Oracle® WebDB™

Tutorial Guide

Release 2.2

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ORACLE

Oracle WebDB Tutorial Guide, Release 2.2

Part No. A77075-01

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- Did you find any errors?
- Is the information clearly presented?
- Do you need more information? If so, where?
- Are the examples correct? Do you need more examples?
- What features did you like most about this manual?

If you find any errors or have any other suggestions for improvement, please indicate the part number, chapter, section, and page number (if available). You can send comments to us by electronic mail to webdbdoc@us.oracle.com

If you have problems with the software, please contact your local Oracle World Wide Support Center.

Welcome To Oracle WebDB!

Welcome to Oracle WebDB! This guide will help get you started with Oracle WebDB Release 2.2.

This preface includes the following sections:

Intended Audience

This guide is intended for a variety of users, from database administrators (DBAs) to Web site content creators.

Before you begin the tutorial, you should read the preface "Oracle WebDB Basic Concepts" to gain a basic understanding of WebDB and general advice on how to use the product. After that, you only need to read those chapters that relate to your particular role. To find out which chapters you should read, see "Structure" on page xii.

Prerequisites

You should be familiar with using your Web browser. For example, you should know how to start your Web browser and be familiar with the basic user interface elements such as hypertext links.

In addition:

- If you are a DBA, you should be familiar with Oracle database administration concepts such as users, roles, profiles, and tablespaces.
- If you are a component developer, you should have a basic understanding of SQL and be familiar with objects in the database.

Tutorial Setup

Before you begin the exercises in this tutorial, you or your DBA must set up the tutorial environment. Instructions for this are provided in Appendix A, "Tutorial Setup Instructions".

Structure

This book teaches you how to use WebDB in the following chapters:

Chapter	Contents	Who Should Read This Chapter?
Chapter 1, "Managing Users"	Exercises to create a new user, add a user to a role, grant privileges to a user, and create a new role.	DBAs who will be managing WebDB users.
Chapter 2, "Building and Browsing Database Objects"	Exercises to build a table and a procedure, query the table, and execute the procedure.	Developers who will be building WebDB applications. Developers who will be building and browsing database objects.
Chapter 3, "Building Components"	Exercises to build a form, a report, a chart, and a List of Values.	Developers who will be building WebDB applications. Developers who will be building WebDB components. **Note** To complete this chapter you must have completed Chapter 2, "Building and Browsing Database Objects".

Chapter	Contents	Who Should Read This Chapter?
Chapter 4, "Building Applications by Linking Components"	Exercises to build menus and links.	Developers who will be building WebDB applications. Developers who will be building links between WebDB components. **Note** To complete this chapter you must have completed Chapter 3, "Building Components".
Chapter 5, "Creating WebDB Sites"	Exercises to create and set up a new Web site.	DBAs who will be creating Web sites with WebDB.
Chapter 6, "Designing WebDB Sites"	Exercises to design the structure, define the style, and control access to a WebDB site.	Site administrators and folder owners who will be managing one or more folders of a WebDB site.
Chapter 7, "Managing WebDB Site Content"	Exercises to add and edit WebDB site content.	Contributors who will be adding content to a WebDB site. **Note** To complete this chapter, you must have completed Chapter 6, "Designing WebDB Sites".
Chapter 8, "Controlling Access to Oracle Reports"	Provides an overview of how to use Oracle WebDB to control access to Oracle Reports reports (and their associated Reports Servers and printers).	Oracle Reports administrator who is responsible for controlling access to Oracle Reports reports.
Chapter A, "Tutorial Setup Instructions"	Provides information on setting up the appropriate user accounts to perform tutorial tasks.	Database administrator on which WebDB is installed.

Conventions

The following typographical conventions are used in this guide:

Convention	Meaning
boldface	Used for emphasis. Also used for button names, labels, links, and other user interface elements.
italics	Used to introduce new terms. Also used enclosed in angled brackets (<>) to represent a variable. Substitute an appropriate value.
`courier`	Used to represent text you need to type. Also used for file names and directories.

Related Publications

You may also wish to refer to the following publications which are available in Adobe Portable Document Format (PDF) in the `\docs` directory on your WebDB CD-ROM, or orderable from Oracle.

Oracle WebDB publications

Part Number	Title	Description
A77054-01	*Oracle WebDB Release Notes*	Describes last minute changes to the product or documentation.
A77053-01	*Oracle Installation Guide*	Provides complete Oracle WebDB 2.2 installation instructions for both Windows NT or Solaris environments. Also, provides upgrade and site migration details, WebDB Listener installation and configuration, *inter*Media Text set up information, and WebDB CGI executable and WebDB cartridge to Oracle Application Server setup information.

Part Number	Title	Description
A77057-01	*Creating and Managing Components - Task Help*	Provides procedural help on the various tasks you can perform with WebDB.
A77055-01	*Creating and Managing Components - Field-Level Help*	Provides screen-specific help for each WebDB page.
A77056-01	*Creating and Managing Sites - Task Help*	Provides procedural help on the various tasks you can perform in WebDB sites.
A77058-01	*Creating and Managing Sites - Field-Level Help*	Provides screen-specific help for each WebDB site page.

Other Oracle publications

Part Number	Title
A58230-01	*Oracle Net8 Administrator's Guide*
A60172-02	*Oracle Application Server Administration Guide*
A67843-01	*Oracle8i interMedia Text Reference*
A67845-01	*Oracle8i interMedia Text Migration*

Oracle WebDB Basic Concepts

This preface introduces the basic concepts and navigational principles of Oracle WebDB and Web sites built with Oracle WebDB.

This preface includes the following sections:

What is Oracle WebDB?

Oracle WebDB is a complete solution for building, deploying, and proactively monitoring Web database applications and content-driven Web sites. WebDB provides a fast and easy way to "Web-enable" Oracle databases.

Manage database objects

Developers can create and view database objects through the easy-to-use, HTML-based WebDB interface. These objects include tables, views, procedures, functions, and triggers.

Develop HTML components

WebDB provides tools for creating HTML-based interfaces to database data. These interfaces include reports, forms, charts, and menus.

Build content-driven Web sites

Web sites created with WebDB (WebDB sites) are divided into manageable areas that can be delegated to individuals or groups. The tools for managing WebDB sites are provided within the site itself, enabling content creators to make changes to and ensure the quality of their own areas of the site, instead of relying on the Webmaster.

Track performance

DBAs can isolate and proactively resolve performance problems using the performance tracking facilities in WebDB. Information about individual components, Web pages, and their requestors is logged, and pre-built reports display their performance and security histories. DBAs can also create their own customized reports that display logged information.

Manage database security

DBAs can manage database roles, users, and privileges, as well as WebDB specific privileges and Web server settings, all through the WebDB interface.

Control access to Oracle Reports

Reports administrators can set up WebDB to control access to Oracle Reports reports (.RDF files), Reports Servers, and printers.

Why Use Oracle WebDB?

WebDB is easy to use, easy to access, and easy to administer. Wizards guide administrators and developers through tasks step-by-step. By lowering the amount of technical knowledge required to produce useful results and maintain a high quality of service, WebDB makes information readily available to everyone who has permission to see it.

Universal accessibility

The only software needed to develop and run WebDB applications and Web sites is a Web browser. WebDB is accessible from anywhere there is a network connection. Unauthorized access is prevented because WebDB leverages database security.

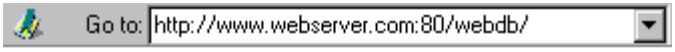
Reduced total cost of ownership

WebDB itself, as well as applications and Web sites created with WebDB are completely contained within the Oracle database. There is no need to install software on every machine being used. Thus, WebDB significantly reduces the amount of overhead usually associated with application rollout and maintenance.

Starting Oracle WebDB

1. Once WebDB has been installed, set up or obtain the following information from your DBA:
   - A user name
   - A password
   - The URL of your WebDB home page

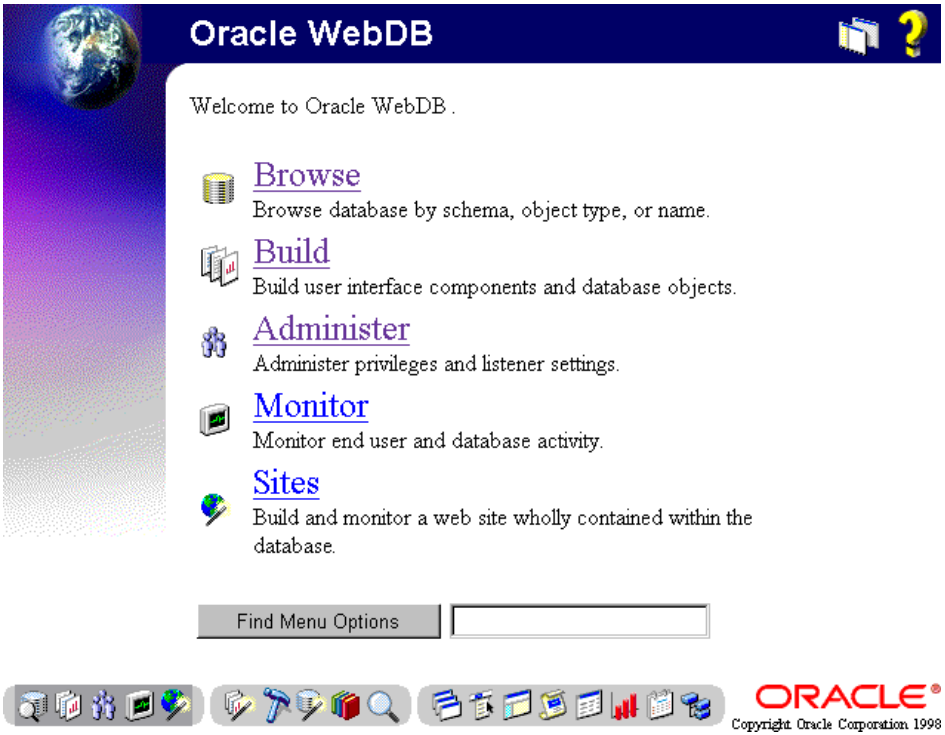
   For information about installing WebDB, see the *"Oracle WebDB Installation Guide."*
2. Start your Web browser.
3. In the Address or Location field of your browser, type the URL of your WebDB home page and press the Enter or Return key.



4. In the log on dialog box, type your user name and password and click **OK**.

   If your browser displays an error message, check that you've typed the information correctly, or ask your DBA to verify the information given to you.

If the connection is successful, your WebDB home page is displayed.



Tip: It is a good idea to bookmark your WebDB home page so that you do not have to type the URL each time you want to access it. If you do not know how to add a bookmark, see your Web browser documentation.

Exiting Oracle WebDB

To exit WebDB, simply close your Web browser, or navigate to a non-WebDB page.

- If you close your Web browser, you will automatically be logged off WebDB.
- If you navigate to a non-WebDB page, you will not be logged off WebDB. If you return to a WebDB page, you will still be logged on. For security reasons, you may want to log off WebDB before navigating to a non-WebDB page.

To log off Oracle WebDB:

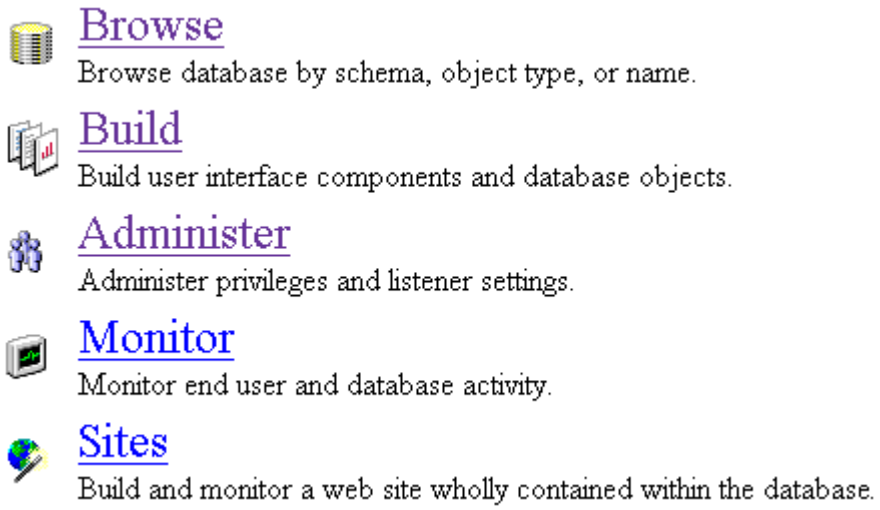
1. In the top left of any page, click the WebDB logo to display the Connection Information page.
2. Click **Log off**.

   If you return to a WebDB page, click your browser's Reload or Refresh button and you will be prompted for your user name and password.

Navigating in Oracle WebDB

WebDB's HTML interface makes it very easy to navigate within the product. The following list details some of the navigation tools offered:

- **Hypertext links**

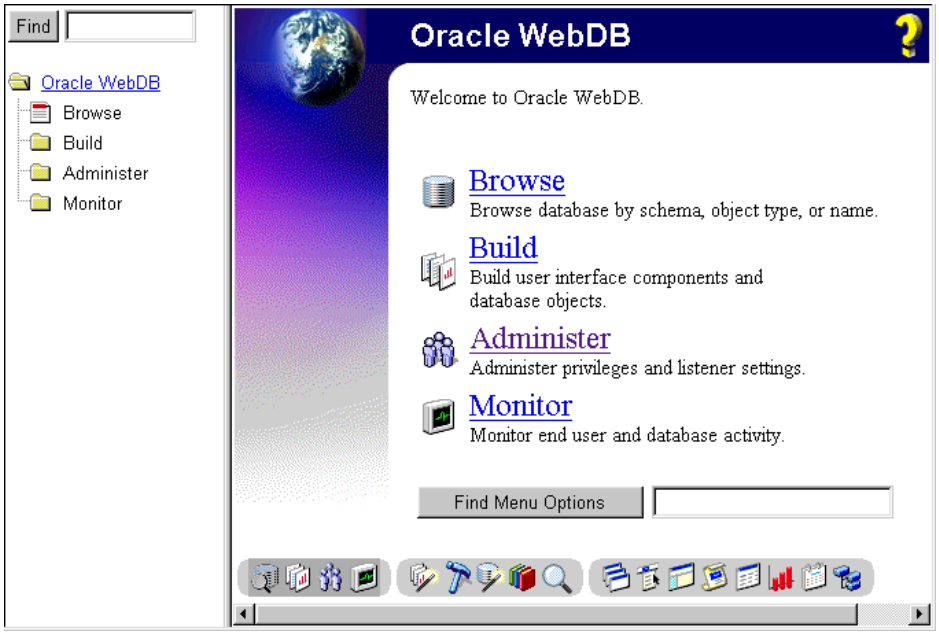


WebDB uses lists of hypertext links as menus to help you navigate through the product. The text below the link describes its destination in more detail.

- **Toolbar**

The toolbar is displayed at the bottom of most WebDB pages and provides access to the most commonly used menus and tools.

- **Home page navigation tree**



The navigation tree is a hierarchical menu displayed in a separate frame on the left side of the home page. You can use the navigation tree instead of the hypertext link menus if you prefer.

To activate the navigation tree, click  at the top right of your WebDB home page. To return to the full page view, click **Oracle WebDB** at the top of the navigation tree.

- **Home page Find Menu Options field**

The Find Menu Options field is displayed just above the toolbar on the WebDB home page. WebDB finds all the menu items that contain the text you type in the Find field. If you use the navigation tree instead of the hypertext link menus, the Find Menu Options field is displayed above the navigation tree in the left frame.

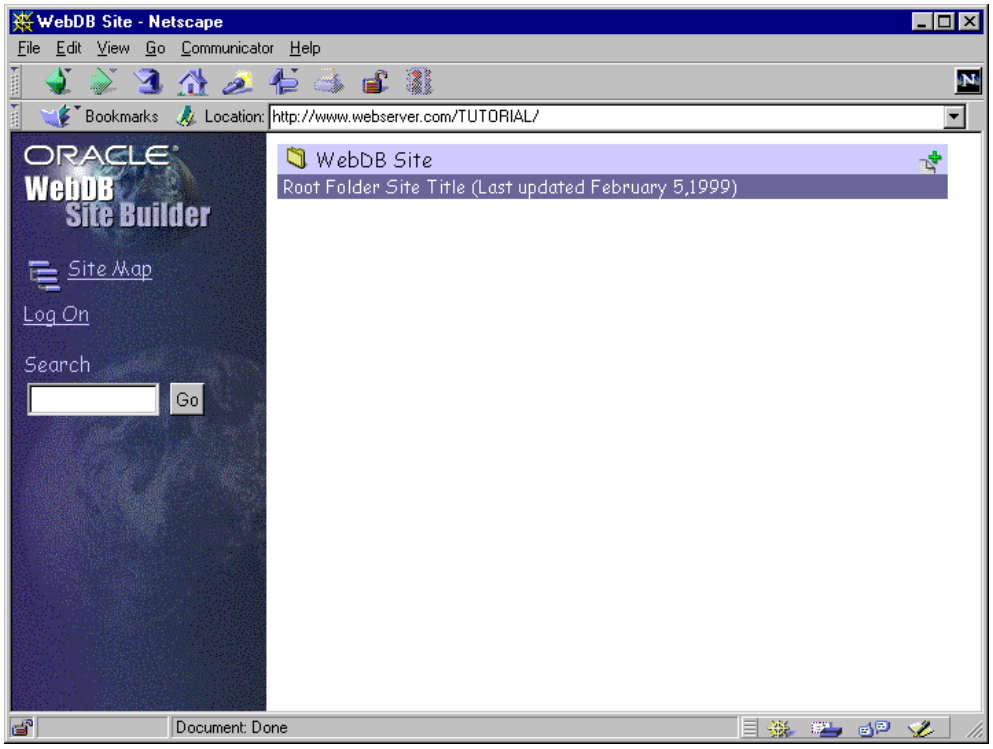
- **Link history**

The link history is a list of links displayed just above the toolbar that enable you to quickly return to the pages that precede the current page in the WebDB menu structure.

Tip: Wherever you are in WebDB, clicking  at the top right of any page always takes you to your WebDB home page.

Displaying an Oracle WebDB Site

You can use WebDB to create database-driven Web sites. Once you a WebDB site has been created, all other site management tasks are performed within the site itself.



A WebDB site is divided into *folders*. A folder is a collection of related *items*, including files, URLs of other Web pages, and WebDB components. You can enable users to log on to the site and thus control the content displayed to them:

- Users who are not logged on to the site can only view items in folders that have been marked as public.
- Users who are logged on to the site can view items in public folders and can also view items in folders where they have been granted view privileges. Logged on users can also be granted privileges to edit items in folders or administer folders or the entire WebDB site.

To display an Oracle WebDB site:

Once a WebDB site has been created, you display it in the same way as you display any other Web site or page. For information about creating WebDB sites, see Chapter 5, "Creating WebDB Sites".

1. Obtain the URL of the WebDB site from your DBA or site administrator.
2. Start your Web browser.
3. In the Address or Location field of your browser, type the URL of the WebDB site and press the Enter or Return key.

   The WebDB site home page is displayed and you can view items in public folders.

Tip: It is a good idea to bookmark the WebDB site home page so that you do not have to type the URL each time you want to access it. If you do not know how to add a bookmark, see your Web browser documentation.

To log on to an Oracle WebDB site:

If you are not logged on to the WebDB site, you can only view items in public folders. For greater access to the site, you must log on. Once you are logged on to the site, the tasks you can perform depend upon the privileges you have been granted.

Note: If you don't already have a user name for the site, ask your DBA or site administrator to set one up for you.

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1. In the WebDB site navigation bar, click **Log On**.
2. In the log on dialog box, type your user name and password and click **OK**.

   If your browser displays an error message, check that you've typed the information correctly, or ask your DBA or site administrator to verify your user information.

   If the connection is successful, you will now be able to view items in non-public folders and perform those tasks for which you have the appropriate privileges.

To access the Administration page:

If you are a site administrator, you can perform administrative tasks on the whole site. If you are a folder owner, you can perform administrative tasks only on the folders that you own.

1. Log on to the WebDB site.
2. In the navigation bar, click  to access the Administration page.

To enter Edit Mode:

If you have been granted the appropriate privileges by the folder owner, you can add, edit, or delete items in a folder.

1. Log on to the WebDB site.
2. In the navigation bar, click  to display the Site Map.

> **Note:** The Site Map lists only the folders that you can access. You can access public folders, folders on which you have been granted view or item privileges, and folders that you own.

3. Click the folder name to display the folder.

   Until you enter Edit Mode, you can only **view** the contents of the folder.
4. In the banner at the top of the page, click  to enter Edit Mode and display the folder dashboard.

   The folder dashboard provides quick access to the tools for editing a folder. Edit Mode also provides you with access to tools for editing the content of the folder.
5. To exit Edit Mode, in the folder dashboard click  .

Getting Help

WebDB includes a comprehensive online help system to provide you with all the information you need.

Help Type	Icon	Description
Online Help		Online help provides step-by-step instructions and reference information. You can access WebDB's online help by clicking the large question mark.
Context-sensitive Help		Context-sensitive help provides specific information about a particular page. You can access context-sensitive help by clicking the small question mark.
Quick Tour	<No icon>	The Quick Tour provides a visual introduction to the terminology, workflow, and concepts of WebDB. You can access the Quick Tour from the online help table of contents, or from the `\docs` directory on your WebDB CD-ROM.

Part I

Building Applications

Complete this chapter:	If you will be using Oracle WebDB to:
Chapter 1, "Managing Users"	Create database users and roles and assign privileges to users and roles.
Chapter 2, "Building and Browsing Database Objects"	Build database objects such as tables and procedures. Browse database objects.
Chapter 3, "Building Components"	Build components such as forms and reports. **Note** To complete this chapter, you must have completed some of the exercises in Chapter 2, "Building and Browsing Database Objects". We recommend that you complete all the exercises in Chapter 2 before starting Chapter 3.
Chapter 4, "Building Applications by Linking Components"	Build applications by linking components together with links and menus. **Note** To complete this chapter, you must have completed some of the exercises in Chapter 3, "Building Components". We recommend that you complete all the exercises in Chapter 3 before starting Chapter 4.

1

Managing Users

Estimated completion time: 30 minutes

This chapter shows you how to use Oracle WebDB to manage WebDB users. You'll learn how to create new users and give users task-related job privileges.

WebDB is installed in an Oracle database. To access WebDB, users must have a user account with a user name and password set up in the database where WebDB is installed. If a WebDB user does not already have a user account, you can use WebDB to create one. When you create a new user account, a *schema* is also created in the database which can be used to store database objects and WebDB components. The schema name is the same as the user name.

> **Note:** The terms user and schema are often used synonymously.

This chapter includes the following sections:

1.1 Before You Begin

- To complete this chapter, you must be a DBA (that is, you must be a member of the DBA role). If you are not a DBA, you will not be able to access WebDB's user, role, and privilege management features. If you need to be added to the DBA role, ask your DBA.
- At least one tablespace must exist to store database objects and to be used for temporary operations. If an appropriate tablespace does not already exist, create it now. We recommend that you create two tablespaces called USERS and TEMP.

  For information about how to create tablespaces, see your Oracle Server documentation.
- If you have not already started WebDB, follow the instructions in "Oracle WebDB Basic Concepts, Starting Oracle WebDB" on page xix.

1.2 Creating a New User

Users who already have a user account in the database can already log on to WebDB using their user name and password. You can use WebDB to create user accounts for new users and to manage existing user accounts, without ever having to leave your Web browser.

A new employee, MILLER, has joined your company. He does not have access to any databases and you have been asked to give him access to Oracle WebDB.

1. If you are not currently on your WebDB home page, click  at the top right of the page.
2. Click **Administer**.

Note: If you cannot see the **Administer** link, you are probably not a DBA. Ask your DBA to add you to the DBA role.

Tip: You can also click  in the toolbar at the bottom of any page to display the Administer page.

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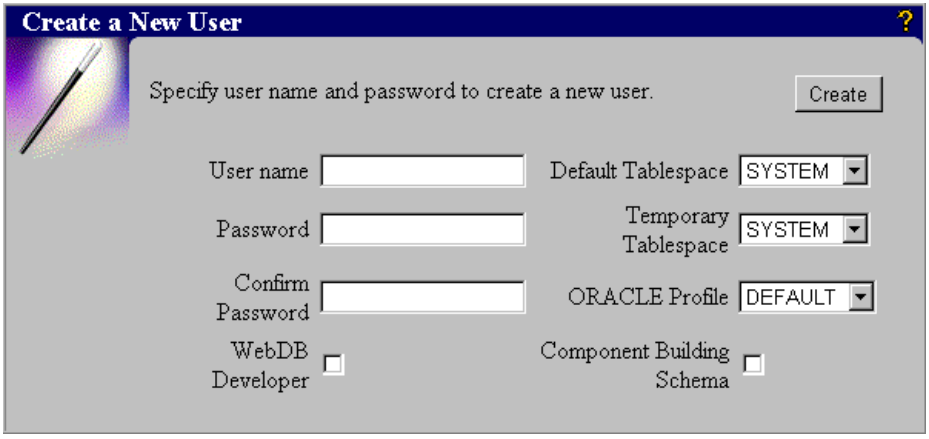
3. Click **User Manager**.

> **Note:** If you cannot see the **User Manager** link, you are probably not a DBA. Ask your DBA to add you to the DBA role.

The page displayed contains three panels. For this exercise you will use the Create a New User panel.



4. In the **User name** field, type `MILLER_<`*NAME*`>`, where *NAME* is your own user name.

   For the purposes of this tutorial, you add your own user name to the end to identify this user as the one created by you, rather than one created by another tutorial user.

> **Tip:** We recommend that you use a consistent naming convention for user names.

5. In the **Password** field, type `CHANGEME`.

   This is the password MILLER will use to log on to WebDB.

   > **Tip:** You should instruct new users to change their password the first time they log on.

6. In the **Confirm Password** field, type `CHANGEME` to confirm that this is the password you want to use.
7. In the **Default Tablespace** list, choose the tablespace to be used to store any database objects created by MILLER (for example, USERS).

   You, or another DBA, should have created this tablespace before you started this chapter. We recommend that all users use the same default tablespace.
8. In the **Temporary Tablespace** list, choose the tablespace to be used for temporary operations, such as sorting table rows (for example, TEMP).

   You, or another DBA, should have created this tablespace before you started this chapter. We recommend that all users use the same temporary tablespace.
9. In the **ORACLE Profile** list, make sure **DEFAULT** is selected.

   A *profile* specifies the amount of system and database resources available to a user. For more information about profiles, see your Oracle Server documentation.

10. Click **Create** to create the user account and display the User Manager, which you will use in the next exercise.

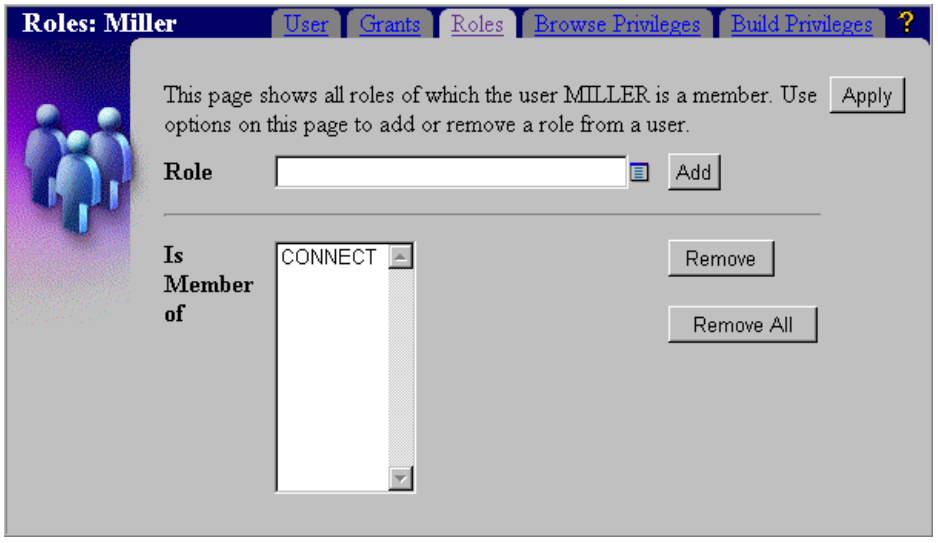
1.3 Adding a User to a Role

To use WebDB, a user must be a member of one of the following roles. These roles control the user's view of WebDB itself:

- The DBA role provides the user with access to all WebDB menus.
- The WEBDB_DEVELOPER role provides the user with access to the WebDB menus for building applications.

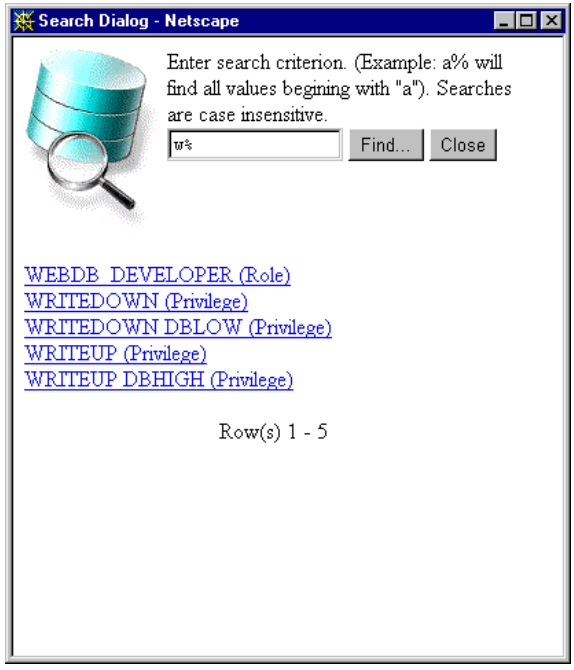
MILLER is a member of the Application Development department. As he will be building applications, he needs to be added to the WEBDB_DEVELOPER role.

1. In the User Manager, click the **Roles** tab.



2. Click  to display a list of the roles to which you can add MILLER.

Tip: You can restrict the search by typing search criteria in the field at the top of the list. For example, to find all roles beginning with W type W% in the field and click **Find**.



3. Click **Next** to page through the roles if necessary and click **WEBDB_DEVELOPER (Role)**.

   WEBDB_DEVELOPER is displayed in the **Role** field on the User Manager: Roles page.

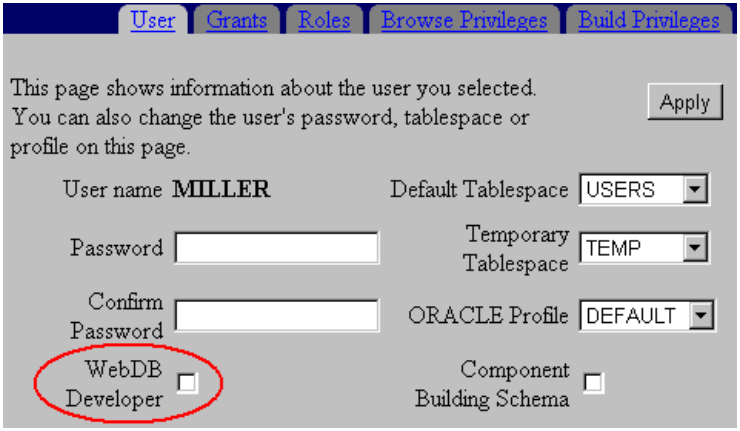
4. Click **Add** to add WEBDB_DEVELOPER to the **Is Member of** list.

   To add MILLER to more roles, you would repeat Steps 2 through 4 for each role. You can use the User Manager to add a user to any existing Oracle database role, not just those associated with WebDB.

5. Click **Apply** to save your changes.

WARNING: If you do not click Apply, your changes will not be preserved when you leave the current page of the User Manager.

Tip: The recommended method for adding a user to the WEBDB_DEVELOPER role is to check **WebDB Developer** on the User Manager: User page. This also grants the user Build In privileges on his or her own schema. You will learn about Build In privileges in Section 1.4, "Granting Browse In and Build In Privileges to a User" on page 1-9.



In this exercise you learned how to use the User Manager to add a single user to multiple roles. In Section 1.6.2, "Adding a user to a role" on page 1-15 you will learn how to use the Role Manager to add multiple users to a single role.

1.4 Granting Browse In and Build In Privileges to a User

Database objects and WebDB components are stored in database schemas. To view database objects, users need to be granted *Browse In privileges* on the schema that contains the object. To build objects and components in a schema, users need to be granted *Build In privileges* on the schema.

- Browse In privileges enable users to use the Browse feature to browse a schema for objects such as tables, views, and procedures on which a component will be based. Users can also browse for other objects such as functions or triggers that can be included in the component. By default, users have Browse In privileges in their own schema.

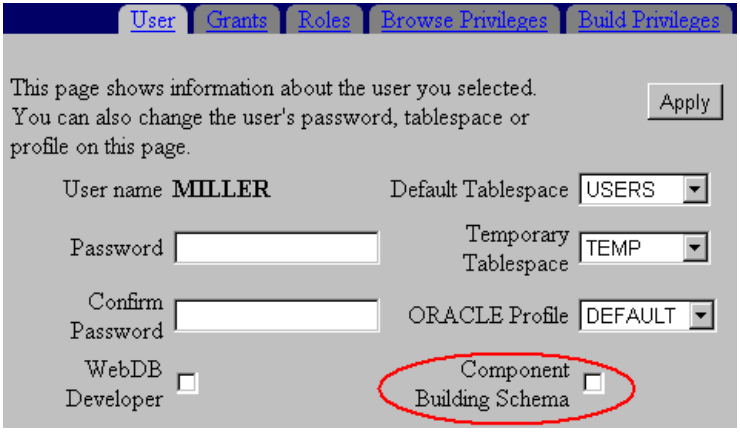
  Note: Browse In privileges only enable users to browse the schema. They **do not** enable users to build components based on or including database objects in the schema. To build a component based on objects in a schema, users must be building the component in one of the following:

  - The schema that contains the objects
  - A schema that has been explicitly granted database object privileges on the objects

  You'll learn how to grant database object privileges to a user in Section 1.5, "Granting Database Object Privileges to a User" on page 1-12.

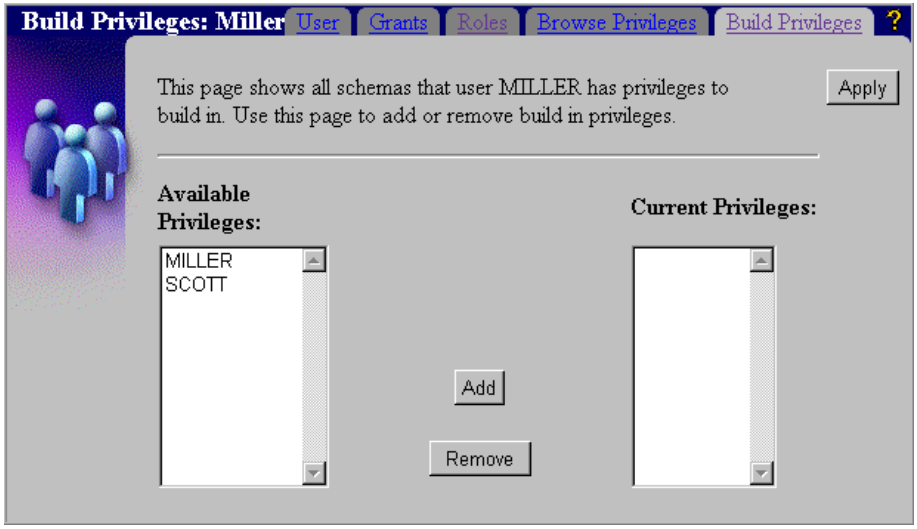
- Build In privileges enable users to build database objects and WebDB components in a schema. All components built in the schema are owned by that schema, regardless of who built them. Granting a user Build In privileges on a schema automatically grants the user Browse In privileges on the schema.

Note: To grant a user Build In privileges on a schema other than his or her own, the schema must have been identified as a *component schema*. To identify a schema as a component schema, check **Component Building Schema** on the User Manager: User page for the schema.



The Application Development department requires that all developers build their applications in the SCOTT schema. MILLER needs to be granted Build In privileges on that schema.

1. In the User Manager, click the **Build Privileges** tab.



   The **Available Privileges** list lists the schemas on which you can grant MILLER Build In privileges. You can grant a user Build In privileges on his or her own schema and on any component schema. The **Current Privileges** list lists the schemas on which MILLER already has Build In privileges.

2. In the **Available Privileges** list, choose **SCOTT**.

   Tip: You can choose more than one schema. For example in Microsoft Windows, press **Ctrl** and choose the schemas on which you want to grant the user Build In privileges.

3. Click **Add** to add the SCOTT schema to the **Current Privileges** list.

4. Click **Apply** to save your changes.

   WARNING: If you do not click Apply, your changes will not be preserved when you leave the current page of the User Manager.

> **Tip:** If you add a user to the WEBDB_DEVELOPER roles by checking **WebDB Developer** on the User Manager: User page, that user is automatically granted Build In privileges on his or her own schema. This is the recommended method for adding a user to the WEBDB_DEVELOPER role.

1.5 Granting Database Object Privileges to a User

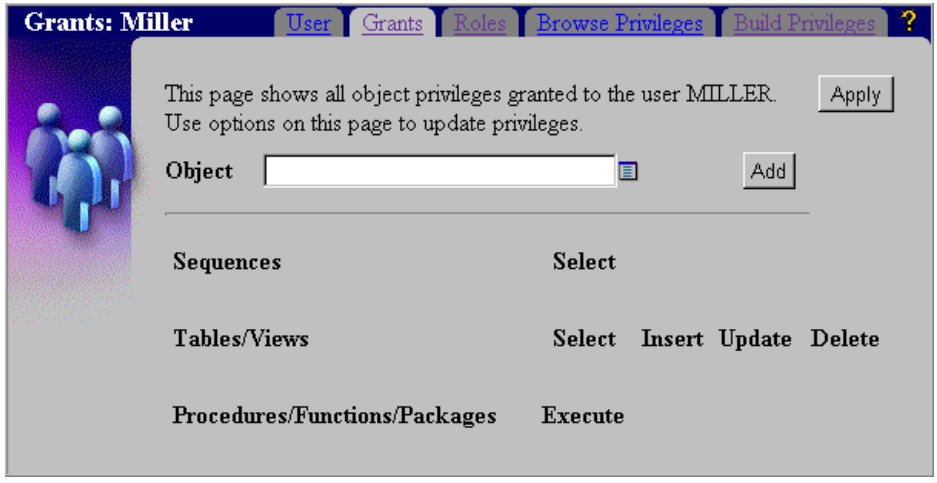
To build components based on database objects, the schema where the component will be stored must have the appropriate privileges on those objects. For example, to build a report in the SCOTT schema based on a table in the FRED schema, the SCOTT schema must be granted SELECT privileges on the table. A schema automatically has privileges on all database objects stored in it. For example, the SCOTT schema automatically has privileges on all database objects in the SCOTT schema.

> **Note:** These privileges must be explicitly granted directly to the schema. You cannot use roles to grant these privileges.

In the previous exercise you granted MILLER Build In privileges on the SCOTT schema. MILLER can now build a component in the SCOTT schema based on a table in the SCOTT schema, because the SCOTT schema automatically has privileges on all objects in the SCOTT schema.

However, if MILLER wants to build a component in his own schema (the MILLER schema) based on a table in the SCOTT schema, the MILLER schema needs to be **explicitly** granted privileges on the table (but remember before he can build components, MILLER also needs to be granted Build In privileges on the MILLER schema).

1. In the User Manager, click the **Grants** tab.



2. Click  to display a list of the objects on which you can grant MILLER privileges.
3. In the field at the top of the list type S% and click **Find** to find all objects that start with an S.
4. Click **Next** to page through the objects if necessary and click **SCOTT.EMP**.

   SCOTT.EMP is displayed in the **Object** field on the User Manager: Grants page.
5. Click **Add** to add SCOTT.EMP under **Tables/Views** (SCOTT.EMP is a table).
6. Check **Select**, **Insert**, **Update**, and **Delete** to grant MILLER those privileges on the table.

   To grant MILLER database object privileges on more objects, you would repeat Steps 2 through 6 for each object.
7. Click **Apply** to save your changes.

