Oracle FLEXCUBE Investor Servicing®
DDL Tool Reference Guide

Release 12.0.4.0.0
Part No. E57474-01

September 2014

ORACLE
FINANCIAL SERVICES

Contents

1 Preface

This document describes the features of DDL tool and guide how to use the features.

1.1 Audience

This document is intended for FLEXCUBE Application developers/users that use DDL tool to develop FLEXCUBE Database objects.

To Use this manual, you need conceptual and working knowledge of the below:

Proficiency	*Resources*
FLEXCUBE Functional Architecture	Training programs from Oracle Financial Software Services.
FLEXCUBE Technical Architecture	Training programs from Oracle Financial Software Services.
FLEXCUBE Object Naming conventions	*Development Overview Guide*
Working knowledge of Web based applications	Self Acquired
Working knowledge of Oracle Database	Oracle Documentations

1.2 Related documents

For more information on RAD development, see these resources:

- *FCIS-FD01-01-01-Development Overview Guide*
- *FCIS-FD05-01-01-Tools-Getting Started*

1.3 Conventions

The following text conventions are used in this document:

Convention Meaning

boldface Boldface type indicates graphical user interface elements (for example, menus and menu items, buttons, tabs, dialog controls), including options that you select.

italic italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values.

monospace Monospace type indicates language and syntax elements, directory and file names, URLs, text that appears on the screen, or text that you enter.

2 Introduction

2.1 How to use this Guide

The information in this guide includes:

- Chapter 2, "Introduction"
- Chapter 3, "DDL Tool - Getting started"
- Chapter 4, "System Users"
- Chapter 5, "DDL Functionalities"
- Chapter 6, "Data Model"

3 DDL Tool - Getting started

This document gives a brief idea of the DDL Tool software. The system was developed to hold all the database objects such as data definitions, schemas, static data and various other information regarding them and enables the user to view and manipulate them with ease.

4 System Users

This section explains the System Administrator user functionalities of DDL Tool

4.1 Administrator(s)

The administrator(s) will use the system to make new users and provide them with their rights and permissions. The administrator(s) will have full control over the rights and permissions. They can set the role for a particular user along with their default project.

4.1.1 **Administrator Activities**

The administrator can create Vercon files and the DBA report.

- Vercon files are maintained to document……...
- At any time, the administrator can generate a database report for a given stream and project.

4.1.2 **Maintenance**

- The administrator(s) can create new stream, amend an existing stream or delete an existing stream.
- The administrator(s) can create a new project in a stream, amend an existing project such as project name, type, status, stage, etc and can also delete an existing project.
- The administrator(s) can create new schemas, amend or delete existing schemas.

- The administrator(s) can create new users, enable or disable existing users. They can amend the details of an existing user such as role name, default project and their status

4.1.3 **Generation of Files**

- Generate consol scripts - Consol scripts are used to generate scripts for the latest objects present in the database for a particular project. Consol scripts will have only create and insert scripts as if these objects have been newly created by users. A project can be based on previous projects. The objects then can be modified or dropped. Console scripts will not show these modifications but rather will create scripts for these objects as though these were new objects.

- Generate Delta scripts – Delta scripts will show the differences between two versions of a project in terms of the objects present in these versions. Any two versions of a project will have different objects. The objects may have been modified, dropped, new objects may have been created or insertions may have been done. These modifications, new creations and insertions are captured by delta scripts. Delta scripts

- Generate Conversion Files -

4.2 Developers/users

Developers can use the system to view all the database objects present along with their schema definitions and static data. They can modify, insert and update the information

5 DDL Functionalities

This section describes the overview of DDL tool functionalities

5.1 The Login Screen

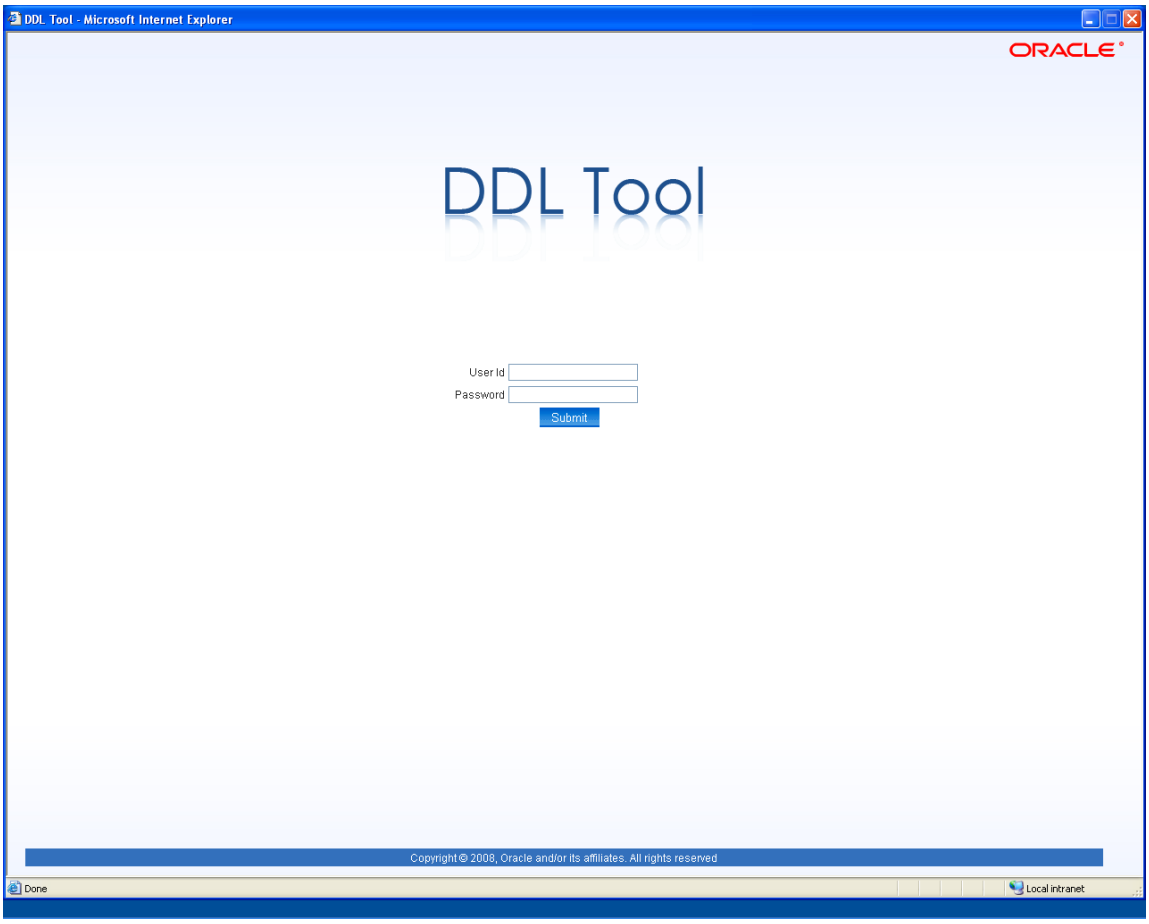


Fig.1

Upon starting the application, the user is presented with the login screen as shown in Fig1. The user is expected to enter the user id and password if they have been provided with the appropriate rights by the administrator. On entering, click on the 'submit' button to proceed.

