.00</td>
</tr>
<tr>
<td>DOC</td>
<td>Document (Voucher,</td>
<td></td>
<td></td>
<td>11.00</td>
</tr>
<tr>
<td>KCO</td>
<td>Document Company</td>
<td></td>
<td></td>
<td>12.00</td>
</tr>
<tr>
<td>POST</td>
<td>G/L Posted Code</td>
<td></td>
<td>CMP(EQ 'P')</td>
<td>13.00</td>
</tr>
<tr>
<td>BC</td>
<td>Bill Code</td>
<td></td>
<td>CMP(NE 'H')</td>
<td>14.00</td>
</tr>
</tbody>
</table>

F3=Exit/Save   F16=Search by File   F1=Search by Name  F4=Field Attributes
Sample — Logical File with Omits

This example represents an AND condition for the omits.

<table>
<thead>
<tr>
<th>Data Item</th>
<th>Data Field Desc.</th>
<th>K/S</th>
<th>Function Specifications</th>
<th>Seq No</th>
</tr>
</thead>
<tbody>
<tr>
<td>I0101</td>
<td>PFILE(F0101     )</td>
<td>K</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>AC01</td>
<td>Category Code - Add</td>
<td>K</td>
<td></td>
<td>2.00</td>
</tr>
<tr>
<td>ALPH</td>
<td>Name - Alpha</td>
<td>K</td>
<td></td>
<td>3.00</td>
</tr>
<tr>
<td>AN8</td>
<td>Address Number</td>
<td>K</td>
<td></td>
<td>4.00</td>
</tr>
<tr>
<td>DF1</td>
<td>Date - First Invoic</td>
<td>O</td>
<td>COMP(EQ 000000)</td>
<td>5.00</td>
</tr>
<tr>
<td>DLI</td>
<td>Date - Last Invoice</td>
<td></td>
<td>COMP(EQ 000000)</td>
<td>6.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>9.00</td>
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<td>10.00</td>
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<td>11.00</td>
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<td></td>
<td>12.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>13.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>14.00</td>
</tr>
</tbody>
</table>

Creating Join Files and Work Files

To create a join file or a work file, you should use the Source Edit Utility.

Function Keys From File Design Aid

**F1 – Field Help on Data Item**

Using F1 in the Data Item field takes you to the Data Item Search screen.

**F2 – J.D. Edwards Command Line**

Access command line in order to enter a J.D. Edwards or IBM command without having to exit to Command Entry or a menu. If the user is secured out of Command Entry or Menu Traveling, the user will still get this command line but they will not be able to execute commands or menu travel.
F3 – Exiting Data File Design Aid

When the user presses F3 to exit Data File Design Aid, the following screen appears.

```
Data File Design Aid

Update Source Changes (Y/N) . . N
Member ID. . . . . . . . . . . . F92801
File ID. . . . . . . . . . . . JDESRMC
Src Library. . . . . . . . . . PGFSRC
Description. . . . . . . . . . SDM Item Master File
Function Code. . . . . . . . . PF
Return to Design (Y/N) . . . N
```

From this screen, the user can choose to:

- Exit without saving the changes made.
- Exit and save the changes made.
- Save the changes made and return to the design aid screen.

F6 – Access Repository Services

This window provides access to other repository services within J.D. Edwards.

F16 – Search by File

Accesses the File Field Description window to view file formats and field descriptions for any file on the system.
**What Are the Data File Design Aid Standards?**

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique Keys</td>
<td>If a file can be organized so the key will uniquely identify only one specific record, define the Unique Keys field. Uniqueness can be specified for physical and logical files. Most J.D. Edwards physical files in the past have been defined as sequential and logicals were used for creating keyed sequences. More recently, however, physical files have been keyed.</td>
</tr>
<tr>
<td>File Description</td>
<td>The description associated with each file is used to further identify the relation of the file and its purpose. It should match the Description in Software Versions Repository. Physical files should have a description that explains the purpose of the file. Logical files should be designated as follows: LF – <em>fldname, fldname, fldname</em>, where <em>fldname</em> is equal to a key field. Join files should be designated as follows: JF – <em>filename/filename/filename</em> – <em>fldname, fldname</em>, where <em>filename</em> is a file over which the join is built and <em>fldname</em> is the key field that joins the files. Work files should be designated as follows: WF – <em>filename</em> where <em>filename</em> is the file that the work file accesses.</td>
</tr>
<tr>
<td>Based On File</td>
<td>For physical and logical files, the Based on File is the same as the physical file. For join files, the Based on File is the name of the first physical that the join is built over.</td>
</tr>
<tr>
<td>Recompiling</td>
<td>When recompiling a physical, you need to delete any logicals or joins from the data file library and then recompile them after the physical has been recompiled.</td>
</tr>
<tr>
<td>Record Format</td>
<td>It is a J.D. Edwards standard that only one record format is defined for each physical and logical file. Joins may contain more. Record format names begin with I followed by the physical file number.</td>
</tr>
<tr>
<td>Ordering of Fields</td>
<td>When designing a physical, list the component fields in descending order of their importance to the file. Keyed items must always be last in sequence number within the Data File Design Aid program itself.</td>
</tr>
<tr>
<td>Field Reference Files</td>
<td>Used in all file creations to retrieve field descriptions.</td>
</tr>
<tr>
<td>Logical Files</td>
<td>Logical files include all fields; we do not define specific fields.</td>
</tr>
</tbody>
</table>
Merge Functions for PTFs and Reinstalls

The reinstall or PTF install does the following:

In a PTF install, prints a report that identifies all files that are in the PTF library but were not installed in the client's production libraries. The user must add the new files manually into the appropriate libraries.

In a reinstall, the client prints a report to add new files into appropriate libraries.

Updates JDFDATA in a PTF install; replaces JDFDATA in a reinstall.

Adds new keys to both logical and physical files.

Changes the file formats of logical and physical files.

Data Models displays relational models of the major files within each J.D. Edwards product.
Data File Design Aid Summary

Has direct ties to the Data Dictionary and the Field Reference Files.
Attaches a two-character prefix to each data item to create a unique field within the file.
A record format must be defined for all files with a K/S value of R. This is the default record format.
PFILE keyword will automatically be pulled in for logical files.
Logical files must have a Based on File designated in the Software Versions Repository which will carry over to the design screen.
You must enter the data item names from the Data Dictionary.
File Design Aid will add the two-character prefix.

Steps for creating a new file.

- Data items must reside in the Data Dictionary.
- Must rebuild the FRF files if new data items were added (from the Rebuilds menu, G9642).
- Must have a file prefix specified on the Software Versions Repository record.

Field Reference Files

- Contain all the definitions for creating fields.
- 28 in all (F98FRFA–F98FRFZ, F98FRF$, and F98FRF@).
- Each field reference file contains all the data items beginning with the same character as the field reference file

For example: F98FRFA contains all Data Dictionary data items beginning with the letter A.

Exercises

See the exercises for this chapter.
Screen Design Aid

About Screen Design Aid

Screen Design Aid (SDA) is an interactive feature to design and maintain display screens. This full-screen editor validates against the Data Dictionary and adds records to Vocabulary Overrides. You can work with multiple record formats simultaneously and you can move fields from one format to another.

Features

Design is conducted in a safe work environment. If you make a mistake you can exit without changing a screen's DDS.

Screen specifications are stored in data structures in the QRECOVERY library. Much like the IBM recovery of SEU.

You can create a screen in normal mode (80 columns by 24 rows) or wide mode (132 columns by 27 rows). You can also design wide screens on 80 column devices using a windowing facility.

Answering initial yes/no options allows you to create a basic screen skeleton for a subfile, non-subfile or window-style screen.

SDA is fully integrated with the Data Dictionary and Vocabulary Override files. You can place fields on the screen by referring to a Data Dictionary name and override default attributes, if necessary. You can place Vocabulary Override fields on the screen and, if desired, modify their contents through the full screen.

SDA is fully integrated with the system database. You can select fields from the system database, create a pick list and then reorder fields in the pick list. You can place fields on the screen individually or in mass by pinpointing locations on the full screen with an ampersand (&) or asterisk (*).

SDA has full screen capability. You can add, change, move or delete fields by entering control characters directly on the screen.

Unlike the IBM SDA, the JDE SDA allows you to work with multiple record formats at one time. You can display and change any combination of formats simultaneously (as long as they do not overlap). You can also move fields from one format to another.

SDA allows you to simulate a screen at program execution time. You can run the simulation for any set of conditioning indicators to represent a particular error condition or other program functions.
## Editing Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>*DEL</td>
<td>Delete field(s) (used in Field Definition window)</td>
</tr>
<tr>
<td>d</td>
<td>Delete field(s) (used in Field Definition window)</td>
</tr>
<tr>
<td>&lt;&lt;, &gt;&gt;</td>
<td>Shift field(s) to the left or right</td>
</tr>
<tr>
<td>(xx...xx), ’xx...xx’</td>
<td>Literals (use apostrophes)</td>
</tr>
<tr>
<td>–</td>
<td>Move from position.</td>
</tr>
<tr>
<td>=</td>
<td>Move to position.</td>
</tr>
<tr>
<td>– –</td>
<td>Move block from position</td>
</tr>
<tr>
<td>=</td>
<td>Move block to position.</td>
</tr>
<tr>
<td>F7</td>
<td>Restore the screen if you accidently press Field Exit or a power failure knocks you off.</td>
</tr>
</tbody>
</table>

Do not use the INSERT or DELETE keys while in the actual design portion of SDA.

Automatically assigns Editing Indicators.

Indicators 40 to 79 are reserved for editing.

Indicator 40 is reserved for the Action Code field.

Indicator 41 is reserved for the key fields.

If all available indicators have been used, an error message is issued.

Indicator 37 is used in subfile videos to highlight all fields on the last line of the subfile to indicate that no more records exist.
## Prefix Standards

<table>
<thead>
<tr>
<th>Prefix</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>VD</td>
<td>Video display fields.</td>
</tr>
<tr>
<td></td>
<td>VD fields display data base information from the file being used for the video and may be used to enter database information.</td>
</tr>
<tr>
<td></td>
<td>Default size is the size specified in the Data Dictionary for the data item being displayed.</td>
</tr>
<tr>
<td></td>
<td>Reside in the based on file and can be input/output.</td>
</tr>
<tr>
<td>SF</td>
<td>Subfile fields.</td>
</tr>
<tr>
<td></td>
<td>Same as VD fields, but they are in a subfile.</td>
</tr>
<tr>
<td></td>
<td>Default size is the size specified in the Data Dictionary for the data item being displayed plus editing characters.</td>
</tr>
<tr>
<td>SH</td>
<td>Subfile Hidden fields.</td>
</tr>
<tr>
<td></td>
<td>SH fields store data that is not displayed on a screen.</td>
</tr>
</tbody>
</table>
Field Name Standards

<table>
<thead>
<tr>
<th>Field</th>
<th>Standard</th>
</tr>
</thead>
</table>
| VC0 – Video constants | VC0 fields display definitions and/or descriptions for a single piece of data or for a group of data.  

VC0 fields are always output fields and the description that will be loaded into the VC0 field is obtained from a separate file.  

For example, if creating a video using the Item Master file (F92801), the user will need to take the Item Master Business Unit field and chain out to the Business Unit Master file (F0006) to get the description for that Business Unit.  

User enters *VC0 for the Field Name field in the Field Definition Window when adding a new constant/description field.  

The default size for VC0 fields is 30. |
| VTX – Video text | These fields display the row description or column headings from the Data Dictionary.  

The text that displays in the VTX fields is stored in the Vocabulary Overrides file (F9220).  

Can key directly over Vocabulary Override fields in SDA.  

User enters *VTX for the Field Name field in the Field Definition Window when adding a new text field.  

The default size for VTX fields is 16. |
| Line 24 is always VDL24 | Cannot change the text for Line 24 by using the Field Definition window because it is too large.  

Key over the text in Line 24 to change it. |
| TTL@ | Uses the default title from Vocabulary Overrides if the video is called from another video.  

Uses the menu selection text if the video is called from a menu. |
| ACTION | Action Code field.  

The name assigned by SDA.  

The default cursor keyword is assigned to the action code field. |
| *LITER – Literal fields | Literals are added by placing apostrophes around the text on the screen and pressing Enter. (e.g. ‘V928011’). |
Updating/Adding Fields through SDA

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| * – Field Definition Window | Allows the user to update existing fields and add new fields without using the Pick List feature. Place the * one space to the left of the first character of the requested field to display the Field Definition Window.  
To add a field, the user places an asterisk (*) on the SDA design area where they want to add the field.  
To update a field, the user places an asterisk in the attribute character of the field they want to update.  
The user can pull in the video field, the Row Description/Column Headings (VTX), and a 30 character description field (VC0) all at the same time by making special entries in the field definition window (*BOTH and *ALL). |
| & – Field Selection Window | Allows the user to add new fields using the Pick List feature  
Causes the Field Selection window to display.  
To place a field on the screen from the user’s Pick List, place an ampersand (&) on the SDA design area where you want to place the first character of the field.  
Allows the user to pull in one or all of the following at the same time:  
The Row Description/Column Headings (VTX)  
The video field  
A description field (VC0) |
Working with Screen Design Aid

To work with Screen Design Aid you must have access to the source file

1. Inquire on a video in SVR
2. Copy the production source down to a development environment using selection
3. Select option 10 to access the appropriate Design Aid form based on the members’ Function Code value.

Function Key Exits

F12 – Return to Previous Panel

Will exit you out of the current window or utility and return to the screen you were previously on.

Use instead of F3

When calling another program outside of SDA (for example: F13, F24), you must use F3 to return to SDA.
Updating an Existing Field

To update an existing field

Place an asterisk (*) in front of the field (in the attribute character).

---F3=Exit--F12=Prev-Screen--F17=Dictionary---
<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Field Name</td>
<td>Identifies a screen field name.</td>
</tr>
<tr>
<td></td>
<td>*VTX (VTX001–VTX200) automatically assigns next available.</td>
</tr>
<tr>
<td></td>
<td>*VC0 (VC0001–VC0200) automatically assigns next available.</td>
</tr>
<tr>
<td></td>
<td>*LITER literal fields.</td>
</tr>
<tr>
<td></td>
<td>*BOTH or *ALL to bring in video (VD), VC0, and VTX fields.</td>
</tr>
<tr>
<td>Row/Column</td>
<td>Two 3–digit fields that define the row and column location of field.</td>
</tr>
<tr>
<td>Field Use</td>
<td>How the data is to be used on the screen.</td>
</tr>
<tr>
<td></td>
<td>I input only.</td>
</tr>
<tr>
<td></td>
<td>O output only.</td>
</tr>
<tr>
<td></td>
<td>B Both input and output.</td>
</tr>
<tr>
<td></td>
<td>H Hidden field.</td>
</tr>
<tr>
<td></td>
<td>M IBM Message field.</td>
</tr>
<tr>
<td>Size</td>
<td>Two fields identify the length of the data item and for numeric fields, the decimal places.</td>
</tr>
<tr>
<td></td>
<td>If left blank, automatically fills.</td>
</tr>
<tr>
<td>Text Form</td>
<td>For VTX fields, identifies the field from the Data Dictionary that is used for headings.</td>
</tr>
<tr>
<td></td>
<td>R Row Description.</td>
</tr>
<tr>
<td></td>
<td>C Column Heading 1.</td>
</tr>
<tr>
<td></td>
<td>D Column Heading 1 and 2.</td>
</tr>
<tr>
<td>Dft Cursor</td>
<td>Starting cursor position on a data entry screen, Y or N.</td>
</tr>
<tr>
<td>Edited</td>
<td>Should the field be checked for error conditions, Y or N.</td>
</tr>
<tr>
<td></td>
<td>Will assign an indicator for error handling and default Condition Indicator information.</td>
</tr>
<tr>
<td></td>
<td>Assigns error indicators 40–79.</td>
</tr>
<tr>
<td></td>
<td>Key fields, K. Assigns indicator 41.</td>
</tr>
<tr>
<td>Lower Case</td>
<td>To allow lowercase, Y or N.</td>
</tr>
<tr>
<td>Change</td>
<td>CHANGE keyword is in effect, Y or N. The indicator will be seton whenever the value in this field is changed.</td>
</tr>
<tr>
<td>OVERDTA</td>
<td>OVRDTA keyword is in effect, Y or N. Used with PUTOVR to override data that is in a field already on the video.</td>
</tr>
</tbody>
</table>

All input capable fields should be edited (‘Y’ or ‘K’ in Edited field).
<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duplicate</td>
<td>Duplicate the data. Only valid for an SFL format. Puts the DUP keyword in the video/report DDS but the Program Generator does not generate any code to enable this.</td>
</tr>
<tr>
<td>OVRATR</td>
<td>OVRATR keyword is in effect, Y or N. Used with PUTOVR to override display attributes of a field on the video.</td>
</tr>
<tr>
<td>Field Cond</td>
<td>Field Conditioning Indicators. Determines if the user can see the field or not.</td>
</tr>
<tr>
<td>Condition Indicators</td>
<td>To set a condition indicator on a field, enter a Y in the first blank to the right of the desired condition. You have the option of entering up to 3 indicators to be associated with the condition. Three spaces are provided to allow an N prior to the two digit indicator to create a negative condition. The allowed conditions are:</td>
</tr>
<tr>
<td></td>
<td>RI Reverse Image</td>
</tr>
<tr>
<td></td>
<td>HI Highlight</td>
</tr>
<tr>
<td></td>
<td>UL Underline</td>
</tr>
<tr>
<td></td>
<td>ND Nondisplay</td>
</tr>
<tr>
<td></td>
<td>BL Blink</td>
</tr>
<tr>
<td></td>
<td>PR Protect</td>
</tr>
<tr>
<td></td>
<td>PC Place Cursor</td>
</tr>
<tr>
<td>Color</td>
<td>F8 toggles to display the color attributes for the field. The first blank to the right of each color controls the order that multiple colors will appear in the DDS (1–7). If multiple colors are defined, the first enabled color appears and the remaining colors are ignored. A blank or N disables the color. The color values default based on whether you selected JDE or SAA colors in QJDF.</td>
</tr>
</tbody>
</table>
Accessing Fast Path Create for a New Form

When you design the format for a new screen, you have the option to use Fast Path Create.

To access Fast Path Create for a new form

1. Locate your video and enter selection 10

If SDA cannot find the existing DDS for your screen, the following screen will appear:

```
92510                      Create New Screen
Screen: V927400
Text Description. . . Item Search
  (Y/N)
Fast Path Create        Y
Screen Type
  Action Code
  Window
  Wide Screen (Y/N) . .
Subfile Creation
  Subfile
  Subfile Fold
  Subfile Clear
  Selection Exits
  Record Format Level
PUTOVR
OVERLAY                  F3=Exit   F12=Previous
```

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text Description</td>
<td>Description of your screen.</td>
</tr>
<tr>
<td>Fast Path Create</td>
<td>Automatically create record formats, fields, file, and record level parameters.</td>
</tr>
<tr>
<td>Window</td>
<td>Video is a window.</td>
</tr>
<tr>
<td>Wide Screen</td>
<td>Video is in wide format (132 columns by 27 rows) or normal format (80 columns by 24 rows).</td>
</tr>
<tr>
<td>Subfile</td>
<td>Create subfile format.</td>
</tr>
<tr>
<td>Subfile Fold</td>
<td>Create a fold area in the subfile using SFLDROP and SFLFOLD keywords.</td>
</tr>
</tbody>
</table>
### Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subfile Clear</td>
<td>Use SFLCLR (Y) or SFLINZ (N).</td>
</tr>
<tr>
<td>Selection Exits</td>
<td>Create selection exits to allow the user to exit the program using selection codes.</td>
</tr>
<tr>
<td>PUTOVR</td>
<td>The video record format uses the PUTOVR keyword. Causes the video to be erased and redisplayed when a window is displayed.</td>
</tr>
<tr>
<td>OVERLAY</td>
<td>The video record format uses the OVERLAY keyword. Will not erase and redisplay video when a window is displayed. Most J.D. Edwards videos use OVERLAY.</td>
</tr>
</tbody>
</table>

2. Press Enter and SDA begins the creation of your video based on what you specified.

**Example – Video with Action Code and No Subfile**

```
92700                            Item Maintenance
Action Code. . . B

F24=More Keys
```
Example – Video with Action Code and Subfile

92700                         Item Maintenance
Action Code... B

SFLCTL
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD
DELETE THIS FIELD

F24=More Keys

Example – Video with Action Code, Subfile and Selection Exits

92700                         Item Maintenance
Action Code... B

O
P
B
B
B
B
B
B
B
B
B
B
B
B
B
B

F24=More Keys
Adding Fields Without Using a Pick List

To add a Video Text Field (VTX)

1. Place an asterisk (*) on the SDA design area where you want the text field to be placed.

When the field definition window appears:

2. Enter the data dictionary item name in the Dict Name field.
3. Specify *VTX in the Field Name field.

   The system will assign the next available VTX number.
4. Enter a value in the Text Form field to indicate whether the row description or a column heading from the Data Dictionary should be used as the text.

   R     Row Description.

   C     Column Heading 1.

   D     Column Heading 2.

   Default is R     Description.

   Text will default from the Data Dictionary based upon the Text Form value.
5. Enter a value in the Size field only if you want to override the default length of 16 for the Row Description that will be brought in.

Start your fields in column two (unless selection exits exist). This allows you to place an asterisk to the left of the first field in column one.

To add a Data Base Video Field (VD)

1. Place an * on the SDA design area where you want the field to be placed.

When the field definition window appears:

2. Enter the data dictionary item name in the Dict Name field.

3. Specify a field use.

   The default for field use is O for output.

   Editing indicators are not assigned for output fields.

4. Enter the Data Type, Size, and Text defaults from the Data Dictionary.
To add a Video Constant Field (VCO)

1. Place an * on the SDA design area where you want the description/constant field to be placed.

When the field definition window appears:

2. Specify *VC0 in the Field Name field.
   The system will assign the next available VC0 number.

3. Enter a value in the Size field only if you want to override the default length of 30.
Adding a Literal Field

To add a literal field

Enter the literal text on the SDA Design area, enclose the text within single quotes, and press Enter.

J.D. Edwards standard is that the only literal on a video is the program ID in the top left corner.
Using the *BOTH and *ALL Features

The field definition window (* window) allows for some special keywords to be entered in the Field Name field. Two of these special keywords are *BOTH and *ALL.

This feature provides for placement of multiple fields with a single entry.

Using *BOTH

If you use the keyword *BOTH with a valid data dictionary item, screen design will place a VTX field and a video (VD) field on the screen.

To use the *BOTH feature

On Field Definition type "*BOTH" in the Field Name
The previous example will cause the following to appear on the SDA design area for the Unit of Measure field:

![Image of the SDA design area showing the Unit of Measure field with item codes and descriptions]
Using *ALL

If you use the keyword *ALL with a valid data dictionary item, screen design will place a VTX field, a video (VD) field, and a VC0 field on the screen.

To use the *ALL feature

On Field Definition type "*ALL" in the Field Name
The previous example will cause the following to appear on the SDA design area for the Unit of Measure field:

```
928011  Item Master Information

Action Code. . . .  
Item ID. . . . .  Item Desc. .
Business Unit. . . .  00000000000000000000
Item Type. . . .  
Date Last Ship . . .  00000000000000000000
Quantity On Hand . .
Unit of Measure. . .  00000000000000000000
Item Code 001. . . .  00000000000000000000
Item Code 002. . . .  00000000000000000000
Item Code 003. . . .  00000000000000000000
Item Code 004. . . .  00000000000000000000
Item Code 005. . . .  00000000000000000000

F24=More Keys
```

### Field Defaults

**VD** — Video Display field

Output only

Can enter a B in the Field Use field to override output only to both input/output.

No Editing

If B is entered in the Field Use field, the Edited field will default to Y.

The Condition Indicators default to Y and the next available editing indicator will be assigned to that field.

**VTX** — Video Text field

16 bytes long

Row description

**VC0** — Video Constant field

30 bytes long
Understanding the SDA Exit/Save Function Key

**F3 – Design Aid Exit / Save**

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save DDS (Y/N)</td>
<td>Saves the DDS and updates or creates Vocabulary Overrides and Function Key definitions.</td>
</tr>
<tr>
<td>Member ID</td>
<td>Name of the screen.</td>
</tr>
<tr>
<td>File ID</td>
<td>Identifies the file that will contain the source code.</td>
</tr>
<tr>
<td>Src Library</td>
<td>Identifies the library where the source code resides.</td>
</tr>
<tr>
<td>Description</td>
<td>Description of the Member ID.</td>
</tr>
<tr>
<td></td>
<td>Should be the same as in F9801.</td>
</tr>
<tr>
<td>Function Code</td>
<td>Identifies the Member ID.</td>
</tr>
<tr>
<td>Return to Edit (Y/N)</td>
<td>EOJ or return to SDA.</td>
</tr>
</tbody>
</table>

F12=Previous
Compiling Your Video

To compile your video

From the Software Versions Repository screen, enter 14 next to the member in the subfile that you want to create and press Enter.
Screen Design Standards and Tips

Title

Screen title is limited to 30 characters and should match the F9801 file (Software Versions Repository). The title entered in SDA updates the Vocabulary Overrides record for the video. Be aware that if a user accesses the screen using a menu selection, the menu selection name overrides the screen title. If a user accesses the screen using a selection option or function key, the vocabulary overrides title is used.

Line 24

All function keys should be documented on the right side of line 24 and options should be documented on the left side.

List both the options and function keys in numeric order.
F24 should always appear and should say MORE KEYS or MORE.
F4 should always read MORE DETAIL or DETAIL.
Do not include standard exits of F3, F7, F22, Help, Rollup, Rolldown.
Line 24 should be in reverse image during error condition except on windows. Line 24 is conditioned to appear in reverse image on screens based on indicator 93.
If *SAME is specified for the field Error Text for Line 24 in Vocabulary Overrides, then the text that will display is the same as the text specified for the normal Line 24.

Windows

Within a window, line 24 should include F3 and F24 when the window is initially displayed. When designing windows in SDA, fill in unused line space with literal fields to prevent data on the calling screen from showing through on the window. The literal fields can be added as blanks with a single quote on each end or through the Field Definition Window.
Default Cursor

The default cursor attribute should always be set for Action Code or the input field closest to the upper-left corner of the screen.

Fold Area

Keep the number of Fold Area lines to no more than two lines to avoid excessive use of the Roll keys when the Fold Area is open.

Description Fields

Define all description input fields to allow for upper and lower case letters. Use VC0 descriptions when a field’s value has no obvious meaning and a description can be retrieved from a master file or User Defined Codes.

Alpha Fields

Because of the dynamic nature of international currency, you must define every field as alpha. The only exception is that hidden fields can be numeric. J.D. Edwards scrubbing routines handle the two-way conversion between numeric file data and alpha screen fields.
General Aesthetics

Alignment

Line up fields vertically. This includes row descriptions, input fields and description fields. Fields on the left side of the screen should be in column space 2 (column 1 is needed for the attribute byte).

Use periods to equalize length of row descriptions

Use periods to equalize length of row descriptions

Line up VC0 fields of row descriptions

Line up VC0 fields of row descriptions

<table>
<thead>
<tr>
<th>08332</th>
<th>Single D/B Relation Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action Code . . . . . . . . . . I</td>
<td></td>
</tr>
<tr>
<td>Employee Number . . . . . . 6001 Allen, Raymond</td>
<td></td>
</tr>
<tr>
<td>Plan ID . . . . . . . . . DEPCARR Dependent Care Reimb. Account</td>
<td></td>
</tr>
<tr>
<td>Dependent/Beneficiary No . . 4036 Name . Allen, Cindy</td>
<td></td>
</tr>
<tr>
<td>Effective From . . . . . 01/01/90 Thru .</td>
<td></td>
</tr>
</tbody>
</table>

Relationship Data:
- Dependent or Beneficiary . D
- Relationship . . . . . . . . C Child
- Dep/Ben Type . . . . . Primary Beneficiary
- Percent Allocated . . . . .

Dependent/Beneficiary Data:
- Social Security Number . 524-58-5113
- Date Of Birth . . . . . . 04/01/72
- Dep/Ben Status . . . . .

Memo/Address Info . . 2525 E. 11th Avenue Denver, Colorado 80206

F5=D/B Relationships F21=Print F24=More Keys
Grouping Fields

When entering a description heading to group related fields, use up to 40 characters for the description (or as long as space will permit). Highlight the heading and end it with a colon. Underneath the heading, indent the group of fields one space to the right.

```
08332                       Single D/B Relation Entry

Action Code. . . . . . . . .
Employee Number. . . . . .
Plan ID. . . . . . . . . . .
Dependent/Beneficiary No. .
Effective From. . . . . .
Thru. . . .

Relationship Data:
Dependent or Beneficiary.
Relationship. . . . . . . .
Dep/Ben Type. . . . . . .
Percent Allocated. . . .

Dependent/Beneficiary Data:
Social Security Number .
Date Of Birth. . . . . . .
Dep/Ben Status . . . . .

Memo/Address Info. . .

F5=D/B Relationships  F21=Print  F24=More Keys
```

Spacing

Use the following as your standards when spacing different screen elements.

Separate column headings with one space.
End row descriptions with at least one period followed by a single space before you begin associated input fields.

| Dependent or Beneficiary: |  
| Relationship: |  
| Dep/Ben Type: |  
| Percent Allocated: |  

Indent Fold Area fields one or more spaces to offset them from regular subfile.

<table>
<thead>
<tr>
<th>08335</th>
<th>Benefits by Employee</th>
<th>Year . . . 90</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee:</td>
<td>6001</td>
<td>Allen, Raymond</td>
</tr>
<tr>
<td>Soc Sec No:</td>
<td>798-52-5841</td>
<td></td>
</tr>
<tr>
<td>Benefit Grp:</td>
<td>9 An Energy Deleted Interes</td>
<td></td>
</tr>
<tr>
<td>Business Unit:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>O</td>
<td>Plan Name</td>
<td>.  Effective. .</td>
</tr>
<tr>
<td>P</td>
<td>Dependent Care Reimb. Account</td>
<td>From</td>
</tr>
<tr>
<td>Plan ID: DEPCARE</td>
<td>Provider/Trustee: Edwards, J. D.</td>
<td></td>
</tr>
<tr>
<td>Life Insurance</td>
<td>01/01/90 12/31/90</td>
<td></td>
</tr>
<tr>
<td>Plan ID: LIFE</td>
<td>Provider/Trustee: State Mutual Insurance Company</td>
<td></td>
</tr>
</tbody>
</table>

Use two or more spaces to separate Fold Area data fields form row descriptions that follow on the same line. End Fold Area row descriptions with a colon instead of periods to aid legibility.

| O | Plan Name | .  Effective. . | . Contributions . |
| P | Dependent Care Reimb. Account | From | Through |
| Plan ID: DEPCARE | Provider/Trustee: Edwards, J. D. |
| Life Insurance | 01/01/90 12/31/90 |
| Plan ID: LIFE | Provider/Trustee: State Mutual Insurance Company |
Insert a blank line between header and subfile information.

When possible insert a blank line between title and first field. Begin fields on line 3 unless you need to use the upper right corner of line 1 and 2.

Exercises
See the exercises for this chapter.
Adding Video Fields Using Pick List

To add video fields

1. Access the Records Formats List using the F10 key
2. Complete the Record Formats List form

F10 – Record Formats List

<table>
<thead>
<tr>
<th>Opt</th>
<th>Format Name</th>
<th>Type</th>
<th>Fast Path</th>
<th>Start</th>
<th>Related</th>
<th># Fields</th>
<th>Fld</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>V928200C</td>
<td>SFLCT</td>
<td>F92801</td>
<td>001</td>
<td>006</td>
<td>V28200S</td>
<td>000</td>
</tr>
<tr>
<td></td>
<td>V928200S</td>
<td>SFL</td>
<td>007</td>
<td>022</td>
<td>000</td>
<td>SP</td>
<td></td>
</tr>
<tr>
<td></td>
<td>V9282001</td>
<td>RECORD</td>
<td>024</td>
<td>024</td>
<td>000</td>
<td>VD</td>
<td></td>
</tr>
</tbody>
</table>

Opt: 1=DB Field Selection  3=Field List  4=Delete  5=Format Keywords

This video is used to select database fields and maintain record formats, record types, fast path files, and record format keywords.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opt</td>
<td>Enter appropriate number to indicate you want to select one of the following values:</td>
</tr>
<tr>
<td>1</td>
<td>File/field pick list of ampersand functions.</td>
</tr>
<tr>
<td>2</td>
<td>File/field pick list for fast path function.</td>
</tr>
<tr>
<td>3</td>
<td>List of defined fields in the format.</td>
</tr>
<tr>
<td>4</td>
<td>Delete format.</td>
</tr>
<tr>
<td>5</td>
<td>Record format keywords.</td>
</tr>
</tbody>
</table>
## Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Format Name</td>
<td>Screen record format.</td>
</tr>
<tr>
<td></td>
<td>The format name will be the video ID followed by a specific format suffix value. Typically, the suffix values are:</td>
</tr>
<tr>
<td></td>
<td>C   subfile control format</td>
</tr>
<tr>
<td></td>
<td>S   subfile format</td>
</tr>
<tr>
<td></td>
<td>1   record format</td>
</tr>
<tr>
<td></td>
<td>If additional formats are required, each format name must be unique so new format suffix values must be assigned.</td>
</tr>
<tr>
<td>Type</td>
<td>Record format type. See types listed below.</td>
</tr>
<tr>
<td>Fast Path File</td>
<td>The database file you want to select fields from</td>
</tr>
<tr>
<td>Start/End Lines</td>
<td>Specifies the line number range of the format.</td>
</tr>
<tr>
<td>Related Record</td>
<td>Field that ties a subfile to a control record format. Required in all SFLCTL record formats.</td>
</tr>
<tr>
<td># Fields Selected</td>
<td>The number of database fields that have been selected for use on the format.</td>
</tr>
<tr>
<td>Fld Pfx</td>
<td>Screen field prefix to be used for the video fields: VD, SF</td>
</tr>
</tbody>
</table>

### About Record Formats

Four Record Format Types are valid for videos:

SFLCTL – Subfile control

Present in all subfile videos. Contains all of the fields in the header or top portion of the video, include the subfile column headings.

**V928200C (SFLCTL)**

928200  Item Search

Business Unit. BBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBBB
Contains all of the fields in the subfile portion of the video, including the fold area if applicable.

**V928200S (SFL)**

```
B OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO
B OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO
B OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO
B OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO
B OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO
B OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO
B OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO OOOOOOOO OOOOOOOOOOOOOOOOOOOOOOOOOOOO
```

**RECORD**

Present in all videos. In subfile videos, contains VDL24 (line 24 text). In non-subfile videos, may contain all fields on the video, including VDL24.

**V9282001 (RECORD)**

```
Opt:1=Item Master Information   F5=Item Maintenance  F24=More Keys
```

**SFLMSG – Subfile Message**

Display error message text. J.D. Edwards does not use this format because errors are handled through RPG programs.
Selecting Database Fields

There are two methods of selecting database fields for placement on the screen:

With Fast Path

Without Fast Path

<table>
<thead>
<tr>
<th>Method</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fast Path</td>
<td>Type 1 next to the format on which you want to place the fields and enter a file name under the Fast Path File column.</td>
</tr>
<tr>
<td>File Selection List</td>
<td>Type 1 next to the format on which you want to place the fields but do not enter a file name. Will access a file selection video where you can specify multiple files and libraries from which to select database fields.</td>
</tr>
</tbody>
</table>

To select a database field using Fast Path

1. Enter a Fast Path File for the specified format on the Record Formats List form.
2. Selection option 1 for database field selection.
The Field Selection List appears.

<table>
<thead>
<tr>
<th>Seq No</th>
<th>Field Name</th>
<th>Description</th>
<th>DT</th>
<th>Size</th>
<th>HDG</th>
<th>P</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>QXXIT</td>
<td>Item ID</td>
<td>S</td>
<td>8</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>QXXDS</td>
<td>Description</td>
<td>A</td>
<td>30</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>QXXTY</td>
<td>Item Type</td>
<td>A</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>QXXDT</td>
<td>Date Last Ship</td>
<td>S</td>
<td>6</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>QXXCC</td>
<td>Business Unit</td>
<td>A</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>QXXQT</td>
<td>Quantity On Hand</td>
<td>S</td>
<td>15</td>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>QXXUM</td>
<td>Unit of Measure</td>
<td>A</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>QXX001</td>
<td>Item Code 001</td>
<td>A</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>QXX002</td>
<td>Item Code 002</td>
<td>A</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>QXX003</td>
<td>Item Code 003</td>
<td>A</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>QXX004</td>
<td>Item Code 004</td>
<td>A</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>QXX005</td>
<td>Item Code 005</td>
<td>A</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

F3=Exit    F12=Prev Screen    F21=Select All

Field | Explanation
---|---
Seq No | Sequence Number to indicate which data items you want on the video you are creating and what order you want them to be displayed in the Pick List window accessed from SDA
Field Name | The name of the field in the file
Description | The Data Dictionary row description
DT | Data Item Type
DS | Data Item Size
HDG | Which heading to use from the Data Dictionary
   | R Row Description.
   | C Column 1 heading.
   | D Column 1 and 2 heading.
D | Used to indicate whether a 30 character VC field should be brought for constant information to be loaded into.
Use | Specifies how the data field is to be used on the video:
   | I Input only.
   | O Output only (default).
   | B Both input and output.
   | M IBM Message field.
Understanding the Select All Function Key

Select All

You can select all fields for the file instead of selecting them individually by pressing F21 from this screen.

Based on which record format the Field Selection List is being used for, the following information will default in:

For a subfile control record format, an R will default for the type of heading to use and the Use will default to B for input/output.

For a subfile record format, a D will default for the type of heading to use and the Use will default to B for input/output.

For a non-subfile video, the row description will default for the type of heading to Use and the use will default to B for input/output.

For a report, a D will default for the type of heading to use and the Use will default to O for output.

To select database fields without Fast Path

1. Select option ‘1’ but do not specify a file.
The File Selection List appears.

2. Enter the files from which you want to select fields.

Fields for files requested will be displayed through the Field Selection List video.

3. Select fields using the same techniques as in the Fast Path method.

If you select a key field, that field will be edited as the key of the screen. An edit indicator of 41 will be assigned.
To place fields on a form using a Pick List

On the Item Master Information form

1. Type either one or multiple ampersands (&) on the screen where you want to place the fields from the pick list you created.
   
   If you place more than one &, make sure that you allow room for all of the fields that will be returned to the screen, so that you do not overlap fields.

2. When the Field Selection window appears, verify the information that will be brought back to the screen (VTX field – HDG, 30-character description – D, and field Use – USE), as well as the order that they will be brought back (the sequence number).

Adding a Fold Area to a Subfile

Place an asterisk (*) or ampersand (&) on the second line in the subfile format of your video to add a Fold Area. If a second line in the Fold Area is needed, you can place an asterisk (*) or ampersand (&) on the third line of the subfile format. HDG should be 'R' when adding to the fold!

Exercises

See the exercises for this chapter.
Function Key Exits from Screen Design Aid

**F2 – J.D. Edwards Command Line**

Access a command line in order to enter a J.D. Edwards or IBM command without having to exit to Command Entry or a menu.

If the user is secured out of Command Entry or Menu Traveling, he/she will still get this command line, but will not be able to execute commands or menu travel.

**F5 – Format Display Control Window**

```plaintext
<table>
<thead>
<tr>
<th>Code 1</th>
<th>Code 2</th>
<th>Code 3</th>
<th>Sel Format</th>
<th>Type</th>
<th>Boundaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>V928200C</td>
<td>SPLCTL</td>
<td>001</td>
<td>006</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V928200S</td>
<td>SFL</td>
<td>007</td>
<td>022</td>
<td></td>
<td></td>
</tr>
<tr>
<td>V9282001</td>
<td>RECORD</td>
<td>024</td>
<td>024</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Opt: -1=Display–Fmt--F3=Exit--F12=Pre
Opt: 1=Item Master Information  F5=Item Maintenance  F24=More Keys
```
<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Selection</td>
<td>Controls the display of record formats.</td>
</tr>
<tr>
<td>1</td>
<td>Format is active.</td>
</tr>
<tr>
<td>Blank</td>
<td>Not to display.</td>
</tr>
<tr>
<td>Format</td>
<td>Lists the DDS format names for the video screen.</td>
</tr>
<tr>
<td></td>
<td>All names begin with Video name</td>
</tr>
<tr>
<td></td>
<td>Subfile control formats end with C.</td>
</tr>
<tr>
<td></td>
<td>Subfile formats end with S.</td>
</tr>
<tr>
<td></td>
<td>Record (non–subfile) formats end with 1.</td>
</tr>
<tr>
<td>Type</td>
<td>Describes the DDS format name.</td>
</tr>
<tr>
<td>Boundaries</td>
<td>Two 3–digit numbers that define the range (rows) for the DDS.</td>
</tr>
<tr>
<td>Window</td>
<td>Allows access to fields outside the boundaries.</td>
</tr>
<tr>
<td>Browse (Y/N)</td>
<td>Allows user to enable/disable the browse mode and view the screen as it would appear when executed.</td>
</tr>
<tr>
<td></td>
<td>Cannot change or access any item while in browse mode.</td>
</tr>
</tbody>
</table>

**F4 – Subfile Drop (while in browse mode)**

Toggle between displaying the Fold Area or not for a subfile video

Must set Browse in Format Display Control Window (F5)

**F6 – Access Repository Services**

This window provides access to other repository services within J.D. Edwards.

**F8 – Toggle Monochrome/Color Display**

Will display your screen in monochrome or color

If accessing the Field Definition window, will toggle between Condition Indicators and Color Attributes
F10 – Option 5 — Format Keyword Maintenance

<table>
<thead>
<tr>
<th>General Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUTOVR (Y/N)</td>
</tr>
<tr>
<td>OVERLAY (Y/N)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Subfile Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subfile Fold</td>
</tr>
<tr>
<td>Type (A/F)</td>
</tr>
<tr>
<td>Subfile Clear</td>
</tr>
<tr>
<td>Subfile Next Change</td>
</tr>
<tr>
<td>Subfile Page</td>
</tr>
<tr>
<td>Subfile Size</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUTOVR</td>
<td>Erases video and rewrites when an action is taken; for example, when a window is displayed.</td>
</tr>
<tr>
<td>OVERLAY</td>
<td>Displays an action; for example, displaying a window, without erasing the video. Most J.D. Edwards videos use OVERLAY.</td>
</tr>
<tr>
<td>Subfile Fold</td>
<td>Indicates whether the screen will have a fold area. Uses the SFLDROP keyword.</td>
</tr>
<tr>
<td>Type (A/F)</td>
<td>Further identifies subfile fold area:</td>
</tr>
<tr>
<td></td>
<td>F: Data is retained.</td>
</tr>
<tr>
<td>Subfile Clear</td>
<td>Whether or not to use SFLCLR or SFLINZ:</td>
</tr>
<tr>
<td></td>
<td>Y: SFLCLR (clears subfile)</td>
</tr>
<tr>
<td></td>
<td>N: SFLINZ (clears and initializes subfile to blank)</td>
</tr>
<tr>
<td>Subfile Next Change</td>
<td>Whether or not to use SFLNXTCHG (Y/N). Will require the user to correct any errors in the subfile before further execution of program.</td>
</tr>
<tr>
<td>Subfile Page</td>
<td>Identifies number of records on one subfile page, with the fold area open if applicable.</td>
</tr>
<tr>
<td></td>
<td>1 to 27, inclusive</td>
</tr>
</tbody>
</table>
### Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subfile Size</td>
<td>Identifies the total number of records in the subfile that will be loaded in one program cycle. 1 to 9999, inclusive</td>
</tr>
</tbody>
</table>

### F13 – Function Key/Opt Definition

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subfile Size</td>
<td>Identifies the total number of records in the subfile that will be loaded in one program cycle. 1 to 9999, inclusive</td>
</tr>
</tbody>
</table>

#### Line 24

<table>
<thead>
<tr>
<th>Include</th>
<th>Description</th>
<th>Key/Opt</th>
<th>Field</th>
</tr>
</thead>
<tbody>
<tr>
<td>Y</td>
<td>Exit Program</td>
<td>03</td>
<td>#FEOJ</td>
</tr>
<tr>
<td>Y</td>
<td>Clear Screen</td>
<td>22</td>
<td>#FCLR</td>
</tr>
<tr>
<td>Y</td>
<td>Help Instructions</td>
<td>HL</td>
<td>#FHELP</td>
</tr>
<tr>
<td>Y</td>
<td>Roll Up/Next Record</td>
<td>RU</td>
<td>#FROLU</td>
</tr>
<tr>
<td>Y</td>
<td>Roll Down/Previous Record</td>
<td>RD</td>
<td>#FROLD</td>
</tr>
<tr>
<td>Y</td>
<td>Field Sensitive Help</td>
<td>01</td>
<td>#FQMRK</td>
</tr>
<tr>
<td>Y</td>
<td>Display Error Message(s)</td>
<td>07</td>
<td>#FERRD</td>
</tr>
<tr>
<td>Y</td>
<td>Display All Function Keys</td>
<td>24</td>
<td>#FKEYS</td>
</tr>
<tr>
<td>Y</td>
<td>Item Maintenance</td>
<td>05</td>
<td>#F01</td>
</tr>
<tr>
<td>Y</td>
<td>Item Master Information</td>
<td>01</td>
<td>#S01</td>
</tr>
</tbody>
</table>

*Include: Y/N F16=Display All*

Used to define the function keys for the screen

Function Key Definition files (F9601 and F9611)

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Line 24</td>
<td>Identifies the function key exits and options exits.</td>
</tr>
<tr>
<td>Include</td>
<td>Whether or not to include the function key or option on the screen.</td>
</tr>
<tr>
<td>Description</td>
<td>Describes the function or option exit. Cannot exceed 40 characters.</td>
</tr>
<tr>
<td>Key/Opt</td>
<td>Identifies the function key number or option. Special values:</td>
</tr>
<tr>
<td></td>
<td>HL Helps.</td>
</tr>
<tr>
<td></td>
<td>RU Roll up.</td>
</tr>
<tr>
<td></td>
<td>RD Roll down.</td>
</tr>
<tr>
<td>Field</td>
<td>Identifies the name of the function or option exit. Values always begin with a # (pound sign).</td>
</tr>
</tbody>
</table>
### F14 – Indicator Control

<table>
<thead>
<tr>
<th>Item Search</th>
<th>Business Unit</th>
<th>Code 1</th>
<th>Code 2</th>
<th>Code 3</th>
<th>Code 4</th>
<th>Code 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>928200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Used with the Browse mode to simulate a screen at program execution**
F16 – List of Defined Fields

Used to maintain the defined fields and add hidden fields.
Only shows fields for the formats that are active.

Hidden Fields

Used to see hidden field information

➢ To add a hidden field

1. Roll to the bottom blank line of the format that will contain the field.
2. Type 5 to update.
3. Enter the field with a prefix of SH, description, type, size and press Enter.
   This information should be the same as the displayed database field that will be affected.
Option 5 — Select Field Definition

Option 5 — Select Field Definition

Accesses the Field Definition Window, just as if the user entered an asterisk (*) for the field.

F17 – Define Soft Coding (Vocabulary Override) Fields

F17 – Define Soft Coding (Vocabulary Override) Fields
To define VTX fields other than row and column headings on the screen. Row and column headings are protected here. Specify whether you want to use the Data Dictionary row description, column heading 1 or column heading 2.

Can specify the literal text that will be loaded into a *VC0 field.

You must save your video at least once in order to be able to update vocabulary overrides and/or function key definitions by this method. This is because when you are first defining a video, the vocabulary override record and function key definition record are not created until you save the video.

After changing the size of a VTX field, you should execute the Rebuild Vocabulary Override Field Lengths program (11/G9642). This displays the correct VTX field lengths in the Field Size field in Vocabulary Overrides.

**F19 – Window left**

**F20 – Window right**

Only applicable when designing wide screens (132 by 27 rows) on 80 column terminal.
Changing Subfile Boundaries

Be careful when changing the size of a subfile through SDA. Consider using these processes to make such changes easier and less confusing.

You can make a subfile smaller or larger.

**To make a subfile smaller**

1. Press F10 to access the Record Formats List video.
2. Change the starting line number for the subfile format (VxxxxxS).
3. Press Enter to return to SDA.
4. Press F10 to access the Record Formats List video again.
5. Change the ending line number for the control format (VxxxxxC).
6. Press Enter to return to SDA.
7. Move or add headings.

**To make a subfile larger**

The above steps are reversed if you want to make the subfile larger. You must move the control format fields up before changing the starting line number for the subfile format.

1. Move headings.
2. Press F10 to access the Record Formats List video.
3. Change the ending line number for the control format (VxxxxxC).
4. Press Enter to return to SDA.
5. Press F10 to access the Record Formats List video again.
6. Change the starting line number for the subfile format (VxxxxxS).
7. Press Enter to return to SDA.
8. Press F10 and enter 5 on control format.