> **WARNING: If you do not click Apply, your changes will not be preserved when you leave the current page of the User Manager.**

In this exercise you learned how to use the User Manager to grant a single user database object privileges on multiple objects. You can use the Grant Manager

to grant multiple users database object privileges on a single object. For more information about the Grant Manager, see the WebDB online help.

1.6 Creating a new role

Developers may want to enable a group of users to run a component. For example, a developer might create a report to display employee information and want all members of the Human Resources department to be able to run the report. You can create a *role* and add each user in the group to the role. The developer can then grant execute privileges to the role, rather than to each individual user.

Developers can also use roles to provide menu security.

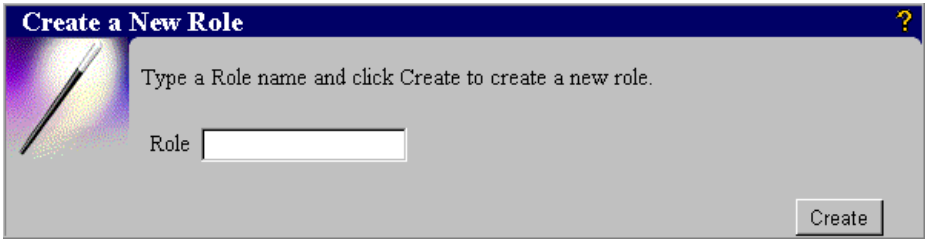
Note: In WebDB you use roles to grant **component execute privileges for running components**. You cannot use roles to grant **database object privileges for building components**. These privileges must be explicitly granted directly to the schema where the component will be stored.

1.6.1 Creating a role

The Application Development department is building a Human Resources application. Members of the Human Resources department will need to be able to run the components in that application. First, let's create a Human Resources role.

1. In the toolbar at the bottom of the page, click  to return to the Administer page.
2. Click **Role Manager**.

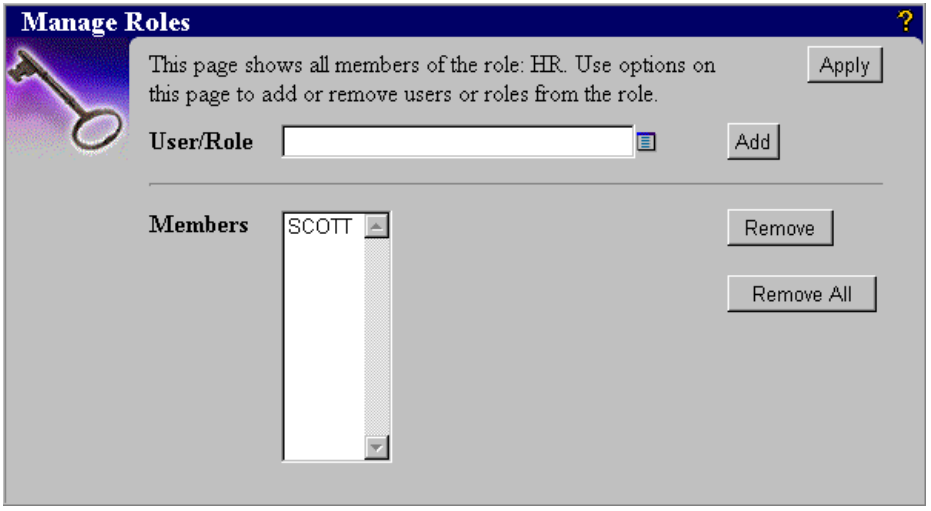
   The page displayed contains three panels. For this exercise you will use the Create a New Role panel.



3. In the **Role** field, type HR_<*NAME*>, where *NAME* is your own user name.

For the purposes of this tutorial, you add your own user name to the end to identify this role as the one created by you, rather than one created by another tutorial user.

4. Click **Create** to create the role and display the Role Manager, which you will use in the next exercise.



1.6.2 Adding a user to a role

Now let's identify the members of the new role you have created. In Section 1.3, "Adding a User to a Role" on page 1-6 you learned how to add a single user to multiple roles. In this exercise you'll learn how to add multiple users to a single role.

1. In the Role Manager, click  to display a list of the users and roles you can add to the role.
2. In the field at the top of the list type `M%R%` and click **Find** to find all users and roles that start with an M and contain an R.
3. Click **Next** to page through the users and roles if necessary and click **MILLER_<*NAME*> (User)**, where *NAME* is your own user name to choose the user you created earlier in this chapter.

   MILLER_<*NAME*> is displayed in the **User/Role** field of the Role Manager.
4. Click **Add** to add MILLER to the **Members** list.

To add more members to the HR role, you would repeat Steps 1 through 4 for each user or role.

5. Click **Apply** to save your changes.

   When developers create components for the Human Resources application, they can grant execute privileges to members of the HR role in a single operation, rather than having to grant privileges to each user individually.

1.7 What's Next?

In this chapter you learned how to:

- Create a new user
- Add a user to a role
- Grant Build In and Browse In privileges to a user
- Grant database object privileges to a user
- Create a new role and add users to that role

If you will be creating database objects or WebDB components, see Chapter 2, "Building and Browsing Database Objects".

If you will be creating WebDB sites, see Chapter 5, "Creating WebDB Sites".

2

Building and Browsing Database Objects

Estimated completion time: 20 minutes

This chapter shows you how to use Oracle WebDB to build and browse *database objects*. Database objects are structures used to store data in the database. You can create the following database objects in WebDB:

Icon	Database Object	Description
	Function	A PL/SQL subprogram that performs a specified sequence of actions, and then returns a value.
	Index	A structure associated with a table used to locate rows of the table quickly, and (optionally) to guarantee that every row is unique.
	Package	A database object consisting of a specification and a body. The specification defines the procedures and functions that can be referenced by other program units. The body includes the actual implementation of the package.
	Procedure	A PL/SQL subprogram that performs a specified sequence of actions.
	Sequence	A database object used to automatically generate numbers for table rows.
	Synonym	An alias assigned to a table, view, or other database object that can thereafter be used to refer to it.

Icon	Database Object	Description
	Table	The basic storage structure in a relational database. Data is stored in columns and rows within a table.
	Trigger	A stored procedure associated with a table and automatically executed before or after one or more specified events.
	View	A virtual table whose rows do not actually exist in the database, but which is based on a table that is physically stored in the database.

In this chapter, you'll learn how to build tables and procedures using Oracle WebDB's database object build wizards.

> **Note:** You can still build database objects using SQL CREATE commands if you prefer. WebDB simply provides an alternative tool for you to use.

This chapter includes the following sections:

2.1 Before You Begin

- To complete this chapter, you must be a WebDB Developer (that is, you must be a member of the WEBDB_DEVELOPER role) and have Build In privileges on your own schema. If you are not a WebDB Developer, you will not be able to access WebDB's database object building features. If you do not have Build In privileges on your own schema, you will not be able to build database objects in that schema. You must also be a member of the RESOURCE role. If you need to be added to the WEBDB_DEVELOPER or RESOURCE roles or granted Build In privileges on your own schema, ask your DBA.
- If you have not already started Oracle WebDB, follow the instructions in "Oracle WebDB Basic Concepts, Starting Oracle WebDB" on page xix.

2.2 Building a Table

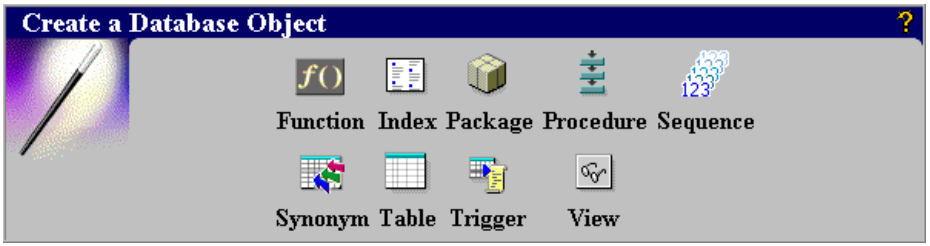
The Human Resources department has requested a table to store information about the company's employees.

1. If you are not already on your WebDB home page, click  at the top right of the page.
2. Click **Build**.

> **Note:** If you cannot see the **Build** link, you are probably not a WebDB Developer. Ask your DBA to add you to the WEBDB_DEVELOPER role.

3. Click **Database Objects** to display the Build Database Objects page.

The page displayed contains the Create a Database Object panel.



Tip: You can also click in the toolbar at the bottom of any page to display the Build Database Objects page.

---

4. Click to display the Create Table Wizard.
5. In the **Schema** list, choose your own schema.

Note: Your schema name is the same as your user name.

If your own schema is not listed, you have probably not been granted Build In privileges on it. Ask your DBA to grant these privileges to you.

---

6. In the **Table Name** field, type `TUTORIAL_TABLE`.
7. Click to display the Columns page.

WARNING: Click if you need to go back to a previous page of the wizard. Do not click your browser's Back button.

---

8. Complete the column details using the information in the following table.

Column Name	Datatype	Length	Precision	Null?	Primary Key?
EMPNO	NUMBER	10	<No value>	Uncheck	Check
ENAME	VARCHAR2	20	<No value>	Check	Uncheck
JOB	VARCHAR2	20	<No value>	Check	Uncheck
SAL	NUMBER	10	<No value>	Check	Uncheck
DEPTNO	NUMBER	10	<No value>	Check	Uncheck

9. Click  to display the Storage page.
10. You can accept the default values on this page. Click  to display the Create Table page.
11. Click **OK** to create the table and return to the Build Database Objects page.

2.3 Building a Procedure

The Human Resources department has requested a procedure to increase the salaries of the employees in a specified department by a specified percentage.

1. Click  to display the Create Procedure Wizard.
2. In the **Schema** list, choose your own schema.
3. In the **Procedure Name** field, type `TUTORIAL_PROC`.
4. Click  to display the Arguments page.
5. Complete the argument details using the information in the following table.

Argument Name	In/Out	Datatype	Default
P_DEPTNO	IN	NUMBER	<No value>
P_PCT_RAISE	IN	NUMBER	<No value>

6. Click  to display the Create Procedure page.

7. In the **Procedure Body** field, change the text so it reads:

```
BEGIN
    UPDATE TUTORIAL_TABLE
    SET SAL = ((P_PCT_RAISE/100)+1)*SAL
    WHERE DEPTNO = P_DEPTNO;
END;
```

8. Click  to display the Create Procedure page.

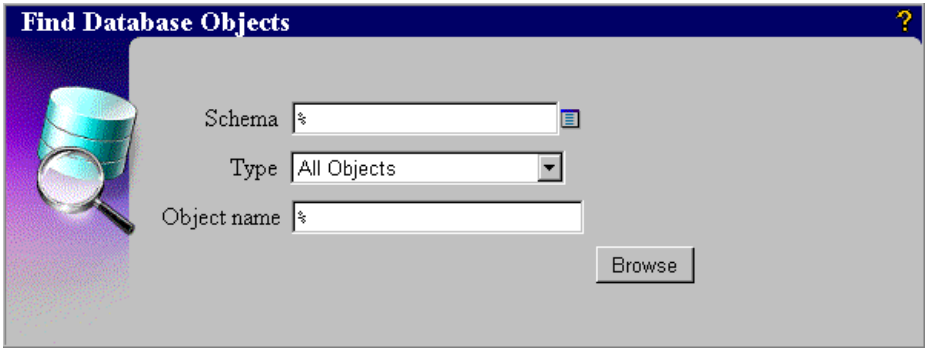
9. Click **OK** to create the procedure and return to the Build Database Objects page.

2.4 Querying a Table

So far you have created a table (TUTORIAL_TABLE) and a procedure (TUTORIAL_PROC). Now you need to test these objects to make sure they meet the requirements of the Human Resources department. First, you need to find the table in the database.

1. In the toolbar at the bottom of the page, click  to display the Browse Database page.

   The page displayed contains the Find Database Objects panel.



2. In the **Schema** field, type the name of your own schema (the schema where you created the table).

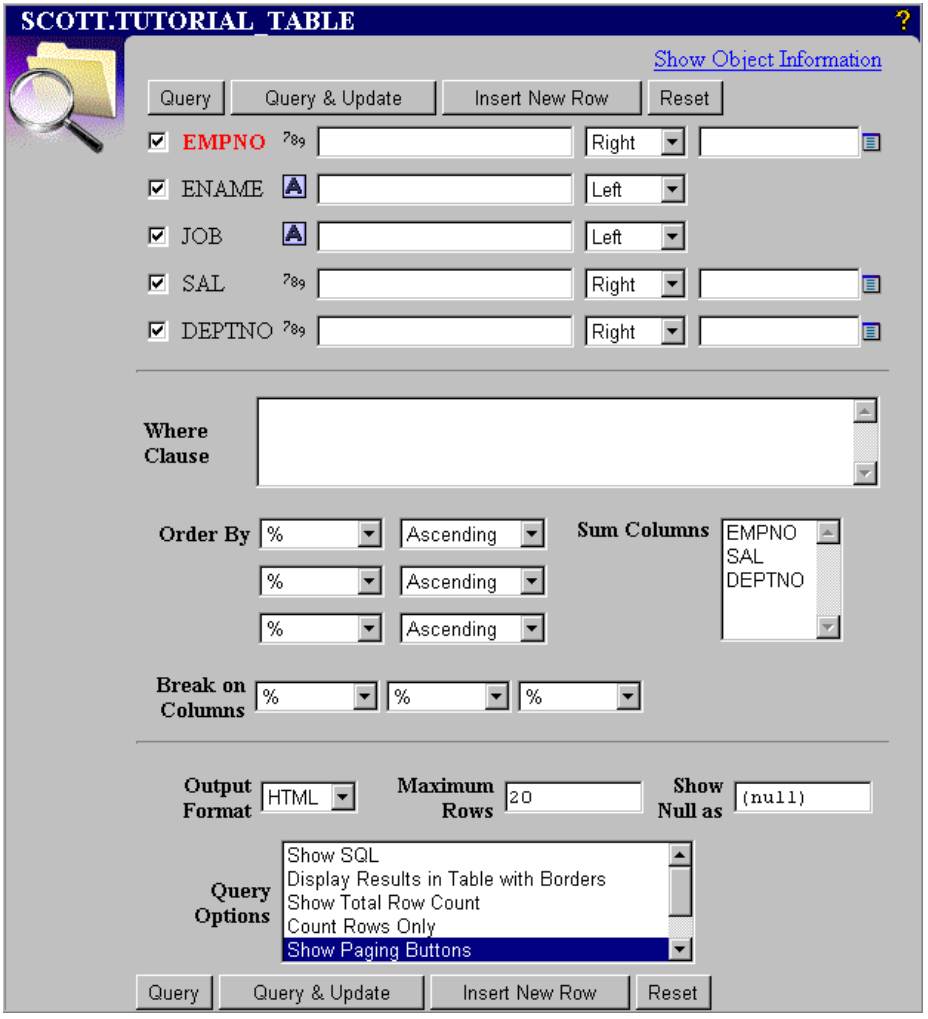
Tip: Click  to display a list of schemas if you don't know the name of the schema you want to browse.

3. In the **Type** list, choose **Tables**.
4. Click **Browse** to list all the tables in your own schema.

Note: To browse database objects in a schema other than your own, you must have been granted Browse In privileges to do so by the DBA. If you have Build In privileges on a schema, you automatically have Browse In privileges on that schema.

5. Click **Tutorial_Table** to display the Query and Update Table page.

   The form on the Query and Update page is divided into three sections. The first section lists the columns in the table. You can type values in the fields to specify query criteria or to add new data. The second and third sections of the form enable you to specify the way the query results are displayed. For example, you can order the results by a specified column, or download the results and display them in Microsoft Excel.



TUTORIAL_TABLE does not currently contain any data. Let's insert a row so that you have some test data to work with.

6. Use the information in the following table to complete the first section of the Query and Update Table form.

Column	Value
EMPNO	1
ENAME	KING
JOB	PRESIDENT
SAL	5000
DEPTNO	10

7. Click **Insert New Row** to add the data to your table.

1 Row Inserted.

Column	Value(s)
EMPNO	1
ENAME	KING
JOB	PRESIDENT
SAL	5000
DEPTNO	10

8. Click **Browse Table** in the link history to return to the Query and Update Table page.
9. Click **Query** to take a look at the data you just added.

EMPNO	ENAME	JOB	SAL	DEPTNO
1	KING	PRESIDENT	5000	10

Row(s) 1 - 1

10. At the top right of the page, click **Return to Table** to return to the Query and Update Table page.

11. Let's add some more data. Use the information in the following table to add more rows to TUTORIAL_TABLE. After completing the form for each row, click **Insert New Row**, and then **Browse Table** to return to the form to add the next row.

EMPNO	ENAME	JOB	SAL	DEPTNO
2	BLAKE	MANAGER	3000	30
3	JONES	MANAGER	3500	20
4	ALLEN	SALESMAN	1500	30
5	CLARK	MANAGER	2500	10
6	MILLER	CLERK	1000	10
7	SCOTT	ANALYST	2000	20

12. After you have finished, in the Query and Update Table page, click **Query** again to review all the data.

EMPNO	ENAME	JOB	SAL	DEPTNO
1	KING	PRESIDENT	5000	10
2	BLAKE	MANAGER	3000	30
3	JONES	MANAGER	3500	20
4	ALLEN	SALESMAN	1500	30
5	CLARK	MANAGER	2500	10
6	MILLER	CLERK	1000	10
7	SCOTT	ANALYST	2000	20

Row(s) 1 - 7

You can specify values to restrict the results of the query. For example, you might only want to display employee details for those employees who earn more than 3000.

13. Click **Return to Table**.

14. In the field for the **SAL** column, type `>3000`.

15. Click **Query** to display all those employees with a salary greater than 3000.

EMPNO	ENAME	JOB	SAL	DEPTNO
1	KING	PRESIDENT	5000	10
3	JONES	MANAGER	3500	20

Row(s) 1 - 2

You can also restrict which columns to query and control how the query results are displayed. For example, you might only want to see the name and salary of employees in Department 10.

16. Click **Return to Table**.
17. Uncheck **EMPNO**, **JOB**, and **DEPTNO**.

    ENAME and **SAL** should be checked.
18. In the field for the **DEPTNO** column, type `10`.
19. In the **Order By** list, choose **SAL**.
20. In the **Query Options** list, choose **Display Results in Table with Borders**.
21. Click **Query** to display all those employees in Department 10. Make a note of this information, it will be useful to refer to later in this chapter.

ENAME	SAL
MILLER	1000
CLARK	2500
KING	5000

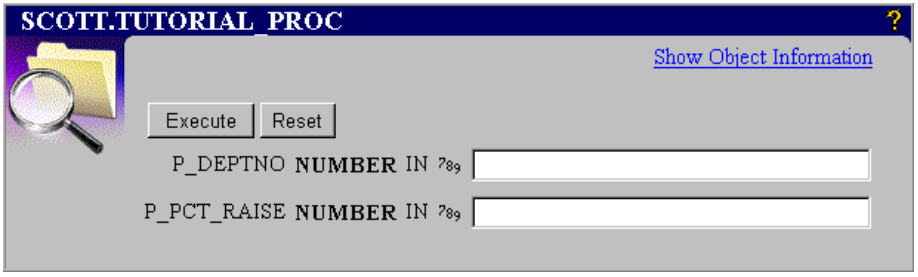
Row(s) 1 - 3

2.5 Executing a Procedure

Now that you have added some data to TUTORIAL_TABLE, let's test TUTORIAL_PROC.

1. In the toolbar at the bottom of the page, click  to display the Browse Database page.
2. In the **Schema** field, type the name of your own schema (the schema where you created the procedure).
3. In the **Type** list, choose **Procedures**.

4. Click **Browse** to list all the procedures in your own schema.
5. Click **Tutorial_Proc** to display the Execute Procedure page. This is where you provide values for the arguments defined in the procedure.



6. In the field for the **P_DEPTNO** argument, type `10`.
7. In the field for the **P_PCT_RAISE** argument, type `5`.
8. Click **Execute**.
9. The image indicates that the procedure executed successfully.

   Now let's take another look at TUTORIAL_TABLE to check the results of the procedure.
10. Click your browser's Back button to return to the Execute Procedure page.
11. In the toolbar at the bottom of the page, click to display the Browse Database page.
12. In the **Schema** field, type the name of your own schema.
13. In the **Object name** field, type `TUTORIAL%`.
14. Click **Browse** to list all the objects in your own schema that start with "tutorial".
15. Click **Tutorial_Table** to display the Query and Update Table page.

16. Click **Query** to view all the data in the table.

EMPNO	ENAME	JOB	SAL	DEPTNO
1	KING	PRESIDENT	5250	10
2	BLAKE	MANAGER	3000	30
3	JONES	MANAGER	3500	20
4	ALLEN	SALESMAN	1500	30
5	CLARK	MANAGER	2625	10
6	MILLER	CLERK	1050	10
7	SCOTT	ANALYST	2000	20

Row(s) 1 - 7

17. Compare the salaries of the employees in Department 10 (KING, CLARK, and MILLER) with those that you noted down at the end of the previous exercise. Executing TUTORIAL_PROC has increased them by 5%.

2.6 What's Next?

In this chapter, you learned how to:

- Create a table
- Create a procedure
- Query a table and add rows to a table
- Execute a procedure

In Chapter 3, "Building Components", you will build components based on the TUTORIAL_TABLE table you created in this chapter.

3

Building Components

Estimated completion time: 1 hour

This chapter shows you how to use Oracle WebDB to build *components*. Components are Web pages with content based on data stored in the Oracle database. Some components, such as reports, display data in a graphical format. Others, such as forms, provide interfaces that end users can use to change data. You can create the following components in WebDB:

Icon	Component	Description
	Forms	Provide an interface to one or more database tables, views, or procedures.
	Menus	Display Web pages containing options that end users can click to navigate to WebDB components, URLs, or other menus.
	Frame Drivers	Consist of Web pages divided into two frames. One frame (the driving frame) contains a SQL query that drives the contents of a second frame (the target frame).
	Dynamic Pages	Display dynamic database data based on SQL or PL/SQL which is executed every time the page is requested.
	Reports	Display the results of a SQL query in tabular format.
	Charts	Display the results of a SQL query as a bar chart. Charts are based on at least two table or view columns: one that identifies the bars on the chart and one that calculates the size of the bars on the chart.

Icon	Component	Description
	Calendars	Display the results of a SQL query in calendar format. At least one of the table columns in the query must contain values having the DATE datatype.
	Hierarchies	Display data from a self-referencing table or view (at least two columns in the table must share a recursive relationship). Hierarchies can contain up to three levels and display data such as employees in an organization chart, or the hierarchical relationship between menus in a Web site.

There is a separate component build wizard for each type of component. Each wizard creates PL/SQL stored procedures. When executed, the stored procedures dynamically create the HTML and JavaScript code to display the component.

In this chapter, you'll learn how to build forms, reports, and charts using Oracle WebDB's component build wizards. You'll also learn how to build Lists of Values which you can use in your components and share with other developers.

This chapter includes the following sections:

3.1 Before You Begin

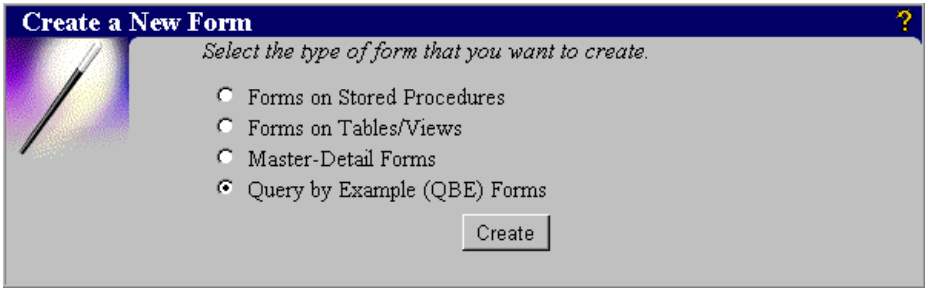
- To complete this chapter, you must be a WebDB Developer (that is, you must be a member of the WEBDB_DEVELOPER role) and have Build In privileges on your own schema. If you are not a WebDB Developer, you will not be able to access WebDB's component building features. If you do not have Build In privileges on your own schema, you will not be able to build components in that schema. You must also be a member of the RESOURCE role. If you need to be added to the WEBDB_DEVELOPER or RESOURCE roles or granted Build In privileges on your own schema, ask your DBA.
- You must have completed Section 2.2, "Building a Table" on page 2-3 and Section 2.4, "Querying a Table" on page 2-6 before starting this chapter.
- Your DBA must have created the HR_TUTORIAL role. Instructions for creating this role are provided in Appendix A, "Tutorial Setup Instructions".

3.2 Building a Form Based on a Table

In Section 2.2, "Building a Table" on page 2-3 you created a table (TUTORIAL_TABLE) to contain information about a company's employees. End users in the company's Human Resources department need to be able to add new employees to this table. Your next development task is to build a form that the Human Resources staff can use to perform this part of their job.

1. In the toolbar at the bottom of the page, click  .

   The page displayed is divided into three panels. For this exercise you will use the Create a New Form panel.



You can build the following types of forms:

- **Form based on stored procedures** End users can select values to pass to a stored procedure, then execute the procedure. You used a form based on a stored procedure in Section 2.5, "Executing a Procedure" on page 2-11.
- **Form based on tables or views** End users can query, insert, update, or delete data contained in a table or view. Forms based on tables or views offer more advanced features than simple Query by Example forms.
- **Master-detail form** End users can display a master table row and multiple detail rows within a single HTML page. Values in the master row determine which detail rows are displayed for updating, inserting, and deleting.
- **Query by Example (QBE) form** End users can query or insert values in a database table or view. A Query by Example form contains fields that correspond to the columns in the database table or view on which the form is built. You used a Query by Example form in Section 2.4, "Querying a Table" on page 2-6.

In this exercise, you will build a form based a table (TUTORIAL_TABLE).

2. Click **Forms on Tables/Views**.
3. Click **Create** to display the Create Forms Wizard.
4. In the **Schema** list, choose your own schema.

Note: Your schema name is the same as your user name.

You can build components in the schema that owns the database objects on which the component is to be based, or in a schema that has been granted explicit database object privileges on the objects on which the component is to be based.

5. In the **Form Name** field, type `TUTORIAL_FORM`.
6. Click  to display the Tables or Views page.

WARNING: Click  if you need to go back to a previous page of the wizard. Do not click your browser's Back button.

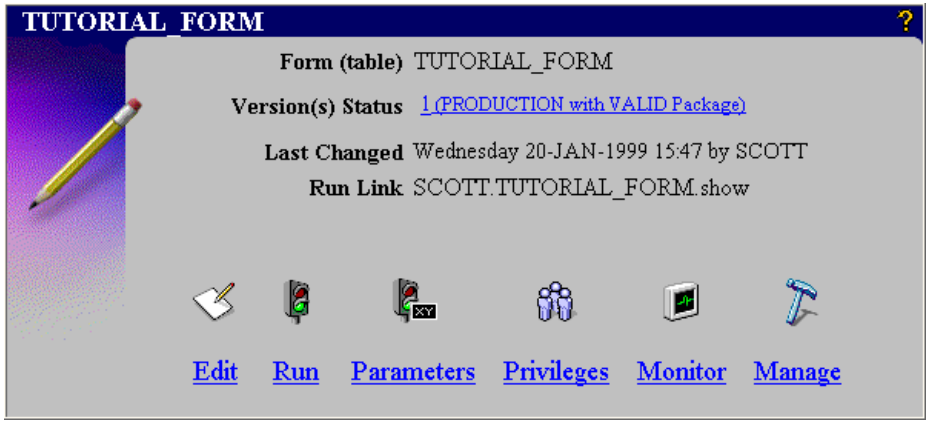
---

7. In the **Tables/Views** list, choose **<*YOUR_SCHEMA*>.TUTORIAL_TABLE**, where *YOUR_SCHEMA* is the name of your own schema.

8. Click  to display the Form Layout Selection page.
9. Click **Structured**.

   Clicking **Unstructured** enables you to supply your own HTML code for the form.
10. Click  to display the Formatting and Validation page.
11. You can accept the default values on the remaining pages. Click  to create the form and display the Manage Component page.

Note:  is only displayed when you have reached a point in the wizard where you have provided all the information needed to create the component, and can use the default values in the remaining pages. You can change these default values later, if desired.



In the Manage Component page, you can choose from the following options:

- **Edit** Edit the form. For example, you can change the look and feel, add text, or add PL/SQL. You will use this option in Section 3.3, "Editing a Form" on page 3-8.
- **Run** Run the current **Production with VALID package** version of the form. You will use this option in the next step of this exercise.

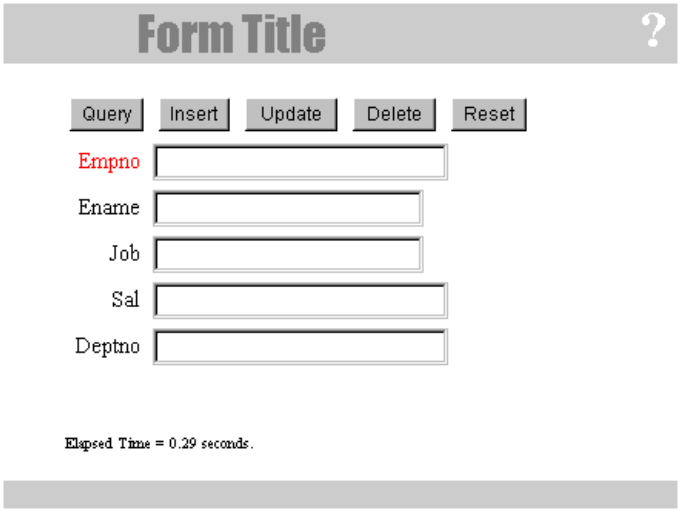
  Note: If the component contains errors (indicated by the words **INVALID Package** in the **Version(s) Status** link), you will not be able to run it. You will need to edit the component first to correct the errors.

- **Parameters** Test the behavior of the form when it is passed certain values.

  Note: For components with a parameter entry form, such as reports, choosing this option displays the parameter entry from. For more information see Section 3.5, "Building a Report" on page 3-20.

- **Privileges** Grant and revoke privileges to execute the form to other WebDB users. You will use this option in Section 3.4, "Making a Component Available to End Users" on page 3-17.
- **Monitor** View a chart of all requests for the form and the end users who made those requests.
- **Manage** Display additional options for managing the form. For example, **Export** enables you to move the form to a different database, and **Drop** enables you to delete the form or old versions of the form.

12. Click **Run**. Your form is displayed on a Web page.



You can now use the form to query, insert, update, or delete data into TUTORIAL_TABLE.

Note: If you use the form to query a table and more than one row matches the query criteria, **Next** and **Previous** buttons are displayed at the bottom of the form so that you can view the query results one row at a time.

---

13. Use the following information to fill in the form.

Field	Value
Empno	8
Ename	WARD
Job	SALESMAN
Sal	1250
Deptno	30

Click **Insert**.

1 Row Inserted.

Column	Value(s)
EMPNO	8
ENAME	WARD
JOB	SALESMAN
SAL	1250
DEPTNO	30

3.3 Editing a Form

As you can see, the form you created, while functional, is not particularly sophisticated. However, you can easily edit the form to improve the appearance and add more functionality.

3.3.1 Editing the basic appearance of forms

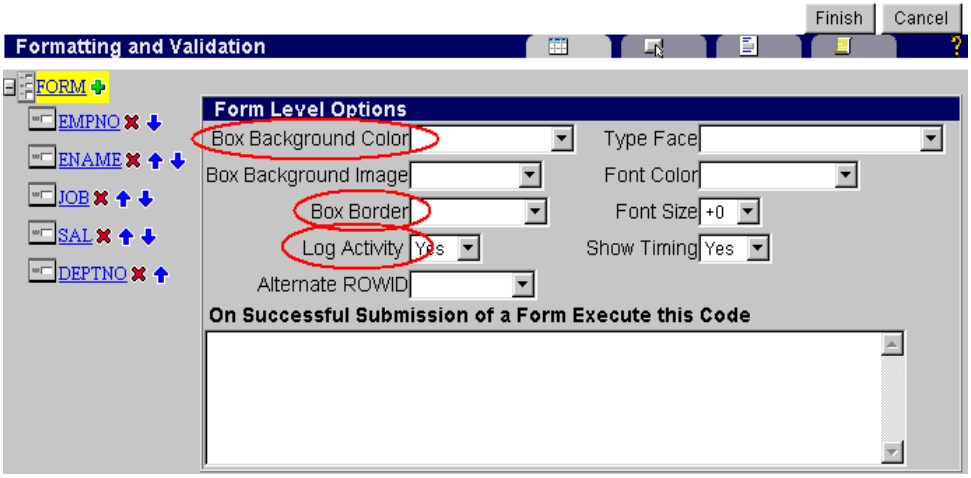
You can improve the usability of a form by making some changes to the basic appearance. For example, you can add color to make the form more visually appealing, or provide meaningful labels so the end user can easily see what each field in the form is for.

1. Click your browser's Back button twice to return to the Manage Component page.
2. Click **Edit** to display the Edit Form: Formatting and Validation page.

   In this page, you can specify options that control the appearance of the form. You can also choose the columns you want to display as fields in the form and for each field you can specify a selectable List of Values, a default value, a display format, and choose a JavaScript application for validating the field in the form.

   The page is divided into two. The left side of the page shows the columns that will be displayed as fields in the form. You can perform actions on the fields in the form, such as deleting them, changing their order on the form, or editing

their options. The right side of the page is where you edit the options for the currently selected form or field.



3.3.1.1 Adding colors

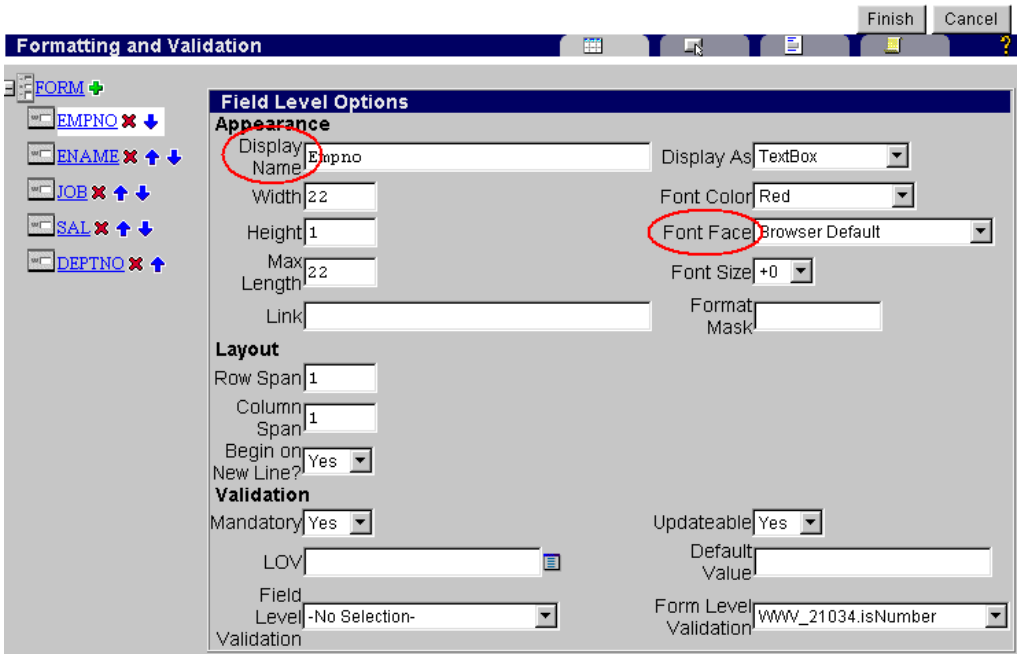
Adding color is one way of improving the basic appearance of a form and improving the overall end user experience.

1. Currently, **FORM** is selected in the left side of the page and the right side of the page is displaying the form-level options, so let's edit those.
2. In the **Box Background Color** list, choose a color, for example **Turquoise**.
3. In the **Box Border** list, choose **Thin Border**.
4. Make sure that **Yes** is chosen in the **Log Activity** list. This means that every time an end user uses the form, details about that usage will be recorded in the activity log. You can view reports on the activity log from the **Monitor** option on the Manage Component page, or the WebDB Monitor menu.

3.3.1.2 Changing field labels

By default, WebDB uses the column name as the label for the field in the form. Let's change the labels in the form to something more descriptive.

1. In the left frame, click **EMPNO** to edit the EMPNO field-level options.



2. In the **Display Name** field, type `Employee Id`.
3. In the left side of the page, click **ENAME**. Note that the fields in the right side of the page are updated with information for ENAME.
4. In the **Display Name** field, type `Last Name`.
5. Change the labels of the rest of the columns to something more descriptive.

   You can change the font of labels to something that's easier to read.
6. For each column:
   a. In the left side of the page, click the column name, for example **EMPNO**.
   b. In the **Font Face** list, choose **Arial**.

You can also change the color and size of labels.

Note: The label for EMPNO is already colored red because EMPNO is a mandatory column.

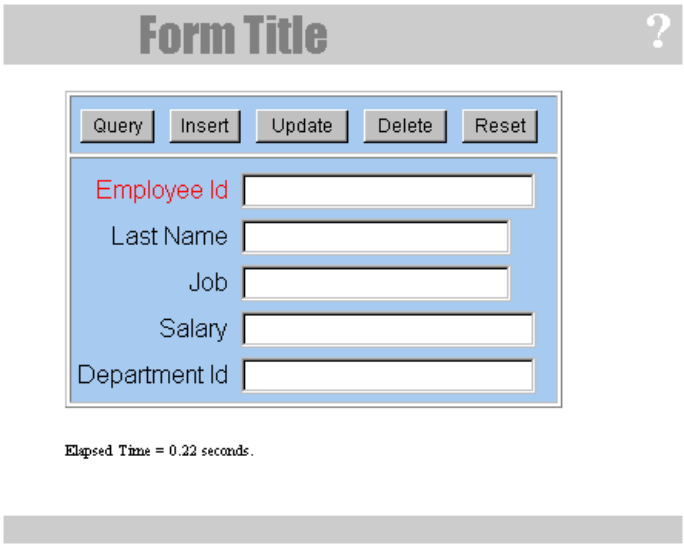
The value of the label **Font Size** is relative to your browser's default text size. For example, if your browser's default text size is 12 points, changing the size of a label to +2 would increase the size of the label by two. For information about how to change your browser's default text size, refer to your browser documentation.

---

7. Click **Finish** to save your changes and display the Manage Component page.

   WebDB keeps a copy of previous versions of your components. If you want to go back to an earlier version, simply click the appropriate **Version(s) Status** link. Once you have finished editing a component and are happy with the final version, you can click **Manage** and use the **Drop** option to delete the old versions of the component.

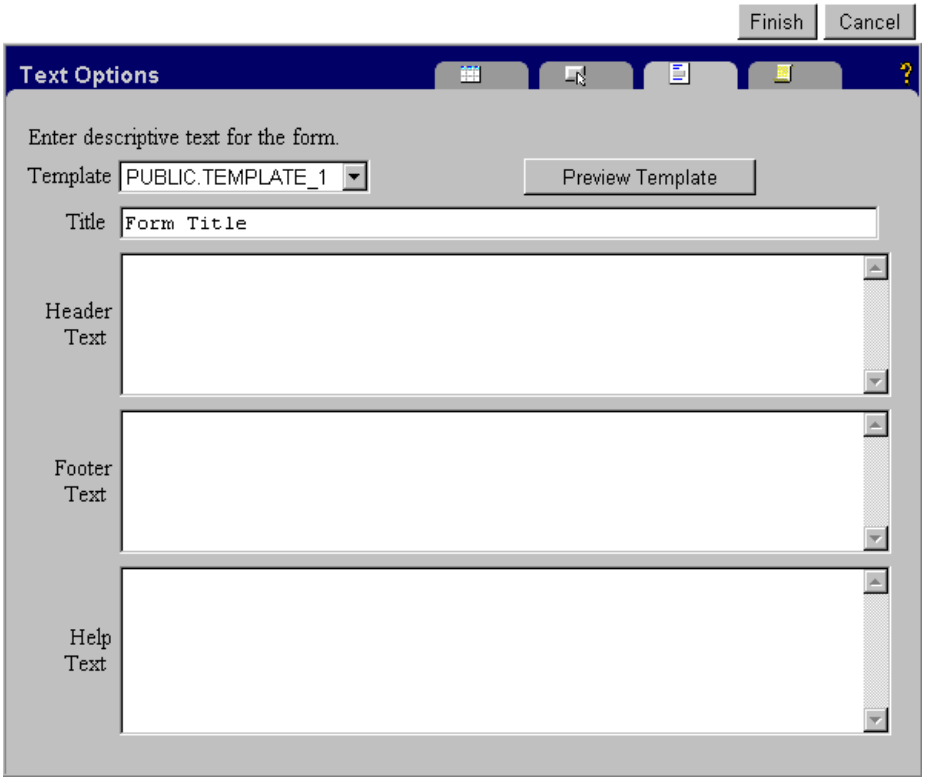
8. Click **Run** to view your changes.