5.2 Set Project

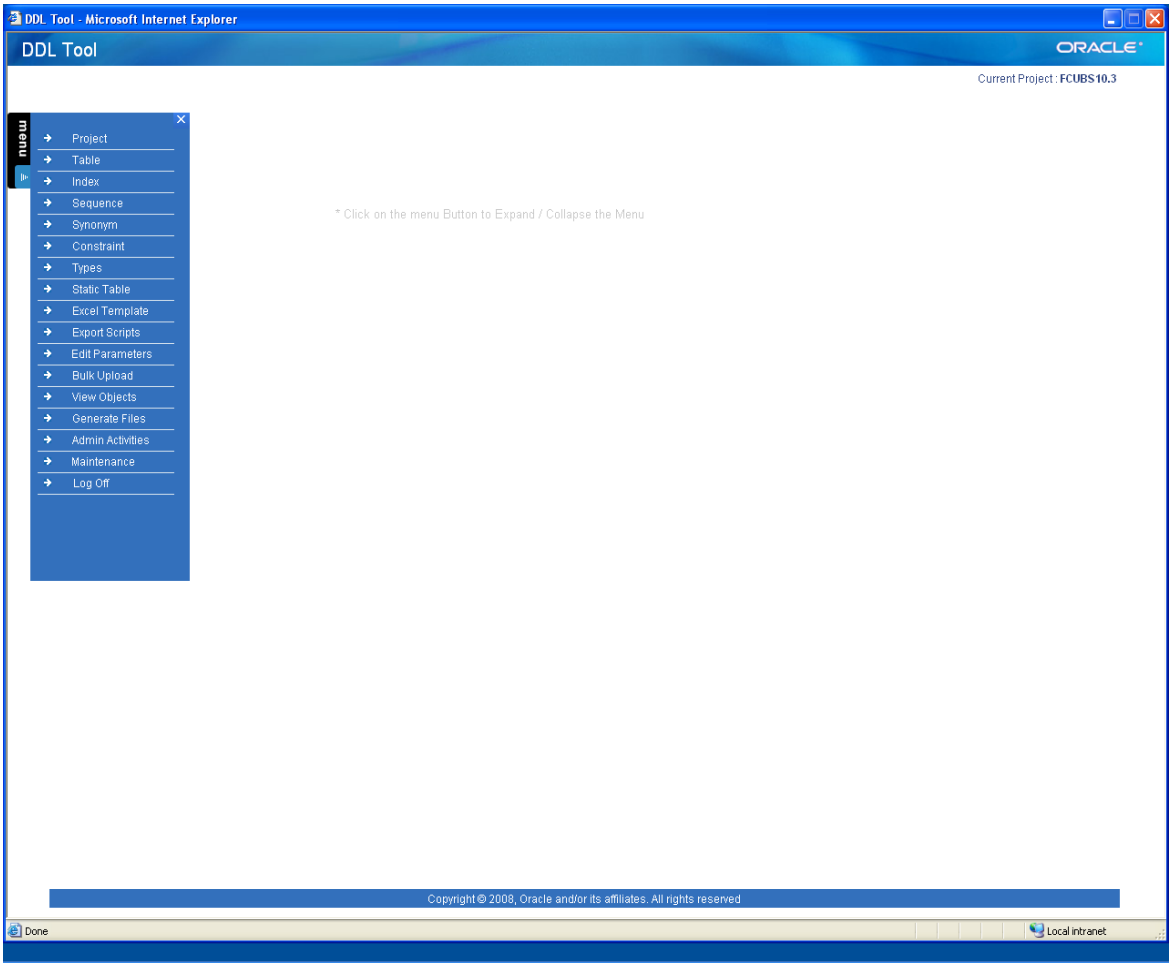


Fig.2

Once the user has logged in, he/she is provided with a blank window with a collapsible menu attached to the left side. Click on the menu to expand it. The administrator sets a default project for each of the user. The name of the current project is visible on the right hand side of the window. If the user wishes to change the current project, select the 'Project' option from the menu and it leads to the set project screen as shown in Fig.3.

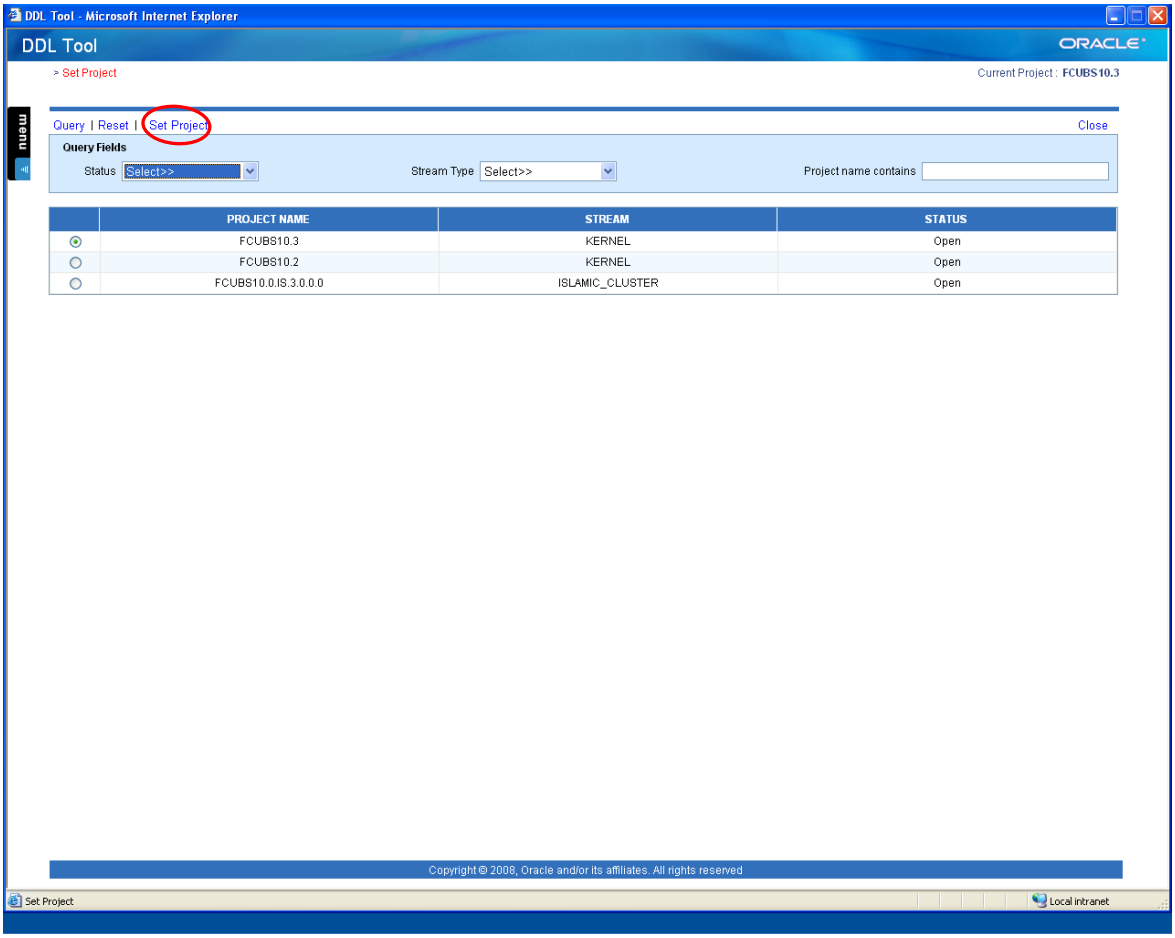


Fig.3

- The user can query for a project using any or all of the query fields and then select the 'Query' button on top.
- 'Status' query field is used to set the status of the project to be queried. For example the status can be set as Open or Close.
- 'Stream Type' is used to set the stream of the project
- After selecting a project from the list, select the 'Set Project' button (circled in red). The project name will appear on the right hand side of the screen.