Change subfile page size if desired.

When the subfile is changed, the subfile page and subfile size must be changed to correctly reflect the size of the new subfile.
Process Overview – Placing Selected Fields

Once you’ve established your field pick list, use the ampersand (&) to specify where you want to locate the field.

The ampersand (&) calls up the pick list in the Field Selection window where you can order the fields and further define their specifications.

Options

Override Row Description length
Resequence fields in list
Select headings (Row, Column headings) *VTX
Description Field (*VC0)
Usage (O=Output, B=Both Input and Output)
Once you have sequenced the fields, they are retrieved from the file and placed on the design area.
Process Overview – Revising the Field Definition

SDA Design Area

Place asterisk in the field’s attribute byte to revise

OR

F16 OR

F10

List of Defined Fields

Use the Field Definition information to display/create attributes for the data item.

Option 3

Field Definition

Option 5 next to displayed

From the Field Definition information to display/color attributes for the data item.
Process Overview – Revising Vocabulary and Function Keys

Use the Define Soft Coding Fields screen to define VTX fields other than row and column headings.

Use the Function Key/Opt Definition screen to define the function keys for the screen.

Function Keys for Screen and Display Format Control

User can turn indicators on & off to see how screen will look.

Screen will show a subfile video that has a fold area in its folded & un-folded formats. Note: the video must be in browse mode for this to function.

Use the format display control video to:
1) Put the video in browse mode
2) Activate and/or deactivate formats
3) Enable the F4 key to see a subfile video in the folded/ unfolded format.
Summary of Screen Design Aid

Editing options

- d, *DEL
- <<, >>
- xx...xx
- -, =
- --, =
- * and &

You should not use the INSERT and DELETE keys while in SDA.

F7 will restore a video if Field Exit is accidently pressed.

Standard prefixes

VD, SF, SH

Special Fields

*VTX, *VC0, *LITER, *DATE, *TIME
ACTION
VDL24
TTL@

Error indicators 40 to 79 are automatically assigned to VD and SF fields that are defined as input or input/output

Update fields by using *

Two methods of adding fields to a screen

* (non–pick list method)
& (pick list method)

You can pull in VTX, VC, and the video data base fields all at the same time for one database field

Two methods of selecting data base fields

Fast Path
Non–Fast Path — Accesses File Selection screen
If changing subfile boundaries, should use the outlined processes to make this process easier.

You must save a video at least once before updating Vocabulary Overrides or Function Key Definitions since the exit from SDA creates these records.

Hidden fields are added from the List of Defined Fields video which is accessed by pressing F16 from SDA.

You can only add hidden fields one at a time.

Must enter a selection exit 5 to actually add the field.

---

**Exercises**

See the exercises for this chapter.
Report Design Aid

About Report Design Aid

The Report Design Aid (RDA) is a powerful and versatile tool for designing reports.

It uses the same process as the Screen Design Aid (SDA), except:

- It extends to column 227
- Has windowing capability

You only need to identify field names, field lengths, and field positions on the report.

J.D. Edwards reports are externally defined, which means that all the DDS specifications are created and compiled as a printer file, separate from the program object. Report Design Aid automatically generates the DDS specifications. It also incorporates the report information into the documentation and adds it to the cross reference facilities. You can print illustrations of each report.

RDA differs from SDA in that its parameters are targeted for print-based output, which includes page skipping, line skipping and relative positioning.

Perform the following tasks:

- Access Report Design Aid
- Update Report Fields
- Compile the Report
Illustrative Example – RDA and DREAM Writer

DREAM Writer

CL Program J01800

RPG Program P01800

Report Template R01800

Report Design Aid

Creates DDS for R01800

F98301/F98302
F98303/F9831
F98311/F98312

Computer Assisted Programming

R01800 Version 001
Report Design Aid vs. Screen Design Aid – Field Definition Window

**FIELD POSITIONING**

<table>
<thead>
<tr>
<th>RDA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Row positions are relative to other field, not fixed. Location on the report is determined by Space and Skip designations. Column positions are fixed.</td>
<td>Both row and column positions are fixed. Field will appear on the screen exactly where Row/Column field specify.</td>
</tr>
</tbody>
</table>

**FIELD CONDITIONING**

<table>
<thead>
<tr>
<th>RDA</th>
<th>SDA</th>
</tr>
</thead>
<tbody>
<tr>
<td>A field can optionally appear in bold face, be underlined, etc. J.D. Edwards does not typically use these features because they impact printer performance.</td>
<td>A field can appear highlighted, underlined, in reverse image, etc. J.D. Edwards makes use of these attribute for marking fields in error.</td>
</tr>
</tbody>
</table>
Cover Page Fields

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC0CO</td>
<td>Name of company 00000</td>
</tr>
<tr>
<td>TTL@</td>
<td>Line 1 of DREAM Writer Version ID if it exists, otherwise it is blank</td>
</tr>
<tr>
<td>TXT2</td>
<td>Line 2 of DREAM Writer Version ID, or blank</td>
</tr>
<tr>
<td>TXT3</td>
<td>Line 3 of DREAM Writer Version ID, or blank</td>
</tr>
</tbody>
</table>
Report Header Fields

<table>
<thead>
<tr>
<th>Address Number</th>
<th>Name</th>
<th>Phone Number</th>
<th>Line2</th>
<th>Line3</th>
<th>ST</th>
<th>Postal Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>4008</td>
<td>Allied Steel</td>
<td>779-1675</td>
<td>Attn: Andrew Carnegie</td>
<td>4949 S. Syracuse Pkwy</td>
<td>CO</td>
<td>80112</td>
</tr>
<tr>
<td>6805</td>
<td>American General Insurance Co.</td>
<td>(303) 522-7575</td>
<td>1717 Chamber St.</td>
<td>Denver</td>
<td>CO</td>
<td>80202</td>
</tr>
<tr>
<td>4004</td>
<td>American Supply Company</td>
<td>(303) 321-5648</td>
<td>2658 Sherman Street</td>
<td>Denver</td>
<td>CO</td>
<td>80131</td>
</tr>
<tr>
<td>5004</td>
<td>Apple Hotel</td>
<td>(303) 773-3733</td>
<td>1234 Merry Road</td>
<td>Englewood</td>
<td>CO</td>
<td>80237</td>
</tr>
<tr>
<td>1111</td>
<td>Arapahoe Hospital</td>
<td>(303) 773-3755</td>
<td>1476 Arapahoe Road</td>
<td>Englewood</td>
<td>CO</td>
<td>80111</td>
</tr>
<tr>
<td>4003</td>
<td>Arapahoe Plumbing</td>
<td>(303) 798-1515</td>
<td>c/o Phillips, Andover</td>
<td>25 DTC Center</td>
<td>CO</td>
<td>80121</td>
</tr>
<tr>
<td>1759</td>
<td>Ashby, Arnold</td>
<td>(303) 643-4132x1611</td>
<td>4129 S. Adams Street</td>
<td>Denver</td>
<td>CO</td>
<td>80121</td>
</tr>
<tr>
<td>4976</td>
<td>August, Rodin</td>
<td>(707) 456-2246</td>
<td>94 Rue de Balrac</td>
<td>Paris</td>
<td>CO</td>
<td>80327</td>
</tr>
<tr>
<td>7018</td>
<td>Bank of America</td>
<td>(303) 733-5546</td>
<td>So. St. Louis</td>
<td>Denver</td>
<td>CO</td>
<td>80209</td>
</tr>
<tr>
<td>7211</td>
<td>Bovaird, Georgia</td>
<td>(303) 733-5546</td>
<td>707 Vine Street</td>
<td>Denver</td>
<td>CO</td>
<td>80209</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>VC0CO</td>
<td>Name of company 00000</td>
</tr>
<tr>
<td>RRTTL@</td>
<td>Line 1 of DREAM Writer Version ID if it exists, otherwise it is blank</td>
</tr>
<tr>
<td>RRTXT2</td>
<td>Line 2 of DREAM Writer Version ID, or blank</td>
</tr>
<tr>
<td>RRTXT3</td>
<td>Line 3 of DREAM Writer Version ID, or blank</td>
</tr>
</tbody>
</table>
What Are the Report Formats?

The first step in designing a new report is laying out the formats. All lines of information of the report should be accounted for in order to correctly define the formats needed and their size.

<table>
<thead>
<tr>
<th>FORMAT</th>
<th>FIELD</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any format</td>
<td>*VTX</td>
<td>Assigns the first available VTX name to the field and will pull in a description from the Data Dictionary that can be overridden.</td>
</tr>
<tr>
<td></td>
<td>*VC0</td>
<td>Assigns the first available VC0 field and assigns a default size of thirty.</td>
</tr>
<tr>
<td>HEADING1 – contains the standard fields to be printed on the top of every page</td>
<td>VTX001</td>
<td>The default VTX field which prints the row description, Page –.</td>
</tr>
<tr>
<td></td>
<td>*PAGE</td>
<td>The default special field that inserts the DDS keyword PAGNBR in the source and retrieves the current page number on the report.</td>
</tr>
<tr>
<td></td>
<td>VTX002</td>
<td>The default VTX field which prints the row description, Date –.</td>
</tr>
<tr>
<td></td>
<td>*DATE</td>
<td>Special field that retrieves today’s date.</td>
</tr>
<tr>
<td></td>
<td>VC0CO</td>
<td>The name of the default company 000, it appears on the first line of each page.</td>
</tr>
<tr>
<td></td>
<td>RRTTL@</td>
<td>Line 1 of DREAM Writer Version ID if it exists, otherwise it is blank.</td>
</tr>
<tr>
<td></td>
<td>RRTXT2 &amp; RRTXT3</td>
<td>DREAM Writer overrides that correspond to the second and third header lines of the report.</td>
</tr>
<tr>
<td>HEADING2 – contains the subheading fields used to describe the level break detail that is to follow</td>
<td>VC0ROW</td>
<td>Data Dictionary row description of the level break field.</td>
</tr>
<tr>
<td></td>
<td>VC0KEY</td>
<td>The value of the level break field.</td>
</tr>
<tr>
<td></td>
<td>VC0DSC</td>
<td>The description of the value of the level break field.</td>
</tr>
<tr>
<td>DETAIL1 – contains the data line fields</td>
<td>RRxxxx</td>
<td>The value of the data for this field</td>
</tr>
</tbody>
</table>
You may have as many formats as you can fit on one RDA screen. Just remember to increment the suffix number for each format added as well as any VC fields you may be using.

Certain fields are used in RDA when generating reports that will contain subheadings or dynamic (hierarchical) totaling. The following illustrates how these fields are used within a report.
What Are the Report Design Standards?

**RDA Features**

Normal Design range of 132 – 198 Character Reports  
To validate against Data Dictionary  
To automatically add records to the Vocabulary Overrides File

**J.D. Edwards Standards/Record Formats**

Prefix standards  
RR for output fields  
$$ for total fields

**General Aesthetics**

When possible, design your reports using the following set of rules:

**Column Headings**

Column headings should not be wider than the length of the data that appear below them.

**Alignment**

Begin fields in column space 2 and do not extend fields beyond column 132 unless necessary.

**Spacing**

Use the following as your guides when spacing different report elements:

- Separate column headings by one space  
- Use both column headings when one heading isn’t clear enough

**Special Effects**

Always use dashes below column headings instead of underlines. Underlines can impact the performance of printers. Dashes are entered as literal fields.

Do not use highlight as it will print a line three times to achieve the highlighted (or boldface) effect, again impacting performance.
Format

In order to avoid overflow, limit the number of lines in any detail or total format to six or less.

Line and Page Skipping

To be consistent with other report programs use SPACEB and SKIPB instead of SPACEA and SKIPA.

About Designing the Report

DDS is being created as you design the report

SPACEB and SPACEA are entered and removed as you add and move fields around.

Multiple formats are relative to each other.

<table>
<thead>
<tr>
<th>Function</th>
<th>What to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Changing the Report Title</td>
<td>TTL@</td>
</tr>
<tr>
<td>Adding a New Field</td>
<td>*, &amp;</td>
</tr>
<tr>
<td>Updating Existing Fields</td>
<td>*</td>
</tr>
<tr>
<td>Deleting an Existing Field</td>
<td>*DEL on field definition window, d.</td>
</tr>
<tr>
<td>Format Name</td>
<td>Displayed in upper right hand corner of window.</td>
</tr>
<tr>
<td>Field positions</td>
<td>Represent starting positions.</td>
</tr>
</tbody>
</table>
Accessing Report Design Aid

You must have access to the source file to enter RDA.

To access Report Design Aid

From the Software Versions Repository

<table>
<thead>
<tr>
<th>Action Code</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member ID</td>
<td>R928400</td>
</tr>
<tr>
<td>Description</td>
<td>Inventory by Cost Center w/o Subheadings</td>
</tr>
<tr>
<td>Function Code</td>
<td>PRTF Printer Files</td>
</tr>
<tr>
<td>Function Use</td>
<td>161 Simple Reports</td>
</tr>
<tr>
<td>System Code</td>
<td>92 Computer Assisted Design</td>
</tr>
<tr>
<td>Reporting System</td>
<td>92 Computer Assisted Design</td>
</tr>
<tr>
<td>Base Member Name</td>
<td>P928400</td>
</tr>
<tr>
<td>Maint/RSTDSP</td>
<td>1</td>
</tr>
<tr>
<td>Omit Option</td>
<td>S</td>
</tr>
<tr>
<td>Copy Data (Y/N)</td>
<td>N</td>
</tr>
<tr>
<td>Optional File</td>
<td>N</td>
</tr>
<tr>
<td>Common File</td>
<td>N</td>
</tr>
</tbody>
</table>

O Source Object Source SAR Version SD User Data
P Library Library File Number ID CP ID Modified
JDFSRC JDCOBJ JDESRC 834451 A71 I QUARLES 10/26/94

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt F24=More

1. Inquire on a report.
2. Copy the production source down to a development environment.
3. Select option 10 on the Software Versions Repository form to go to the appropriate Design Aid screen based on the members Function Code value.

Enter ‘PRTF’ or ‘PRTS’ in the Function Code field to go to Report Design Aid.
Updating a Field in RDA

The field definition window in RDA is slightly different from SDA.

To update a field in RDA

Select the design option from Software Versions Repository

Enter “*” in the field you wish to update.

Field | Explanation
---|---
Space Before | Specifies the number of lines a printer device is to space before printing the next line(s)
Space After | Specifies the number of lines a printer device is to space after printing the next line(s)
Skip Before | Specifies that the printer device is to skip to a specific line number before it prints the next line(s).
Skip After | Specifies that the printer device is to skip to a specific line after it prints the next line(s).
Field Cond | Indicates whether the field conditioning (to print this field or not) is in effect.
### Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Char per Inch</td>
<td>Specifies the horizontal printing density.</td>
</tr>
<tr>
<td></td>
<td>J.D. Edwards specifies this at the report level and this field is not used.</td>
</tr>
<tr>
<td>Edit Code</td>
<td>Used to specify output formatting of numeric data.</td>
</tr>
<tr>
<td></td>
<td>Used in conjunction with *DATE, *TIME, *PAGE.</td>
</tr>
<tr>
<td>Asterisk Fill</td>
<td>Optionally specify asterisk fill for edit codes 1–4, A–D, and J–M.</td>
</tr>
<tr>
<td></td>
<td>An asterisk will print for each zero suppressed in the edited field.</td>
</tr>
<tr>
<td>Float Symbol</td>
<td>Specify a currency symbol (corresponding to the system value QCURSYM) that will be printed immediately to the left of the left–most digit of an edited field.</td>
</tr>
<tr>
<td></td>
<td>Valid for a numeric field that has an edit code of 1–4, A–D, or J–M.</td>
</tr>
</tbody>
</table>
# Understanding the Report Design Aid Function Keys

## F5 – Format Display Control

<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Description</th>
<th>Sel</th>
<th>Format</th>
<th>Type</th>
<th>Boundaries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>928400</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Field Explanation

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sel</td>
<td>Selection. Controls the display of record formats.</td>
</tr>
<tr>
<td>Format</td>
<td>Lists the DDS format names.</td>
</tr>
<tr>
<td>Type</td>
<td>Describes the DDS format type. Always REPORT or SFORMS in RDA.</td>
</tr>
<tr>
<td>Boundaries</td>
<td>Two 3-digit numbers that define the range (rows) for the DDS. HEADING1 is rows 1 to 8, DETAIL1 is row 9, TOTAL1 is rows 10 to 11.</td>
</tr>
<tr>
<td>Window</td>
<td>Allows you to access fields outside the boundaries.</td>
</tr>
<tr>
<td>Browse (Y/N)</td>
<td>Indicator that allows you to enable/disable the browse mode.</td>
</tr>
</tbody>
</table>
RDA may automatically adjust displayed formats with those formats that are not displayed.

**F6 – Repository Services**

<table>
<thead>
<tr>
<th>Business Unit</th>
<th>Description</th>
<th>It Ty</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9850000000000</td>
<td>Repository Services</td>
<td>1</td>
<td>Available Services</td>
</tr>
<tr>
<td></td>
<td>Data Dictionary</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Menus</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Vocabulary Overrides</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Function Key Definitions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dream Writer Versions</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Processing Options</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>User Defined Codes</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Edit System Helps</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>CASE Profiles</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>SAR Log Inquiry</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Copy DD, VO, DW, UDC, SI, Menus</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Sel: "1" = Select ------- F12 = Previous

**F10 – Record Formats List**

<table>
<thead>
<tr>
<th>Opt</th>
<th>Format Name</th>
<th>Type</th>
<th>Fast Path</th>
<th>Start / End</th>
<th>Related</th>
<th># Fields</th>
<th>Fld Pfx</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>HEADING1</td>
<td>REPORT</td>
<td>001 008</td>
<td>000 RR</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>DETAIL1</td>
<td>REPORT</td>
<td>F92801</td>
<td>009 009</td>
<td>000 FF</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>TOTAL1</td>
<td>REPORT</td>
<td>010 011</td>
<td>000 FF</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Opt: 1=DB Field Selection 3=Field List 4=Delete 5=Format Keywords
The Record Formats establish the arrangement of fields on your report and in what segment of the page they are to print.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opt</td>
<td>Selection, combined with the Fast Path file name, accesses the Field Selection List.</td>
</tr>
<tr>
<td>Format Name</td>
<td>Specifies the format name.</td>
</tr>
<tr>
<td></td>
<td>HEADINGx</td>
</tr>
<tr>
<td></td>
<td>DETAILx</td>
</tr>
<tr>
<td></td>
<td>TOTALx</td>
</tr>
<tr>
<td>Type</td>
<td>Specifies the type format.</td>
</tr>
<tr>
<td></td>
<td>REPORT</td>
</tr>
<tr>
<td></td>
<td>Record formats that do not use line numbers in the DDS. Instead, they use relative positioning. Default for all report formats.</td>
</tr>
<tr>
<td></td>
<td>SFORMS</td>
</tr>
<tr>
<td></td>
<td>Record formats that use line numbers in the DDS. These formats exist in special forms (example: checks, mailing labels)</td>
</tr>
<tr>
<td>Fast Path File</td>
<td>Specifies the file you are working with.</td>
</tr>
<tr>
<td>Start/End Lines</td>
<td>The beginning line of the format.</td>
</tr>
<tr>
<td></td>
<td>RDA automatically assigns the end number and adjust when needed</td>
</tr>
<tr>
<td>Related Record</td>
<td>Used for SDA only.</td>
</tr>
<tr>
<td>Fld Pfx</td>
<td>Defaults to RR for HEADING and DETAIL formats.</td>
</tr>
<tr>
<td></td>
<td>Defaults to $$ for TOTAL formats.</td>
</tr>
</tbody>
</table>

There should be no gaps between the end line of one format and the start line of the next format. If you make changes to the positioning of a format and leave a gap between formats, RDA will automatically adjust the end lines for you.
Advanced Programming Concepts and Skills

F14 – Indicator Control Window

F16 – Display All Defined Fields

Opt  Fmt/Field  Description  Row/Col Typ  Size  Use
---  --------  -----------  -------    -------  ---
---  HEADING1  Record Format REPORT    001 003  6  O
---  *LITER    Company Name          001 046  A  40  O
---  VC0CO     Page No. ................ 001 112  A  12  O
---  *PAGE     Inventory by Business Unit 002 046  A  40  O
---  RRTTL@    Date - ................ 002 112  A  12  O
---  VTX002    Processing Option Text 003 046  A  40  O
---  RRTXT3    Processing Option Text 004 046  A  40  O
---  VTX003    Cost                      006 002  A  12  O
---  VTX006    Item                      006 046  A  2  O
---  VTX009    Item                      006 080  A  8  O
---  VTX011    Ship                      006 109  A  8  O

Opt: 4=Delete   5=Display/Update   F3=Exit   F12=Prev Screen
### F17 – Maintain Vocabulary Override Fields

You must save your report at least once in order to be able to update vocabulary overrides by this method. This is because when you are first defining a report, the vocabulary override record is not created until you save the report.

### F19 – Window Left

### F20 – Window Right
Compiling A Report

To compile a report

From the Software Versions Repository screen

Enter 14 next to the member in the subfile that you want to create and press Enter.
A screen of printer file parameters will display.

```
Printer File Parameters

Member ID............ R928400
Forms Length........ 068
Forms Width......... 112
Lines/Inch (4/6/8/9) 8
Char./Inch (10/15)   15
Overflow Line........ 062
Align Forms.......... N
Form Type............ *STD
Copies.............. 001
Separator Pages...... 1
```

2. You can either accept the defaults or change them as necessary.

**Changing Compile Option Defaults for Reports**

Reports must be compiled through the J.D. Edwards compiler by this method so that R98COVER and R98RPTH are pulled in for the cover page and help instructions.

Compiling through PDM or some other method will not bring this information in automatically.

> To change compile option defaults for reports

Change the Data Dictionary defaults for the following data items:

- #FLN – Forms Length
- WDTH – Forms Width
- LPI – Lines Per Inch
- #CPI – Characters Per Inch
- #OVF – Overflow Line Number
- #ALN – Alignment (Y/N)
- #FTY – Form Type
#CPY – Number of Copies

#SPG – Number of Separator Pages

Some severity level 10 errors may occur when your report compiles because of R98COVER (DREAM Writer cover page) and R98RPTH (DREAM Writer help instructions). These are only warning errors.

Exercises

See the exercises for this chapter.
Programming Standards

Objectives

To understand and use J.D. Edwards programming standards

Programming Standards

The Program Generator serves as the primary enforcer of J.D. Edwards programming standards. Because all J.D. Edwards programs are created through the Program Generator, J.D. Edwards programming standards are enforced throughout the software. These standards include subroutines and consistent formats that ease the maintenance process. The following areas are covered in the programming standards.

- Program Specifications
- Program Overview
- Program Structure
- Performance Issues
- User Spaces
- User Indexes
- File Servers
- Functional Servers
- Group Jobs
- J.D. Edwards Source Debugger
Program Specifications

About Program Specifications

As described in IBM’s Languages: RPG/400 User’s Guide, there are several kinds of RPG/400 specifications. When your source program is compiled, these specifications are arranged in the following sequence:

- Control specifications (H Specs)
- File description specifications (F Specs)
- Extension specifications (E Specs)
- Input specifications (I Specs)
- Calculation specifications (C Specs)
- Output specifications (O Specs)

An RPG/400 program does not have to use all specifications. A typical J.D. Edwards program will contain control, file description, extension, input, calculation, and output specifications. The following descriptions were pulled from the manual, Languages: RPG/400 User’s Guide, and are repeated here for your convenience.
What Are Control Specifications?

The control specification includes the name of the program.

The first line identifies the program, P55011X, including its description, Item Information Update.

The next fourteen lines are comments that are included in J.D. Edwards programs for copyright purposes and reproduction restrictions.

```plaintext
0001.00  H/TITLE P55011X – Item Information Update
0002.00  H*                                      -----------------------------------------------
0003.00  H*  Copyright (c) 1993
0004.00  H*  J. D. Edwards & Company
0005.00  H*  This unpublished material is proprietary to
0006.00  H*  J. D. Edwards & Company. All rights reserved.
0007.00  H*  The methods and techniques described herein are
0008.00  H*  considered trade secrets and/or confidential.
0009.00  H*  Reproduction or distribution, in whole or in part,
0010.00  H*  is forbidden except by express written permission
0011.00  H*  of J. D. Edwards & Company.
0012.00  H*  -----------------------------------------------
0013.00  H*                                      -----------------------------------------------
0014.00  H*  -----------------------------------------------
0015.00  F*                                      -----------------------------------------------
0016.00  P*
```

F3=Exit  F5=Refresh  F9=Retrieve  F10=Cursor  F12=Cancel
F16=Repeat find  F24=More keys
What are File Description Specifications?

File description specifications describe all the files that your program uses. The information for each file includes:

- Name of the file
- How the file is used (for example, input)
- Size of records in the file for internal files or an external designation
- Whether or not the file is keyed
- Input or output device used for the file
- If the file will have records added to it

When the Program Generator generates a program, it arranges the included files in alphabetical order within the F Specs.

When a program runs, it opens the files in bottom–to–top order. As a general rule:

1. Place the files that have the most I/Os at the bottom of the F specs.
2. Place any small usage files or files that are closed after first use at the top of the F specs.
3. Place the display or print files at the bottom of the list.
What Are Extension Specifications?

Extension specifications describe all record address files, table files, and array files used in the program. The information includes:

- Name of the file, table or array
- Number of entries in a table or array input record
- Length of the table or array entry
- Optional comment text

Lines 44 through 47 are used in this program to facilitate error handling and field editing.

The first line defines an array called EMK which has a maximum of 64 entries, each with a length of 4 characters.

Line 52 requests that the compiler program copy in a specific set of E Specs.

The E Specs, E0001, are used in any program that executes the common subroutine, C0001.
What Are Input Specifications?

Input specifications describe the records, fields, data structures, and named constants used by the program. The information in the input specifications includes:

- Name of the file
- Sequence of record types
- Whether record–identifying indicators, control–level indicators, field–record relation indicators, or field indicators are used
- Whether data structures, look–ahead fields, record identification codes, or match fields are used
- Type of each file (alphanumeric or numeric; packed–decimal, zoned decimal, or binary format)
- Location of each field in the record
- Name of each field in the record
- Named constants

Lines 73 through 83 are used to define some of the vocabulary overrides that appear on this screen.

The lengths change from program to program, and the program retrieves the values for each field at the time it executes the housekeeping subroutine, S999.
What Are Calculation Specifications?

Calculation specifications describe the calculation to be done on the data and the order of the calculations. Calculation specifications can also be used to control certain input and output operations. The information includes:

- Control–level and conditioning indicators for the operation specified (generally not used in J.D. Edwards)
- Fields or constants to be used in the operation
- The operation to be processed
- Whether resulting indicators are set after the operation is processed

The C Specs are the heart of the processing of a program. J.D. Edwards programs are designed with a MAINLINE portion which is a select set of C Specs that call other subroutines.
What Are Output Specifications?

Output specifications describe the records and fields in the output files and the conditions under which output operations are processed. They include information such as:

- Name of the file
- Type of record to be written
- Spacing and skipping instructions of Printer files
- Output indicators that condition when the record is to be written
- Name of each field in the output record
- Location of each field in the output record
- Edit codes and edit words
- Constants to be written
- Format name for a workstation file

J.D. Edwards utilizes the RPG EXCPT operation to release locks on data records. This O Spec informs the program which record format is to be released when the EXCPT UNLOCK calculation is performed. Additional formats can be identified with a name such as UNLCKA or UNLCKB.

Typically, J.D. Edwards does not perform reporting functions using O Specs.

The Opcode “UNLCK” can be used instead of EXCPT/O~SPECS.
Program Overview

About the Program Overview

The program overview provides a basic overview of the standards used in a program, including:

- Subroutines
- Error Handling
- Indicator Usage
- Documentation
- Miscellaneous Items

Subroutines

The Program Generator uses two categories of subroutines:

- Standard Subroutines
- Common Subroutines

About Standard Subroutines

The Program Generator includes the required standard routines in the Calculation Specifications at the time it generates a program. It arranges them in alphanumeric order.

If you must enter your own standard subroutine, name it in such a way that it will be executed in the necessary order. For example, if you need your subroutine to be executed after the scrub and edit subroutine (S005) but before the update files subroutine (S010), begin the name with an S and then use a three to four character suffix that fits in logically, such as S005A or S006.
Standard subroutine code lines are identified in positions 7 and 8 with SR. Their name always begins with an S. Subroutines are separated by a single line of asterisks. Major blocks of code within a subroutine are separated by a single line of dashes.

```plaintext
1870.00  CSR MOVE *BLANK HRJBCD
1871.00  CSR MOVE *BLANK HRJEST
1872.00  CSR MOVE *BLANK HRRVW
1873.00  CSR END
1874.00  C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1875.00  CSR ENDSR
1876.00  C****************************************************************
1877.00  C*
1878.00  C* SUBROUTINE S003 – Edit Key
1879.00  C* ------------------------------------------------------
1880.00  C*
```

Place an END tag on the ENDSR statement. The TAG name should start with END. The subroutine name is added as a suffix. For example, ENDO01 would be the used for subroutine S001. Do not use the end tag for anything else. Use a T tag if the code needs to be executed prior to the ENDSR statement. For example, T001 would be used for subroutine S001 if the tag is used in the middle of the subroutine.

```plaintext
1874.00  C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1875.00  CSR ENDSR
1876.00  C****************************************************************
```

About Common Subroutines

Common subroutines are maintained outside the program and are included at the appropriate times using the COPY statement. Common subroutines are also referred to as copy modules for that reason. J.D. Edwards stores all common subroutines in the file JDECPY.

At compile time, the compiler copies in code for all instances of the COPY statement. The included code appears only once and then can be called from anywhere within the program.

The statement that instructs the compiler to copy in the source code is shown below. Single lines of asterisks separate common subroutines.
This example shows how the COPY statement in the source (above) brings in additional code to the compiled source (below).

The following user defined code contains an online listing and specifications.

Install System Code: 93

User Defined Code: /C
Error Handling

J.D. Edwards has devised an efficient means of handling errors by way of arrays.

The EMK array holds the four byte data dictionary name of every error that could occur in this program. Loaded in Housekeeping (S999).

The @MK array maintains a flag setting for each error identified in EMK. If one of the errors occurs, the flag is set on.

The @ER array loads the related error messages when the user presses F7 to view the errors that actually occurred.

A program may have up to 64 errors.
The call to the error message handling program is shown below.

If any error flag is set to one, then the program moves the corresponding data item from the array of all possible errors (EMK) into the array of the errors that have actually occurred (@ER). P0000E is called to display the errors when the function key is pressed.

The next example of code shows how a flag is set in the @MK array.

If indicator 82 is on, the standard indicator for an error (93) is set on and indicator 41 is set on to highlight the field in error.
The next example of code shows the loading of the array that contains every possible error for this program. This loading takes place only once (in S999).

### Indicator Usage

There are 99 indicators available for use. They are grouped by purpose. The chart on the next page lists the available indicators and their description.
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Causes the Invalid Function Key Pressed message to appear</td>
</tr>
<tr>
<td>02</td>
<td>Dictates the color palette to be used</td>
</tr>
<tr>
<td>15</td>
<td>Indicates a function key was pressed.</td>
</tr>
<tr>
<td>20</td>
<td>Handles the clear screen action code</td>
</tr>
<tr>
<td>21</td>
<td>Handles the add action code</td>
</tr>
<tr>
<td>22</td>
<td>Handles the change action code</td>
</tr>
<tr>
<td>23</td>
<td>Handles the delete action code</td>
</tr>
<tr>
<td>24</td>
<td>Handles the inquire action code</td>
</tr>
<tr>
<td>25</td>
<td>Handles the inquire action code 'P' for print (payroll)</td>
</tr>
<tr>
<td>31</td>
<td>Used in conjunction with subfile processing to initiate the INVITE or SFLCLR keyword. Using INVITE will slow processing</td>
</tr>
<tr>
<td>32</td>
<td>Used in conjunction with subfile processing initiating the keyword SFLNXTCHG</td>
</tr>
<tr>
<td>37</td>
<td>Used in conjunction with subfile processing to avoid display of an empty subfile (used only with inquiry subfiles)</td>
</tr>
<tr>
<td>38</td>
<td>Used in conjunction with subfile processing to highlight the last record in the display (keyword SFLDSP) and avoid display of an empty subfile</td>
</tr>
<tr>
<td>40–79</td>
<td>Used for error processing to indicate which fields are in error and need to be highlighted</td>
</tr>
<tr>
<td>40</td>
<td>Reserved for errors in the Action Code field</td>
</tr>
<tr>
<td>41</td>
<td>Reserved for errors in the key fields</td>
</tr>
<tr>
<td>80–89</td>
<td>General reusable one–time indicators. Use them as needed.</td>
</tr>
<tr>
<td>93</td>
<td>Global error indicator that highlights line 24</td>
</tr>
<tr>
<td>98</td>
<td>Indicates a chain or read failure</td>
</tr>
<tr>
<td>99</td>
<td>Indicates a record is in use or file error</td>
</tr>
<tr>
<td>OF</td>
<td>Indicates overflow for report processing</td>
</tr>
<tr>
<td>LR</td>
<td>Indicates that the last record has been read and the program should end normally</td>
</tr>
<tr>
<td>RT</td>
<td>Indicates that a temporary or final halt in the program should take place. Returns to calling program leaving files open.</td>
</tr>
</tbody>
</table>
Documentation

In the F specifications the program contains several comment lines that are to serve as the program revisions log. The log should list all programmers who have revised the program, the date the revisions were made and the SAR outlining the change that was made.

```
0016.00  F*  F*  PROGRAM REVISION LOG
0018.00  F*  -----------------------------
0020.00  F*  Date  Programmer  Nature of Revision
0021.00  F*  ---------------  ----------  -----------------------------
0022.00  F*  03/18/93  MARTIN  SAR # 00000005  [AS/400  A/G]
0023.00  F*  05/01/93  RIPPEY  SAR # 00167542
```

When entering comment lines, use the following conventions.

An asterisk in column seven specifies that the line is a comment line only.

The asterisk should be followed by four blank spaces before the comment begins.

Precede and follow the comment lines with a blank line.

Notice in the example below how these conventions are observed.

```
0034.00  F*****************************************************************
0035.00  F*
0036.00  F*    Copy Member for Composite Common Subroutine - C0001
0037.00  F*
```
Guidelines

Common sense should be your guide when documenting your programs. Be thorough and descriptive. Put yourself in the place of the next programmer who will inherit your work. Use English and not “programmerese” to specify the action occurring. For example, for the code shown below:

```
0130.00  C*
0131.00  C     $998     CASEQ' ' S998
0132.00  C*     ———     ———
0133.00  C     END
```

DON’T WRITE: If $998 is blank, execute S998.

INSTEAD WRITE: Load data field dictionary parameters (one cycle only).

Notice that the good example gives more detail than can be inferred from the actual code.

Include a line of dashes beneath any line of code that branches to another line of code (CASxx, CABxx, GOTO, EXSR, CALL, BEGSR). The receiving tag statement should also be followed by a line of dashes as shown in the example below.

```
0275.00  C*
0276.00  C     EXSR S999
0277.00  C*     ———     ———
```

Miscellaneous Items

The following represent miscellaneous items of note that you should keep in mind when writing your own code.

Naming Conventions

Use the following first character to distinguish different item names:

@ Array names

$ Program created field names (flags and work fields)

# Fields defined in common subroutines
Key List (KLIST)

Key lists should all be defined in the housekeeping subroutine.

Begin the key list name with the data file prefix. For example, the Address Book Master file prefix is AB, so the key list would be ABKY01.

The Program Generator creates key lists using the following naming conventions:

XXKY01 for physical files where XX = the file prefix

For example: ABKY01

When a physical needs to have more than one key list in a program, the successive files are noted in the last character space. For example, for three key lists for the physical F0101, the key lists would be: ABKY01, ABKY02, and ABKY03.

XXKY0x for logical files where XX is equal to the file prefix and x is equal to the last letter of the logical file name.

For example: ABKY0A for F0101LA, ABKY0B for F0101LB.

When a logical needs to have more than one key list in a program, the successive files are noted in the second to last character space. For example for three key lists for the logical F0101LA the key lists would be: ABKY0A, ABKY1A, and ABKY2A.

Work Fields

Define work fields only once within a program. The use of the *LIKE DEFN command is highly recommended for defining work fields when their attributes are directly tied to those of data base fields.

For example, if the work field needs to have the same attributes as a field that exists in a file:

MOVE ABANS $$ANS,

then define $$ANS as follows:

*LIKE DEFN ABANS $$ANS

The advantage of this method is that the work field and data base field will retain the same attributes even if the data base field changes.
When using work fields as a flag, you should assign them the prefix $ and have the remainder of the name be descriptive. In the example below, the work field name is $GLOBL. This name is more descriptive than a field name such as $G.

0831.00  C*  
0832.00  C*  If F6 pressed, Global Update by Percent or Amount.  
0833.00  C*  
0834.00  C*  
0835.00  CSR  @@AID IFEQ #F03  
0836.00  CSR  MOVE '1' $GLOBL 1

Optional Files

If a program uses files which are dependent upon your particular setup, you should designate those files as user control open (UC) in the file specifications and then write the program such that they are opened, if needed, in the Housekeeping subroutine. This eliminates the need to open files unnecessarily and conserves resources.

FF085201 UF  E           K        DISK                           UC  
FF08501LAIF  E           K        DISK                           UC
The lines that perform the open are shown below.

<table>
<thead>
<tr>
<th>Columns</th>
<th>1 71</th>
<th>Browse</th>
<th>JDFSRC/JDESRC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEQ--&gt;&gt;</td>
<td></td>
<td></td>
<td>F08320</td>
</tr>
<tr>
<td>3825.00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3826.00</td>
<td>C*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3827.00</td>
<td>C*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3828.00</td>
<td>CSR</td>
<td>OPEN</td>
<td>F085201</td>
</tr>
<tr>
<td>3829.00</td>
<td>CSR</td>
<td>*IN99</td>
<td>IPEQ '0'</td>
</tr>
<tr>
<td>3830.00</td>
<td>CSR</td>
<td>MOVE</td>
<td>'1'</td>
</tr>
<tr>
<td>3831.00</td>
<td>CSR</td>
<td>END</td>
<td></td>
</tr>
<tr>
<td>3832.00</td>
<td>C*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3833.00</td>
<td>CSR</td>
<td>OPEN</td>
<td>F085011A</td>
</tr>
<tr>
<td>3834.00</td>
<td>CSR</td>
<td>*IN99</td>
<td>IPEQ '0'</td>
</tr>
<tr>
<td>3835.00</td>
<td>CSR</td>
<td>MOVE</td>
<td>'1'</td>
</tr>
</tbody>
</table>

If you are doing a user–controlled open for a file that is part of another system, you will also need to provide pre–compiler commands in the event the user hasn’t purchased that system. The example below illustrates the necessary pre–compiler commands designed to address just such a situation.

In the example, if a Payroll client has not purchased Human Resources, the code specifies a file override and then substitutes an empty file (identified with the suffix E) which all Payroll clients receive.

```
*************** Beginning of data ****************************************
0001.00       OVRKDBF    FILE(F082001B) TOFILE(F082001E)
0002.00       OVRKDBF    FILE(F08001) TOFILE(F08001E)
0003.00       OVRKDBF    FILE(F08005B) TOFILE(F08005E)
*************** End of data **********************************************
```

The user–controlled opens in the program allow the program to run in the absence of certain files, whereas the precompiler commands allow the program to be compiled in the absence of those files.
Program Structure

About Program Structure

There are several types of subroutines used in the J.D. Edwards program structure, including the following:

- Internal RPG Subroutines within J.D. Edward programs
- Subfile program with selection exits
- Interactive non-subfile program
- Report program without subheadings
- Report program with subheadings
- Maintenance program without a subfile

Internal RPG Subroutines Within J.D. Edwards Programs

Standard names make program maintenance easier.
Called primarily from Mainline.

The table below describes internal RPG subroutines within J.D. Edwards programs:

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| S00EX | Processes all function key exits.  
Calls P9601H if F24 was pressed  
Calls X96CCX if F1 was pressed  
Calls subroutine S00VL if F1 was pressed after  
X96CCX was called  
Calls P0000E if F7 was pressed  
Calls P00HELP if the HELP key was pressed  
Calls subroutine S001 if F22 was pressed  
Calls all programs to process all user defined function keys |
| S00VL | Values returned with Cursor Sensitive Help.  
Is called from the subroutine S00EX after the program  
X96CCX is called |
<p>| S00OP | Subfile Selection Exits (Options). |</p>
<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>S001</td>
<td>Clears all database and video fields. Usually only clears key fields and VC0 fields if F22 (Clear) is pressed</td>
</tr>
<tr>
<td></td>
<td>Checks for level breaks for reports. Turns on level break flags. Retrieves total line description</td>
</tr>
<tr>
<td>S003</td>
<td>Validates the key fields. Calls S998 subroutine if auto inquire was invoked Sets the file pointer. Performs a SETLL or CHAIN if a single record maintenance program Performs a SETLL for subfile programs Calls a subroutine S004 to load video/report fields Monitors for no subfile records loaded if a subfile Loads unused subfile records with blanks</td>
</tr>
<tr>
<td>S004</td>
<td>Display/load video/report fields.</td>
</tr>
<tr>
<td>S005</td>
<td>Scrubs and edits video/report fields. Moves video data to database fields Turns on error indicators if a field is in error Updates/writes records to the database file if a subfile Updates the subfile</td>
</tr>
<tr>
<td>S010</td>
<td>For reports with level breaks it: Prints the total Clears the level break totals Prints the grand total (if it has reached the end of the file) Prints the detail Adds to the new level break totals Calls subroutine S020 if it is a report with subheadings If it is not a report, it updates, adds, or deletes records from the database file Turns on F22 (Clear) to force S001 to be executed to clear the buffer before reading another record</td>
</tr>
<tr>
<td>S020</td>
<td>Print Report Subheadings.</td>
</tr>
<tr>
<td>S998</td>
<td>Loads Data Dictionary values. (One time only) Retrieves row description for level breaks and subheadings, if applicable</td>
</tr>
<tr>
<td>Field</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| S999  | Housekeeping. (One time only)  
Sets auto inquiry  
Defines key lists  
Retrieves processing options and level breaks, if applicable  
Retrieves vocabulary overrides  
Loads error messages  
Performs file opens  
Current date retrieval  
Work fields defined using *LIKE  
Prints cover page and Helps in a report |
Interactive Non-Subfile Program

Mainline

- Set auto inquiry
- Key lists
- Retrieve processing options
- Retrieve vocabulary overrides
- Load error messages
- File opens
- Date retrieval
- If auto inquiry

Write Videos

- Update/add records to file if no error
- If auto inquiry

Write Videos

S001

- Clear fields
- One-time only - load Data Dictionary editing information

Read Videos

S00EX

- Action Code
- Process Function keys
- Return F1 values to video fields

S00VLS00EXC0001

S003

- Validate key fields
- Set file pointer
- If auto inquiry

S005

- Load video fields
- Edit video data and move to file fields
- Turn on error indicators

S010

- Update/add records to file if no error

S999

- S999

S003

- S003

S004
Subfile Program With Selection Exits

Mainline

Set auto inquiry
Key lists
Retrieve processing options
Retrieve vocabulary overrides
Load error messages
File opens
Date retrieval
If auto inquiry

Simulates the 'Clear Screen' function key to clear fields

Start at beginning of subfile and read each record. Edit the data.
Turn on error indicator
Update/write records to file
If no errors. Update subfile

Load subfile records

Validate key fields(s).
Set file pointer
Monitor for no subfile records loaded.
Load remaining subfile records with blanks

Clear fields
IF 'Clear Screen' function key is pressed

Edit the action code
Process selection exits

Process function keys

Return F1 values to video fields

Start at beginning of subfile and read each record.
Edit the data.
Turn on error indicator
Update/write records to file
If no errors. Update subfile

Load remaining subfile records with blanks

If auto inquiry

Validate key fields(s).
Set file pointer
Monitor for no subfile records loaded.
Load remaining subfile records with blanks

Clear fields
IF 'Clear Screen' function key is pressed

Edit the action code
Process selection exits

Process function keys

Return F1 values to video fields
Report Program Without Subheadings

Mainline

- Key lists
- Load vocabulary overrides
- File opens
- Print cover page and helps
- Retrieve processing options and level breaks
- Retrieve Data Dictionary editing information
- Retrieve row description for subheadings

Read a Record

- If level break, print totals
- If level break, clear totals
- If end of file, print grand total
- Print detail
- Add to totals

Check cost center security

- Check for level breaks
- Set level break flag(s)
- Retrieve total line description

Load report fields

- S999
- S998
- S010
- C0000
- S002
- S004
Report Program With Subheadings

Mainline

- Key lists
- Load vocabulary overrides
- File opens
- Print cover page and helps
- Retrieve processing options and level breaks

- Retrieve Data Dictionary editing information
- Retrieve row description for subheadings

S020

Print subheadings

S010

Read a Record

- If level break, print totals
- If level break, clear totals
- If end of file, print grand total
- Print detail
- Add to totals

C0000

Check cost center security

S004

Load report fields

S002

Check for level breaks
- Set level break flag(s)
- Retrieve total line description

S020

Print subheadings if overflow
Review an RPG Program’s Source

The following pages illustrate a maintenance program without a subfile.