3.3.2 Adding supporting text to a form

Good user interface design requires that any important information about a form should be displayed on the form itself. You should also provide help text to give end users additional guidance if they need it.

1. Click your browser's Back button to return to the Manage Component page.
2. Click **Edit** to display the Edit Form: Formatting and Validation page.
3. Click the  tab to display the Text Options page. In this page, you can specify text that you want to appear at the top or bottom of the form. You can also add help text and specify a template.



4. In the **Title** field, type `Employees`.

5. In the **Header Text** field, type:

```
<H3>Use this form to add, edit or delete employee information.</H3>
```

> **Note:** You can use HTML tags, for example <H3> or <FONT>, to control the appearance of the text, if desired.

6. In the **Footer Text** field, type:

```
<FONT COLOR="red">Red text indicates that the field is mandatory and you
must enter a value.</FONT>
```

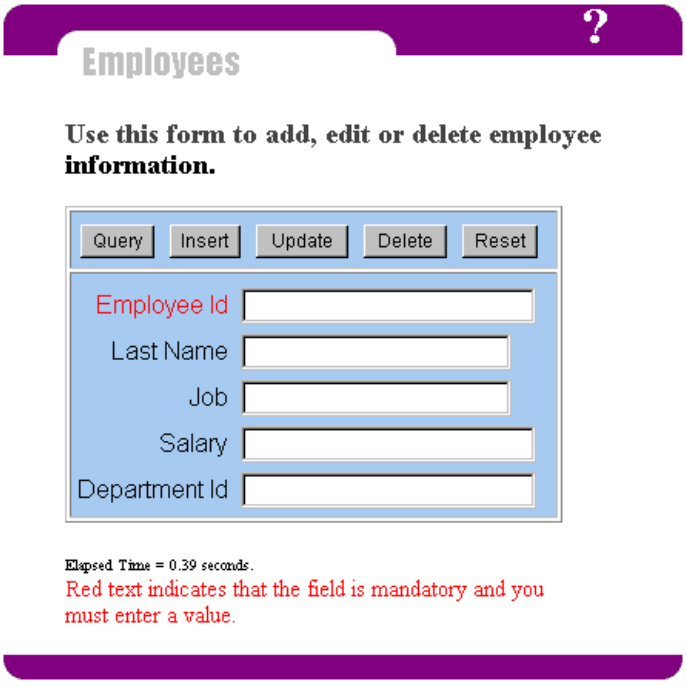
7. In the **Help Text** field, type:

```
<H3>To add a new employee:</H3>
Fill in the fields on the form and click <B>Insert</B>.
```

   In this page, you can also specify the overall look and feel of the page on which the form is displayed by choosing a template. WebDB provides some templates to get you started, but you can also create your own with your company logo, color scheme, and text. For more information about templates, see the WebDB online help.

8. In the **Template** list, choose a template, for example **PUBLIC.TEMPLATE_3**.
9. Click **Preview Template** to see what the template looks like.
10. Close the template preview window and click **Finish** to save your changes and display the Manage Component page.

11. Click **Run** to view your changes.



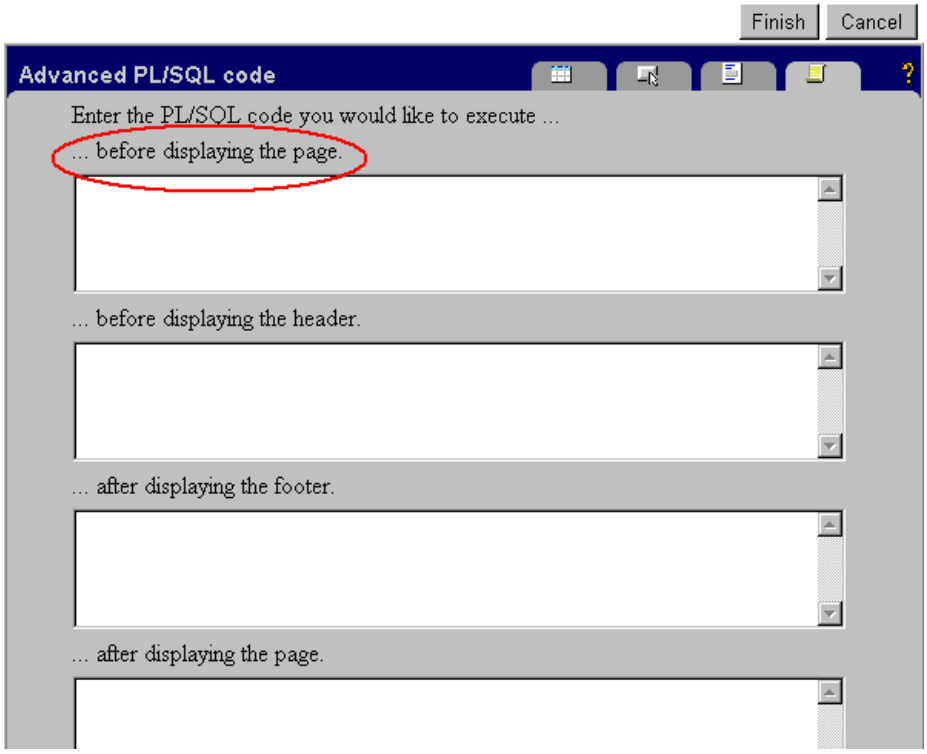
12. To view the help text you provided, click the question mark (?) at the top right of the form.
13. Click your browser's Back button to return to the form.

3.3.3 Adding advanced PL/SQL code

You can use PL/SQL to add more functionality to your forms. For example, you might want to display a custom header, or create a temporary table.

1. Click your browser's Back button to return to the Manage Component page.
2. Click **Edit** to display the Edit Form: Formatting and Validation page.

3. Click the tab to display the Advanced PL/SQL code page. In this page, you can specify PL/SQL code that runs at different points during the execution of the HTML code that creates the form.



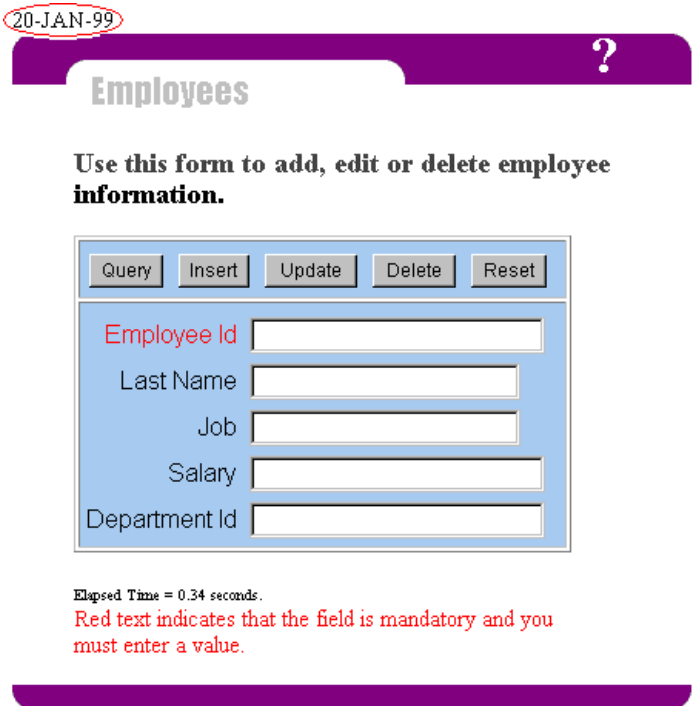
4. In the **before displaying the page** field, type:

```
htp.print(sysdate);
```

This will print today's date at the top of the page on which the form is displayed.

5. Click **Finish** to save your changes and display the Manage Component page.

6. Click **Run** to view your changes. Today's date is displayed above the form.



3.4 Making a Component Available to End Users

To enable end users to run a component, you need to provide the following:

- The URL of the page that contains the component, or a way of accessing that URL
- Execute privileges on the component

Members of the Human Resources department need to be granted execute privileges on TUTORIAL_FORM before they can run it.

1. Take a look at the URL of the page containing TUTORIAL_FORM.

   This is the URL your end users need to run the form.

   - End users can type the URL in the Address or Location field of their browser.
   - You can provide a link to the URL on another page that end users already know how to access.
   - You can add the component to a WebDB site. For information about adding components to WebDB sites, see Chapter 7, "Managing WebDB Site Content".

   The URL consists of:

   ```
   webserver.com:port/dad/your_schema.TUTORIAL_FORM.show
   ```

   where:

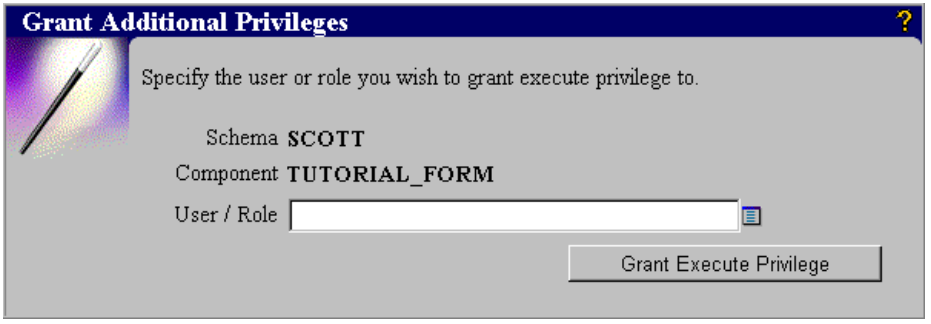
`webserver.com`	is the name of the Web server where WebDB is installed.
`port`	is the port used to access the Web server where WebDB is installed. If port 80 is used, this may be omitted.
`dad`	is the name of the *Database Access Descriptor (DAD)* used by WebDB to access the database. A DAD is a set of values that specify how WebDB connects to the database to fulfill an HTTP request. A DAD is automatically configured when you install WebDB.
`your_schema.TUTORIAL_FORM`	is the package that creates the component.
`show`	is the procedure that displays the component.

> **Note:** The combination of the package that creates the component (for example, `your_schema.TUTORIAL_FORM`) and the procedure that displays the component (for example, `show`) is referred to as the *run link*. The run link of a component is displayed on the Manage Component page.

When end users attempt to display the page containing the component, they will be prompted for their user name and password. To be able to use the component, the end user must have execute privileges on the component.

2. Click your browser's Back button to return to the Manage Component page.
3. Click **Privileges**.

   The page displayed is divided into two panels. In this exercise you will use the Grant Additional Privileges panel.

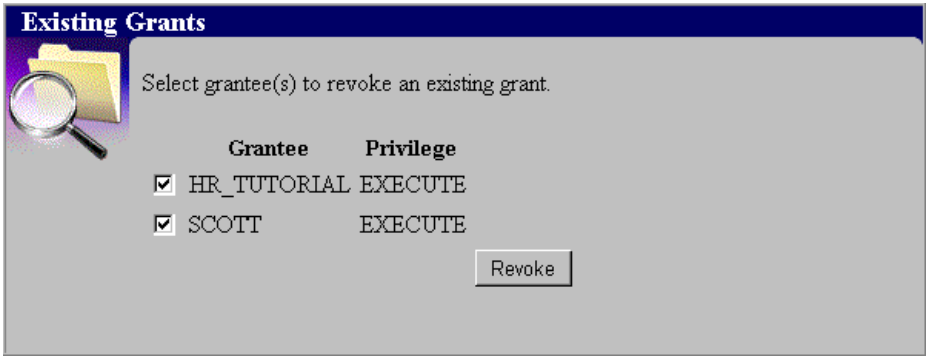


4. Click  to display a list of the users and roles to which you can grant execute privileges.
5. Click **Next** to page through the list if necessary and click **HR_TUTORIAL (Role)**.

   > **Note:** If HR_TUTORIAL is not listed, ask your DBA to create this role for you using the instructions in Appendix A, "Tutorial Setup Instructions".

   HR_TUTORIAL is displayed in the **User / Role** field.
6. Click **Grant Execute Privilege**.

HR_TUTORIAL is displayed in the Existing Grants panel.



Members of the HR_TUTORIAL role are now able to run TUTORIAL_FORM.

Note: If the form was part of a human resources application, you would need to grant the HR_TUTORIAL role execute privileges on all the components in the application.

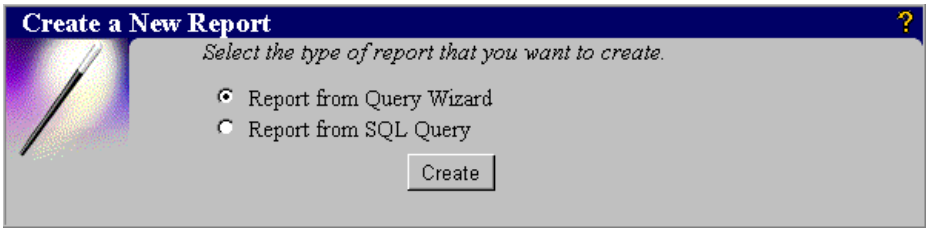
To revoke execute privileges from a user or role, make sure the check box next to the user or role is checked and click **Revoke**.

3.5 Building a Report

The Human Resources department has also requested a report that they can use to view employee information.

1. In the toolbar at the bottom of the page, click  .

   The page displayed is divided into three panels. For this exercise you will use the Create a New Report panel.

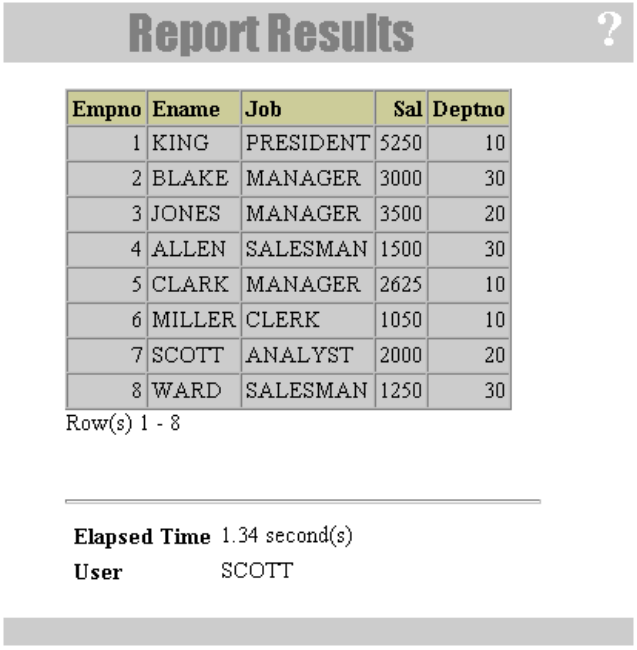


2. Make sure **Report from Query Wizard** is selected, and click **Create** to display the Create Reports Wizard.

   The Create Reports Wizard produces a SQL query based on the information you provide as you step through the pages of the wizard. If you are familiar with SQL you can also create a report by writing the SQL query yourself.

3. In the **Schema** list, choose your own schema.
4. In the **Report Name** field, type `TUTORIAL_REPORT`.
5. Click  to display the Tables and Views page.
6. Scroll down the **Tables/Views** list, and choose ***<YOUR_SCHEMA>*.TUTORIAL_TABLE**, where *YOUR_SCHEMA* is the name of your own schema.
7. You can accept the default values on the remaining pages. Click  to create the report and display the Manage Component page.

8. Click **Run** to display your report.



Report Results

Empno	Ename	Job	Sal	Deptno
1	KING	PRESIDENT	5250	10
2	BLAKE	MANAGER	3000	30
3	JONES	MANAGER	3500	20
4	ALLEN	SALESMAN	1500	30
5	CLARK	MANAGER	2625	10
6	MILLER	CLERK	1050	10
7	SCOTT	ANALYST	2000	20
8	WARD	SALESMAN	1250	30

Row(s) 1 - 8

Elapsed Time 1.34 second(s)
User SCOTT

3.6 Editing a Report

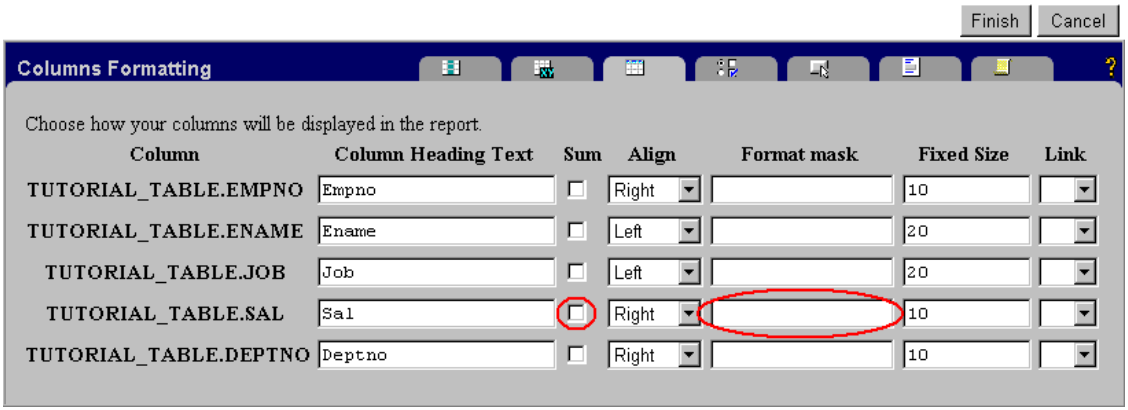
You can edit your report in the same way as you edited the form in Section 3.3, "Editing a Form" on page 3-8. For example, you can change the report display options, add text, and add PL/SQL code. You can also use the report edit options to produce more sophisticated reports, such as summary reports, break reports, and parameterized reports. The following exercises show you how to create these advanced reports.

3.6.1 Adding summary information to a report

The Human Resources department would like the total salary to be displayed on the report, so they can easily see how much is being spent on salaries.

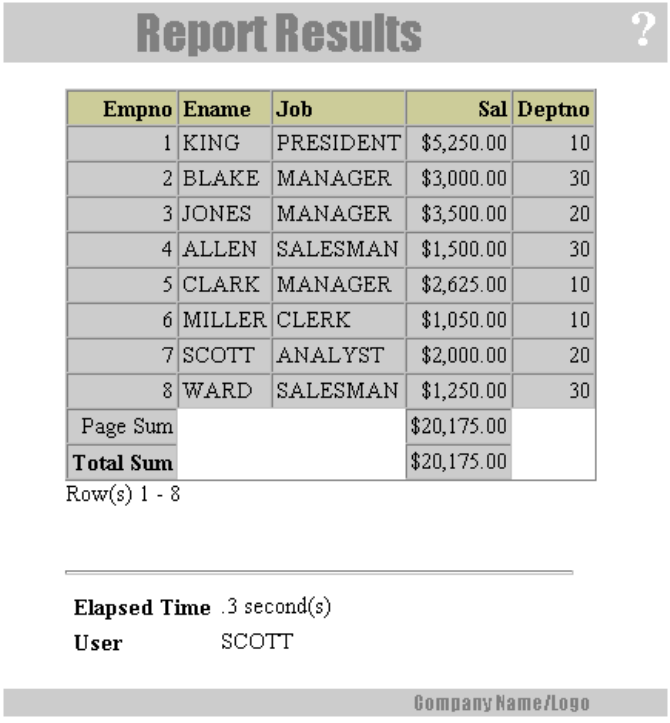
1. Click your browser's Back button to return to the Manage Component page.
2. Click **Edit** to display the Edit Reports: Table/View Columns page.

3. Click the tab to display the Columns Formatting page. In this page, you can specify column alignment, a display format, and whether to add a summary of a column's values.



4. In the row for the **TUTORIAL_TABLE.SAL** column:
   a. Check **Sum**.
   b. In the **Format mask** field, type `$999,999.99`.
5. Click **Finish** to save your changes and display the Manage Component page.

6. Click **Run** to view your changes. The report now shows the total salary.



Report Results

Empno	Ename	Job	Sal	Deptno
1	KING	PRESIDENT	$5,250.00	10
2	BLAKE	MANAGER	$3,000.00	30
3	JONES	MANAGER	$3,500.00	20
4	ALLEN	SALESMAN	$1,500.00	30
5	CLARK	MANAGER	$2,625.00	10
6	MILLER	CLERK	$1,050.00	10
7	SCOTT	ANALYST	$2,000.00	20
8	WARD	SALESMAN	$1,250.00	30
Page Sum			$20,175.00	
Total Sum			$20,175.00	

Row(s) 1 - 8

Elapsed Time .3 second(s)
User SCOTT

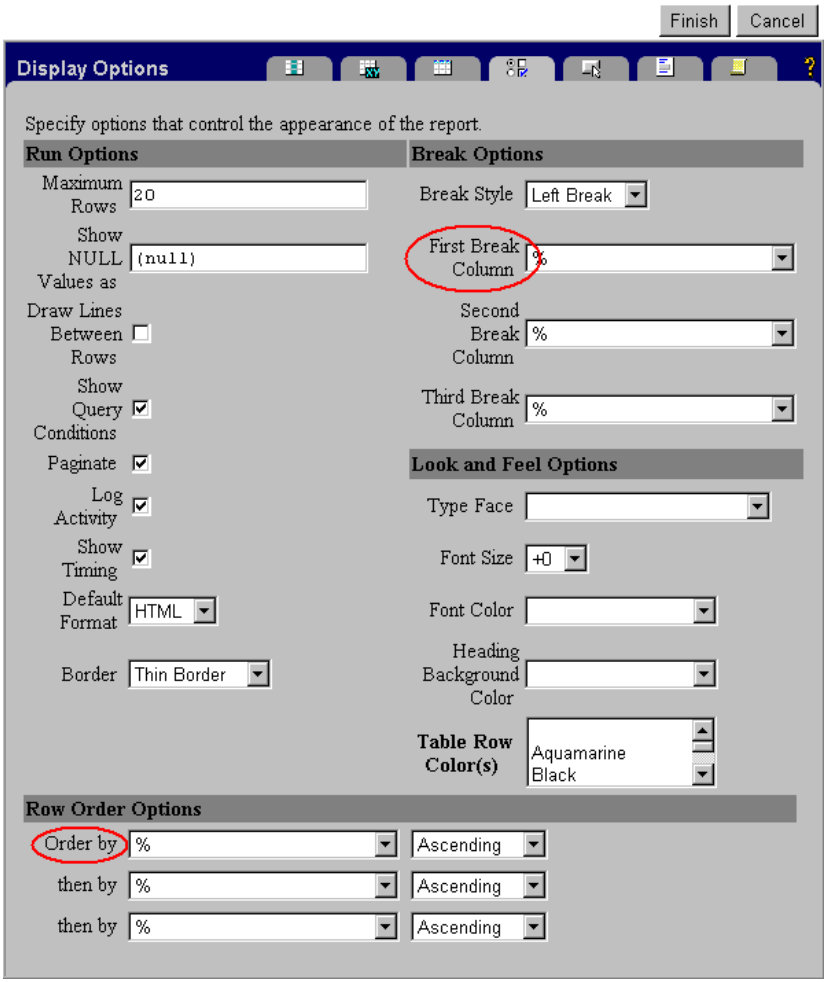
Company Name/Logo

3.6.2 Adding a break to a report

The Human Resources department has requested that the report be grouped by the different departments, to make it easier to view employees by department. You can create a break report to do this.

1. Click your browser's Back button to return to the Manage Component page.
2. Click **Edit** to display the Edit Reports: Table / View Columns page.

3. Click the tab to display the Display Options page. In this page, you can specify options that control the appearance of the report.

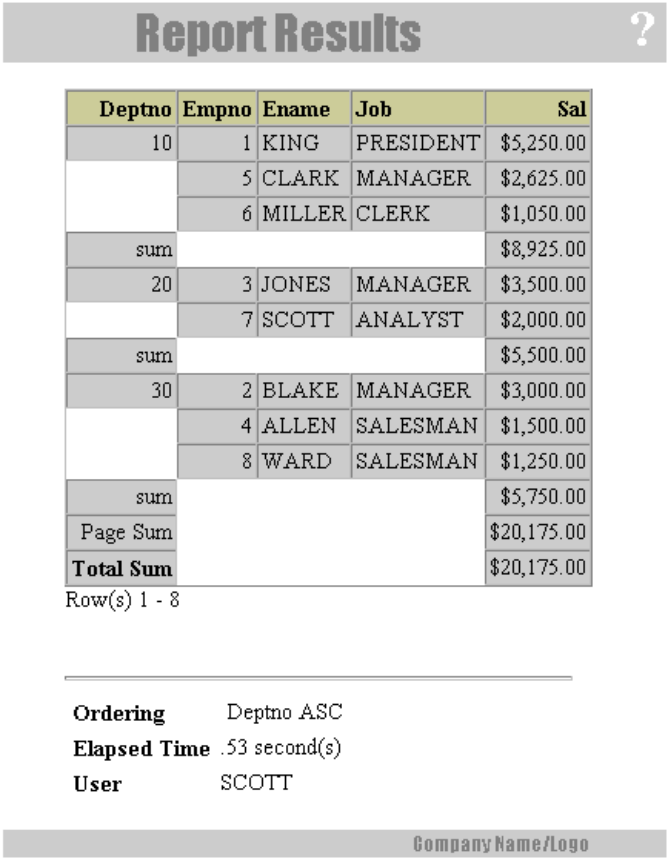


4. In the **First Break Column** list, choose **TUTORIAL_TABLE.DEPTNO**.

   For best results, you should also order the report by the columns you have chosen to break on.

5. At the bottom of the page, in the first **Order by** list, choose **TUTORIAL_TABLE.DEPTNO**.

6. Click **Finish** to save your changes and display the Manage Component page.
7. Click **Run** to view your changes. The report is now grouped by department. The total salary is shown for each group as well as for the whole report.



Report Results

Deptno	Empno	Ename	Job	Sal
10	1	KING	PRESIDENT	$5,250.00
	5	CLARK	MANAGER	$2,625.00
	6	MILLER	CLERK	$1,050.00
sum				$8,925.00
20	3	JONES	MANAGER	$3,500.00
	7	SCOTT	ANALYST	$2,000.00
sum				$5,500.00
30	2	BLAKE	MANAGER	$3,000.00
	4	ALLEN	SALESMAN	$1,500.00
	8	WARD	SALESMAN	$1,250.00
sum				$5,750.00
Page Sum				$20,175.00
Total Sum				$20,175.00

Row(s) 1 - 8

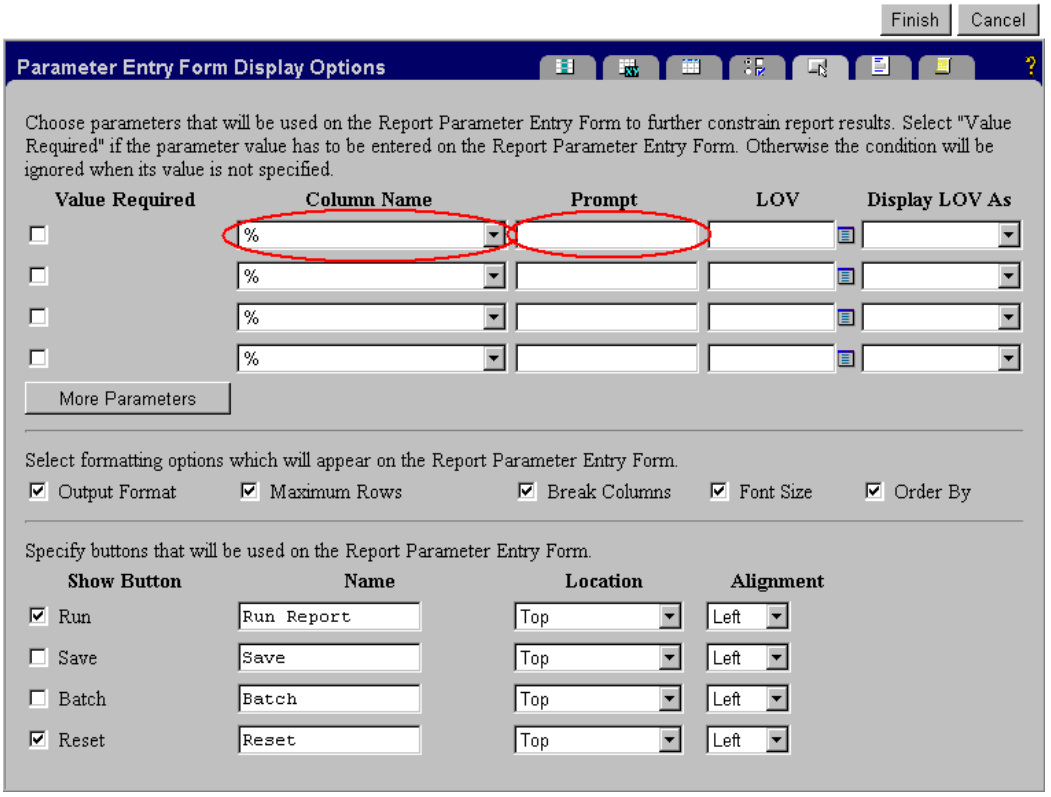
Ordering Deptno ASC
Elapsed Time .53 second(s)
User SCOTT

Company Name/Logo

3.6.3 Adding parameters to a report

The Human Resources department has submitted another enhancement request for the report. They want to be able to display the report data for a single specified department. You need to create a parameter that they can use to specify the department.

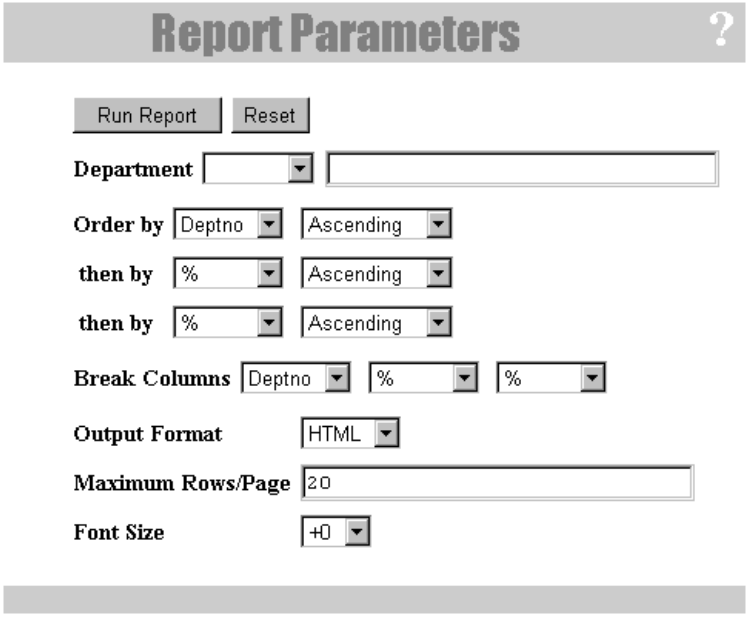
1. Click your browser's Back button to return to the Manage Component page.
2. Click **Edit** to display the Edit Reports: Table/View Columns page.
3. Click the tab to display the Parameter Entry Form Display Options page. In this page, you can specify parameters that will be used to specify the data displayed in the report.



4. In the first **Column Name** list, choose **TUTORIAL_TABLE.DEPTNO**.
5. In the **Prompt** field, type `Department`.

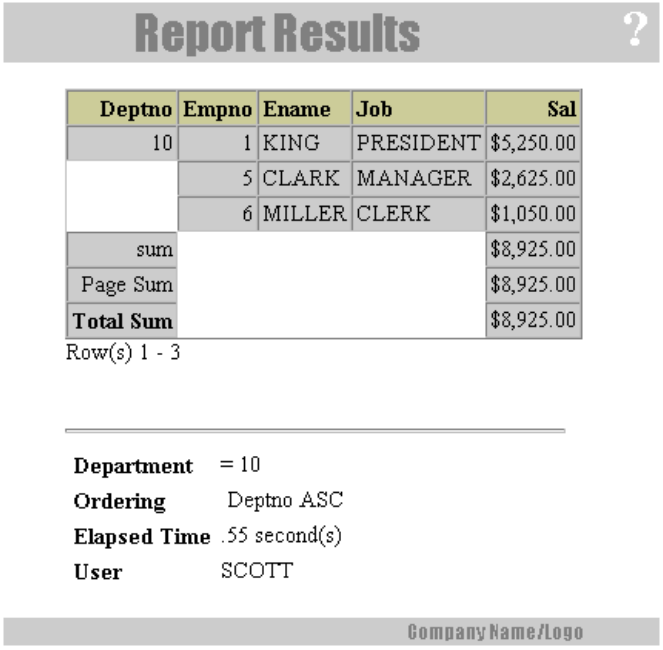
6. Click **Finish** to save your changes and display the Manage Component page.
7. Click **Parameters** to display the parameter entry form for the report.

   The parameter entry form prompts the end user for values to use to display the report. The Department parameter you created is the first field on the parameter entry form. Note that end users can also change the break column and order by settings for the report.



8. In the **Department** fields, choose = in the list, and type `10` in the field.

9. Click **Run Report**. Now, your report only lists employees who work in Department 10.

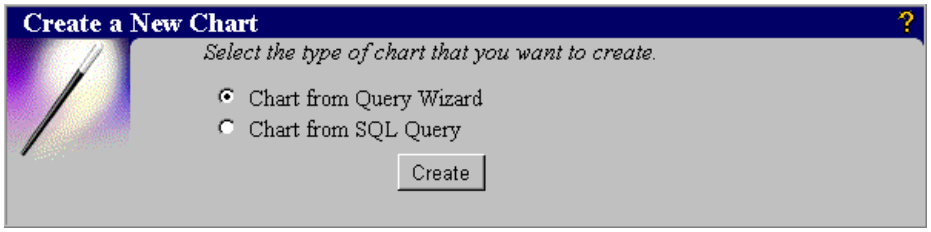


3.7 Building a Chart

The Human Resources department has also requested a chart that shows the total salary for each department.

1. Click your browser's Back button twice to return to the Manage Component page.
2. In the toolbar at the bottom of the page, click  .

The page displayed is divided into three panels. For this exercise you will use the Create a New Chart panel.



3. Make sure **Chart from Query Wizard** is selected and click **Create** to display the Create Charts Wizard.

   The Create Charts Wizard produces a SQL query based on the information you provide as you step through the pages of the wizard. If you are familiar with SQL you can also create a chart by writing the SQL query yourself.

4. In the **Schema** list, choose your own schema.
5. In the **Chart Name** field, type `TUTORIAL_CHART`.
6. Click  to display the Tables or Views page.
7. In the **Tables/Views** list, choose **<*YOUR_SCHEMA*>.TUTORIAL_TABLE**, where *YOUR_SCHEMA* is the name of your own schema.
8. Click  to display the Table/View Columns page.
9. In the **Label** list, choose **DEPTNO**.

   The values of the Label column are displayed along the axis of the chart.

10. In the **Value** list, choose **SAL**.

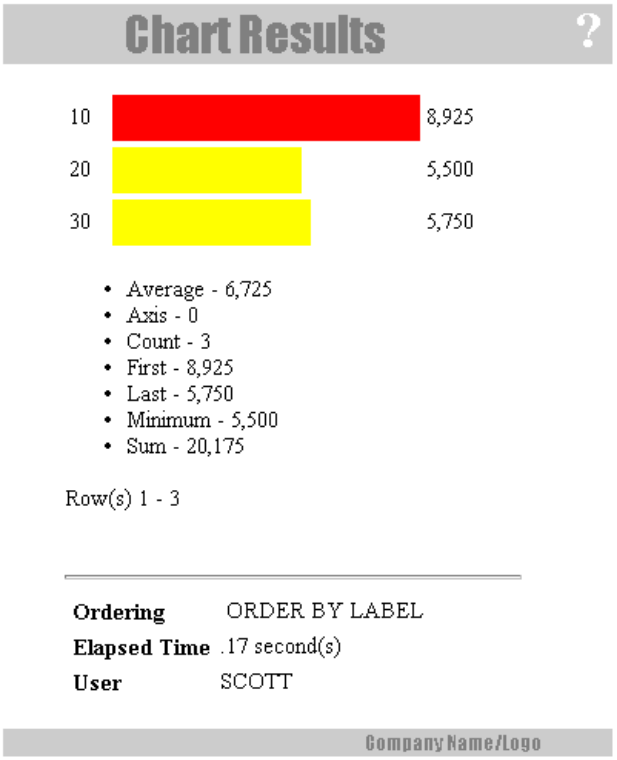
    The values of the Value column are used to calculate the size of the bars in the chart.

> **Note:** The default for **Value** is **1**. Choosing a value of 1 is useful if you also choose a group function. For example, you can choose the JOB column from TUTORIAL_TABLE as the label, 1 as the value, and COUNT as the group function. This creates a chart that displays the number of employees in each job classification.

11. In the **Group Function** list, choose **SUM**.

The group function groups the Value column values by unique Label column values, and performs an operation on each group of values. In this case, the group function sums the salaries of each department.

12. In the **Order By** list, choose **ORDER BY LABEL**.
13. You can accept the default values on the remaining pages. Click  to create the chart and display the Manage Component page.
14. Click **Run** to display your chart.



3.8 Building a Shared Component

A *shared component* is a component element such as a link, List of Values, or image that can be used by multiple developers when creating forms, reports, and other WebDB components. You can create the following shared components in WebDB:

Icon	Shared Component	Description
	Color	Set the component background color and other component elements such as report headings and chart bars.
	Font	Set the font for text that appears in components, such as in labels and headings.
	Image	Add graphic image files to a component or its background.
	JavaScript	Perform field- or form-level validation of fields in the component.
	Link	Add hypertext links to jump between components.
	List of Values (LOV)	Add selectable parameters to component fields. The List of Values can be displayed in formats such as combo boxes or radio buttons.
	User Interface Template	Set the look and feel of a page on which a component is displayed.

Because these component elements are shared, they only need to be created once and will look and behave consistently across components. WebDB Developers can create shared components in a schema on which they have Build In privileges. To use a shared component, developers must have Build In privileges in the schema that owns the shared component.

In the following exercises you'll learn how to create Lists of Values and use them in components. In Chapter 4, "Building Applications by Linking Components" you'll learn how to create and use links.

3.8.1 Building a List of Values (LOV)

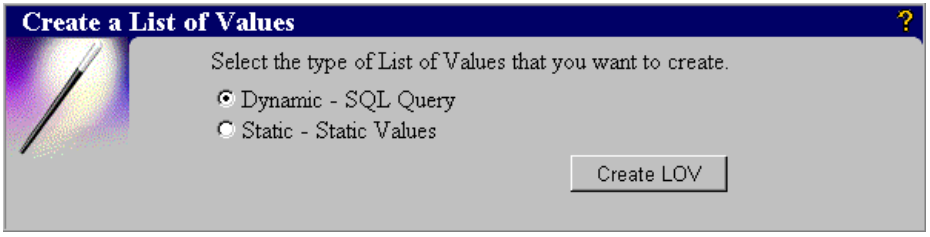
End users can use Lists of Values (LOV) to select from a list of possible values rather than type values in fields on forms and component parameter entry forms. There are two types of LOV:

- **A Dynamic LOV** is based on a SQL query that you code. This type of LOV is dynamically generated from a SQL query of a table column and contains all values in the column.
- **A Static LOV** contains values that you explicitly specify when you create it.