5.3 A Typical Screen

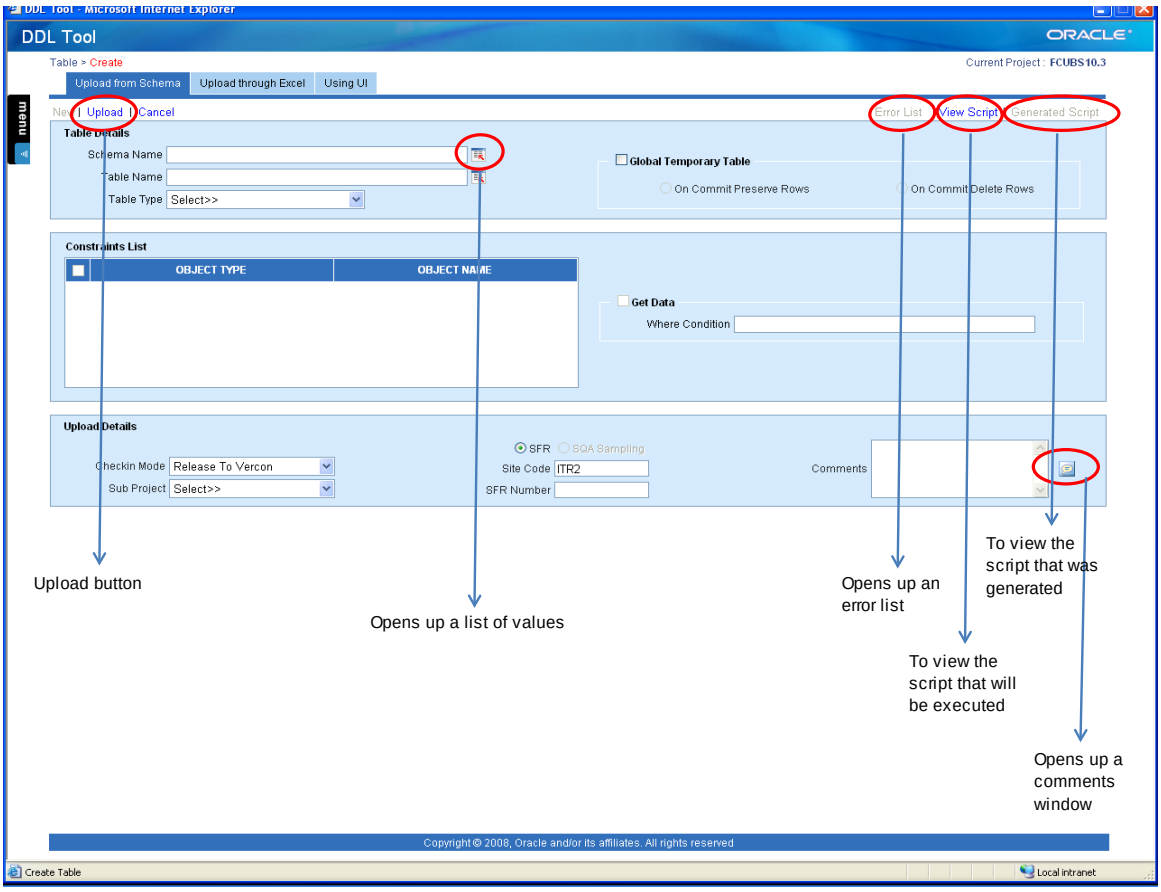


Fig.4

A typical user interface looks like as shown in Fig.4. The objects highlighted using a red circle are user buttons. Each of these buttons is usually common on most of the user interfaces.

- The 'Upload' button is used to upload the new object or data into the database once the user has finished filling in the appropriate details.

- The small red button that appears next to the text boxes such as Table Name etc are used for opening up a list of values from where the user can their choice. When the user clicks on the button, a window opens up with a search text box. Usually the list will be initially empty, once the user enters a search string such as the first letter of the object's name; the list will show all the names starting with that name. Sometimes, the list will be populated automatically when the user selects the button.

- The 'Error List' button at the right top corner of the screen opens up a window that contains details of the recent error if an error had occurred. The user can make use of the error list to find out the reason for errors.

- The 'View Script' at the right top corner of the screen is to let the user view the script that will be executed. To view the script, all the necessary details have to be filled in first.

- The 'Generated Script' button is to let the user view the script that got executed if the execution was successful.

- Table Details – Details such as Schema Name, Table Name and Table Type must be provided by the user. The user can make use of the search window that opens up upon selecting the button that is present right next to the text boxes.

- The user can use the cancel button to cancel the operation any time.

5.4 Table Creation

5.4.1 'Upload' From Schema

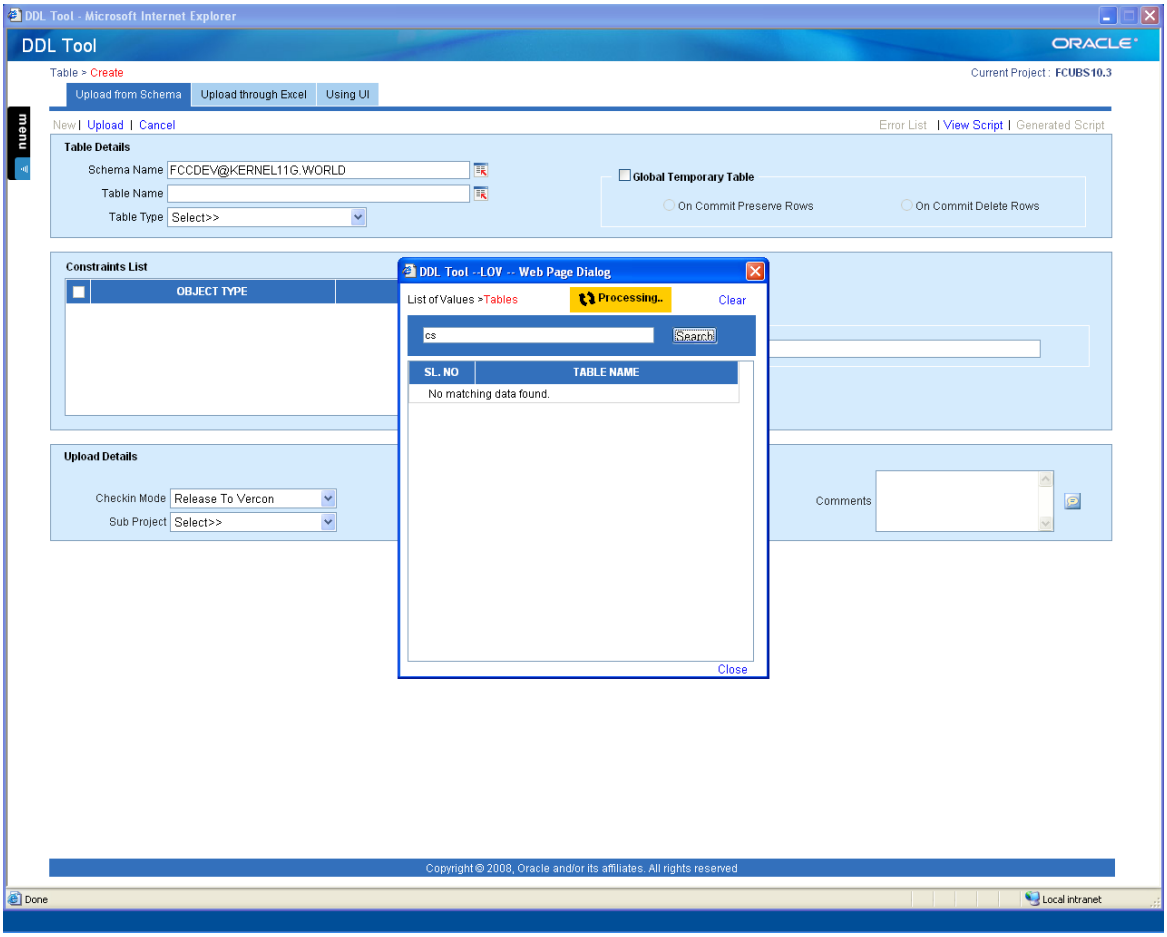


Fig.5

Here the user can create a table using already existing schema details. Select the table to be uploaded from the table list. Select the table type. The Constraints List will display the existing constraints on the table. Fill in the Upload Details and select the 'Upload' button to upload the table.