Some of the more important areas and commonly used fields are highlighted and explained.
1.00  H/TITLE P928011  Item Master Information
2.00  H*
3.00  H*
4.00  H*  Copyright (c) 1993
5.00  H*  J. D. Edwards & Company
6.00  H*
7.00  H*  This unpublished material is proprietary to
8.00  H*  J. D. Edwards & Company. All rights reserved.
9.00  H*  The methods and techniques described herein are
10.00 H*  considered trade secrets and/or confidential.
11.00 H*  Reproduction or distribution, in whole or in part,
12.00 H*  is forbidden except by express written permission
13.00 H*  of J. D. Edwards & Company.
14.00 H*
15.00 H*
16.00 H*  PROGRAM REVISION LOG
17.00 H*
18.00 H*
19.00 H*
20.00 F*
21.00 F*
22.00AUTHRF*  12/07/93  QUARLES  SAR # 241883  (AS/400 A/G)
23.00 F*
24.00 F*  B0010 - Standard Maintenance Program Type
25.00 F*  This program provides the standard single cycle
26.00 F*  processing for adding, changing, deleting and
27.00 F*  inquiring into data records as requested.
28.00 F*
29.00 F*
30.00 F*
31.00 F*  Copy Member for Composite Common Subroutine – C001
32.00 F*
33.00 F*  Copy Member for Composite Common Subroutine – C00001
34.00 F*
35.00 F*  Copy Member for Composite Common Subroutine C0012
36.00 F*
37.00 F*  Copy Member for Composite Common Subroutine C997
38.00 F*
39.00 F*  PROGRAM TABLES AND ARRAYS
40.00 F*
41.00 F*
42.00 F*
43.00 F*
44.00 F*  PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES
45.00 F*
46.00 F*
47.00 F*
48.00 F*
49.00 F*
50.00 F*
51.00 F*
52.00 F*
53.00 F*
54.00 F*
55.00 F*
56.00 F*
57.00 F*
58.00 F*
59.00 F*
60.00 F*
61.00 F*
62.00 F*
63.00 F*
64.00 F*
65.00 F*
66.00 F*
67.00 F*
68.00 F*
### Data Structure to Load Video Screen Text

<table>
<thead>
<tr>
<th>Line</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>69.00</td>
<td>I*</td>
<td>Data Structure to Load Video Screen Text</td>
</tr>
<tr>
<td>70.00</td>
<td>I*</td>
<td>IDSTXT DS 1000</td>
</tr>
<tr>
<td>71.00</td>
<td>I</td>
<td>1 18 VTX001</td>
</tr>
<tr>
<td>72.00</td>
<td>I</td>
<td>8 82 VTX003</td>
</tr>
<tr>
<td>73.00</td>
<td>I</td>
<td>121 138 VTX004</td>
</tr>
<tr>
<td>74.00</td>
<td>I</td>
<td>161 178 VTX005</td>
</tr>
<tr>
<td>75.00</td>
<td>I</td>
<td>201 218 VTX006</td>
</tr>
<tr>
<td>76.00</td>
<td>I</td>
<td>241 258 VTX007</td>
</tr>
<tr>
<td>77.00</td>
<td>I</td>
<td>281 298 VTX008</td>
</tr>
<tr>
<td>78.00</td>
<td>I</td>
<td>321 338 VTX009</td>
</tr>
<tr>
<td>79.00</td>
<td>I</td>
<td>361 378 VTX010</td>
</tr>
<tr>
<td>80.00</td>
<td>I</td>
<td>401 418 VTX011</td>
</tr>
<tr>
<td>81.00</td>
<td>I</td>
<td>441 458 VTX012</td>
</tr>
<tr>
<td>82.00</td>
<td>I</td>
<td>481 498 VTX013</td>
</tr>
<tr>
<td>83.00</td>
<td>I</td>
<td>521 536 VTX014</td>
</tr>
<tr>
<td>84.00</td>
<td>I</td>
<td>561 576 VTX015</td>
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<td>85.00</td>
<td>I</td>
<td>601 616 VTX016</td>
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<td>86.00</td>
<td>I</td>
<td>641 656 VTX017</td>
</tr>
<tr>
<td>87.00</td>
<td>I</td>
<td>681 696 VTX018</td>
</tr>
<tr>
<td>88.00</td>
<td>I</td>
<td>721 736 VTX019</td>
</tr>
<tr>
<td>89.00</td>
<td>I</td>
<td>761 776 VTX020</td>
</tr>
<tr>
<td>90.00</td>
<td>I</td>
<td>801 816 VTX021</td>
</tr>
<tr>
<td>91.00</td>
<td>I</td>
<td>841 856 VTX022</td>
</tr>
<tr>
<td>92.00</td>
<td>I</td>
<td>881 896 VTX023</td>
</tr>
<tr>
<td>93.00</td>
<td>I</td>
<td>921 936 VTX024</td>
</tr>
<tr>
<td>94.00</td>
<td>I</td>
<td>961 976 VTX025</td>
</tr>
<tr>
<td>95.00</td>
<td>I*</td>
<td>99.00</td>
</tr>
<tr>
<td>96.00</td>
<td>I</td>
<td>COPY JDECPY, I00PS@@</td>
</tr>
<tr>
<td>97.00</td>
<td>I</td>
<td>COPY JDECPY, I00PSPROG</td>
</tr>
</tbody>
</table>

### Copy Member for Composite Common Subroutine – C00SC

#### Data structure for commonly used indexes

<table>
<thead>
<tr>
<th>Line</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>101.00</td>
<td>I*</td>
<td>Copy Member for Composite Common Subroutine – C00SC</td>
</tr>
<tr>
<td>102.00</td>
<td>I*</td>
<td>I0000</td>
</tr>
<tr>
<td>103.00</td>
<td>I*</td>
<td>I0001</td>
</tr>
<tr>
<td>104.00</td>
<td>I*</td>
<td>I0002</td>
</tr>
<tr>
<td>105.00</td>
<td>I*</td>
<td>I0003</td>
</tr>
<tr>
<td>106.00</td>
<td>I*</td>
<td>I0004</td>
</tr>
<tr>
<td>107.00</td>
<td>I*</td>
<td>I0005</td>
</tr>
<tr>
<td>108.00</td>
<td>I*</td>
<td>I0006</td>
</tr>
<tr>
<td>109.00</td>
<td>I*</td>
<td>I0007</td>
</tr>
<tr>
<td>110.00</td>
<td>I*</td>
<td>I0008</td>
</tr>
<tr>
<td>111.00</td>
<td>I*</td>
<td>I0009</td>
</tr>
<tr>
<td>112.00</td>
<td>I*</td>
<td>I0010</td>
</tr>
<tr>
<td>113.00</td>
<td>I*</td>
<td>I0011</td>
</tr>
<tr>
<td>114.00</td>
<td>I*</td>
<td>I0012</td>
</tr>
<tr>
<td>115.00</td>
<td>I*</td>
<td>I0013</td>
</tr>
<tr>
<td>116.00</td>
<td>I/COPY JDECPY, I000661</td>
<td></td>
</tr>
<tr>
<td>117.00</td>
<td>I*</td>
<td>I0014</td>
</tr>
<tr>
<td>118.00</td>
<td>I*</td>
<td>I0015</td>
</tr>
<tr>
<td>119.00</td>
<td>I*</td>
<td>I0016</td>
</tr>
<tr>
<td>120.00</td>
<td>I*</td>
<td>I0017</td>
</tr>
<tr>
<td>121.00</td>
<td>I/COPY JDECPY, I000881</td>
<td></td>
</tr>
</tbody>
</table>

### Copy Member for Server – X0005

#### Data structure used with file servers

<table>
<thead>
<tr>
<th>Line</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>124.00</td>
<td>C*</td>
<td>MAINLINE PROGRAM</td>
</tr>
<tr>
<td>125.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>126.00</td>
<td>C*</td>
<td>Process housekeeping.</td>
</tr>
<tr>
<td>127.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>128.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>129.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>130.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>131.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>132.00</td>
<td>C*</td>
<td>If LR on, end program.</td>
</tr>
<tr>
<td>133.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>134.00</td>
<td>C*</td>
<td>$INLR CASEQ'1' ENDJ</td>
</tr>
<tr>
<td>135.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>136.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>137.00</td>
<td>C*</td>
<td>If automatic inquiry set, process inquiry.</td>
</tr>
<tr>
<td>138.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>139.00</td>
<td>C*</td>
<td>$AUTO CASEQ'1' S003</td>
</tr>
<tr>
<td>140.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>141.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>142.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>143.00</td>
<td>C*</td>
<td>Begin normal program processing.</td>
</tr>
<tr>
<td>144.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>145.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>146.00</td>
<td>C*</td>
<td>$INLR DOWEQ'0'</td>
</tr>
<tr>
<td>147.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
<tr>
<td>148.00</td>
<td>C*</td>
<td>Write video screen.</td>
</tr>
<tr>
<td>149.00</td>
<td>C*</td>
<td>---------------</td>
</tr>
</tbody>
</table>

---

*Each VTX field is 40 long but may not use all 40.*

*Pulls in text from Vocabulary Overrides.*

---

*Only time only functions*

*If information is passed to this program, it will automatically inquire on the record*
<table>
<thead>
<tr>
<th>Line</th>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.00</td>
<td>C</td>
<td>WRITEV9280111</td>
</tr>
<tr>
<td>151.00</td>
<td>C</td>
<td>MOVE '1' &amp;AID</td>
</tr>
<tr>
<td>152.00</td>
<td>C</td>
<td>EXSR S001</td>
</tr>
<tr>
<td>153.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>154.00</td>
<td>C</td>
<td>Clears fields</td>
</tr>
<tr>
<td>155.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>156.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>157.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>158.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>159.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>160.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>161.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>162.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>163.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
<tr>
<td>164.00</td>
<td>C</td>
<td>----- -----</td>
</tr>
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</tr>
</tbody>
</table>
Set correct message in line 24.

Sets the message for Line 24

Contains what function key was pressed by the user

Values assigned in the Function Key Definitions program

External programs start with an X. This is the cursor sensitive help program

Parameters passed identifying where the cursor was when F1 was pressed
If Display errors press, exit to error messages.

If HELP key pressed, exit to help facility and return.

If Clear screen pressed, clear screen and return.

Process roll up and down keys.

Reset error indicators if roll

If error on read, set error.
384.00 CSR END
385.00 C* If ROLL DOWN key pressed, process read prior.
387.00 C* ---------------------------------------------------------------
388.00 CSR @@AID IFEQ #FROLD
391.00 C* Reset error indicators if roll
393.00 CSR MOVEA$RESET *IN,41
394.00 CSR MOVE '0' *IN,40
395.00 CSR SETOF 818299
396.00 CSR READPI92801 9981
397.00 CSR *IN81 IFEQ '1'
398.00 CSR $RDKEY SETTLL92801
399.00 CSR SETOF 8299
400.00 CSR READPI92801 9982
401.00 C* If error on read, set error.
402.00 C*-------------------------------------
404.00 CSR @@A1D IFEQ #FROLU
416.00 CSR @@AID OREQ #FROLD
419.00 C* Release record lock or report record in use.
420.00 C*-------------------------------------
421.00 CSR *IN99 IFEQ '0'
422.00 CSR EXTCPTUNLOCK
423.00 CSR PARM ##PSDS
425.00 C* ---- --------
426.00 CSR SETON 9341
428.00 CSR MOVE '1' @MK,6
429.00 CSR GOTO ENDEXE
430.00 C* ---- --------
431.00 CSR END
432.00 C* Cost Center security edit.
434.00 C*-------------------------------------
436.00 CSR MOVEL'F92801 ' #FILE
437.00 CSR MOVELQXXCC #MCU
438.00 CSR #AUT IFNR '1'
439.00 CSR #AUT ANDNE'1'
440.00 CSR EXSR COOOO
441.00 C* ---- --------
442.00 CSR END
444.00 CSR #AUT IFNR '1'
445.00 CSR #AUT ANDNE'1'
446.00 CSR #MAUT ANDNE'1'
448.00 CSR MOVE '1' $SECUR
449.00 C* ---- --------
450.00 CSR END
451.00 C* End
452.00 CSR END
453.00 C* End
454.00 CSR END
455.00 CSR GOTO ENDEXE
456.00 C* ---- --------
457.00 CSR END
458.00 C* End
459.00 CSR @@AID IFNR '1'
460.00 CSR SETON 0193
461.00 CSR GOTO ENDEXE
462.00 C* ---- --------
463.00 CSR END
464.00 C* End
465.00 CSR ENDEXE ENDSR

Program that will display a record lock window when a record in use error is encountered.

Could not find a match in the Function Key Definitions for the function key pressed, so program displays Invalid Function Key message.
SUBROUTINE SGOLV - Cursor Control Return Values

By format, find the field to update and move in the returned value. If the format is a subfile, the record to change is found in @@RRN.

Return values for fields in format V9280111

RETURN values for fields in format V9280111

RETURN values for fields in format V9280111

RETURN values for fields in format V9280111
543.00 CSR END
544.00 C*  
545.00 CSR ##FLDN IFEQ 'VDX002 '  
546.00 CSR MOVEL#RVAL VDX002  
547.00 CSR GOTO ENDOVL  
548.00 C* ---- ----  
549.00 CSR END  
550.00 C*  
551.00 CSR ##FLDN IFEQ 'VDX003 '  
552.00 CSR MOVEL#RVAL VDX003  
553.00 CSR GOTO ENDOVL  
554.00 C* ---- ----  
555.00 CSR END  
556.00 C*  
557.00 CSR ##FLDN IFEQ 'VDX004 '  
558.00 CSR MOVEL#RVAL VDX004  
559.00 CSR GOTO ENDOVL  
560.00 C* ---- ----  
561.00 CSR END  
562.00 C*  
563.00 CSR *#FLDN IFEQ 'VDX005 '  
564.00 CSR MOVEL#RVAL VDX005  
565.00 CSR GOTO ENDOVL  
566.00 C* ---- ----  
567.00 CSR END  
568.00 CSR END  
569.00 C*  
570.00 CSR ENDOVL ENDSR  
571.00 C*-----------------------------------------------  
572.00 C*  
573.00 C* SUBROUTINE S001 - Clear Fields  
574.00 C* -----------------------------------------------  
575.00 C*  
576.00 C* Processing: 1.  Reset all video screen and data file fields  
577.00 C* for next transaction.  
578.00 C* 2.  Clear action code only if requested.  
579.00 C*  
580.00 CSR S001 BEGSR  
581.00 C* ---- ----  
582.00 C*  
583.00 CSR END001 ENDSR  
584.00 C*  
585.00 CSR *NOKEY CLEARA123456789  
586.00 CSR MOVE *BLANK ###CFL  
587.00 CSR MOVE *BLANK ###CRC  
588.00 CSR Z-ADD*ZERO ##RCOL  
589.00 CSR Z-ADD*ZERO ##RROW  
590.00 CSR MOVE *BLANK VDXCC  
591.00 CSR MOVE *BLANK VDXDS  
592.00 CSR MOVE *BLANK VDXDT  
593.00 CSR MOVE *BLANK VDXIT  
594.00 CSR MOVE *BLANK VDXQT  
595.00 CSR MOVE *BLANK VDXTY  
596.00 CSR MOVE *BLANK VDXUM  
597.00 CSR MOVE *BLANK VDX001  
598.00 CSR MOVE *BLANK VDX002  
599.00 CSR MOVE *BLANK VDX003  
600.00 CSR MOVE *BLANK VDX004  
601.00 CSR MOVE *BLANK VDX005  
602.00 CSR MOVELSVL24M VDL24  
603.00 CSR MOVE ' ' @IN37 1  
604.00 C*  
605.00 CSR **AID IFEQ 'FCLR'  
606.00 C*  
607.00 CSR MOVE *ALL'0' SRESET  
608.00 CSR MOVE*RESET *IN,41  
609.00 C*  
610.00 CSR MOVE ' ' ACTION 1  
611.00 CSR Z-ADD*ZERO QXXIT  
612.00 CSR MOVE *BLANK VC0001  
613.00 CSR MOVE *BLANK VC0002  
614.00 CSR MOVE *BLANK VC0003  
615.00 CSR MOVE *BLANK VC0004  
616.00 CSR MOVE *BLANK VC0005  
617.00 CSR MOVE *BLANK VC0006  
618.00 CSR MOVE *BLANK VC0007  
619.00 CSR MOVE *BLANK VC0008  
620.00 CSR Z-ADD*ZERO $$EDT 60  
621.00 CSR END  
622.00 C*  
623.00 CSR ENDO01 ENDSR  

---

Clears all the fields in the record format for F92801

Clears the video fields

These fields will only be cleared if the user presses the function key to clear the screen. We want to save certain information like key fields and descriptions so they don’t get cleared everytime S001 is executed.
SUBROUTINE S003 – Edit Key

Sets the file pointer and edits the key

Processing:
1. Clear error indicators and arrays.
2. Load input keys.
3. Validate master file key.
4. Release master file record lock.
5. Load video screen output on inquiry.

Load data field dictionary parameters (one cycle only).

Load video input field for – Item ID

Automatic Next Number for – Item ID

Cost Center security edit.

Checks cost center security

If security violation, set error condition.
<table>
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<tr>
<th>Line</th>
<th>Code</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>701</td>
<td>CSR</td>
<td>MOVE ' '</td>
</tr>
<tr>
<td>702</td>
<td>CSR</td>
<td>GOTO END003</td>
</tr>
<tr>
<td>703</td>
<td>c*</td>
<td>Edit result of read and action code.</td>
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<td>704</td>
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<td>END</td>
</tr>
<tr>
<td>705</td>
<td>c*</td>
<td></td>
</tr>
<tr>
<td>706</td>
<td>CSR</td>
<td>*IN98 IPEQ '1'</td>
</tr>
<tr>
<td>707</td>
<td>CSR</td>
<td>*IN21 COMP '0'</td>
</tr>
<tr>
<td>708</td>
<td>CSR</td>
<td>ELSE</td>
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<tr>
<td>709</td>
<td>CSR</td>
<td>*IN21 COMP '1'</td>
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<td>710</td>
<td>CSR</td>
<td>END</td>
</tr>
<tr>
<td>711</td>
<td>c*</td>
<td>If indicator 41 on, invalid key for action code.</td>
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<td>712</td>
<td>CSR</td>
<td>END</td>
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<td>713</td>
<td>c*</td>
<td>If indicator 99 on, record in use.</td>
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<td>714</td>
<td>CSR</td>
<td>END</td>
</tr>
<tr>
<td>715</td>
<td>c*</td>
<td>If not inquiry, skip remainder of subroutine.</td>
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<td>*IN99 IPEQ '1'</td>
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<td>720</td>
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<td>Release record lock on master file.</td>
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<td>CSR</td>
<td>*IN24 CABEQ '0'</td>
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<td>CSR</td>
<td>CALL 'P98RLCK'</td>
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<td>727</td>
<td>cSR</td>
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</tr>
<tr>
<td>728</td>
<td>cSR</td>
<td>END003</td>
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<td>Move data base information to video screen.</td>
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<td>S004</td>
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<td>c*</td>
<td>Copy Common Subroutine - Right Justify Numeric Fields</td>
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<tr>
<td>732</td>
<td>CSR</td>
<td>COPY JDECPY,C0012</td>
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<td>c*</td>
<td>SUBROUTINE S004 - Load Video Screen Data</td>
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<td>c*</td>
<td>Processing: 1. Move data base information to video screen.</td>
</tr>
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<td>Copy Common Subroutine - Right Justify Numeric Fields</td>
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<td>c*</td>
<td>Moves information to the video/report fields</td>
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<td>*IN98 IPEQ '0'</td>
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<td>CSR</td>
<td>*IN99 ANDEQ '0'</td>
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<td>744</td>
<td>c*</td>
<td>If errors, skip remainder of subroutine.</td>
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<tr>
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<td>c*</td>
<td>Move data base information to video screen.</td>
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<td>CSR</td>
<td>CABEQ '1'</td>
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<td>748</td>
<td>c*</td>
<td>Move data base information to video screen.</td>
</tr>
<tr>
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<td>c*</td>
<td>Copy Common Subroutine - Right Justify Numeric Fields</td>
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</table>
778.00 C*  S004  BBGSR
779.00 CSR  ----  ----
780.00 C*  ----  ----
781.00 C*
782.00 C*  Move to output - Description for Cost Center
783.00 C*
784.00 C*  CALL 'X0006'  $1
785.00 CSR  PARM *BLANKS  PSOMOD 1
786.00 C*  ----  ----
787.00 CSR  PARM '1'  PSIMOD 1
788.00 CSR  PARM QXXCC  PSIMCU 12
789.00 CSR  PARM *BLANKS  PSERRM 4
790.00 CSR  PARM I0006
791.00 CSR  I0006
792.00 C*
793.00 CSR  MOVE *BLANK  VC0001
794.00 CSR  PSERRM  IFEQ *BLANK
795.00 CSR  MOVEL#DL01 VC0001
796.00 CSR  END
797.00 C*
798.00 C*  Description display for - Item Type
799.00 C*
800.00 CSR  CLEARI0005U
801.00 CSR  MOVELS@XTY #USY
802.00 CSR  MOVE R@XTY #URT
803.00 CSR  MOVE QXXTY #UKY
804.00 CSR  CALL 'X0005'  $1
805.00 C*  ----  ----
806.00 CSR  PARM I0005U
807.00 CSR  MOVE *BLANK  VC0002
808.00 CSR  IFPQ '0'  VC0002
809.00 CSR  MOVEL#DL01 VC0002
810.00 CSR  END
811.00 C*
812.00 C*  Description display for - Item Unit of Measure
813.00 C*
814.00 CSR  CLEARI0005U
815.00 CSR  MOVELS@XUM #USY
816.00 CSR  MOVE R@XUM #URT
817.00 CSR  MOVE QXXUM #UKY
818.00 CSR  CALL 'X0005'  $1
819.00 C*  ----  ----
820.00 CSR  PARM I0005U
821.00 CSR  MOVE 'BLANK  VC0003
822.00 CSR  IFPQ '0'  VC0003
823.00 CSR  MOVEL#DL01 VC0003
824.00 CSR  END
825.00 C*
826.00 C*  Description display for - Item Category Code 001
827.00 C*
828.00 CSR  CLEARI0005U
829.00 CSR  MOVELS@X001 #USY
830.00 CSR  MOVE R@X001 #URT
831.00 CSR  MOVE QXX001 #UKY
832.00 CSR  CALL 'X0005'  $1
833.00 C*  ----  ----
834.00 CSR  PARM I0005U
835.00 CSR  MOVE *BLANK  VC0004
836.00 CSR  IFPQ '0'  VC0004
837.00 CSR  MOVEL#DL01 VC0004
838.00 CSR  END
839.00 C*
840.00 C*  Description display for - Item Category Code 002
841.00 C*
842.00 CSR  CLEARI0005U
843.00 CSR  MOVELS@X002 #USY
844.00 CSR  MOVE R@X002 #URT
845.00 CSR  MOVE QXX002 #UKY
846.00 CSR  CALL 'X0005'  $1
847.00 C*  ----  ----
848.00 CSR  PARM I0005U
849.00 CSR  MOVE *BLANK  VC0005
850.00 CSR  IFPQ '0'  VC0005
851.00 C*
932.00 CSR MOVE QXXDT #SIDAT 6
933.00 CSR MOVE *BLANK #EDAT 8
934.00 CSR MOVEL *JUL #FMT 7
935.00 CSR MOVEL *SYSDATE #TFMT 7
936.00 CSR MOVEL *SYSDATE *SEP 7
937.00 CSR MOVEL *SEP SERTST 1
938.00 CSR CALL 'X0028' 81
939.00 C* –––– ––––––
940.00 CSR PARM #SIDAT
941.00 CSR PARM #EDAT
942.00 CSR PARM #FFMT
943.00 CSR PARM #TFMT
944.00 CSR PARM #SEP
945.00 CSR PARM SERTST
946.00 CSR MOVEL #EDAT VDXDT
947.00 C* –––– ––––––
948.00 C* Move to output – Item ID
949.00 C*
950.00 C* Move to output – Quantity – On Hand
951.00 CSR MOVE *BLANK #SINBR
952.00 CSR MOVELQXXQT #SINBR
953.00 CSR MOVE TXXQT #DTPY
954.00 CSR MOVE WXXQT #BWRD
955.00 CSR MOVE BXXQT #BC
956.00 CSR MOVE SXXQT #DSDP
957.00 CSR MOVE GXXQT #DATD
958.00 CSR MOVE JXXQT #ALR
959.00 CSR MOVE ' ' #ECOR
960.00 CSR MOVE ' ' #DCOR
961.00 CSR EXSR C00161
962.00 C* –––– ––––––
963.00 CSR #ALR IFEQ 'L'
964.00 CSR MOVEL #SINBR VDXIT
965.00 CSR ELSE
966.00 CSR MOVE #SINBR VDXIT
967.00 CSR END
968.00 C* –––– ––––––
969.00 C* Move to output – Item type
970.00 C*
971.00 CSR MOVE *BLANK #SINBR
972.00 CSR MOVELQXXTY VDXTY
973.00 CSR MOVELQXX01 
974.00 CSR MOVELQXX01 
975.00 CSR MOVELQXX01 
976.00 CSR MOVELQXX01 
977.00 CSR MOVELQXX01 
978.00 CSR MOVELQXX01 
979.00 CSR MOVELQXX01 
980.00 CSR MOVELQXX01 
981.00 CSR MOVELQXX01 
982.00 CSR MOVELQXX01 
983.00 CSR MOVELQXX01 
984.00 CSR MOVELQXX01 
985.00 CSR MOVELQXX01 
986.00 CSR MOVELQXX01 
987.00 CSR MOVELQXX01 
988.00 CSR MOVELQXX01 
989.00 CSR MOVELQXX01 
990.00 CSR MOVELQXX01 
991.00 CSR MOVELQXX01 
992.00 CSR MOVELQXX01 
993.00 CSR MOVELQXX01 
994.00 CSR MOVELQXX01 
995.00 CSR MOVELQXX01 
996.00 CSR MOVELQXX01 
997.00 CSR MOVELQXX01 
998.00 CSR MOVELQXX01 
999.00 CSR MOVELQXX01 
1000.00 CSR MOVELQXX01 
1001.00 CSR MOVELQXX01 
1002.00 CSR MOVELQXX01 
1003.00 CSR MOVELQXX01 
1004.00 CSR MOVELQXX01 
1005.00 CSR MOVELQXX01 
1006.00 CSR MOVELQXX01 
1007.00 CSR MOVELQXX01 
1008.00 CSR MOVELQXX01 
1009.00 CSR MOVELQXX01 

Advanced Programming Concepts and Skills

1010.00 CSR MOVE J\#X001 #ALR
1011.00 CSR MOVE ' ' #ECOR
1012.00 CSR MOVE ' ' #DCOR
1013.00 CSR E\$KR C00161
1014.00 C* ---- ----
1015.00 CSR #ALR IFEQ 'L'
1016.00 CSR MOVEL#SINBR VDX001
1017.00 CSR ELSE
1018.00 CSR MOVE #SINBR VDX001
1019.00 CSR END
1020.00 C*---------------------------------------------
1021.00 C* Move to output - Item Category Code 002
1022.00 C*
1023.00 CSR MOVE *BLANK #SINBR
1024.00 CSR MOVE T\#X002 #DTYP
1025.00 CSR MOVE W\#X002 #BWRD
1026.00 CSR MOVE E\#X002 #BC
1027.00 CSR MOVE F\#X002 #DSPD
1028.00 CSR MOVE G\#X003 #DATD
1029.00 CSR MOVE J\#X002 #ALR
1030.00 CSR MOVEL#SINBR VDX001
1031.00 CSR ELSE
1032.00 CSR MOVE ' ' #DCOR
1033.00 CSR E\$KR C00161
1034.00 CSR #ALR IFEQ 'L'
1035.00 CSR MOVEL#SINBR VDX002
1036.00 CSR ELSE
1037.00 CSR MOVE #SINBR VDX002
1038.00 CSR END
1039.00 C*---------------------------------------------
1040.00 C* Move to output - Item Category Code 003
1041.00 C*
1042.00 CSR MOVE *BLANK #SINBR
1043.00 CSR MOVE T\#X003 #DTYP
1044.00 CSR MOVE W\#X003 #BWRD
1045.00 CSR MOVE E\#X003 #BC
1046.00 CSR MOVE F\#X003 #DSPD
1047.00 CSR MOVE G\#X003 #DATD
1048.00 CSR MOVE J\#X003 #ALR
1049.00 CSR MOVEL#SINBR VDX003
1050.00 CSR MOVE *BLANK #SINBR
1051.00 CSR MOVE T\#X004 #DTYP
1052.00 CSR MOVE W\#X004 #BWRD
1053.00 CSR MOVE E\#X004 #BC
1054.00 CSR MOVE F\#X004 #DSPD
1055.00 CSR MOVE G\#X004 #DATD
1056.00 CSR MOVE J\#X004 #ALR
1057.00 CSR MOVEL#SINBR VDX004
1058.00 CSR #ALR IFEQ 'L'
1059.00 CSR MOVEL#SINBR VDX004
1060.00 CSR ELSE
1061.00 CSR MOVE #SINBR VDX004
1062.00 CSR END
1063.00 C*---------------------------------------------
1064.00 C* Move to output - Item Category Code 004
1065.00 C*
1066.00 CSR MOVE *BLANK #SINBR
1067.00 CSR MOVE T\#X004 #DTYP
1068.00 CSR MOVE W\#X004 #BWRD
1069.00 CSR MOVE E\#X004 #BC
1070.00 CSR MOVE F\#X004 #DSPD
1071.00 CSR MOVE G\#X004 #DATD
1072.00 CSR MOVE J\#X004 #ALR
1073.00 CSR MOVEL#SINBR VDX005
1074.00 CSR MOVE ' ' #DCOR
1075.00 CSR E\$KR C00161
1076.00 C*---------------------------------------------
1077.00 C* ---- ----
1078.00 CSR #ALR IFEQ 'L'
1079.00 CSR MOVEL#SINBR VDX005
1080.00 CSR ELSE
1081.00 CSR MOVE #SINBR VDX005
1082.00 CSR END
1083.00 C*---------------------------------------------
1084.00 C* Move to output - Item Category Code 005
1085.00 C*
1086.00 C*
1087.00 CSR MOVE *BLANK #SINBR
1088.00 CSR MOVELQXX005 #SINBR
1089.00 CSR MOVE TXX005 #DTYP
1090.00 CSR MOVE WXX005 #BRSD
1091.00 CSR MOVE EKXX005 #BC
1092.00 CSR MOVE FSXX005 #DSPD
1093.00 CSR MOVE GXX005 #DATD
1094.00 CSR MOVE JXX005 #ALR
1095.00 CSR MOVE ' ' #ECOR
1096.00 CSR MOVE ' ' #DCOR
1097.00 CSR EXSR C00161
1098.00 C*  -----  -----
1099.00 CSR #ALR IFEQ 'L'
1100.00 CSR MOVEL#SINBR VOXX005
1101.00 CSR ELSE
1102.00 CSR MOVEL#SINBR VOXX005
1103.00 CSR END
1104.00 C*-----------------------------
1105.00 CSR END004 ENDSR
1106.00 C***************************************************************
1107.00 C*
1108.00 C* Copy Common Subroutine – Format Numeric Fields for Output with Override
1109.00 C*
1110.00 C/COPY JDECOPY,C00161
1111.00 C***************************************************************
1112.00 C*
1113.00 C*     SUBROUTINE S005 – Scrub Input
1114.00 C*
1115.00 C*
1116.00 C* Processing: 1. Validate all video input.
1117.00 C* 2. Validate all video input.
1118.00 C* 2. Validate all video input.
1119.00 C* 2. Validate all video input.
1120.00 C* 2. Validate all video input.
1121.00 C* All numeric fields must be processed
1122.00 C* to scrub the alpha input field and convert
1123.00 C* 15 digits and 0 decimals.
1124.00 C* Date fields must be converted from system
1125.00 C* format to their internal format of month,
1126.00 C* day and year or julian using program X0028.
1127.00 C*
1128.00 CSR S005 BEGSR
1129.00 C* –––– –––––
1130.00 C*
1131.00 C* If not addition or change, bypass subroutine.
1132.00 C*
1133.00 CSR *IN21 IFEQ '0'
1134.00 CSR *IN22 ANDEQ '0'
1135.00 CSR GOTO END005
1136.00 C* 2. Update data record fields from video.
1137.00 CSR END
1138.00 C*
1139.00 C*
1140.00 C* Scrub and edit - Cost Center
1141.00 C*
1142.00 C*
1143.00 CSR CALL 'X0006' 99
1144.00 C*  -----  -----
1145.00 CSR PARM '1'  PSOMOD 1
1146.00 CSR PARM ' '  PSIMOD 1
1147.00 CSR PARM VXCC  PSMCU 12
1148.00 CSR PARM *BLANKS  PSERRM 4
1149.00 CSR PARM 10006
1150.00 C*
1151.00 CSR PSERRM IFNE *BLANK
1152.00 CSR SETON 4393
1153.00 CSR MOVELPSERM RMX,10
1154.00 CSR MOVE '1'  #MK,10
1155.00 CSR END
1156.00 CSR MOVELPSM CU QXXCC
1157.00 C*-----------------------------
1158.00 C*
1159.00 C* Scrub and edit - Description
1160.00 C*
1161.00 CSR MOVELVXXDS QXXDS
1162.00 CSR MOVE VXXDS QXXDS
1163.00 C* Set default value - Description
1164.00 C*
Common subroutine to convert screen fields to numeric data

```assembly
1165.00 CSR QXXDS IFEQ *BLANK
1166.00 CSR DXXXDS IFNE *BLANK
1167.00 CSR MOVEADXXDS #DV
1168.00 CSR MOVEA#DV QXXDS
1169.00 CSR #DV,1 IFEQ
1170.00 CSR MOVE ' ' #DV,1
1171.00 CSR Z-ADD2
1172.00 CSR #M DOWLE40
1173.00 CSR #DV,#M IFEQ '***'
1174.00 CSR MOVE ' ' #DV,#M
1175.00 CSR END
1176.00 CSR ADD 1 #M
1177.00 CSR END
1178.00 CSR MOVEADV,2 QXXDS
1179.00 CSR END
1180.00 CSR END
1181.00 CSR END
1182.00 C* Edit allowed values - Description
1183.00 C*
1184.00 CSR AAQXXDS IFEQ '*NB'
1185.00 CSR RXRXDS ANDNEQ*BLANK
1186.00 CSR MOVE '1' #MK,03
1187.00 CSR SETON 4293
1188.00 CSR END
1189.00 CSR END
1190.00 C* Scrub and edit - Date Last Ship
1191.00 C*
1192.00 CSR MOVEAVEQDT @NM
1193.00 CSR EXSR A0012
1194.00 C* –––– –––––
1195.00 CSR MOVE $NBR6 QXXDT
1196.00 C* Edit julian date - Date Last Ship
1197.00 C*
1198.00 CSR $ERTST IFEQ '1'
1199.00 CSR MOVE '1' #MK,04
1200.00 CSR END
1201.00 CSR END
1202.00 C* Scrub and edit - Item ID
1203.00 CSR VDXIT *BLANK
1204.00 CSR MOVE QAQXXIT #SIDAT 6
1205.00 CSR MOVEEL '#SIDAT 9
1206.00 CSR MOVEEL '#SIDAT 7
1207.00 CSR MOVEEL '#SIDAT 8
1208.00 CSR MOVEEL '#SIDAT 1
1209.00 CSR CALL 'X0028' 99
1210.00 C* ----- ------
1211.00 CSR PARM #SIDAT
1212.00 CSR PARM #SIDAT
1213.00 CSR PARM #SIDAT
1214.00 CSR PARM #SIDAT
1215.00 CSR PARM #SIDAT
1216.00 CSR PARM #SIDAT
1217.00 CSR MOVE #ERTST QXXIT
1218.00 CSR $ERTST IFEQ '1'
1219.00 CSR MOVE '1' #MK,04
1220.00 CSR SETON 4593
1221.00 CSR END
1222.00 CSR END
1223.00 C* Set default value - Item ID
1224.00 C*
1225.00 CSR MOVEAVEQIT #NN
1226.00 CSR EXSR C0012
1227.00 CSR EXSR C0051
1228.00 C* ----- ------
1229.00 CSR MOVE $ERTST QXXIT
1230.00 CSR MOVE $ERTST QXXIT
1231.00 CSR MOVE $ERTST QXXIT
1232.00 CSR EXSR C00151
1233.00 C* ----- ------
1234.00 CSR MOVE $ERTST QXXIT
1235.00 C* Set default value - Item ID
1236.00 C*
1237.00 C*
1238.00 CSR VDXIT *BLANK
1239.00 CSR DDXIT ANDNEQ*BLANK
1240.00 CSR MOVEADEXIT #NN
1241.00 CSR EXSR C0012
```

Work fields used in the IPIRS program begin with #

Convert to numeric

Adjust for display decimals
1242.00 C*          ----- ------
1243.00 CSR        MOVE P@XIT    #DSPD
1244.00 CSR        MOVE G@XIT    #DCTD
1245.00 CSR        EXSR C00151
1246.00 C*          ----- ----- C*
1247.00 CSR        MOVE #NUMBR Q@XIT
1248.00 CSR        END
1249.00 C*          Edit upper and lower range – Item ID
1250.00 C*          Edit upper and lower range – Item ID
1251.00 C*
1252.00 CSR        L@XIT IFNE *BLANK
1253.00 CSR        MOVE *BLANK X@XIT  15
1254.00 CSR        MOVE ’1’ $ERTST
1255.00 CSR        MOVELQ@XIT X@XIT
1256.00 CSR        X@XIT IFGE L@XIT
1257.00 CSR        X@XIT ANDLEU@XIT
1258.00 CSR        MOVE ’ ’ $ERTST
1259.00 CSR        END
1260.00 CSR        SERTST IFEQ ’1’
1261.00 CSR        MOVE ’1’ @MK,07
1262.00 CSR        SETON            4193
1263.00 CSR        END
1264.00 CSR        END
1265.00 C*          Edit upper and lower range – Quantity – On Hand
1266.00 C*          Scrub and edit – Quantity – On Hand
1267.00 C*          Scrub and edit – Quantity – On Hand
1268.00 C*          Scrub and edit – Quantity – On Hand
1269.00 CSR        MOVEBV@XQT @NM
1270.00 CSR        EXSR C0012
1271.00 C*          ----- ------
1272.00 CSR        MOVE P@XQT    #DSPD
1273.00 CSR        MOVE G@XQT    #DATD
1274.00 CSR        EXSR C00151
1275.00 C*          ----- ------
1276.00 CSR        MOVE #NUMBR Q@XQT
1277.00 C*          ----- ------
1278.00 CSR        V@XQT IFEQ *BLANK
1279.00 C*          Set default value – Quantity – On Hand
1280.00 CSR        V@XQT IFEQ *BLANK
1281.00 CSR        D@XQT ANDNE*BLANK
1282.00 CSR        MOVEADV@XQT @NM
1283.00 CSR        EXSR C0012
1284.00 C*          ----- ------ C*
1285.00 CSR        MOVE P@XQT    #DSPD
1286.00 CSR        MOVE G@XQT    #DATD
1287.00 CSR        EXSR C00151
1288.00 C*          ----- ------
1289.00 CSR        MOVE #NUMBR Q@XQT
1290.00 CSR        END
1291.00 C*          Scrub and edit – Item Type
1292.00 C*          Scrub and edit – Item Type
1293.00 C*          Scrub and edit – Item Type
1294.00 CSR        L@XQT IFNE *BLANK
1295.00 CSR        MOVE *BLANK X@XQT  15
1296.00 CSR        MOVE ’1’ $ERTST  1
1297.00 CSR        MOVELQ@XQT X@XQT
1298.00 CSR        X@XQT IFGE L@XIT
1299.00 CSR        X@XQT ANDLEU@XIT
1300.00 CSR        MOVE ’ ’ $ERTST
1301.00 CSR        END
1302.00 CSR        SERTST IFEQ ’1’
1303.00 CSR        MOVE ’1’ @MK,07
1304.00 CSR        SETON            4693
1305.00 CSR        END
1306.00 CSR        END
1307.00 C*          ----- ------
1308.00 C*          Scrub and edit – Item Type
1309.00 C*          Scrub and edit – Item Type
1310.00 C*          Scrub and edit – Item Type
1311.00 CSR        MOVELV@XTY Q@XTY
1312.00 C*          Set default value – Item Type
1313.00 C*          Set default value – Item Type
1314.00 C*          Set default value – Item Type
1315.00 CSR        Q@XTY IFEQ *BLANK
1316.00 CSR        D@XTY IFNE *BLANK
1317.00 CSR        MOVELQ@XTY @40
1318.00 CSR        MOVEAS40 Q@XTY
1396.00  C*    Set default value – Item Unit of Measure
1397.00  C*
1398.00  CSR  QXXUM    IFNE *BLANK
1399.00  CSR  D@XUM    IFNE *BLANK
1400.00  CSR  MOVED@XUM  @40
1401.00  CSR  MOVE@40   QXXUM
1402.00  CSR  @40,1    IFPEQ '***'
1403.00  CSR  MOVE ' '   @40,1
1404.00  CSR  Z-ADD2   #M
1405.00  CSR  #M    D#MLE40
1406.00  CSR  @40,#M   IFPEQ '***'
1407.00  CSR  MOVE ' '   @40,#M
1408.00  CSR  END
1409.00  CSR  END
1410.00  CSR  END
1411.00  CSR  Move@40,2   QXXUM
1412.00  CSR  END
1413.00  CSR  END
1414.00  CSR  END
1415.00  C*
1416.00  C*    Edit allowed values – Item Unit of Measure
1417.00  C*
1418.00  CSR  A@XUM    IFNE *BLANK
1419.00  CSR  A@XUM    IFPEQ '*NB'
1420.00  CSR  QXXUM    ANDEQ*BLANK
1421.00  CSR  MOVE '1'   @MK,03  4793
1422.00  CSR  SETON
1423.00  CSR  ELSE
1424.00  CSR  MOVEA@XUM   @40
1425.00  CSR  MOVE *HIVAL   @AV
1426.00  CSR  EXSR C997
c*
1427.00  c*
1428.00  CSR  MOVE ' '   $ERTST  1
1429.00  CSR  MOVE *BLANK   $WRK10  10
1430.00  CSR  MOVELQXXUM   $WRK10
1431.00  CSR  @AV,1    IPNE *HIVAL
1432.00  CSR  $WRK10    LOKUP@AV  81
1433.00  CSR  *IN81    IFPEQ '0'
1434.00  CSR  MOVE '1'   $ERTST
1435.00  CSR  END
1436.00  CSR  $ERTST    IPPEQ '1'
1437.00  CSR  MOVE '1'   @MK,07  4793
1438.00  CSR  SETON
1439.00  CSR  END
1440.00  CSR  END
1441.00  CSR  END
1442.00  CSR  END
1443.00  C*
1444.00  C*    Edit upper and lower range – Item Unit of Measure
1445.00  C*
1446.00  CSR  L@XUM    IPNE *BLANK
1447.00  CSR  L@XUM    IFPEQ '1'
1448.00  CSR  QXXUM    IFPEQ L@XUM
1449.00  CSR  QXXUM    ANDEQ@XUM
1450.00  CSR  MOVE ' '   $ERTST
1451.00  CSR  END
1452.00  CSR  $ERTST    IPPEQ '1'
1453.00  CSR  MOVE '1'   @MK,07  4793
1454.00  CSR  SETON
1455.00  CSR  END
1456.00  CSR  END
1457.00  C*
1458.00  C*    Edit from User Defined Codes – Item Unit of Measure
1459.00  C*
1460.00  CSR  RaXUM    IPNE *BLANK
1461.00  CSR  CLE@RXUM  90005U
1462.00  CSR  MOVE@RXUM   #USY
1463.00  CSR  MOVE RaXUM   #URT
1464.00  CSR  MOVE QXXUM   #UKY
1465.00  CSR  CALL 'X0005'   81
1466.00  C*    ------ ------
1467.00  CSR  PARM    I0005SU
1468.00  CSR  #UERR    IPPEQ '1'
1469.00  CSR  MOVE '1'   @MK,09  4793
1470.00  CSR  SETON
1471.00  CSR  END
1472.00  CSR  END

Release A7.3 (June 1996)
Scruber and edit – Item Category Code 001

Set default value – Item Category Code 001

Edit allowed values – Item Category Code 001

Edit upper and lower range – Item Category Code 001

Edit from User Defined Codes – Item Category Code 001
1550.00 CSR PARM I0005U
1551.00 CSR #UERR IFQ '1' @MK,9
1552.00 CSR MOVE '1' @MK,09
1553.00 CSR SETON 4893
1554.00 CSR END
1555.00 CSR END
1556.00 C*---------------------------------------------------------------
1557.00 C*
1558.00 C* Scrub and edit – Item Category Code 002
1559.00 C*
1560.00 CSR MOVEVDX002 QXX002
1561.00 C*
1562.00 C* Set default value – Item Category Code 002
1563.00 C*
1564.00 CSR QXX002 IFQ *BLANK
1565.00 CSR QXX002 IFNE *BLANK
1566.00 CSR MOVEADX002 @40
1567.00 CSR MOVEAs40 QXX002
1568.00 CSR @40,1 IFQ '''
1569.00 CSR MOVE ' ' @40,1
1570.00 CSR Z-ADD2 #M
1571.00 CSR #M D0WLE40
1572.00 CSR @40,#M IFQ '''
1573.00 CSR MOVE ' ' @40,#M
1574.00 CSR END
1575.00 CSR ADD 1 #M
1576.00 CSR END
1577.00 CSR MOVEAs40,2 QXX002
1578.00 CSR END
1579.00 CSR END
1580.00 CSR END
1581.00 C*
1582.00 C* Edit allowed values – Item Category Code 002
1583.00 C*
1584.00 CSR AAX002 IFNE *BLANK
1585.00 CSR AAX002 IFQ 'NB' @AV
1586.00 CSR QXX002 ANDEQ*BLANK @40
1587.00 CSR MOVE '1' @MK,03
1588.00 CSR SETON 4993
1589.00 CSR ELSE
1590.00 CSR MOVEAAsX002 @40
1591.00 CSR MOVE *HIVAL @AV
1592.00 CSR EXSR C997
1593.00 C* ----- -----
1594.00 CSR MOVE ' ' $ERTST
1595.00 CSR MOVE *BLANK $WKK10 10
1596.00 CSR MOVEQX002 $WKK10
1597.00 CSR @AV,1 IFQ *BLANK $ERTST
1598.00 CSR $WKK10 L0KUP@AV 81
1599.00 CSR *IN81 IFQ '0'
1600.00 CSR MOVE '1' $ERTST
1601.00 CSR END
1602.00 CSR $ERTST IFQ '1'
1603.00 CSR MOVE '1' @MK,07
1604.00 CSR SETON 4993
1605.00 CSR END
1606.00 CSR END
1607.00 CSR END
1608.00 CSR END
1609.00 C* Edit upper and lower range – Item Category Code 002
1610.00 C* Edit from User Defined Codes – Item Category Code 002
1611.00 C*
1612.00 CSR LAX002 IFNE *BLANK
1613.00 CSR LAX002 IFQ *ERTST
1614.00 CSR QXX002 IFQ LAX002
1615.00 CSR QXX002 ANDEQLAX002
1616.00 CSR MOVE ' ' $ERTST
1617.00 CSR END
1618.00 CSR $ERTST IFQ '1'
1619.00 CSR MOVE '1' @MK,07
1620.00 CSR SETON 4993
1621.00 CSR END
1622.00 CSR END
1623.00 C*
1624.00 C* Edit from User Defined Codes – Item Category Code 002
1625.00 C*
1626.00 CSR RAX002 IFNE *BLANK
1704.00 CSR END
1705.00 CSR END
1706.00 CSR
1707.00 CSR Edit from User Defined Codes - Item Category Code 003
1708.00 CSR
1709.00 CSR RxX003 IFNE *BLANK
1710.00 CSR CLEARI0005U
1711.00 CSR MOVELE$X003 #USY
1712.00 CSR MOVE P$X003 #URT
1713.00 CSR MOVE Q$X003 #UKY
1714.00 CSR CALL ‘X0005’ 81
1715.00 CSR Edit from User Defined Codes - Item Category Code 003
1716.00 CSR PARM I0005U
1717.00 CSR #UERR IFNE ‘1’
1718.00 CSR MOVE ‘1’ $MK,09
1719.00 CSR SETON 5093
1720.00 CSR END
1721.00 CSR END
1722.00 CSR Scrub and edit - Item Category Code 004
1723.00 CSR
1724.00 CSR
1725.00 CSR
1726.00 CSR MOVELVDX004 QXX004
1727.00 CSR
1728.00 CSR Set default value - Item Category Code 004
1729.00 CSR
1730.00 CSR QXX004 IFNE *BLANK
1731.00 CSR DxX004 IFNE *BLANK
1732.00 CSR MOVEAD$X004 @40
1733.00 CSR MOVEAs40 QXX004
1734.00 CSR @40,1 IFNE ’’
1735.00 CSR MOVE ’’ @40,1
1736.00 CSR Z-ADD2 #M
1737.00 CSR #M DOWLE40
1738.00 CSR @40,#M IFNE ’’
1739.00 CSR MOVE ’’ @40,#M
1740.00 CSR END
1741.00 CSR END
1742.00 CSR END
1743.00 CSR MOVEAs40,2 QXX004
1744.00 CSR END
1745.00 CSR END
1746.00 CSR END
1747.00 CSR Edit allowed values - Item Category Code 004
1748.00 CSR
1749.00 CSR
1750.00 CSR AxX004 IFNE *BLANK
1751.00 CSR AxX004 IFNE ‘’NB’
1752.00 CSR QXX004 ANDEq*BLANK
1753.00 CSR MOVE ’’ $MK,03
1754.00 CSR SETON 5193
1755.00 CSR ELSE
1756.00 CSR MOVEEA$sX004 @40
1757.00 CSR MOVE *HIVAL $AV
1758.00 CSR EXSR C997
1759.00 CSR #AV,1 IFNE *HIVAL
1760.00 CSR SWRK10 LOKUp$AV 81
1761.00 CSR *IN81 IFNE ’’
1762.00 CSR MOVEQ$X004 SWRK10
1763.00 CSR SWRK10 END
1764.00 CSR SWRK10 $ERTST 1
1765.00 CSR SWRK10 IFNE ’’
1766.00 CSR SWRK10 $ERTST
1767.00 CSR SWRK10 END
1768.00 CSR SWRK10 END
1769.00 CSR SWRK10 END
1770.00 CSR SETON 5193
1771.00 CSR END
1772.00 CSR END
1773.00 CSR END
1774.00 CSR END
1775.00 CSR Edit upper and lower range - Item Category Code 004
1776.00 CSR
1777.00 CSR
1778.00 CSR L@004 IFNE *BLANK
1779.00 CSR MOV$E ‘1’ $ERTST
1780.00 CSR QXX004 IFNE LaX004
1781.00  CSR  QXX004  ANDLEUX004
1782.00  CSR  MOVR ' ' $ERTST
1783.00  CSR  END
1784.00  CSR  $ERTST  IFPEQ '1'
1785.00  CSR  MOVR '1'  AMX,07
1786.00  CSR  SETON  5193
1787.00  CSR  END
1788.00  CSR  END
1789.00  CSR  END
1790.00  CSR  END
1791.00  CSR  END
1792.00  CSR  END
1793.00  CSR  END
1794.00  CSR  END
1795.00  CSR  END
1796.00  CSR  END
1797.00  CSR  END
1798.00  CSR  END
1799.00  CSR  END
1800.00  CSR  END
1801.00  CSR  END
1802.00  CSR  END
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1838.00  CSR  END
1839.00  CSR  END
1840.00  CSR  END
1841.00  CSR  END
1842.00  CSR  END
1843.00  CSR  END
1844.00  CSR  END
1845.00  CSR  END
1846.00  CSR  END
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1849.00  CSR  END
1850.00  CSR  END
1851.00  CSR  END
1852.00  CSR  END
1853.00  CSR  END
1854.00  CSR  END
1855.00  CSR  END
1856.00  CSR  END
1857.00  CSR  END
Program Structure