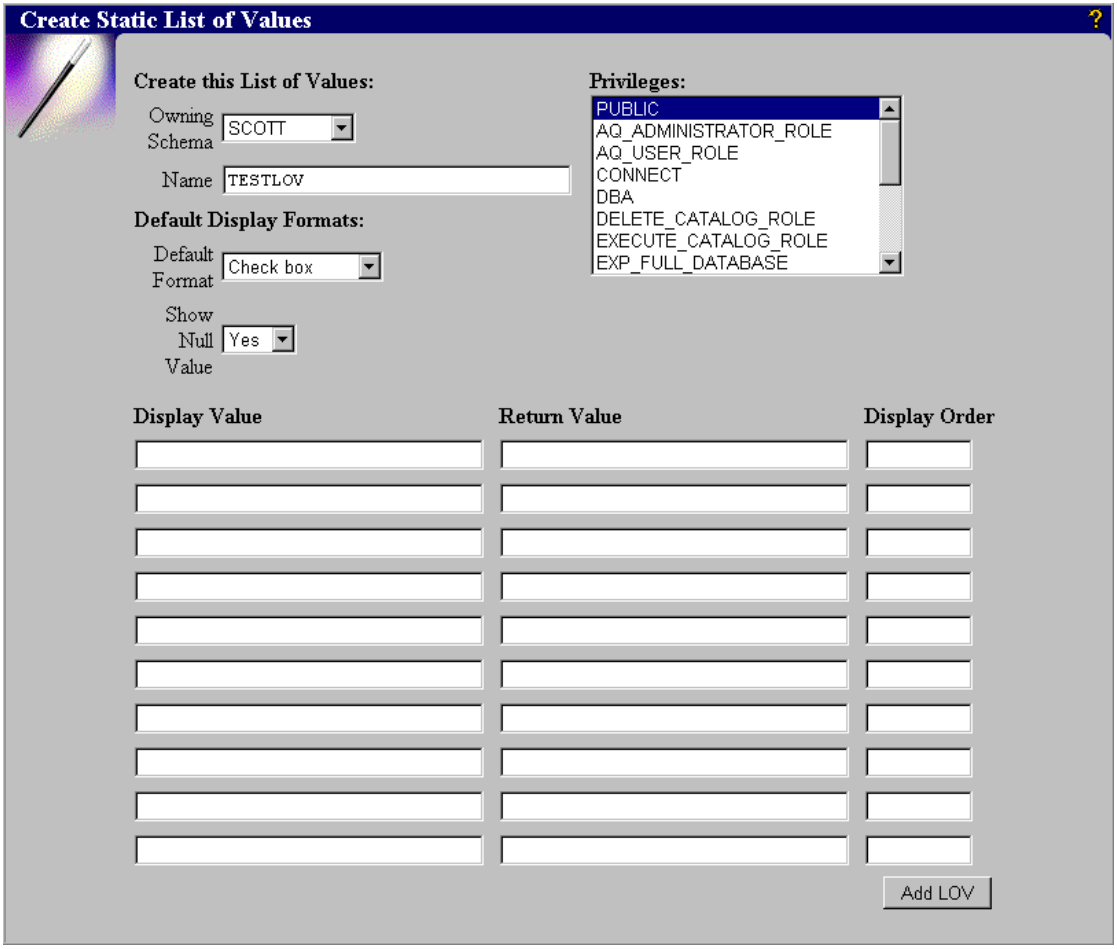
The DEPTNO column in TUTORIAL_TABLE can have a value of 10, 20, or 30. Let's create an LOV so that when the Human Resources staff need to enter a department number they can choose from a list.

1. Click your browser's Back button to return to the Manage Component page.
2. In the toolbar at the bottom of the page, click  .
3. Click **Lists of Values (LOV)**.

   The page displayed is divided into three panels. For this exercise you will use the Create a List of Values panel.



4. Click **Static**, then click **Create LOV** to display the Create Static List of Values page.



5. In the **Owning Schema** list, choose your own schema.
6. In the **Name** field, type `TUTORIAL_LOV`.

7. Complete the **Display Value**, **Return Value**, and **Display Order** fields using the information in the following table.

   - **Display Value** specifies what is displayed in the list.
   - **Return Value** is the actual value that is returned to the component when an item in the LOV is chosen.
   - **Display Order** specifies the order the items are displayed in the LOV. If you do not specify a display order, the items are displayed in ascending alphabetic or numeric order.

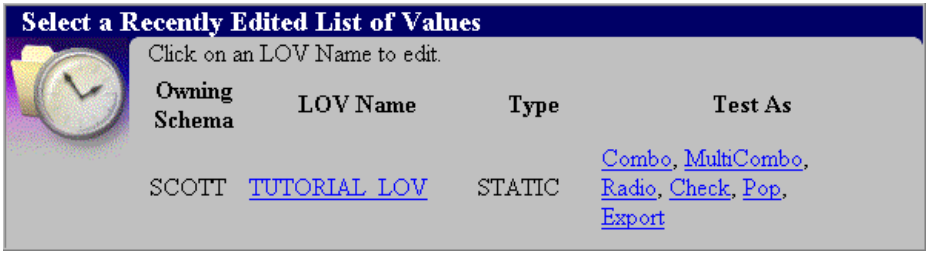
Display Value	Return Value	Display Order
Accounting (10)	10	1
Research (20)	20	2
Sales (30)	30	3

8. Click **Add LOV** to create the LOV and display the Manage Lists of Values page.

3.8.2 Testing a List of Values

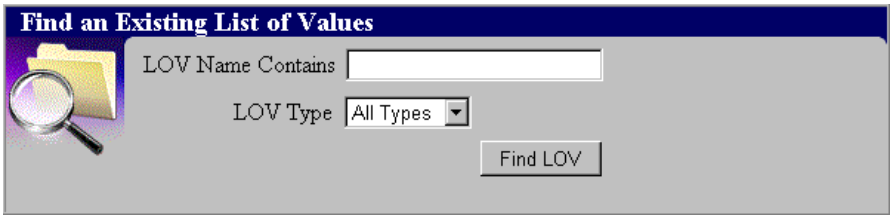
Once you have created an LOV, you can test it to check how it will appear in a component.

1. Scroll down to the Select a Recently Edited List of Values panel.



If TUTORIAL_LOV is not listed:

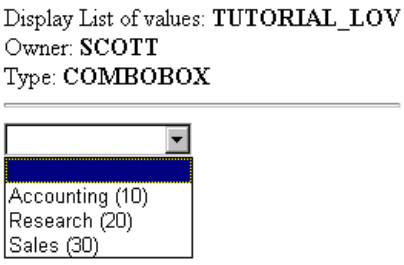
a. Scroll up to the Find an Existing List of Values panel.



b. In the **LOV Name Contains** field, type `TUTORIAL_LOV`.

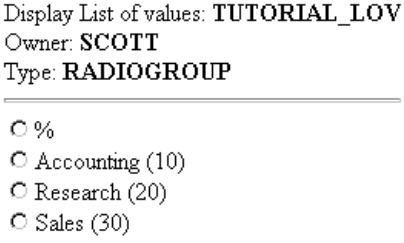
c. Click **Find LOV**.

2. Click **Combo** to test what TUTORIAL_LOV will look like as a combo box.



3. Click your browser's Back button.

4. Click **Radio** to test what the List of Values will look like as a group of radio buttons.



3.8.3 Using a List of Values in a component

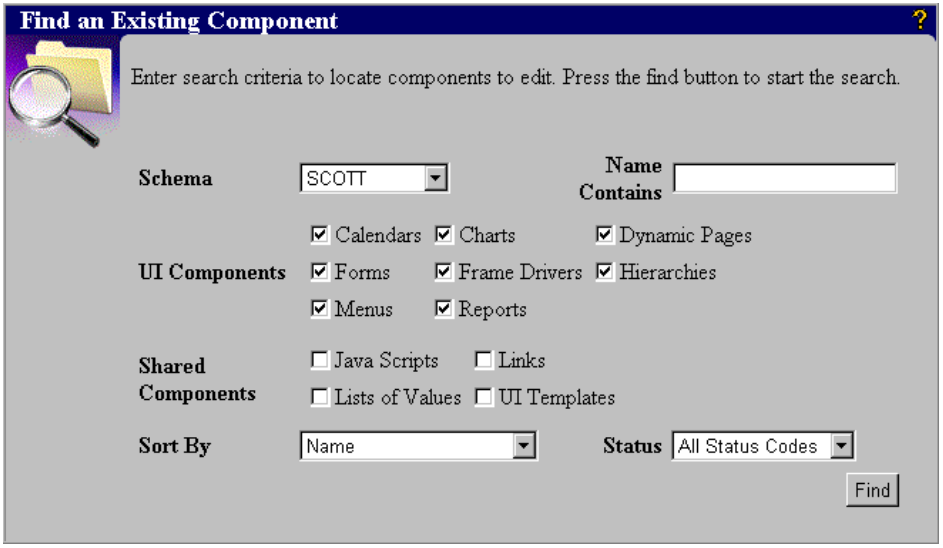
In the previous exercise you created an LOV. In this exercise you will use the LOV in the form and report that you created in Section 3.2, "Building a Form Based on a Table" on page 3-3 and Section 3.5, "Building a Report" on page 3-20.

3.8.3.1 Using a List of Values in a form

Let's add the LOV to the DEPTNO field in TUTORIAL_FORM.

1. In the toolbar at the bottom of the page, click  to display the Component Building page.

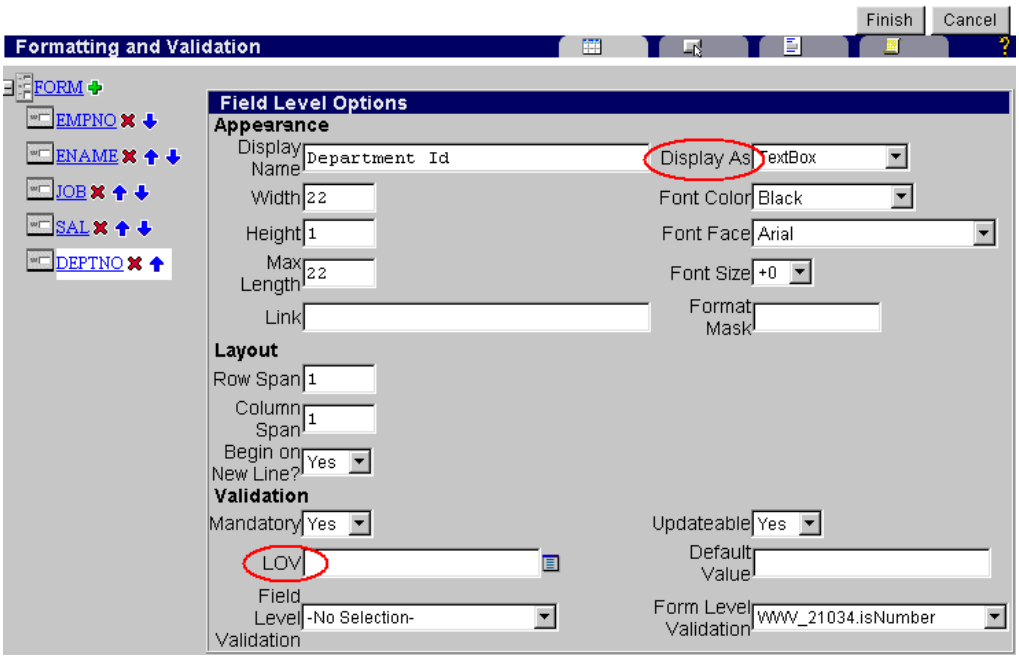
   The Component Building page offers another way of finding components. Here you can search across different types of component.



2. In the **Schema** list, choose your own schema.
3. In the **Name Contains** field, type `TUTORIAL`.
4. Click **Find**.

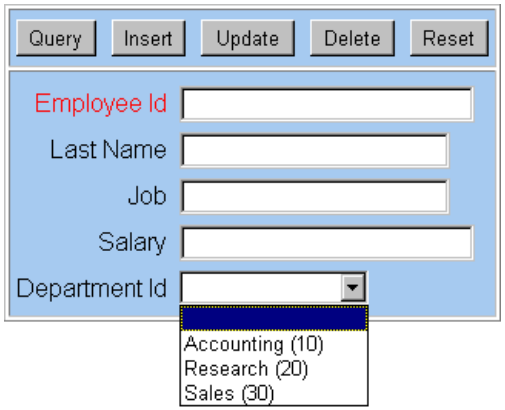
   WebDB searches for all components containing the text "TUTORIAL" and lists them at the bottom of the Component Building page. You can use the check boxes to restrict the search further by specifying which type of components to search for.

5. Scroll down the Component Building page and click **TUTORIAL_FORM** to display the Manage Component page for the form.
6. Click **Edit** to display the Edit Form: Formatting and Validation page.
7. In the left side of the page, click **DEPTNO**.



8. In the **Display As** list, choose **ComboBox**.
9. Click  next to the **LOV** field to list the available LOVs. You can only use LOVs stored in schemas on which you have Build In privileges.
10. Click **Next** to page through the LOVs if necessary and click **<*YOUR_SCHEMA*>.TUTORIAL_LOV**, where *YOUR_SCHEMA* is the name of your own schema.
11. Click **Finish** to save your changes and return to the Manage Component page.

12. Click **Run** to view your changes. The **Department Id** field is now a combo box where the end user can select a department by name, rather than having to know which number to type.

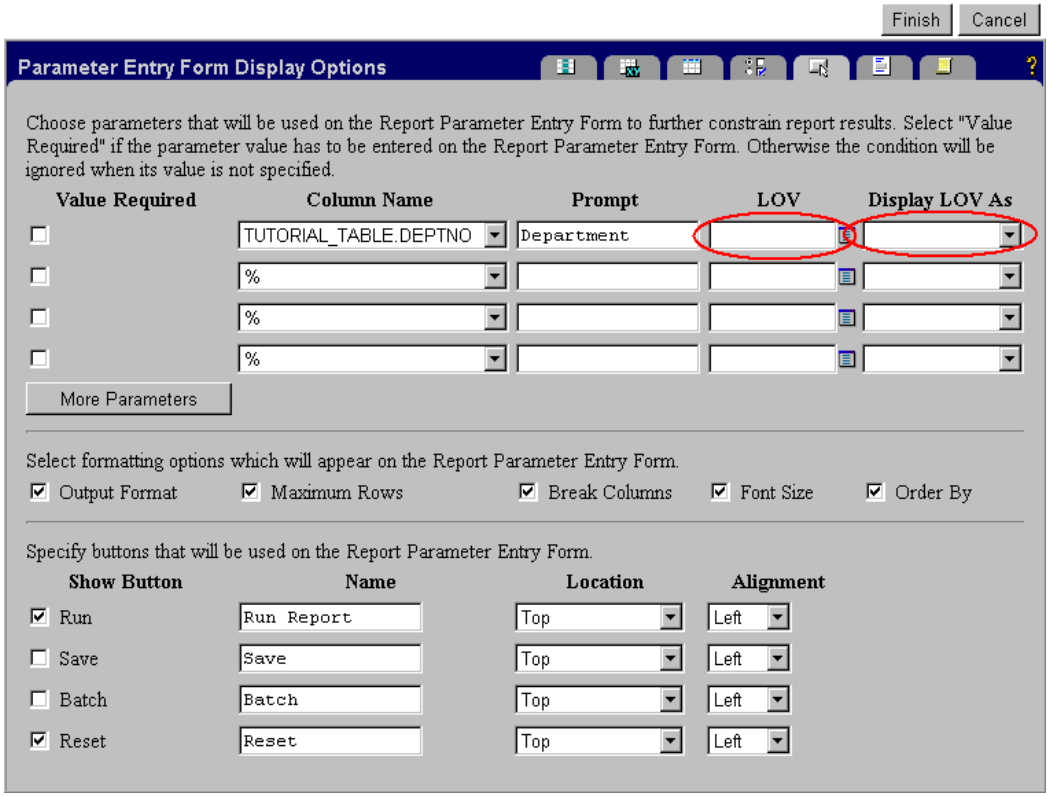


3.8.3.2 Using a List of Values in a report parameter entry form

Let's add the LOV to the Department parameter field in the TUTORIAL_REPORT parameter entry form.

1. Click your browser's Back button to display the Manage Component page.
2. In the toolbar at the bottom of the page, click  to display the Component Building page.
3. In the **Schema** list, choose your own schema.
4. In the **Name Contains** field, type `TUTORIAL`.
5. This time, let's just search for reports. Uncheck all the check boxes except for **Reports** and click **Find**.
6. Scroll down the Component Building page and click **TUTORIAL_REPORT** to display the Manage Component page for the report.
7. Click **Edit** to display the Edit Reports: Table / View Columns page.

8. Click the tab to display the Parameter Entry Form Display Options page.



9. In the row for the Department parameter, click next to the **LOV** field to list the available LOVs.

10. Click **Next** to page through the LOVs if necessary and click **<*YOUR_SCHEMA*>.TUTORIAL_LOV**, where *YOUR_SCHEMA* is the name of your own schema.

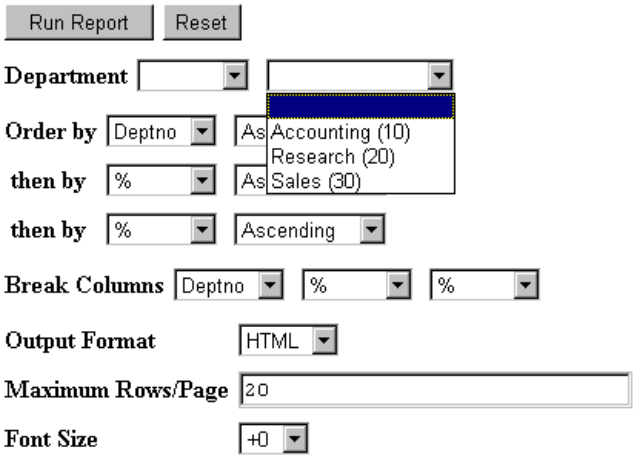
11. In the **Display LOV As** list, choose **Combo box**.

12. Click **Finish** to save your changes and return to the Manage Component page.

13. Click **Parameters** to display the parameter entry form for the report.

    The LOV looks the same as the LOV in TUTORIAL_FORM: the same values are listed in the same order. This improves the usability and consistency of an application, because the end user does not have to learn a different interface

before being able to use the report. If you did not use a shared component in this situation, the LOV might be ordered differently or use different names for the departments, which could confuse the end user.



14. In the **Department** fields, choose **=** from the first list and choose **Sales (30)** from the second.
15. Click **Run Report** to show employees in the Sales department (Department 30).
16. Click your browser's Back button twice to return to the Manage Component page.

3.9 What's Next?

In this chapter, you learned how to:

- Create and edit a form
- Create and edit a report
- Create a chart
- Provide access to a component
- Create and use a List of Values (LOV)

In Chapter 4, "Building Applications by Linking Components" you will create menus and links to build applications from the individual components you have created.

4

Building Applications by Linking Components

Estimated completion time: 30 minutes

This chapter shows you how to use Oracle WebDB to build applications from the individual components you have created. Typically, you will build components as part of an application, not as standalone components. End users need to be able to easily access an application's components and the components themselves need to be able to link to each other and pass data between each other.

In this chapter you'll learn how to build menus to provide access to your application components and how to build links to add hypertext jumps and pass data between components.

This chapter includes the following sections:

4.1 Before You Begin

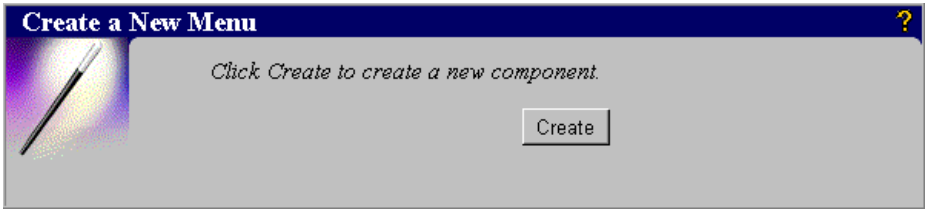
- To complete this chapter, you must be a WebDB Developer (that is, you must be a member of the WEBDB_DEVELOPER role) and have Build In privileges on your own schema. If you are not a WebDB Developer, you will not be able to access WebDB's component building features. If you do not have Build In privileges on your own schema, you will not be able to build components in that schema. You must also be a member of the RESOURCE role. If you need to be added to the WEBDB_DEVELOPER or RESOURCE roles or granted Build In privileges on your own schema, ask your DBA.
- You must have completed Section 3.2, "Building a Form Based on a Table" on page 3-3, Section 3.5, "Building a Report" on page 3-20, and Section 3.6.3, "Adding parameters to a report" on page 3-26 before starting this chapter.
- Your DBA must have created the HR_TUTORIAL role. Instructions for creating this role are provided in Appendix A, "Tutorial Setup Instructions".

4.2 Building a Menu

End users use menus to navigate within an application and access the different components that make up that application. The components you have built so far provide the beginnings of a Human Resources application. Let's create a menu to make it easier for Human Resources staff to access the components of that application.

1. In the toolbar at the bottom of the page, click  .

   The page displayed is divided into three panels. For this exercise you will use the Create a New Menu panel.



2. Click **Create** to display the Create Menus Wizard.
3. In the **Schema** list, choose your own schema.

> **Note:** Your schema name is the same as your user name.

4. In the **Menu Name** field, type `TUTORIAL_MENU`.
5. Click  to display the Menu Options page.

   The Menu Options page is divided into two. The left side of the page shows the menu hierarchy including submenus and menu items.

   - A submenu is a menu that is accessed from another menu or submenu.
   - A menu item is a jump to another WebDB component, a link (shared component), or another URL.

   The right side of the page is where you set the options for the currently selected menu, submenu, or menu item.

> **WARNING: Click  if you need to go back to a previous page of the wizard. Do not click your browser's Back button.**

6. Currently **My Menu** is selected in the left side of the page and the right side of the page is displaying the menu options, so let's edit those.
7. In the **Name** field, type `Tutorial Menu`.
8. In the **Welcome Text** field, type:

   ```
   Welcome to the Tutorial Human Resources Application.<BR>
   Choose an option from the list below.
   ```

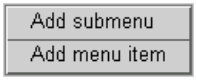
9. In the **Menu Footer** field, type:

   ```
   For enhancements, please email <A
   HREF="mailto:your_email_address">your_name</A>.
   ```

   You have now defined the basic appearance of the menu. Let's add some submenus and menu items.

10. In the left side of the page, click  next to **My Menu** to add a submenu or menu item to the menu.

    A pop-up menu appears, where you need to choose whether you are adding a submenu or a menu item.



11. In the pop-up menu, choose **Add menu item**.

    A menu item, called menu item 1, is added to the menu hierarchy in the left side of the page. The right side of the page is updated to display options for menu item 1.

> **Note:** As soon as you add the new menu item, **My Menu** changes to **Tutorial Menu** to reflect the changes you made previously.

    Now you need to specify the destination of the menu item.

12. In the **Name** field, type `Oracle`.

    This text is displayed as a hypertext link in the menu.

13. In the **Link** field, type `http://www.oracle.com`.

14. In the **Description** field, type:

    ```
    Go to the Oracle Corporation Web site.
    ```

    The description text is displayed just below the hypertext link and is used to provide end users with more information about where the link will take them when they click it.

    You can add submenus to organize the items in your menu.

15. In the left side of the page, click  next to **Tutorial Menu**.

16. In the pop-up menu, choose **Add submenu**.

    A submenu, called submenu 2, is added to the menu hierarchy in the left side of the page. The right side of the page is updated to display options for submenu 2.

17. In the **Name** field, type `Update Records`.

This text is displayed as a hypertext link in the menu. The text is also used as the title of the submenu which appears in a banner at the top of the page.

18. In the left side of the page, click  next to **submenu 2** to add a submenu or menu item to the Update Records submenu.

19. In the pop-up menu, choose **Add menu item**.

    A menu item, called menu item 3, is added to the menu hierarchy in the left side of the page. The right side of the page is updated to display options for menu item 3

    Note: As soon as you add the new menu item, **submenu 2** changes to **Update Records** to reflect the changes you made previously.

20. In the **Name** field, type `Add Employee`.

21. In the **Link** field, type *<YOUR_SCHEMA>*`.TUTORIAL_FORM.SHOW`, where *YOUR_SCHEMA* is your own schema name.

    This is the run link of the form you created in Section 3.2, "Building a Form Based on a Table" on page 3-3, and is used to link to the form.

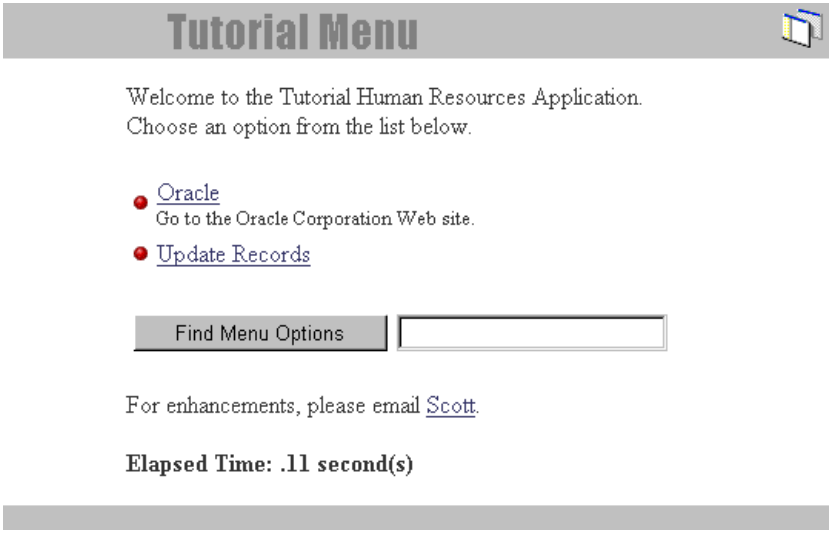
22. In the **Description** field, type:

    `Add information for a new employee.`

23. Click  to display the Create Menu page.

24. Click **OK** to create the menu and display the Manage Component page.

25. Click **Run** to view your menu.



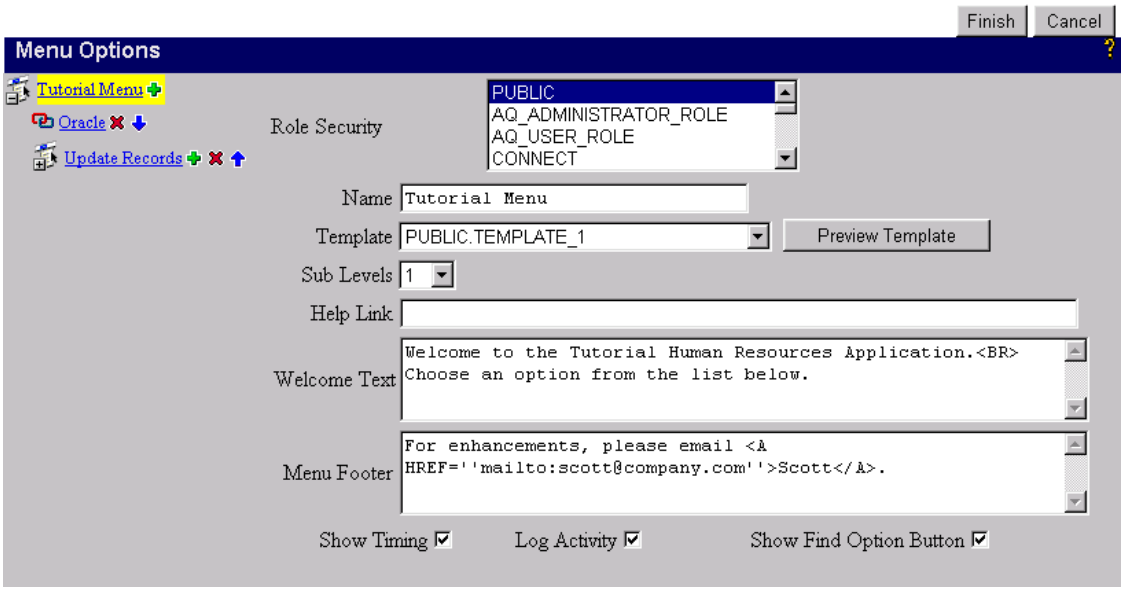
26. Click **Update Records** to display the Update Records submenu.

27. Click **Add Employee** to display the Employees form.

4.3 Editing a Menu

Now let's add some more submenus and menu items to the menu.

1. Click your browser's Back button three times to return to the Manage Component page.
2. Click **Edit** to display the Edit Menu: Menu Options page.

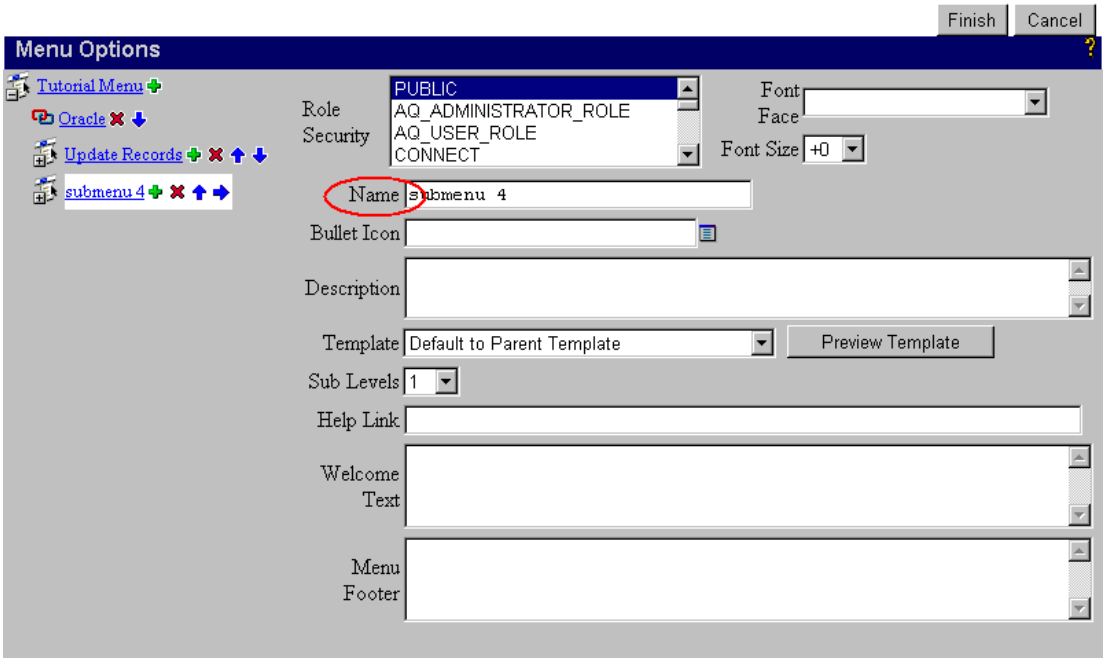


Note: You can no longer see the Add Employee menu item because the Update Records submenu is no longer expanded. To see the Add Employees menu item you need to click  to expand the Update Records submenu.

Let's add another submenu to Tutorial Menu.

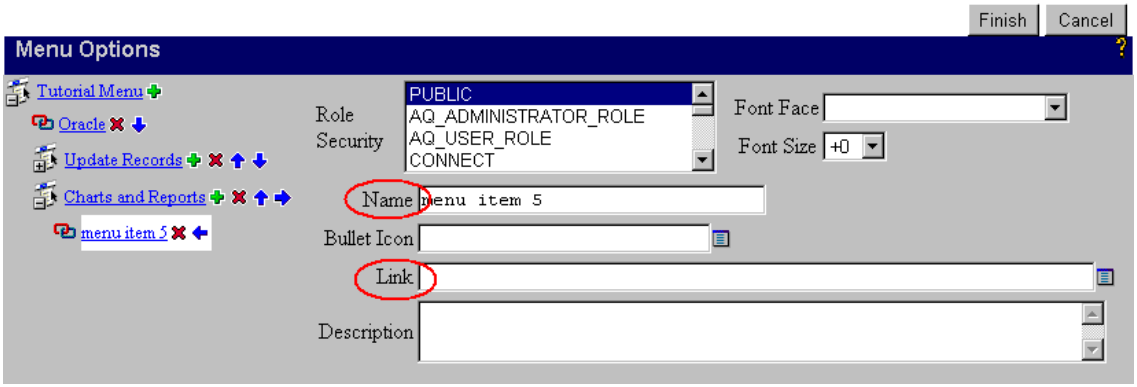
3. In the left side of the page, click  next to **Tutorial Menu**.

4. In the pop-up menu, choose **Add submenu** to create submenu 4.



5. In the **Name** field, type `Charts and Reports`.
6. In the left side of the page, click ✚ next to **submenu 4** to add a menu item to the Charts and Reports submenu.

7. In the pop-up menu, choose **Add menu item** to create menu item 5.

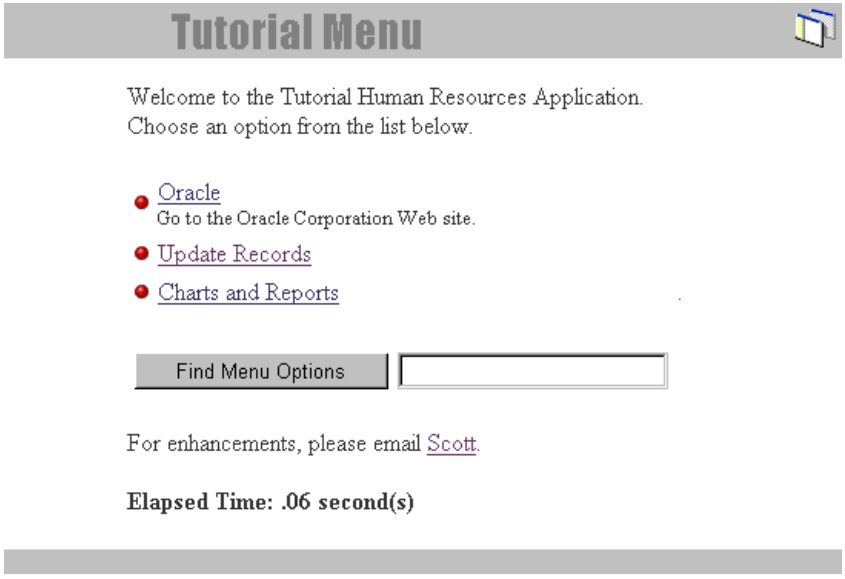


8. In the **Name** field, type `Department Salaries (Chart)`.
9. In the **Link** field, type *<YOUR_SCHEMA>*`.TUTORIAL_CHART.SHOW`, where *YOUR_SCHEMA* is your own schema name.

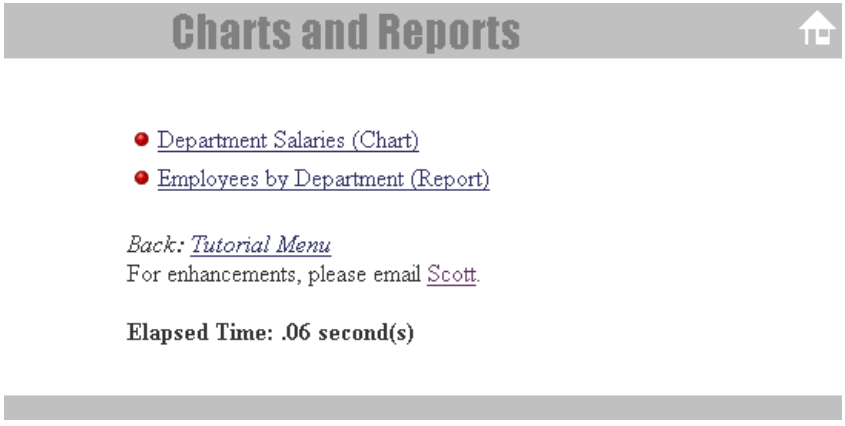
   This is the run link of the chart you created in Section 3.7, "Building a Chart" on page 3-28, and is used to link to the chart.
10. In the left frame, click ✚ next to **Charts and Reports** to add another menu item to the Charts and Reports submenu.
11. In the pop-up menu, choose **Add menu item** to create menu item 6.
12. In the **Name** field, type `Employees by Department (Report)`.
13. In the **Link** field, type *<YOUR_SCHEMA>*`.TUTORIAL_REPORT.SHOW_PARMS`, where *YOUR_SCHEMA* is your own schema name.

    This is the run link of the report you created in Section 3.5, "Building a Report" on page 3-20, and is used to link to the report.
14. Click **Finish** to save your changes and display the Manage Component page.

15. Click **Run** to view your changes.



16. Click **Charts and Reports** to display the Charts and Reports submenu.



17. Click **Department Salaries (Chart)** to display the Department Salaries chart.

    Suppose you now wanted to see the salary of each employee in Department 10.

18. Click your browser's Back button to return to the Charts and Reports menu.

19. Click **Employees by Department (Report)** to display the parameter entry form for the Employees report.

> **Note:** The parameter entry form is displayed rather than the report itself because you used the SHOW_PARMS run link rather than the SHOW run link.

20. In the **Department** fields, choose **=** from the first list and choose **Accounting (10)** from the second.
21. Click **Run Report** to display a report of employees in the Accounting department (Department 10), in which you can view the salary of each employee in that department.

4.3.1 Adding role-level menu security

You can control who can view menu item hypertext links by adding role security.

1. Click your browser's Back button four times to return to the Manage Component page.
2. Click **Edit** to display the Edit Menu: Menu Options page.
3. In the left side of the page, click **Update Records** to edit the Update Records submenu options.
4. In the **Role Security** list, choose **HR_TUTORIAL**.

> **Note:** If HR_TUTORIAL is not listed, ask your DBA to create this role for you using the instructions in Appendix A, "Tutorial Setup Instructions".

5. Click **Finish** to save your changes and display the Manage Component page.

   Now only members of the HR_TUTORIAL role will be able to view the Update Records submenu hypertext link on Tutorial Menu.

Note: Even though you have enabled members of the HR_TUTORIAL role to view the links on the menu, you still need to grant end users execute privileges on the individual components themselves to enable them to run the components linked to from the menu. You will also need to grant end users execute privileges on the menu. The most efficient way of granting multiple end users access to components is to use roles. If you need a role creating, ask your DBA.

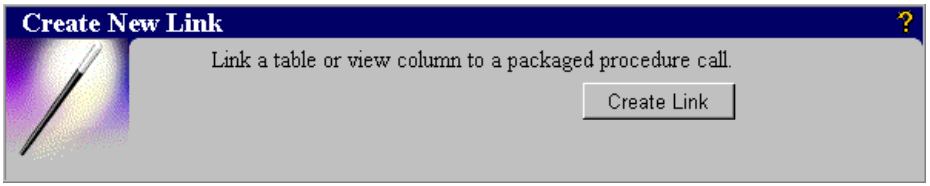
4.4 Building a Link

WebDB links are shared components that WebDB Developers can add to components so that end users can navigate from one component to another component, parameter entry form, or Web page. For more information about shared components, see Section 3.8, "Building a Shared Component" on page 3-31. This provides quick and easy access to additional information. You can also use links to pass data between components or to link to any Web page.

TUTORIAL_REPORT includes a parameter that restricts the data displayed in the report to a particular department. Let's create a link that passes a department number to that parameter. This link can then be added to other components so that end users can click a department number in one component and jump directly to a report that contains employee information about that department.

1. In the toolbar at the bottom of the page, click  .
2. Click **Links**.

   The page displayed is divided into three panels. For this exercise you will use the Create New Link panel.



3. Click **Create Link** to display the Create Link Wizard.
4. In the **Schema** list, choose your own schema.
5. In the **Link Name** field, type `TUTORIAL_LINK`.

6. Click  to display the Link Target Type and Name page.

   Here, you identify where the link will jump to when it is clicked. It can jump to a component, and optionally pass values to that component to specify what data it displays. You can also link to a component parameter entry form where the end user can specify the values to use to display the component, or to any Web page.

7. Click **WebDB Component** to identify the target as a component.

8. Click  next to **The name of the component or page you are linking to** field to list the components to which you can link.

9. Click **Next** to page through the list if necessary and click **<*YOUR_SCHEMA*>.TUTORIAL_REPORT**, where *YOUR_SCHEMA* is the name of your own schema.

10. Click  to display the Link Target Inputs page.

    This page lists the parameters and display options associated with the chosen component that the link can pass values to.

    Note: If you clicked **WebDB Component Parameter Form** or **HTML Link**, clicking  on the Link Target and Name page displays the last page of the Create Link Wizard, because links pass values only to components.

11. In the row for the **tutorial_table.deptno** parameter:

    a. In the **Condition** list, choose **=**.

    b. In the **Value Type** list, choose **Column**.

       This specifies that the link passes the value of a column to the component. You can also choose **Literal** and specify a static value so that the link always passes the same value to the component.

    c. In the **Value** field, type `DEPTNO`.