5.4.2 **'Upload' Through Excel**

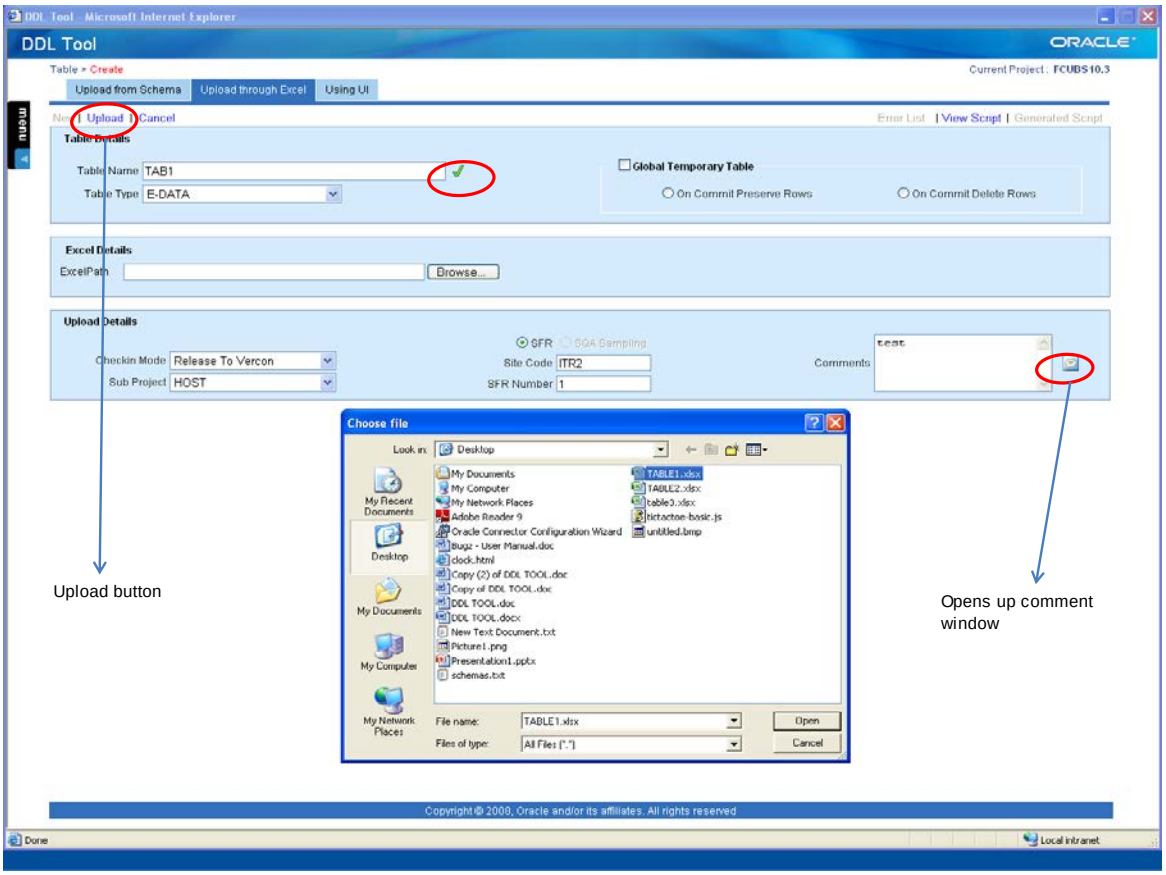


Fig.6

The user can create a table by uploading the table template through an excel file.

- Fill in the table name. If the entered table name does not already exist then a green tick mark (circled red in Fig.5) appears next to the table name, else a warning window opens up to indicate that a table with that name already exists.

- Excel Path – The user has to set the excel path by selecting the required excel file on his/her system by making use of the dialog window.

- Upload Details - The various Upload Details have to be entered before the user can 'Upload' the table.

- Once all the details are entered, the user has to select the 'Upload' button present at the top of the screen to upload the table.

5.4.3 **Using UI**

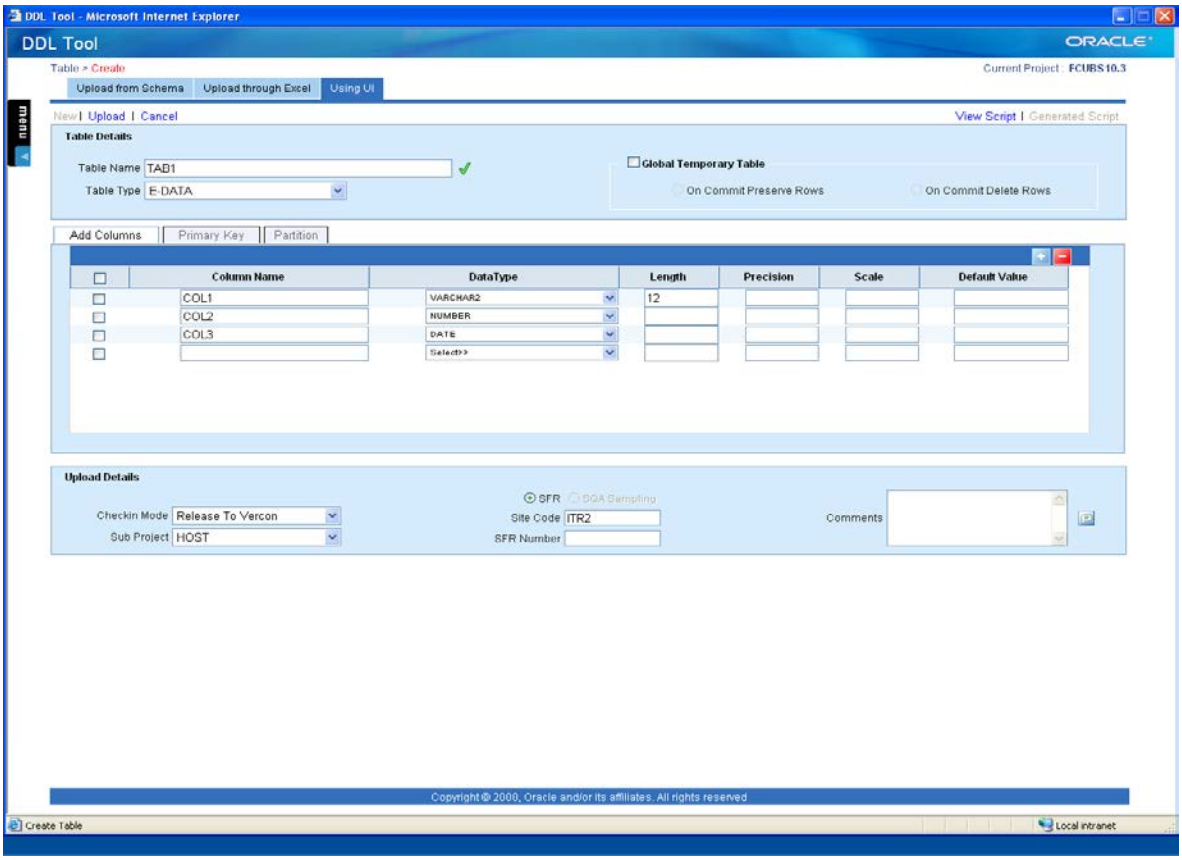


Fig.7

The user can create a table using the user interface as shown in Fig.7

- Enter a table name and select the table type. If the entered table name does not already exist then a green tick mark (circled red in Fig.4) appears next to the table name, else a warning window opens up to indicate that a table with that name already exists.
- Click on the plus symbol to add columns. Fill in the column details. Erroneous details will not be accepted and error windows will pop up if there are errors.
- The minus symbol in red is used to delete the selected columns.
- Select the Primary Key tab to set the primary key. Please note that if the primary key has not been set, then, while inserting data into the table, the system will not let The user will do so unless a primary key is set.
- Select the Partition tab to create partitions.
- Select the 'Upload' button (circled in Fig.4) to upload the new table.

5.5 Alter Table

The user can alter the existing table structure by selecting the Table>Alter Table option from the menu.