1858.00 C* Edit upper and lower range - Item Category Code 005
1859.00 C*  
1860.00 C*  
1861.00 CSR LxX005 IPNE *BLANK
1862.00 CSR MOVE ‘1’ $ERTST
1863.00 CSR QXX005 IPGE LxX005
1864.00 CSR QXX005 ANDEUXUX005
1865.00 CSR MOVE ‘ ‘ $ERTST
1866.00 CSR END
1867.00 CSR $ERTST IFPE ‘1’
1868.00 CSR MOVE ‘1’ @MK,07
1869.00 CSR SETON 5293
1870.00 CSR END
1871.00 CSR END
1872.00 C*  
1873.00 C* Edit from User Defined Codes - Item Category Code 005
1874.00 C*  
1875.00 CSR R@X005 IFNE *BLANK
1876.00 CSR CLEARI0005U
1877.00 CSR MOVEI0005 #USY
1878.00 CSR MOVE R@X005 #URT
1879.00 CSR MOVE QXX005 #UKY
1880.00 CSR CALL ‘X0005’ 81
1881.00 C*  
1882.00 CSR PARM I0005U
1883.00 CSR #UERR IFPE ‘1’
1884.00 CSR MOVE ‘1’ @MK,09
1885.00 CSR SETON 5293
1886.00 CSR END
1887.00 CSR END
1888.00 C*  
1889.00 CSR END005 ENDSR
1890.00 C* *******************************************************
1891.00 C*  
1892.00 C* Copy Common Subroutine - Currency - Translate Video Fields to Data Base
1893.00 C*  
1894.00 C/COPY JDECPY,C00151
1895.00 C* *******************************************************
1896.00 C*  
1897.00 C* Copy Common Subroutine - Build Allowed Values Work Array
1898.00 C* *******************************************************
1899.00 C/COPY JDECPY,C997
1900.00 C* *******************************************************
1901.00 C*  
1902.00 C* SUBROUTINE S010 – Update Data Base
1903.00 C*  
1904.00 C*  
1905.00 C* Processing: 1. Update data base file based upon valid action codes.
1906.00 C*  
1907.00 C*  
1908.00 CSR S010 BDRSR
1909.00 C* ----- -----  
1910.00 C*  
1911.00 C* If add action, add record.  
1912.00 C*  
1913.00 CSR *IN21 IPFQ ‘1’  
1914.00 CSR WRITR192801 99  
1915.00 CSR END  
1916.00 C*  
1917.00 C* If change action, update record.  
1918.00 C*  
1919.00 CSR *IN22 IPFQ ‘1’  
1920.00 CSR UPDRT192801 99  
1921.00 CSR END  
1922.00 C*  
1923.00 C* If delete action, delete record.  
1924.00 C*  
1925.00 CSR *IN23 IPFQ ‘1’  
1926.00 CSR DELETR192801 99  
1927.00 CSR END  
1928.00 C*  

Indicator value for action code is assigned in copy module C0001.
1929.00  C*  Clear data field for next transaction
1930.00  C*  MOVES$CCLR  @A1D
1931.00  CSR  EXSR S001
1932.00  C*  ---- ----
1933.00  CSR  END010  ENDSR
1934.00  C***************************************************************
1935.00  C*
1936.00  C*  SUBROUTINE S998  – Load dictionary parameters.
1937.00  C*      –––––––––––––––––––––––––––––––––––––––––––––
1938.00  C*
1939.00  CSR  S998  BEGSR
1940.00  C*  ---- ----
1941.00  C*
1942.00  C*  Dictionary parameters for – Cost Center
1943.00  C*
1944.00  CSR  MOVE *BLANK  FRDTAI
1945.00  CSR  MOVEL’XCC”  FRDTAI
1946.00  CSR  CALL ’X9800E’  81
1947.00  CSR  PARM 19800E
1948.00  CSR  FRERR  IFEQ ’0’
1949.00  CSR  MOVE FRDTAT  T@XCC  1
1950.00  CSR  MOVE FRRC  B@XCC  1
1951.00  CSR  MOVE FRDTAS  O@XCC  50
1952.00  CSR  MOVE FRDTAD  G@XCC  20
1953.00  CSR  MOVE FRCCBC  F@XCC  1
1954.00  CSR  MOVEFPRSY  $@XCC  4
1955.00  CSR  MOVE FRKT  R@XCC  2
1956.00  CSR  MOVE FRDVAL  D@XCC  40
1957.00  CSR  MOVE FRVAL  A@XCC  40
1958.00  CSR  MOVEFPRSY  S@XCC  4
1959.00  CSR  MOVE FRKT  R@XCC  2
1960.00  CSR  MOVE FRDVAL  D@XCC  40
1961.00  CSR  MOVE FRVAL  A@XCC  40
1962.00  CSR  MOVE FRDVAL  D@XCC  40
1963.00  CSR  MOVE FRUVAL  U@XCC  40
1964.00  CSR  MOVE FREC  E@XCC  1
1965.00  CSR  MOVEFPRSY  S@XCC  4
1966.00  CSR  MOVE FRRT  R@XCC  2
1967.00  CSR  MOVE FRDVAL  D@XCC  40
1968.00  CSR  MOVE FRVAL  A@XCC  40
1969.00  CSR  DO #A
1970.00  CSR  MULT 10 #@XCC
1971.00  CSR  END
1972.00  CSR  END
1973.00  C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1974.00  C*
1975.00  C*  Dictionary parameters for – Description
1976.00  C*
1977.00  CSR  MOVE *BLANK  FRDTAI
1978.00  CSR  MOVEL’XDES’  FRDTAI
1979.00  CSR  CALL ’X9800E’  81
1980.00  C*  ---- ----
1981.00  CSR  PARM 19800E
1982.00  CSR  FRERR  IFEQ ’0’
1983.00  CSR  MOVE FRDTAT  T@XCC  1
1984.00  CSR  MOVE FRRC  B@XCC  1
1985.00  CSR  MOVE FRDTAS  O@XCC  50
1986.00  CSR  MOVE FRDTAD  G@XCC  20
1987.00  CSR  MOVE FRDTAS  O@XCC  50
1988.00  CSR  MOVE FRDTAD  G@XCC  20
1989.00  CSR  MOVEFPRSY  S@XCC  4
1990.00  CSR  MOVE FRKT  R@XCC  2
1991.00  CSR  MOVE FRDVAL  D@XCC  40
1992.00  CSR  MOVE FRVAL  A@XCC  40
1993.00  CSR  MOVE FRDVAL  D@XCC  40
1994.00  CSR  MOVE FRUVAL  U@XCC  40
1995.00  CSR  MOVE FREC  E@XCC  1
1996.00  CSR  MOVEFPRSY  S@XCC  4
1997.00  CSR  MOVE FRRT  R@XCC  2
1998.00  CSR  MOVE FRDVAL  D@XCC  40
1999.00  CSR  MOVE FRVAL  A@XCC  40
2000.00  CSR  DO #A
2001.00  CSR  MULT 10 #@XCC
2002.00  CSR  END
2003.00  CSR  END
2004.00  C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
2005.00  C*
2006.00 C* Dictionary parameters for – Date Last Ship
2007.00 C* 
2008.00 CSR MOVE *BLANK FRDTAI 
2009.00 CSR MOVEL’ XDT’ FRDTAI 
2010.00 CSR CALL ‘X9800E’ 81 
2011.00 C* ---- ------- 
2012.00 CSR PARM I9800E 
2013.00 CSR FRERR IFEQ ‘0’ 
2015.00 CSR MOVE FRDTAT T@XDT 1 
2016.00 CSR MOVE FREC E@XDT 1 
2017.00 CSR MOVE FRDTAS C@XDT 50 
2018.00 CSR MOVE FRDTAD G@XDT 20 
2019.00 CSR MOVE FRDCDC F@XDT 1 
2020.00 CSR MOVELPSY S@XDT 4 
2021.00 CSR MOVE FRRT R@XDT 2 
2022.00 CSR MOVE FRDVAL D@XDT 40 
2023.00 CSR MOVE FRLVAL L@XDT 40 
2024.00 CSR MOVE FRUVAL U@XDT 40 
2026.00 CSR MOVE FKRDWR W@XDT 30 
2027.00 CSR MOVE FRLR J@XDT 1 
2029.00 CSR MOVE FRNIX N@XDT 20 
2029.00 CSR Z–ADD1 #@XDT 110 
2030.00 CSR MOVE F@XDT #A 
2031.00 CSR DO #A 
2032.00 CSR MULT 10 #@XDT 
2033.00 CSR END 
2034.00 CSR END 
2035.00 C*--

2036.00 C* Dictionary parameters for – Item ID 
2037.00 C* 
2039.00 CSR MOVE *BLANK FRDTAI 
2040.00 CSR MOVEL’XIT’ FRDTAI 
2041.00 CSR CALL ‘X9800E’ 81 
2042.00 C* ---- ------- 
2043.00 CSR PARM I9800E 
2044.00 CSR FRERR IFEQ ‘0’ 
2046.00 CSR MOVE FRDTAT T@XIT 1 
2047.00 CSR MOVE FREC E@XIT 1 
2048.00 CSR MOVE FRDTAS C@XIT 50 
2049.00 CSR MOVE FRDTAD G@XIT 20 
2050.00 CSR MOVE FRDCDC F@XIT 1 
2051.00 CSR MOVELPSY S@XIT 4 
2052.00 CSR MOVE FRRT R@XIT 2 
2053.00 CSR MOVE FRDVAL D@XIT 40 
2054.00 CSR MOVE FRLVAL L@XIT 40 
2055.00 CSR MOVE FRUVAL U@XIT 40 
2056.00 CSR MOVE FRNIX N@XIT 20 
2058.00 CSR MOVE FKRDWR W@XIT 30 
2059.00 CSR MOVE FRLR J@XIT 1 
2060.00 CSR MOVE F@XIT #A 
2062.00 CSR DO #A 
2063.00 CSR MULT 10 #@XIT 
2064.00 CSR END 
2065.00 CSR END 
2066.00 C*--

2068.00 C* Dictionary parameters for – Quantity – On Hand 
2069.00 C* 
2070.00 CSR MOVE *BLANK FRDTAI 
2071.00 CSR MOVEL’XQT’ FRDTAI 
2072.00 CSR CALL ‘X9800E’ 81 
2073.00 C* ---- ------- 
2074.00 CSR PARM I9800E 
2075.00 CSR FRERR IFEQ ‘0’ 
2077.00 CSR MOVE FRDTAT T@XQT 1 
2078.00 CSR MOVE FREC E@XQT 1 
2079.00 CSR MOVE FRDTAS C@XQT 50 
2080.00 CSR MOVE FRDTAD G@XQT 20 
2081.00 CSR MOVE FRDCDC F@XQT 1 
2082.00 CSR MOVELPSY S@XQT 4
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<tr>
<th>Line</th>
<th>Command</th>
<th>Description</th>
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<tr>
<td>2083.00</td>
<td>CSR</td>
<td>MOVE FRRT RXQT 2</td>
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<td>2084.00</td>
<td>CSR</td>
<td>MOVE FRVAL DXQT 40</td>
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<td>CSR</td>
<td>MOVE FRVAL AXQT 40</td>
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<td>CSR</td>
<td>MOVE FRLVAL LXQT 40</td>
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<td>CSR</td>
<td>MOVE FRLVAL UXQT 40</td>
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<td>CSR</td>
<td>MOVE FREDWR WXQT 30</td>
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<td>CSR</td>
<td>MOVE FREDWR JXQT 1</td>
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<td>2090.00</td>
<td>CSR</td>
<td>MOVE FREDWR NXXQT 20</td>
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<td>2091.00</td>
<td>CSR</td>
<td>Z-ADD1 #AXQT 110</td>
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<td>2092.00</td>
<td>CSR</td>
<td>MOVE P=AXQT #A</td>
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<td>2093.00</td>
<td>CSR</td>
<td>DO #A</td>
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<td>2094.00</td>
<td>CSR</td>
<td>MULTI 10 #=AXQT</td>
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<td>2095.00</td>
<td>CSR</td>
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<tr>
<td>2096.00</td>
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**Dictionary parameters for - Item Type**

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<tr>
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<th>Command</th>
<th>Description</th>
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<tbody>
<tr>
<td>2101.00</td>
<td>CSR</td>
<td>MOVE *BLANK FRDTAI</td>
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<td>2102.00</td>
<td>CSR</td>
<td>MOVE *XTY FRDTAI</td>
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<tr>
<td>2103.00</td>
<td>CSR</td>
<td>CALL 'X9800E' 81</td>
</tr>
<tr>
<td>2104.00</td>
<td>CSR</td>
<td>PARM I9800E</td>
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<tr>
<td>2105.00</td>
<td>CSR</td>
<td>FRERR IFEQ '0'</td>
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<tr>
<td>2106.00</td>
<td>CSR</td>
<td>MOVE FRDTAT TAXY 1</td>
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<tr>
<td>2109.00</td>
<td>CSR</td>
<td>MOVE FRREC DXXY 1</td>
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<td>2110.00</td>
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<td>MOVE FRDTAS OXXY 50</td>
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<td>MOVE FRDTAD OXXY 20</td>
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<td>MOVE FRCDEC PXXY 1</td>
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<td>CSR</td>
<td>MOVEFLRSY SXXY 4</td>
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<td>CSR</td>
<td>MOVE FRT PXXY 2</td>
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<td>MOVE FREDVAL DXXY 40</td>
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<td>MOVE FREDVAL AXXY 40</td>
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<td>MOVE FREDVAL LXXY 40</td>
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<td>2118.00</td>
<td>CSR</td>
<td>MOVE FREDVAL UXXY 40</td>
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<td>2119.00</td>
<td>CSR</td>
<td>MOVE FREDWR WXXY 30</td>
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<td>2120.00</td>
<td>CSR</td>
<td>MOVE FREDWR JXXY 1</td>
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<td>MOVE FREDWR NXXXY 20</td>
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<td>2122.00</td>
<td>CSR</td>
<td>Z-ADD1 #=AXXY 110</td>
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<td>2123.00</td>
<td>CSR</td>
<td>MOVE P=AXXY #A</td>
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<td>2124.00</td>
<td>CSR</td>
<td>DO #A</td>
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<td>2125.00</td>
<td>CSR</td>
<td>MULTI 10 #=AXXY</td>
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<td>2126.00</td>
<td>CSR</td>
<td>END</td>
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<td>2127.00</td>
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**Dictionary parameters for - Item Unit of Measure**

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<tr>
<th>Line</th>
<th>Command</th>
<th>Description</th>
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<tr>
<td>2132.00</td>
<td>CSR</td>
<td>MOVE *BLANK FRDTAI</td>
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<tr>
<td>2133.00</td>
<td>CSR</td>
<td>MOVE *XUM FRDTAI</td>
</tr>
<tr>
<td>2134.00</td>
<td>CSR</td>
<td>CALL 'X9800E' 81</td>
</tr>
<tr>
<td>2135.00</td>
<td>CSR</td>
<td>PARM I9800E</td>
</tr>
<tr>
<td>2137.00</td>
<td>CSR</td>
<td>FRERR IFEQ '0'</td>
</tr>
<tr>
<td>2139.00</td>
<td>CSR</td>
<td>MOVE FRDTAT TAUXYM 1</td>
</tr>
<tr>
<td>2140.00</td>
<td>CSR</td>
<td>MOVE FRREC DXUXYM 1</td>
</tr>
<tr>
<td>2141.00</td>
<td>CSR</td>
<td>MOVE FRDTAS OXUXYM 50</td>
</tr>
<tr>
<td>2142.00</td>
<td>CSR</td>
<td>MOVE FRDTAD OXUXYM 20</td>
</tr>
<tr>
<td>2143.00</td>
<td>CSR</td>
<td>MOVE FRCDEC PXUXYM 1</td>
</tr>
<tr>
<td>2144.00</td>
<td>CSR</td>
<td>MOVEFLRSY SXUXYM 4</td>
</tr>
<tr>
<td>2145.00</td>
<td>CSR</td>
<td>MOVE FRT PXUXYM 2</td>
</tr>
<tr>
<td>2146.00</td>
<td>CSR</td>
<td>MOVE FREDVAL DXUXYM 40</td>
</tr>
<tr>
<td>2147.00</td>
<td>CSR</td>
<td>MOVE FREDVAL AXUXYM 40</td>
</tr>
<tr>
<td>2148.00</td>
<td>CSR</td>
<td>MOVE FREDVAL LXUXYM 40</td>
</tr>
<tr>
<td>2149.00</td>
<td>CSR</td>
<td>MOVE FREDVAL UXUXYM 40</td>
</tr>
<tr>
<td>2150.00</td>
<td>CSR</td>
<td>MOVE FREDWR WXUXYM 30</td>
</tr>
<tr>
<td>2151.00</td>
<td>CSR</td>
<td>MOVE FREDWR JXUXYM 1</td>
</tr>
<tr>
<td>2152.00</td>
<td>CSR</td>
<td>MOVE FREDWR NXXUXYM 20</td>
</tr>
<tr>
<td>2153.00</td>
<td>CSR</td>
<td>Z-ADD1 #=AXUXYM 110</td>
</tr>
<tr>
<td>2154.00</td>
<td>CSR</td>
<td>MOVE P=AXUXYM #A</td>
</tr>
<tr>
<td>2155.00</td>
<td>CSR</td>
<td>DO #A</td>
</tr>
<tr>
<td>2156.00</td>
<td>CSR</td>
<td>MULTI 10 #=AXUXYM</td>
</tr>
<tr>
<td>2157.00</td>
<td>CSR</td>
<td>END</td>
</tr>
<tr>
<td>2158.00</td>
<td>CSR</td>
<td>END</td>
</tr>
</tbody>
</table>

**C***
2160.00  C*
2161.00  C*  Dictionary parameters for – Item Category Code 001
2162.00  C*
2163.00  CSR
2164.00  CSR
2165.00  CSR
2166.00  C*  ----  ------
2167.00  CSR
2168.00  CSR
2169.00  CSR
2170.00  CSR
2171.00  CSR
2172.00  CSR
2173.00  CSR
2174.00  CSR
2175.00  CSR
2176.00  CSR
2177.00  CSR
2178.00  CSR
2179.00  CSR
2180.00  CSR
2181.00  CSR
2182.00  CSR
2183.00  CSR
2184.00  CSR
2185.00  CSR
2186.00  CSR
2187.00  CSR
2188.00  CSR
2189.00  CSR
2190.00  C*  ------------------------
2191.00  C*
2192.00  C*
2193.00  C*
2194.00  CSR
2195.00  CSR
2196.00  CSR
2197.00  C*  ----  ------
2198.00  CSR
2199.00  CSR
2200.00  CSR
2201.00  CSR
2202.00  CSR
2203.00  CSR
2204.00  CSR
2205.00  CSR
2206.00  CSR
2207.00  CSR
2208.00  CSR
2209.00  CSR
2210.00  CSR
2211.00  CSR
2212.00  CSR
2213.00  CSR
2214.00  CSR
2215.00  CSR
2216.00  CSR
2217.00  CSR
2218.00  CSR
2219.00  CSR
2220.00  CSR
2221.00  Ct
2222.00  C*
2223.00  C*  Dictionary parameters for – Item Category Code 003
2224.00  C*
2225.00  CSR
2226.00  CSR
2227.00  CSR
2228.00  C*  ----  ------
2229.00  CSR
2230.00  CSR
2231.00  CSR
2232.00  CSR
2233.00  CSR
2234.00  CSR
2235.00  CSR
2236.00  CSR
2237.00  CSR  MOVELFRSY  @X003  4
2238.00  CSR  MOVE  FRRT  @X003  2
2239.00  CSR  MOVE  FREDVAL  D@X003  40
2240.00  CSR  MOVE  FRVAL  A@X003  40
2241.00  CSR  MOVE  FREDVAL  l@X003  40
2242.00  CSR  MOVE  FRUVAL  U@X003  40
2243.00  CSR  MOVE  PREDWR  W@X003  30
2244.00  CSR  MOVE  PRLR  J@X003  1
2245.00  CSR  MOVE  FREDNX  N@X003  20
2246.00  CSR  Z–ADD1  #X003  110
2247.00  CSR  MOVE  P@X003  #A
2248.00  CSR  DO  #A
2249.00  CSR  MULT  10  @X003
2250.00  CSR  END
2251.00  CSR  END

2253.00  CSR  END

2254.00  CSR  END

2255.00  CSR  END

2256.00  CSR  MOVELFRSY  @X004  4
2257.00  CSR  MOVE  FRRT  @X004  2
2258.00  CSR  MOVE  FREDVAL  D@X004  40
2259.00  CSR  MOVE  FRVAL  A@X004  40
2260.00  CSR  MOVE  FREDNYX  N@X004  20
2261.00  CSR  MOVE  FREDWR  W@X004  30
2262.00  CSR  MOVE  PREDWR  W@X004  30
2263.00  CSR  CALL  ‘X9800E’  81
2265.00  CSR  CALL  ‘X9800E’  81
2264.00  CSR  PARM  I9800E
2266.00  CSR  PARM  I9800E

2267.00  CSR  FRERR  IFQP  ‘0’
2268.00  CSR  FRERR  IFQP  ‘0’
2269.00  CSR  FRERR  IFQP  ‘0’
2270.00  CSR  FRERR  IFQP  ‘0’
2271.00  CSR  FRERR  IFQP  ‘0’
2272.00  CSR  FRERR  IFQP  ‘0’
2273.00  CSR  FRERR  IFQP  ‘0’
2274.00  CSR  FRERR  IFQP  ‘0’
2275.00  CSR  FRERR  IFQP  ‘0’
2276.00  CSR  FRERR  IFQP  ‘0’
2277.00  CSR  FRERR  IFQP  ‘0’
2278.00  CSR  FRERR  IFQP  ‘0’
2279.00  CSR  FRERR  IFQP  ‘0’
2280.00  CSR  FRERR  IFQP  ‘0’
2281.00  CSR  FRERR  IFQP  ‘0’
2282.00  CSR  FRERR  IFQP  ‘0’
2283.00  CSR  FRERR  IFQP  ‘0’
2284.00  CSR  FRERR  IFQP  ‘0’
2285.00  CSR  FRERR  IFQP  ‘0’

2286.00  CSR  END
2287.00  CSR  END
2288.00  CSR  END
2289.00  CSR  END
2290.00  CSR  END
2291.00  CSR  END
2292.00  CSR  END
2293.00  CSR  END
2294.00  CSR  END
2295.00  CSR  END
2296.00  CSR  END
2297.00  CSR  END
2298.00  CSR  END
2299.00  CSR  END
2300.00  CSR  END
2301.00  CSR  END
2302.00  CSR  END
2303.00  CSR  END
2304.00  CSR  END
2305.00  CSR  END
2306.00  CSR  END
2307.00  CSR  END
2308.00  CSR  END
2309.00  CSR  END
2310.00  CSR  END
2311.00  CSR  END
2312.00  CSR  END
2313.00  CSR  END

Advanced Programming Concepts and Skills
Set subroutine execution flag.

CSR MOVE '1' $998 1
CSR END998 ENDSR

SUBROUTINE S999 – Housekeeping

Processing:
1. Load video screen text.
2. Retrieve screen title data area, test for unauthorized access, center video title and move to video screen.
3. Initialize key list.
4. Load roll keys.
5. Passed parameters.

Required program parameters.

ENTRY PLIST

Passed Parameter – Item ID

Parm #XIT 8

Move to internal reference – Item ID

Test for auto inquiry function.

Load video screen text.

Key list for – Cost Center Security

Key list for – SUM Item Master File

Load roll key upper and lower key values.

Using *LIKE more and more, especially for work fields.
Load error messages array.

```
2386.00 C*  Load error messages array.
2387.00 C*  
2388.00 CSR  MOVE '0001'  EMK,01 Inv Action
2389.00 CSR  MOVE '0002'  EMK,02 Inv Key
2390.00 CSR  MOVE '0003'  EMK,03 Inv Blanks
2391.00 CSR  MOVE '0004'  EMK,04 Inv Date
2392.00 CSR  NIVE '0005'  EMK,05 Inv Next Nbr
2393.00 CSR  MOVE '0007'  EMK,06 In Use
2394.00 CSR  MOVE '0025'  EMK,07 Inv Values
2395.00 CSR  MOVE '0026'  EMK,08 In MCU
2396.00 CSR  MOVE '0027'  EMK,09 Inv Desc Ttl
2397.00 CSR  MOVE '0052'  EMK,10
2398.00 C*  
2399.00 C*  
2400.00 C*  Load invalid action code array.
2401.00 C*  
2402.00 CSR  MOVEA ' '  @NAC
2403.00 C*  
2404.00 C*  Load system date.
2405.00 C*  
2406.00 C*  
2407.00 CSR  TIME $WRK12 120
2408.00 CSR  MOVE $WRK12 $EDT 60
2409.00 CSR  MOVE $EDT #SIDAT 6
2410.00 CSR  MOVEL *SYSVAL  ' #FFMT 7
2411.00 CSR  MOVEL *BLANKS #EDAT 8
2412.00 CSR  MOVEL *JUL  ' #TFMT 7
2413.00 CSR  MOVEL *NONE  ' #SEP 7
2414.00 CSR  MOVE ' '  $ERTST 1
2415.00 CSR  CALL 'X0028'
2416.00 C*  
2417.00 CSR  PARM #SIDAT
2418.00 CSR  PARM #EDAT
2419.00 CSR  PARM #FFMT
2420.00 CSR  PARM #TFMT
2421.00 CSR  PARM #SEP
2422.00 CSR  PARM $ERTST
2423.00 CSR  MOVE #SIDAT $UPMJ 60
2424.00 C*  
2425.00 CSR  ENDSR
2426.00 C*  
2427.00 C*  
2428.00 D15W801 E  UNLOCK
```

Error message numbers from Data Dictionary

- **Inv Action**: Error number 1
- **Inv Key**: Error number 2
- **Inv Blanks**: Error number 3
- **Inv Date**: Error number 4
- **Inv Next Nbr**: Error number 5
- **In Use**: Error number 7
- **Inv Values**: Error number 9
- **Inv Desc Ttl**: Error number 10

Load invalid action code array.

```
2400.00 C*  Load invalid action code array.
2401.00 C*  
2402.00 CSR  MOVEA ' '  @NAC
```

Lockout action code function used with the Program Generator

Use the **TIME** feature to allow for all date formats

Method of releasing master file record locks
Exercises
See the exercises for this chapter.
User Spaces

About User Spaces

User spaces are objects managed by Application Program Interfaces (APIs) to store data. User object APIs create, manipulate, and delete user spaces and indexes. An API provides you:

- A faster way of retrieving information
- A means of dynamically modifying sizes
- A means of manipulating user objects

You should place your user spaces in library QTEMP so that it will be deleted automatically when you sign off. In this chapter you will learn the following about user spaces:

- What are they?
- What are the advantages of using them?
- How do they function?

To work with user spaces perform the following tasks:

- Create a user space
- Write to a user space
- Read from a user space

What is a User Space?

A user space is:

An object made up of a collection of bytes that are used for storing any user-defined information.

When you use a user space, there is no key to use to retrieve the information placed in the space. Therefore, the information in the user space is in the order that it was entered. A user space can store up to 16 megabytes of information.
To see the contents of a User Space, enter the command DMPOBJ (Dump Object) from any command line after the space has been loaded.

What Are the Advantages of Using a User Space?

The main advantage of using a user space is its speed.

Because a user space consists of bytes instead of elements like an array, you can write and retrieve records faster using a user space than an array.

In addition to speed, a user space provides you with more flexibility.

A user space does not have a fixed record length. When you write a record to a user space, you define the length of that record. Therefore, each record you write to your user space can be a different size. In addition, it is possible to dynamically increase the size of your user space by calling the Enter User Space program (X00SPC) after creating the user space.

For example: @EX  999  30

The array @EX has a fixed record length of 30, therefore no record smaller or larger than 30 bytes can be written to this array.

User spaces are also used when communicating between two programs. The space can carry information loaded in one program to another program for retrieval.

For example: Program A creates the user space and loads information into a user space. Then Program A calls Program B and passes the name of the user space to it. Program B can retrieve information from the user space that was loaded by Program A.

How Does a User Space Function?

Remember that a user space is nothing more than a collection of bytes used to store information:
You write information to a user space, as well as retrieve information from it. Since there is no key associated with a user space, the information contained in a user space is in a user-defined order. The order is based on program controlled offset and length values.

**Creating a User Space**

1. Determine if a user space already exists by using the J.D. Edwards program J98CKOBJ.

   - **For example:**  
     - CALL J98CKOBJ  
     - PARM PSOBJ  
     - PARM PSLIB  
     - PARM PSTYPE  
     - PARM PSMID  
     - PARM PSAUT  
     - PARM PSERR

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSOBJ (10)</td>
<td>The name of your user space.</td>
</tr>
<tr>
<td>PSLIB (10)</td>
<td>The name of the library in which you wish to check for the existence of the user space. Generally, this is *LIBL to check all of the libraries in the library list.</td>
</tr>
<tr>
<td>PSTYPE (8)</td>
<td>The type of object you are checking for. Generally, this is *USRSPC for a user space.</td>
</tr>
<tr>
<td>PSMID (10)</td>
<td>The member ID if you are checking for a database file. Generally, this is *NONE.</td>
</tr>
<tr>
<td>PSAUT (10)</td>
<td>The authority or authorization list to be checked for the user. Generally, this is *NONE.</td>
</tr>
</tbody>
</table>
Advanced Programming Concepts and Skills

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSERR (1)</td>
<td>The error parameter that will indicate an error while checking your object. Generally, this is *BLANK.</td>
</tr>
<tr>
<td></td>
<td>0 – No authority</td>
</tr>
<tr>
<td></td>
<td>1 – Not found</td>
</tr>
<tr>
<td></td>
<td>3 – No library</td>
</tr>
<tr>
<td></td>
<td>4 – Member not found</td>
</tr>
<tr>
<td></td>
<td>5 – No authority to library</td>
</tr>
<tr>
<td></td>
<td>6 – Cannot assign library</td>
</tr>
</tbody>
</table>

2. If a user space does exist you should clear it and write your new information over the old.

3. If the user space did not exist and no errors occurred, you can create your user space. To create a user space, use the QUSCRTUS (Create User Space) command.

   For example: CALL ‘QUSCRTUS’ 81

   – – – – – – – – – – –
   PARM #SPNAM
   PARM #SPATT
   PARM #SPSIZ
   PARM #SPVAL
   PARM #SPAUT
   PARM #SPTXT

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#SPNAM (20)</td>
<td>The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember, place your user space in library QTEMP to automatically delete your space when you sign off.</td>
</tr>
<tr>
<td>#SPATT (10)</td>
<td>The extended attribute of your user space. You may use this field to classify your user space. For example, JDE uses this field to label all of the user spaces with JDE.</td>
</tr>
<tr>
<td>#SPSIZ (4 binary)</td>
<td>The initial size of your user space. Any value from 1 byte to 16 megabytes.</td>
</tr>
<tr>
<td>#SPVAL (1)</td>
<td>The initial value of all bytes in the user space. Generally, this is *BLANK.</td>
</tr>
<tr>
<td>#SPAUT (10)</td>
<td>The authority you give users to your user space. Generally, this is *ALL.</td>
</tr>
</tbody>
</table>
4. To dynamically increase the size of your user space when maximum allocation is reached, call the Enlarge User Space program (X00SPC).

   For example:  CALL ’X00SPC’ 81

   PARM #XSPCN
   PARM #XRQSZ
   PARM #XERR

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#SPTXT (50)</td>
<td>The text description of your user space.</td>
</tr>
<tr>
<td>#XSPCN (20)</td>
<td>The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember to place your user space in library QTEMP to automatically delete your space when you sign off.</td>
</tr>
<tr>
<td>#XRQSZ (15,0)</td>
<td>The requested size to increase your space.</td>
</tr>
<tr>
<td>#XERR (1)</td>
<td>An error flag:</td>
</tr>
<tr>
<td></td>
<td>1 – Space not found</td>
</tr>
<tr>
<td></td>
<td>2 – Not authorized</td>
</tr>
<tr>
<td></td>
<td>3 – Error</td>
</tr>
</tbody>
</table>

An error flag:  
1 – Space not found  
2 – Not authorized  
3 – Error
Writing to a User Space

To write to a User Space

Use either the QUSCHGUS or the X98CHGUS (Change User Space) command.

For example:

```
CALL 'QUSCHGUS' 81

PARM #SPNAM
PARM #SPPOS
PARM #SPLGH
PARM #SPVAL
PARM #SPAUX
```

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#SPNAM (20)</td>
<td>The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember to place your user space in library QTEMP to automatically delete your space when you sign off.</td>
</tr>
<tr>
<td>#SPPOS (4 binary)</td>
<td>The starting position in your user space where the information will begin. It must be the first byte and must have a value greater than 0.</td>
</tr>
<tr>
<td>#SPLGH (4 binary)</td>
<td>The length of the information that is being written to your user space. This field is user–defined, but it must be greater than 0.</td>
</tr>
<tr>
<td>#SPVAL (* user defined)</td>
<td>The actual information to be written to your user space. The field must be at least as long as the length parameter.</td>
</tr>
<tr>
<td>#SPAUX (1)</td>
<td>Used to force changes made to your user space to auxiliary storage, such as a disk. The valid values are: 0 – do not force changes, 1 – write changes, 2 – write changes immediately</td>
</tr>
</tbody>
</table>

The X98CHGUS program, JDE’s version of the IBM command QUSCHGUS, will perform a transfer control to QUSCHGUS.
Tracking Information if Writing Variable Length Records

Method 1

During the process of writing information to your user space, you should keep track of a pointer. This will ensure that you will not overwrite information or retrieve incorrect information.

One way to do this is to initialize your pointer to 1 and after you write information to your user space, add the length of the information to your pointer. The pointer is now set at the next starting point and ready for you to enter new information.

If the information you are writing to your user space contains various lengths, you should maintain the length of each piece of information in save fields. You can use the save fields when you wish to retrieve the information from your user space.

<table>
<thead>
<tr>
<th>Initialize pointer to 1</th>
<th>Add 30 bytes to pointer and to save field</th>
<th>Add 41 bytes to pointer and to another save field</th>
</tr>
</thead>
<tbody>
<tr>
<td>▼</td>
<td>← 30 bytes →</td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td></td>
<td>← 41 bytes →</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▼</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Method 2

You can also reserve the first 2 or 3 bytes of every record for the size of that record. Then you would only have to load that part of the record with its length. When you read the record from the user space, the first 2 or 3 bytes will tell you how long the record is.
Reading from a User Space

Once you have loaded information into your user space, you are ready to retrieve it. Do not forget that your pointer must be set to the proper starting position to ensure the correct information is retrieved.

To read from a User Space

Use the QUSRTVUS (Retrieve User Space) command.

For example:

```
CALL 'QUSRTVUS' 81

PARM #SPNAM
PARM #SPPOS
PARM #SPLGH
PARM #SPREC
```

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>#SPNAM (20)</td>
<td>The first 10 characters contain your user space name, and the second 10 characters contain the name of the library where your user space is located. Remember to place your user space in library QTEMP to automatically delete your space when you sign off.</td>
</tr>
<tr>
<td>#SPPOS (4 binary)</td>
<td>The starting position in your user space where the information will begin. It must be the first byte and must have a value greater than 0.</td>
</tr>
<tr>
<td>#SPLGH (4 binary)</td>
<td>The length of the information that is being retrieved to your user space. This field is user-defined, it must not be larger than the variable that will receive the information, and it must be greater than 0.</td>
</tr>
<tr>
<td>#SPREC (* user defined)</td>
<td>The variable that will receive the information from your user space.</td>
</tr>
</tbody>
</table>
User Indexes

About User Indexes

A user index is an object that will:

- Store data
- Allow search functions
- Automatically sort data based on its value

When you use a user index you must have a key to retrieve the information placed in the index.

The key must be unique.

You can only retrieve data using the key in ascending or descending order.

Data entered into a user index is placed in order according to its value.

A user index can store up to 4 gigabytes of information.

Each key and record within a user index can be 1 to 999 bytes long.

To see the contents of a user index, enter the command DMPOBJ (Dump Object) from any command line after the index has been loaded.

You should place your user indexes in library QTEMP so that it will be deleted automatically when you sign off.

To work with user indexes perform the following tasks:

- Create a User Index
- Write to a User Index
- Retrieve from a User Index
What Are the Advantages of Using a User Index?

When you load data into your user index, it is automatically sorted for you. Based on your key for the index, the information is arranged according to its value.

This will help streamline table searches, cross-referencing, and the ordering of data.

The size flexibility of a user index is much better than an array because arrays have a fixed size.

A user index is only as big as the information it contains at one time. User indexes expand as you add data to them.

For example: @EX 999 30

The array @EX has a fixed size of approximately 3 kilobytes. Each record must be 30 bytes long and up to 999 records can be loaded. If you have 300 records loaded into @EX, you will waste approximately 2 kilobytes. On the other hand, if you have 1500 records to load, the program will error when record number 1000 is loaded. A user index would be able to accommodate both situations.

A user index is able to retrieve records faster than an array.

Although a user index may expand to hold more records, it will not contract when records are removed. If you load 100 records into a user index and then remove 50 of them, the user index will remain at the 100 record level size.

You may retrieve data from a user index in ascending order or descending order.

When data is loaded into a user index, it is loaded in ascending order. This does not restrict you to retrieving it in this order.
How Does a User Index Function?

A user index stores data and allows you to retrieve it by a key, which must be unique. The data it stores is made up of a data structure that consists of several fields that you wish to store. A user index is capable of expanding when you add data to it.

J.D. Edwards leaves the first byte in the user index blank for clearing purposes.

---

When using a user index you can create it, add data to it, remove data from it, and delete it.

User indexes, like user spaces, should be created in your QTEMP library so you do not have to worry about deleting it.
Creating a User Index

Before you actually create a user index, check to see if one already exists using the JDE program J98CKOBJ.

For example:  CALL 'J98CKOBJ' 81

- - - - - - - - - -
PARM PSOBJ
PARM PSLIB
PARM PSTYPE
PARM PSMID
PARM PSAUT
PARM PSERR

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSOBJ (10)</td>
<td>The name of your user index.</td>
</tr>
<tr>
<td>PSLIB (10)</td>
<td>The name of the library in which you wish to check for the existence of the user index. Generally, this is *LIBL to check all of the libraries in the library list.</td>
</tr>
<tr>
<td>PSTYPE (8)</td>
<td>The type of object you are checking for. Generally, this is *USRIDX for a user index.</td>
</tr>
<tr>
<td>PSMID (10)</td>
<td>The member if you are checking for a database file. Generally, this is *NONE.</td>
</tr>
<tr>
<td>PSAUT (10)</td>
<td>The authority or authorization list to be checked for the user. Generally, this is *NONE.</td>
</tr>
<tr>
<td>PSERR (1)</td>
<td>The error parameter that will indicate an error while checking your object. Generally, this is *BLANK.</td>
</tr>
<tr>
<td></td>
<td>0 – No authority</td>
</tr>
<tr>
<td></td>
<td>1 – Not found</td>
</tr>
<tr>
<td></td>
<td>3 – No library</td>
</tr>
<tr>
<td></td>
<td>4 – Member not found</td>
</tr>
<tr>
<td></td>
<td>5 – No authority to library</td>
</tr>
<tr>
<td></td>
<td>6 – Cannot assign library</td>
</tr>
</tbody>
</table>
If a user index exists, clear it and write your new information over the old.

For example:

```
CALL 'X00IDX' 81

PARM #0XNAM
PARM 'D' #0XACT
PARM 'EQ' #0XRUL
PARM '1' #0XKLN
PARM *BLANK #0XKEY
PARM #0XRLN
PARM #0XREC
PARM #0XSTA
```

If the user index did not exist, you can now create your user index.

To create a User Index

Use the QUSCRTUI (Create User Index) command.

For example:

```
CALL 'QUSCRTUI' 81

PARM #IDNAM
PARM #IDA TT
PARM #IDENT
PARM #IDLEN
PARM #IDINS
PARM #IDKEY
PARM #IDUPD
PARM #IDOPT
PARM #IDAUT
PARM #IDTXT
```

**PARM (Length))** | **Explanation**
---|---
#IDNAM (20) | The first 10 characters contain your user index name, and the second 10 characters contain the name of the library where your user index is located. Remember to place your user index in library QTEMP to automatically delete your index when you sign off.
## PARM (Length))

<table>
<thead>
<tr>
<th>PARM</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#IDATT (10)</td>
<td>The extended attribute of your user index. You may use this field to classify your user index. For example, JDE uses this field to label all of the user indexes with JDE.</td>
</tr>
<tr>
<td>#IDENT (1)</td>
<td>Whether the records you are loading into your user index are Fixed–length (F) or Variable–length (V). Generally, this is set to ‘F’.</td>
</tr>
<tr>
<td>#IDLEN (4 binary)</td>
<td>The length of the records to be entered into your user index. For fixed–length records valid values are 1 to 999. For variable–length records, enter 0 for a key length of 1 to 120, or 1 for a key length of 1 to 999.</td>
</tr>
<tr>
<td>#IDINS (1)</td>
<td>Whether you are loading your user index by a key or not. Generally, this is set to 1 to load your index by a key. A value of 0 means you are not loading your index by a key.</td>
</tr>
<tr>
<td>#IDKEY (4 binary)</td>
<td>The length of your key. The first byte in your record must be the beginning of your key. The values are 1 to 999 or 0 for no key.</td>
</tr>
<tr>
<td>#IDUPD (1)</td>
<td>Whether or not the data in your user index will be immediately updated. Each data change to your index is written to auxiliary storage. The values are 0 for no immediate update or 1 for immediate update. Generally, this is 0.</td>
</tr>
<tr>
<td>#IDOPT (1)</td>
<td>The type of access in which to optimize your index. The values are 0 to optimize for random references or 1 to optimize for sequential references. Generally, this is 1.</td>
</tr>
<tr>
<td>#SPAUT (10)</td>
<td>The authority you give users to your user index. Generally, this is *ALL.</td>
</tr>
<tr>
<td>#SPTXT (50)</td>
<td>The text description of your user index.</td>
</tr>
</tbody>
</table>

You may want to define data structures containing some of the information required for the parameters to avoid having to enter values. The user index name, record length, key length, and user index text are good examples.
Writing to a User Index

To write to a User Index

J.D. Edwards provides an external program called User Index Server (X00IDX) to manipulate data for user index entries.

For example:

```
CALL 'X00IDX' 81
      PARM #0XNAM
      PARM #0XACT
      PARM #0XRUL
      PARM #0XKLN
      PARM #0XKEY
      PARM #0XRLN
      PARM #0XREC
      PARM #0XSTA
```

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#0XNAM (20)</td>
<td>The first 10 characters contain your user index name, and the second 10 characters contain the name of the library where your user index is located. Remember to place your user index in library QTEMP to automatically delete you index when you sign off.</td>
</tr>
</tbody>
</table>
| #0XACT (1)    | The action you want to perform on your user index. The valid values are: I – Inquire
A – Add
C – Change
D – Delete |
| #0XRUL (2)    | The rule used to search your user index using the record. The valid values are:
EQ – Equal to
GT – Greater than
LT – Less than
GE – Greater than or Equal to
LE – Less than or Equal to |
<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#0XKLN (3,0)</td>
<td>The length of your key. The first byte in your record must be the beginning of your key. The values are 1 to 999 or 0 for no key.</td>
</tr>
<tr>
<td>#0XKEY (120)</td>
<td>The fields that make up the key to your user index. *FIRST (first record) and *LAST (last record) are allowed.</td>
</tr>
<tr>
<td>#0XRLN (3,0)</td>
<td>The length of your record. The values are 1 to 999.</td>
</tr>
<tr>
<td>#0XREC (120)</td>
<td>The record you are entering or deleting from your user index. This parameter will also receive the record when you inquire on your user index.</td>
</tr>
<tr>
<td>#0XSTA (1)</td>
<td>The error status of the manipulation. The possible values are:</td>
</tr>
<tr>
<td></td>
<td>0 – Record found</td>
</tr>
<tr>
<td></td>
<td>1 – Record not found, not authorized</td>
</tr>
<tr>
<td></td>
<td>8 – Rule invalid</td>
</tr>
<tr>
<td></td>
<td>9 – Error on action</td>
</tr>
</tbody>
</table>
Appearance of Records

The records added to your user index will appear in ascending order.

For example: You created a user index to keep track of your ice cream sales. Each record within your user index contains the total sales amount, item, item description, and cost center. The key for your user index consists of total sales amount and item (remember the key must be unique).

The following records are to be loaded into your user index:

<table>
<thead>
<tr>
<th>Total</th>
<th>Sales Item</th>
<th>Description</th>
<th>Cost Center</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ 500.00</td>
<td>CHO</td>
<td>Chocolate</td>
<td>Denver</td>
</tr>
<tr>
<td>$ 250.00</td>
<td>STR</td>
<td>Strawberry</td>
<td>Denver</td>
</tr>
<tr>
<td>$ 750.00</td>
<td>C&amp;C</td>
<td>Cookies &amp; Cream</td>
<td>Denver</td>
</tr>
<tr>
<td>$1200.00</td>
<td>VAN</td>
<td>Vanilla</td>
<td>Denver</td>
</tr>
<tr>
<td>$ 400.00</td>
<td>ROC</td>
<td>Rocky Road</td>
<td>Denver</td>
</tr>
</tbody>
</table>

Because the key to your user index is total sales amount and item, the records will be entered into your index in ascending order by total sales amount first, then item. So your user index will look like this:

<table>
<thead>
<tr>
<th>Ice Cream Sales Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>$ 250.00</td>
</tr>
<tr>
<td>$ 400.00</td>
</tr>
<tr>
<td>$ 500.00</td>
</tr>
<tr>
<td>$ 750.00</td>
</tr>
<tr>
<td>$1200.00</td>
</tr>
</tbody>
</table>
Retrieving Data from a User Index

You can retrieve data in ascending or descending order.

▶ To retrieve data in Ascending Order

1. Use the User Index Server (X00IDX).
2. Set the Action parm to inquire (I)
3. Set Rule to Equal to (EQ)
4. Set the Key to the first record (*FIRST)
   
   For example:  
   
   ```
   CALL 'X00IDX' 81
   PARM #0XNAM 20
   PARM 'I' #0XACT 1
   PARM 'EQ' #0XRUL 2
   PARM #0XKLN 30
   PARM '*FIRST' #0XKEY120
   PARM #0XRLN 30
   PARM #0XREC120
   PARM #0XSTA 1
   ```

5. To retrieve the next record, load the key with the current record’s values and change your rule to ‘GT’.
   
   For example:  
   
   ```
   CALL 'X00IDX' 81
   PARM #0XNAM 20
   PARM 'I' #0XACT 1
   PARM 'GT' #0XRUL 2
   PARM #0XKLN 30
   PARM #0XKEY120
   PARM #0XRLN 30
   PARM #0XREC120
   PARM #0XSTA 1
   ```
To retrieve data in descending order

1. Use the User Index Server (X00IDX)
2. Set the Action parm to inquire (I)
3. Set Rule to Equal to (EQ)
4. Set the Key to the first record (\*LAST)

For example:  CALL 'X00IDX' 81
               _ _ _ _ _ _
               PARM #0XNAM 20
               PARM 'I' #0XACT 1
               PARM 'EQ' #0XRUL 2
               PARM #0XKLN 30
               PARM '\*LAST' #0XKEY120
               PARM #0XRLN 30
               PARM #0XREC120
               PARM #0XSTA 1

5. To retrieve the next record, load the key with the current record’s values and change your rule to ‘LT’.

For example:  CALL 'X00IDX' 81
               _ _ _ _ _ _
               PARM #0XNAM 20
               PARM 'I' #0XACT 1
               PARM 'LT' #0XRUL 2
               PARM #0XKLN 30
               PARM #0XKEY120
               PARM #0XRLN 30
               PARM #0XREC120
               PARM #0XSTA 1
**User Index Example Program**

1.00 H/TITLE PINDEX — User Index Demonstration
2.00 H* -----------------------------------------------
3.00 H*  
4.00 H* Copyright (c) 1993
5.00 H* J. D. Edwards & Company
6.00 H* This unpublished material is proprietary to
7.00 H* J. D. Edwards & Company. All rights reserved.
8.00 H* The methods and techniques described herein are
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11.00 H* is forbidden except by express written permission
12.00 H* of J. D. Edwards & Company.
13.00 H*  
14.00 H*  
15.00 H*  
16.00 H*  
17.00 F* PROGRAM REVISION LOG
18.00 F* -----------------------------------------------
19.00 F*  
20.00 F* Date Programmer Nature of Revision
21.00 F*  
22.00 AUTHRF* 12/02/93 FRAZZINI SAR # 289 (AS/400 A/G)
23.00 F*  
24.00 F*  
25.00 F*  
26.00 F*  
27.00 FVINEX CF E WORKSTN KINPDS SRVPDS
28.00 F  
29.00 F*  
30.00 F*  
31.00 F* Copy Member for Composite Common Subroutine - C0001
32.00 F*  
33.00 F/COPY JDECPY,D0001
34.00 F*  
35.00 F*  
36.00 F* PROGRAM TABLES AND ARRAYS
37.00 F*  
38.00 F*  
39.00 E  
40.00 E  
41.00 E  
42.00 E  
43.00 E  
44.00 E  
45.00 E  
46.00 E  
47.00 E  
48.00 E  
49.00 E/COPY JDECPY,B0001
50.00 E*  
51.00 E*  
52.00 E* Copy Member for Composite Common Subroutine C0012
53.00 E*  
54.00 E/COPY JDECPY,B0012
55.00 E*  
56.00 E*  
57.00 E*  
58.00 E*  
59.00 E/COPY JDECPY,B0042
60.00 E*  
61.00 E*  
62.00 E* Copy Member for Composite Common Subroutine C997
63.00 E*  
64.00 E/COPY JDECPY,B997
65.00 E*  
66.00 E*  
67.00 E* PROGRAM INPUT SPECIFICATIONS AND DATA STRUCTURES
68.00 E*  
69.00 E*  
70.00 E* Data Structure to Load Video Screen Text
71.00 E*  
72.00 FDS TXT DS 240
73.00 I  
74.00 I  
75.00 I  
76.00 I  
77.00 I  
78.00 I  
79.00 I  
80.00 I/COPY JDECPY,I00DSINX
81.00 I/COPY JDECPY,I00PS@@
82.00 I/COPY JDECPY,I00DSPRG

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User Indexes

83.00 I*
84.00 I* Copy Member for Composite Common Subroutine – C00SC
85.00 I*
86.00 I*
87.00 I/COPY JDECPY, I00SC
88.00 I*--
89.00 I* Data Structures for user index.
90.00 I* --------------------------
91.00 I* Entry Record
92.00 I*
93.00 I* Entry Length, Name/Library, Text
94.00 I* Partial keys 1 & 2, full unique key KEYL.
95.00 I*
96.00 I* Data Structure for File Servers
97.00 I*
98.00 I* MAINLINE PROGRAM
99.00 I* Process housekeeping.
100.00 C* EXSR S999
101.00 C* ----- ----- 
102.00 C* If LR on, end program.
103.00 C* INLR CASEQ'1' EOJ
104.00 C* ----- ----- 
105.00 C* If automatic inquiry set, process inquiry.
106.00 C* AUTO CASEQ'1' S003 24
107.00 C* ----- END
108.00 C* Begin normal program processing.
109.00 C* ----- ----- 
110.00 C* If subfile page display not set, set subfile page display.
111.00 C* #SPRNO IFREQ 0
112.00 C* Z-ADD1 #SPRNO
113.00 C* END
114.00 C* If subfile page empty, don’t display SPL page.
115.00 C* I1 IFLE 0
116.00 C* SETOP 38
117.00 C* ELSE
118.00 C* SETON 38
119.00 C* END
120.00 C* Write video screen.