       The link passes the values of this column to the component. If you chose **Literal** in the **Value Type** list, you would specify the static value that you want to pass to the component in the **Value** field.

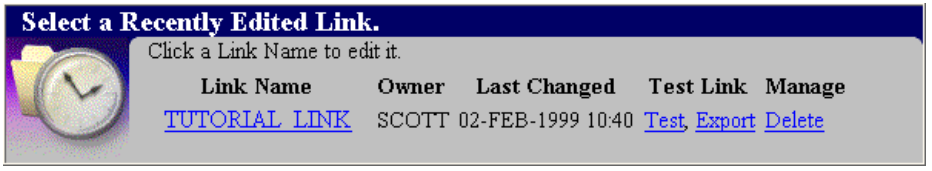
> **Note:** In this page, you can also specify values for display options, such as Maximum Rows/Page, Output Format, and Font Size. If you do not change these values, the component is run using whatever display options were specified when the component was created.

12. Click  to display the Create Link page.
13. Click **OK** to create the link and return to the Manage Links page.

4.4.1 Testing a link

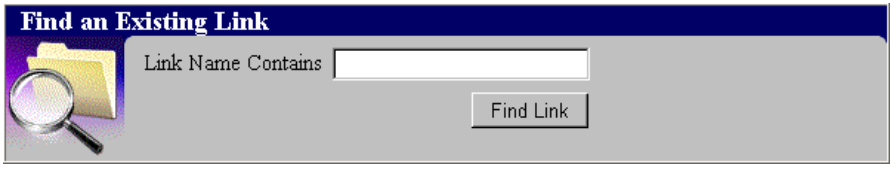
Once you have created a link, you can test it to check how it will appear in a component.

1. In the Manage Links page, scroll down to the Select a Recently Edited Link panel.



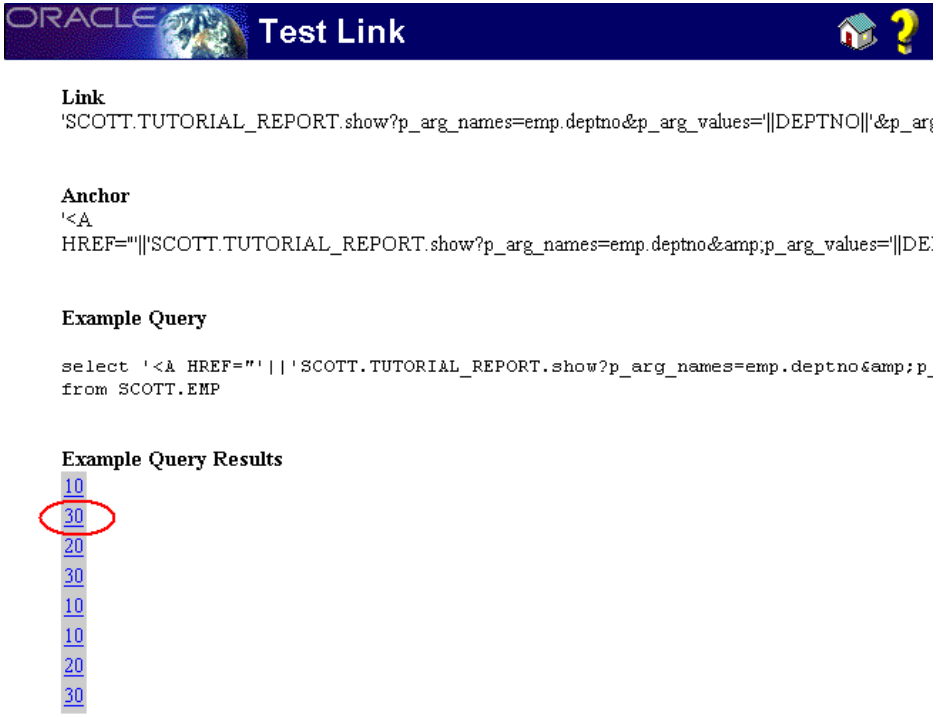
If TUTORIAL_LINK is not listed:

a. Scroll up to the Find an Existing Link panel.



b. In the **Link Name Contains** field, type `TUTORIAL_LINK`.
c. Click **Find Link**.

2. Click **Test** to test the behavior of TUTORIAL_LINK.



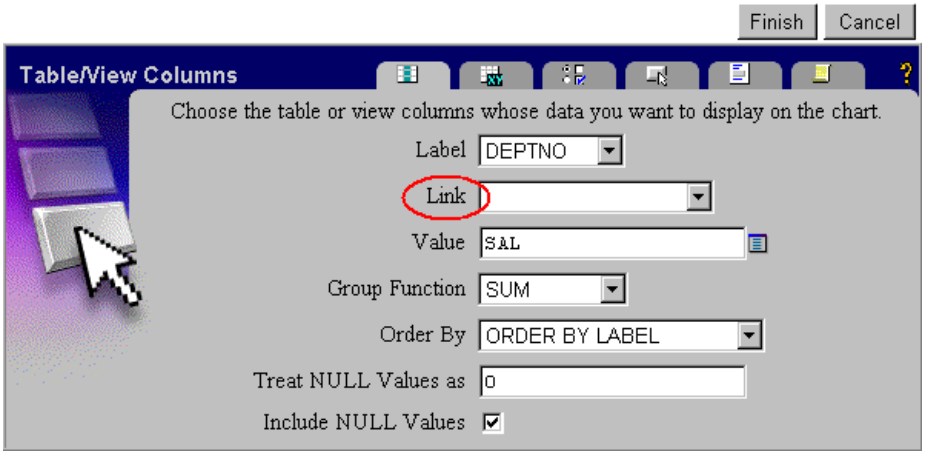
3. Click **30** to display TUTORIAL_REPORT with the Department parameter set to 30.

4.4.2 Using a link in a component

In the previous exercise you created a link to TUTORIAL_REPORT. In this exercise you will add the link to TUTORIAL_CHART so that end users can quickly display a report that lists the employees in a department, based on the department number that they click in the chart. Rather than having to exit the chart and run the report separately, end users can get straight to the information they want from the chart.

1. Click your browser's Back button to return to the Test Link page.
2. In the toolbar at the bottom of the page, click  .
3. In the **Schema** list, choose your own schema.
4. In the **Name Contains** field, type `TUTORIAL`.

5. Uncheck all the check boxes except for **Charts**, and click **Find**.
6. Click **TUTORIAL_CHART** to display the Manage Component page for the chart.
7. Click **Edit** to display the Edit Charts: Table / View Columns page.



8. In the **Link** list, choose **TUTORIAL_LINK**.
9. Click **Finish** to save your changes and return to the Manage Component page.
10. Click **Run** to view your changes.

    The department number is underlined, identifying it as a link.

11. Click **30** to display TUTORIAL_REPORT showing all employees in Department 30.

4.5 What's Next?

In this chapter, you learned how to:

- Build a menu to provide access to the components in an application
- Create a link between components in an application

This concludes the application building part of the tutorial. Now you're ready to build your own applications. For more information about any subject you've learned in this chapter and others, see the WebDB online help.

If you will be using WebDB to build Web sites, see Chapter 5, "Creating WebDB Sites".

If you will be designing or adding content to WebDB sites, see Chapter 6, "Designing WebDB Sites".

Part II

Building WebDB Sites

Complete this chapter:	If you will be using Oracle WebDB to:
Chapter 5, "Creating WebDB Sites"	Create Oracle WebDB sites. **Note** To complete this chapter, you must have completed some of the exercises in Chapter 1, "Managing Users".
Chapter 6, "Designing WebDB Sites"	Design the structure, design the style, or control access to one or more folders of a WebDB site.
Chapter 7, "Managing WebDB Site Content"	Add, edit, or delete WebDB site content. **Note** To complete this chapter, you must have completed some of the exercises in Chapter 6, "Designing WebDB Sites". We recommend that you complete all the exercises in Chapter 6 before starting Chapter 7.

5

Creating WebDB Sites

Estimated completion time: 30 minutes

This chapter shows you how to use Oracle WebDB to create Web sites. You create a WebDB site within a schema in an Oracle database. Storing Web sites in the database means that backing up the database backs up all of the data in your site. It also means that to move the site from one database to another, you simply export the schema that owns the site and import it into a new database.

When you create a WebDB site, you also install all the tools needed for designing and maintaining the site. These tools can then be accessed from within the site itself, using a Web browser. No other software needs to be installed.

In this chapter, you'll learn how to create a WebDB site in a database, using WebDB's Site Creation Wizard. You'll then learn how to assign a site administrator to manage the design and maintenance of the site.

This chapter includes the following sections:

5.1 Before You Begin

- To complete this chapter, you must be a DBA (that is, you must be a member of the DBA role). If you are not a DBA, you will not be able to access WebDB's site creation features. If you need to be added to the DBA role, ask your DBA.
- You must also have execute privileges on SYS.DBMS_SYS_SQL **with grant option**. Ask your DBA to grant you these privileges.

> **Note:** The WebDB schema owner is automatically a DBA and has the appropriate privileges on SYS.DBMS_SYS_SQL. Therefore, if you are logged on as the WebDB schema owner, you will already meet the above two prerequisites for completing this chapter.

- At least one tablespace must exist to store site objects and to be used for temporary operations. If an appropriate tablespace does not already exist, create it now. We recommend that you create two tablespaces called USERS and TEMP.

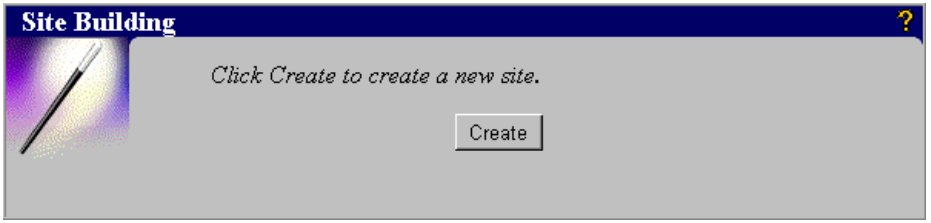
  For information about how to create tablespaces, see your Oracle Server documentation.
- You must have completed Section 1.2, "Creating a New User" on page 1-2 before starting this chapter.

5.2 Creating a WebDB Site in the Database

Your company wants a Web site for providing information, such as product information to its employees and customers. As DBA, it is your job to create the Web site in the database.

1. Click  at the top right of the page if you are not already on your WebDB home page.
2. Click **Sites**.

The page displayed is divided into three panels. For this exercise you will use the Site Building panel.



Tip: You can also click  in the toolbar at the bottom of any page to display the Create Site Wizard page.

---

3. Click **Create** to display the WebDB Site Creation Wizard.
4. In the **Site Name** field, type `Tutorial Site`.
5. Click  to display the Select Owning Schema page.

WARNING: Click  if you need to go back to a previous page of the wizard. Do not click your browser's Back button.

---

6. In the **Owning Schema** field, type <*NAME*>_SITE, where *NAME* is your own user name.

   WebDB will create the Web site in the specified schema.

Note: This schema must not already exist. WebDB creates it for you.

WebDB also creates two user accounts, <*SITENAME*>_PUBLIC and <*SITENAME*>_ADMIN, where *SITENAME* is the name you specified in the **Owning Schema** field.

- The <*SITENAME*>_PUBLIC user account is granted public access to the site.
- The <*SITENAME*>_ADMIN user account is granted site administrator privileges on the site.

WebDB also configures two Database Access Descriptors (DADs). A DAD is a set of values that specify how WebDB connects to the database to fulfill an HTTP request.

- The <*SITENAME*> DAD is used to provide public access to the site and automatically logs users on as <*SITENAME*>_PUBLIC.
- The <*SITENAME*>S DAD is used when users attempt to log on for authorized access to the site. This DAD is not configured with a user name and password. Thus, when users click the **Log On** link, they have to provide a valid user name and password before they can continue.

7. Click  to display the Language page.
8. In the Language list, choose the desired language for the text in the Web site, for example **American**.

   WARNING: Make sure you choose the correct language. You cannot change the language setting once you have chosen it in the Site Creation Wizard.

9. Click  to display the Select Tablespaces page.
10. In the **User Tablespace** field, type the name of the tablespace to be used to store any site objects (for example USERS).

    You, or another DBA, should have created this tablespace before you started this chapter.

11. In the **Temporary Tablespace** field, type the name of the tablespace to be used for temporary operations (for example, TEMP).

    You, or another DBA, should have created this tablespace before you started this chapter.

12. In the **Document Tablespace** field, type the name of the tablespace to be used to store any items uploaded to the site (for example, USERS).

    WARNING: Make sure you choose the correct tablespaces. You cannot change the tablespace settings once you have chosen them in the Site Creation Wizard.

13. Click  to display the Select Demos page.

14. Check **The Traveler** to include the WebDB demo in your site.

    The Traveler is an example WebDB site that can be included as a folder in your sites. You can use The Traveler to learn about and experiment with the features of WebDB sites.

15. Click  to display the Create Site page.

    The Create Site page displays the following information:

    - The options you selected in the wizard.
    - The name of the Owning Schema that will be created. The password is the same as the name.

      IMPORTANT: For security purposes, it is very important that you change the Owning Schema password immediately after creating the site.

    - The user name of the public access user account that will be created. The password is the same as the user name.
    - The user name of the administrator user account that will be created. The password is the same as the user name.

      IMPORTANT: For security purposes, it is very important that you change the administrator user password immediately after creating the site.

    - The URLs of the Web site that will be created.

      The first URL provides public access to the site. This is the URL you will provide to the users of the site.

      The second URL provides authorized access to the site when users click the **Log On** link. When users try to access this URL they are prompted for a user name and password.

    The URLs consist of:

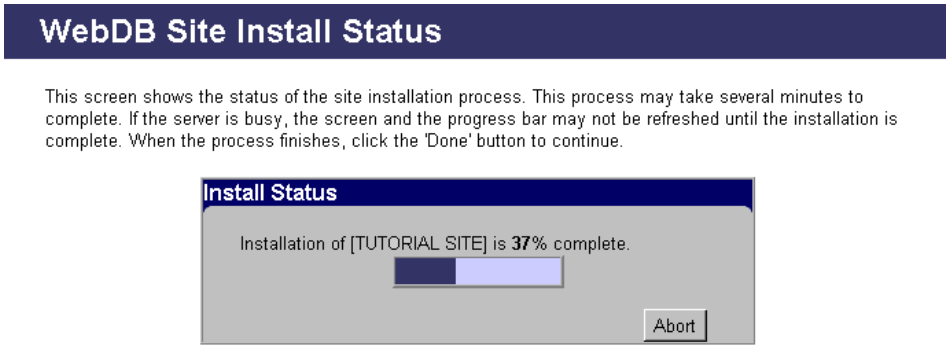
    ```
    hostname:port/dad/
    ```

    where:

`hostname`	is the name of machine where the site is installed.
`port`	is the port to use to access the machine where the site is installed. If port 80 is used, this may be omitted.
`dad`	is the name of the Database Access Descriptor (DAD) used to access the database where the site is installed. Two DADs are automatically configured for each WebDB site you create: one for public access to the site and one for when users log on to the site.

16. Note down the public access URL of the Web site and the user name for the administrator user. You will need this information to log on to the site later.

17. Click **Finish** to display the WebDB Site Install Status page.




```
create or replace package wwv_personalinfo...
create or replace package wwv_layouttabfunc...
create or replace package wwv_subtypetab...
create or replace package wwv_classmgr...
create or replace package accessstats...
create or replace package searchstats...
create or replace package itemstats...
create or replace package cornerstats...
create or replace package sitestats2...
create or replace package sitestats1...
create or replace package wwv_siteapi as...
```

WebDB executes a series of operations to create the site and install the site development tools in the Owning Schema. The WebDB Site Install Status page lists these operations as they are being executed and informs you of the progress of the site creation process.

18. When the site creation process finishes, the **Abort** button changes to a **Done** button. Click **Done** to display the WebDB Site Install Menu page.

WebDB has now created the site in the Owning Schema you specified. All the tools needed to design and maintain the site have also been installed in the schema. All that your WebDB site users require to view and edit the site is the URL for public access to the site (you noted this down in Step 15).

Note: Once the WebDB site has been created in the database, all site development and maintenance tasks are performed within the site itself.

5.3 Assigning a Site Administrator

When you create a WebDB site, WebDB creates an administrator user account that you can use to log on to the site as site administrator. A site administrator is responsible for managing a site. This includes designing the structure of the information accessed from the site, designing the style of the pages in the site, and granting other users access to the site. Typically, you will want to transfer this responsibility to another user or users. You can do one of the following:

- Provide the administrator user name and password created by WebDB to another user who will be a site administrator.
- Log on to the site yourself using the administrator user name and password and assign another user as a site administrator.

Let's log on to the site you just created and assign MILLER, the user you created in Section 1.2, "Creating a New User" on page 1-2, as a site administrator.

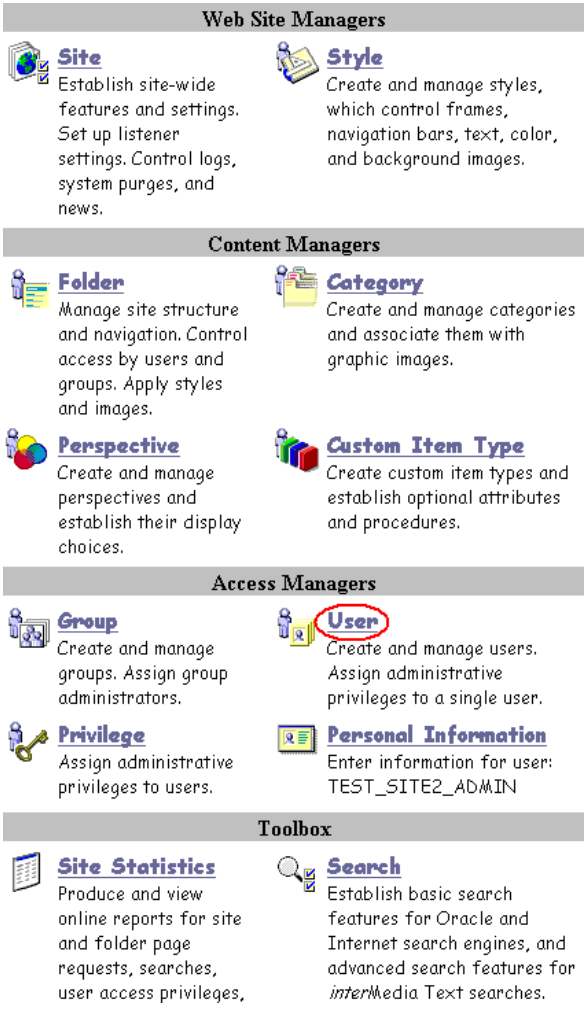
1. In the WebDB Site Install Menu page, click **Site Administration**.

2. You will be prompted for a user name and password.

   a. In the log on dialog box, type the administrator user name that you noted down in Step 15 of the previous exercise and the password. The password is the same as the user name.

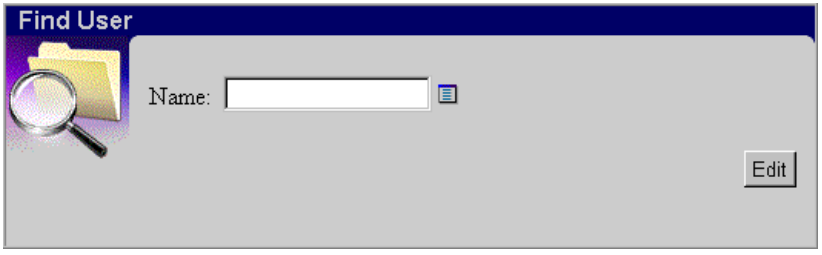
   b. Click **OK**.

   The site's Administration page is displayed.



IMPORTANT: While you are logged on to the site as the administrator user, you should also change the default passwords for the site owning schema and the administrator user that were set during site creation. For information about how to change passwords, refer to the WebDB Site Builder online help.

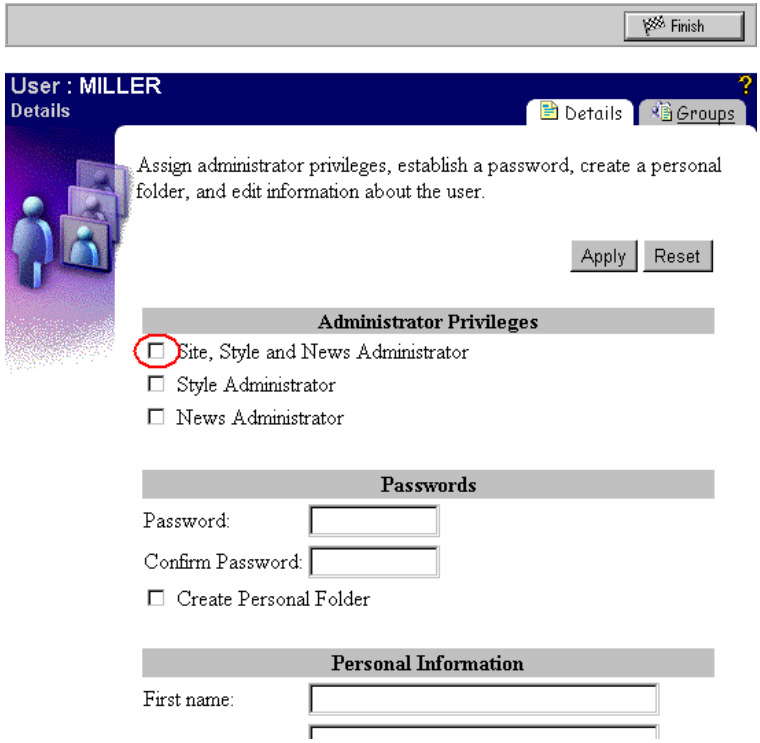
3. In the Access Managers section, click **User** to display the User Manager.
4. The page displayed is divided into two panels. For this exercise, you will use the Find User panel.



5. Click  to search for users you can assign as site administrator.
6. In the field at the top of the list, type `M%` and click **Find** to display user names that start with an M.
7. Click **MILLER_<*NAME*>**, where *NAME* is your own user name to choose the user you created in Section 1.2, "Creating a New User" on page 1-2.

   MILLER_<*NAME*> is displayed in the **Find User: Name** field of the User Manager.

8. Click **Edit** to display the User Manager: Details page.



9. In the Administrator Privileges section, check **Site, Style and News Administrator**.

   There are three types of administrator:

   - **Site Administrator** Site administrators have the highest level of privileges in a WebDB site. They can view and modify anything on the site. Site administrators can create users, groups of users, and control access to the site. Site administrators can also perform all style and news administrator functions.
   - **Style Administrator** Style administrators establish the look and feel of the WebDB site. They have control over color schemes, text, fonts, and background images for pages used on the site. For more information about styles, see Section 6.3, "Controlling the Style of a WebDB Site" on page 6-13.

- **News Administrator** News administrators have the authority to add news to the home page, approve news submitted by public users, and perform other functions related to site wide news management. News is a special type of WebDB site content, for more information see Section 7.3, "Adding a News Item" on page 7-7.

10. Click 

to save your changes and return to the User Manager.
11. Click 

to return to the Administration page.

5.4 What's Next?

In this chapter you learned how to:

- Create a WebDB site in the database.
- Assign administrators to design and maintain a WebDB site.

If you will be designing or adding content to a WebDB site, see Chapter 6, "Designing WebDB Sites".

If you will be using WebDB to build applications, see Chapter 2, "Building and Browsing Database Objects".

6

Designing WebDB Sites

Estimated completion time: 45 minutes

This chapter shows you how to design your WebDB site. You'll learn how to design a site's structure, control its style, and provide access to its contents.

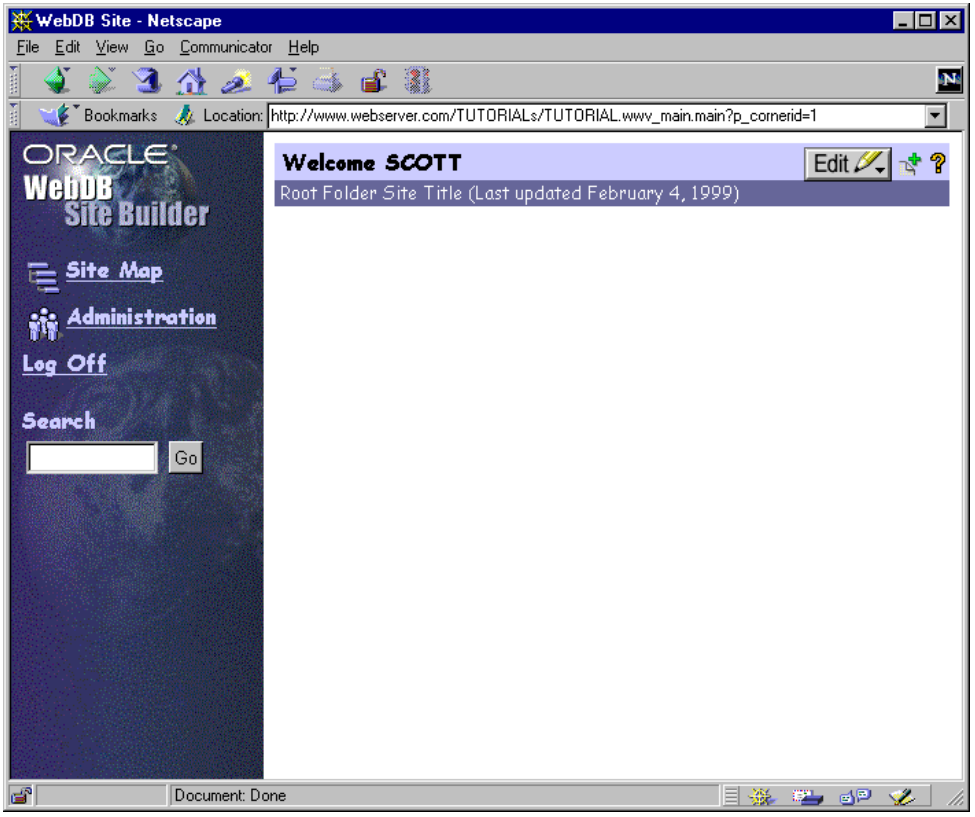
You should complete this chapter if you are a WebDB site administrator or you are the owner of one or more folders in a WebDB site.

This chapter includes the following sections:

6.1 Before You Begin

- To complete this chapter you need to use the Tutorial Web Site. Obtain the URL of this Web site from your DBA. You should be set up as a site administrator of the Tutorial Web Site. Instructions for creating the Tutorial Web Site and assigning users as site administrators are provided in Appendix A, "Tutorial Setup Instructions".

IMPORTANT: To modify a WebDB site, you need to be logged on to the site. If you have not already logged on to the Tutorial Web Site, follow the instructions in "Oracle WebDB Basic Concepts, Displaying an Oracle WebDB Site" on page xxiv to do so now.



- You also need a *personal folder* within the Tutorial Web Site to keep your work separate from that of other tutorial users. A personal folder is an area of a WebDB site set aside for your own personal use. If you do not already have a personal folder in the Tutorial Web Site, follow the instructions below.

  1. In the navigation bar of the Tutorial Web Site, click  to display the Administration page.
  2. In the Access Managers section, click **Personal Information** to display the Personal Information Manager.
  3. Check **Create Personal Folder**.

     Note: If you cannot see the **Create Personal Folder** check box, you already have a personal folder in the Tutorial Web Site and do not need to create one.

  4. Click 

 to save your changes and return to the Administration page.

     Note: Although some of the exercises in this chapter take place in your personal folder, the techniques you learn in those exercises can be applied to any folder you own, including the root folder if you are a site administrator.

- Your DBA or site administrator must have created the TUTORIAL_USER user account. Instructions for creating this user account are provided in Appendix A, "Tutorial Setup Instructions".

6.2 Designing the Structure of a WebDB Site

The structure of your WebDB site determines how easily users can find the information they need.

6.2.1 Creating folders

A WebDB site is divided into folders. A folder is a collection of related items, including files, URLs of other Web pages, and WebDB components. For example, The Traveler demo includes folders for Africa, Americas, and Europe. Dividing your Web site into these distinct areas means you can structure your site, and organize content logically. This makes it much easier for site users to find the information they need. You can make folders containing general information accessible to anyone who displays the site and restrict access to folders containing sensitive information to specific users who must first log on to the site.

Each folder has a *folder owner*, who is responsible for the content of that folder. Delegating responsibility in this way means that each folder is maintained by someone who is familiar with the information and is able to keep that information accurate and up-to-date.

Note: The main page of the site itself is in fact a folder, called the *root folder*. Site administrators own the root folder.

Site administrators can also maintain any other folder in the site.

Site administrators can create folders anywhere in the WebDB site. Folder owners can create folders within the folders they own.

Let's create a folder to contain general information about the products offered by your company. For the purposes of this tutorial, let's create this folder in your personal folder.

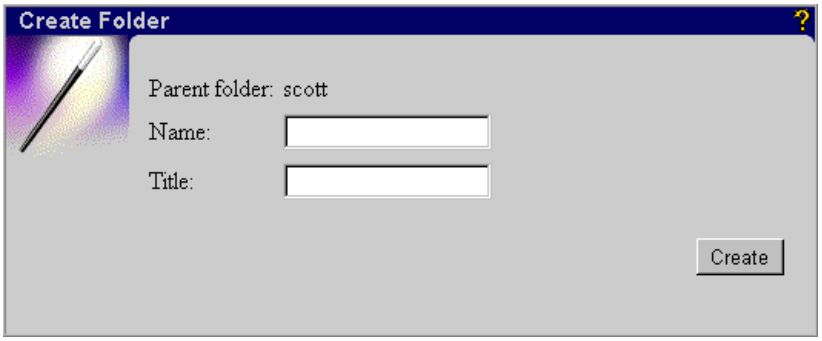
1. To create a folder, you must first navigate to the folder that you want to create the new folder in. When you are logged on to a WebDB site, the home page displays a list of all the folders you own.
   a. If you are not already on the Tutorial Web Site's home page, click the site logo at the top of the navigation bar to display the home page.
   b. Scroll down the home page and under the **Owned folders** banner, click your user name to display your personal folder.

2. In the banner at the top of the page, click 

to enter Edit Mode and display the folder dashboard.
3. In the folder dashboard, click 

to display the Folder Manager.

   The page displayed is divided into two panels. For this exercise you will use the Create Folder panel.



4. In the **Name** field, type PRODUCTS<*NAME*>, where *NAME* is your own user name.

   For the purposes of this tutorial, you add your own user name to the end to give this folder a unique name and to identify it as one created by you, rather than one created by another tutorial user.
5. In the **Title** field, type `Products`.
6. Click **Create** to create the folder.
7. Click 

to return to your personal folder.
8. A link to the Products folder you just created is included in your personal folder.
9. Click **Products** to display the new Products folder.
10. You can also create folders through the Administration page. Let's create another folder, in the Products folder, to contain confidential information about the products offered by your company.

> **Tip:** Although you can nest folders to any level, we recommend that you create no more than five levels of folders. If you have more than five levels of folders, site users will have to click too many links to get to the information they want.

In the navigation bar, click  to display the Administration page.

11. In the Content Managers section, click **Folder** to display the Folder Manager tree which lists all of the folders to which you have access.

> **Note:** You are a site administrator, so you have access to all the folders in the site.

12. Expand **Personal Folders**.
13. Expand the first letter of your user name.
14. Expand your personal folder.
15. In the toolbar to the right of **Products**, click  to display the Folder Manager.
16. In the Create Folder panel:
    a. In the **Name** field, type `CONFIDENTIAL<`*`NAME`*`>`, where *NAME* is your own user name.

       For the purposes of this tutorial, you add your own user name to the end to give this folder a unique name and to identify it as one created by you, rather than one created by another tutorial user.

    b. In the **Title** field, type `Confidential`.
    c. Click **Create** to create the folder.
17. At the top of the navigation bar, click the site logo to display the home page.
18. Scroll down the home page and under the **Owned folders** banner, click **Confidential** to display the Confidential folder.

You will add items to the Confidential folder in Chapter 7, "Managing WebDB Site Content".

6.2.2 Creating categories

All Regular items added to a WebDB site are assigned to a *category*. A category is a grouping of items that answers the content-specific question, "What is this item?" For example, The Traveler demo includes categories for Flights, Lodgings, and Restaurants. Categories provide a way of further organizing the content of a WebDB site, so that users can quickly and easily find the information they want. An item can be assigned to only one category.

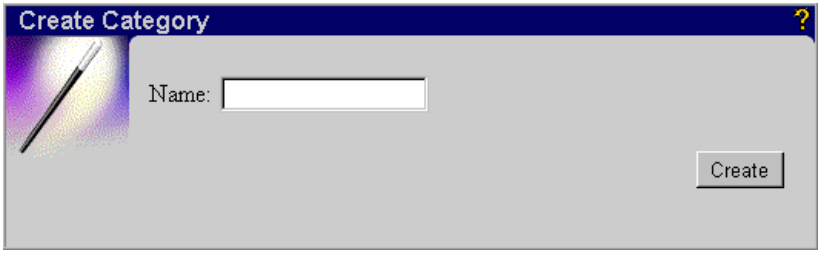
IMPORTANT: Only site administrators can create categories.

---

1. In the navigation bar, click  to display the Administration page.
2. In the Content Managers section, click **Category** to display the Category Manager.

Note: If you cannot see the **Category** link, you are probably not a site administrator of the Tutorial Web Site. Ask your DBA or site administrator to set you up as a site administrator. Instructions for assigning users as site administrators are provided in Appendix A, "Tutorial Setup Instructions".

The page displayed is divided into two panels. For this exercise you will use the Create Category panel.



3. In the **Name** field, type `Tutorial Items <NAME>`, where *NAME* is your own user name.

   For the purposes of this tutorial, you add your own user name to the end to identify the category as one created by you, rather than one created by another tutorial user.

4. Click **Create**. You remain in the Category Manager, where you can create more categories or find and edit existing categories.

> **Note:** You can edit the category to add an image that can be displayed on the navigation bar.

When a contributor adds an item relating to the tutorial, the item can be assigned to the Tutorial Items category.

You will assign an item to a category in Chapter 7, "Managing WebDB Site Content".

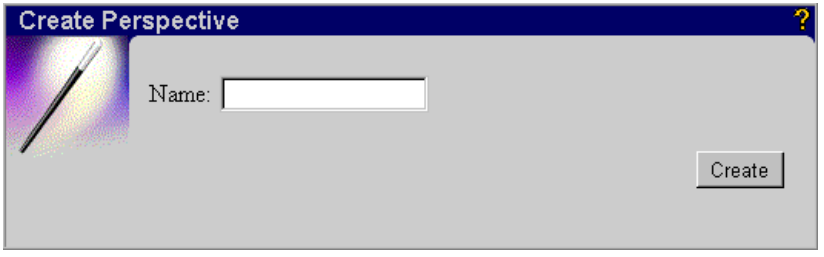
6.2.3 Creating perspectives

Each item added to a WebDB site can optionally be assigned to one or more *perspectives*. A perspective is a cross-folder, cross-category grouping of items that answers the question "Who will be interested in this item?" For example, The Traveler demo includes Beach, Safari, and Skiing perspectives.

> **IMPORTANT: Only site administrators can create perspectives.**

1. In the navigation bar, click  to display the Administration page.
2. In the Content Managers section, click **Perspective** to display the Perspective Manager.

   The page displayed is divided into two panels. For this exercise you will use the Create Perspective panel.



3. In the **Name** field, type `Tutorial Users <NAME>`, where *NAME* is your own user name.

For the purposes of this tutorial, you add your own user name to the end to identify the perspective as one created by you, rather than one created by another tutorial user.

4. Click **Create**. You remain in the Perspective Manager, where you can create more perspectives or find and edit existing perspectives.

> **Note:** You can edit the perspective to add an image that can be displayed on the folder page next to the title of an item that is assigned to the perspective.

When a contributor adds an item that would be of interest to tutorial users, the item can be associated with the Tutorial Users perspective. Tutorial users can view the site by the Tutorial Users perspective, or can search for items associated with the Tutorial Users perspective.

You will assign an item to a perspective in Chapter 7, "Managing WebDB Site Content".

6.2.4 Creating custom item types

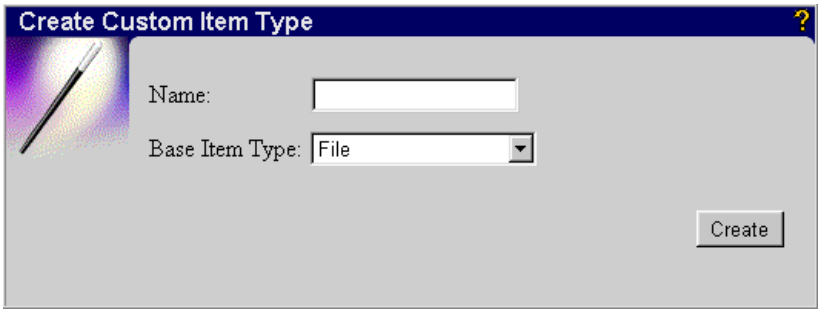
An *item type* defines the display and functional characteristics of items that a contributor adds to a WebDB site. WebDB sites support the following item types: URL, File, Text Item, Imagemap, Folder Link, WebDB Component, and PL/SQL Call. You can also add many files at once (up to 10) to the WebDB site by adding them as Multiple Files. In addition, you can create your own *custom item types*, which enable you to customize the existing item types to make them map more specifically to the items you include in your site.

> **IMPORTANT: Only site administrators can create custom item types.**

Let's create a custom item type that enables users to add notes about a text item and to specify a string to pass to a search engine.

1. In the navigation bar, click  to display the Administration page.
2. In the Content Managers section, click **Custom Item Type** to display the Custom Item Type Manager.

The page displayed is divided into two panels. You will first use the Create Custom Item Type panel.



3. In the **Name** field, type `Tutorial Type <NAME>`, where *NAME* is your own user name.

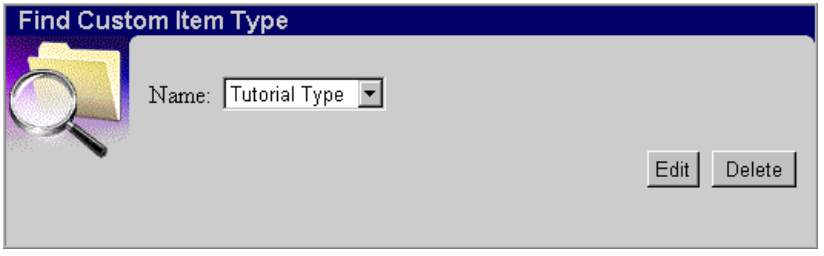
   For the purposes of this tutorial, you add your own user name to the end to identify the custom item type as one created by you, rather than one created by another tutorial user.

4. In the **Base Item Type** list, choose **Text**.

   When you first create a custom item type, it is exactly the same as the base item type. You then edit the custom item type to customize it to meet your specific requirements.

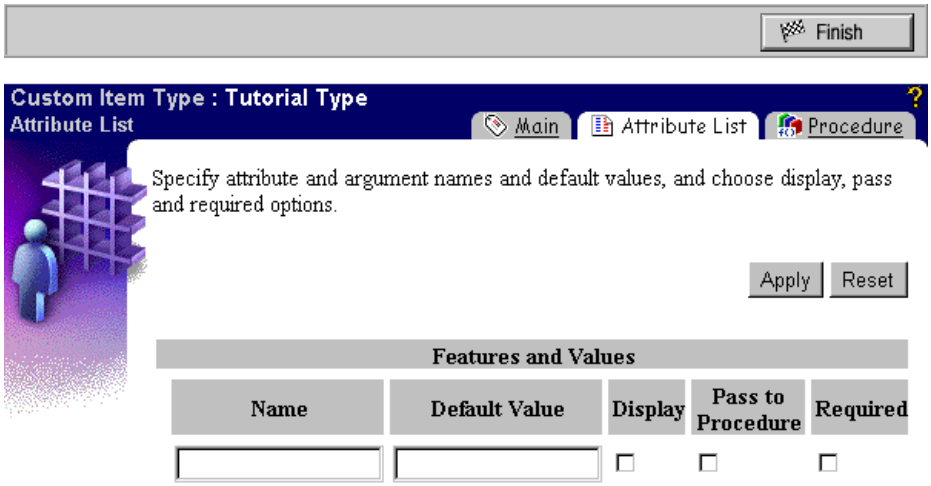
5. Click **Create**. You remain in the Custom Item Type Manager, where you can create more custom item types or find and edit existing custom item types.