5.5.1 **Add Columns**

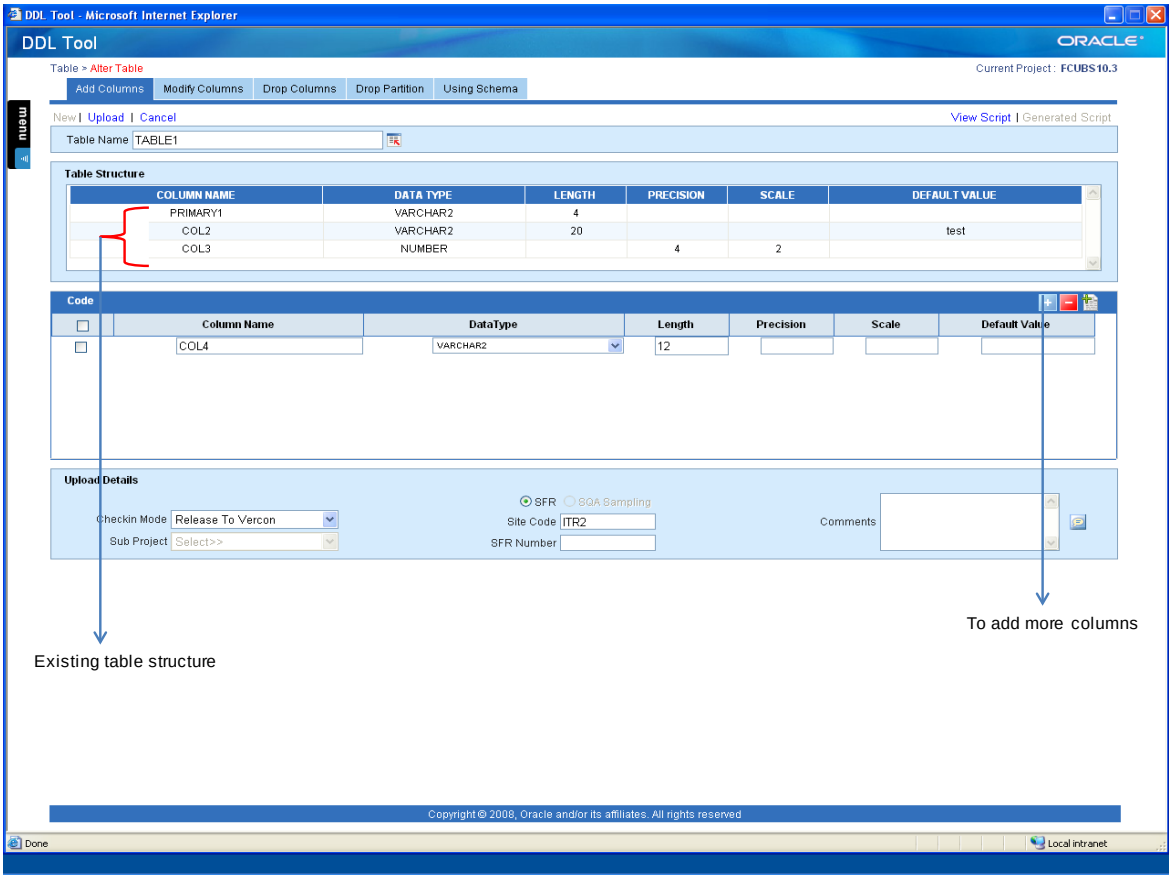


Fig.8

The user can add more columns to an existing table structure. First enter the table name. The system will show the existing table structure. Add more columns by selecting the plus symbol and filling in the details. After that, fill in the Upload Details and 'Upload' the table by selecting the 'Upload' Button (circled in Fig.4).

5.5.2 **Modify Columns**

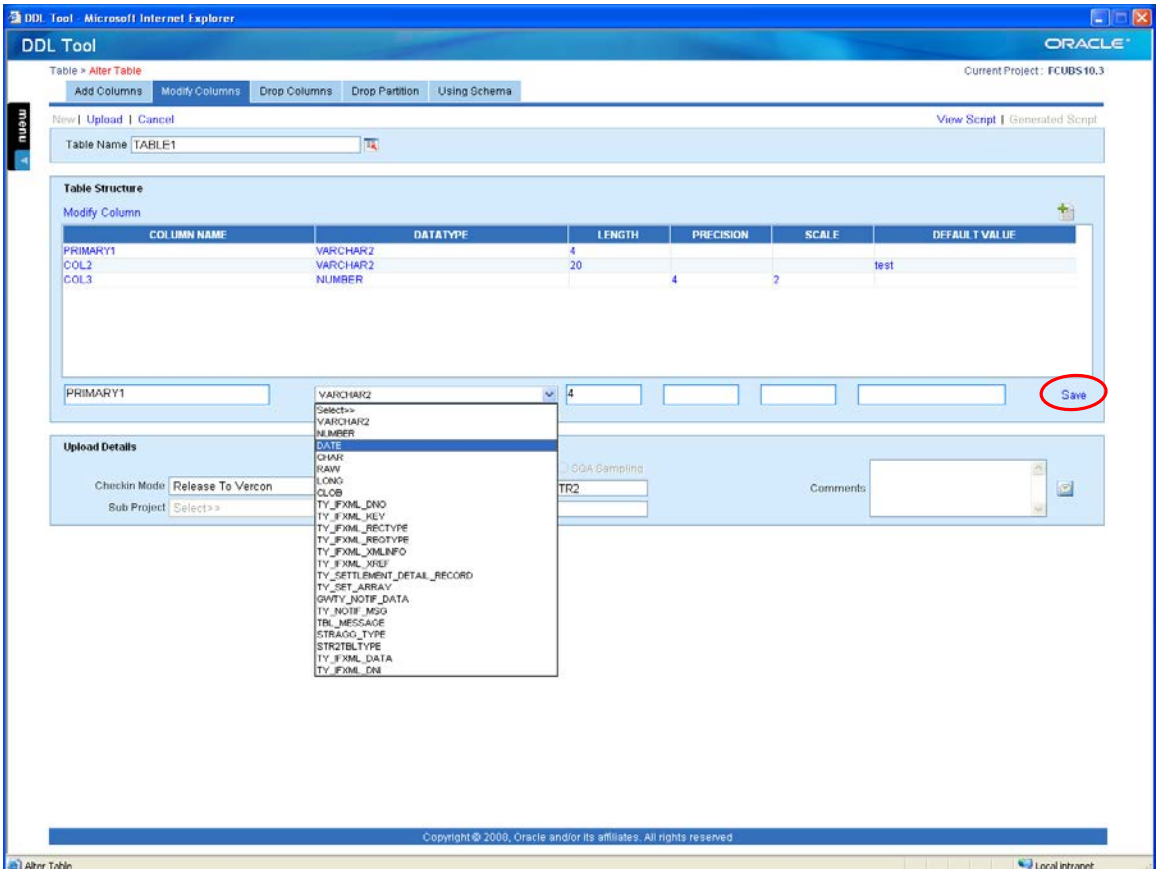


Fig.9

- The user can modify the columns of an existing table by selecting the Modify Columns tab in the Alter Table option in the menu.
- Select the name of the table from the table list.
- The existing table structure is made visible. To modify any of the columns click on the column and modify it.
- Select the save button (circled in red in Fig.8) and then select 'Upload' button (circled in red in Fig.4)

5.5.3 **Drop Columns**

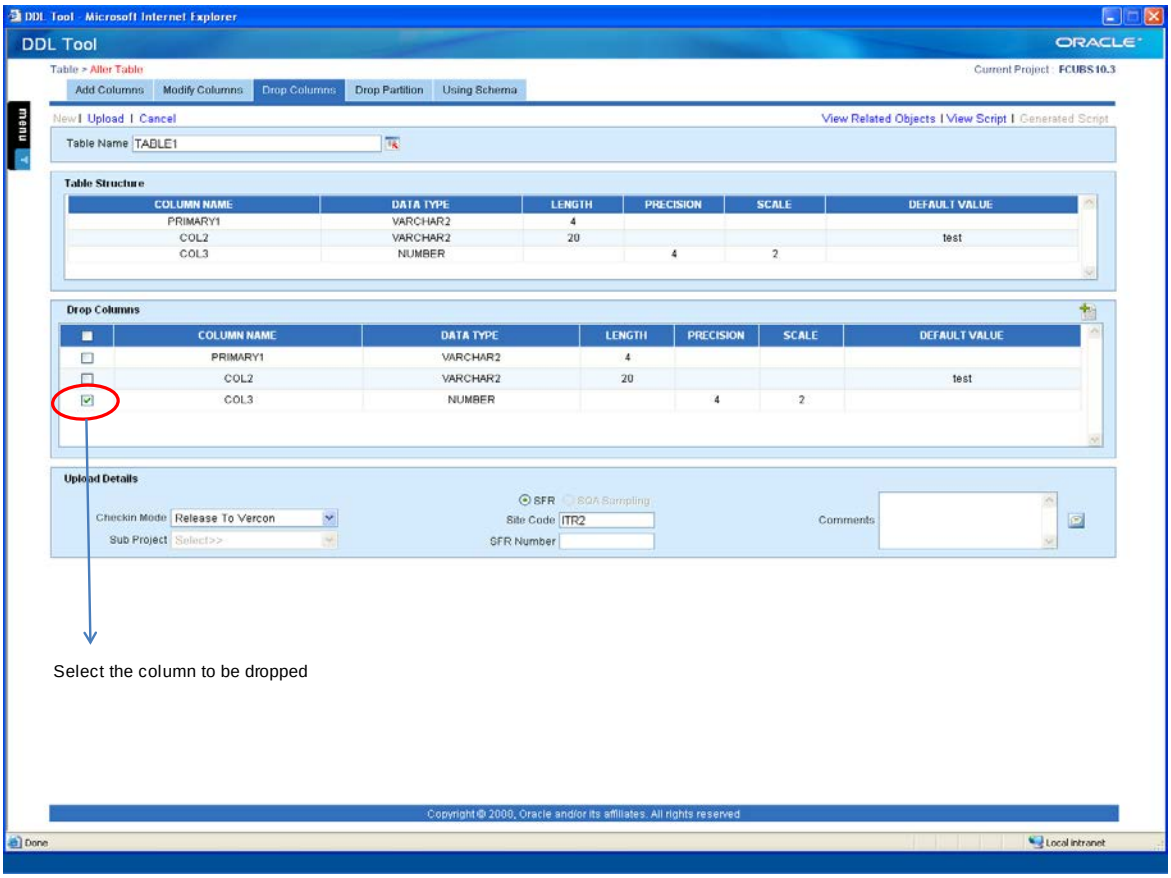


Fig.10

- To drop columns from a table, select the name of the table from the list. The user will see the selected table's structure (if the table exists of course!).
- Tick the columns to be dropped as shown in Fig.10
- Select the 'Upload' button (circled in red in Fig.4).
- Please note that if the columns being dropped belong to the primary key set of the table, an error window will open telling the user that it is not possible to drop those columns. The user will need to alter the primary key before proceeding.