Data Structure defining three possible key lengths. $1KEYL is the full key length. Refer to DSIDX1 to see which fields are key fields when $1KEY1 (1 byte), $1KEY2 (1–6 bytes), or $1KEYL (1–18 bytes) are being used.

Record format to be used with User Index defined as a Data Structure

Data Structure containing the record length, User Index name, and User Index description text.
160.00 C* WRITEVINDEX1
161.00 C WRITEVINDEXC
162.00 C MOVE '1' @@AID
163.00 C EXSR S001
164.00 C* –––– ––––
165.00 C* –––– ––––
166.00 C* –––– ––––
167.00 C* Load data field dictionary parameters (one cycle only).
168.00 C* $998 CASEQ' ' S998
169.00 C* –––––––– ––––
170.00 C* END
171.00 C* Begin video screen read processing
172.00 C* ––––– ––––
173.00 C* Begin video screen read processing
174.00 C* ––––– ––––
175.00 C SETOF 999301
176.00 C READ VINDEX 9998
177.00 C Z-ADD0 ##RROW
178.00 C Z-ADD0 ##RCOL
179.00 C* ––––– ––––
180.00 C* If video read timed out, end program.
181.00 C* ––––– ––––
182.00 C *IN99 CASEQ'1' EOJ LR
183.00 C* ––––– ––––
184.00 C* If valid function key pressed, process and return.
185.00 C* ––––– ––––
186.00 C* ––––– ––––
187.00 C* ––––– ––––
188.00 C* Edit the action code.
189.00 C* ––––– ––––
190.00 C* ––––– ––––
191.00 C* ––––– ––––
192.00 C* ––––– ––––
193.00 C* ––––– ––––
194.00 C* ––––– ––––
195.00 C* ––––– ––––
196.00 C* ––––– ––––
197.00 C* ––––– ––––
198.00 C* ––––– ––––
199.00 C* ––––– ––––
200.00 C EXSR C0001
201.00 C* ––––– ––––
202.00 C* ––––– ––––
203.00 C* ––––– ––––
204.00 C* ––––– ––––
205.00 C* ––––– ––––
206.00 C* ––––– ––––
207.00 C* ––––– ––––
208.00 C* ––––– ––––
209.00 C* ––––– ––––
210.00 C* ––––– ––––
211.00 C* ––––– ––––
212.00 C* ––––– ––––
213.00 C* ––––– ––––
214.00 C* ––––– ––––
215.00 C* ––––– ––––
216.00 C* ––––– ––––
217.00 C* ––––– ––––
218.00 C* ––––– ––––
219.00 C* ––––– ––––
220.00 C* ––––– ––––
221.00 C* ––––– ––––
222.00 C* ––––– ––––
223.00 C* ––––– ––––
224.00 C* ––––– ––––
225.00 C* ––––– ––––
226.00 C* ––––– ––––
227.00 C* ––––– ––––
228.00 C* ––––– ––––
229.00 C* ––––– ––––
230.00 C* ––––– ––––
231.00 C* ––––– ––––
232.00 C* ––––– ––––
233.00 C* ––––– ––––
234.00 C* ––––– ––––
235.00 C* ––––– ––––
236.00 C* ––––– ––––
237.00 C* ––––– ––––
238.00 C* ––––– ––––
239.00 C* ––––– ––––
240.00 C* ––––– ––––
241.00 C* ––––– ––––
242.00 C* ––––– ––––
243.00 C* ––––– ––––
244.00 C MOVESVL24E VDL24
245.00 C ELSE C MOVESVL24M VDL24
246.00 C END
247.00 C END
248.00 C EOJ TAG
249.00 C END
250.00 C END
251.00 C *
252.00 C END
253.00 C *
254.00 C END
255.00 C END MAINLINK PROGRAM
256.00 C*
257.00 C******************************************************************************
258.00 C COPY Common Subroutine – Edit Action Code
259.00 C*
260.00 C*
261.00 C/COPY JDECPY,C0001
262.00 C******************************************************************************
263.00 C*
264.00 C SUBROUTINE S00EX – Process Function Keys
265.00 C******************************************************************************
266.00 C Processing: 1. Process standard function keys.
267.00 C 2. Process special function key exits.
268.00 C*
269.00 C CSR S00EX BEGSR
270.00 C******************************************************************************
271.00 C Retain current page of subfile.
272.00 C*
273.00 C CSR T00EXA TAG
274.00 C******************************************************************************
275.00 C If EOJ requested, exit subroutine.
276.00 C CSR @@AID CABEQ#FEOJ ENDEXE LR
277.00 C******************************************************************************
278.00 C If Display Keys pressed, exit to help facility and return.
279.00 C******************************************************************************
280.00 C CSR @@AID IFEQ #FKEYS
281.00 C******************************************************************************
282.00 C If Cursor Sensitive Help Pressed, exit to CS Help.
283.00 C******************************************************************************
284.00 C******************************************************************************
285.00 C******************************************************************************
286.00 C******************************************************************************
287.00 C******************************************************************************
288.00 C******************************************************************************
289.00 C******************************************************************************
290.00 C******************************************************************************
291.00 C******************************************************************************
292.00 C******************************************************************************
293.00 C******************************************************************************
294.00 C******************************************************************************
295.00 C******************************************************************************
296.00 C******************************************************************************
297.00 C******************************************************************************
298.00 C******************************************************************************
299.00 C******************************************************************************
300.00 C******************************************************************************
301.00 C******************************************************************************
302.00 C******************************************************************************
303.00 C******************************************************************************
304.00 C******************************************************************************
305.00 C******************************************************************************
306.00 C******************************************************************************
307.00 C******************************************************************************
308.00 C******************************************************************************
309.00 C******************************************************************************
310.00 C******************************************************************************
311.00 C******************************************************************************
312.00 C******************************************************************************
313.00 C******************************************************************************
314.00 C******************************************************************************
315.00 C******************************************************************************
316.00 C******************************************************************************
317.00 C******************************************************************************
318.00 C******************************************************************************
319.00 C******************************************************************************
320.00 C******************************************************************************
321.00 C******************************************************************************
322.00 C******************************************************************************
323.00 C******************************************************************************
324.00 C******************************************************************************
325.00 C******************************************************************************
326.00 C******************************************************************************
327.00 C******************************************************************************
327.01  CSR  Z-ADD1  #H
328.00  CSR  #G  DOWLE4
329.00  CSR  #MK,#G  IIEQ '1'
330.00  CSR  MOVE  EMK, #G  @ER, #H
331.00  CSR  ADD  1  #H
332.00  CSR  END
333.00  CSR  ADD  1  #G
334.00  CSR  END
335.00  CSR  CALL  'P0000E'  98
336.00  CSR  ----- -------
337.00  CSR  PARM  @ER
338.00  CSR  GOTO  ENDEXE
339.00  CSR  ----- -------
340.00  CSR  END
341.00  CSR
342.00  CSR
343.00  CSR
344.00  CSR
345.00  CSR  @AID  IFEQ  #HELP
346.00  CSR  CALL  'P00IELP'  99
347.00  CSR
348.00  CSR
349.00  CSR
350.00  CSR
351.00  CSR
352.00  CSR
353.00  CSR  GOTO  ENDEXE
354.00  CSR
355.00  CSR  END
356.00  CSR
357.00  CSR
358.00  CSR
359.00  CSR
360.00  CSR  @AID  IFEQ  #IROLU
361.00  CSR  IFNE  '1'
362.00  CSR  MOVES  *IN  SHIN
363.00  CSR  WRITEVINDEXX
364.00  CSR  END
365.00  CSR  ELSE
366.00  CSR  Z-ADD$SVI1  I1
367.00  CSR  MOVE  *BLANK  SFPL01
368.00  CSR  MOVE  *BLANK  SFRP01
369.00  CSR  MOVE  *BLANK  SFRP02
370.00  CSR  MOVE  *BLANK  SHMCU
371.00  CSR  ADD  1  #SFRNO
372.00  CSR  DO  $PGSZ
373.00  CSR
374.00  CSR  ADD  1  I1
375.00  CSR  WRITEVINDEXX
376.00  CSR  END
377.00  CSR  END
378.00  CSR  Z-ADDI1  $SVI1
379.00  CSR  END
380.00  CSR  GOTO  ENDEXE
381.00  CSR
382.00  CSR  END
383.00  CSR
384.00  CSR
385.00  CSR
386.00  CSR
387.00  CSR  @AID  IFEQ  #FROLD
388.00  CSR  IFNE  $SVI1  #SFRNO
389.00  CSR  GOTO  ENDEXE
390.00  CSR
391.00  CSR  END
392.00  CSR
393.00  CSR
394.00  CSR
395.00  CSR
396.00  CSR  @AID  IFEQ  #FCLR
397.00  CSR  EXSR  S001
398.00  CSR
399.00  CSR  GOTO  ENDEXE
400.00  CSR
401.00  CSR  END
402.00  CSR  IFNE  '1'
403.00  CSR  IFNE  0193
404.00  CSR  SETON  0193
405.00  CSR  GOTO  ENDEXE
406.00  CSR
407.00  CSR  END
408.00  CSR
409.00  CSR  ENDEXE  ENDERS
410.00  CSR
411.00  CSR

---

If HELP key pressed, exit to help facility and return.

If ROLL UP key pressed, load next page of subfile.

If ROLL DOWN key pressed, reset subfile page display.

If Clear screen pressed, clear screen and return.
SUBROUTINE S00VL – Cursor Control Return Values

By format, find the field to update and move in the returned value. If the format is a subfile, the record to change is found in @RRN.

CSR S00VL BEGSR

CSR ##RVAL IFEQ '*BLANK'
CSR MOVE *BLANK ##RVAL
CSR END

Return values for fields in format VINDEXC

CSR ##RFMT IFEQ 'VINDEXC'
CSR ##FLDN IFEQ 'ACTION'
CSR MOVEL ##RVAL ACTION
CSR GOTO ENDOVL
CSR END
CSR END
CSR ##FLDN IFEQ 'VDCO'
CSR MOVEL ##RVAL VDCO
CSR MOVEL ##RDSC VC0001
CSR GOTO ENDOVL
CSR END
CSR END
CSR ##FLDN IFEQ 'SFMCU'
CSR MOVEL ##RVAL SFMCU
CSR GOTO T00VLA
CSR END
CSR END
CSR ##FLDN IFEQ 'SFDL01'
CSR MOVEL ##RVAL SFDL01
CSR GOTO T00VLA
CSR END
CSR END
CSR ##FLDN IFEQ 'SFRP01'
CSR MOVEL ##RVAL SFRP01
CSR GOTO T00VLA
CSR END
CSR END
CSR ##FLDN IFEQ 'SFRP02'
CSR MOVEL ##RVAL SFRP02
CSR GOTO T00VLA
CSR END
CSR END
CSR T00VLA TAG
CSR SETON 32
CSR MOVEA *IN SHIN
CSR UPDATVINDEXS 81
CSR END
CSR END

Return values for fields in format VINDEXE

Return values for fields in format VINDEXS

Return values for fields in format VINDEX1

SUBROUTINE S001 – Clear Fields
495.00 C* .trim-------------------------------------------------------------------
496.00 C*  
497.00 C* Processing:  1.  Reset all video screen and data file fields 
498.00 C* for next transaction. 
499.00 C* 2.  Clear action code only if requested. 
500.00 C*  
501.00 CSR S001 BEGSR 
502.00 C*  
503.00 CSR  MOV*BLANK $1DL01 
504.00 CSR  MOV*BLANK $1RP01 
505.00 CSR  MOV*BLANK $1RP02 
506.00 CSR  Z-ADD*ZERO #RCOL 
507.00 CSR  Z-ADD*ZERO #RROW 
508.00 CSR  Z-ADD*ZERO #SRNO 
509.00 CSR  MOV*BLANK SFDL01 
510.00 CSR  MOV*BLANK $PMCU 
511.00 CSR  MOV*BLANK SFRP01 
512.00 CSR  MOV*BLANK SFPR02 
513.00 CSR  MOV*BLANK $MCU 
514.00 CSR  MOV*BLANK VDCO 
515.00 CSR  MOVELSVL24M VDL24 
516.00 CSR  MOVE '0' SHIN17 
517.00 C*  
518.00 C* Clear action code only if clear screen action. 
520.00 C*  
521.00 CSR @xAID IPEQ #FLCR 
522.00 CSR  MOV*ALL'0' $RESET 
523.00 CSR  MOV@RESET *IN,41 
524.00 CSR  MOV* ' ' ACTION 1 
525.00 CSR  Z-ADD00000 #SRNO 
526.00 CSR  SETON 31 
527.00 CSR  WRITEINDEXE 89 
528.00 CSR  SETOF 203193 
529.00 CSR  Z-ADD 1  
530.00 CSR  DO $PGSZ 
531.00 CSR  ADD 1  I1 
532.00 CSR  MOV*IN SHIN 
533.00 CSR  WRITEINDEXS 81 
534.00 CSR  END 
535.00 CSR  Z-ADD1 $SVT1 
536.00 CSR  MOV*BLANK $CO 
537.00 CSR  MOV*BLANK $MCU 
538.00 CSR  MOV*BLANK VC0001 
539.00 CSR  END 
540.00 C* .trim-------------------------------------------------------------------
541.00 CSR  ENDO01 ENDSR 
542.00 C***************************************************************************
543.00 C*  
544.00 C* SUBROUTINE S003 – Edit Key 
545.00 C*  
546.00 C* Processing:  1.  Initialize error arrays and subfile. 
547.00 C* 2.  Load inquiry selection. 
548.00 C* 3.  Load subfile information. 
549.00 C* 3.  Monitor for empty subfile. 
550.00 C*  
551.00 C*  
552.00 CSR S003 BEGSR 
553.00 C*  
554.00 C*  
555.00 C* Reset error indicators and arrays. 
556.00 C*  
557.00 CSR  MOV*ALL'0' $RESET39 
558.00 CSR  MOV*BLANK $SBST1 63 
559.00 CSR  MOV@RESET *IN,41 
560.00 CSR  MOV@RESET #MK,2 
561.00 CSR  CLEAR@$ER 
562.00 C*  
563.00 C* Clear the user index to begin with; set flag. 
564.00 C*  trimmed-------------------------------------------------------------------
565.00 CSR  CLEAR@IDX1 
566.00 CSR  MOVE 'Y' $START 1 
567.00 C*  
568.00 C* Load video input field for - Company 
569.00 C*  
570.00 C*  
571.00 CSR  MOVEAVDCO #MN 
572.00 CSR  EXSR CO0012 99 
573.00 C*  
574.00 CSR  Z-ADD$NUMR $WKS 50 
575.00 CSR  MOVE $WKS $1CO 
576.00 CSR  MOVE $WKS VDCO 
577.00 C*  

Clear Data Structure containing record format for User Index
Determine if any entries exist for that company.

Error of trying to delete but not found.

Error of trying to delete but not found.

Initialize subfile indexes.
C***************************************************************************
C*        Copy Common Subroutine – Right Justify Numeric Fields
C***************************************************************************

SUBROUTINE S004 - Load Video Screen Data
C
---------------------------------  

Processing: 1. Move data base information to video screen.
All video screen fields are alpha and therefore numeric information must be
processed through subroutine C0014 to set proper decimals and provide editing for
display on screen.

Date fields must be converted from their internal format of month, day and year or julian to the system format using program X0028.

CSR S004 BEGSR
CSR $998 CASEQ' ' S998
CSR END
If subfile load completed, skip subroutine.
CSR $SEND IFEQ '1'
CSR Z–ADD0 #SFRNO
CSR GOTO END004
CSR END

Save company number for comparison later.
CSR MOVE $1CO $$CO    5

Move to output – company description.
CSR MOVE *BLANKS PS@@
CSR MOVEL$1CO KY@@
CSR CALL 'XS0010'              81
CSR PARM PS@@
CSR PARM DS0010
CSR MOVELCCNAME VC0001

Initialize subfile page control and index.
CSR MOVEL$1CO $@CO  5

Read user index until end or subfile page filled.
CSR SETOF  96
CSR *IN96 DOWEQ'0'
First time through, have already read first record, so skip the index logic. (First time through if $START = ‘Y’)
CSR $START IFEQ 'Y'

CSR $START MOVE ' ' $START
CSR ELSE
Call to User Index to retrieve next record that is greater than current key value.

successive times through, read next "greater" entry.

Load key length, record length, and key with values

Load key length, record length, and key with values

Check error status parameter to see if a record was found.
816.00 CSR END
817.00 C***********************************************************************
818.00 C*
819.00 C* Move to output – Category Code – Cost Center 01
820.00 C*
821.00 CSR MOVE *BLANK #SINBR
822.00 CSR MOVES1RP01 #SINBR
823.00 CSR MOVE T5RP01 #DTYP
824.00 CSR MOVE W5RP01 #EWRD
825.00 CSR MOVE E5RP01 #BC
826.00 CSR MOVE F5RP01 #DSPD
827.00 CSR MOVE G5RP01 #DATD
828.00 CSR MOVE J5RP01 #ALR
829.00 CSR MOVE ' ' #ECOR
830.00 CSR MOVE ' ' #DCOR
831.00 CSR EXSR C00161
832.00 C*
833.00 CSR #ALR ------- -------
834.00 CSR MOVEL$1RP01 #SINBR
835.00 CSR ELSE
836.00 CSR MOVE #SINBR SFRP01
837.00 CSR END
838.00 C***********************************************************************
839.00 C*
840.00 C* Move to output – Category Code – Cost Center 02
841.00 C*
842.00 CSR MOVE *BLANK #SINBR
843.00 CSR MOVELS1RP02 #SINBR
844.00 CSR MOVE T5RP02 #DTYP
845.00 CSR MOVE W5RP02 #EWRD
846.00 CSR MOVE E5RP02 #BC
847.00 CSR MOVE F5RP02 #DSPD
848.00 CSR MOVE G5RP02 #DATD
849.00 CSR MOVE J5RP01 #ALR
850.00 CSR MOVE ' ' #ECOR
851.00 CSR MOVE ' ' #DCOR
852.00 CSR EXSR C00161
853.00 C*
854.00 CSR #ALR ------- -------
855.00 CSR MOVEL$1RP02 #SINBR SFRP02
856.00 CSR ELSE
857.00 CSR MOVE #SINBR SFRP02
858.00 CSR END
859.00 C***********************************************************************
860.00 C*
861.00 C* Move to output – Cost Center
862.00 C*
863.00 CSR MOVE *BLANK #SINBR
864.00 CSR MOVEMS1MCU #SINBR
865.00 CSR MOVE T5MCU #DTYP
866.00 CSR MOVE W5MCU #EWRD
867.00 CSR MOVE E5MCU #BC
868.00 CSR MOVE F5MCU #DSPD
869.00 CSR MOVE G5MCU #DATD
870.00 CSR MOVE J5MCU #ALR
871.00 CSR MOVE ' ' #ECOR
872.00 CSR MOVE ' ' #DCOR
873.00 CSR EXSR C00161
874.00 C*
875.00 CSR #ALR ------- -------
876.00 CSR MOVEL$1MCU #SINBR SHMCU
877.00 CSR ELSE
878.00 CSR MOVE #SINBR SHMCU
879.00 CSR END
880.00 C***********************************************************************
881.00 C* Increment subfile page control and index.
882.00 C*
883.00 CSR ADD 1 $PG
884.00 CSR ADD 1 11
885.00 CSR ADD 1 $PG
886.00 CSR ADD 1 11
887.00 C*
888.00 C* If subfile page display not set, set subfile page display.
889.00 C*
890.00 CSR #SPRNO IFEO 'L'
891.00 CSR ZADD11 #SPRNO
892.00 CSR END
893.00 C*
894.00 C* Write subfile record and save current subfile index.
895.00 C*
896.00 CSR MOVESA*IN SHIN
897.00 CSR WRITEXINDEXS 99
898.00 CSR Z-ADD11 SSVI1
899.00 C* If subfile page loaded, drop out of subroutine.
900.00 C*  
901.00 C*  
902.00 CSR $PG CABELQ$PGSZ END004
903.00 C*  
904.00 CSR END  
905.00 CSR END
906.00 C*  
907.00 CSR END004 ENDSR
908.00 C************************************************************************
909.00 C*  
910.00 C* Copy Common Subroutine - Format Numeric Fields for Output with Override
911.00 C*
912.00 C/COPY JDECPY,C00161
913.00 C************************************************************************
914.00 C*  
915.00 C* SUBROUTINE S005 - Validate and update input data.
916.00 C*  
917.00 C*  
918.00 C* Processing: 1. Validate all video input. Numeric data
919.00 C* must be processed thru subroutines C0012 & C0015 to be converted to internal numeric
920.00 C*
921.00 C* representation (15 digits 0 decimals).
922.00 C*
923.00 C* Date fields must be converted from system
924.00 C* format to their internal format of month,
925.00 C* day and year or julian using program X0028.
926.00 C* 2. Update data fields from input and process
927.00 C* subfile transaction.
928.00 CSR S005 BEGSR
929.00 C*  
930.00 C* If not addition or change, bypass subroutine
931.00 C*
932.00 CSR *IN21 IFEQ '0'
933.00 CSR *IN22 ANDEQ '0'
934.00 CSR GOTO END005
935.00 C*  
936.00 CSR END
937.00 C*  
938.00 C* Process all subfile transactions.
939.00 C*  
940.00 CSR MOVE ' ' $WRT 1
941.00 CSR Z-ADD1 S$IX 70
942.00 CSR SETOF 9699
943.00 CSR *IN96 DOWEQ '0'
944.00 CSR *IN99 ANDEQ '0'
945.00 CSR GOTO END005
946.00 CSR S$IX ANDLE$SVI1
947.00 CSR MOVEA$RESET *IN,41
948.00 CSR *IN96 IFEQ '0'
949.00 CSR *IN99 ANDEQ '0'
950.00 CSR *IN99 ANDEQ '0'
951.00 C*  
952.00 C* Load video input field for - Cost Center
953.00 C*  
954.00 CSR MOVEASHMCU @FI
955.00 CSR EXSR C0042
956.00 C*  
957.00 CSR MOVE #RADJ $1MCU
958.00 C*  
959.00 C* Determine if prior record existed in user index.
960.00 C*  
961.00 C*  
962.00 CSR Z-ADD1KEYL PSDKYL
963.00 CSR Z-ADD1KEYL PSDKYL
964.00 CSR MOVELSIXIDX1 PSDKYL
965.00 CSR CALL 'X00IDX'
966.00 C*  
967.00 C*  
968.00 CSR PARM $1IDX Idx Name/Lib
969.00 CSR PARM '1' PSDKTY Action Code
970.00 CSR PARM 'EQ' PSDKTY Action Rule
971.00 CSR PARM PSDKYL Key Length
972.00 CSR PARM PSDKYL Key Fields
973.00 CSR PARM PSDKYL Entry Length
974.00 CSR PARM PSDKYL Entry
975.00 CSR PARM PSDKYL Error Status
976.00 C*  
977.00 C* If no data and prior record existed, delete old record.
978.00 C*  
979.00 C*  

Release A7.3 (June 1996)  4–95
Check error status parameter to see if record has found

Deletion of record from User Index

```
980.00 CSR SFMCU IFNE *BLANK
981.00 CSR SFMCU ANDEQ *BLANK
982.00 CSR CSAR CALL 'X001IDX'
983.00 CSR PARM $1IDX Idx Name/Lib
984.00 CSR PARM 'D' PSALCN Action
985.00 CSR PARM 'EQ' PSRULE Action Rule
986.00 CSR PARM $PSMY Key Length
987.00 CSR PARM $PSMY Entry Length
988.00 CSR PARM PSSTSP Entry Status
989.00 CSR PARM PSSTSP Error Status
990.00 CSR END
991.00 CSR END
992.00 CSR END
993.00 CSR END
994.00 CSR END
995.00 CSR END
996.00 CSR END
997.00 CSR END
998.00 CSR SFMCU IFNE *BLANK
999.00 CSR END
1000.00 CSR END
1001.00 CSR END
1002.00 CSR END
1003.00 CSR END
1004.00 CSR END
1005.00 CSR END
1006.00 CSR END
1007.00 CSR END
1008.00 CSR END
1009.00 CSR END
1010.00 CSR END
1011.00 CSR END
1012.00 CSR END
1013.00 CSR END
1014.00 CSR END
1015.00 CSR END
1016.00 CSR END
1017.00 CSR END
1018.00 CSR END
1019.00 CSR END
1020.00 CSR END
1021.00 CSR END
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1086.00 CSR END
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1097.00 CSR END
1098.00 CSR END
1099.00 CSR END
1100.00 CSR END
1101.00 CSR END
1102.00 CSR END
1103.00 CSR END
1104.00 CSR END
1105.00 CSR END
1106.00 CSR END
1107.00 CSR END
1108.00 CSR END
1109.00 CSR END
1110.00 CSR END
1111.00 CSR END
1112.00 CSR END
1113.00 CSR END
1114.00 CSR END
1115.00 CSR END
1116.00 CSR END
1117.00 CSR END
1118.00 CSR END
1119.00 CSR END
1120.00 CSR END
1121.00 CSR END
1122.00 CSR END
1123.00 CSR END
1124.00 CSR END
1125.00 CSR END
1126.00 CSR END
1127.00 CSR END
1128.00 CSR END
1129.00 CSR END
1130.00 CSR END
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1159.00 CSR END
1160.00 CSR END
1161.00 CSR END
1162.00 CSR END
1163.00 CSR END
```

Process only non-blank records.

```
980.00 CSR SFMCU IFNE *BLANK
981.00 CSR SFMCU ANDEQ *BLANK
982.00 CSR CSAR CALL 'X001IDX'
983.00 CSR PARM $1IDX Idx Name/Lib
984.00 CSR PARM 'D' PSALCN Action
985.00 CSR PARM 'EQ' PSRULE Action Rule
986.00 CSR PARM $PSMY Key Length
987.00 CSR PARM $PSMY Entry Length
988.00 CSR PARM PSSTSP Entry Status
989.00 CSR PARM PSSTSP Error Status
990.00 CSR END
991.00 CSR END
992.00 CSR END
993.00 CSR END
994.00 CSR END
995.00 CSR END
996.00 CSR END
997.00 CSR END
998.00 CSR SFMCU IFNE *BLANK
999.00 CSR END
1000.00 CSR END
1001.00 CSR END
1002.00 CSR END
1003.00 CSR END
1004.00 CSR END
1005.00 CSR END
1006.00 CSR END
1007.00 CSR END
1008.00 CSR END
1009.00 CSR END
1010.00 CSR END
1011.00 CSR END
1012.00 CSR END
1013.00 CSR END
1014.00 CSR END
1015.00 CSR END
1016.00 CSR END
1017.00 CSR END
1018.00 CSR END
1019.00 CSR END
1020.00 CSR END
1021.00 CSR END
1022.00 CSR END
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1058.00 CSR END
1059.00 CSR END
1060.00 CSR END
1061.00 CSR END
1062.00 CSR END
1063.00 CSR END
```
**User Indexes**

1064.00 CSR SETON 4393
1065.00 CSR END
1066.00 CSR END
1067.00 CSR END
1068.00 CSR END
1069.00 CSR END
1070.00 CSR END
1071.00 CSR LARP01 IFNE *BLANK
1072.00 CSR $1RP01 MOVE '1' $ERTST
1073.00 CSR LARP01 IFOR LARP01
1074.00 CSR $1RP01 ANDLEUXRP01
1075.00 CSR MOVE ' ' $ERTST
1076.00 CSR END
1077.00 CSR $ERTST IFGE LARP01
1078.00 CSR MOVE '1' @MK,07
1079.00 CSR SETON 4393
1080.00 CSR END
1081.00 CSR END
1082.00 CSR END
1083.00 CSR END
1084.00 CSR END
1085.00 CSR RARP01 IFNE *BLANK
1086.00 CSR CLEAR100050
1087.00 CSR MOVELSRP01 $1RP01
1088.00 CSR MOVELS$1RP01 #USY
1089.00 CSR MOVE RARP01 #URT
1090.00 CSR MOVE $1RP01 #UKY
1091.00 CSR CALL 'X0005 ' 81
1092.00 CSR PARM I0005U
1093.00 CSR #UERR IFEQ '1'
1094.00 CSR SETON 4393
1095.00 CSR END
1096.00 CSR END
1097.00 CSR END
1098.00 CSR END
1099.00 CSR END
1100.00 CSR END
1101.00 CSR END
1102.00 CSR END
1103.00 CSR MOVELSRP02 $1RP02
1104.00 CSR END
1105.00 CSR END
1106.00 CSR END
1107.00 CSR $1RP02 IFREQ *BLANK
1108.00 CSR DSRP02 IFNE *BLANK
1109.00 CSR MOVESRP02 #40
1110.00 CSR MOVESA40 $1RP02
1111.00 CSR $40,1 IFREQ ' ' $ERTST
1112.00 CSR $40,1 MOVE ' ' $40,1
1113.00 CSR Z-ADD2 #M
1114.00 CSR DOWLEA40
1115.00 CSR DOWLEA40 #M
1116.00 CSR MOVELS $40,#M
1117.00 CSR END
1118.00 CSR ADD 1 #M
1119.00 CSR END
1120.00 CSR MOVESA40,2 $1RP02
1121.00 CSR END
1122.00 CSR END
1123.00 CSR END
1124.00 CSR END
1125.00 CSR END
1126.00 CSR END
1127.00 CSR A$RP02 IFNE *BLANK
1128.00 CSR MOVESA$RP02 #40
1129.00 CSR MOVE *HIVAL #AV
1130.00 CSR EASR C997
1131.00 CSR END
1132.00 CSR MOVE ' ' $ERTST
1133.00 CSR MOVE *BLANK SWRK10 10
1134.00 CSR MOVES$1RP02 SWRK10
1135.00 CSR $AV,1 IFNE *HIVAL
1136.00 CSR SWRK10 LOKUP$AV
1137.00 CSR $INAV IFREQ '0'
1138.00 CSR MOVE '1' $ERTST
1139.00 CSR END
1140.00 CSR $ERTST IFREQ '1'
1141.00 CSR MOVE '1' @MK,07
1142.00 CSR SETON 4493
1143.00 CSR END
1144.00 CSR END
1145.00 CSR END
Advanced Programming Concepts and Skills

1146.00  C*  Edit upper and lower range – Category Code – Cost Center 02
1147.00  C*  Edit upper and lower range – Category Code – Cost Center 02
1148.00  C*
1149.00  CSBR  LaRP02  IFNE 'BLANK'
1150.00  CSBR  MOVE '1'  $ERTST
1151.00  CSBR  $1RP02  IFNE LaRP02
1152.00  CSBR  $1RP02  ANDLEU@RP02
1153.00  CSBR  MOVE  $ERTST
1154.00  CSBR  END
1155.00  CSBR  $ERTST  IFEQ '1'
1156.00  CSBR  MOVE '1'
1157.00  cSR  SETON  4493
1158.00  cSR  END
1159.00  cSR  END
1160.00  C*
1161.00  C*  Edit from descriptive titles – Category Code – Cost Center 02
1162.00  C*
1163.00  CSBR  RaRP02  IFNE 'BLANK'
1164.00  CSBR  CLEAR1005U
1165.00  CSBR  MOVE  ' '  $ERTST
1166.00  CSBR  MOVELS@RP02  #USY
1167.00  CSBR  MOVE RaRP02  #URT
1168.00  CSBR  MOVE $1RP02  #URY
1169.00  CSBR  CALL 'X0005'  81
1170.00  C*  ---- -----
1171.00  CSBR  PARM  IO005U
1172.00  CSBR  #UERR  IFEQ '1'
1173.00  CSBR  MOVE '1'  #MK, 09
1174.00  CSBR  SETON  4493
1175.00  CSBR  END
1176.00  CSBR  END
1177.00  C*  -----------------------------------------------
1178.00  C*  If no errors, update user index.
1179.00  C*  -----------------------------------------------
1180.00  C*  *IN93  IFEQ '0'
1181.00  C*  -----------------------------------------------
1182.00  CSBR  2-ADD$1KEYL  PSKEYL
1183.00  CSBR  2-ADD$1RECL  PSRECL
1184.00  CSBR  MOVELSIDX1  PSKY
1185.00  CSBR  MOVELSIDX1  PSRC
1186.00  CSBR  PSSTS  IFEQ '0'  It Existed
1187.00  CSBR  $1MCU  ANDEQSHMCU  and same CC
1188.00  CSBR  CALL 'X00IDX'
1189.00  CSBR  PARM I0005U
1190.00  CSBR  PARM '1'  PSACTN Action Code
1191.00  CSBR  PARM 'EQ'  PSRULE Action Rule
1192.00  CSBR  PARM PSKEYL Key Length
1193.00  CSBR  PARM PSKY Key Fields
1194.00  CSBR  PARM PSRECL Recd Length
1195.00  CSBR  PARM PSREC Record
1196.00  CSBR  PARM PSSTS Status
1197.00  CSBR  ELSE
1198.00  CSBR  CALL 'X00IDX'
1199.00  CSBR  PARM $1IDX Idx Name/Lib
1200.00  CSBR  PARM 'A'  PSACTN Action Code
1201.00  CSBR  PARM PSRULE Action Rule
1202.00  CSBR  PARM PSKEYL Key Length
1203.00  CSBR  PARM PSKEYL Key Fields
1204.00  CSBR  PARM PSRECL Entry Length
1205.00  CSBR  PARM PSREC Entry
1206.00  CSBR  PARM PSSTS Error Status
1207.00  CSBR  ELSE
1208.00  CSBR  CALL 'X00IDX'
1209.00  CSBR  PARM $1IDX Idx Name/Lib
1210.00  CSBR  PARM 'I'  PSACTN Action Code
1211.00  CSBR  PARM PSRULE Action Rule
1212.00  CSBR  PARM PSKEYL Key Length
1213.00  CSBR  PARM PSKEYL Key Fields
1214.00  CSBR  PARM PSRECL Entry Length
1215.00  CSBR  PARM PSREC Entry
1216.00  CSBR  PARM PSSTS Error Status
1217.00  CSBR  ELSE
1218.00  CSBR  CALL 'X00IDX'
1219.00  CSBR  PARM $1IDX Idx Name/Lib
1220.00  CSBR  PARM 'A'  PSACTN Action Code
1221.00  CSBR  PARM PSRULE Action Rule
1222.00  CSBR  PARM PSKEYL Key Length
1223.00  CSBR  PARM PSKEYL Key Fields
1224.00  CSBR  PARM PSRECL Entry Length
1225.00  CSBR  PARM PSREC Entry
1226.00  CSBR  PARM PSSTS Error Status
1227.00  CSBR  ELSE
1228.00  CSBR  CALL 'X00IDX'
1229.00  CSBR  PARM $1IDX Idx Name/Lib
1230.00  CSBR  PARM 'I'  PSACTN Action Code
1231.00  CSBR  PARM PSRULE Action Rule
1232.00  CSBR  PARM PSKEYL Key Length
1233.00  CSBR  PARM PSKEYL Key Fields
1234.00  CSBR  PARM PSRECL Entry Length
1235.00  CSBR  PARM PSREC Entry
1236.00  CSBR  PARM PSSTS Error Status

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1231.00 C* MOVE ‘1’ $WRT
1232.00 CSR END
1234.00 CSR END
1235.00 CSR END
1236.00 C*
1237.00 CSR *IN93 IFEQ ’1’
1238.00 CSR #SFRNO ANDEQ*ZERO
1239.00 CSR Z–ADDI1 #SFRNO
1240.00 CSR END
1241.00 C*
1242.00 CSR END
1243.00 C*
1244.00 C* If errors, set subfile next change flag.
1245.00 C*
1246.00 CSR *IN93 IFEQ ’1’
1247.00 CSR SETON 32
1248.00 CSR END
1249.00 C*
1250.00 C* Update all subfile records read.
1251.00 C*
1252.00 CSR MOVEA*IN SHIN
1253.00 CSR UPDATINDEXS 81
1254.00 CSR SETOF 32
1255.00 C*
1256.00 C* Read next subfile record.
1257.00 C*
1258.00 CSR ADD 1 $$IX
1259.00 CSR END
1260.00 CSR END
1261.00 C*
1262.00 C* If error detected on a add, Change Action Code to ‘C’
1263.00 C*
1264.00 CSR *IN93 IFEQ ’1’
1265.00 CSR $WRT ANDEQ’1’
1266.00 CSR MOVE ‘C’ ACTION
1267.00 CSR END
1268.00 C*
1269.00 CSR ENDSR
1270.00 C***************************************************************
1271.00 C*
1272.00 C* Copy Common Subroutine – Right Adjust Alphanumeric Field
1273.00 C*
1274.00 C/COPY/JDECPY,C0042
1275.00 C***************************************************************
1276.00 C*
1277.00 C* Copy Common Subroutine – Build Allowed Values Work Array
1278.00 C*
1279.00 C/COPY/JDECPY,C997
1280.00 C***************************************************************
1281.00 C*
1282.00 C* SUBROUTINE S010 – Update Data Base
1283.00 C*-----------------------------------------------
1284.00 C*
1285.00 C* Processing: 1. Update data base file for delete action.
1286.00 C*
1287.00 CSR S010 BBSSR
1288.00 C* ---- ----
1289.00 C*
1290.00 C* If delete action, delete all records by primary partial key.
1291.00 C*
1292.00 CSR *IN23 IFEQ ’1’
1293.00 CSR Z–ADD$1KEY2 PSKYL
1294.00 CSR Z–ADD$1RECL PSRC1L
1295.00 C*
1296.00 CSR CALL ’X00IDX’
1297.00 C*
1298.00 CSR PARM $1IDX Idx Name/Lib
1299.00 CSR PARM ’D’ PSACTN Action
1300.00 CSR PARM ’EQ’ PSRULE Action Rule
1301.00 CSR PARM PSKYL Key Length
1302.00 CSR PARM PSKY Key Fields
1303.00 CSR PARM PSRC1L Entry Length
1304.00 CSR PARM PSRC Entry
1305.00 CSR PARM PSSTS Error Status
1306.00 CSR END
1307.00 C*
1308.00 C* Clear data field for next transaction
1309.00 C*
1310.00 CSR MOVE #PCLR @AID
1311.00 CSR EXSR S001
1312.00 C* ---- ----
1313.00 CSR ENDSR
**SUBROUTINE S998 - Load dictionary parameters.**

1314.00 C*---------------------------------------------------------------
1315.00 C*
1316.00 C*           Dictionary parameters for – Description Ol
1317.00 C*
1318.00 C*
1319.00 CSR         S998 BEGSR
1320.00 C*          ---- -----
1321.00 C*          ----
1322.00 C*          ----
1323.00 C*          ----
1324.00 C*          ----
1325.00 CSR         MOVE *BLANK    FRDTAI
1326.00 CSR         MOVE'DL01'    FRDTAI
1327.00 CSR         CALL 'X9800E'  81
1328.00 C*          ----        ----
1329.00 CSR         PARM 19800E
1330.00 CSR         FRERR '0'
1331.00 CSR         MOVE FRDSCR B@DL01  40
1332.00 CSR         MOVE FRDTAT T@DL01  1
1333.00 CSR         MOVE FRREC  B@DL01  1
1334.00 CSR         MOVE DRDTAS C@DL01  40
1335.00 CSR         MOVE FRDTAD G@DL01  10
1336.00 CSR         MOVE FRDCDE F@DL01  1
1337.00 CSR         MOVE VHLPRS Y  S@DL01  4
1338.00 CSR         MOVE FRET  R@DL01  2
1339.00 CSR         MOVE FRDVAL D@DL01  40
1340.00 CSR         MOVE FRLR  J@DL01  1
1341.00 CSR         MOVE FRRT  R@DL01  2
1342.00 CSR         MOVE FRVAL A@DL01  40
1343.00 CSR         MOVE FREDWR W@DL01 30
1344.00 CSR         MOVE FRLR  J@DL01  1
1345.00 CSR         MOVE FRRT  R@DL01  2
1346.00 CSR         ZADD1 #A
1347.00 CSR         END
1348.00 CSR         END
1349.00 CSR         END
1350.00 CSR         END
1351.00 CSR         END
1352.00 C*---------------------------------------------------------------
1353.00 C*          ----
1354.00 C*          ----
1355.00 C*          ----
1356.00 CSR         MOVE *BLANK    FRDTAI
1357.00 CSR         MOVE'MCU'    FRDTAI
1358.00 CSR         CALL 'X9800E'  81
1359.00 C*          ----        ----
1360.00 CSR         PARM 19800E
1361.00 CSR         FRERR '0'
1362.00 CSR         MOVE FRDSCR B@MCU  40
1363.00 CSR         MOVE FRDTAT T@MCU  1
1364.00 CSR         MOVE FRREC  B@MCU  1
1365.00 CSR         MOVE DRDTAS C@MCU  40
1366.00 CSR         MOVE FRDTAD G@MCU  10
1367.00 CSR         MOVE VHLPRS Y  S@MCU  4
1368.00 CSR         MOVE FRET  R@MCU  2
1369.00 CSR         MOVE FRDVAL D@MCU  40
1370.00 CSR         MOVE FREDWR W@MCU 30
1371.00 CSR         MOVE FREDWR W@MCU 30
1372.00 CSR         MOVE FRRT  R@MCU  2
1373.00 CSR         MOVE FRRT  R@MCU  2
1374.00 CSR         MOVE FREDWR W@MCU 30
1375.00 CSR         MOVE FRRT  R@MCU  2
1376.00 CSR         MOVE FRRT  R@MCU  2
1377.00 CSR         ZADD1 #A
1378.00 CSR         END
1379.00 CSR         END
1380.00 CSR         END
1381.00 CSR         END
1382.00 CSR         END
1383.00 C*---------------------------------------------------------------
1384.00 C*          ----
1385.00 C*          ----
1386.00 C*          ----
1387.00 CSR         MOVE *BLANK    FRDTAI
1388.00 CSR         MOVE'RP01'    FRDTAI
1389.00 CSR         CALL 'X9800E'  81
1390.00 C*          ----        ----
1391.00 CSR         PARM 19800E
1392.00 CSR         FRERR '0'
1393.00 CSR         MOVE FRDSCR B@RP01  40
1394.00 CSR         MOVE FRDTAT T@RP01  1
1395.00 CSR         MOVE FRREC  B@RP01  1
1396.00 CSR MOVE FRDTAS G@RP01 40
1397.00 CSR MOVE FRDTAD G@RP01 10
1398.00 CSR MOVE FRDCRC F@RP01 1
1399.00 CSR MOVEFRPSY S@RP01 4
1400.00 CSR MOVE FRPSY R@RP01 2
1401.00 CSR MOVE FRDIAS D@RP01 40
1402.00 CSR MOVE FRIVAL A@RP01 40
1403.00 CSR MOVE FRLVAL L@RP01 40
1404.00 CSR MOVE FRLVAL U@RP01 40
1405.00 CSR MOVE FREDWR W@RP01 40
1406.00 CSR MOVE FRLQ J@RP01 1
1407.00 CSR MOVE FRLNNIX N@RP01 20
1408.00 CSR Z–ADD1 #@RP01 110
1409.00 CSR MOVE FREDWR W@RP01 #A
1410.00 CSR DO #A
1411.00 CSR MULT 10 #@RP01
1412.00 CSR END
1413.00 CSR END
1414.00 CSR
1415.00 C* Dictionary parameters for - Category Code - Cost Center 02
1416.00 CSR MOVE *BLANK FRDTAI
1419.00 CSR MOVE’RP02’ FRDTAI
1420.00 CSR CALL ‘X9800E’ 81
1421.00 CSR
1422.00 CSR PARM I9800E
1423.00 CSR FRERR IFREQ ‘0’
1424.00 CSR MOVE FRDSCR B@RP02 40
1425.00 CSR MOVE FRDTAD T@RP02 1
1426.00 CSR MOVE FRPSY S@RP02 1
1427.00 CSR MOVE FRDTAS C@RP02 40
1428.00 CSR MOVE FRIVAL A@RP02 40
1429.00 CSR MOVE FREDWR W@RP02 40
1430.00 CSR MOVE FRLVAL L@RP02 40
1431.00 CSR MOVE FRLQ J@RP02 1
1432.00 CSR MOVE FRLNNIX N@RP02 20
1433.00 CSR Z–ADD1 #@RP02 110
1434.00 CSR MOVE FREDWR W@RP02 #A
1435.00 CSR DO #A
1436.00 CSR MULT 10 #@RP02
1437.00 CSR END
1438.00 CSR END
1441.00 CSR
1442.00 CSR
1443.00 CSR
1444.00 CSR
1445.00 CSR
1446.00 CSR
1447.00 Dictionary parameters for - Company
1448.00 CSR
1449.00 CSR MOVE *BLANK FRDTAI
1450.00 CSR MOVE’CO’ FRDTAI
1451.00 CSR CALL ‘X9800E’ 81
1452.00 CSR
1453.00 CSR PARM I9800E
1454.00 CSR FRERR IFREQ ‘0’
1455.00 CSR MOVE FRDSCR B@CO 40
1456.00 CSR MOVE FRDTAD T@CO 1
1457.00 CSR MOVE FRPSY S@CO 1
1458.00 CSR MOVE FRDTAS C@CO 40
1459.00 CSR MOVE FRIVAL A@CO 40
1460.00 CSR MOVE FREDWR W@CO 40
1461.00 CSR MOVE FRLNNIX N@CO 40
1462.00 CSR MOVE FREDWR W@CO 40
1463.00 CSR MOVE FREDWR W@CO 2
1464.00 CSR MOVE ERVAL A@CO 40
1465.00 CSR MOVE FRLVAL L@CO 40
1466.00 CSR MOVE FREDWR W@CO 40
1467.00 CSR MOVE FRLQ J@CO 1
1468.00 CSR MOVE FRLNNIX N@CO 20
1469.00 CSR
1470.00 CSR Z–ADD1 #@CO 110
1471.00 CSR MOVE FRCO
1472.00 CSR DO #A
1473.00 CSR MULT 10 #@CO
1474.00 CSR END
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Advanced Programming Concepts and Skills

Create or clear the Demonstration User Index

Check to see if User Index already exists

Create User Index if User Index did not already exist

Check error status parameter to see if User Index exists

Load key length, record length, and key to clear User Index if it already exists

Delete all records from User Index

Set subroutine execution flag.