   You will now use the Find Custom Item Type panel of the Custom Item Type Manager.



6. Make sure **Tutorial Type <*NAME*>** is chosen in the **Name** list.

7. Click **Edit** to display the Custom Item Type Manager: Main page.
8. Click the **Attribute List** tab to display the Attribute List page.



You can use custom item type attributes to enable contributors to add more information about an item, or specify values to pass to a PL/SQL or HTTP procedure. In this exercise, you will add two attributes to the Tutorial Type custom item type: one to enable contributors to add notes about the item and one to specify values to pass to a search engine.

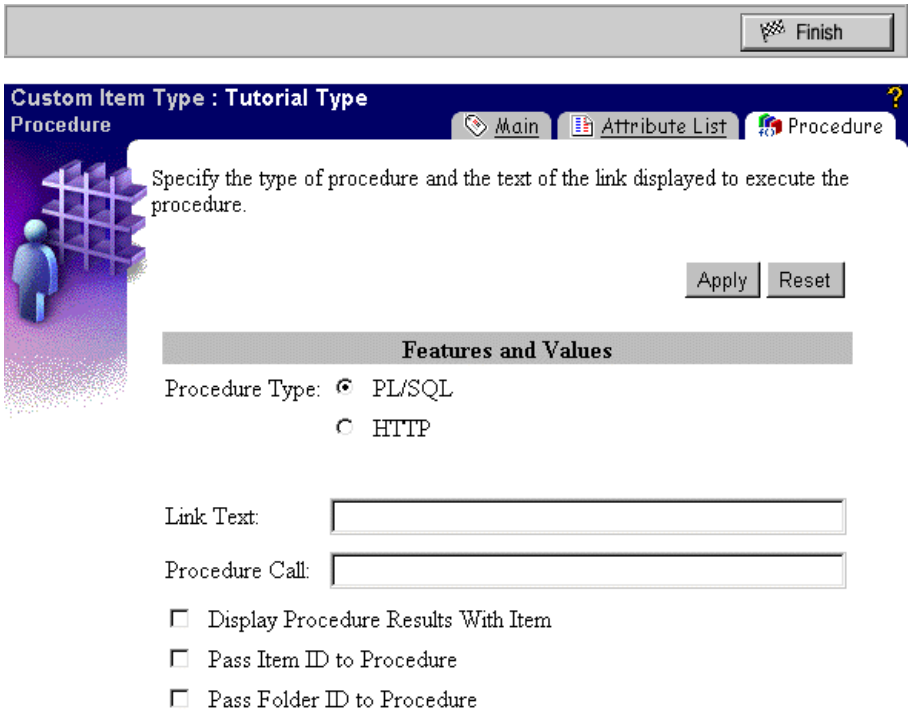
9. In the **Name** field, type `Notes`.

   A field labeled **Notes** will be added to the Optional page of the Item Wizard and Item Manager for this type of item.

10. Click **Apply** to insert another row.
11. In the **Name** field, type `p`.
12. Check **Pass to Procedure** to identify the p attribute as a procedure argument.
13. Check **Required** so that when contributors add an item of this type, they have to specify a value for the p attribute.

    A field labeled **p** will be added to the Required page of the Item Wizard and Item Manager for this type of item.

14. Click the **Procedure** tab to display the Procedure page.



15. Click **Procedure Type: HTTP**.

16. In the **Link Text** field, type:

    Search

    This text is displayed as a hypertext link next to the item title. When an end user clicks the text, a call is made to the procedure using the value specified in the **p** field when the item was added.

17. In the **Procedure Call** field, type:

    `http://search.yahoo.com/bin/search?p=`

18. Click 

to save your changes and return to the Custom Item Type Manager.

When a contributor adds an item, the item can be added as a Tutorial Type item. The contributor must specify a search string and can optionally add notes about the item which other users will be able to view when they edit the item. End users can click on the link next to the item title to search for other Web sites and Web pages that contain the search string.

You will create an item of this type in Chapter 7, "Managing WebDB Site Content".

6.3 Controlling the Style of a WebDB Site

The style of your WebDB site determines how the site looks. Site and style administrators can create styles that control the location and appearance of the navigation bar and the text, color, and images used in the site. Folder owners can choose an existing style to apply to their folders. In addition, site administrators can grant folder owners privileges to create their own styles.

6.3.1 Designing the style of a WebDB site

The following exercise shows you how to use the Style Manager to create a style to control the appearance of a WebDB site. The exercise illustrates some of the style options. For more information about any of the other options in the Style Manager, click the small question mark to access field-level help.

1. Click in the navigation bar to display the Administration page.
2. In the Web Site Managers section, click **Style** to display the Style Manager.

   The page displayed is divided into two panels. You will first use the Create Style panel.

3. In the **Name** field, type `tutorial style <NAME>`, where *NAME* is your own user name.

   For the purposes of this tutorial, you add your own user name to the end to give this style a unique name and to identify it as one created by you, rather than one created by another tutorial user.

4. In the **Based on Style**, choose **Main Site Style**.

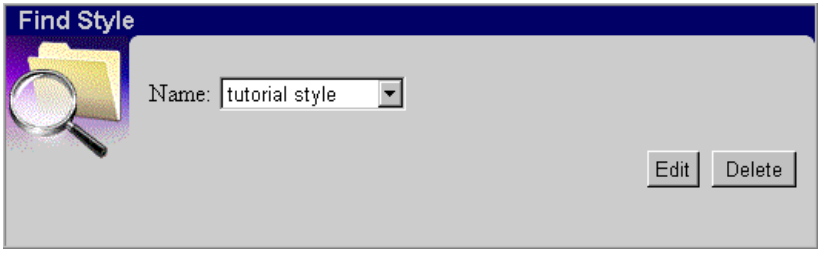
   Using a base style provides you with a starting point. The new style will be created with the same settings as Main Site Style. You then edit the new style and change the settings to your own preferences.

5. Click **Access: Private**.

   The style will be available only to you. Once you have finished designing the style, you can make it available for other folder owners to use, if desired.

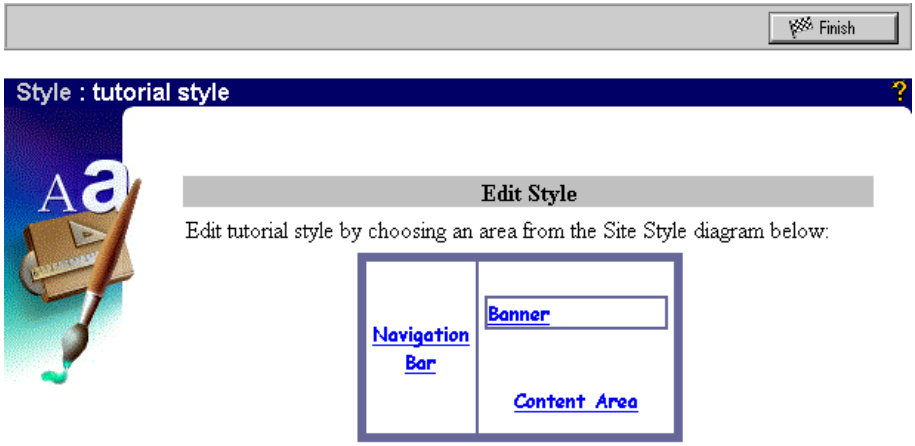
6. Click **Create**. You remain in the Style Manager where you can create more styles or find and edit existing styles.

   You will now use the Find Style panel of the Style Manager.



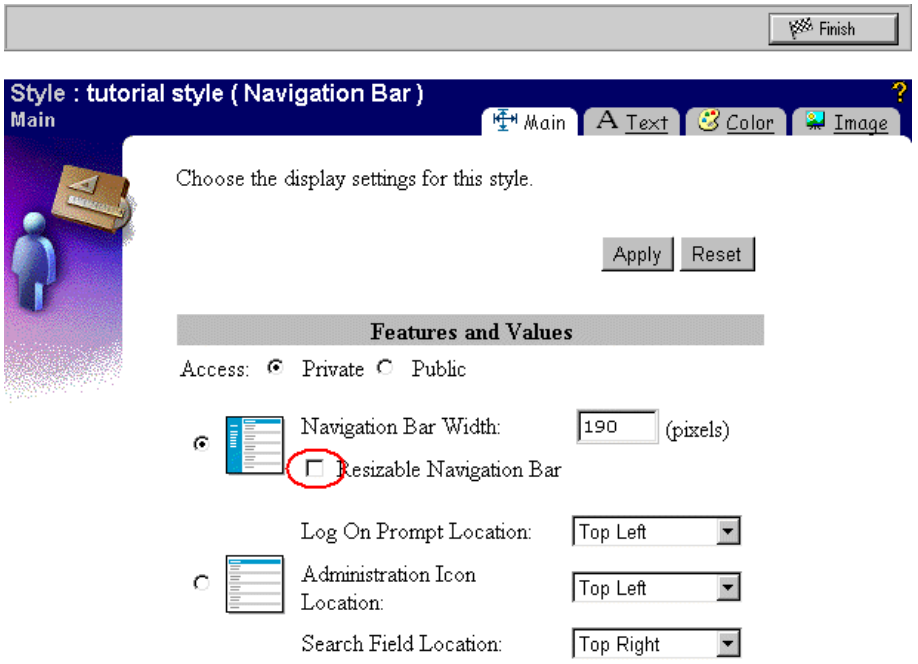
7. Make sure **tutorial style <*NAME*>** is chosen in the **Name** list.

8. Click **Edit** to display the Style Editor.



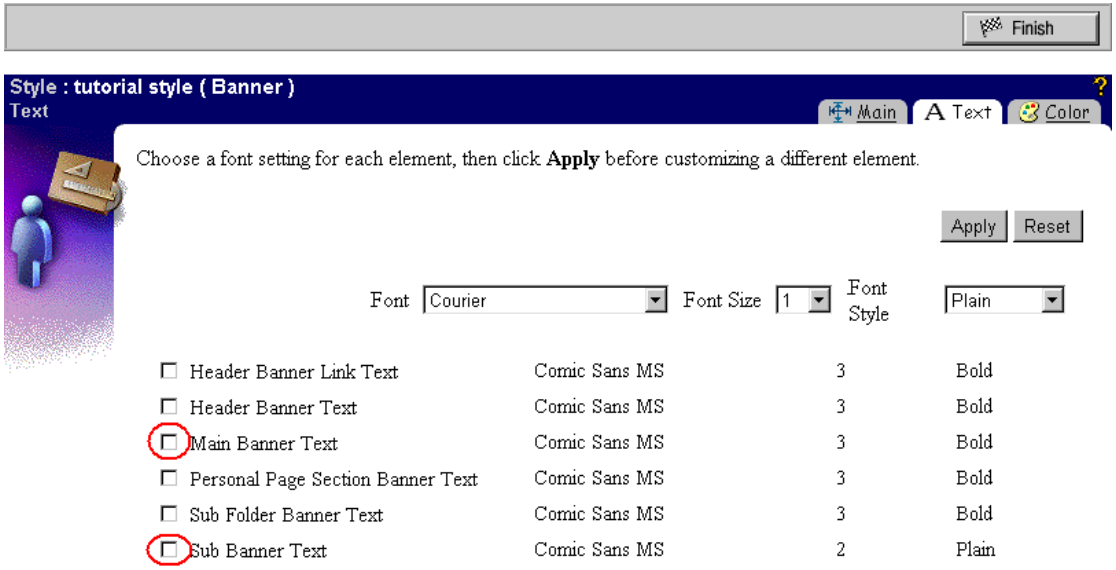
In the Style Editor you click the area of the site on the Site Style diagram for which you want to change the style settings: Navigation Bar, Banner, or Content Area.

9. In the Site Style diagram, click **Navigation Bar** to display the Style Manager: Main page for the navigation bar.



10. Check **Resizable Navigation Bar** to enable users to resize the navigation bar by dragging the frame border.
11. Click  to save your changes and return to the Style Editor.
12. In the Site Style diagram, click **Banner** to display the Style Manager: Main page for the banner.

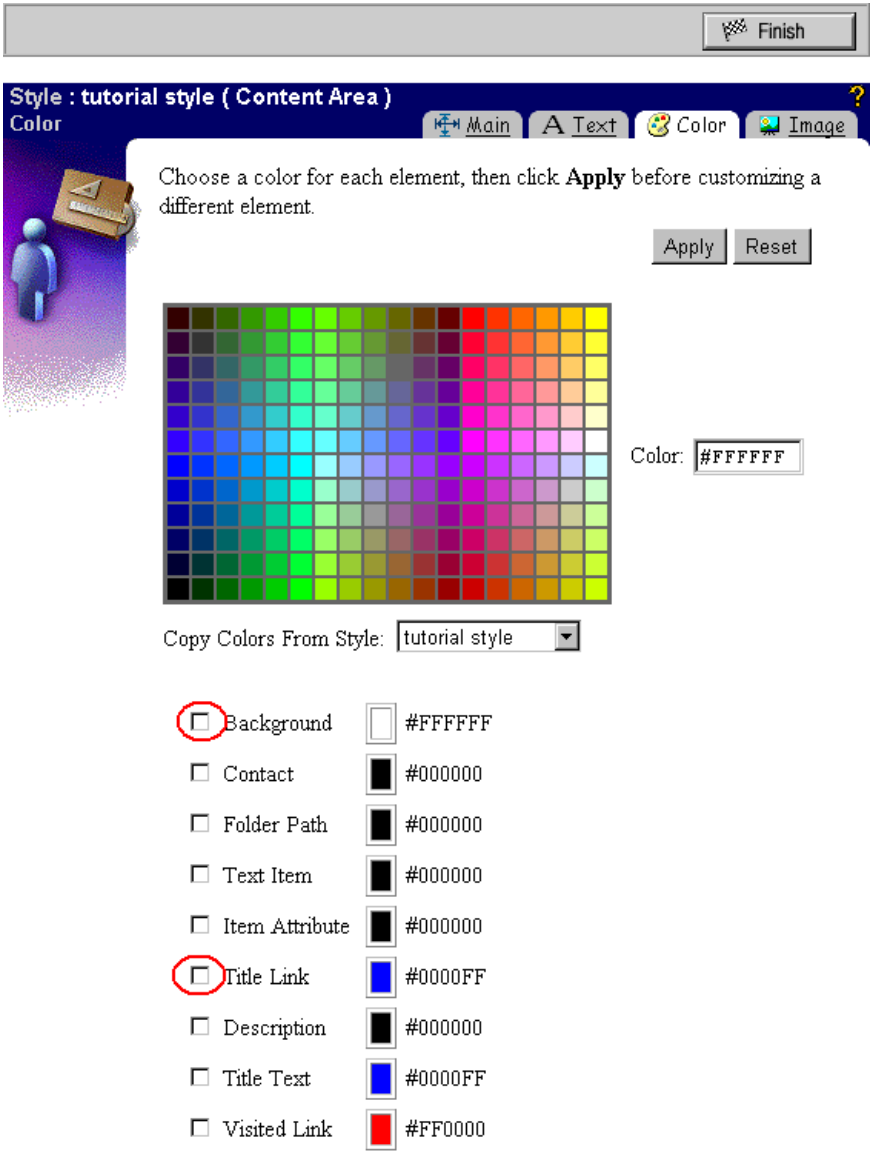
13. Click the **Text** tab to display the Text page.



14. In the **Font** list, choose a font other than the current setting, for example **Times New Roman**.
15. In the **Font Size** list, choose **4**.
16. In the **Font Style** list, choose **Bold Italic**.
17. Check **Main Banner Text** and **Sub Banner Text**, and click 

to change Main Banner Text and Sub Banner Text to the settings specified in the lists and return to the Style Editor.
18. In the Site Style diagram, click **Content Area** to display the Style Manager: Main page for the content area.

19. Click the **Color** tab to display the Color page.



20. In the color palette, choose a green color. The value of the color is displayed in the **Color** field next to the palette.

21. Check **Title Link** and click **Apply** to change the Title Link color to green.
22. In the color palette, choose a light yellow color.
23. Uncheck **Title Link**.
24. Check **Background** and click 

to change the Background color to light yellow and return to the Style Editor.
25. Click 

to return to the Style Manager.

6.3.2 Applying a style to a folder

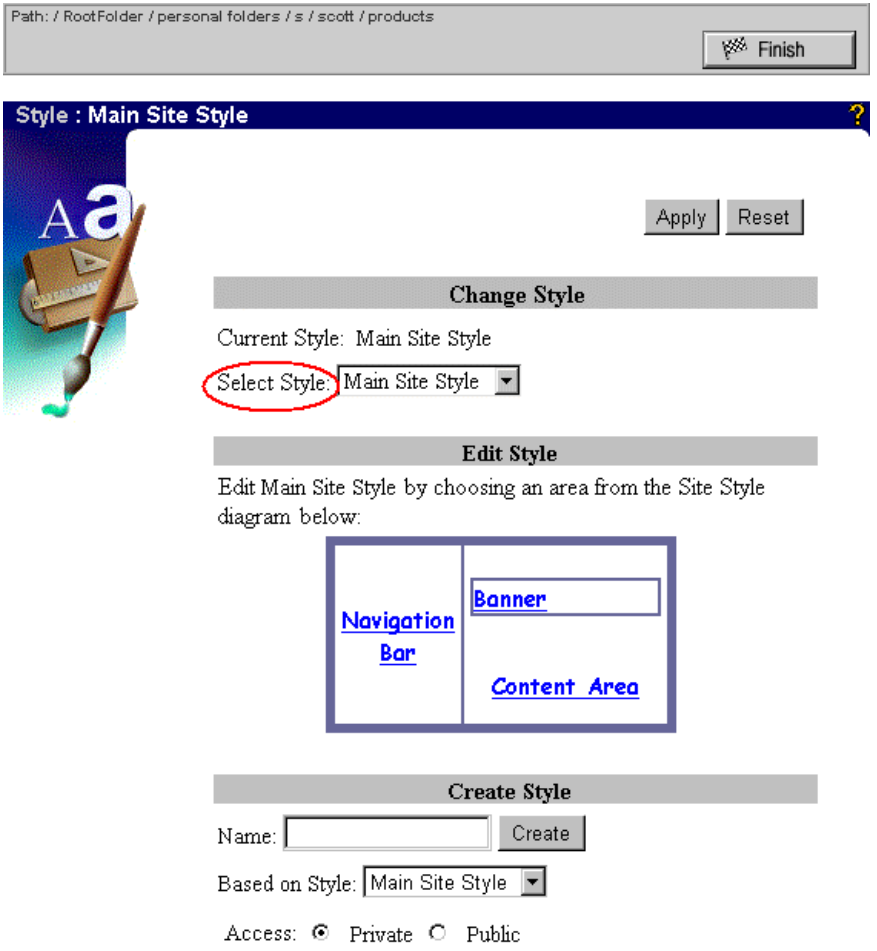
At the moment, the folders you created in Section 6.2, "Designing the Structure of a WebDB Site" on page 6-4 use the Main Site Style. Let's apply the style you just created to the Products folder.

1. At the top of the navigation bar, click the site logo to display the home page.
2. Scroll down the home page and under the **Owned folders** banner, click **Products** to display the Products folder.
3. In the banner at the top of the page, click 

to enter Edit Mode and display the folder dashboard.
4. In the folder dashboard, click 

to display the Style Editor for the Products folder where, depending on your privileges, you can:
   - Choose an existing style
   - Edit the current style
   - Create a new style

Note: You are a site administrator, so you can perform all the above style-related tasks.



5. In the **Select Style** list, choose **tutorial style <*NAME*>**, where *NAME* is your own user name.

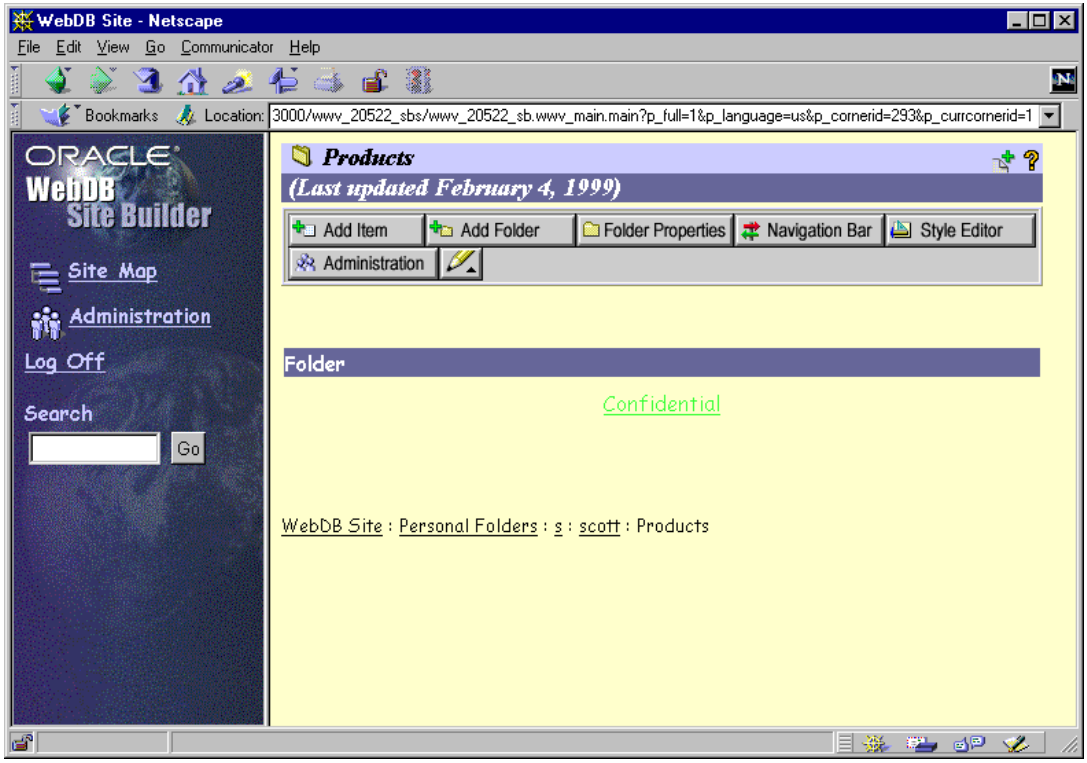
6. Click  to save your changes and return to the Products folder.

   The Products folder now uses the style you specified in tutorial style: the text in the banners at the top of the page is the font you specified, title links in the content area are green, and the content area itself is light yellow.

7. To activate the resizeable navigation bar, you need to redraw the page. To do this:

   a. At the top of the navigation bar, click the site logo to display the home page.

   b. Scroll down the home page and under the **Owned folders** banner, click **Products** to display the Products folder.



6.4 Providing Access to a Web Site

When end users first display a WebDB site, they can only view items in public folders.

For greater access to the site, users must log on to the site using their database user name and password.

Once users are logged on to the site, the tasks they can perform on a folder depend on the privileges they have been granted for that folder.

With the following privilege:	End user can:
Own	Perform all folder tasks, including granting folder privileges to other users.
View	View any item in the folder.
Style	Make changes to the folder's style.
Manage Items	Add, edit, or delete items in the folder.
Create With Approval	Add new items to the folder. Items that are added using this privilege must be approved by the folder owner before they are displayed publicly.

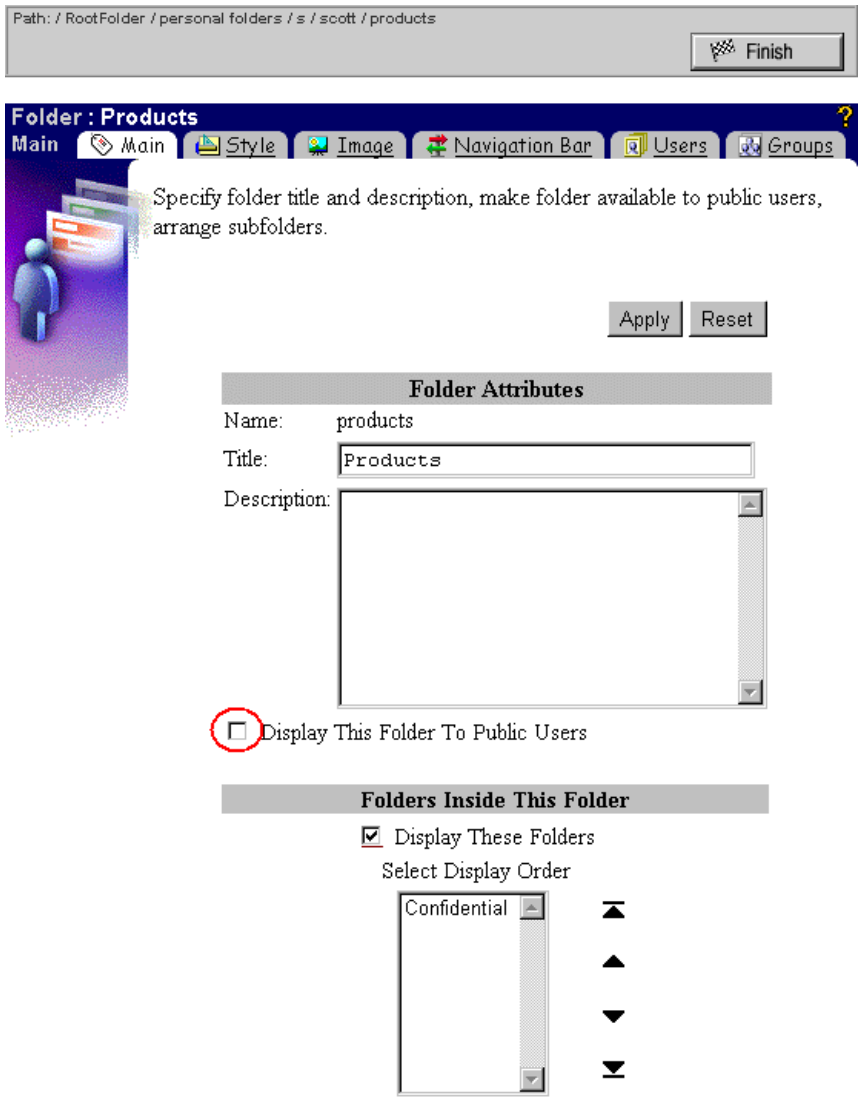
6.4.1 Providing public access to a folder

You want your company's customers to be able to view items in the Products folder. To make the items in a folder available to all users, including those who are not logged on to the site, you must make the folder a public folder.

1. In the banner at the top of the page, click 

to enter Edit Mode and display the folder dashboard.

2. In the folder dashboard, click Folder Properties to display the Folder Manager: Main page for the Products folder.



3. Check **Display This Folder To Public Users**.
4. Click Finish to save your changes.

Let's view the site as a public user to see the how the changes you have made have affected the site. To view the site as a public user, you need to log off the site.

5. In the navigation bar, click **Log Off** to log off the site.
6. Click  to list the folders that you can view as a public user. You can only view folders specified as public folders. The Products folder is listed as one of the folders you can view, but the Confidential folder is not.

6.4.2 Granting folder access privileges to a user

If you do not want everyone be able to access the items in a folder that you own, you must grant the appropriate access privileges only to the users you **do** want to have access. For example, if the information in your folder is of a confidential nature, you might want only a few users to be able to view it. Or, you might want members of your department to be able to add items to a folder.

Your company wants to use the Confidential folder in the Products folder to make confidential product information available to its employees, but its customers should not be able to see this information. For now, let's enable a single user (TUTORIAL_USER) to view the items in the Confidential folder.

1. To grant folder access, you need to be logged on to the site as a site administrator or the folder owner. At the end of the previous exercise you logged off, so the first thing you need to do now is log back on to the site.

   Log back on to the site using your own user name and password.

   Tip: If you can't remember how to do this, follow the instructions in "Oracle WebDB Basic Concepts, Displaying an Oracle WebDB Site" on page xxiv.

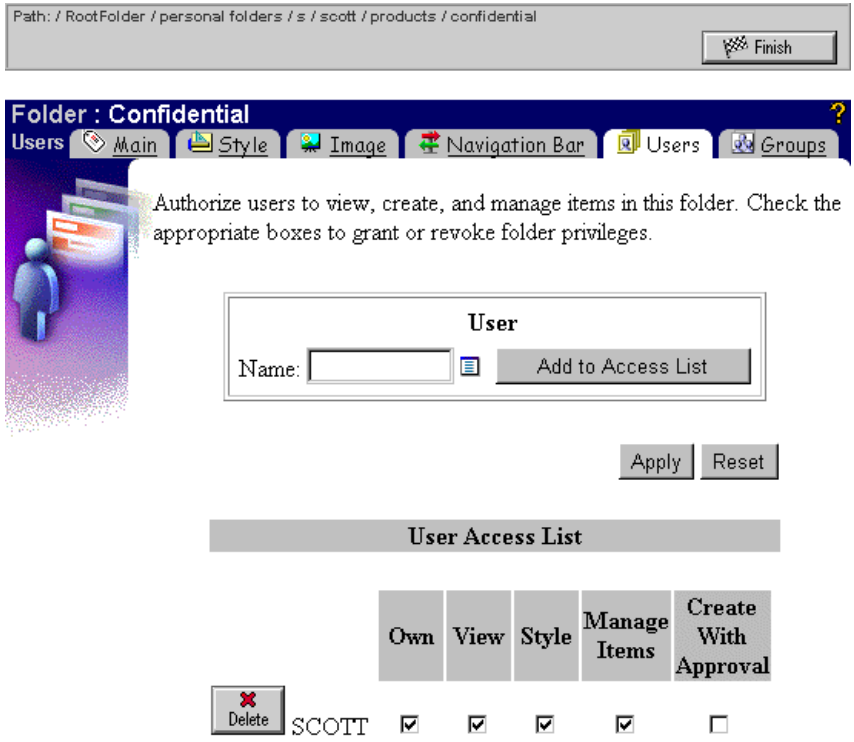
   ---

2. Scroll down the home page and under the **Owned folders** banner, click **Confidential** to display the Confidential folder.
3. In the banner at the top of the page, click 

to enter Edit Mode and display the folder dashboard.
4. In the folder dashboard, click 

to display the Folder Manager: Main page for the Confidential folder.

5. Click the **Users** tab to display the Users page.



6. Click  , then **Find** to list all the users to which you can grant grant access privileges.

7. Click **TUTORIAL_USER**.

Note: If TUTORIAL_USER is not listed, ask your DBA or site administrator to create this user for you. Instructions for creating TUTORIAL_USER are provided in Appendix A, "Tutorial Setup Instructions".

TUTORIAL_USER is displayed in the **Name** field on the Folder Manager: Users page.

8. Click **Add to Access List**. TUTORIAL_USER is added to the User Access List and is automatically given privileges to view items in the folder.

9. Click  to save your changes and return to the Confidential folder.

   TUTORIAL_USER can now view the contents of the Confidential folder.

   Let's view the site as TUTORIAL_USER to see the how the changes you have made have affected the site. To view the site as TUTORIAL_USER, you need to log off the site and then log back on as TUTORIAL_USER.

10. In the navigation bar, click **Log Off** to log off the site.

11. Log back on to the site using the user name TUTORIAL_USER and the password TUTORIAL.

> **Note:** If your browser displays an error message, check that you've typed the information correctly, or ask your DBA or site administrator to verify the password for TUTORIAL_USER.

12. In the navigation bar, click  to list the folders that you can access as TUTORIAL_USER.

13. Expand **Products**. The Confidential folder is listed as one of the folders TUTORIAL_USER can access.

14. Click **Confidential** to display the folder. Notice that because you only gave TUTORIAL_USER view privileges, there is no  button in the banner at the top of the page. TUTORIAL_USER can view the folder, but cannot edit it.

6.4.3 Granting folder access privileges to a group of users

Sometimes, you may want to grant the same privileges to multiple users. For example, you may want to allow all of the members of your department to add items to your department's folder. Rather than granting each user the Create With Approval privileges individually, you can create a group of users and grant the privileges to all members of the group in a single operation.

6.4.3.1 Creating a group

First you need to create the group.

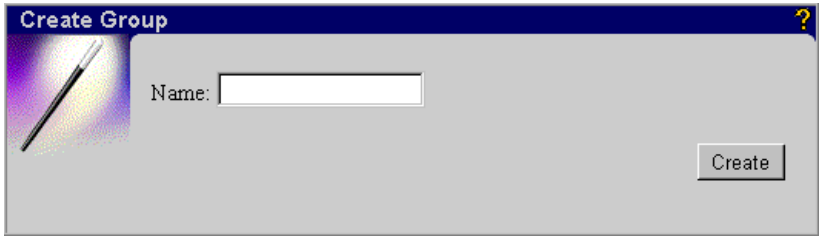
1. At the end of the previous exercise you logged on as TUTORIAL_USER, so the first thing you need to do now is log back on to the site as the site administrator.

   Click **Log Off** in the navigation bar to log off the site as TUTORIAL_USER.

2. Log back on to the site using your own user name and password.

3. In the navigation bar, click  to display the Administration page.
4. In the Access Managers section, click **Group** to display the Group Manager.

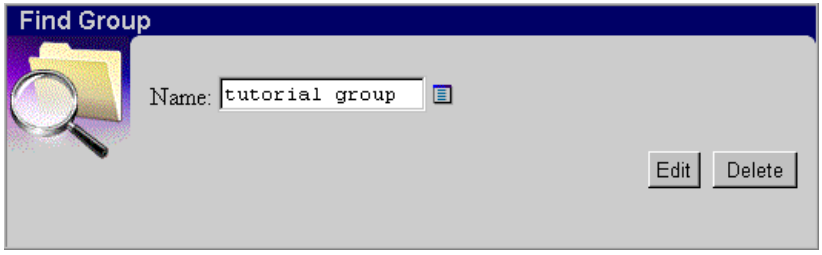
   The page displayed is divided into two panels. You will first use the Create Group panel.



5. In the **Name** field, type `tutorial group <NAME>`, where *NAME* is your own user name.

   For the purposes of this tutorial, you add your own user name to the end to give this group a unique name and to identify it as the one created by you, rather than one created by another tutorial user.
6. Click **Create**. You remain in the Group Manager where you can create more groups, or find and edit existing groups.

   You will now use the Find Group panel of the Group Manager.



7. Make sure **TUTORIAL GROUP <*NAME*>** is chosen in the **Name** field.
8. Click **Edit** to display the Group Manager: Details page.

9. Click the **Users** tab to display the Users page.

10. Click , then **Find** to list all the users that you can add to the group.
11. Click **TUTORIAL_USER**.

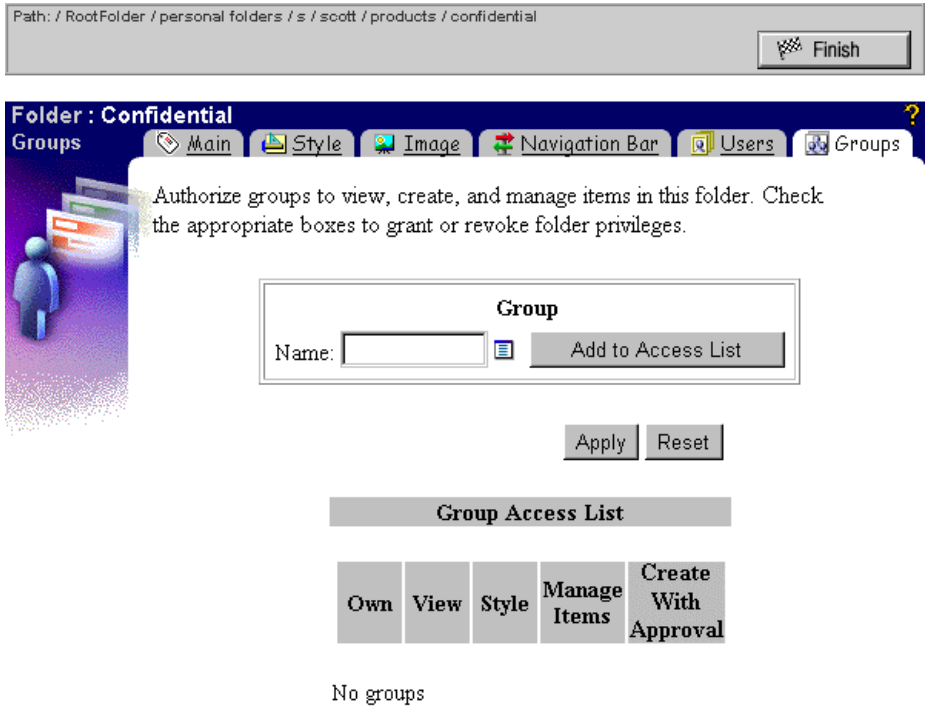
    TUTORIAL_USER is displayed in the **Name** field on the Group Manager: Users page.
12. Click **Add to Access List**. TUTORIAL_USER is added to the User Access List.

    To add more users to the group, you would repeat Steps 10 through 12 for each user.
13. Click Finish to save your changes and return to the Group Manager.

6.4.3.2 Granting folder access privileges to a group

Now that you have created a group, you can grant folder access privileges to all members of this group in a single operation.

1. At the top of the navigation bar, click the site logo to display the home page.
2. Scroll down the home page and under the **Owned folders** banner, click **Confidential** to display the Confidential folder.
3. In the banner at the top of the page, click Edit to enter Edit Mode and display the folder dashboard.
4. In the folder dashboard, click Folder Properties to display the Folder Manager: Main page for the Confidential folder.
5. Click the **Groups** tab to display the Groups page.



6. Click , then **Find** to list all the groups to which you can grant grant access privileges.

7. Click **TUTORIAL GROUP <*NAME*>** to choose the group you created earlier in the exercise.

   TUTORIAL GROUP <*NAME*> is displayed in the **Name** field on the Folder Manager: Groups page.

8. Click **Add to Access List**. TUTORIAL GROUP <*NAME*> is added to the Group Access List and is automatically given privileges to view items in the folder.

9. Check **Create With Approval** to enable members of the group to add items to the folder, subject to approval from the folder owner.

10. Click 

to save your changes and return to the Confidential folder.

    Members of the tutorial group can now add items to the folder. However, because you only granted the group Create With Approval privileges, these items will not become visible until you, the folder owner, approve them. This enables folder owners to delegate content creation while remaining in control of the information that is contained in the folder.

    Let's view the site as TUTORIAL_USER to see the how the changes you have made have affected the site. To view the site as TUTORIAL_USER, you need to log off the site and then log back on as TUTORIAL_USER.

11. In the navigation bar, click **Log Off** to log off the site.

12. Log back on to the site using the user name TUTORIAL_USER and the password TUTORIAL.

13. In the navigation bar, click  to display the Site Map.

14. Expand **Products**.

15. Click **Confidential** to display the Confidential folder. Now that TUTORIAL_USER has Create With Approval privileges (as a member of the TUTORIAL GROUP <*NAME*> group), the 

button is displayed in the banner at the top of the page. TUTORIAL_USER can now add items to the folder. You will learn how to add items to a folder and how to approve items in Chapter 7, "Managing WebDB Site Content".

16. In the navigation bar, click **Log Off** to log off the site.

6.5 What's Next?

In this chapter, you learned how to:

- Create a folder
- Create a category
- Create a perspective
- Create a custom item type
- Define a style and apply that style to a folder
- Grant a user access to a folder
- Create a group and grant that group access to a folder

In Chapter 7, "Managing WebDB Site Content", you will find out how to add items to a site.

7

Managing WebDB Site Content

Estimated completion time: 30 minutes

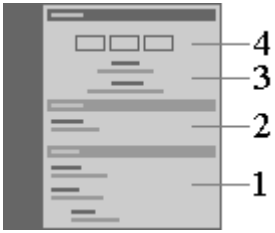
The content of a WebDB site is made up of items. You can add the following types of items to a WebDB site:

- URL of another Web page
- File, such as a document or an image
- Text
- Imagemap
- Folder link
- WebDB component
- PL/SQL call
- Custom item type

When you add an item to a folder, the item title is displayed as a hypertext link on the folder page. Clicking the title navigates to the item itself.

Note: If you specify that an item should be displayed in place, the item itself is displayed on the folder page, **not** a link to the item.