5.5.4 **Drop Partition**

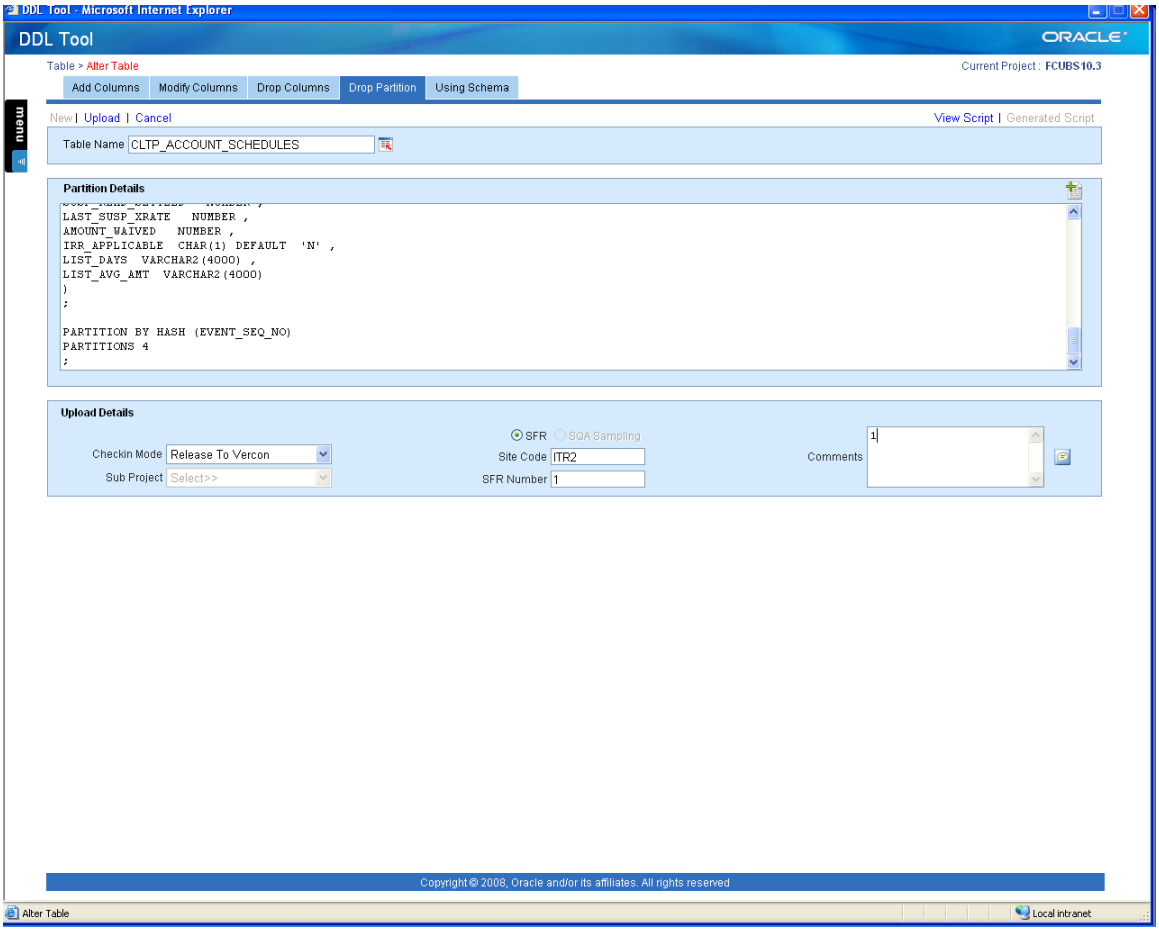


Fig.11

To drop a partition on a table, select the table from the table list. The partition details will be shown in the Partition Details section, as shown in Fig/11. Fill in the Upload Details and select the 'Upload' button.

5.5.5 **Using Schema**

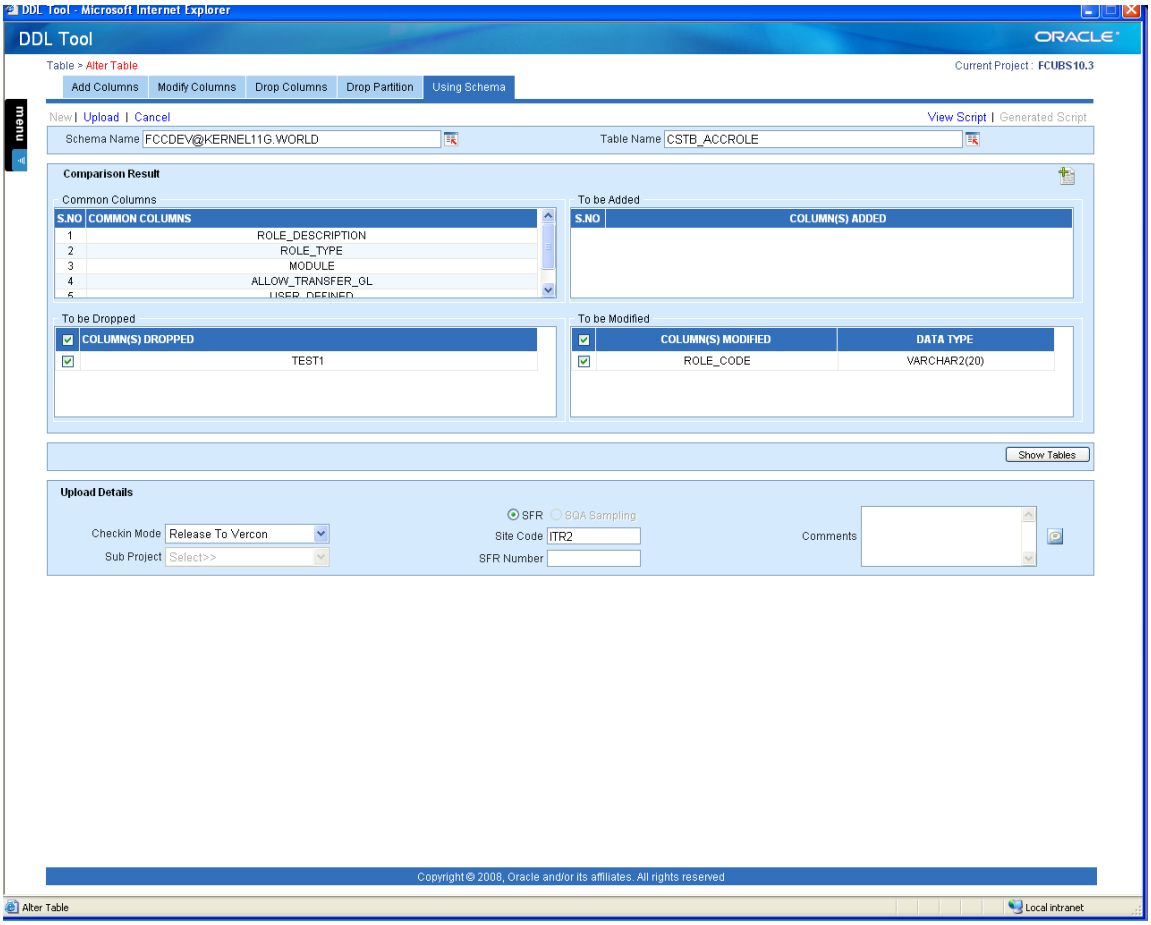


Fig. 12

Tables can be uploaded from schemas and these tables could have been altered by the user.