SUBROUTINE S999 - Housekeeping

Processing: 1. Load video screen text.
2. Retrieve screen title data area, test for unauthorized access, center video title and move to video screen.
3. Initialize key list.
4. Load roll keys.
5. Passed parameters.
7. Initialize subfile display.

Required program parameters.

... No Parameters passed
User Indexes

1557.00 C* Test for auto inquiry function.
1558.00 C*
1559.00 CSR SAuto IFNE *BLANK
1560.00 CSR MOVE '1' SAuto 1
1561.00 CSR END
1562.00 C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1563.00 C*
1564.00 C* Load video screen text.
1565.00 C*
1566.00 CSR MOVEL@FILE PSKEY 10
1567.00 CSR Z–ADD006 PSVTX# 30
1568.00 C/COPY JDRCPY,C00SC
1569.00 C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1570.00 C*
1571.00 C* Load error messages array.
1572.00 C*
1573.00 CSR MOVE '0001' EMK,01 Inv Action
1574.00 CSR MOVE '0002' EMK,02 Inv Key
1575.00 CSR MOVE '0003' EMK,03 Inv Blanks
1576.00 CSR MOVE '0004' EMK,04 Inv Date
1577.00 CSR MOVE '0005' EMK,05 Inv Next Nbr
1578.00 CSR MOVE '0007' EMK,06 In Use
1579.00 CSR MOVE '0025' EMK,07 Inv Values
1580.00 CSR MOVE '0026' EMK,08 Inv MCU
1581.00 CSR MOVE '0027' EMK,09 Inv Desc Ttl
1582.00 C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1583.00 C*
1584.00 C* Load invalid action code array.
1585.00 C*
1586.00 CSR MOVEA ' @NAC
1587.00 C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1588.00 C*
1589.00 C* Initialize subfile display.
1590.00 C*
1591.00 CSR Z–ADD0 I1
1592.00 CSR Z–ADD15 $PGSZ 30
1593.00 CSR DO $PGSZ
1594.00 CSR ADD 1 I1
1595.00 CSR MOVEA'IN SHIN
1596.00 CSR WRITEINDEXS 99
1597.00 CSR END
1598.00 CSR Z–ADD1 $SVI1
1599.00 C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1600.00 C*
1601.00 C* Load system date.
1602.00 C*
1603.00 CSR TIME $WRK12 120
1604.00 CSR MOVE $WRK12 $EDT 60
1605.00 C*––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––––
1606.00 CSR END999 ENSR

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Exercises
See the exercises for this chapter.
File Servers

About File Servers

File servers (sometimes called I/O servers) allow you to enhance the processing time of your program. In addition, they ease the maintenance of your programs by making your system more modular. There should be no reason to bypass the use of a server. Eventually, every program should perform database functions using either a file server or a functional server. Note that all logical files are accessed through servers by their based-on file. Embedded in one server, there may be many access paths available.

To understand File Servers you should know:

What are file servers?
What are the advantages of using them?
How do they function?

What is a File Server?

A file server, or I/O server, is:

A server that performs all RPG database operation codes.

This type of server has no effect on program logic, but it isolates the actual database from the application program. Once you implement a file server into a program, the file specification is no longer required.

Types of File Servers

There are three types of file servers you can use:

XS_____Input-Only/Caching Servers

They should be used when you would otherwise use a simple CHAIN operation for input only. You may request descriptions only, or the entire record. They provide caching logic to decrease physical I/O for duplicate requests.

XF_____Input/Output File Servers
They will allow you to replace all RPG database operation codes for a given file with program calls. They can read, chain, setll, etc. to a file.

X_____Special Scrub & Edit Servers

They can accept the cost center or account numbers in any valid data entry or file format, convert them to any format, validate the existence of the master record, and optionally pass the master record back to the calling program.

What are the Advantages of Using a File Server?

Minimizing maintenance of your software

The ability to change a physical file without having to make changes to application programs that use the file, or even having to recompile them

Using versions in future releases to allowing programs from a previous release to run against a changed database

The transition from an old database to a new database will be smoother. Instead of applying all new programs, you will only have to apply a new set of file servers.

Ability to implement one file server at a time without affecting the rest of your system

What are the Disadvantages of Using a File Server?

A file server is minutely slower because you are performing an external call to the server from your program.

File server programs tend to be large.

File servers are designed to perform all database functions that can be performed directly.
How Does a File Server Function?

A file server performs all the interfaces between a program and file. First you will load the control parameters, which contain information about the record you are retrieving. The file server converts the control parameters and retrieve a record back to the program.

If you plan on using any of the file server programs and you are asking them to return the database record, you must use the record image /COPY member that the corresponding I/O server uses. The /COPY member has the following naming convention:

I(file name) (release level).

For example: The copy member for the F0101 record image should appear as:

I/COPY JDECPY, I010171

Some technical file servers (X9800E, X0005) have a /COPY member with the naming convention:

I(file name)(special character)

I/COPY JDECPY, I0005U

A file server is called with two parameters:

For example: CALL ‘XF0101’ 81

- - - - - - - - - -

PARM PS@@1
PARM I0101

<table>
<thead>
<tr>
<th>PARM</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PS@@1</td>
<td>Contains all of the control parameters. It is contained in copy module I00XFSRV, and it is common to all file servers.</td>
</tr>
<tr>
<td>I(file name)</td>
<td>Contains the record image for updates and writes specific for each I/O server. It is an exact duplicate of the record image. It is contained in the copy module I(file name) (release level).</td>
</tr>
</tbody>
</table>
What Are Control Parameters?

The parameter PS@@1 contains all the control parameters for the file server. All control parameters, except the format name, are cleared every time the server returns control to the calling program. You must set the parameter values every time the server is called unless you are satisfied with the default values.

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>@@ACCS (1)</td>
<td>The type of access to the file. The valid values are K for Keyed access (default), R for relative record number access and S for sequential access (DREAM Writer).</td>
</tr>
<tr>
<td>@@OPER (10)</td>
<td>The operation to be performed to the file. The valid values are presented below:</td>
</tr>
<tr>
<td></td>
<td>Operation</td>
</tr>
<tr>
<td></td>
<td>CHAIN</td>
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<tr>
<td></td>
<td>CLOSE</td>
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<td>DELET</td>
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<td>OPEN</td>
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<td>READ</td>
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<td>REDPE</td>
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<td>SETGT</td>
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<td>SETLV</td>
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<td>UPDAT</td>
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<td>UPDATC</td>
</tr>
<tr>
<td></td>
<td>WRITE</td>
</tr>
<tr>
<td></td>
<td>UNLCK</td>
</tr>
<tr>
<td>@@LOCK (1)</td>
<td>Whether you do or do not want to lock the record. The valid values are Y to lock the record (default) or N to not lock the record.</td>
</tr>
<tr>
<td></td>
<td>Note: This parameter is only valid for chain and read operations, and is ignored for all other operations. You should set it to N when reading records not to be updated.</td>
</tr>
<tr>
<td>PARM (Length)</td>
<td>Explanation</td>
</tr>
<tr>
<td>--------------</td>
<td>-------------</td>
</tr>
</tbody>
</table>
| @@CHGR (1)   | Servers allow records to be read without lock and then be updated (UPDATC). In this situation, the record will be re-read before it is updated and if it has changed since it was last read, action will have to be taken. This parameter determines what action will be. The valid values are:  
  N— Do not update the record. A return code (RC) is returned and it comes up to the program to determine what action to take. (default)  
  O— Overlay the changed record with the values you are currently updating. This will cause the changes made by the other user to be lost.  
  W— Call the Changed Record Window (P0000U) that will prompt you for what action to take. Use this option with interactive programs only. |
| @@KLST (10)  | The key list that will be used for access. The calling program does not specify a logical file so that the application program is isolated from any database changes. A value must be specified unless you are accessing the file by relative record number or sequentially (@@ACCS = R or S).  
  Note: The server maintains status information for each access path, so multiple paths can be accessed through the server in one program. The @@KLST parameter determines which access path is affected by the current call to the server. |
| @@KNUM (5,0) | Specifies how many key fields in the list will be used for the current operation. This allows you to perform a read equal by a partial key. The valid values are 1 through the number of fields in the key, and blank for operations not requiring a key. |
| @@FMT (10)   | Specifies the release level the program is expecting. This field does not get cleared upon returning from the server, so it can be set once in S999. |
| @@#RRN (9,0) | The relative record number for RRN access. |
| I (file name) | Record image for updates and writes. This parameter is optional for OPEN, CLOSE, DELET, SETHV, SETLV, and UNLCK operations. |

Access paths are opened automatically when the first operation is performed. Therefore, it is not necessary to call the server with the OPEN operation.

A server normally remains active as long as the calling program is active. If you know you will need a server for only a limited period of time and do not want it taking up space in the PAG, you can call the server the @@OPER parameter blank, this causes the server to return and end.
What Are Returned Parameters?

When the file server returns the record to the program, there are several parameters associated with it.

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
</table>
| @@IOR         | The I/O return code. The possible values are:  
|               | blank – No errors  
|               | NF – Record not found  
|               | NE – Not equal for a READE operation  
|               | EOF – End of file  
|               | EQ – Equal for a SETLL operation  
|               | BOF – Beginning of file  
|               | RL – Record Locked, could not read  
|               | RC – Record changed  
|               | YES – Record found  
|               | NO – Record not found  
|               | ERR – Error, check error fields for explanation |
| @@ERR (10)    | Short description of the cause of the problem (invalid, reclock, error, required, deleted, chgrec). |
| @@ERRS (10)   | The subject causing the error. The value could be a parameter (KLST), an operation (OPEN), or a file name (Fxxxx). Used in combination with @@ERR gives a good idea of what happened. The application program will generally only use @@IOR. @@ERR and @@ERRS are most useful for debugging purposes. |
| @@#RRN (9,0)  | Returns the relative record number of the record just read (both input and output). |
| I (filename)   | Returns an exact duplicate of the record image (both input and output). |
Implementing a File Server

The following are generally the steps needed to set up a file server in a program. Some programs may differ.

1. Remove F–spec line for file being accessed through the server, and replace it with a comment mentioning access through the server.

2. Add clear statement in S999 (CLEAR PS@1). You may optionally set @@FMT to ‘A71’ so it does not have to be set on every call.

3. Copy in I–spec copy module I00XFSRV.

4. Copy in I–spec copy module for the required server, following the naming convention: I[file name] (release level). Example: I010171

5. Code call to server for each database access. Naming convention for server is X[file name]. For example, XF0101 for F0101 and any of its logicals.

   - Load control parameters
   - Load record image if a write or update
   - Call the server
   - Check the return code

6. Remove any open statements and key lists for this file from S999.

7. Remove any output specifications dealing with EXCPT unlock statements at the bottom of the program. The server will handle all of the unlock/lock operations.

When reading sequentially (@@ACCS = S) through the physical file or through a DREAM Writer based–on file that is overridden to the physical, some operations are not available. Do not use: CHAIN, EXIST, READ, REDPE, UPDATC, SETLL, SETGT, SETHV, SETLV. Since UPDATC is not available and you are going to update a record, you need to read with lock.

If the file you are accessing though the server is the DREAM Writer based on file, the Open Query Options on the DREAM Writer Additional Parameters screen need to be changed. Change all of the “Open for xxxxx” parameters to “Y”.

Searching for Key Lists

When converting programs to use the file servers, make note of what logical files are being accessed, and what mode (update/input) and what each of the defined key lists for those access paths represent.
To search for Key Lists

1. Look up the corresponding server key list name using P93KL (fast path, KL).
2. Search for the format name for files that are accessed in the program.
3. Replace each instance of file access code with a call to the server with the correct parameters.
Tips When Using File Servers

When converting a program to use the file servers, always set the @@LOCK parameter to N when reading records through an access path that the program uses to open for input only.

The reason for this is that all access paths are open for update in the server. This can cause record lock problems when a program opens multiple paths into the same file. Correct use of the @@LOCK parameter solves these problems.

Some programs may be doing a CHAIN or EXCPT to unlock a record. Instead of replacing it with a CHAIN through the server, take advantage of the UNLCK operation. Performing an UNLCK on a file that does not have a record locked does not produce an error.

Some programs perform a SETLL to validate that a record exists. The new operation EXIST is provided to handle this function. It returns a YES or NO in return code (@@IOR).

There is only one instance in which a particular file server is active in your job at one time, so if one program calls another program that accesses the file through the same access path, they are actually sharing the same open data path. If it is possible that a call to another program could relocate a file pointer that could mess up the program, it would be a good idea to save the keys and reset the pointer (CHAIN or SETLL) upon returning.
## File Server Examples

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<tr>
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### 1.1 File Server Calls

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**Release A7.3 (June 1996)**
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332.00  CSR        MOVEV 'ABKCY01'  #@KLST 10.11.92
333.00  CSR        MOVEV 'UNLCK'  #@OPER 10.11.92
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337.00  CSR       PARM      10101 10.11.92
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347.00  CSR       PARM      #DG  60 19.01.93
348.00  CSR       PARM      #PN  20 19.01.93
349.00  CSR       PARM      #FY  20 19.01.93
350.00  CSR       PARM      #CTY 20 19.01.93
351.00  CSR       PARM      #EDT  1 19.01.93
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362.00  CSR       PARM '1'  #PMOD 1 19.01.93
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## Commonly Used File Servers

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Functional Servers

About Functional Servers

A functional server allows you to enhance the processing and maintenance of your application programs. Functional servers provide a central location for standard business rules about entering documents, such as vouchers, invoices, and journal entries. These business rules establish the following:

- Data dictionary default values
- Field edits and valid values
- Error processing
- Relationships between fields or applications

To work with functional servers you should understand:

- What functional servers are
- What the advantages of using them are
- How to set up the business rules
- How they function

What Are Functional Servers?

A functional server is:

A server that performs all transaction validation and database updates.

This type of server is designed to relieve application programs from the burden of performing edit and update operations. This functionality is removed from the application program and placed into a server.

A functional server is a called program. The application program calling the server must tell the server what action is to be performed for every transaction. In turn, the functional server will return error messages, record error flags, and record update flags to the application program to use when determining the result of a call to a server.
Functional Servers have the following naming convention:

XT (file name) (server version)

For example: The function server for the F0411 file should appear as:

XT0411Z1

The following diagram depicts the flow of a typical program using a functional server:

What are the Advantages of Using a Functional Server?

Minimizes maintenance and versioning of your software.

Data editing routines and actual file updates can be isolated.

Provide greater flexibility. Multiple programs can use the same functional server.
The transition from an old database to a new database will be smoother. Instead of applying all new programs, you will only have to apply a new set of functional servers.

Ability to implement one functional server at a time without affecting the rest of your system.

What are the Disadvantages of Using a Functional Server?

A functional server is minutely slower because you are performing an external call to the server from your program.

Functional server programs tend to be large.

Setting Up Business Rules for an Entry Program

To set up business rules for an entry program

1. Create a DREAM Writer version for a specific functional server program (for example, XT0411Z1 for voucher entry).
2. Set the processing options within the version according to your company requirements.
3. Specify the version you want the entry program to use in the processing options for that entry program.

You can have all your entry programs use the same DREAM Writer version (and thus, use the same rules) or you can set up different DREAM Writer versions. J.D. Edwards provides DREAM Writer version ZJDE0001 as the default functional server version for your entry programs.

Only the person responsible for system-wide setup should make changes to the functional server version. For more information about how to set up DREAM Writer versions, see the Technical Foundation Guide.

How Does a Functional Server Function?

When a functional server is called, an entire transaction will be processed.

Generally, once a functional server is called, it will receive the data entered by you and load it into a user space.

It will then perform its functionality on the data.

Finally, it will return the requested data back to the calling program via the user space. If any errors occur, they will be loaded into a user index.
Three interfaces are used to communicate with the functional server. They are:

The call parameters
The control fields within each user space line
The error index

**Functional Server Highlights**

Provides all editing for a transaction
Provides field default values
Provides all database updates
Performs inquiry for an entire transaction
Runs interactively or in batch
Supports a multitude of user interfaces

**Basic Accounting Transactions**
In the Financial System there are five basic transactions:

- Journal Entries
- A/P Voucher Entry
- A/P Checks
- A/R Invoice Entry
- A/R Cash Receipts

J.D. Edwards uses one program for each part or transaction of the system.

**Example: Voucher Processing Functional Server**

The following graphic shows the programs that use the voucher processing functional server. J.D. Edwards provides two demo versions of the functional server, ZJDE0001 and ZJDE0002.
Program Example – Traditional Architecture

Each program contains both the User Interface Logic and the Data Integrity Logic. You would access this one program to interface with the database.
User Interface Logic

- Screen format
- Skip to and section
- Fill screen
- Field formatting
- Help functions
- Error message display
- Touch and feel

Data Integrity Logic

- Field editing
- Multi-field editing
- Transaction editing
- Default logic
- Error message selection
- Tax processing
- Currency processing
- Database update
Example – Traditional Architecture . . .

. . . Alternative Method of Entry

If a user wanted the screen to look different, the User Interface Logic would have to change. The Data Integrity Logic remained the same as it was duplicated.
Example – Traditional Architecture . . .
. . . Various Entry Methods

Several users each wanted their own User Integrity logic. The Data Integrity Logic remained the same and was duplicated too many times.
The creation of a Functional Server allows you to maintain the Data Integrity Logic in one common program. The Functional Server becomes separated from each User Integrity Logic program. All of the User Integrity Logic programs access one Functional Server to interface with the database. This concept is called an Open Application Architecture.
Open Application Architecture

In the Open Application Architecture, the database is separated from each User Integrity Logic program by the Functional Server. The advantages of the Open Application Architecture are:

- Standard Entry Programs
- External Open Application Architecture
- PC Input Application
- Customer Input Application
- PC-AS/400 Interface
- Batch Input Processor
- Internal Open Application Architecture (Functional Servers)

- Database

- Automatic Consistency
- Reduced Maintenance Burden
- Stability of Custom Code
- Separation of Development Efforts
- Performance Enhancements
A Functional Server must handle two basic components:

- Data
- Error messages

**Functional Server Transaction Data**

**Arithmetic:**

1) Full transaction passed to server at one time
2) A single transaction can have more than 1,000 lines
3) Each line from 500 to 1,000 characters long

= A lot of space

**Story Problem:**

How can program A pass program B a one thousand line transaction without using a 1-meg parameter?
Functional Server Error Messages

Arithmetic:

1) Each field can have an error
2) Each line can have 150 or more fields
3) Each transaction can have hundreds of lines

= A lot of space

Story Problem:

How can program A pass program B a one thousand line transaction without using a 1-meg parameter?

Answers

#1. User Space
#2 User Index

Functional Server Interface

A Functional Server can interact with a User Space and a User Index by passing and receiving parameters.
Functional Server Parameters

Single data structure defined in /COPY module

Two sections: fixed and application specific

- Fixed parameters
  - Action code (edit, update, inquire)
  - Number of lines in transactions
  - DREAM Writer version of Functional Server
- Application specific parameters
  - Contains header information for a transaction
  - Document number of transaction
  - Total amount of transaction
  - Batch number of transaction

Functional Server User Space

- One big data area
- Maximum of 16 meg
- Beginning 100 bytes of user space reserved
- Data portion of user space contains formatted lines
  - User space lines defined by /COPY module
  - Each line contains three sections
    - Control section
    - Application specific section
    - Record format section
**Functional Server User Index**

- One big keyed data area
- Used to pass error messages back to application
- User index entry defined using a /COPY module
- Each user index entry contains two sections
  - Key
    - Application ID
    - Line number (assigned by application program)
    - Data item in error
    - Error code
  - Data – value of erroneous data

**Functional Server /COPY Modules**

- All User Space and User Index formats contained in /COPY modules
- All database record formats contained in /COPY modules
- /COPY module I00FS@@ contains generic data structures and constants
- Each Functional Server has its own I00FSxx /COPY module to define application specific data structures
Creating User Space and User Index

- OS/400 APIs
- X00991
  - Called once for each Functional Server an application program intends to use
  - Creates user space and user index for each Functional Server
  - Returns name and library where user space exists
  - Returns the length each user space line should be

Accessing the User Space

- Writing to the user space X98CHGUS
  - J.D. Edwards version of QUSCHGUS API
  - Updates a user space beginning at offset x for length
  - Similar to CHGDTAARA command
- Reading from the user space QUSRTVUS
  - API
  - Retrieves data from a user space beginning at offset x for length
  - Similar to RTVDTAARA command
- Application responsibilities
  - Remember number of lines written to user space
  - Increment user space offset
Accessing the User Index

- User Index written to by Functional Server
- Reading from the User Index
  - C00RIX/COPY module reads the User Index
  - C00RIX returns formatted error message defined by /COPY module
  - First execution of C00RIX reads first entry in User Index
  - Subsequent executions of C00RIX do read nexts
  - Uses X00IDX under the covers
- Application responsibilities
  - Remember the value of your Application ID (typically program name)
  - Set flag for initial read of User Index by C00RIX
  - Use the data item name and line number in error to set on screen indicators

Interactive Program Cycle Using a Functional Server

- Mainline – no change
- S001 – no change
- S003
  - No change for add, change, or delete
  - Call Functional Server to perform an inquiry
- S004 – Retrieve records from User Space for display on screen

Interactive Program Cycle Using a Functional Server

- S005:
  - Application program performs “scrubs” only
  - Write data records to User Space
  - Call Functional Server to perform edits
  - Read each line from User Space to redisplay defaulted information
  - Execute C00RIX to determine each data item in error so that screen error indicators may be set ON
- S010 – call Functional Server to perform an update
The Call Parameters for the Functional Server

The call parameters provide commands to the functional server which apply to all transaction lines in the input user space.

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#PFUNC (1)</td>
<td>Specifies a function code. The valid values are:</td>
</tr>
<tr>
<td></td>
<td>0 Edit and Update</td>
</tr>
<tr>
<td></td>
<td>1 Edit only</td>
</tr>
<tr>
<td></td>
<td>2 Update only</td>
</tr>
<tr>
<td></td>
<td>1 Inquire</td>
</tr>
<tr>
<td>#PVERS (3)</td>
<td>The DREAM Writer version number you are executing. This parameter uses the version number to retrieve processing options for the server. The default version number will be 001. This allows global processing options to be set at the server level, instead of for each program. (10 as of A6)</td>
</tr>
<tr>
<td>#PSPCN (20)</td>
<td>The name of the user space which the program has used. The user space contains the modified database records. Characters 1–10 contain the space name, and characters 11–20 contain the library name.</td>
</tr>
<tr>
<td>#PSPCB (9,0)</td>
<td>The byte position within the user space where the application data begins. Characters in the space prior to this position contain header information used by the functional server.</td>
</tr>
<tr>
<td>#PNBRL (5,0)</td>
<td>The number of lines in the input user space which the application program has loaded. When inquiring, this contains the number of lines output to the user space.</td>
</tr>
<tr>
<td>#PWARN (1)</td>
<td>This parameter contains a code explaining how you want warnings to be handled. The valid values are:</td>
</tr>
<tr>
<td></td>
<td>0 Normal warning processing</td>
</tr>
<tr>
<td></td>
<td>1 Treat warnings as errors</td>
</tr>
<tr>
<td></td>
<td>2 Ignore warnings</td>
</tr>
<tr>
<td>#PCYCL (1)</td>
<td>This parameter is only used if the #PWARN parameter specifies normal warning processing. The valid values are:</td>
</tr>
<tr>
<td></td>
<td>0 No cycle, all cycle processing ignored</td>
</tr>
<tr>
<td></td>
<td>1 First cycle, all warning messages are sent to the program</td>
</tr>
<tr>
<td></td>
<td>2 Second cycle, only warning messages not previously sent are sent to the program</td>
</tr>
<tr>
<td>#PDFTC (1)</td>
<td>Specifies how you want field values to be defaulted. 0 will default field values for add lines only and 1 will default field values for change or add lines.</td>
</tr>
<tr>
<td>#PXATP (3)</td>
<td>The application specific transaction type.</td>
</tr>
<tr>
<td>PARM (Length)</td>
<td>Explanation</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>#PLVL (1)</td>
<td>The transaction level. 0 implies that each detail record to be updated or added has been sent in the input user space. 1 applies only to changes or deletions because only one record is sent in the input user space and the server will change or delete all other records for that transaction.</td>
</tr>
<tr>
<td>#PPROG (10)</td>
<td>The name of the calling program. This is used by the server to update the program name field in the updated database records.</td>
</tr>
<tr>
<td>#PAPPL (10)</td>
<td>The application ID value used for writing entries to the error index. Generally, this may be the same value as the calling program.</td>
</tr>
<tr>
<td>#PFLDS (4,0)</td>
<td>The number of fields which have been loaded to the Field Names Array parameter.</td>
</tr>
<tr>
<td>#PFMT (10)</td>
<td>The record format identifier the application program has used. This is used for versioning, allowing the database to change without the need for recompiling the application program.</td>
</tr>
<tr>
<td>#PEDIT (1)</td>
<td>Indicates the overall result of edits performed against all transaction lines. 0 implies that the edits went OK, 1 means there were some warnings, 2 is errors occurred.</td>
</tr>
<tr>
<td>#PUPDT (5,0)</td>
<td>The number of database updates which occurred. This will allow the program to know whether any updates actually occurred.</td>
</tr>
<tr>
<td>#PERR (4)</td>
<td>Specifies any errors that occurred within the server. A non–blank value indicates a fatal error occurred.</td>
</tr>
<tr>
<td>#PFERR (4)</td>
<td>Contains the first error message found during editing.</td>
</tr>
<tr>
<td>#PFDTA (4)</td>
<td>Contains the data item of the first field which had an error during editing.</td>
</tr>
<tr>
<td>#PMDE (1)</td>
<td>For currency translations, this contains the mode of entry. If this value is passed as blank, the server will output the default mode of entry.</td>
</tr>
<tr>
<td>#PCRCD (3)</td>
<td>For currency translations, this contains the currency code of entry. If this value is passed as blank, the server will output the default currency code.</td>
</tr>
<tr>
<td>#PCRR (15,7)</td>
<td>For currency translations, this contains the currency exchange rate of entry. If this value is passed as zero, the server will output the default currency rate.</td>
</tr>
<tr>
<td>#PIDXN (20)</td>
<td>The name of the user index which the functional server will use to return error messages to the program. Characters 1–10 contain the index name, and characters 11–20 contain the library name.</td>
</tr>
<tr>
<td>#PSPCL (5,0)</td>
<td>The total length of each user space record. This includes both the user space control fields and the database record format.</td>
</tr>
<tr>
<td>PARM (Length)</td>
<td>Explanation</td>
</tr>
<tr>
<td>---------------</td>
<td>-------------</td>
</tr>
<tr>
<td>#0SPSPEC (100)</td>
<td>This is a data structure which is redefined by each server. Generally, this will contain the key fields which a specific server uses.</td>
</tr>
<tr>
<td>VariableVary</td>
<td>An array of field names which the program has used. Only fields in this array will be updated in the database. If the first element contains *ALL, then all fields will be used. The number of field names parameter should contain the number of entries loaded into this array.</td>
</tr>
</tbody>
</table>
Control Fields within the User Space

The input user space can contain multiple lines for each control field.

<table>
<thead>
<tr>
<th>PARM (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#SPCAC (1)</td>
<td>The line action code. The valid values are: A = Add the record, D = Delete the record, C = Change the record, U = Change the record if it already exists, otherwise add the record, V = Void the record</td>
</tr>
<tr>
<td>#SPCID (15,0)</td>
<td>Used by the program to uniquely identify each line in the user space. (optional)</td>
</tr>
<tr>
<td>#SPCER (1)</td>
<td>The line error code. X = the line is OK, 1 = some warnings, 2 = errors.</td>
</tr>
<tr>
<td>#SPCUP (1)</td>
<td>The line update code. 0 = the line was not updated, 1 = updated.</td>
</tr>
<tr>
<td>#SPCRR (9,0)</td>
<td>Contains the database relative record number which corresponds to this user space record. For adds, this is only loaded following an update operation. For changes and deletes, this is updated following an edit operation.</td>
</tr>
<tr>
<td>#SPCMN (2,0)</td>
<td>Contains the database physical file member number which corresponds to this user space record. For adds, this is only loaded following an update operation. For changes and deletes, this is updated following an edit operation.</td>
</tr>
<tr>
<td>#SPCPG (12)</td>
<td>Allows the program to store up to 12 bytes of information with each user space record.</td>
</tr>
<tr>
<td>#SPCAP (100)</td>
<td>Any application specific information which must be passed to the server for each transaction line, but is not contained within the transaction record format.</td>
</tr>
<tr>
<td>VariableVary</td>
<td>Externally described record format for the transaction record.</td>
</tr>
</tbody>
</table>
Error Message Index Line (C00RIX)

The output error message index contains warning and error messages issued for each line in the user space. The structure of the message index line is as follows:

<table>
<thead>
<tr>
<th>Field (Length)</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>#IDXAP (10)</td>
<td>The application identifier from the input parameter. Allows a program to access only its error messages.</td>
</tr>
<tr>
<td>#IDXID (15,0)</td>
<td>The line identifier from the input user space.</td>
</tr>
<tr>
<td>#IDXFN (10)</td>
<td>The data item portion of the field name.</td>
</tr>
<tr>
<td>#IDXER (4)</td>
<td>Contains the data dictionary error message code.</td>
</tr>
<tr>
<td>#IDXMD (88)</td>
<td>Contains the error message substitution data. Generally, this is the value of the field which caused the error.</td>
</tr>
</tbody>
</table>

Interactive programs using a functional server must include a call to P0000EX (in addition to P0000E) in S00EX when the F7 (Display Errors) key is pressed. P0000EX will retrieve and display the error messages contained in the Error Message Index (C00RIX).
Example – Functional Server Program Sections

Copy module containing generic data structures for functional server.

Contains control parameter list for file servers

Contains record image of F0101 version A6.1 for file servers.

Call to file server XS0010 to retrieve currency code.

Call to file server XS0013 to retrieve display decimals.

Call to file server XF0101 to retrieve record
Call to file server XF0101 to update record

```
*IN81     IFEQ '0'
ADD  $#FC      ABAFCY
MOVEL 'A61'   @@FMT
MOVEL 'ABKY01' @@XLET
MOVEL 'UPDAT' @@OPER
CALL 'XF0101'
@@IOR    COMP 'ERR'
```

Call functional server XT0311Z1

```
MOVE #GLDCT    #ARDCT
MOVE $SVKCO    #ARKCO
Z–ADD#GLDOC    #ARDOC
Z–ADD#GLICU    #ARICU
MOVE #GLICT    #ARICT
MOVE *BLANK    #ARSPL
```

Load functional server parms for edit/update.

```
MOVE $XIDXN    #PIDXN           index name
MOVE SPAR      #PSPEC           application
MOVE ##EDUP    #PFUNC           function
MOVE $#311     #PVERS           DW version
MOVE #XIDXN    #PNBRL           number of lines
MOVE $#ARBG    #PSPCB           space offset
MOVE #INV      #PXATP           type
MOVE #ARSN     #PPARM           parameter
MOVE #ARSN     #PSPCN           space name
Z–ADD#ARSL     #FSPCL           space length
Z–ADD#ARSL     #PFLDS           number of fields
MOVE *BLANKS   #PFMT            format name
CALL 'XT0311Z1'
@@IOR
```

```
MOVE #PPARM
MOVE @@ARN
```
Write records to user space for functional server.

User space description

MOVE #SU$GL #SSPCD

Current user space offset

Z-ADD$#GLBG #SPCOF

Set update flag

MOVE #OFF #SPCU

General Ledger record

MOVEAGL01 #SSPC

Application specific line data

MOVE#SSGL #SPCA

Write record to user space

CALL 'X9$CHGUS' #PCHUS 81

ENDIF

##edit
Load G/L Functional Server Specific Parameters

MOVE *ZERO     #GLDOC           One-to-One Rel
MOVE 'F'       #GLDCT           Document Type
MOVE $SVKCO    #GLKCO           Document Co.
Z–ADD$GLDG     #GLDG           G/L Date
Z–ADD$GLDG#    #GLDG#           G/L Date

If PICU 'Z'

Z–ADD*ZERO     #GLICU           Batch Number
ELSE
Z–ADD$ICU      #GLICU           Batch Number
ENDIF

MOVE 'I'       #GLICT           Batch Type
MOVE $SVCO     #GLCO           Company
MOVE *BLANKS   #GLMOD           Add a Model
MOVE *BLANKS   #GLIMD           Change a Model
MOVE #ARSN     #GLCSN           A/R Spc Name
MOVE ##AR1     #GLCFM           A/R Spc Fmt
MOVE #ARSL     #GLCLN           A/R Spc Length
MOVE #OPF      #GLCDG           One-to-One Rel

-------------------------------

Call functional server – XT0911Z1 – Edit and Update

-------------------------------

Load functional server parms for edit and update

MOVE $GACTN    #PFUNC           Action Code
MOVE#911      #PVERS           DW version
MOVE #GLSN     #PSPCN           space name
Z–ADD#GLBG    #PSPCB           space offset
Z–ADD1        #PNBRL           number of lines
Z–ADD*ZERO    #PWARN           warning handler
MOVE ##IGNW    #PCYCL           cycle nes
MOVE #OPF      #PDFTC           default on chg
MOVE 'INV'     #PXATP           type
MOVE #OPF      #PLVL            detail level
MOVE #PROG     #PPROG           program name
Z–ADD$GL     #PFLDS           number of field
MOVE *BLANKS   #PPMT            format name
MOVE#GGL1     #PPMT            mode of entry
MOVE *BLANKS   #P#MDE           number of lines
MOVE *BLANKS   #PCKR           exchange rate
MOVE #IDXN     #PIDXN           index name
Z–ADD#GLSL    #PBSL            space length
MOVE#GSPGL    #PBSL            application par

CALL 'XT0911Z1' 81

-------------------------------------------------------------------------------

Retrieve record from user space.

User space description

MOVEL#SUAR     #SSPCD

Current user space offset

Z–ADD$ARBG     #SPCOF

Read record from user space

CALL 'QUSRTVUS' #PRTUS 81

-------------------------------------------------------------------------------
Create Functional Server Objects for XT0311Z1

CLEAR#PCRT
MOVE ##AD #PCRTF
MOVE *BLANK #PCRTN
MOVEL'XT0311Z1'#PCRTN

CALL 'X00991' '81

PARM #PCRT

Create Functional Server Objects for XT0911Z1

CLEAR#PCRT
MOVE ##AD #PCRTF
MOVE *BLANK #PCRTN
MOVEL'XT0911Z1'#PCRTN

CALL 'X00991' '81

PARM #PCRT

Create user space and user index for XT0311Z1.

Create user space and use index for XT0911Z1.
## Available Functional Servers

<table>
<thead>
<tr>
<th>Case</th>
<th>Funct. Server</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>XT0006Z1</td>
<td></td>
<td>Cost Center Master</td>
<td></td>
</tr>
<tr>
<td>XT0101Z1</td>
<td></td>
<td>Address Book</td>
<td></td>
</tr>
<tr>
<td>XT0311Z1</td>
<td></td>
<td>Accounts Receivable</td>
<td></td>
</tr>
<tr>
<td>XT0311Z1E</td>
<td></td>
<td>Accounts Receivable</td>
<td>User Exit</td>
</tr>
<tr>
<td>XT0411Z1</td>
<td></td>
<td>Accounts Payable</td>
<td></td>
</tr>
<tr>
<td>XT0411Z1E</td>
<td></td>
<td>Accounts Payable</td>
<td>User Exit</td>
</tr>
<tr>
<td>XT0411Z2</td>
<td></td>
<td>Accounts Payable Check</td>
<td></td>
</tr>
<tr>
<td>XT06116Z1</td>
<td></td>
<td>Payroll Time Entry</td>
<td></td>
</tr>
<tr>
<td>XT0901Z1</td>
<td></td>
<td>Account Master</td>
<td></td>
</tr>
<tr>
<td>XT0911Z1</td>
<td></td>
<td>Journal Entry</td>
<td></td>
</tr>
<tr>
<td>XT0911Z1E</td>
<td></td>
<td>Journal Entry</td>
<td>User Exit</td>
</tr>
<tr>
<td>XT4102Z1</td>
<td></td>
<td>Item Balance</td>
<td></td>
</tr>
</tbody>
</table>

### Exercises

See the exercises for this chapter.
Source Debugger

About Source Debugger

There are two types of programs that can be executed under the J.D. Edwards Source Debugger — interactive and batch. The only difference when running the Source Debugger on an Interactive program compared to a Batch program, is the initial execution statements. Once the Source Debugger has begun, all of the features are the same for both interactive and batch programs.

The J.D. Edwards Source Debugger is a tool designed to help you determine where a bug exists in your program. You can apply the Source Debugger to any program, whether it is in production or development. Since the Source Debugger displays source code, you must have source on installed on your machine.

The source code you see while running the Source Debugger is displayed in SEU Browse mode, so you can not change a line within the program. However, you may display and/or change the value of any field, variable, or indicator within the program. In addition, you can add or remove a breakpoint anywhere in the program.

Before You Begin

- If you are not accessing the J.D. Edwards training machine, you must recompile programs into your student object library or your client object library, CLTOBJ or DEVOBJ before executing JDEDBG.

  This ensures that the program is observable and therefore, accessible to the Source Debugger.

- If you are accessing the J.D. Edwards training machine, you may execute the JDEDBG command on any of the following programs: P92801, P928011, P928200, P01051, J928401, and P928401. You may also recompile any desired program in JDFOBJ to run in the Source Debugger.
Using Debugger With an Interactive Program

The program may exist in your production environment, your development environment, or both. To use Debugger complete the following tasks:

Determine the program environment
Initiate the J.D. Edwards Source Debugger
Execute the program being debugged

To determine the program environment

1. From the Computer Assisted Design menu (G92), select Software Versions Repository.

<table>
<thead>
<tr>
<th>Action Code...</th>
<th>I</th>
</tr>
</thead>
<tbody>
<tr>
<td>Member ID...</td>
<td>P01051</td>
</tr>
<tr>
<td>Description...</td>
<td>Address Book Information</td>
</tr>
<tr>
<td>Function Code...</td>
<td>RPG Programs</td>
</tr>
<tr>
<td>Function Use...</td>
<td>File Maintenance</td>
</tr>
<tr>
<td>System Code...</td>
<td>91</td>
</tr>
<tr>
<td>Reporting System...</td>
<td>91</td>
</tr>
<tr>
<td>Base Member Name...</td>
<td>P01051</td>
</tr>
<tr>
<td>Maint/RSTDSP...</td>
<td>...</td>
</tr>
<tr>
<td>Copy Data (Y/N)...</td>
<td>N</td>
</tr>
<tr>
<td>Optional File...</td>
<td>N</td>
</tr>
<tr>
<td>Common File...</td>
<td>N</td>
</tr>
<tr>
<td>DREAM Writer Form Exists...</td>
<td>...</td>
</tr>
<tr>
<td>Source...</td>
<td>Library</td>
</tr>
<tr>
<td>Object...</td>
<td>File</td>
</tr>
<tr>
<td>Source...</td>
<td>Name</td>
</tr>
<tr>
<td>SAR...</td>
<td>Number</td>
</tr>
<tr>
<td>Version...</td>
<td>ID</td>
</tr>
<tr>
<td>SD...</td>
<td>ID</td>
</tr>
<tr>
<td>User...</td>
<td>Modified</td>
</tr>
<tr>
<td>Date...</td>
<td>...</td>
</tr>
</tbody>
</table>

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt  F24=More

2. Locate the program that you want to run the Source Debugger on, to determine what environments the program exists in.

If the program exists in several environments (production and development), you must determine which program environment to run the Source Debugger against.
To initiate the J.D. Edwards Source Debugger

1. Type the J.D. Edwards debug command (JDEDBG) and press F4.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Program Name</td>
<td>Type your program name</td>
</tr>
<tr>
<td>Source File</td>
<td>Type the file name that contains the source code of your program. Generally, this is JDESRC.</td>
</tr>
<tr>
<td>Library</td>
<td>Type the name of the library that contains the source file. Generally, this is JDFSRC for your production environment or DEVSRC for your development environment.</td>
</tr>
</tbody>
</table>

2. Enter the correct values in the proper fields and press Enter to start the Source Debugger.

Now, any time the program being debugged is executed, the source code will display in debug mode, until you end the Source Debugger.
To execute the program being debugged

Since it is an interactive program, you can either call the program from a command line or select the menu option that will execute the program.

Call program name ('parameters')
Selection/Menu

After you have executed the program, the first thing you will see is the program source code.

The source code is displayed in browse mode, so you cannot edit or change any code.
Using Debugger with a Batch Program

The program may exist in your production environment, your development environment, or both.

To use Debugger with a batch program you should complete the following tasks:

- Determine the program environment
- Initiate the J.D. Edwards Source Debugger
- Execute the program
- Set the break point
- Continue execution

► To determine the program environment

This step is the same as the first one for an interactive program.

1. Go to the Software Versions Repository and inquire on your program, to determine which environment the Source Debugger will be run against.

► To initiate the J.D. Edwards Source Debugger

This step is similar to debugging an interactive program. The difference is that you must enter the debug command twice.

The first time you initiate in J.D. Edwards Source Debugger (JDEDBG — F4), the Program Name will be the CL Program.

1. Enter the correct values in the proper fields on the Debug Program form and press Enter.
2. Enter the J.D. Edwards Source Debugger command (JDEDBG–F4) again, but this time change the Program Name will be the RPG Program Name.

The reason for this is, you cannot run the Source Debugger on a program that is submitted and executed in a subsystem. You must “trick” the Source Debugger into thinking that your batch program is actually an interactive program.
To execute the program

Since you are executing a batch program interactively, you must call the CL Program from a command line.

`call CL program ('program name' 'version')`

The CL Program source code appears.

The source code is displayed in browse mode, so you cannot edit or change any code.
To set the break point

Set a break point on the line testing the job type in order to change a variable in the CL. The variable &JOBTYPE normally edits against a batch program being executed by calling it from a command line.

1. Find the line of code that contains the variable &JOBTYPE.

2. Press F5 anywhere on the line containing &JOBTYPE to set the breakpoint.

   The line will highlight, indicating that a breakpoint has been set on that line.

To continue execution

1. Allow your program to continue executing. Press F3 to continue to a breakpoint.

   The line that you set the breakpoint on will display in reverse image. This indicates that the program has reached this point in the CL program and is ready to execute this line.

   You must change the value of &JOBTYPE to something other than 1, and other than the value specified in the CL program.

2. To change the value of &JOBTYPE, press F8 to access the Change Program Variable form.
Change Program Variable (CHGPGMVAR)

Type choices, press Enter.

Program variables:
- Program variable . . . . . . .   
- Basing pointer variable . . .
- + for more values

New value . . . . . . . . . . . . '2'
Program . . . . . . . . . . . . > J928401   Name, *DFTPGM

3. Complete the Change Program Variable form and press enter.
   The value of &JOBTYPE is now changed to your specified value.

4. Press F3 to allow the CL program to continue processing.
   The RPG program source is displayed next.

Features of the J.D. Edwards Source Debugger

**F2 – J.D. Edwards Command Line Window**

To display a J.D. Edwards command line window, press F2.

**F3 – Continue processing**

Once the program hits a breakpoint or when you first enter the source, F3 will allow the program to continue processing.

**F5 – Add breakpoint**

Position the cursor on an executable line and press F5 to add a breakpoint. You **cannot** add breakpoints to a comment line, only to executable lines. Once the breakpoint is set, the line will be highlighted. If the program executes a line with a breakpoint set on it, the line will appear in reverse image and the program will pause **before** executing the line.
320.00 C* $AUTO CASEQ’1’ S003 24
321.00 C* ------- ----
322.00 C* END
323.00 C* Begin normal program processing.
324.00 C* ----------------------------------------
325.00 C* ----------- -----------
326.00 C* ----------- -----------
327.00 C* ----------- -----------
328.00 C* ----------- -----------
329.00 C* ----------- -----------
330.00 C* ----------- -----------
331.00 C* ----------- -----------
332.00 C* ----------- -----------
333.00 C* ----------- -----------
334.00 C* ----------- -----------
335.00 C* ----------- -----------
336.00 C* ----------- -----------

P2=JDE Command Line  P5=ADDBKP  P6=ADDBKP w/prompt  P7=DSPPGMVAR
P8=CHGPGMVAR  P13=Display Indicators  P16/15=Scan Fwd/Bkwd  P24=More
F6 – Add breakpoint with prompt

Position the cursor on an executable line and press F6 to add a breakpoint with a prompt. You cannot add breakpoints to a comment line, only to executable lines. Once the breakpoint is set, the line will highlight. If the program executes a line with a breakpoint set on it, the line will reverse image and the program will pause before executing the line.

Add Breakpoint (ADDKBP)

Type choices, press Enter.

Statement identifier . . . . . . > 62100 Character value
   + for more values
Program variables:
   Program variable . . . . . . *NONE
   -
   Basing pointer variable . .
   -
   + for more values
   -
   + for more values
Output format . . . . . . . . . *CHAR *CHAR, *HEX
Program . . . . . . . . . . . . > P01251 Name, *DFTPGM

More...
F3=Exit  F4=Prompt  F5=Refresh  F10=Additional parameters  F12=Cancel
F13=How to use this display  F24=More keys
Position the cursor on an executable line and press F7 to display the values of all of the variables on that line. Breakpoints within copy modules will stop at the correct source sequence number.

Display Program Variables

Program . . . . . . . . . . . . . . . . : P01051
Recursion level . . . . . . . . . . . . : 1
Start position . . . . . . . . . . . . : 1
Format . . . . . . . . . . . . . . . . : *CHAR
Length . . . . . . . . . . . . . . . . : *DCL

Variable . . . . . . . . . . . . . . . . : *IN99
Type . . . . . . . . . . . . . . . . : CHARACTER
Length . . . . . . . . . . . . . . . . : 1
*...+....1....+....2....+....3....+....4....+....5
'0'

Variable . . . . . . . . . . . . . . . . : *IN93
Type . . . . . . . . . . . . . . . . : CHARACTER
Length . . . . . . . . . . . . . . . . : 1
*...+....1....+....2....+....3....+....4....+....5
'0'

Press Enter to continue.

F3=Exit   F12=Cancel
F8 – Change Program Variable

To change the value of a variable, press F8 and type the correct values in the prompt screen.

```
Change Program Variable (CHGPGMVAR)
Type choices, press Enter.
Program variables:
- Program variable . . . . . . .
- Basing pointer variable . . .
- + for more values
- New value . . . . . . . . . . . . > P01051 Name, *DFTPGM
```

F10 – Move Line to Top of Page

F12 – Remove Current Breakpoint

From anywhere on the screen, press F12 to remove the current breakpoint. The line is no longer highlighted, indicating the line is no longer set as a breakpoint. The program will immediately continue processing.
F13 – Display Indicator Values

To display the current values of all indicators, press F13.

...Display Program Variables...

F15 – Scan Backward

Type in a value on the Scan Line at the top of the screen and press F15 to scan backward from the point you are at to the end of the source code. If a match is found, the line containing the matching value will be displayed. To continue scanning backward, press F15 again.

F16 – Scan Forward

Type in a value on the Scan Line at the top of the screen and press F16 to scan forward from the point you are at to the beginning of the source code. If a match is found, the line containing the matching value will be displayed. To continue scanning forward, press F16 again.
F21 – Command Line Window

To display a command line, press F21.

**ENDBBG**  
**End Debug**

To stop the J.D. Edwards Source Debugger, enter ENDBBG from a command line. You cannot enter ENDBBG while displaying the source code of a program in debug. This command will end debug mode for all programs in the Debugger at that point.

You can remove a single program from debug mode by using the RMVPGM (remove program) command.

**Exercises**

See the exercises for this chapter.
Software Scan and Replace

About Software Scan and Replace

The Software Scan and Replace feature lets you scan source members to accomplish the following:

- Scan for a particular item and replace it with a new item
- Produce a list of all members that meet the search criteria
- Scan for a particular item and insert a source file after each occurrence

Because you can potentially replace source code across all systems, this job is submitted to batch and held in the job queue until you release it.

To Work with Software Scan and Replace

1. From the Computer Assisted Programming menu, select Developer’s Workbench. From the Developer’s Workbench menu, select Software Scan and Replace.

The previous screen illustrates how you replace the copy module I00SC with the copy module I00RSC for all RPG members coded to install system code 55.
2. Complete the form and press Enter.

   The job submits to batch and a message displays. The job is held on the job queue.

3. When you are ready to process the job, go to the Work with Submitted Jobs form (hidden selection 33) and release the job.

Report

When the job completes, it produces a report that indicates those objects where the scan and replace occurred.