Each item can be added to the site as one of the following:



- **1 Regular item** A Regular item receives no special treatment to make it stand out on a page.
- **2 News item** A News item is displayed before any Regular items, under the **News** banner. News items are usually items that are of current interest. For example, in The Traveler demo, there might be a News item for a special offer.
- **3 Announcement item** An Announcement item is displayed at the top of the page, just under the Quickpicks items. Announcement items are usually items that require special attention. For example, in The Traveler demo, there might be an Announcement about an airline strike.
- **4 Quickpick item** A Quickpick item is displayed at the top of the page. Quickpick items are usually items that end users will frequently want to access. For example, in The Traveler demo, there might be a Quickpick item for a currency converter.

This chapter includes the following sections:

7.1 Before You Begin

- To complete this chapter you need to use the Tutorial Web Site. Obtain the URL of this Web site from your DBA. You should be set up as a site administrator of the Tutorial Web Site. Instructions for creating the Tutorial Web Site and assigning users as site administrators are provided in Appendix A, "Tutorial Setup Instructions".

  IMPORTANT: To modify a WebDB site, you need to be logged on to the site. If you have not already logged on to the Tutorial Web Site, follow the instructions in "Oracle WebDB Basic Concepts, Displaying an Oracle WebDB Site" on page xxiv to do so now.

- You must have completed Section 6.2, "Designing the Structure of a WebDB Site" on page 6-4 and Section 6.4.2, "Granting folder access privileges to a user" on page 6-24 before starting this chapter.
- Your DBA or site administrator must have created the TUTORIAL_USER user account. Instructions for creating this user account are provided in Appendix A, "Tutorial Setup Instructions".

  Note: The exercises in this chapter take place in your personal folder. However, the techniques you learn here can be applied to any folder for which you have permission to add or edit items.

7.2 Adding a Regular Item

Most of the items in your Web site will be Regular items.

1. Make sure you are logged on to the Tutorial Web Site with your own user name and password.

   Tip: If you can't remember how to log on to a WebDB site, follow the instructions in "Oracle WebDB Basic Concepts, Displaying an Oracle WebDB Site" on page xxiv.

2. Scroll down the home page and under the **Owned folders** banner, click **Confidential** to display the Confidential folder.

3. In the banner at the top of the page, click 

to enter Edit Mode and display the folder dashboard.
4. In the folder dashboard, click 

to display the Item Wizard.
5. In the **Item Type** list, choose **Text Item**.
6. In the **Display Option** radio group, make sure **Regular Item** is selected.
7. Click **Next** to display the Text Item: Required Settings and Values page.

Note: Click **Previous** if you need to go back to a previous page of the wizard. Do **not** click your browser's Back button.

---

8. In the **Text** field, type:

   ```
   This item might contain product information that sales personnel could use
   when visiting customer sites.
   ```

9. In the **Title** field, type `Tutorial Text Item`.
10. In the **Category** list, choose **Tutorial Items <*NAME*>**, where *NAME* is your own user name. This is the category you created in Section 6.2.2, "Creating categories" on page 6-7.

Note: All Regular items must be assigned to one (and only one) category.

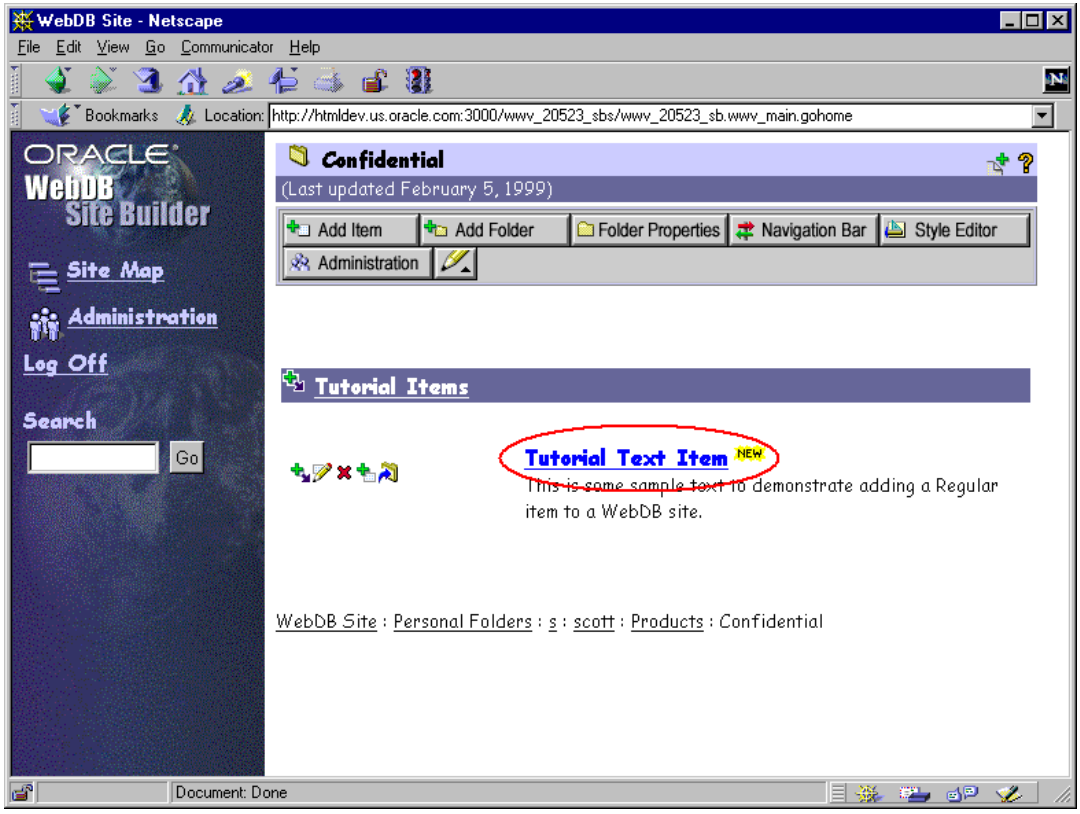
---

11. In the **Description** field, type:

    ```
    This is some sample text to demonstrate adding a Regular item to a WebDB
    site.
    ```

12. Click **Next** to display the Text Item: Optional Settings and Values page.
13. In the **Perspectives** list, choose **Tutorial Users <*NAME*>**, where *NAME* is your own user name. This is the perspective you created in Section 6.2.3, "Creating perspectives" on page 6-8.

14. Click **Finish** to add the item and return to the Confidential folder.



The Regular item title, **Tutorial Text Item**, is displayed as a hypertext link on the folder page, under the **Tutorial Items** category banner.

15. Click **Tutorial Text Item** to display the item.

7.2.1 Adding a custom item type item

Now let's add a custom item. Custom item types enable you to customize the existing item types to make them map more specifically to the items you include in your site.

1. Click your browser's Back button to return to the Confidential folder.
2. In the **Tutorial Items** category banner, click to display the Item Wizard.

3. In the **Item Type** list, choose **Tutorial Type <*NAME*>**, where *NAME* is your own user name. This is the custom item type you created in Section 6.2.4, "Creating custom item types" on page 6-9.
4. In the **Display Option** radio group, make sure **Regular Item** is selected.
5. Click **Next** to display the Tutorial Type: Required Settings and Values page.
6. In the **p** field, type `Oracle`.

   This is one of the attributes that you defined for the custom item type. This attribute passes the specified value to a procedure that calls an internet search engine.
7. In the **Text** field, type:

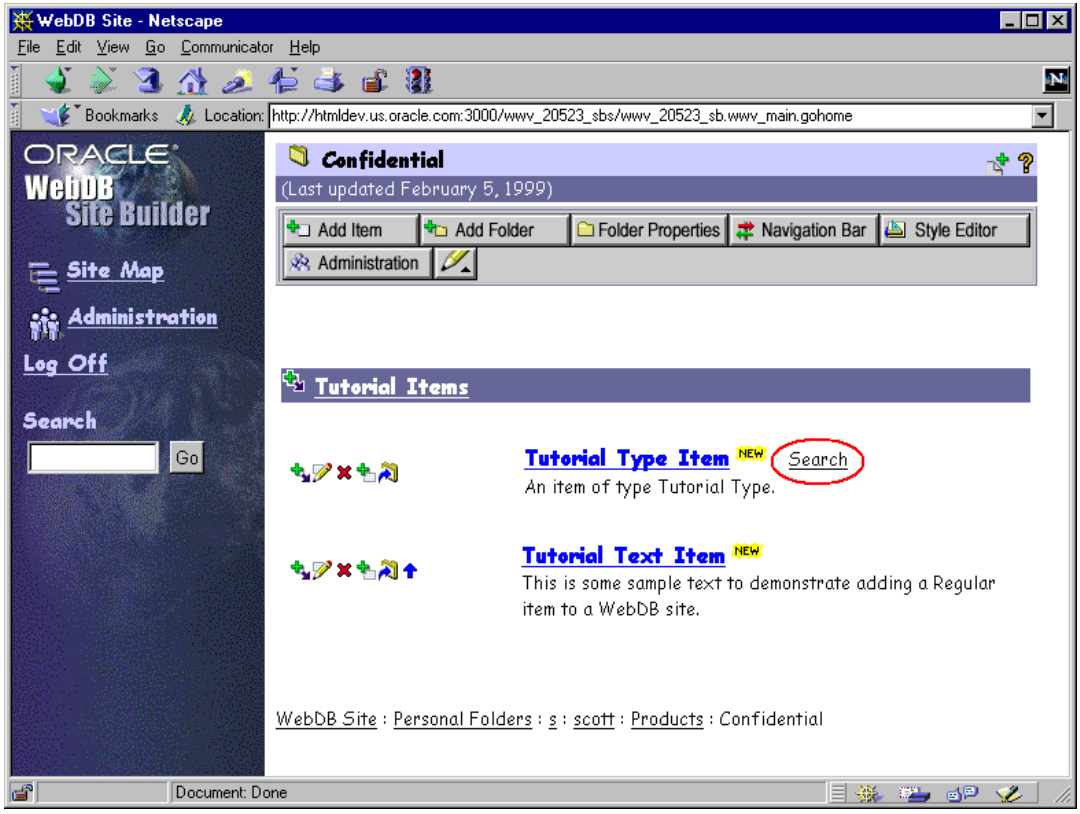
   ```
   This is a text item about Oracle Corporation.
   ```
8. In the **Title** field, type `Tutorial Type Item`.
9. Note that in the **Category** list, **Tutorial Items <*NAME*>** is already chosen. This is because clicking  in a category banner like the **Tutorial Items** banner automatically adds the item to that category.
10. In the **Description** field, type:

    ```
    An item of type Tutorial Type.
    ```
11. Click **Next** to display the Tutorial Type: Optional Settings and Values page.
12. In the **Perspectives** list, choose **Tutorial Users <*NAME*>**.
13. In the **Notes** field, type:

    ```
    This item enables end users to search for Web sites and Web pages about
    Oracle Corporation.
    ```

    This is the other attribute that you defined for the custom item type. Because you did not check **Required** when you defined this attribute, it is displayed on the Optional Settings and Values page.

14. Click **Finish** to add the item and return to the Confidential folder.



The link, **Search**, is displayed next to the custom item title, **Tutorial Type Item**.

15. Click **Search** to pass the string that you specified in the **p** field ("Oracle") to the search engine.

7.3 Adding a News Item

You can add items that are of current interest as News items. Typically a News item will only be displayed for a short time, before some other news takes its place.

1. Click your browser's Back button to return to the Confidential folder.
2. In the folder dashboard, click 

to display the Item Wizard.

3. In the **Item Type** list, choose **URL**.
4. In the **Display Option** radio group, click **News**.
5. Click **Next** to display the URL: Required Settings and Values page.
6. In the **URL** field, type:

   `http://www.cnn.com/world`

7. In the **Title** field, type `CNN World Headlines`.
8. In the **Description** field, type:

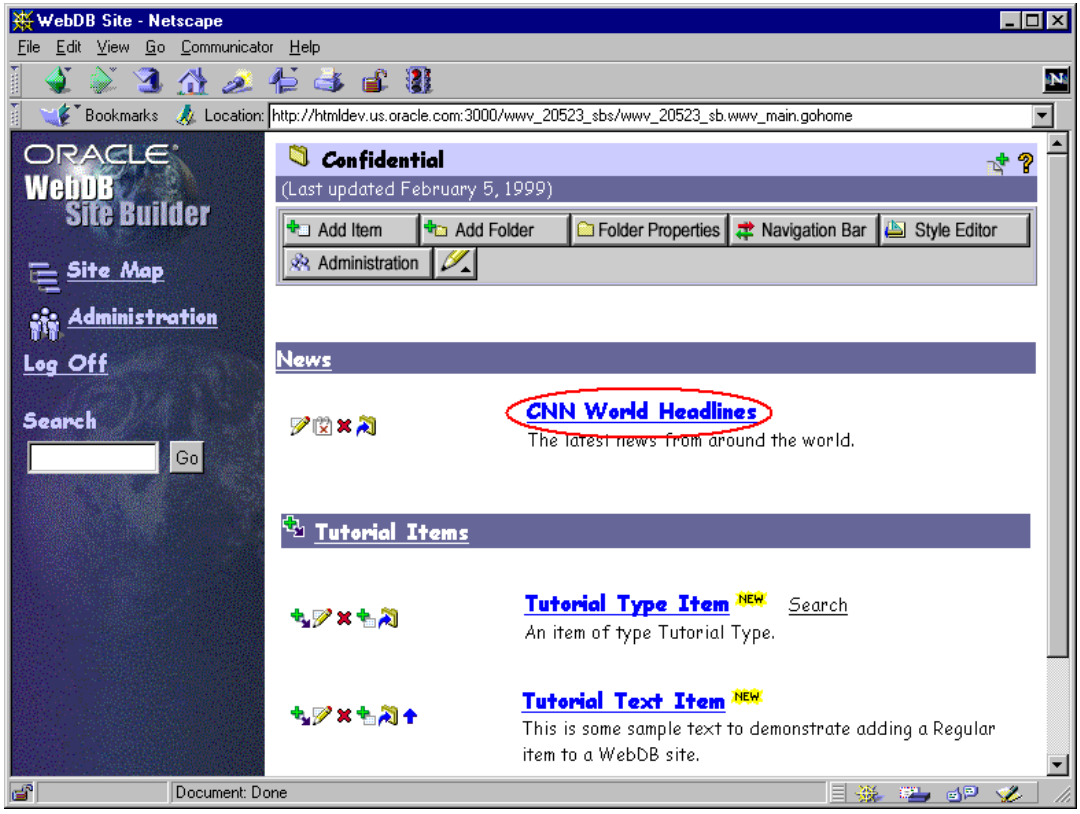
   `The latest news from around the world.`

9. In the **Expiration Period** list, choose **7 days**.

   Use expiration dates when you only want the item to appear in the Web site for a limited time. After the time specified, the item will no longer be displayed on the site. Thus, you do not have to remember to remove it yourself.

   Note: The item is not deleted from the database until the site administrator purges expired items.

10. Click **Finish** to add the News item and return to the Confidential folder.



The News item title, **CNN World Headlines**, is displayed as a hypertext link under the **News** banner, above the Regular items.

7.4 Adding an Announcement Item

You can add items that require special attention as Announcement items.

1. In the folder dashboard, click 

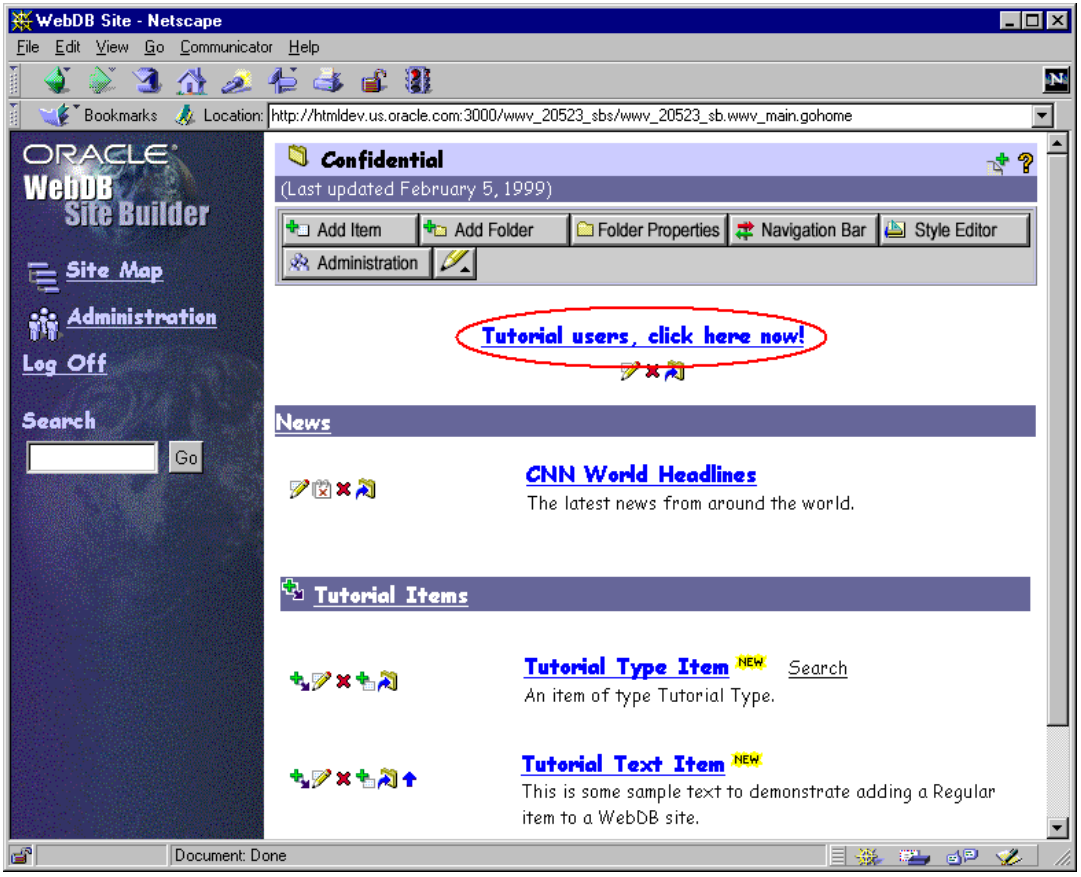
to display the Item Wizard.
2. In the **Item Type** list, choose **Text Item**.
3. In the **Display Option** radio group, click **Announcement**.
4. Click **Next** to display the Text Item: Required Settings and Values page.

5. In the **Text** field, type:

   ```
   Important Announcement:
   You've almost finished the tutorial.
   ```

6. In the **Title** field, type `Tutorial users, click here now!`

7. Click **Finish** to add the Announcement item and return to the Confidential folder.



The Announcement item title, **Tutorial users, click here now!**, is displayed as a hypertext link above the Regular items and News item.

7.5 Adding a Quickpick Item

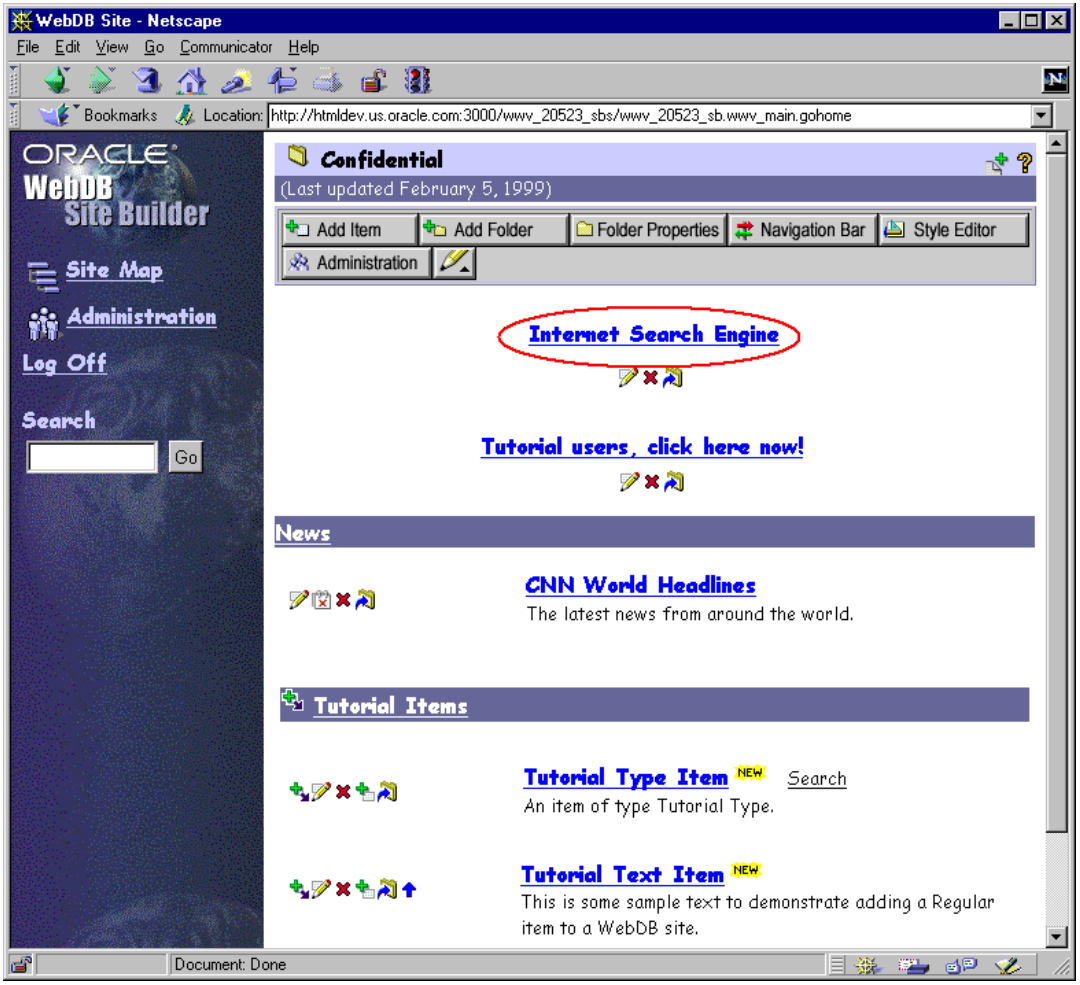
You can create frequently used items as Quickpick items, so that end users can access them quickly and easily.

1. In the folder dashboard, click 

to display the Item Wizard.
2. In the **Item Type** list, choose **URL**.
3. In the **Display Option** radio group, click **Quickpick**.
4. Click **Next** to display the URL: Required Settings and Values page.
5. In the **URL** field, type:

   `http://www.yahoo.com`
6. In the **Title** field, type `Internet Search Engine`.

7. Click **Finish** to add the Quickpick item and return to the Confidential folder.



The Quickpick item title, **Internet Search Engine**, is displayed as hypertext above all the other items.

7.6 Adding an Item with Approval

If you own a folder, or if you have been granted Manage Items privileges on a folder, you can add, edit, move, and delete items in that folder. When you add an item, that item is immediately visible in the folder. If you have Create With Approval privileges, you can only add items to the folder. When you add an item that requires approval, the item does not become visible to other users until the folder owner approves it. This enables the folder owner to maintain control of the folder's content.

7.6.1 Adding an item that requires approval

Adding an item that requires approval is the same as adding any other item. The only difference is that once you have added the item, it only becomes visible to other users when the folder owner approves it.

In Section 6.4.3, "Granting folder access privileges to a group of users" on page 6-26, you granted Create With Approval privileges on the Confidential folder to TUTORIAL_USER. In the following exercise, you will add an item as TUTORIAL_USER, and then approve the item as yourself (the folder owner).

1. To add an item as TUTORIAL_USER, you first need to log on to the site as TUTORIAL_USER.

   In the navigation bar, click **Log Off** to log off the site.

2. Log back on to the site using the user name TUTORIAL_USER and the password TUTORIAL.

   Tip: If you can't remember how to do this, follow the instructions in "Oracle WebDB Basic Concepts, Displaying an Oracle WebDB Site" on page xxiv.

3. In the navigation bar, click  to display the Site Map.

4. Expand **Products**.

5. Click **Confidential** to display the Confidential folder. TUTORIAL_USER has Create With Approval privileges on this folder.

6. In the banner at the top of the page, click 

to enter Edit Mode and display the folder dashboard.

IMPORTANT: When you enter Edit Mode as TUTORIAL_USER, the item management icons are not displayed next to the item titles. This is because TUTORIAL_USER has privileges only to add items, and cannot edit existing items.

Also, there are fewer tools offered in the folder dashboard. This is because TUTORIAL_USER is not a site administrator and does not own this folder, and thus cannot perform folder administration tasks, such as creating folders within the Confidential folder or changing the folder's style.

---

7. In the folder dashboard, click 

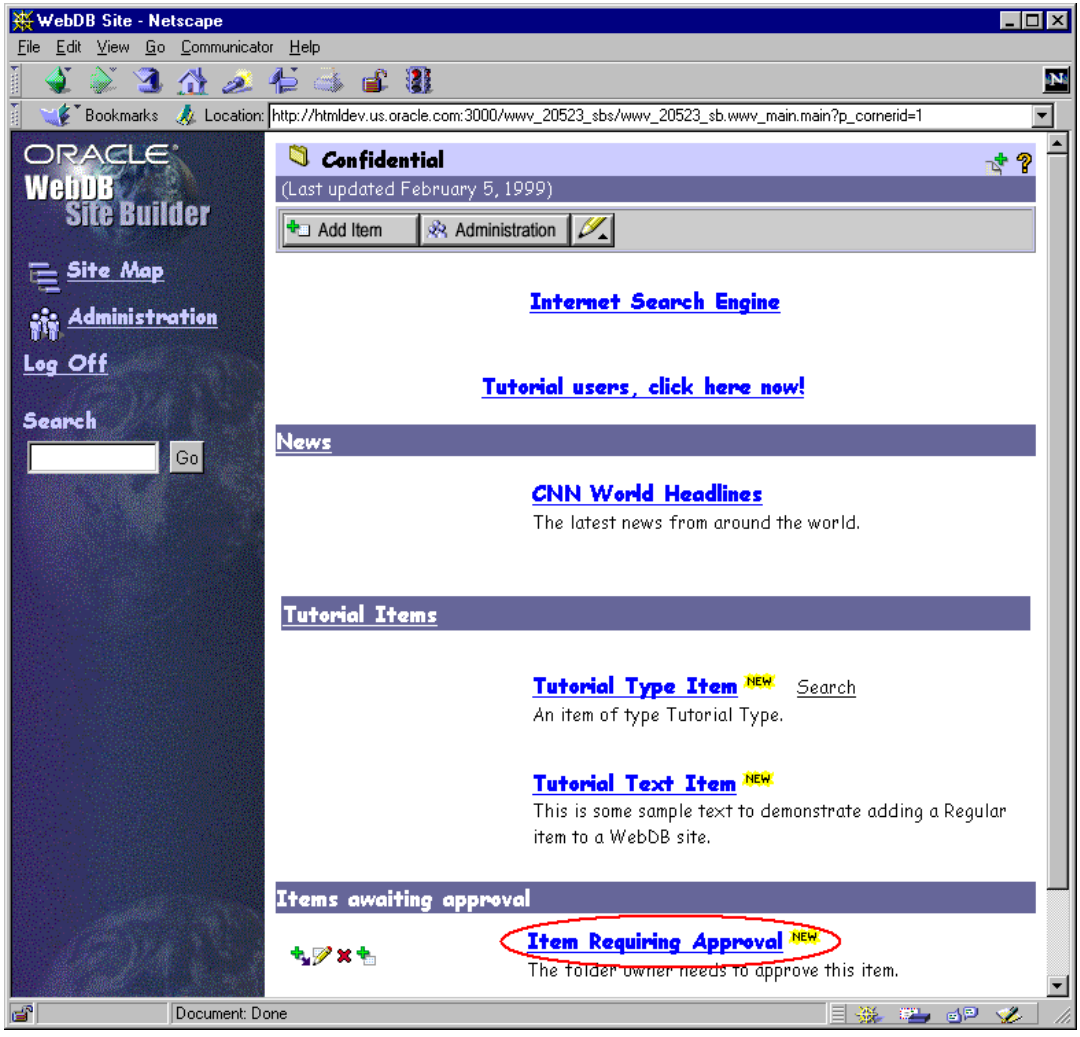
to display the Item Wizard.
8. In the **Item Type** list, choose **Text Item**.
9. In the **Display Option** radio group, make sure **Regular Item** is selected.
10. Click **Next** to display the Text Item: Required Settings and Values page.
11. In the **Text** field, type:

    ```
    This is some sample text to demonstrate adding an item that requires approval.
    ```

12. In the **Title** field, type `Item Requiring Approval`.
13. In the **Description** field, type:

    ```
    The folder owner needs to approve this item.
    ```

14. Click **Finish** to add the item and return to the Confidential folder.



The item title, **Item Requiring Approval**, is displayed as a hypertext link under the **Items awaiting approval** banner.

7.6.2 Approving an item

When an item that requires approval is added to a folder, the folder owner must review that item and decide whether to make it visible to other users or not.

1. To approve an item, you need to be logged on to the site as the folder owner. In the previous exercise you were logged on as TUTORIAL_USER, so the first thing you need to do now is log back on to the site as yourself. You are the site administrator, and by default have folder owner privileges on every folder in the site.

   In the navigation bar, click **Log Off** to log off the site.

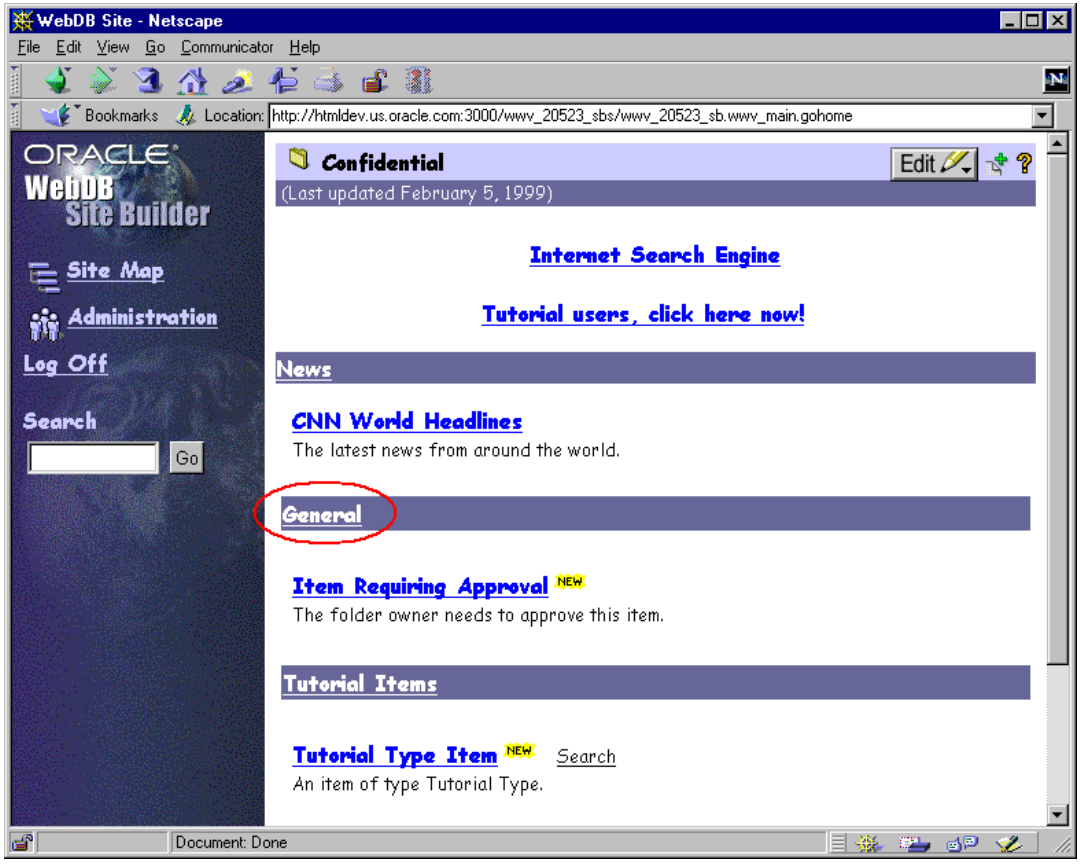
2. Log back on to the site using your own user name and password.

3. Scroll down the home page and under the **Owned folders** banner, click **Confidential** to display the Confidential folder.

   The item you created in the previous exercise is displayed under the **Items awaiting approval** banner. The only users who can view this item are the original contributor, folder owner, and site administrator.

4. Click  to approve the item.

> **Note:** You do not need to enter Edit Mode to approve an item.



The item is now displayed under the **General** category banner. Any user with access to the Confidential folder can now view the item.

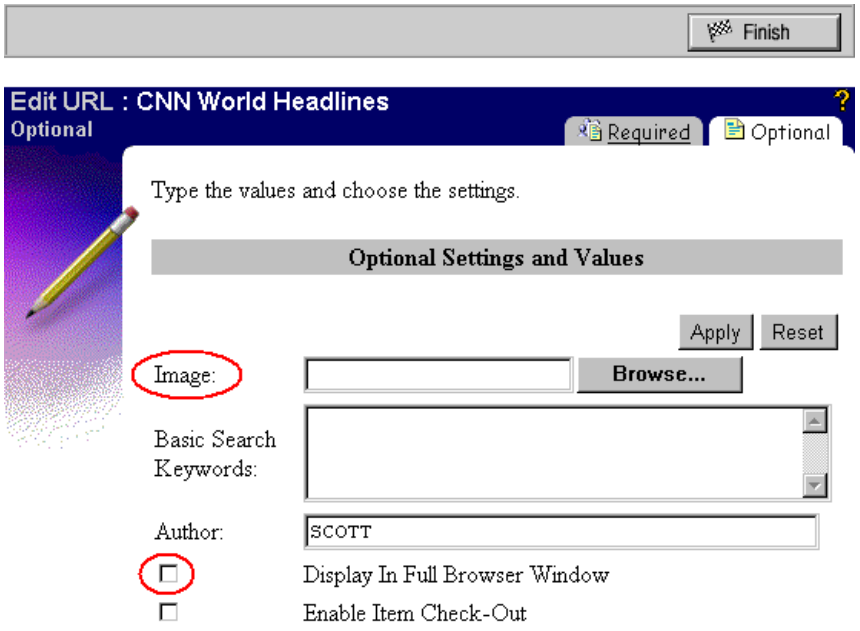
Note: You can also edit the item, move it to a different folder, or delete it.

7.7 Editing an Item

If you have Manage Items privileges, you can edit existing items in the WebDB site.

> **Note:** When you edit an item in a WebDB site, you edit how the item is displayed on the site. Except for items of type Text Item, you do not edit the actual content of the item itself.

1. In the banner at the top of the page, click Edit to enter Edit Mode and display the folder dashboard.
2. Click next to **CNN World Headlines** to display the Edit URL: Required page.
3. Click the **Optional** tab to display the Optional page.



4. Check **Display In Full Browser Window**.

   Selecting this option means that when an end user clicks the item title, the item will fill the whole browser window, rather than the current frame. The user can then view more of the item without having to scroll, but the site navigation bar will no longer be displayed.

5. Click 

to save your changes and return to the Confidential folder.

6. Click **CNN World Headlines**. The item is displayed in the full browser window.

7. Click your browser's Back button to return to the Confidential folder.

8. You can add images to items, to make them stand out more on the page.

   First let's find an image to use for the Internet Search Engine Quickpick.

   a. Open a new browser window and go to the following URL:

      `http://us.yimg.com/i/recip/1yahoo.gif`

   b. Save the image to your local file system, making a note of the directory where you save the image.

   c. Close the browser window.

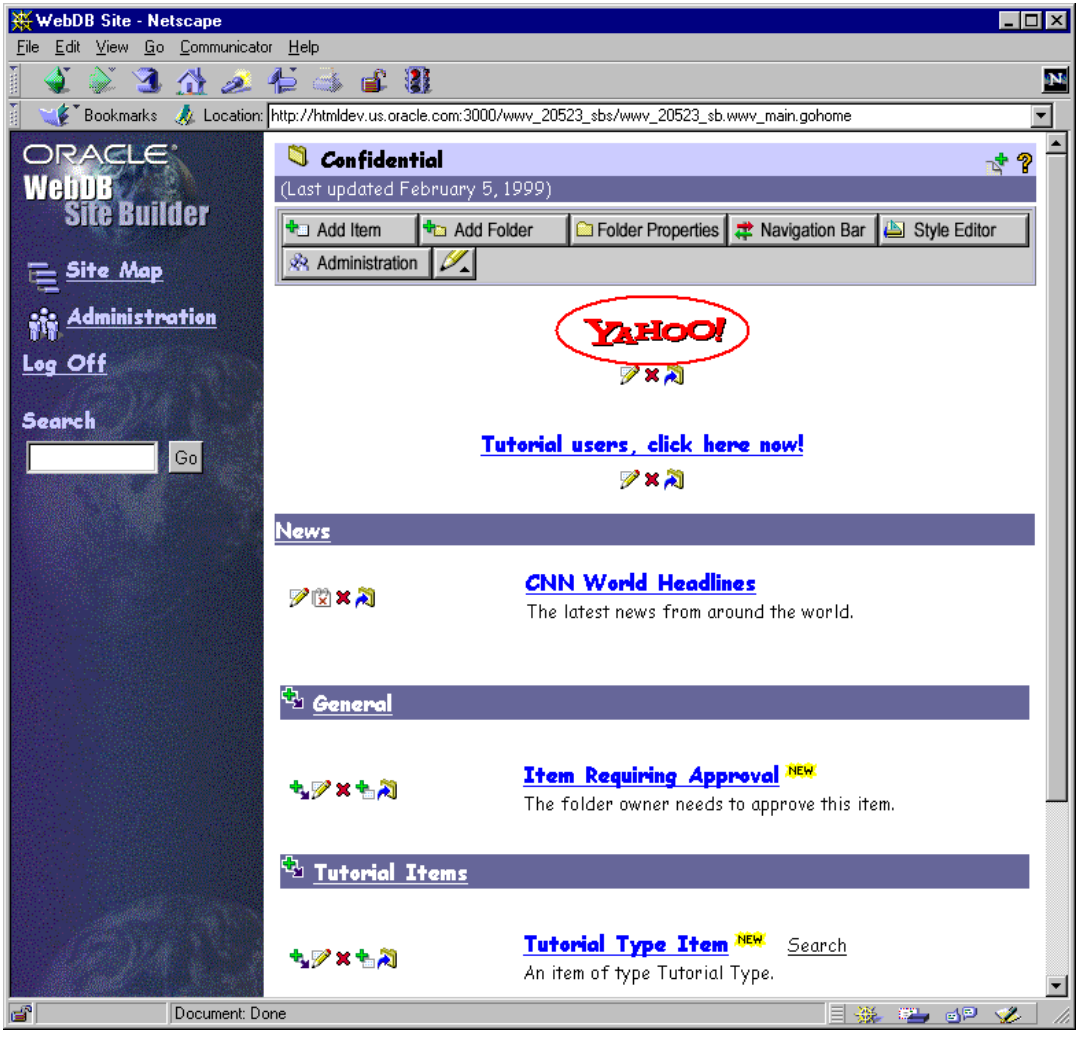
9. In the Confidential folder, click  under **Internet Search Engine** to display the Edit URL: Required page.

10. Click the **Optional** tab to display the Optional page.

11. Click **Browse** next to the **Image** field and locate the image you saved in Step 8.

12. Click 

to save your changes and return to the Confidential folder.



The Quickpick image, YAHOO! , is now displayed instead of the title.

7.8 What's Next?

In this chapter, you learned how to:

- Add a Regular item to a WebDB site
- Add a custom item to a WebDB site
- Add a News item to a WebDB site
- Add an Announcement item to a WebDB site
- Add a Quickpick item to a WebDB site
- Add an item requiring approval to a WebDB site
- Approve an item
- Edit an item in a WebDB site

This concludes the Web site development part of the tutorial. Now you're ready to add items to your own Web site, without having to rely on a Webmaster. This means that you can take responsibility for your own Web site content and keep it accurate and up-to-date. For more information about any subject you've learned in this chapter and others, see the online help.

Part III

Using Oracle WebDB to Control Access to Oracle Reports

Read Chapter 8, "Controlling Access to Oracle Reports" if you will be using Oracle WebDB to control access to Oracle Reports reports (and their associated Reports Servers and printers).