- To alter the table according to the table in the original schema, user can select the 'Using Schema' tab. The user screen is as shown in Fig.12.
- First select a schema name from the schema list and a table name from the table list.
- Initially the user will see the existing table structure and the schema table structure.
- To view the differences between the tables, select the 'show comparison' button. The user will see
    - the common columns
    - additional columns in the existing tables (that is, the columns to be dropped in the existing table to make both the tables similar)
    - The columns that is not present in the existing table (that is, the columns that are to be added to in the existing table to make both the tables similar).

- The columns that are present in both the tables but are not similar in structure (that is the columns to be modified in the existing table to make both the tables similar)

- In all the categories above, select the columns that are to be added, dropped or modified. Those columns that are selected for modification will be modified according to the columns in the schema table.

- Fill in the Upload Details and select the 'Upload' button at the top.

5.6 Drop Table

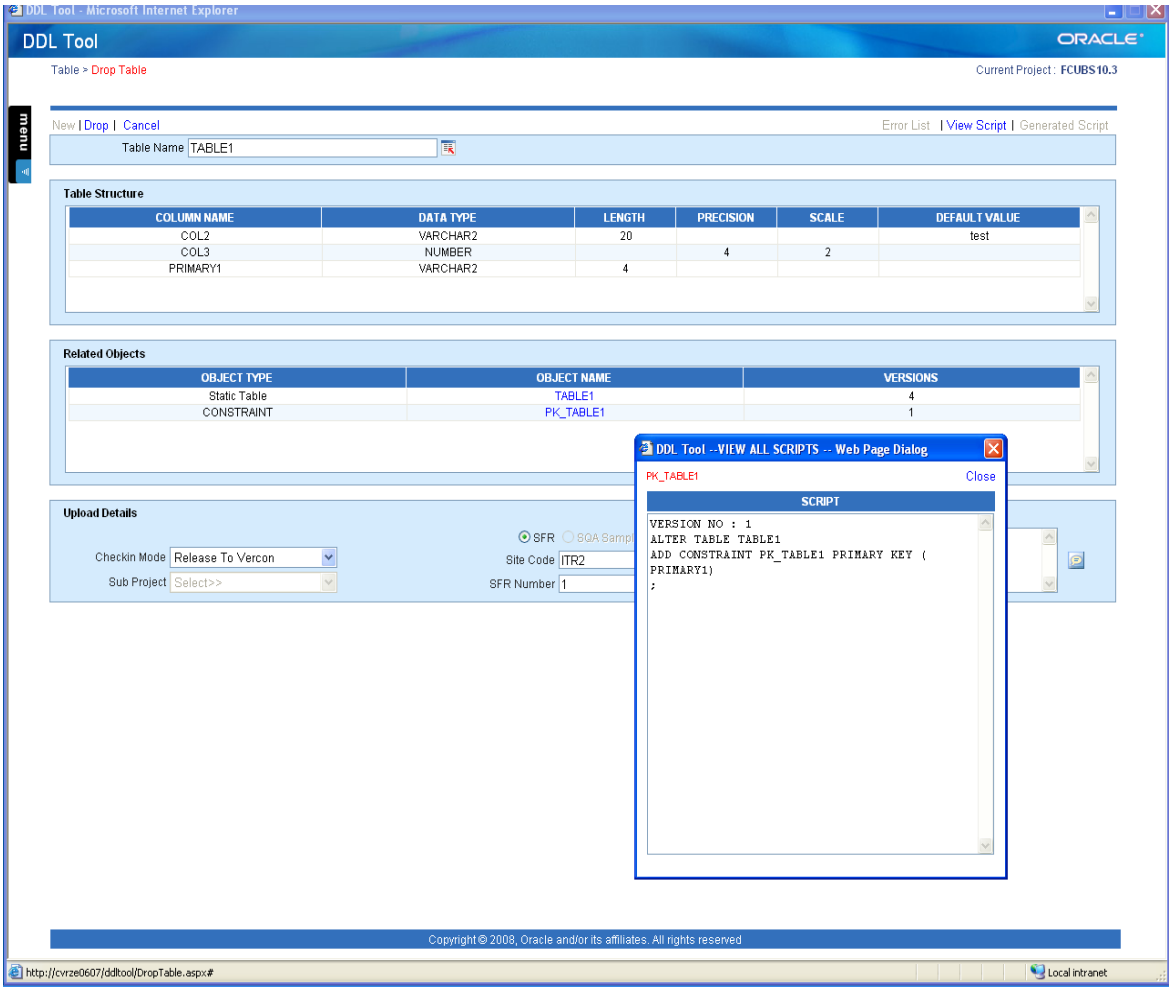


Fig.13

- The drop table option in the menu allows the user to drop an existing table.
- First select the name of the table from the.
- The table structure will be made visible and all the related objects associated with that table. To see the details of the objects, click on the object name to see a window open up showing the details of the selected object.
- Click on the 'Drop' button to drop the table.

5.7 Create Index

The user can create an index on a table by selecting the Index>Create option from the menu.

5.7.1 Using UI

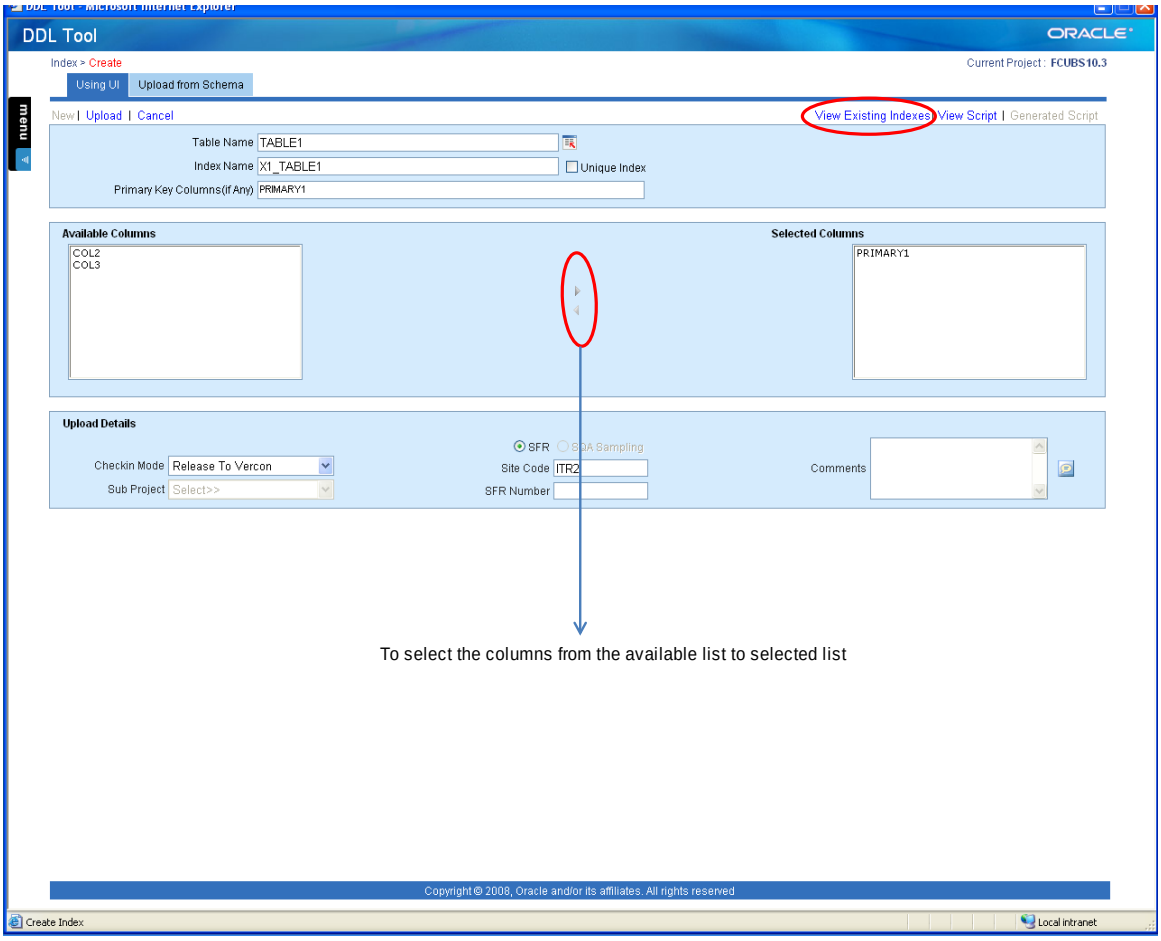


Fig.14

- To create an index using UI, first select the table name from the table list.
- On selecting the table name, the index name is automatically filled. Unique index option lets the user to set the created index as unique.
- The primary key columns are made visible so that the user can easily select the primary key columns as indices for the table.
- To select the columns that should make up the index, select the column from the 'Available Columns' list, press the arrow button and it will transfer the selected column to the 'Selected Columns' list. The same procedure must be followed if to deselect the columns.