<table>
<thead>
<tr>
<th>98810</th>
<th>J. D. Edwards &amp; Company</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scan Software Source</td>
<td>4/01/91</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>System</th>
<th>Function</th>
<th>File</th>
<th>Source Lib</th>
<th>Argument</th>
<th>Replace By</th>
<th>Column End</th>
<th>Column End</th>
<th>Allow Ovrf</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>RPG</td>
<td>JDESRC</td>
<td>DEVSRC</td>
<td>&quot;I00SC&quot;</td>
<td>&quot;I00RSC&quot;</td>
<td>000</td>
<td>000</td>
<td></td>
</tr>
</tbody>
</table>

Guidelines

If you leave the Replacement argument field blank, the utility produces a listing of all source members that meet the search criteria.

Because this job could be used to update all code across systems and could severely impact processing, it is automatically held.

Use this job to replace a copy module across systems or determine a listing of members that meet certain criteria. Use with caution.
Performance Issues

About Performance Issues

Following are some performance issues you should consider when executing J.D. Edwards software, changing current J.D. Edwards programs or writing new programs:

- Purge your files on a regular basis to avoid excess, unnecessary records existing in files.
- Minimize the number of open files in a program. If a file may not be used, define it as a User Controlled Open file.
- Use User Spaces and User Indexes wherever possible.
- Use File Servers and Functional Servers wherever possible.
- Minimize the number of subroutine calls within your program.
- Weigh the advantages of inter-program calls. Although this method is very modular in design, you should consider the effect on performance.
- Substitute the comparison of a literal with the comparison of a variable.
- For example: Use *ON and *OFF to set an indicator on and off rather than a 1 and 0.
- Consider flexibility vs. performance when using User Defined Codes, Vocabulary Overrides, and loading Data Dictionary values extensively.
Group Jobs

Objectives

Work with the J.D. Edwards Group Job Window
Work with J.D. Edwards group jobs
Work with non-J.D. Edwards group jobs
Work with the J.D. Edwards Attention MENU Window
Use IBM Pass-Through with group jobs

About Group Jobs

The Group Jobs window allows you to perform a number of tasks from a single window, saving you both time and effort. You can perform the following functions from this window:

- Run up to 16 jobs under a single signon
- Execute (or run) CL and fast path commands from a single command line
- Execute (or run) J.D. Edwards Hidden Selections

In addition to the added convenience, the Group Jobs function keeps the files for each of the jobs selected opened, whether they are currently active or not.

Perform the following tasks:

- Access the J.D. Edwards Group Job Window
- Create New Group Jobs
- Activate Suspended Group Jobs
- Terminate Job Groups
- Change to Non-Group Mode
- Sign Off with Suspended Group Jobs
Work with the J.D. Edwards Group Job Window

About Working with the J.D. Edwards Group Job Window

You can perform several operations using the J.D. Edwards Group Jobs Window, including:

- Create new group jobs
- Activate suspended group jobs
- Terminate group jobs
- Change to non-group mode
- Sign off with suspended group jobs
Before You Begin

In order for a user to access the J.D. Edwards Group Job Window at any time, the ATTN key program should be set to call the J. D. Edwards Group Job Window program (P98GRP).

To set the ATTN key program

1. Select User Information from the Security Officer Menu

2. Enter the J.D. Edwards Group Job Window program ID (P98GRP) in the Set Attention Program field.
Accessing the J.D. Edwards Group Job Window

After the ATTN Key program has been set up in the J.D. Edwards software you can access the Group Job Window.

To access the J.D. Edwards Group Job Window

1. Sign off and sign back on to reset the ATTN key program within the J.D. Edwards Menu Driver.
2. Press the ATTN key and the following will be displayed.
Creating New Group Jobs

To create new group jobs

2. When the J.D. Edwards Menu Driver is displayed, press the ATTN key and the following will be displayed.

The new group job GROUP02 is now in process. The group job GROUP01 was suspended when the function key F5 was pressed.

If you are set up to access J.D. Edwards software by J98INITA, your library list selection list will appear. Select an environment and then you will be able to display the J.D. Edwards Group Job Window.
Activating Suspended Group Jobs

To activate suspended group jobs

Press the ATTN key to display the J.D. Edwards Group Job Window and enter option 4 next to the job you want to activate.

All suspended group jobs will be displayed in the window.

Any suspended group job can be activated, as illustrated below.
Terminating Group Jobs

Any group job, active or suspended, may be terminated from the J.D. Edwards Group Job Window.

To terminate group jobs

Enter option 9 next to the group job you want to terminate.
Changing to Non-Group Mode

To change to non-group mode

Enter option 9 beside all active and suspended group jobs.
Signing Off With Suspended Group Jobs

You may use two different methods to sign off with suspended group jobs.

To sign off with suspended group jobs

Select one of the following methods:

Press F18 within the J.D. Edwards Group Job Window.
Enter SIGNOFF, 90, or ‘..’ on any J.D. Edwards Menu.

Since group jobs are created under one signon, all group jobs are terminated when the signoff command is executed.
Work with Non-J.D. Edwards Group Jobs

To work with non-J.D. Edwards group jobs

To create group jobs that call a program outside the J.D. Edwards software, the J.D. Edwards Group Job Window allows an external program to be executed. In addition, the ATTN Key can be pressed within the external program and still allow access to the J.D. Edwards group jobs.

1. Press F11 within the J.D. Edwards Group Job Window to call an external program.

The following illustrates what will be displayed when F11 is pressed.

```
Change Library List (CHGLIBL)
Type choices, press Enter.
Libraries for current job . . . > QTEMP Name, *SAME, *NONE
  > TCA3020B7
  > JDFOBJ
  > TCA302DTA
  > A3SHARE
  > TRNSHAEE
  > TCA302SC
  > JDFSRC
  > VAPAY2JLIB
  > VPAY2JLIB
  > VCPAY2JLIB
  > VPAYLIB
  > QPRT5225
  + for more values > QGPL
Current library . . . . . . . . *SAME Name, *SAME, *CRTDF
Bottom
F3=Exit   F4=Prompt   F5=Refresh   F12=Cancel   F13=How to use this display
F24=More keys
```

2. Complete the Change Library List form.

You may enter libraries related to the external program. Libraries currently in the library list can be removed if desired. However, the following libraries *must* be left in the library list in order to retain the link to the J.D. Edwards group jobs:

- **QTEMP**
  Library containing F9220 (J.D. Edwards Group Job Window Vocabulary Overrides)
- **Library containing F0090** (J.D. Edwards Hidden Selections)
- **Library containing F0092** (J.D. Edwards User Information)
- **Library containing J.D. Edwards Objects** (i.e. RPG, CL, DSPF)
After the CHGLIBL command has been executed, the CALL command prompt is displayed.

3. Enter the external program.

The following illustrates the CALL command prompt.

When the CALL command is executed, the external program will be executed.

To work with a J.D. Edwards group job, the ATTN Key can be pressed to display the J.D. Edwards Group Job Window.

Any suspended group job can be activated from the J.D. Edwards Group Job Window.
Advanced Functions of the J.D. Edwards Group Job Window

**J.D. Edwards Hidden Selections**

Most J.D. Edwards Hidden Selections (31+) can be executed from the command line at the bottom of the J.D. Edwards Group Job Window.

The J.D. Edwards Hidden Selection Window (HS) can be used to display and execute hidden selections.

J.D. Edwards Hidden Selection Security is used when users execute hidden selections.

No J.D. Edwards Menus or J.D. Edwards Hidden Selection related to menus are allowed.

**Entering Commands**

Any command can be entered on the command line at the bottom of the J.D. Edwards Group Job Window.

F4 can be used to prompt a command.

A ? can be placed in front of a command to prompt.

F9 can be used to retrieve previous commands.

Parameters entered while in prompt mode will not be retrieved.

The last 10 previous commands are saved.

Only successfully executed commands are saved.

Previous commands are lost when user exits window F3.

J.D. Edwards Fast Path Commands from User Defined Code 00/FP can be executed. F13 to display all Fast Path Commands.

To retain all commands entered and retrieve parameters entered in prompt mode, access the IBM Command Entry Screen from the J.D. Edwards Group Job Window (i.e. J.D. Edwards Hidden Selection 36) and enter commands.

Commands can only be executed if there is a value of ‘Y’ or ‘ ’ in the Allow Command Entry (Y/N) field defined in the J.D. Edwards User Information option found on A94.
J.D. Edwards Group Job Window Summary

The program allows you to:

Create up to 16 jobs per signon
Execute commands, J.D. Edwards hidden selections, J.D. Edwards Fast Path Command, and J.D. Edwards Fast Path Menu Execution

Available Function Keys

F3 = Exit the J.D. Edwards Group Job Window
F4 = Prompt a command
F5 = Create a new J.D. Edwards group job
F6 = Submit job to batch
F8 = J.D. Edwards Menu Word Search
F9 = Retrieve previous command
F11 = Create a new Non-J.D. Edwards group job
F13 = Display all fast path commands
F18 = SIGNOFF all group jobs

Available Selection Exits

4 = Activate a suspended group job
9 = End a group job

J.D. Edwards Group Job Window is not accessible when using

SysReq (Source Machine Only)
A program that has reset the ATTN Key program (i.e. OFFICE/400)
Work with the Attention MENU Window

About the Attention MENU Window

The J.D. Edwards Attention Menu Window program is a generic program that allows you to access up to 15 predefined programs via the ATTN Key. The 15 predefined programs are associated with options on a J.D. Edwards Menu.

Each user can be assigned a different J.D. Edwards Menu

The program was available in Release A4.1 PTF001

Before You Begin

To access the J.D. Edwards Attention Menu Window at any time, the ATTN Key program should be set to call some other J.D. Edwards Menu. For example G92.
The following illustrates how the ATTN Key program is set in the J.D. Edwards software. The User Information screen can be accessed from the Security Officers Menu.

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>User ID</td>
<td>TEACH</td>
</tr>
<tr>
<td>Library List</td>
<td>QTEMP JDFOBJ COMMON PRODDATA JDFSRC QGPL</td>
</tr>
</tbody>
</table>

**User Security:**

- User Key: A J K DP F
- Initial Menu to Execute: A
- Initial Program to Execute: A
- Menu Level: A
- User Type: TEACHER
- Batch Job Queue: OBATCH
- Job Scheduling Priority: 5
- Logging (level/severity/messages): 4
- Optional Printer File Library: P4B
- Current Library: *
- Employee Address Number (PPAT): *
- Set Attention Program: G92

<table>
<thead>
<tr>
<th>Key Function</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F6=Display/Lang Pref</td>
<td>Display Language Preference</td>
</tr>
<tr>
<td>F9=Library Inquiry</td>
<td>Library Inquiry</td>
</tr>
<tr>
<td>F21=Print Lib List</td>
<td>Print Library List</td>
</tr>
<tr>
<td>F24=More Keys</td>
<td>More Keys</td>
</tr>
</tbody>
</table>

An *(asterisk) must precede the menu name.
Accessing the J.D. Edwards Attention Menu Window

After the ATTN Key program has been setup for you the J.D. Edwards software you can access the J.D. Edwards attention menu window.

To access the J.D. Edwards attention menu window

1. Sign off and sign back on to reset the ATTN key program within the J.D. Edwards Menu Driver.

   SETATNPGM PGMP(00AMNU) SET(*ON).

2. Press the ATTN key and the menu options for the menu will be displayed as follows.

   Original Job refers to the current job that has been converted to a group job. The remaining jobs refer to the first 15 interactive programs on the menu which the user is authorized to.

Summary of J.D. Edwards Attention Menu Window Functions

The program allows you to:

   Access 15 predefined programs via the ATTN Key
   Execute commands, J.D. Edwards Hidden Selections, J.D. Edwards Fast Path Commands, and J.D. Edwards Fast Path Menu Executions
Available Function Keys

F3 = Exit the J.D. Edwards Attention Menu Window
F4 = Prompt a command
F6 = Submit a job to batch
F8 = J.D. Edwards Menu Word Search
F9 = Retrieve previous command
F13 = Display all fast path commands
F18 = SIGNOFF all group jobs

Available Selection Exits

4 = Activate a group job
9 = End a group job

J.D. Edwards Attention Menu is not accessible while using

SysReq (Source Machine Only)
a program that has reset the ATTN Key program (i.e. OFFICE/400)
Work with IBM Pass–Through

About Working with IBM Pass–Through

To create group jobs on remote locations and still retain a link to the group jobs created on the source machine, use IBM Pass–Through. Perform the following tasks:

- Set up access to remote locations
- Use IBM Pass–Through with Group Jobs
Setting Up Access to Remote Locations

To setup access to remote locations

1. To setup access to remote locations, go to the DREAM Writer versions list for Form ID P98GRP5.

<table>
<thead>
<tr>
<th>Version</th>
<th>Description</th>
<th>User</th>
<th>Chg Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>XJDE0001</td>
<td>Denver A</td>
<td>DEMO</td>
<td>08/23/93</td>
</tr>
<tr>
<td>XJDE0002</td>
<td>Denver C</td>
<td>DEMO</td>
<td>08/23/93</td>
</tr>
<tr>
<td>XJDE0003</td>
<td>Denver D</td>
<td>DEMO</td>
<td>08/23/93</td>
</tr>
<tr>
<td>XJDE0004</td>
<td>Denver E</td>
<td>DEMO</td>
<td>08/23/93</td>
</tr>
<tr>
<td>XJDE0005</td>
<td>Denver I</td>
<td>DEMO</td>
<td>08/23/93</td>
</tr>
<tr>
<td>XJDE0006</td>
<td>Atlanta</td>
<td>DEMO</td>
<td>11/13/91</td>
</tr>
<tr>
<td>XJDE0007</td>
<td>Chicago</td>
<td>DEMO</td>
<td>11/13/91</td>
</tr>
<tr>
<td>XJDE0008</td>
<td>New York</td>
<td>DEMO</td>
<td>11/13/91</td>
</tr>
<tr>
<td>XJDE0009</td>
<td>Dallas</td>
<td>DEMO</td>
<td>11/13/91</td>
</tr>
<tr>
<td>XJDE0010</td>
<td>Houston</td>
<td>DEMO</td>
<td>11/13/91</td>
</tr>
<tr>
<td>XJDE0011</td>
<td>San Francisco</td>
<td>DEMO</td>
<td>11/13/91</td>
</tr>
<tr>
<td>XJDE0012</td>
<td>Washington DC</td>
<td>DEMO</td>
<td>11/13/91</td>
</tr>
</tbody>
</table>

Opt: 1=Run 2=Chg 3=Add 4=Rpt Dist 5=Cover 6=Prt Ovr 8=Repair 9=Dlt F13=Form
The processing options for each version provides setup on exactly how to access the remote location. The following illustrates the processing options.

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Destination Virtual Control Unit</strong></td>
<td>This is the control unit that the user will connect to at the remote location. The first available device on the control unit will be selected.</td>
</tr>
<tr>
<td><strong>Destination Location</strong></td>
<td>This is the APPN network name for the remote location.</td>
</tr>
<tr>
<td></td>
<td>(Used in AS/400 Environment)</td>
</tr>
<tr>
<td><strong>APPC Device(s)</strong></td>
<td>These are the APPC devices that identify the route to the remote location. Only one intermediate node is supported.</td>
</tr>
<tr>
<td>(Used in S/38 Environment)</td>
<td></td>
</tr>
</tbody>
</table>
Using IBM Pass–Through with Group Jobs

To use IBM Pass–Through with Group Jobs

1. Use the J.D. Edwards menu B98P to start an IBM Pass–Through session to a remote machine.

2. Use the J.D. Edwards Menu Design Aid (G92) to attach your user defined DREAM Writer Form ID P98GRP5 versions to menu B98P.

When an option is selected on the menu, the IBM Start Pass–Through command will be executed to the remote machine, and still retain a link to the source machine group jobs.

The mechanism used to attach remote locations to the J.D. Edwards Group Job Window on the source machine is a parameter on the STRPASTHR (Start Pass-Through) command. The following illustrates the link to the source machine.
The SRQ10PGM (SysReq 10) parameter allows a program to be called on the source machine from the remote location. By entering the J.D. Edwards Group Job Window program (P98GRP) in this parameter, the J.D. Edwards Group Job Window can be displayed on the remote location by pressing SysReq 10, NOT the ATTN Key.

This allows access to all suspended group jobs on the source machine and other remote locations.
Universal File Converter

Objectives

Initially convert existing client files to J.D. Edwards data files
Create recurring interfaces or bridges between J.D. Edwards and non-J.D. Edwards application systems

About Universal File Converter

There is constant change in data processing. For example, when you upgrade your J.D. Edwards software, you are changing several pieces of the software. Your data files may be greatly impacted when you upgrade. J.D. Edwards Universal File Converter will assist you in converting your data files.

Universal File Converter allows you to store conversion information for future conversions. It automatically matches data fields to be converted together.

J.D. Edwards Universal File Converter accesses standing instruction files and transfers data in fields:

- From one file to another file
- From one file to multiple files
- From multiple files to a single file
The instruction file defines the association between two files and includes data field information.
Step 1

You specify From files and To files through DREAM Writer processing options. You can specify up to four To files. If you require multiple From files, specify a join logical as the From file in the DREAM Writer “based on” file. The system returns file field information and pre-loads the Cross-Over Rules file with field name, length, size, type and reference (data dictionary name). The system pre-loads information in the Cross-Over Rules file for all fields that have the same reference (data dictionary field name) as the From file.

Step 2

You must manually associate the fields that were not automatically loaded in the Cross-Over Rules file. If you need special calculations for a field, you can specify special processing key words in the Conversion Rule field. You can also add the calculations into an external program that can be called from the converter program. The external program needs several parameters that are sent and passed back to the converter program. These parameters are: data, error, From field name, To field name, and number of To file records. You must specify the external program in the Conversion Rule field in the Cross-Over Rules file.

Step 3

In this step you specify the form ID and the version you selected in the first step. The From and To files should be the same (or exact equivalent) as the files specified in Step 1. The converter program accesses the cross-over instructions for the “From/to” combination and loads the information to arrays. The system then processes the arrays for each field that has an association. Finally, the system transfers the value in the From file to the To file.
Special Processing

Special processing procedures are available to help you in the conversion of one field to another.

To execute any of the special processing procedures listed below, you must type the appropriate keyword into the From or To Conversion Rule field. This is explained in Detail Cross Over Rules, later in this guide. There are special keywords for the following.

**Dates**

The converter uses a keyword to decide what date translation is necessary.

**Numeric Fields**

The converter translates non-packed numeric data to packed data or vice versa, depending on your need. It also maintains decimal alignment, performing rounding or zero padding if required. Alphanumeric representations of numeric fields can be translated to numeric fields. Numeric fields can be translated into alphanumeric fields.

**Business Unit**

The converter processes the field through the Business Unit scrub routine. This routine right adjusts and fills the field with blanks.

**Data Dictionary Default**

The converter uses the reference field in the To file to access the data dictionary and retrieve the default value for the field.

**Initialization**

Fields in the To file are initialized to blanks for alphanumerics and zeros for numerics if no fields are defined to map to them.

**Next Number**

You can specify to have a next number value assigned to a field.

**Check Data Dictionary**

You can specify to have the value of the field validated against the data dictionary values, ranges, and user defined codes.

**User Defined Code Lookup**

Use the fields in the From file to look up a user defined code (UDC) and return the associated value in the Description 1 field as the To field value.
Default Constant

Specify constant value, up to six characters, for the To field value.

Database Considerations

The system creates new records in the Cross-Over Rules file for each version of cross-over rules you specify. This file contains information explaining the fields in the From file and the To file and how the two files are associated.

If the field lengths or characteristics of the files that the cross-over rules have been built upon change, you must redefine the cross-over rules. Otherwise, the rules are based on the erroneous descriptions.

The system handles extra calculations through called programs specified in the Cross-Over Rules file for each field.

User Responsibilities

You are responsible for developing and maintaining the cross-over instruction rules. If the From file or To file definition of the cross-over instructions changes, you must revise the Cross-Over Rules.

Perform the following tasks:

- Set Up Universal File Converter
- Work with Crossover Rules
- Work with File Conversion
- Print a Report
- Create Conversion Forms
- Work with the Data Dictionary Glossary by File
Set Up Universal File Converter

About Setting Up Universal File Converter

If you have more than one file to convert, you can set up a separate version for each type of conversion required. The Universal File Conversion Setup program loads information to the Crossover Rules file (F0031) about the fields in the files you are converting.

The system uses the information in the Crossover Rules file to transfer the data from a field in one file to a field in another file, or to a field in multiple files.

This program also has processing options that let you convert data from both J.D. Edwards and non-J.D. Edwards files.

Before You Begin

Before you run the setup procedure make sure the To files exist.

Do not attempt to use the Universal File Converter on a file that contains “double byte” data. The converter program may corrupt the integrity of the bracketing “shift in” and “shift out” characters that are automatically inserted by double byte terminals.

Understanding the Universal File Converter Setup

The setup program is the first part of a three-part conversion process. Specify a From file and a To file through the DREAM Writer processing options. You can specify up to four To files. If you require multiple From files, specify a join logical as the From file. This join logical is over all the files you select for the From file. Use the name of the join logical in the first processing option.

The program retrieves field information for all fields in the From file and loads this information to the Crossover Rules file.

The program then retrieves field information for the To files. If the Reference (data dictionary) field in the To file matches the From file Reference field, the program makes an association between the two fields. The system writes information for the To file to the record in the Crossover Rules file associated with the From file field.
**FILLER conversions are automatically generated for From file fields with no corresponding To file fields and for To file fields with no corresponding From file fields. You can override a **FILLER entry with the appropriate field name, position, and characteristics if the field exists in the file but has a different field name.

If there are any other associations you need, do them manually using the Crossover Rules selection on the menu.

Setting Up Universal File Converter

G9841                      J.D. Edwards & Company                JDEG
Programmers               Universal File Converter
... DATA FILE CONVERSION
  2. Version Setup
  3. Crossover Rules
  4. File Conversion
  5. Report

Selection or command
  ==>
To access Versions Setup

1. From the Universal File Converter menu (G9841), select Versions Setup.

The Versions Setup form appears. The examples shown are for illustrative purposes only.

This program loads information into the Crossover Rules File (F0031) about the fields in the files you are converting. The system uses the information in the Crossover Rules File to transfer the data from a field in one file to a field in another file or to a field in multiple files.

2. Add your own version from a Demo version and go to the processing options of your new version.

3. Once you have displayed the processing options, you must specify a From file and a To file. You can specify up to four To files. If you require multiple From files, specify a join logical as the based on file for your version. The join logical will encompass all the files you wish to use for the From file.
Generate Cross Over Instructions
This job has various options described below. Enter the desired values and press ENTER to continue.

**FILE SPECIFICATION:**
1. Enter the name of the file to convert the data from.
   JDE File? Y

2. Enter the name of the file OR files to convert the data to.
   File 1 JDE File?
   File 2 JDE File?
   File 3 JDE File?
   File 4 JDE File?

* F5=Printer Overrides

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter the name of the file</td>
<td>The name of the <em>From</em> file to convert the data from.</td>
</tr>
<tr>
<td>JDE File?</td>
<td>Y if the <em>From</em> file is a JDE file, or N if it is not</td>
</tr>
<tr>
<td>Enter the name of the file OR files to convert the data to.</td>
<td>The name(s) of the <em>To</em> file(s) in the spaces provided</td>
</tr>
<tr>
<td>JDE File?</td>
<td>Y if the <em>To</em> file is a JDE file, or N if it is not</td>
</tr>
</tbody>
</table>
Generate Cross Over Instructions

This job has various options described below. Enter the desired values and press ENTER to continue.

3. Enter the library containing the "from" file. If left blank the library list will be searched for the "from" files.

4. Enter the library containing the "To" file. If left blank the library list will be searched for the "To" file.

F5=Printer Overrides

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter the library containing the from file.</td>
<td>The name of the From file library, or leave blank to search your library list</td>
</tr>
<tr>
<td>Enter the library containing the to file.</td>
<td>The name of the To file library, or leave blank to search your library list</td>
</tr>
</tbody>
</table>
Work with Crossover Rules

The Crossover Rules form lets you add, change, and delete crossover rules used in the Universal File Converter process. Use this form to set up or maintain associations between fields in the From file and The To file.

Using filler fields you can view From file fields with no corresponding To field fields. You can also view To file fields with no corresponding From file fields.

Working with the Crossover Rules Form

To work with the Crossover Rules form

1. From the Universal File converter menu, select Crossover Rules.

<table>
<thead>
<tr>
<th>Field Name</th>
<th>T Begin</th>
<th>Bytes</th>
<th>Dec</th>
<th>Name</th>
<th>T Begin</th>
<th>Bytes</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
<tr>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
<td>0</td>
<td>00</td>
<td><strong>FILLER</strong></td>
<td>A</td>
<td>1</td>
</tr>
</tbody>
</table>

Opt:  9=Del  F4=Del  F6=Add  F8=From  F9=To  F13=File  F14=Text

The screen above displays illustrative data only. The From files appear on the left. The To files display on the right.
2. Complete the Crossover Rules form.

F8 and F9 are toggles. Press them to suppress or activate the display of the **FILLER fields in the From and To files.

F14 is cursor-sensitive. If you are on a From file field, press F14 to enter text for that field. When the cursor is on a To file field name, press F14 and the Generic Text Window opens for that To file field name. You can also enter text for the From file and To file by placing the cursor on the appropriate field. The field name is highlighted on V0031 if generic text exists. For additional information refer to the Advanced Functions Reference Guide.

Press F4 to display detail information in the fold area.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form Id</td>
<td>Type the DREAM Writer Form Id you specified in the initial setup. Defaults to P00120.</td>
</tr>
<tr>
<td>Version</td>
<td>The Form Id version. Required for an inquiry.</td>
</tr>
<tr>
<td>To File Name</td>
<td>Type name of the file you are converting data to. This field defaults if you have a successful inquire.</td>
</tr>
<tr>
<td>Skip to (From/To)</td>
<td>Allows you to skip to a field in either the From file or the To file. Pressing F1 in one of these two fields will display the File Field Descriptions Window.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Field</th>
<th>T Begin</th>
<th>...</th>
<th>Field</th>
<th>T Begin</th>
<th>...</th>
<th>O</th>
<th>Name</th>
<th>Pos</th>
<th>Bytes</th>
<th>Dig</th>
<th>Dec</th>
</tr>
</thead>
<tbody>
<tr>
<td>QXXCC</td>
<td>A</td>
<td>47</td>
<td>QXXCC</td>
<td>A</td>
<td>47</td>
<td>12</td>
<td>D</td>
<td>00</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desc Bus Unit Conv Rule</td>
<td>Array N</td>
<td>Key Pos</td>
<td>Ref XCC</td>
<td>Array N</td>
<td>Key Pos</td>
<td>00 Ref XCC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desc Date Last Conv Rule</td>
<td>Array N</td>
<td>Key Pos</td>
<td>Ref XDS</td>
<td>Array N</td>
<td>Key Pos</td>
<td>00 Ref XDS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Date Last Conv Rule</td>
<td>Array N</td>
<td>Key Pos</td>
<td>Ref XDT</td>
<td>Array N</td>
<td>Key Pos</td>
<td>00 Ref XDT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Desc Item ID Conv Rule</td>
<td>Array N</td>
<td>Key Pos</td>
<td>Ref XIT</td>
<td>Array N</td>
<td>Key Pos</td>
<td>00 Ref XIT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

OPT: 9=Del  F4=Detail  F6=Add  F8=From Fill  F9=To Fill  F13=File  F14=Text
**Field** | **Explanation**  
---|---  
Field Name | The name of the field the data is being transferred from or to.  
T (Type) | The data dictionary data type.  
Begin Pos (Beginning Position) | The number of the beginning position of the field.  
Field Bytes | Number of bytes in the field.  
Field Dig (Field Digits) | Actual number of digits in the field. In a non-packed field, this number is the same as the number of bytes.  
Field Dec (Field Decimals) | Number of decimal positions in the field. (Future Use)  
O (Option) | Option 9 = delete the line.  
Desc (Description) | The description of the file field.  
Conv Rule (Conversion Rule) | Allows you to specify a keyword or external program used for special calculations to the from file before transfer of data to the to file.  
Specifying keywords into both the from and to file Conversion Rule field. F1 will display a list of valid keywords:  
- Business Unit – *RAB  
- Initialize – *ZEROES, *BLANKS  
- Data Dictionary Default – *DEF  
- User Defined Code Lookup – *UDC (System) (code type)  
- Default Constant – *DFT (constant)  
- Next Number – *NN(system)(number)  
- Check Data Dictionary – CHK, will edit field for DD values/ranges  
- Alpha Translation – *TRAN (language to translate to)  
In addition to the predefined keywords, user-developed programs can be specified. These external programs will be discussed later in this chapter.  
Key Pos (Key Position) | Specifies the position in the key list for the key list for the field in the file. (Future Use)  
Ref (Reference) | The field name in the file with the prefix removed. The system uses this field to automatically pre-load the associations between the from and to file fields. You can also use this field for the *DEF keyword for the Data Dictionary defaults.  
Array | Designates the field as part of an array. (Future Use)
The left side of the screen contains information about the From file.

The right side of the form contains information about the To file fields. If the setup program made associations with the To file fields, they display in the right columns when you inquire on a Form ID. Otherwise, these columns contain **FILLER information.

What You Should Know About

To review a specific set of crossover rules, enter the DREAM Writer version you used to create the rules.

To update information on Crossover Rules form, enter the To file field, type, beginning position, number of bytes, and number of digits and decimals, if applicable. Required information is name, type, beginning position and number of bytes.

Two “skip to” capabilities are available on this form. You can skip to a field in either the From file or the To file.

Displaying Field Descriptions

1. Press F13 in the Field Name column for the From or To file.

The File Field Descriptions window appears, as shown below.
When you use option 4 to select a field from the window, the program returns the name, type, number of bytes, number of decimals, number of digits, description, reference, and key position to the appropriate fields on the screen. For Crossovers on the File Field Descriptions window, refer to the *Computed Assisted Design Reference Guide*.

For details on the Data Dictionary Repository screen, the Glossary screen, and the Cross Reference options on the File Field Description window, refer to the *Advanced Functions Reference Guide*.

2. Enter 4 in the option field. The program returns the field description to the associated field as shown in this example.
Adding Fields

To add a field

1. Press F6 to open the Add Crossover Instructions window.

2. With the cursor in the Field Name field, press F13 to open the File Field Descriptions window.

   - After you press Enter, the program returns field information to the Field Name when you exit the window.
   - The required fields for adding a field are:
     - From field name, type, number of bytes, and beginning position
     - To field name, type, number of bytes, and beginning position

The add function is available to associate a single field in the From file with multiple fields in the To file and to break apart a From field into multiple fields.

A field can exist in the To file and have nothing associated with it in the From file. In this case, the To file field is initialized as described in the section Special Processing in the Introduction of this guide.
Delet ing Records

To delete a record

Select option 9 to delete records from the Crossover Rules file.

This cancels the From/To relationship so that no conversion takes place.

If you blank out the To file field name, the program does not delete the record from the Crossover Rules file, but only clears the To file field information. The converter program looks only at records that have both a From and To file field name.

NOTE: You do not need to delete lines with blank (**FILLER) To file field names, they are automatically omitted.

Keywords

Keywords in the Conversion Rule field (in the fold area) trigger special processing for a field before the data is transferred. Following are the keywords that are available and a brief explanation of what processing they trigger.

With the exception of the date keywords listed below, specify conversion rules for either From field or To field, never for both.


These keywords activate a date conversion between the From file field and the To file field. You must type keywords into both the From file Conversion Rule field and the To file Conversion Rule field. Each keyword on the From field specifies how the field is stored in the From file. The keyword on the To field conveys the output format on the To field. NOTE: This does not work on packed fields.

**Business Unit – *RAB.**

This keyword activates the business unit scrub of right adjust/blank fill to the From file field before moving it to the To field.

**Initialize – *ZEROES, *BLANKS**

These keywords move either zeroes or blanks to the From file field before it is transferred. With the initialization rules, these keywords are not required unless you want to initialize an alphanumeric field to zeroes.
**Data Dictionary Default – *DEF**

This keyword retrieves the Data Dictionary default for the To file field, using the Reference field in the Data Dictionary, and loads it to the From file field before it is transferred.

**User Defined Code Lookup – *UDCsssr**

This keyword retrieves the definition of the user defined code used in a specific system and loads it to the To field. When typing your request, *ssss* is the system and *rr* is the user defined code.

**Default Constant – *DFTccccce**

This keyword loads a default constant to the To field. When typing your request, *ccccce* is the default constant.

**Terminal ID – *TID**

This keyword loads the terminal ID to the To field.

**Next Number – *NNssxxx**

This keyword computes a next number and loads it to the To field. When typing your request, *ssss* is the system and *xx* is the number.

**Check Data Dictionary – *CHK**

This keyword lets you edit a field against Data Dictionary values and ranges. The results of the edit print on the File Conversion report whenever any errors are detected.
About the Conversion Rule Program

Besides specifying the use of keywords in the conversion rule, you can specify an external program that runs before the data is transferred to the To file field. You must name the external program beginning with an X. For example, use an “X” program to determine a range of valid values in a From file field, excluding records based on a given field. Other examples include writing multiple To file records based on a single From file record, or manipulating the data before it is transferred.

The external program requires five parameters:

**First parameter**
- Must be 50 bytes and contains the value of the field being processed. Use it to pass back the value to the converter program when the “X” program is done with it.

**Second parameter**
- One-byte error flag. If the error flag returns blank, the data in parameter 1 from the “X” program is placed in the To file.
  - If the error flag returns with 2, the data in parameter 1 is not transferred to the To file. Use this error if you are writing multiple To file records and different From file fields are used for a single field in the To file.
  - If the error flag returns with 3, a record will not be written to the To file. Use this error if you do not want to write a record when the value of a certain field in parameter 1 is blank, zero, or not valid for your purposes.

**Third parameter**
- Four-byte alphanumeric field for the number of the To file records. The field always has numeric characters and is zero-filled. This lets your “X” program know which record the converter program will write when you are writing multiple To file records.

**Fourth parameter**
- Ten-byte field for the From file field name. This lets your “X” program know which field you are processing if multiple fields in the From file are updating a single To file field.

**Fifth parameter**
- Ten-byte field for the To file field name. This lets your “X” program know which field you are processing if multiple fields in the From file are updating a single To file field.
Available Functions and Options

**F6 – Add Instructions**

To add fields to be converted, press F6 to access the Add Cross Over Instructions Window. The required fields for adding a field are *Field Name*, *Field Data Type*, *Field Beginning Position*, and *Number of Bytes*.

**F8 – Suppress From **FILLER Fields**

Will not display those lines with **FILLER values in the *From* field.

**F9 – Suppress To **FILLER Fields**

Will not display those lines with **FILLER values in the *To* field.
F13 – File Field Description

Place cursor on any Field Name field and press F13 to display the File Field Description window.

F14 – User Defined Text

This allows text to be entered about information on this screen. The field will highlight to indicate that there is generic text associated with this field.

Press F14 in the top area of the screen to enter text about the conversion.

Press F14 in the From Field area (left side of the screen) to enter text describing the From Field.

Press F14 in the To Field area (right side of the screen) to obtain text describing the To Field.

The field will highlight to indicate that there is generic text associated with this field.

Option 9 – Delete Records

To delete records so that no conversion takes place, enter Option 9. If you blank out the To File Field Name, the program does not delete the record from the Cross Over Rules file (F0031), but only clears the To File Field information. The converter program will only look at records that have both a from and to file field name.


Work with File Conversion

Working with File Conversion

The File Conversion program accesses the Crossover Rules file (F0031) and transfers data fields from one file to another, from one file to multiple files, or from multiple files to one file.

To run File Conversion

1. From the Universal File Converter menu (G9841), select File Conversion.

When creating an execution form, be sure the Based on File and the Format Name fields contain your From File name. In addition, the Data Selection and Data Sequence screens should display fields from your From File.

2. Add your own version from a Demo version and go to the processing options of your new version.
This job has various options described below. Enter the desired values and press ENTER to continue.

**FILE SPECIFICATION:**

1. Enter the name of the Form ID and version containing the conversion specifications.
   - Form ID: P00111
   - Version: APCS

2. Enter the name and library of the "from" file, if different than the Form ID and version containing the conversion specifications.
   - From File name
   - From File library

**Caution - file must be the same field format as file used to generate rules.

<table>
<thead>
<tr>
<th>Option</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter the name of the Form ID and version containing the Initial Setup step.</td>
<td>Type your Form ID and version from the conversion specifications.</td>
</tr>
<tr>
<td>Enter the name and library of “from” file, if different than the Form ID and version specified.</td>
<td>Type the name of the From file and library, if it is different than the From file and library in the Form ID and version specified above.</td>
</tr>
</tbody>
</table>
Execute File Conversion - Sample

This job has various options described below. Enter the desired values and press ENTER to continue.

3. Enter the name of the file OR files to convert the data to. Leave blank to convert all files in setup specifications.

File 1
File 2
File 3
File 4

4. Enter the library the "to" files are in. If left blank, the library list will be searched for the "to" files.

F5=Printer Overrides

<table>
<thead>
<tr>
<th>Option</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter the name of the file OR files to convert the data to.</td>
<td>Type the name(s) of the To file(s). Up to four files can be specified. If these fields are left blank, all files entered in the setup version are converted.</td>
</tr>
<tr>
<td>Enter the library the to files are in.</td>
<td>Type the name of the library containing the To file(s), or leave blank to have the library list searched.</td>
</tr>
</tbody>
</table>

File Preparation:

5. Enter a ‘1’ to clear the file data is being transferred to.

TO FILE FORMAT:

6. Enter the number of "to" file records to be created for each "from" file record. If left blank, a single "to" file record will be created for each "from" file record.

File 1
File 2
File 3
File 4
Bottom

F5=Printer Overrides
<table>
<thead>
<tr>
<th>Option</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter a ‘1’ to clear the file data is being transferred to.</td>
<td>Enter ‘1’ to clear the To file. The To file will be filled only with converted records. If this field is left blank, the converted data records are added to the To file.</td>
</tr>
<tr>
<td>Enter the number of to file records to be created for each from file record.</td>
<td>Enter the number of To file records you want to create for each From file record. If this field is left blank, only a single To file record will be created for each From file record.</td>
</tr>
</tbody>
</table>

If you are using multiple From file(s), remember to create a join logical over all the From files you wish to use.

When adding a new version, you should check to see that the format name under Additional Parameters is correct for the based on file.

3. Enter the correct values on Processing Options and submit your version to complete the conversion process.

What You Should Know About

If you are using multiple From files, remember to create a join logical over all the From files you want to use.

When adding a new version, check to see that the format name for the based-on file is correct for the file. The default is lxxxx and may not be appropriate.

The From file name and the To file names should be the same as used to set up the conversion rules in Step 1.

You can use DREAM Writer data selection to specify which record in the From file are to be converted. For example, convert one branch or one company only.

A printed report lists error conditions detected by *CHK keyword and lists the total number of records read and number of records converted. The report lists the description of the errors. Depending on the error condition, you may need to correct the values in the incoming data and rerun the conversion.
Print a Report

Printing a Report

You can print a report that displays the Cross Over Rules and any associated generic text.

To print a report

1. From Universal File Converter select Report

   98300 Report Form P0031P1
   Skip to Version: ____________________________

   Версия   Описание                   Пользователь     Дата изменения
   XJDE0001 File Converter Report           DEMO            10/25/93

   Opt: 1 = Run  2 = Chg  3 = Add  4 = Rpt Dist  5 = Cover  6 = Prt Ovr  8 = Repair  9 = Dlt

The screen may list different versions of the File Converter Report. The example shown is for illustrative purposes only.

2. Specify your Form ID and version on the Data Selection form.

Release A7.3 (June 1996)
This job has various options described below. Enter the desired values and press ENTER to continue.

1) Enter a “1” to print Data Dictionary Glossary for each item. Leave blank to not print the Data Dict. Glossary. (Prints for “TO” fields only)

2) Enter a “1” to print File Specific Glossary for each data item. Leave blank to not print. (Prints for “TO” fields only)

3) Enter a “1” to print the Generic Text Instructions for each data item. Leave blank to not print the Generic Text. (Prints for both “FROM” and “TO” fields)  

F5=Printer Overrides

3. Select one of the following print options.

<table>
<thead>
<tr>
<th>Field</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter a ‘1’ to print Data Dictionary Glossary for each item.</td>
<td>Prints Data Dictionary Glossary for each To field.</td>
</tr>
<tr>
<td>Enter ‘1’ to print File Specific Glossary for each item.</td>
<td>Prints file specific glossary from Generic Text file (F00163) for each To file.</td>
</tr>
<tr>
<td>Enter ‘1’ to print generic text instructions for each item</td>
<td>Prints any generic text associated with either To fields or From fields.</td>
</tr>
</tbody>
</table>
Create Conversion Forms

Creating Conversion Forms

The Universal File Converter helps you create conversion forms that you may want to use for planning purposes when you convert your non-JDE files into JDE files.

Start by creating a form that specifies the major file in the “Convert to” file. The name of the file you convert from is intentionally left blank. This lets you create a blank set of conversion rules which you can print using the Report selection.

JDE supplies a special data dictionary glossary relating to specific fields in specific files in your JDE data dictionary text. You can also create new field descriptions that better correspond to your system by pressing F14 for generic text in the crossover rules revisions.

If you decide to use the blank version (described above) for actual file conversion, type the From file specifications corresponding to the appropriate To field using the Crossover Rules. Be sure to override the From file before you execute the conversion program.
Creating Conversion Forms

To create a conversion form

1. From the Universal File Converter menu, select either Versions Setup or Report.

   98312                 Processing Options Revisions  Form ID. . .  P00120
   Generate Cross Over Instruction - Sample          Version. . .  XJDE0001
   This job has various options described below. Enter the desired values and press ENTER to continue.

   FILE SPECIFICATION:
   1. Enter the name of the file to convert the data from.
      JDE File?
   2. Enter the name of the file OR files to convert the data to.
      File 1
         JDE File? Y
      File 2
      File 3
      File 4
      +

   F5=Printer Overrides

2. Complete the Processing Options Revisions form

   If you selected Versions Setup, be sure to leave the first processing option blank under File Conversion.

   In the second option, type the name of the files you want to convert, and then Y if they are JDE files or N if they are not.
If you select Report, type 1 next to all three options as shown above.
Work with the Data Dictionary Glossary by File

About Working with the Data Dictionary Glossary by File

When using the Universal File Converter, small details often differ for each file. Keeping these details clear, especially when the conversion form might be used by another department, is a potential problem. To remedy this, J.D. Edwards has made it possible to attach data dictionary glossary text to each data item that explains the details particular to that specific file.

To work with the Data Dictionary Glossary by file perform the following tasks:

- Access the Data Dictionary Glossary by file
- Add a file specific glossary item
- Print the Data Dictionary Glossary information
Accessing the Data Dictionary Glossary by File

To access the Data Dictionary Glossary by file

1. From the Universal File Converter menu, type DD and press Enter.
   The Data Dictionary Repository screen appears.

2. Press F10 to display the glossary definition of the data item you selected.

Use the Data Item Glossary Revisions form to change the glossary text for a Data Dictionary item or to add a File-Specific glossary item.
Adding a File Specific Glossary Item

To add a File Specific glossary item

1. Type A in the Action Code field.
2. Type the file name in the Scrn/Rpt field.
3. Type the new text and press Enter.

Printing the Data Dictionary Glossary Information

To print the Data Dictionary glossary information

2. Complete the Processing Options Revisions form.
   Type 1 next to all three options to print the Data Dictionary glossary.
   Option 2 prints the File-Specific glossary text.
Appendices
Appendix A — Common & Production Library Files

This appendix lists the files that are automatically created in the common and production libraries during the installation process.

Chart A — Common Library Files Automatically Created by J.D. Edwards Build Programs

The following chart contains files automatically generated as a result of a build program that J.D. Edwards offers from a menu. It is recommended that these files be maintained in your common library.

<table>
<thead>
<tr>
<th>File Name</th>
<th>File Description</th>
<th>System Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>F98FRF@</td>
<td>Field Reference – '@' Data Items</td>
<td>98</td>
</tr>
<tr>
<td>F98FRFS</td>
<td>Field Reference – '$' Data Items</td>
<td>98</td>
</tr>
<tr>
<td>F98FRF thru</td>
<td>Field Reference – 'A' Data Items through</td>
<td>98</td>
</tr>
<tr>
<td>F98FRFZ</td>
<td>Field Reference – 'Z' Data Items</td>
<td>98</td>
</tr>
</tbody>
</table>
Chart B – Physical and Logical Files Created in a Common Library

The following chart shows the physical and the logical files that were created in a Common Library if one was specified for the Create User Data Libraries selection on menu A9645. Logical Files contain no data. Therefore, data copied is N.