8

Controlling Access to Oracle Reports

Estimated completion time: 15 minutes

This chapter provides an overview of how to use Oracle WebDB to control access to Oracle Reports reports (and their associated Reports Servers and printers). Oracle Reports uses WebDB to provide security, so that end users can run only those reports on which they have the appropriate access privileges. WebDB determines:

- **Which** reports, Reports Servers, and printers are available for processing in the secure environment.
- **Who** has access to those reports, Reports Servers, and printers.
- **When** those reports, Reports Servers, and printers are available for processing.
- **Which** parameter values an end user is offered to control the output of those reports.

For example, a salary report may be made accessible to the Human Resources Director and all department managers. The report is available for processing on the last Friday of every month. The Human Resources Director can view salary details for all employees and can output the results to the destination type of his or her choice, while department managers can view salary details for only their direct reports and can output the results only to a specific printer.

To control end user access to a particular report, the Oracle Reports administrator must register the following in WebDB:

- The report definition file (.RDF or .REP file)
- The Reports Servers on which the report can be processed
- The printers to which the report results can be output

Once the appropriate files and devices have been registered in WebDB, the report can be made accessible to end users, for example by adding it to a WebDB site.

This chapter provides you with a basic overview of the steps involved in using WebDB to control access to Oracle Reports reports (and their associated Reports Servers and printers). For specific information about how to perform each step of the process, see the WebDB online help. For example scenarios, see the *Publishing Reports* manual.

This chapter includes the following sections:

8.1 Prerequisites

- You must have already installed and configured the Reports Servers to which you want to control access.
- The reports to which you want to control access must have already been created using Report Builder.
- The Reports Servers must be able to find any reports that they are to process (that is, the path for the report definition files must be included in the REPORT60_PATH environment variable).
- To register Oracle Reports reports, Reports Servers, and printers you must be an Oracle Reports Administrator (that is, you must be a member of the RW_ADMINISTRATOR role). If you are not an Oracle Reports Administrator, you will not be able to access WebDB's Oracle Reports security features. If you need to be added to the RW_ADMINISTRATOR role, ask your DBA.

8.2 The Access Control Process

There are several steps involved in setting up WebDB to control access to an Oracle Reports report (and its associated Reports Servers and printers). The steps are:

- **Step 1:** Install WebDB
- **Step 2:** Assign Oracle Reports roles to users
- **Step 3:** Configure Reports Servers for security
- **Step 4:** Set the authentication cookie domain
- **Step 5:** Create an availability calendar
- **Step 6:** Add access to printers
- **Step 7:** Add access to Reports Servers
- **Step 8:** Add access to the report definition file

The following sections describe each of the above steps. For more detailed information about how to perform these steps, see the WebDB online help. For example scenarios, see the "*Publishing Reports"* guide.

8.2.1 Step 1: Install and configure WebDB with Oracle Reports Security

Oracle Reports security is controlled using WebDB, therefore to control access to Oracle Reports reports, Reports Servers, and printers, you must have the Reports Server security packages installed in Oracle WebDB. Refer to the *"Publishing Reports Guide"* that is provided with the Oracle Reports package for more information.

8.2.2 Step 2: Assign Oracle Reports roles to users

WebDB includes several roles that provide various levels of Oracle Reports administrative control:

- RW_ADMINISTRATOR
- RW_DEVELOPER
- RW_POWER_USER
- RW_BASIC_USER

For example, RW_ADMINISTRATOR has privileges to perform all WebDB functions related to Oracle Reports access control and can view detailed error messages, while RW_BASIC_USER has privileges to make report requests and view basic error messages. For further information about the Oracle Reports roles, see the WebDB online help.

To learn how to assign roles to users, see Section 1.3, "Adding a User to a Role" on page 1-6 (note that to complete this exercise, you must be a DBA).

8.2.3 Step 3: Configure Reports Servers for security

In order for a Reports Server to communicate with WebDB to determine whether an end user has privileges to run a particular report, you must tell the Reports Server where WebDB is installed.

For information about how to configure an Oracle Reports Server for security, see the *Publishing Reports* manual.

8.2.4 Step 4: Set the authentication cookie domain

When an end user successfully logs on to WebDB, a cookie containing authentication information is saved to his or her browser. When that end user attempts to run an Oracle Reports report URL, the information in the cookie is used to provide the authentication information of the user to the Reports Server.

For the cookie to send the authentication information to the Reports Server where the report is sent, the cookie must know the domain in which to locate the Reports Server. This is done by setting the authentication cookie domain.

For example, if a Reports Server has a domain name of `my_webserver.west.my_company.com` and you set the authentication cookie domain to:

- `my_company.com`, the cookie can communicate with the Reports Server because it is located in a subordinate domain of the authentication cookie domain
- `west.my_company.com`, the cookie can communicate with the Reports Server because it is located in the authentication cookie domain
- `sales.west.my_company.com`, the cookie cannot communicate with the Reports Server because it is outside the authentication cookie domain
- `east.my_company.com`, the cookie cannot communicate with the Reports Server because it is outside the authentication cookie domain

Note: The WebDB Listener must also be installed within the boundaries of the authentication cookie domain.

For information about how to set the authentication cookie domain, see the WebDB online help.

8.2.5 Step 5: Create an availability calendar

An availability calendar determines when an Oracle Reports report, Reports Server, or printer is available for use. Each report, Reports Server, and printer can have an availability calendar associated with it. If an availability calendar is not specified, the report, Reports Server, or printer is available all the time.

There are two types of availability calendars:

- **Simple availability calendars** define a single availability rule (for example Monday through Friday from 12:00 a.m. to 10:00 p.m.).
- **Combined availability calendars** combine two or more availability calendars (for example Monday through Friday from 12:00 a.m. to 10:00 p.m. **AND** Saturday and Sunday from 6:00 a.m. to 6:00 p.m.).

For some examples of availability calendars and information about how to create them, see the WebDB online help.

8.2.6 Step 6: Add access to printers

Adding access to a printer defines:

- **Which** printer you are providing access to
- **Who** has access privileges to send output to the printer
- **When** the printer is available for printing report output

For information about how to register a printer, see the WebDB online help.

8.2.7 Step 7: Add access to Reports Servers

Adding access to a Reports Server defines:

- **Which** Reports Server you are providing access to
- **Who** has access privileges to process report requests on the Reports Server
- **When** the Reports Server is available for processing report requests
- **Which** printers the Reports Server can access

For information about how to register a Reports Server, see the WebDB online help.

8.2.8 Step 8: Add access to the report definition file

Adding access to a report definition file defines:

- **Which** report you are providing access to.
- **Who** has access privileges to request the report to run.
- **When** the report is available for processing.
- **Which** parameter values an end user is offered to control the output of the report.

  You can restrict the values that certain system parameters (such as DESTYPE and DESFORMAT) can be set to. For example, a report could be set to always output to cache in HTML format, always to a printer in PostScript, or the end user can be offered a choice of several destination types and formats.

  You can also restrict the values that other system parameters and user parameters can be set to. For example, if SMITH can access a salary report, you could restrict the user parameter EMPNAME to offer only those employee names that have SMITH as a manager. Thus when SMITH runs the report, he can only access information about his direct reports.

For information about how to register a report, see the WebDB online help.

8.3 What's Next?

In this chapter you learned how to set up WebDB to control access to Oracle Reports reports (and their associated Reports Servers and printers).

This concludes the Oracle Reports access part of the tutorial. Now you're ready to control access to your own Oracle Reports reports, Reports Servers, and printers. For more information about any subject you've learned in this chapter and others, see the WebDB online help.

Part IV

Appendix

Complete the tasks in Appendix A, "Tutorial Setup Instructions" if you will be setting up the tutorial for other users.

A

Tutorial Setup Instructions

Before you begin the exercises in this tutorial, you or your DBA must set up the tutorial environment.

To complete this chapter, you must be a DBA (that is, you must be a member of the DBA role). If you are not a DBA, you will not be able to access the appropriate WebDB features.

Tutorial users must have a user account set up in the database where WebDB is installed. For information about how to create user accounts, refer to the WebDB online help.

A.1 Creating HR_TUTORIAL

In Section 3.4, "Making a Component Available to End Users" on page 3-17, tutorial users need to grant execute privileges to the HR_TUTORIAL role. You can create this role using the CREATE ROLE SQL statement, or using WebDB.

For information about creating a role using the CREATE ROLE SQL statement, refer to your SQL reference documentation.

The following steps describe how to create the HR_TUTORIAL role using WebDB.

1. Start WebDB.
2. In the toolbar at the bottom of the page, click  to display the Administer page.
3. Click **Role Manager**.
4. In the Create a New Role panel:
   a. In the **Role** field, type `HR_TUTORIAL`.
   b. Click **Create**.

A.2 Creating the Tutorial Web Site

In Chapter 6, "Designing WebDB Sites" and Chapter 7, "Managing WebDB Site Content", tutorial users need to be site administrators of a WebDB site. The following steps describe how to create the Tutorial Web Site.

1. Start WebDB.
2. In the toolbar at the bottom of the page, click  in the toolbar at the bottom of the page to display the Site Building page.
3. Click **Create** to display the Site Creation Wizard.
4. In the **Site Name** field, type `Tutorial Site` and go to the next page.
5. In the **Owning Schema** field, type `TUTORIAL` and go to the next page.

   Note: If a schema called TUTORIAL already exists in the database where Oracle WebDB is installed, you will need to choose a different Owning Schema name.

6. In the Language list, choose the desired language for the text in the Web site, and go to the next page.
7. In the **User Tablespace** field, type the name of the tablespace to be used to store any site objects (for example USERS).
8. In the **Temporary Tablespace** field, type the name of the tablespace to be used for temporary operations (for example, TEMP) and go to the next page.
9. In the **Document Tablespace** field, type the name of the tablespace to be used to store any items uploaded to the site (for example, USERS).
10. Check **The Traveler** and go to the next page.
11. Note down the administrator user name and the public access URL.
12. Click **Finish**.
13. When the site creation process has finished, click **Done**.

A.2.1 Assigning a user as Site Administrator

Each tutorial user needs to be a site administrator of the Tutorial Web Site. The following steps describe how to assign an existing user site administration privileges.

1. Display the Tutorial Web Site in your Web browser.
2. In the navigation bar, click **Log On**.
3. In the log on dialog box, type the administrator user name you noted down during the site creation process. The password is the same as the user name.
4. Click **OK**.

IMPORTANT: While you are logged on to the Tutorial Web Site as the administrator user, you should also change the default passwords for the site owning schema and the administrator user that were set during site creation. For information about how to change passwords, refer to the WebDB Site Builder online help.

---

5. In the navigation bar, click  to display the Administration page.
6. In the Access Managers section, click **User** to display the User Manager.
7. In the Find User panel:
   a. In the **Name** field, type the user name of the tutorial user.

Note: The tutorial user must have a user account in the database where you created the Tutorial Web Site. If the tutorial user does not have a user account in the database, you will need to create one for them. For information about how to create user accounts, refer to the WebDB online help.

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   b. Click **Edit** to display the User Manager: Details page.
8. Check **Site, Style and News Administrator**.
9. Click 

.

A.3 Creating the TUTORIAL_USER user account

In Chapter 6, "Designing WebDB Sites" and Chapter 7, "Managing WebDB Site Content", tutorial users need to be able to log in as a different user (TUTORIAL_USER) to view the site with different privileges. The following steps describe how to create the TUTORIAL_USER user account.

1. Display the Tutorial Web Site in your Web browser.
2. In the navigation bar, click **Log On**.
3. In the log on dialog box, type the administrator user name you noted down during the site creation process. The password is the same as the user name.
4. Click **OK**.

> **IMPORTANT: While you are logged on to the Tutorial Web Site as the administrator user, you should also change the default passwords for the site owning schema and the administrator user that were set during site creation. For information about how to change passwords, refer to the WebDB Site Builder online help.**

5. In the navigation bar, click  to display the Administration page.
6. In the Access Managers section, click **User** to display the User Manager.
7. In the Create User panel:
   a. In the **Name** field, type `TUTORIAL_USER`.
   b. In the **Password** field, type `TUTORIAL`.
   c. In the **Confirm Password** field, type `TUTORIAL` to confirm that this is the password you want to use.
   d. In the Default Tablespace list, choose the tablespace to be used to store any database objects created by TUTORIAL_USER (for example, USERS).
   e. In the **Temporary Tablespace** list, choose the tablespace to use for temporary operations (for example, TEMP).
   f. In the **Profile** list, choose the profile for the user (for example DEFAULT).
   g. Click **Create**.

Part V

Glossary

Glossary

Administration page

Page from which all Site Builder managers are accessed. Some managers, such as the Site Manager, Category Manager, and Perspective Manager, are reserved for the site administrator.

Only logged on users may access the Administration page; public users never see the Administration link on the navigation bar.

advanced search

Allows users to use multiple terms in a search, use the Boolean operators And or Or, and limit searches to specific categories, perspectives, or folders. Site administrators choose whether to implement the advanced search feature in a WebDB site.

Announcement

One of the four display options, which places the item directly below Quickpicks at the top of a WebDB site home or folder page. Announcements are typically reserved for important items you want to broadcast to all users, like recent promotions or news about the company picnic. Unlike News items, Announcements are not automatically archived.

application

In WebDB, a group of components connected to one another by links, designed to fulfill a particular business need. For example, a form can be linked a chart that, in turn, allows an end user to drill down to detailed reports about items displayed in the chart.

activity log

A database table that provides a record of end user requests for WebDB components. The log includes information about the time of the request, the user who made the request, and the machine and browser type that originated the request.

banner

A .gif file containing a colored, horizontal bar with a title and optional graphic elements displayed on a WebDB page. A banner is used in WebDB pages to break the visual flow of a page and to group the related items that appear beneath it.

basic search

Allows users to locate an item in a WebDB site by entering a single term in the Search box. The Search box is located on the navigation bar, at the discretion of the site administrator or folder owner. The search criteria is compared to each item's title, description, and keywords, if available. Only those items the user has permission to view are searched.

batch job

Running a component in the background using the WebDB batch job facility. An end user can run a component in batch mode by selecting options on the parameter entry form for the component. Batch processing is useful if the component is based on a large amount of data, or if the component displays many rows of data.

bind variable

A variable in a SQL statement that must be replaced with a valid value or address of a value in order for the statement to execute successfully. WebDB component developers typically use bind variables to display a parameter entry field in a component's parameter entry form. The entry field allows end users to choose the data that the component will display.

body

In WebDB, the part of a web page where the banners, items and images are displayed.

bookmark

A method provided by web browsers for navigating to pages whose locations (URLs) you've saved. In WebDB, you bookmark pages as a personal link?

Browse In privilege

A WebDB-specific privilege that allows a developer to search schemas for objects such as tables, views, and procedures on which WebDB components will be based. To view an object in WebDB, a developer must have Browse In privileges (or Build In privileges, which automatically includes the Browse In privilege) in the schema that owns it.

browse mode

Usual mode of viewing and interacting with a WebDB site, as opposed to edit mode, which is used to perform folder and item management tasks.

browsing

Searching the database for objects. In WebDB, you can browse the database using object names, object types, the schemas owning the objects, or any combination of these search criteria.

Build In privilege

A WebDB-specific privilege that allows a developer to build a component in a schema. Developers must have Build In privileges in at least one schema, including their own, to build a component. The schema will own the finished component.

calendar

A WebDB component that displays the results of a SQL query in calendar format. At least one of the table columns in the query must have the DATE datatype.

category

A grouping of items on a WebDB site. A category helps users answer the question, "What is this item?" For example, in a travel site, you might have categories of maps, snapshots, or hotel reviews. Each Regular item (as opposed to Quickpicks, Announcements, or News items) added to a WebDB site must be assigned a category.

category dashboard

Set of buttons that appears at the top of a category page when displayed in edit mode. Allows quick access to all the tools used to create and manage categories.

Category Links

One of the elements that can appear on the navigation bar. When Category Links is selected on the Folder Manager's Navigation Bar tab, all of the categories

established for the WebDB site appear on the navigation bar as individual links. Users can then click a link to see all of the items associated with that category.

Category List

One of the elements that can appear on the navigation bar. If a user selects Category List on the Folder Manager's Navigation Bar tab, the user must then decide which categories should appear on the navigation bar, using the Available / Displayed Categories Links list boxes. The selected categories appear on the navigation bar as individual links. Users can then click a link to see all of the items associated with that category.

chart

A WebDB component that displays the results of a SQL query as a bar chart. Charts are based on at least two table or view columns: one that identifies the bars on the chart and another that calculates the size of the bars on the chart.

check box

A control that can appear alone or in groups on WebDB forms and parameter entry forms. Each check box can be switched either "On" or "Off." WebDB provides options for displaying Lists of Values as check boxes in forms and component parameter entry forms.

cluster

A database object used to store tables that are related to one another and that are often joined together in the same area on disk.

color palette

Used to assign colors to elements in a folder style, including background, links, banners, and other items displayed on a folder page. The hex value for each color is displayed in the palette.

Common Gateway Interface (CGI)

The industry-standard technique for running applications on a Web server. Whereas standard HTML documents retrieved from a Web server are static (the exact same text is retrieved every time), CGI enables a program running on the Web server to communicate with another computer to dynamically generate HTML documents in response to user-entered information.

component

A PL/SQL stored procedure created by a WebDB component build wizard; for example, a chart, report, or form. Executing the stored procedure creates the HTML code used to display the component.

component schema

Any database schema in which a WebDB developer can build a component.

content area

In a WebDB site, the part of a folder page to the right of the navigation bar, where items are displayed.

contributor

User who has the authority to add content to a WebDB site; that is, the Own, Manage Items, or Create With Approval privilege. Folder owners control which users can add items to a given folder. The site administrator can also allow public users to contribute news items to the site's home page, subject to approval by the news administrator.

Create With Approval privilege

One of the folder privileges. Allows a user who is not the folder owner to add new items to the folder. Items that are added by a user with this privilege must be approved by the folder owner (or site administrator) before they are displayed.

custom item type

User-defined item type which includes values or functions that further control the display or functionality of the item. Custom item types are often function calls. These can be calls to PL/SQL functions that exist in your own database schema, or they can be external, or HTTP calls which are accessible only through an HTML or browser interface using a URL and parameter values. Custom item types are built upon the base item types defined in WebDB.

database access descriptor (DAD)

Set of values that specify how WebDB connects to the Listener or some other type of database server to fulfill an HTTP request. The information in the DAD includes the user name (which also specifies the schema and the privileges), the user password, connect string, error log file, standard error message, and National Language Support (NLS) parameters.

database administrator (DBA)

A WebDB user having the DBA role. The DBA role provides the user access to all WebDB menus and all privileges, including creating and dropping users, assigning build and browse privileges to users, and assigning roles to users.

database object

See *object*.

display option

Option specified during the item creation process, which determines where the item is displayed on the page. News items are displayed beneath the News banner. Quickpicks are displayed beneath the main banner, centered at the top of the page. Announcements appear below Quickpicks. Regular items are displayed beneath the appropriate category banner.

edit mode

Mode that enables an authorized user who has logged on to a WebDB site to manage folders and the items contained within the folders. To enter edit mode, the user clicks the Edit button at the top right of the folder page. If the Edit button does not appear, the user does not have permission to add items to the folder and/or to change the folder's properties.

end user

A WebDB user who executes a component. The user has been granted execute privileges by the owner of the component.

execute privilege

A permission that allows an end user to execute a procedure. In WebDB, the execute privilege is typically granted to allow an end user to execute a component stored in the database as a procedure.

expiration period

Number of days before an item expires, established during the item creation process. After an item expires, it is viewable only by the item's owner and the site administrator. Expired items are removed from the database during a system purge.

export

To store a copy of an object, module, selected text or image to a file or a remote database.

field-level validation

A method for verifying that correct values have been entered into entry fields in components and parameter entry forms. Field-level validation is performed when the end user causes the OnBlur condition to occur after entering a value in an entry field, for example, when tabbing to another entry field. See also, form-level validation.

file item

One of the item types you can add to a folder. When you finish adding a file item, the file is uploaded to the WebDB site and stored in the host database. The title of the file item is displayed on the folder page as a link. When a user clicks the link, the file is downloaded to the user's computer and displayed in the user's Web browser.

folder

Containers for items. Folders in a WebDB site are similar to folders on a desktop computer in that they are organized hierarchically. This hierarchy, displayed in the Site Map, forms the structure of each WebDB site.

folder dashboard

Set of buttons that appears at the top of the folder page when the folder is displayed in edit mode. Allows quick access to all the tools used to create and manage folders and the items within them.

folder link item

One of the item types you can add to a folder. A folder link provides a route to another folder within this WebDB site. The title of the folder link is displayed on a folder page as a link. When the user clicks the link, the Web page referenced by the item is displayed in the user's browser.

folder owner

User with the Own privilege for a given folder. A folder owner controls the folder and its contents, and can grant folder access to other users. If the site administrator allows it, the folder owner also controls the style applied to the folder—that is, the folder's appearance. A folder may have more than one folder owner.

folder page

The page on which a folder's contents are displayed. A folder page is typically divided into discrete areas by the News banner and various category banners.

folder path

Chain of folder reference names separated by colons, starting at the root folder and ending at the object folder. Folder paths, which appear below the folder name on the title banner, describe the complete directory path of a folder and create URLs for folder links.

folder privileges

Refers to the user's level of access to a given folder. These levels are:

Users with this privilege:	Are allowed to:
Own	Perform any tasks relating to the folder or its contents, including deleting the folder, choosing a new parent, adding, deleting, or modifying items, changing the navigation bar, and so on.
View	Look at the folder, but not add or change any of its items or perform any tasks affecting the folder itself.
Style	Modify the folder's style.
Manage Items	Add, delete, or change items belonging to the folder.
Create With Approval	Create new items for the folder. Items created by users with this privilege are not displayed until the folder owner has explicitly approved them.

folder reference name

Allows WebDB to uniquely identify each folder and its contents. The reference name is established when the folder is created and cannot be changed. If the supplied name is not unique, WebDB substitutes a unique value.

foreign key

A value or column(s) in a table that refers to a primary key in another table.

form

A WebDB component that provides an interface to one or more database tables, views, or procedures.

form-level validation

A method for verifying that correct values have been entered into entry fields in components and parameter entry forms. Form-level validation occurs after the user

enters a value in an entry field and submits all values on the page, for example, when clicking an OK button.

frame driver

A WebDB component consisting of a web page divided into with two frames. One frame (the driving frame) contains a SQL query that drives the contents of a second target frame.

frames view

A tree displaying a hierarchical view of WebDB menus and pages. End users can click nodes in the tree to navigate to WebDB menus and pages. The frames view is accessible from the WebDB home page.

function

In WebDB, PL/SQL subprograms that perform a specified sequence of actions, and then return a value.

In WebDB sites, a PL/SQL procedure or user function that returns a value. End users can execute procedures or functions in a WebDB site by clicking on the title of a PL/SQL or custom item. Functions are usually small, very specific blocks of code written to perform a specific task within the scope of a larger application.

generate

To save a procedure containing a WebDB component to a file or database in a binary format so that it can be executed in run-time and batch mode.

grant

A privilege or role given to a WebDB user.

group

Collection of users who have access to a WebDB site and share a common need or interest. Users are assigned to groups based on their common responsibilities or access requirements; for example, Human Resources, Accounting, and so on.

group administrator

User who has the privilege to add or delete members from the group, or to delete the group itself.

header

An optional region in an HTML-based web page that contains introductory material for the page. In WebDB, the header can include text, graphics, data, and computations. The header appears first before the body.

hierarchy

A WebDB component that displays data from a self-referencing table or view (at least two columns in the table must share a recursive relationship). A hierarchy can contain up to three levels and displays data such as employees in an organization chart, or the hierarchical relationship between menus in a web site.

home page

A PL/SQL procedure that, when executed, creates a web page that is the entry point to the WebDB product. A Listener setting specifies the default home page for WebDB.

HTML

Acronym for Hypertext Markup Language. A tag-based ASCII language used to specify the content, format, and links to other pages on Web servers on the Internet. WebDB consists of a collection of PL/SQL procedures that, when executed, generate HTML.

HTTP function

See *function*.

hypertext link

In WebDB, a reference from some point in a component or web site to some point in another component or web site.

image

A bitmapped object that can be stored and loaded into a component or web site, and displayed using a web browser.

imagemap item

One of the item types you can add to a folder. An imagemap is a collection of smaller images, each of which provides a link to a different URL.

index

An optional structure associated with a table used to locate rows of the table quickly, and (optionally) to guarantee that every row is unique.

interest list

Set of links displayed in a folder owner's personal version of the home page under the Interests banner.

*inter*Media Text

Advanced gist, theme, and text retrieval services offered in Oracle 8i that enables search criteria to be compared against every word in every item in a WebDB site. When interMedia is not available, or has not been enabled, search criteria is compared to each item's title, description, and keywords only.

IP address

A four-part number with no more than three digits in each part that uniquely identifies a computer on the Internet, or on a local LAN.

item

Basic unit of content (such as text, files, and links) that folder owners or contributors place on WebDB site pages. When users add items to folders in a WebDB site, they are stored in the site's host database. The item title and its content (or results of execution, in the case of a link or function call) are displayed on automatically-generated Web pages by WebDB. Each item must be defined as one of the pre-defined item types (or custom item types, if they have been created), so that WebDB knows how to display the item and how to execute it.

item ID

Local database reference to the contents of an item. An item ID value is used in custom item types to pass items to PL/SQL procedures. The function uses the item ID to access the contents of the item.

item title

Descriptive text that identifies each item on the home or folder page. The user clicks an item title to view or download the item.

item type

WebDB provides eight item types: URL, file, text, imagemap, folder link, PL/SQL, WebDB component, and multiple files. When a new item is added to a WebDB site, the user specifies the base item type to control item display and functional characteristics. Custom item types are created by users, based on one of the basic item types.

join condition

Combining data from two (or more) tables or views in a single SQL SELECT statement.

JavaScript

A scripting language developed by Netscape that allows generation of dynamic components in otherwise static HTML. WebDB allows you to use JavaScript to create applications that validate entry fields in components and parameter entry forms.

keyword search

see *basic search*.

library

A collection of one or more PL/SQL program units that are stored together in a database, and can be referenced by several applications at once.

link

A shared component that allows developers to add hypertext jumps between components.

link text

Text (usually displayed in color) which is "hot", or hypertext. End users click on the text to display the Web page specified in the HTML code. For example, in the HTML code Travel The World,' Travel The World' is the link text displayed in color. End users click it to jump to the www.traveltheworld.com Web site.

List of Values (LOV)

A shared component that allows developers to add selectable values to entry fields in components and parameter entry forms. An end user selects from the list one or more values for the entry field. A single List of Values can be displayed in different formats such as combo boxes, radio buttons, or check boxes.

lock

A setting automatically applied to a component when it is being edited. The setting prevents other users from editing the component.

Manage Items privilege

One of the folder privileges. Allows a user to make changes to existing items in a folder, or to add items to that folder.

master-detail form

A WebDB component that displays a master table row and multiple detail rows within a single HTML page. Values in the master row determine which detail rows are displayed for querying, updating, inserting, and deleting.

menu

A WebDB component that displays a web page containing options that end users can click to navigate to other menus, WebDB components, or URLs.

mime type

A file format defined by the Multipurpose Internet Mail Extensions standard. A mime type describes the type of file being transferred to the web browser.

multiple file item

One of the item types you can add to a folder. Allows you to quickly upload several files at once and store them in the database. Unlike single file items, you cannot associate titles or descriptions with files uploaded this way. Instead, the actual file names are used as file links on the folder page. You must choose a single category for all the files.

navigation bar

In a WebDB site, the area that allows users to navigate to frequently accessed or important areas of the WebDB site. In framed browsers, the navigation bar appears on the left side of each folder page; in unframed browsers, it appears at the top of the page. While folder owners decide which text links or images to place on the navigation bar for a given folder, the site administrator has control over certain elements of the navigation bar, such as which image is used as the site logo, and the text of the links themselves.

navigation toolbar

1. Buttons located along the bottom of WebDB that allow users to navigate to other WebDB pages.

2. Graphics elements and buttons in a web site created using WebDB that allow users to navigate to other pages in the site. The buttons and graphic elements can be displayed at the top, sides, or bottom of a page.

News

One of the four display options. Usually reserved for time-sensitive material, News items appear beneath the News banner on the home or folder page, and can be any type of item. For example, a News item on a travel WebDB site could be a link to a Web page that temporarily advises against traveling to the Caribbean because of hurricane warnings. News items are archived according to settings made by the site or news administrator.

news administrator

User who has privileges to maintain and approve the news items on a WebDB site's home page.

null value

The absence of a value in a table column.

object

A structure used to store data in the database. Developers can create objects using object build wizards provided by WebDB, or using Oracle database commands.

Although WebDB components are stored in the database as package objects, the term component is used to refer to charts, reports, forms, etc. Object is used when referring to tables, packages, triggers, etc.

object information

Information that WebDB provides about a database object, including its owner, type, and dependencies on other objects.

object schema

A schema that owns the objects on which WebDB components are based. To build a component based on an object, the schema where the component is being built must be granted explicit privileges on the object, such as SELECT, INSERT, UPDATE, DELETE, and EXECUTE.

Oracle Connect String

A Listener setting that can be used to set up a TNS names alias for a remote database installed on Windows NT.

Oracle HOME

An environment variable that indicates the root directory of Oracle products.

Own privilege

One of the folder privileges. Allows a user to perform all functions on a folder, and to grant other users various privileges for this folder. Site administrators automatically have the Own privilege for every folder in a WebDB site.

Owning Schema

The WebDB site schema created by the Site Creation Wizard at site creation time. The schema must be new. The Wizard will grant appropriate privileges to the account. Two users are created: a public one, by adding the suffix '_PUBLIC', and a second, private administrative schema, by adding the suffix '_ADMIN'.

package

A database object consisting of a specification and a body. The specification includes the datatypes and subprograms that can be referenced by other program units. The body includes the actual implementation of the package.

page request

In WebDB, an end user request for a WebDB component.

In WebDB sites, a Web browser request sent to a Web server to transmit a Web page for display. Each time a page request is fulfilled, a log entry is made. These log entries can be queried in reports using the Site Statistics Manager to determine which pages on a Web site are most often requested.

parameter entry field

A field on a parameter entry form that allows end users to enter values that will be passed to a WebDB component.

parameter entry form

A page that prompts end users for values to pass to a WebDB component. End users can view the parameter entry form for a component, if one has been created, by choosing the Run with Parameters option in WebDB.

parent-child relationship

See *recursive relationship*.

personal folder

Area on a WebDB site reserved for a single user. A personal folder is created automatically when the user's database account is created in the User Manager. If the user's database account is created outside of WebDB, the user can create his own personal folder using the Personal Information Manager. Unless the owner grants the View privilege to other users, only the owner can see the items in his personal folder (and the site administrator, who can see all the folders on the site).

perspective

A cross-category grouping of an item. Perspectives help users answer the question "Who will be interested in this item?". For example, you can add links to diverse vacation spots around the world and assign perspectives like 'Vacations for Nordic Enthusiasts', 'Archeology Expeditions', and 'Extreme Vacations for Adventurers'. Perspectives are available only for Regular items, but are not required. More than one perspective can be assigned to an item.

perspective dashboard

Set of buttons that appears at the top of a perspective page when displayed in edit mode. Allows quick access to all the tools used to create and manage perspectives.

Perspective Links

One of the elements that can appear on the navigation bar. When Perspective Links is selected on the Folder Manager's Navigation Bar tab, all of the perspectives established for the WebDB site appear on the navigation bar as individual links. Users can then click a link to see all of the items associated with that perspective.

Perspective List

One of the elements that can appear on the navigation bar. If a user selects Perspective List on the Folder Manager's Navigation Bar tab, the user must then decide which perspectives should appear on the navigation bar, using the Available / Displayed Perspective Links list boxes. The selected perspectives appear

on the navigation bar as individual links. Users can then click a link to see all of the items associated with that perspective.

PL/SQL item

One of the item types you can add to a folder. A PL/SQL item contains a block of PL/SQL code. The title of the item is displayed as a link. When a user clicks the link, the block is executed. The result is returned and displayed in the user's browser.

PL/SQL function

See *function*.

port

A number that TCP uses to route transmitted data to and from a particular program.

primary key

A column in a database table consisting of unique values that can be used to identify rows in a table.

privilege

The right to perform an action on the database. These can either be general (system privileges) or specific to particular database objects (object privileges). They can also be grouped into roles. A user with the DBA role grants privileges in WebDB.

procedure

A PL/SQL subprogram that performs a specified sequence of actions.

profile

The system and Oracle database resources that are available to the user.

public folder

Any folder in a WebDB site that is viewable by end users without logging on. The folder owner or site administrator must designate a folder as public.

public user

User who browses and views a WebDB site without logging on. Public users can see only those features that the site administrator has made available on the navigation bar, and can view only public folders.

Query by Example (QBE) form

A WebDB component that provides an interface allowing end users to query or insert values into a database table or view. The Query by Example form contains entry fields that correspond to the columns in the database table or view on which the form is built.

query

A SQL SELECT statement that specifies which data to retrieve from one or more tables or views in a database.

Quickpick

One of the four display options, which places the item's title at the top center of a WebDB site home or folder. Quickpicks are often designated for items that are frequently accessed by your audience, and are often displayed as graphic links.

radio button

A control (similar to a check box) appearing in sets of two or more, only one of which may be either "on" or "off" at any given time. WebDB provides options for displaying Lists of Values as radio buttons in forms or component parameter entry forms.

recursive relationship

A relationship that occurs when the values in a table column can be related to those in another column in the same table or another table; for example, between a primary key and foreign key.

Regular item

One of the four display options, which places the item's title beneath the category banner to which the item belongs. A folder page typically contains several category banners, with Regular items listed beneath them. A Regular item is the only type of item associated with a category and, optionally, perspectives. A Regular item must belong to one category, and only one. A Regular item may also be associated with one perspective, many, or none at all.

remote database

A database running on a separate machine that can be accessed over the network.

report

A WebDB component that displays the results of a SQL query in a tabular format.

role

A group of database object privileges that can be granted and revoked as a unit. The DBA assigns a role to a group of users in order to grant them the database object privileges associated with the role.

rollover image

A second image that is displayed whenever the cursor is moved over an image on the navigation bar in a WebDB site.

root folder

Top level of the folder hierarchy in a WebDB site; contains all other folders in the WebDB site. Also known as the WebDB site's home page.

row

A set of values in a table; for example, the values representing one employee in the SCOTT.EMP table.

schema

A collection of components and database objects under the control of a given database user. The schema has the same name as the user who owns it.

search

See *basic search*.

search engine

Application for searching for Web pages on the Web. Yahoo! is a popular search engine that anyone can use. In WebDB sites, end users can perform basic or advanced searches using *inter*Media Text, assuming it has been installed with Oracle 8*i* and enabled by the site administrator.

sequence

A database object used to automatically generate numbers for table rows.

session

The period between logging on and logging off WebDB.

shared components

Building blocks used by WebDB developers to create components. Shared components include links, Lists of Values, JavaScripts, and look and feel elements.

Each shared component can be used by multiple developers to create WebDB components.

site

See *WebDB site.*

site administrator

User who has full privileges over the entire WebDB site. Site administrators set up and maintain the site; designate folder owners, news and style administrators; create perspectives and categories for the site; and manage users. Site administrators can also view all the folders on the site, including any user's personal folder.

site contact

E-mail address of the person (or generic job title) designated as the primary contact for the WebDB site. Assuming that the folder owner chooses to display the site contact in the navigation bar, the site contact's e-mail address is displayed in the format: Webmaster: <email address>.

site log

Table of all events and related information gathered as users interact with a WebDB site. Used to generate site statistics in the form of reports and graphs.

Site Map

Displays the hierarchical organization of all folders in a WebDB site that the user has privileges to view or access. Users can click any folder link in the hierarchy to display that folder's page.

site statistics

Report tables and bar graphs that provide detailed and summary information on page requests, users and groups, item requests, and searches.

snapshot

A table that contains the results of a query on one or more tables, called master tables, in a remote database.

snapshot log

A table associated with the master table of a snapshot. It tracks changes to the master table.

status code

See *version*.

stored procedure

See *procedure.*

structured U/I template

A shared component that controls the look and feel of WebDB components. Structured U/I templates display the same image and text in the same location on every component that uses the template.

style

Set of values and parameters that controls the appearance of folder pages in a WebDB site. Styles can control the look and feel of all the pages in the entire site, or they can be applied to a single folder.

style administrator

User who has special privileges to maintain and enforce display settings in a given style.

subfolder

A nested folder. All folders in a WebDB site are subfolders of the site's home page, also known as the root folder.

substitution tag

A tag used to create unstructured U/I templates. When the HTML code that creates the template executes, substitution tags dynamically embed components, titles, headings, and other elements into the template.

SYLK

The file format used by the Microsoft Excel program to define formulas and data in spreadsheet, as well as transfer spreadsheet content from one file to another.

synonym

A name assigned to a table or view that can thereafter be used to refer to it.

system purge

Deletes all items in a WebDB site marked as deleted or expired from the database.

table

The basic storage structure in a relational database.

tablespace

An allocation of space in the database that can contain objects.

temporary tablespace

An allocation of space in the database used for the creation of temporary table segments for operations such as sorting table rows.

text item

One of the item types you can add to a folder. When you create a text item, you enter text (up to 32KB) in the Item Wizard. The text block is then stored in the WebDB site's host database. The title of the item is displayed as a link. When a user clicks the link, the text is displayed in the user's Web browser.

tree view

see *Site Map*.

trigger

A stored procedure associated with a table. It executes before or after one or more specified events.

unstructured U/I template

A shared component that controls the look and feel of WebDB components. Unstructured U/I templates are based on HTML code that, when executed, dynamically embeds components, titles, headings, and other elements.

URL item

One of the item types you can add to a folder. URL items provides a route to another Web page, either inside or outside this WebDB site. The title of the URL item is displayed as a link. When a user clicks the link, the Web page referenced by the link is displayed.

user name

In WebDB, identical to a schema name. A unique string of characters identifying an authorized user's account on an Oracle database. User accounts are created and managed by the database administrator, or directly in a WebDB site by the site administrator. A user who logs into WebDB with the user name Scott can by default create components in the SCOTT schema

user interface component

See *component*.

user interface (U/I) template

A shared component that controls the look and feel of WebDB components. Selecting a U/I template when building a component automatically selects a title on the page where the component is displayed, a title background, links to other web pages, and background colors and images.

version

Indicates the status of a stored procedure that contains a WebDB component. For example, ARCHIVE indicates an old version of the component that is being saved in the database. PRODUCTION with VALID PACKAGE indicates the most recent version of the component, which will run without errors. PRODUCTION with INVALID PACKAGE indicates that the most recent version of the component contains errors. There can be multiple versions of the same component.

version control

When enabled, creates a new copy of an item in the database when the user updates the item and clicks the Add as New Version button in the Item Manager.

view

A virtual table whose rows do not actually exist in the database, but which is based on a table that is physically stored in the database.

View privilege

One of the folder privileges. Allows a user to view any item in a folder, except items that have expired or have been deleted.

visited link

Link which is displayed in a different color than unvisited links to signify that the user has clicked it at least once during the browser session.

web server

A program that delivers web pages.

WebDB component

See *component*.

WebDB component item

One of the item types you can add to a folder. A WebDB component item may be a chart, form, report, and so on, created by the WebDB Component Build Wizard and stored in the host database. The title is displayed on the folder page as a link. When the user clicks the item, the WebDB component executes and sends the result to the user's browser.

WebDB roles

Two special types of roles that control the user's view of the WebDB product. The DBA role provides the user access to all WebDB menus and all privileges. The WEBDB_DEVELOPER role provides the user access to all WebDB menus except System Administration and Monitoring. Users with this role can build components in the their own schema, plus any schemas in which the DBA has granted build and browse privileges.

WebDB site

Web site created with the Site Creation Wizard in WebDB and developed using site management tools within the site itself. A WebDB site consists of folders, which are containers for various items including URLs, text blocks, files, folder links, imagemaps, WebDB components, and PL/SQL procedures.

wildcard

In WebDB, the percent (%) character, which is used to mean any single character or a contiguous set of characters within a word or phase.

wizard

A graphical interface that guides a user step by step through a process. In WebDB, there are wizards for creating of creating components, objects, web sites, and items within web sites.

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