<table>
<thead>
<tr>
<th>File Name</th>
<th>File Description</th>
<th>Copy Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>F0002</td>
<td>Next Numbers – Automatic</td>
<td>Y</td>
</tr>
<tr>
<td>F0004</td>
<td>User Defined Code Types</td>
<td>Y</td>
</tr>
<tr>
<td>F0004D</td>
<td>User Defined Codes – Alternate Language Desc</td>
<td>Y</td>
</tr>
<tr>
<td>F0005</td>
<td>User Defined Codes</td>
<td>Y</td>
</tr>
<tr>
<td>F0005D</td>
<td>User Defined Codes – Alternate Language Desc</td>
<td>Y</td>
</tr>
<tr>
<td>F0005LA</td>
<td>LF – System Code, Desc Title Type, Desc., Desc Title</td>
<td>N</td>
</tr>
<tr>
<td>F0016</td>
<td>Generic Text File</td>
<td>N</td>
</tr>
<tr>
<td>F00161</td>
<td>Generic Text Window Definition File</td>
<td>Y</td>
</tr>
<tr>
<td>F00162</td>
<td>Generic Text Key Definition File</td>
<td>Y</td>
</tr>
<tr>
<td>F00163</td>
<td>Generic Text Key Index File</td>
<td>N</td>
</tr>
<tr>
<td>F00163LA</td>
<td>Generic Text Key Index File – LF By Key Serial Number</td>
<td>N</td>
</tr>
<tr>
<td>F00164</td>
<td>Generic Text Key Index File (120 character key)</td>
<td>N</td>
</tr>
<tr>
<td>F00164LA</td>
<td>Generic Text Key Index File – LF by Key Serial Number</td>
<td>N</td>
</tr>
<tr>
<td>F0082</td>
<td>Menu Master</td>
<td>Y</td>
</tr>
<tr>
<td>F00821</td>
<td>Menu Selection Detail</td>
<td>Y</td>
</tr>
<tr>
<td>F0083</td>
<td>Menu Selection Text</td>
<td>Y</td>
</tr>
<tr>
<td>F0082H</td>
<td>Menu Selection History</td>
<td>N</td>
</tr>
<tr>
<td>F0090HL@</td>
<td>LF – Combined Sequences</td>
<td>N</td>
</tr>
<tr>
<td>F0090L@</td>
<td>LF – Job To Execute</td>
<td>N</td>
</tr>
<tr>
<td>F009141</td>
<td>Word Search Occurrences Master</td>
<td>Y</td>
</tr>
<tr>
<td>F009141S</td>
<td>Word Search Occurrences Master – Dist Supplemental</td>
<td>N</td>
</tr>
<tr>
<td>F009190</td>
<td>Word Search Occurrences Master</td>
<td>Y</td>
</tr>
<tr>
<td>F009191</td>
<td>Question &amp; Answer Search Occurrence Master</td>
<td>Y</td>
</tr>
<tr>
<td>F009198</td>
<td>Question &amp; Answer Search Occurrence Master</td>
<td>Y</td>
</tr>
<tr>
<td>F0095</td>
<td>Open File Directory</td>
<td>Y</td>
</tr>
<tr>
<td>F009690</td>
<td>Menu Word Search Master</td>
<td>Y</td>
</tr>
<tr>
<td>File Name</td>
<td>File Description</td>
<td>Copy Data</td>
</tr>
<tr>
<td>------------</td>
<td>------------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>F009690LA</td>
<td>LF – By Key and Search Word</td>
<td>N</td>
</tr>
<tr>
<td>F009691</td>
<td>Question &amp; Answer Word Search Master</td>
<td>Y</td>
</tr>
<tr>
<td>F009691LA</td>
<td>LF – By Key and Search Word</td>
<td>N</td>
</tr>
<tr>
<td>F009698</td>
<td>Word Search Master – Question and Answer Data Base</td>
<td>N</td>
</tr>
<tr>
<td>F009698LA</td>
<td>LF – By Key and Search Word</td>
<td>N</td>
</tr>
<tr>
<td>F009790</td>
<td>Word Search Verbs</td>
<td>Y</td>
</tr>
<tr>
<td>F0098</td>
<td>ASI Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F0098LA</td>
<td>LF – System Code, Job to Execute</td>
<td>N</td>
</tr>
<tr>
<td>F0098LB</td>
<td>LF – Release, Type, System Code</td>
<td>N</td>
</tr>
<tr>
<td>F12601</td>
<td>WF – STAR</td>
<td>Y</td>
</tr>
<tr>
<td>F12601LA</td>
<td>LF – SK01 through SK09</td>
<td>N</td>
</tr>
<tr>
<td>F12601LB</td>
<td>LF – STAR Logical Over Workfile</td>
<td>N</td>
</tr>
<tr>
<td>F12603</td>
<td>STAR General Specifications Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F12603LA</td>
<td>LF – STAR General Specifications Master File</td>
<td>N</td>
</tr>
<tr>
<td>F12604</td>
<td>STAR – Column Specification Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F12605</td>
<td>STAR – Row Specifications Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F12606</td>
<td>STAR – Cell Specifications Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F12607</td>
<td>STAR – Row Creation File</td>
<td>Y</td>
</tr>
<tr>
<td>F12608</td>
<td>WF – STAR – Balance Auditor</td>
<td>Y</td>
</tr>
<tr>
<td>F12609</td>
<td>STAR – Print Image File</td>
<td>Y</td>
</tr>
<tr>
<td>F81900</td>
<td>DREAM Writer – Performance Statistics Master</td>
<td>Y</td>
</tr>
<tr>
<td>F81900LA</td>
<td>DREAM Writer – Performance Statistics</td>
<td>N</td>
</tr>
<tr>
<td>F81901</td>
<td>DREAM Writer Statistics Detail</td>
<td>Y</td>
</tr>
<tr>
<td>F81901LA</td>
<td>LF – File and Keys</td>
<td>N</td>
</tr>
<tr>
<td>F81902</td>
<td>DREAM Writer – Statistics Detail Accumulator</td>
<td>Y</td>
</tr>
<tr>
<td>F83JOIN</td>
<td>FASTR – Format File for Open Query Dynamic Join</td>
<td>Y</td>
</tr>
<tr>
<td>F83JOINA</td>
<td>FASTR – Format File for Open Query Dynamic Join</td>
<td>Y</td>
</tr>
<tr>
<td>F83JOINB</td>
<td>FASTR – Format File for Open Query Dynamic Join</td>
<td>Y</td>
</tr>
<tr>
<td>F83WORK</td>
<td>FASTR – Work File Save Data</td>
<td>Y</td>
</tr>
<tr>
<td>F83WORKB</td>
<td>FASTR – Work File Save Data</td>
<td>Y</td>
</tr>
<tr>
<td>File Name</td>
<td>File Description</td>
<td>Copy Data</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>F8301</td>
<td>WF – FASTR</td>
<td>Y</td>
</tr>
<tr>
<td>F8302</td>
<td>WF – Level of Detail</td>
<td>Y</td>
</tr>
<tr>
<td>F8303</td>
<td>FASTR General Specifications Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F8303LA</td>
<td>LF – FASTR General Specifications Master File</td>
<td>N</td>
</tr>
<tr>
<td>F8304</td>
<td>FASTR – Column Specifications Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F8305</td>
<td>FASTR – Row Specifications Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F8306</td>
<td>FASTR – Cell Specifications Master File</td>
<td>Y</td>
</tr>
<tr>
<td>F8307</td>
<td>FASTR – Row Creation File</td>
<td>Y</td>
</tr>
<tr>
<td>F8308</td>
<td>WF – FASTR – Balance Auditor</td>
<td>Y</td>
</tr>
<tr>
<td>F8309</td>
<td>FASTR – Print Image File</td>
<td>Y</td>
</tr>
<tr>
<td>F8310</td>
<td>WF – FASTR – Balance Auditor</td>
<td>Y</td>
</tr>
<tr>
<td>F8350</td>
<td>FASTR – Cost Center Organizational Chart</td>
<td>Y</td>
</tr>
<tr>
<td>F8410</td>
<td>DDP Routing Master</td>
<td>Y</td>
</tr>
<tr>
<td>F8415</td>
<td>DDP Transfer File Setup</td>
<td>Y</td>
</tr>
<tr>
<td>F9200</td>
<td>Data Item Master</td>
<td>Y</td>
</tr>
<tr>
<td>F9200JA</td>
<td>JF – Data Item (F9203 F9200)</td>
<td>N</td>
</tr>
<tr>
<td>F9200JB</td>
<td>JF – Data Item (F9200 F9205) Error Messages Only</td>
<td>N</td>
</tr>
<tr>
<td>F9200JC</td>
<td>JF – Data Item (F9203 F9200)</td>
<td>N</td>
</tr>
<tr>
<td>F9200JD</td>
<td>JF – Data Item (F9201 F9200)</td>
<td>N</td>
</tr>
<tr>
<td>F9200LA</td>
<td>LF – Glossary Group, Data Item</td>
<td>N</td>
</tr>
<tr>
<td>F9200LB</td>
<td>LF – System Code, Data Item</td>
<td>N</td>
</tr>
<tr>
<td>F9201</td>
<td>Data Field Specifications</td>
<td>Y</td>
</tr>
<tr>
<td>F9201JA</td>
<td>JF – Data Item (F9202 F9201)</td>
<td>N</td>
</tr>
<tr>
<td>F9201LA</td>
<td>LF – Data Edit Rule, ER Spec 1, ER Spec 2</td>
<td>N</td>
</tr>
<tr>
<td>F9201LB</td>
<td>LF – Data Item Class, Data Item</td>
<td>N</td>
</tr>
<tr>
<td>F9202</td>
<td>Data Field Display Text</td>
<td>Y</td>
</tr>
<tr>
<td>F9203</td>
<td>Data Item Alpha Descriptions</td>
<td>Y</td>
</tr>
<tr>
<td>F9204</td>
<td>Data Item Aliases</td>
<td>Y</td>
</tr>
<tr>
<td>F9204LA</td>
<td>LF – Alias Type, Alias, Data Item</td>
<td>Y</td>
</tr>
<tr>
<td>F9205</td>
<td>Data Dictionary – Error Message Program ID</td>
<td>Y</td>
</tr>
<tr>
<td>File Name</td>
<td>File Description</td>
<td>Copy Data</td>
</tr>
<tr>
<td>------------</td>
<td>-------------------------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>F9220</td>
<td>Screen/Report Text Master</td>
<td>Y</td>
</tr>
<tr>
<td>T9220</td>
<td>Screen/Report Text Master</td>
<td>Y</td>
</tr>
<tr>
<td>F92710</td>
<td>Action Diagramming Translation Master</td>
<td>Y</td>
</tr>
<tr>
<td>F93000</td>
<td>Model Program Definition Master</td>
<td>Y</td>
</tr>
<tr>
<td>F93000LA</td>
<td>LF – Model Program Definition – X–Ref</td>
<td>N</td>
</tr>
<tr>
<td>F93001</td>
<td>Source Code Inventory Master</td>
<td>Y</td>
</tr>
<tr>
<td>F93001LA</td>
<td>LF – Primary Source Key</td>
<td>N</td>
</tr>
<tr>
<td>F93002</td>
<td>Additional Help/Modifications Master</td>
<td>N</td>
</tr>
<tr>
<td>F93002LA</td>
<td>LF – Primary, Secondary and Serial Number</td>
<td>N</td>
</tr>
<tr>
<td>F93003</td>
<td>WF – Source Merge Monitor</td>
<td>N</td>
</tr>
<tr>
<td>F93004</td>
<td>User Defined Entry Point Source Code Master</td>
<td>Y</td>
</tr>
<tr>
<td>F93101</td>
<td>General Purpose/Type Parameters</td>
<td>N</td>
</tr>
<tr>
<td>F93101LA</td>
<td>LF – Program ID by Program Type</td>
<td>N</td>
</tr>
<tr>
<td>F93102</td>
<td>File Specifications</td>
<td>N</td>
</tr>
<tr>
<td>F93103</td>
<td>Data Base Format Parameters</td>
<td>N</td>
</tr>
<tr>
<td>F93103LA</td>
<td>LF – Program ID, Format Name, File Name</td>
<td>N</td>
</tr>
<tr>
<td>F93104</td>
<td>Program Exit Parameters</td>
<td>N</td>
</tr>
<tr>
<td>F93105</td>
<td>Detail Program Logic Parameters</td>
<td>N</td>
</tr>
<tr>
<td>F93105LA</td>
<td>LF – Program ID, Data Field Name</td>
<td>N</td>
</tr>
<tr>
<td>F93105LB</td>
<td>LF – Program ID, File Name, Key Position</td>
<td>N</td>
</tr>
<tr>
<td>F93105LC</td>
<td>LF – Program ID, Clear After, Field Name</td>
<td>N</td>
</tr>
<tr>
<td>F93105LD</td>
<td>LF – Program ID, Field Type, Field Name</td>
<td>N</td>
</tr>
<tr>
<td>F93105LE</td>
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<td>F93105LF</td>
<td>LF – Program ID, Data Field Name</td>
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<td>LF – Program ID, Data Field Name</td>
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<td>LF – Data Field Parameters LF – #DDICT, #DDFTY</td>
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<td>LF – Program ID, Field Name</td>
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<td>LF – Program ID, Field Name, File Name</td>
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<td>F93105LL</td>
<td>LF – Program ID, Data Item</td>
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<td>File Description</td>
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<td>F9501</td>
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<td>LF – Pgm ID, Library, User</td>
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<td>LF – Library, Pgm ID, User</td>
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<td>LF – User, Pgm ID, Library</td>
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</tr>
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<td>F9501LE</td>
<td>LF – Execution Date, Execution Time</td>
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<td>Function Key Translation Master</td>
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</tr>
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<td>F9601D</td>
<td>Function Key Definitions – Alternate Language Desc</td>
<td>Y</td>
</tr>
<tr>
<td>F9611</td>
<td>Function Key Translation Detail</td>
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</tr>
<tr>
<td>F9611LA</td>
<td>LF – Function Key Field Name, Screen Name</td>
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<td>F9612</td>
<td>Function Key Security</td>
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<td>LF – Function Key Security</td>
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<td>F9620LA</td>
<td>LF – File, Field, and Format</td>
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<td>LF – File, Format, and Field</td>
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<td>LF – By Formats</td>
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<td>F9701</td>
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<td>F98HELP</td>
<td>Help Instructions Master File</td>
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<tr>
<td>F98HEPLA</td>
<td>LF – Help Instructions Master File</td>
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<td>F9800Y</td>
<td>Data Dictionary (Field Reference)</td>
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<tr>
<td>F98001</td>
<td>Cross–Reference Relationships</td>
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## Appendix A — Common & Production Library Files

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<th>File Name</th>
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<td>F98001LA</td>
<td>LF – Cross–Reference Relationships</td>
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<td>LF – Cross–Reference Relationships</td>
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<td>LF – Cross–Reference Relationships</td>
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<td>F98001LD</td>
<td>LF – Cross–Reference Relationships</td>
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<td>F98002</td>
<td>Cross–Reference File Information</td>
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<td>LF – Cross–Reference Relationships</td>
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<td>F98002LB</td>
<td>LF – Cross–Reference Relationships</td>
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<td>F98002LC</td>
<td>LF – Cross–Reference Relationships</td>
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</tr>
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<td>F98003</td>
<td>Cross–Program Field Information</td>
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<td>LF – Cross–Reference Program Field Information</td>
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<td>F98003LB</td>
<td>LF – Cross–Reference Program Field Information</td>
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</tr>
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<td>F98003LC</td>
<td>LF – Cross–Reference Program Field Information</td>
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<td>F98009</td>
<td>CASE Profiles File</td>
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<td>F9801</td>
<td>Software Versions Repository Master</td>
<td>Y</td>
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<tr>
<td>F9801JA</td>
<td>JF – Member ID (F9801, F9802)</td>
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<tr>
<td>F9801L@</td>
<td>LF – Functional Usage/System/Function/Member ID</td>
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<tr>
<td>F9801LA</td>
<td>LF – Future Planning – Software Inventory Master</td>
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</tr>
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<td>F9801LB</td>
<td>LF – Functional Usage/System/Function/Member ID</td>
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<td>Software Inventory Master Logical–Sys, Base, MID</td>
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<td>F9801LD</td>
<td>LF – Function Code, Member ID</td>
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<td>F9801LE</td>
<td>LF – File Prefix, Member ID</td>
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</tr>
<tr>
<td>F9801LF</td>
<td>LF – Function Code, System Code, Member ID</td>
<td>N</td>
</tr>
<tr>
<td>F9801LG</td>
<td>LF – Member ID</td>
<td>N</td>
</tr>
<tr>
<td>F9801LH</td>
<td>LF – Member Suffix, Member ID</td>
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<td>LF – Reporting System, Member Suffix, Member ID</td>
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<td>F9801LJ</td>
<td>LF – Member ID (System Code=2 bytes)</td>
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<td>F98012</td>
<td>SVR Member Category Codes</td>
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<td>SVR Member Parm/Key List</td>
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<td>F9802LA</td>
<td>LF – SAR/MID</td>
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<td>File Name</td>
<td>File Description</td>
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<td>F9802LB</td>
<td>LF – Version/Type</td>
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<td>F9805</td>
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<td>Report Writer Combined Versions List</td>
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<td>F9816</td>
<td>Data Dictionary Generic Text File</td>
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<td>F98163</td>
<td>Data Dictionary Generic Text Key Index File</td>
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<td>DD Generic Text Key Index File – LF by Key Serial Num</td>
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<td>Report Writer Version Selection Definition</td>
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<td>DREAM Writer Master Parameter</td>
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<td>LF – Record Type, Program, Version and Sequence No</td>
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<td>LF – Program ID, Version, Type, Prompt Line – Window</td>
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<td>LF – Program ID, Version, Option #</td>
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<td>LF – Key on Form Id &amp; FldName</td>
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<td>DREAM Writer – Processing Options (Language Pref)</td>
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<td>F98303</td>
<td>DREAM Writer – Version Headings (Language Pref)</td>
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<td>F9831</td>
<td>DREAM Writer Values Parameter</td>
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<td>F98311</td>
<td>DREAM Writer – Headings File</td>
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<td>F98312</td>
<td>DREAM Writer – Printer Overrides</td>
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<td>Dialogue Description Master</td>
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<td>F98501LA</td>
<td>LF – Dialogue Type, Member, Data Item</td>
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<tr>
<td>F98501LB</td>
<td>LF – Data Item, Member ID</td>
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<td>Dialogue Question Master</td>
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<td>Dialogue Question Responses</td>
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<td>LF – Keys: Mid, DtaI, Nxts</td>
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The following chart shows the physical and the logical files that were created in Production Library with data. Logical files contain no data, therefore data copied is N.

<table>
<thead>
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<td>General Constants</td>
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<td>Company Constants</td>
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<td>LF – System, Sequence No., Item No., Com</td>
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<td>F063920</td>
<td>Payroll Archive Version File</td>
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<td>W–2 Audit Report File</td>
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<td>F06723LA</td>
<td>W–2 Audit Report File (vers)</td>
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<tr>
<td>F069016</td>
<td>Tax Area Constant</td>
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<td>F069016A</td>
<td>LF – Tax Area Code</td>
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<td>F069016B</td>
<td>LF – Tax Area Code</td>
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<td>F069016C</td>
<td>LF – Statutory Code, Tax Type</td>
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<td>F06917</td>
<td>Tax Payment Schedule File</td>
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<td>F126JOIN</td>
<td>STAR – Join format file for F1201 &amp; F1202</td>
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<td>F1510</td>
<td>Property Management Constants</td>
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<td>F200001</td>
<td>Energy Constants Revisions</td>
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<td>Interest Type Constants</td>
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<td>Product Codes Constants</td>
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<td>Revenue/Prod Trans Typ Constants</td>
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<td>WPT Inflation Factor Constants</td>
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<td>F230002</td>
<td>Tax and Deduction Profile Constants</td>
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<td>Tax Rates Constants</td>
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<td>LF – Tax Code, Effective Date</td>
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<td>Inquiry Formats</td>
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<td>Inquiry Paths</td>
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<td>F82100</td>
<td>Query Header File</td>
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<td>Query Data File Selections</td>
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<td>Query Data File Join Fields</td>
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<td>F82103</td>
<td>Query Output Print Fields</td>
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<td>Query Output Print Field Calculations</td>
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<td>F82105</td>
<td>Query Data Selection Fields</td>
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<td>Query Data Selection Values</td>
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<td>F82107</td>
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<td>Query Field Summary Functions</td>
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<tr>
<td>F82109</td>
<td>Query File Update Specifications</td>
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</table>
Appendix B – Upgrading Customized Source Code

J.D. Edwards provides you access to several complementary products. If you have customized J.D. Edwards source code, the following products will help you upgrade your source code.

S/Compare

Overall, S/Compare is a valuable aid used to:

- Identify differences between any two programs
- Simplify the task of documenting program changes
- Simplify the task of consolidating your custom changes into new releases of programs
- Identify differences between the names of the programs in two different files to quickly locate added or deleted programs in the new release

The S/Compare utility is specifically designed to compare two versions of source code. It will locate inserted, deleted, changed, or moved records in a source program. Processing options are provided to include or exclude comment lines, blank lines, and formatting differences. S/Compare’s output clearly identifies differences between two source members on a composite list of both programs. An option allows the records that are the same in the programs to be omitted from the listing to produce a report of only the differences between the files. This option also allows a given number of matching records on each side of a mismatch to be listed to help in identifying the section of source code.
Features of S/Compare

Some of the features and capabilities of S/Compare are:

Flags are used in the composite listing to clearly mark statements or blocks of statements that have been inserted, deleted, or moved.

Records that are moved from one location in the original file to another in the new program are indicated by source and target locations.

Printing large blocks of identical code can be eliminated by a processing option. Only the differences will be printed and you can control the number of matching lines that are listed before and after each block of mismatched code.

Differences between your program and the new program can be listed in an edit program.

There is a processing option that can eliminate mismatches being printed because of spacing between words.
Harmonizer

Harmonizer adds to the capabilities of S/Compare by allowing the comparison of 3 to 16 program versions. Like S/Compare, the comparison results are written in a format that clearly depicts the differences between source members. In addition, Harmonizer has the capability of merging program versions to generate a composite source member. You can control what is written to the composite source member when potential conflicts are found.

Features and Capabilities of Harmonizer

Some of the features and capabilities of Harmonizer are:

- The comparison of 3 to 16 versions of a program.
- Two report formats are available. The MULTI–Compare report compares 3 to 16 programs. The TRI–Compare report is specifically designed for 3 programs.
- Statements from the original file that have been replaced, inserted, or deleted are noted on the comparison reports.
- All of the features of S/Compare are supported by Harmonizer when 3 programs are being compared, except the creation of an edit program which has been replaced by the creation a composite output program.
- The composite program may be compiled immediately or it may be edited. The ScmpEdit utility can be used to remove specified code in the composite program.
- The HARMONIZER command can be used to execute S/Compare and Harmonizer making the utilities easier to use.

Harmonizer Added to S/Compare

You can incorporate your program changes into new releases easier. Harmonizer can compare the J.D. Edwards original program, the J.D. Edwards new release, and your customized program to produce a composite source file and a composite report. The composite report notifies you of discrepancies in the replacement, insertion, or deletion of code.

The Source File Synopsis report produces a comparison of the program names in the J.D. Edwards original source file, the J.D. Edwards new source file, and your source file to determine any additions or deletions of programs.

You can merge the development work of several programmers working on the same program.
About Harmonizer Plus

Harmonizer Plus adds to the capabilities of S/Compare and Harmonizer by helping you manage the ENTIRE process of building a new software release.

About the Project Manager Feature

The Project Manager feature will display an up-to-the-minute status of every program in your upgrade project. It shows:

- Which merged objects need a programmer review due to conflicts between local changes and vendor changes.
- Modified objects that are already created and ones that need to be created.
- Objects that are ready for production.
- Unmodified objects that must be recreated because they are dependent on modified objects.
- Objects that must be present before the object you are working with can be created.

Additional Functions

Harmonizer Plus provides a workbench for programmers to perform a variety of functions. Given the proper authority, a programmer can:

- Directly access SEU for editing programs.
- Mass compile entire groups of programs.
- Selectively compile individual programs.
- Selectively create all objects dependent on a modified object.
- Add or delete programs from the new production version.

Harmonizer Plus identifies unchanged modules that must be recompiled due to changes in prerequisite objects. For example, if you have modified DDS, Harmonizer Plus can identify programs that reference the related files. It can then recompile those programs. All you need to do is test and move the new libraries into production.
## J98MODEL1 – Interactive Video

<table>
<thead>
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Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt
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Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt

### J98MODEL3 – Interactive Video Prompt

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Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt
J98MODEL4 – Interactive/Batch with Processing Options

9801 Software Versions Repository

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<thead>
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Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt

J98MODEL5 – Batch Report Writer – No DDS File

9801 Software Versions Repository

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Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt
### J98MODEL6 – Batch Report Writer OPNQRYF

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| Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt |

### J98MODEL7 – Batch Report Writer OPNQRYF w/OQF Reset

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| Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt |
J98MODEL8 – Control File Driven Batch Process

Action Code. . .  I
Member ID. . .  J98MODEL8
Description. . . Model CL Program – Control File Driven Batch Process
Function Code. . CLP  CL Programs
Function Use . . J98  Model Source Member
System Code. . . 98  Technical Tools
Reporting System 98  Technical Tools
Base Member Name J98MODEL8  File Prefix. . .

O  Source     Object     Source       SAR    Version    S D    User      Date
P Library     Library     File     Number     ID       CP     ID     Modified
JDFSRC73      JDFOBJ73    JDESRC    867923     A73      1       BECK     07/07/95

Opt: 1=Browse 2=Edit 3=Copy 5=SAR 8=Print 9=Dlt 10=Design 14=Crt
Glossary
Glossary

This glossary defines terms in the context of your use of J.D. Edwards systems and the accompanying user guide.

AAI. See Automatic Accounting Instructions.

access. To get to the information or functions provided by the system through menus, screens, and reports.

activity levels. The activity level of a storage pool is the number of jobs that can run at the same time in a storage pool. The machine manages the control of this level. Often during processing in a job, a program waits for a system resource or a response from a workstation user. During such waits, a job gives up its use of the storage pools in order that another job that is ready to be processed can take its place.


advanced operating system. A single integrated operating system which contains: relational database, display manager, storage manager, communication manager, work manager, security manager and other managers.

AEC. Architectural, Engineering and Construction group.

allocating pools. If the system cannot allocate all the requested storage, it allocates as much storage as is available and allocates all the other as storage becomes available.

alphabetic character. Represents data by using letters and other symbols from the keyboard (such as *&@). Contrast with numeric character.

alphanumeric character. Represents data in a combination of letters, numbers, and other symbols (such as *@#).

ANSI. American National Standards Institute.

answers. Remember the online education system on the AS/400. All you need to remember is the command, GO SUPPORT.

AP. Accounts Payable.

APD. Application Program Driver.

API. An application programming interface describes the means by which a programmer can access the features provided by the interfaced object.

APPC. Advanced Program to Program Communications.

application. A collection of computer programs that allows you to perform specific business tasks. Some examples of applications are accounts payable, inventory, and order processing. Synonymous with system.

APPN. Advanced Peer-to-Peer Networking.

AS/400. Application System/400.

AS/400 Office. An IBM word processing program.

ASCII. American Standard Code for Information Interchange.

ASPs. Auxiliary Storage Pools.

attributes. To regard as belonging.

attribute byte. First character on a display field. This character controls how the field is displayed.

audit trail. The detailed, verifiable history of a processed transaction. The history consists of the original documents, transaction entries, and posting of records, and usually concludes with a report.

authority. The right to do some thing on the system or to use an object in the system, such as a file or a program.

automatic accounting instruction (AAI). A code that points to an account in the chart of accounts. AAI s define rules for programs that automatically generate journal entries. This includes interfaces between Accounts Payable, Accounts Receivable, and Financial Reporting and the General Accounting system. Each
system that interfaces with the General Accounting system has AAs. For example, AAs can direct the Post to General Ledger program to post a debit to a certain expense account and an automatic credit to a certain accounts payable account.

**autostart job entry.** A job is automatically started each time the subsystem is started.

**ATC.** Area Training Coordinator.

**AR.** Accounts Receivable.

**backup copy.** A copy of original data preserved on a magnetic tape or diskette as protection against destruction or loss.

**BAPR.** Approved Budget Field Description.

**BASIC.** Beginners Application Software Introduction Class.

**batch.** A group of like records or transactions that the computer treats as a single unit during processing. For identification purposes, the system usually assigns each batch a unique identifier, known as a “batch number.”

**batch header.** Information the computer uses as identification and control for a group of transactions or records in a batch.

**batch job.** A task or group of tasks you submit for processing that the system treats as a single unit during processing, for example, printing reports and purging files. The computer performs these tasks with little or no user interaction.

**batch processing.** A method by which the computer selects jobs from the job queue, processes them, and writes output to the outqueue. Contrast with interactive processing.

**batch type.** A code that designates which J.D. Edwards system the associated transactions pertain to, thus controlling what records are selected for processing. For example, in the Post General Journal process, only unposted transaction batches with a batch type of G for General Accounting are selected for posting.

**bit.** Binary digit. Either a zero or a one at the MI level.

**Bomb.** Fail.

**Boolean logic operand.** In J.D. Edwards DREAM Writer, the parameter of the Relationship field. The Boolean logic operand tells the system to perform a mathematical calculation on certain records or parameters. Available operands are:

- **EQ** = Equal To
- **LT** = Less Than
- **LE** = Less Than or Equal To
- **GT** = Greater Than
- **GE** = Greater Than or Equal To
- **NE** = Not Equal To
- **NL** = Not Less Than
- **NG** = Not Greater Than

**BORG.** Original/Beginning Budget Field

**BPC.** Budget Pattern Code.

**BREQ.** Requested Budget Field Description.

**B/S.** Balance Sheet.

**buffer.** A reserved memory area used for performing input/output operations.

**business unit.** Formerly cost center.

**Caching.** Refers to the use of a technique to locally store the results of input and output operations to minimize the use of slower accesses to disk drives and other storage devices.

**CAD/CAP.** Computer Assisted Design/Computer Assisted Programming. A set of automated programming tools for designing and developing applications. These tools automate system design, generate source code and documentation, enforce design standards, and help to ensure consistency throughout all J.D. Edwards systems.

**category code.** In user defined codes, a temporary title for an undefined category. For example, if you are adding a code that designates different sales regions, you could change category code 4 to Sales Region, and define E (East), W (West), N (North), and S (South) as the valid codes. Category codes were formerly known as reporting codes.

**CC.** Cost center. *Now known as Business Unit.*

class. Any letter, number, or other symbol that a computer can read, write, and store.

class, special. Representation of data in symbols that are neither letters nor numbers. Some examples are: *&###/.

CLONE. Crazy Logic Only Nerds Enjoy. (Old term for the Program Generator.)

COBOL. Common Business Oriented Language.

Column. See field.

class. A character, word, phrase, or combination of keys you use to tell the computer to perform a defined activity.

compile. To change source code into computer readable code.

constants. Parameters or codes that rarely change. The computer uses constants to standardize information processing by an associated system. Some examples of constants are allowing or disallowing out-of-balance postings and having the system perform currency conversions on all amounts. Once you set constants such as these, the system follows these rules until you change the constants.


CPG. Complementary Products Group.

CRP. Capacity Requirements Planning.

CRP. Conference Room Pilot. A simulation of the client’s business in a conference room environment.

CUA. Common User Access. IBM’s specification of a user interface definition across applications.

CUM. A representation of changes to J.D. Edwards software, which your organization receives on magnetic tapes or diskettes.

current library. Specifies a single library that is searched before any other user libraries in the library list. A current library is optional and can be different for each user or job. On displays, the current library is represented by the value CURLIB.

cursor. The blinking underscore or rectangle on your screen that indicates where the next keystroke appears.

class sensitive help. See field help.

data. Numbers, letters, or symbols that represent facts, definitions, conditions, and situations, that a computer can read, write, and store.

data item. A code which represents a field, file, program, menu message, error message or help text stored in the data dictionary. Each piece of information within the database is defined by a data item. Data item name definition is limited to four characters in the J.D. Edwards systems to allow for program manipulation of the item.

database. A continuously updated collection of all information a system uses and stores. Databases make it possible to create, store, index, and cross-reference information online.

data character. A pattern of 8 bits.

data dictionary. A database file consisting of the definitions, structures, and guidelines for the usage of fields, messages, and help text. The data dictionary file does not contain the actual data itself.

data field. A collection of data characters.

data Integrity. Refers to checking the relationships between data items (fields) and being sure that values correlate correctly.

data validation. Determining if data is correct when compared to a set of conditions.

DDE. Dynamic Data Exchange.

DDM. Distributed Data Management.
DDP. Distributed Data Processing.

DDS. Data Description Specifications.

default. A code, number, or parameter the system supplies when you do not enter one. For example, if an input field’s default is N and you do not enter something in that field, the system supplies an N.

descriptive title. See user defined code.

detail. The individual pieces of information and data that make up a record or transaction. Contrast with summary.

DFU. Data File Utility. An IBM product.

DIF. Data Interchange Format.

display. (1) To cause the computer to show information on a terminal’s screen. (2) A specific set of fields and information that a J.D. Edwards system might show on a screen. Some screens can show more than one display when you press a specified function key.

display field. A field of information on a screen that contains a system-provided code or parameter that you cannot change. Contrast with input field.

DMA. Direct Memory Access.

DNS. Do Not Spread.

DOS. Disk Operating System.

DREAM Writer. Data Record Extraction And Management Writer. A flexible data manipulator and cataloging tool. You use this tool to select and sequence the data that is to appear on a programmed report.

DRP. Distribution Requirements Planning.

Dynamic. Is constantly changing.

DASD. Data Auxiliary Storage Device.

ECS. Electronic Customer Support.

edit. (1) To make changes to a file by adding, changing, or removing information. (2) The program function of highlighting fields into which you have entered inadequate or incorrect data.

EDI. Electronic Data Interchange. The transmission of business documents among computers of independent organizations.

EFT. Electronic Fund Transfer.

EIS. Executive Information System.

Engagement letter. A letter identifying the mutual understandings and initial expectation of the client and J.D. Edwards.

environment. The list of files required by a user to perform certain tasks. For example, a programmer has access to a test environment and an environment which includes live data. Each environment utilizes a different set of files.

execute. See run.

exit. (1) To interrupt or leave a computer program by pressing a specific key or a sequence of keys. (2) An option or function key displayed on a screen that allows you to access another screen.

facility. A collection of computer language statements or programs that provides a specialized function throughout a system or throughout all integrated systems. Some examples DREAM Writer and FASTR.

Fast Path Mnemonics. A method of using a UDC to define execution to a J.D. Edwards program.


FDA. File Design Aid. A J.D. Edwards design tool.

field. (1) An area on a screen where you type in data, values, or characters. (2) A defined area, usually within a record, which can contain a specific piece of information such as name, document type or amount. For example, a vendor record consists of the fields Vendor Name, Vendor Address and Telephone Number. The field Vendor Name contains only the name of the vendor. See input field and display field. Also known as column.
**field help.** J.D. Edwards online Help function, which lets you view a description of a field, its purpose and, when applicable, a list of the valid codes that you can enter. You access this information by pressing F1 with the cursor positioned in the field.

**file.** A collection of related data records organized for a specific use and electronically stored by the computer. Also known as table.


**fold area.** An area of a screen, accessed by pressing F4, that displays additional information associated with the records or data items displayed on the screen.

**function.** A separate feature within a facility that allows you to perform a specific task, for example, the field help function.

**function key.** A key you press to perform a system operation or action. For example, you press F4 to have the system display the fold area of a screen.

**Form.** One World term for video.

**glossary.** The collection of text related to specific data items. The glossary contains help text and message text.

**GL.** General Ledger.

**GA.** General Accounting.

**GST.** Goods & Service Tax.

**GUI.** Graphical User Interface.

**hard code.** Program instructions which can only be altered by a programmer. The altered instructions must then recompiled so the computer can understand them.

**hard copy.** A presentation of computer information printed on paper. Synonymous with printout.

**header.** Information at the beginning of a file. This information is used to identify or provide control information for the group of records that follows.

**help instructions.** Online documentation or explanations of fields that you access by pressing the Help key or by pressing F1 with your cursor in a particular field.

**helps.** See help instructions.

**hidden selections.** Menu selections you cannot see until you enter HS in a menu’s Selection field. Although you cannot see these selections, they are available from any menu. They include such items as Display Submitted Jobs (33), Display User Job Queue (42), and Display User Print Queue (43). The Hidden Selections window displays three categories of selections: user tools, operator tools, and programmer tools.

**HMC.** Horizontal Microcode.

**HS.** J.D. Edwards Hidden Selections.

**ICCC.** InterCompany Cost Center. Now known as business unit.

**ICF.** Intersystem Communication Function.

**ICH.** InterCompany Hub.

**IDDU.** Interactive Data Definition Utility – IBM Product.

**IMP.** Internal Microprogram Load.

**IMPI.** Internal Microprogramming Interface.

**Implementation Methodology.** Nine steps to provide J.D. Edwards consulting staff with a guide for implementing the software in a thorough and consistent manner.

**input.** Information you enter in the input fields on a screen or that the computer enters from other programs, then edits and stores in files.

**input field.** An area on a screen, distinguished by underscores ( _ _ ), where you type data, values, or characters. A field
represents a specific type of information such as name, document type, or amount. Contrast with *display field*.

**install system code.** The four-character identifier of a J.D. Edwards system. For example, 01 for the Address Book system, 04 for the Accounts Payable system, and 09 for the General Accounting system. *Now known as system code.*

**integrity.** Soundness, completeness.

**interactive job.** An interactive job starts when a user signs on a display station and ends when the user signs off. During the job, the user interacts with the system.

**interactive processing.** A job the computer performs in response to commands you enter from a terminal. During interactive processing, you are in direct communication with the computer, and it might prompt you for additional information during the processing of your request. See *online*. Contrast with *batch processing*.

**interface.** A link between two or more J.D. Edwards systems that allows these systems to send information to and receive information from one another.

**I/O.** Input/Output.

**IPL.** Initial Program Load.

**ITF.** Interactive Terminal Facility.

**JDE.** Jack, Dan and Ed. Founders of JD Edwards & Co.

**jargon.** A J.D. Edwards term for system-specific text. You base your jargon help text on a specific reporting code you designate in the Data Dictionary Glossary. You can display this text as part of online help. You create your jargon text descriptions and titles for data items through the Data Dictionary, menu and vocabulary overrides record using a reporting system code. Jargon text descriptions and titles for data items display on screens as field names.

**job.** A single identifiable set of processing actions you tell the computer to perform. You start jobs by choosing menu selections, entering commands, or pressing designated function keys. An example of a computer job is check printing in the Accounts Payable system.

**job description.** An object consisting of a set of specifications about a computer job and its executing environment.

**job log.** A job log is a record of requests (such as commands) submitted by the system by a job, the messages related to the requirements and the actions performed by the system on the job.

**job queue.** A group of jobs waiting to enter a subsystem.

**Join logical file.** Presents composite records consisting of fields extracted from two or more physical records from two or more physical files.

**justify.** To shift information you enter in an input field to the right or left side of the field. Many of the facilities within J.D. Edwards systems justify information. The system does this only after you press Enter.

**KBG.** Knowledge-Based Generator. See *program generator*.

**key field.** A series of identifying or controlling characters a computer uses to retrieve related information tied to the key. An employee number, for example, is a key field consisting of references to other files in the system that contain information about the given employee.

**Key General Ledger Account (Key G/L).** See *automatic accounting instructions*.

**LAN.** Local Area Network.

**leading zeros.** A series of zeros that certain facilities in J.D. Edwards systems place in front of a value you enter. This normally occurs when you enter a value that is smaller than the specified length of the field. For example, if you enter 4567 in a field that accommodates
eight numbers, the facility places four zeros in front of the four numbers you enter. The result would look like this: 00004567.

**level check.** A mechanism of the OS/400 that assures that a file version and program using that file are in sync with one another.

**level of detail.** (1) The degree of difficulty of a menu in J.D. Edwards software. The levels of detail for menus are as follows:
- A=Major Product Directories
- B=Product Groups
- 1=Daily Operations
- 2=Periodic Operations
- 3=Adv/Tech Operations
- 4=Computer Operations
- 5=Programmers
- 6=Advanced Programmers

Also known as *menu levels.* (2) The degree to which account information in the General Accounting system is summarized. The highest level of detail is 1 (least detailed) and the lowest level of detail is 9 (most detailed).

**library.** A library groups objects. A library is an object itself. Similar to directory on a PC.

**library list.** An ordered list of libraries used for locating objects. Similar to path on a PC.

**LIOM.** Line Input/Output Manager.

**LOD.** Level of Detail.

**logical file.** Contains no data, but provides a view of one or more physical files upon which it is based.

**master file.** A computer file that a system uses to store data and information which is permanent and necessary to the system’s operation. Master files might contain data or information such as paid tax amounts and vendor names and addresses.

**MDA.** Menu Design Aid. A J.D. Edwards design tool.

**menu.** A screen that displays numbered selections. Each of these selections represents a program. To access a selection from a menu, type the selection number and then press Enter.

**menu levels.** See *level of detail.*

**menu masking.** A security feature of J.D. Edwards systems that allows you to prevent individual users from accessing specified menus or menu selections. When this security is in effect for a user, the selections that have been secured do not appear on the screen.

**menu message.** Text that appears on a screen after you make a menu selection. It displays a warning, caution, or information about the requested selection.

**menu traveling.** A method of moving between menus by typing the menu identifier in the selection field of the screen.

**MI.** Machine Interface.

**MRP.** Manufacturing Resource Planning.

**MRPx.** J.D. Edwards Manufacturing Software.

**MVS.** Multiple Virtual Storage.

**next number facility.** A J.D. Edwards software facility you use to control the automatic numbering of such items as new G/L accounts, vouchers, and addresses. It lets you specify your desired numbering system and provides a method to increment numbers to reduce transposition and typing errors.

**non-join logical file.** Presents records that are composed of fields extracted from just one physical record, but can effectively merge two or more physical files.

**numeric character.** Represents data using the numbers 0 through 9. Contrast with *alphabetic character* and *alphanumeric character.*

**object.** A discrete entity.

**object existence.** The right to delete an object from the system.

**object management.** The right to change the name or library of an object, for physical files, the right to create a logical file over it.

**object operational.** The right to display the description of an object and the right to the general use of that object.
object orientation. Everything on the AS/400 system that can be stored or retrieved is contained in an object.

offline. Computer functions that are not under the continuous control of the system. For example, if you were to run a certain job on a personal computer and then transfer the results to a host computer, that job would be considered an offline function. Contrast with online.

One Step Install. A method developed to make our software easier to install.

online. Computer functions over which the system has continuous control. Each time you work with a J.D. Edwards system-provided screen, you are online with the system. Contrast with offline. See interactive processing.

online information. Information the system retrieves, usually at your request, and immediately displays on the screen. This information includes items such as database information, documentation, and messages.

Open Application Architecture. An architectures that uses a functional server to allow the various blocks of user interface logic to access the same block of data integrity logic.

operand. See Boolean logic operand.

option. A numbered selection from a J.D. Edwards screen that performs a particular function or task. To select an option, you enter its number in the Option field next to the item you want the function performed on. When available, for example, option 4 lets you return to a prior screen with a value from the current screen.

OS/400. Operating system for the AS/400.

OS/2. Operating system for the IBM personal computer.

OSI. Open Systems Interconnection.

output. Information the computer transfers from internal storage to an external device, such as a printer or a computer screen.

output queue. A group of spool files waiting to be attached to a writer.

override. The process of entering a code or parameter other than the one provided by the system. Many J.D. Edwards systems offer screens that provide default field values when they appear. By typing a new value over the default code, you can override the default. See default.

PACO. Posted After Cutoff.

parameter. A number, code, or character string you specify in association with a command or program. The computer uses parameters as additional input or to control the actions of the command or program.

password. A unique group of characters that you enter when you sign on to the system that the computer uses to identify you as a valid user.

PBCO. Posted Before Cutoff.

PC. Personal computer.

PDM. Program Development Manager. IBM design tool.

PDM. Product Data Management – a module of J.D. Edwards software.

physical file. A file that contains actual data records. Has a maximum record length of 32K, maximum fields per record is 8000.

Plug-&-Go. A 2/18/92 announcement where J.D. Edwards selects PROGRESS to develop client applications for the AS/400. The plug–&–go format offers clients the J.D. Edwards Core financial solutions on the IBM AS/400 E series model.

PPAT. People, Places and Things.

printout. A presentation of computer information printed on paper. Synonymous with hard copy.

print queue. A group of items waiting to be printed. See output queue.

processing options. A feature of the J.D. Edwards DREAM Writer that lets you supply parameters to direct the functions of a program. For example, processing options allow you to specify defaults for certain screen displays.
control the format in which information gets printed on reports, change the way a screen displays information, and enter “as of” dates.

**Product Library.** A library containing programs and related data needed for IBM licensed programs that are installed on your system.

**Production Library.** A production library is a library you create to contain your live J.D. Edwards data files.

**Production Environment.** A list of libraries that contains “live” programs and data.

**Program.** A collection of computer statements that tells the computer to perform a specific task or group of tasks.

**Progress.** A software corporation that is a partner with J.D. Edwards. They are a leading supplier of 4th generation application development systems.

**Program Generator.** The World CASE system of programs which create a new program based upon user specifications.

**Program Help.** J.D. Edwards online facility which displays information about a program’s use and functionality.

**Program-Specific Help Text.** Glossary text written to describe the function of a field within the context of the program.

**Prompt.** (1) A reminder or request for information displayed by the system. When a prompt appears, you must respond in order to proceed. (2) A list of codes or parameters or a request for information provided by the system as a reminder of the type of information you should enter or action you should take.

**PTF.** See CUM.

**Purge.** The process of removing records or data from a file.

**PYEB.** Post Year End Balance.

**P&L.** Profit and Loss Statements.

**PG.** Program Generator.

**QA.** Quality Assurance.

**QJDF Data Area.** A space within the system to hold the system values information for the J.D. Edwards software. This area is referenced at sign-on and during installs and reinstalls for critical system information, such as security codes and initial libraries.

**QSECOFR.** The security officer of the AS/400.

**Query.** A fast means to select and display (or print) information from a database. An IBM utility for databases.

**Queue.** A list of things to be used in an order. See job queue, output queue, and print queue.

**RAID.** Redundant Array of inexpensive disks.

**RAM.** Random Access Memory.


**Read Only.** A type of access to data that allows it to be read but not copied, printed or modified.

**Rebuild.** The process of sequencing files, integrating recently added data.

**Record.** A collection of related, consecutive fields of data the system treats as a single unit of information. For example, a vendor record consists of information such as the vendor’s name, address, and telephone number. Also known as row.

**Record Format.** The definition of how data is structured in the records contained in a file.

**Record Level Locking.** Prevents two people from simultaneously updating the same data base information.

**REP.** Rapidly, Economically and Predictably.

**Reply List.** A system wide automatic message handler for the system.

**Recursive.** In DREAM Writer, the ability to create a unique version from the original, process the new version and delete it, leaving the original intact.
Advanced Programming Concepts and Skills

re-engineering modules. Programs written for the purpose of changing many existing programs in mass.

reporting system code. The four-character identifier of a J.D. Edwards system that uses an object for reporting.

REQIO. Request Input/Output.

reverse image. Screen text that displays in the opposite color combination of characters and background from what the screen typically displays (for example, black on green instead of green on black).

RIBA. Ricevuta Bancaria Elettronica — common way for vendors to receive payments from their customers in Italy.

ROM. Read Only Memory.

ROW. See record.

RPG. Report Program Generator. A programming language developed by IBM.

Rumba. A PC Emulator for the AS/400.

run. To cause the computer to perform a routine, process a batch of transactions, or carry out computer program instructions.

SAA. Systems Application Architecture.

SAR. See Software Action Request.

server. A program that speeds the flow of data between screens, reports and the data files. These programs can also be used to edit data fields.

scroll. To use the roll keys to move screen information up or down a screen at a time. When you press the Rollup key, for instance, the system replaces the currently displayed text with the next screen of text if more text is available.

SDA. Screen Design Aid Utility. An IBM product.

selection. Found on J.D. Edwards menus, selections represent functions that you can access from a given menu. To make a selection, you type its associated number in the Selection field and press Enter.

SEU. Source Entry Utility.

SIC. Standard Industry Code.

SIOM. Station Input/Output Manager.

Ski Slope. Reflects the analogy between the diverse nature of a ski slope and the diverse nature of our software. S levels: Basic, Intermediate, Advanced, Computer Operations and Program Modifications.

SNA. Systems Network Architecture.

SNADS. Systems Network Architecture Distribution Services.

Sleeper. A subsystem which activates jobs set to run during off-peak hours.

softcoding. A J.D. Edwards term that describes an entire family of features that lets you customize and adapt J.D. Edwards software to your business environment. These features lessen the need for you to use computer programmers when your data processing needs change.

software. The operating system and application programs that tell the computer how and what tasks to perform.

Software Action Request. A record which identifies an activity, such as the development of a new program or maintenance of an existing program.

Software Security Code. A code that restricts user access to software.

special character. Representation of data in symbols that are neither letters nor numbers. Some examples are * & # /.

spool. Simultaneous Peripheral Operations On Line. The function by which the system puts generated output into a storage area to await printing or processing.

spooled file. A holding file for output data waiting to be printed or input data waiting to be processed.

SQL. Structure Query Language.

STAR. Spreadsheet Tool for Asset Reporting.
subfile. An area on the screen where the system displays detailed information related to the header information at the top of the screen. Subfiles might contain more information than the screen can display in the subfile area. If so, use the roll keys to display the next screen of information. See scroll.

submit. See run.

subsystem. An operating environment where jobs are run.

summary. The presentation of data or information in a cumulative or totaled manner in which most of the details have been removed. Many of the J.D. Edwards systems offer screens and reports that are summaries of the information stored in certain files.

SVR. Software Versions Repository.

system. A collection of computer programs that lets you perform a specific business function, such as Accounts Payable, Inventory, or Order Processing. Synonymous with application.

system library. Lists libraries containing objects, such as user profiles, that are used by the system. This part of a library list is defined by the system value QSYSLIBL and is usually the same for all jobs.

Simplified Install. J.D. Edwards new way to install J.D. Edwards software. Also called one step Install.

SME. Subject Matter Expert.

T/B. Trial Balance.

Table. One World term for a file.

UNIX. A multi-user, multi-tasking operating system.

Unscheduled PTF. A form of PTF that includes fixed for a particular system.

UPS. Uninterruptible power source.

user class/group. Place to enter group profiles associated with J.D. Edwards Users.

user defined code. The individual codes you create and define within a user defined code type. Code types are used by programs to edit data and allow only defined codes. These codes might consist of a single character or a set of characters that represents a word, phrase, or definition. These characters can be alphabetic, alphanumeric, or numeric. For example, in the user defined code type table ST (Search Type), a few codes are C for Customers, E for Employees, and V for Vendors.

user defined code (type). The identifier for a table of codes with a meaning you define for the system (for example, ST for the Search Type codes table in Address Book). J.D. Edwards systems provide a number of these tables and allow you to create and define tables of your own. User defined codes were formerly known as descriptive titles.

user index. An object that stores data, allows search functions, and automatically sorts data based upon a key value.

user identification (user ID). The unique name you enter when you sign on to a J.D. Edwards system to identify yourself to the system. This ID can be up to 10 characters long and can consist of alphabetic, alphanumeric, and numeric characters.

user library. A libraries that contains objects, such as files and programs used by the user.

user profile. A file of information which identifies the user to the J.D. Edwards system. This file is used to validate the users authority within the system.

user space. An object made up of a collection of bytes used for storing user-defined information.

user type. A code which identifies a list of files which remain open while the user is signed on to the system.

valid codes. The allowed codes, amounts, or types of data that you can enter in a specific input field. The system checks, or edits, user defined code fields for accuracy against the list of valid codes.

version. A specific release of software. Usually numbered in ascending order.

VCS. Version Control System.
**Vertex.** Callable routines and tables that calculate US PIR taxes.

**video.** The display of information on your monitor screen. Normally referred to as the *screen*.

**VM.** Virtual Machine.

**VMC.** Vertical Microcode.

**vocabulary overrides.** A J.D. Edwards facility that lets you override field, row, or column title text on a screen-by-screen or report-by-report basis.

**WACO.** Way After Cutoff.

**WAN.** Wide Area Network.

**window.** A software feature that allows a part of your screen to function as if it were a screen in itself. Windows serve a dedicated purpose within a facility, such as searching for a specific valid code for a field.

**writer.** A J.D. Edwards printer attached to an outqueue.

**World Vision.** A complementary product that converts graphical user interfaces to J.D. Edwards business applications for the AS400.

**World VISTA.** A windows-based direct access to J.D. Edwards data on the AS/400.


**XREF.** Cross reference tool for J.D. Edwards software.

**YTD.** Year to Date.
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