- The user can also view the existing indexes by selecting the 'View Existing Indexes' button (circled in red in Fig.14).

5.7.2 **Upload From Schema**

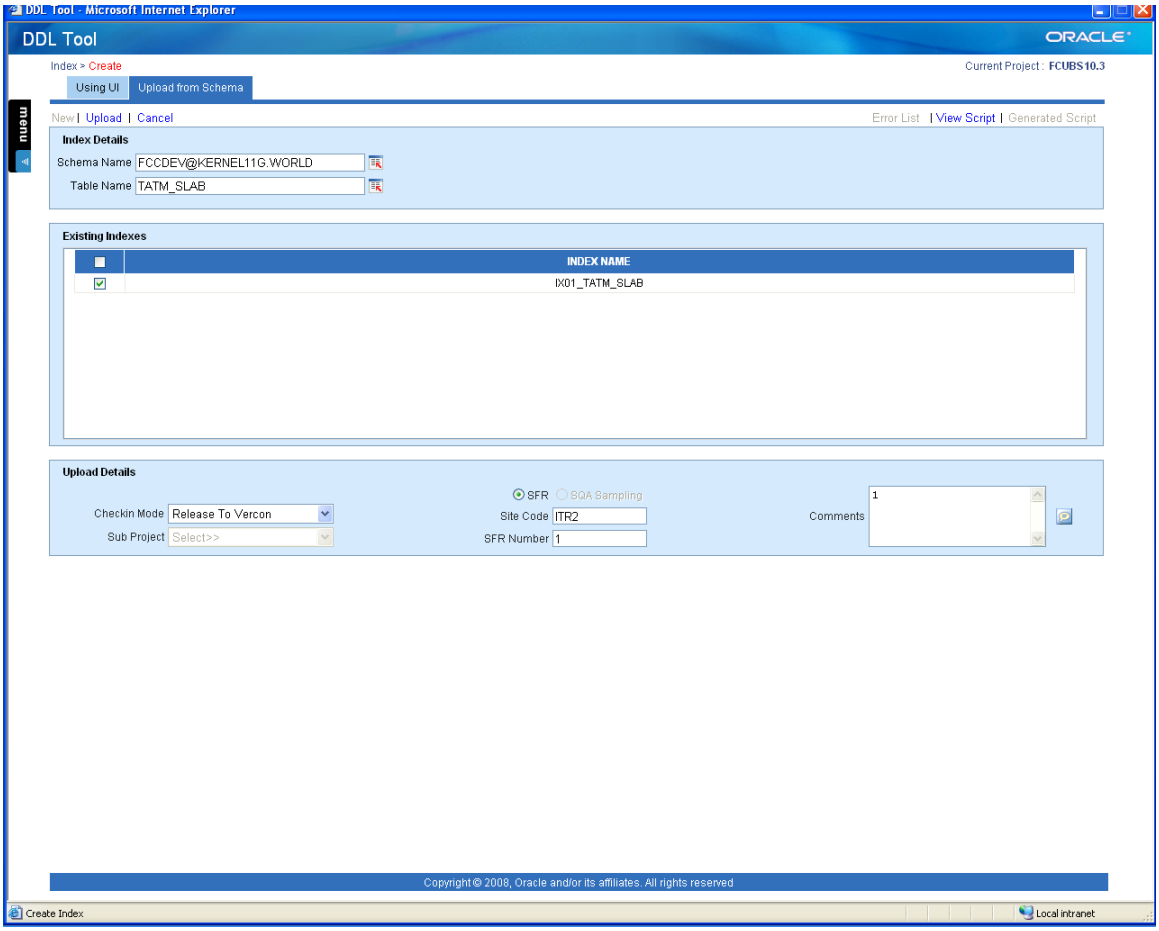


Fig.15

To upload an index from schema, select the schema name and the tale name. The selected table's existing indexes will be shown. Select the indexes that the user wishes to upload and 'Upload' it.

5.8 Alter Index

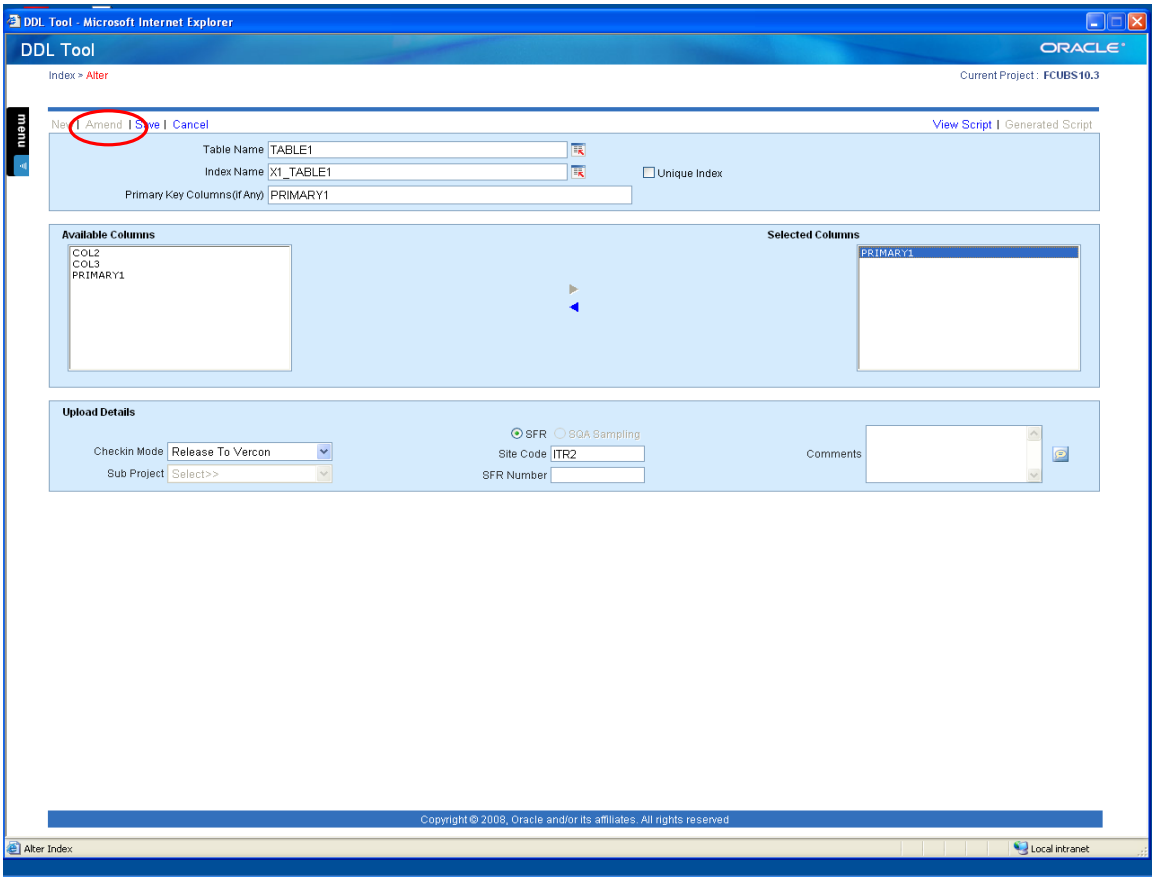


Fig.16

- To alter an index on a table, select Index>Alter option from the menu.
- Select the table name. The user will must select an index from the list of indexes.
- To alter the selected index, select the 'Amend' button (circled in red in Fig.16). The 'Selected Columns' on the right hand side will show the list of columns making up the index.
- To alter the index select the columns from either of the two lists namely 'Available Columns' or 'Selected Columns' and transfer to the other list.
- Once that is done, fill in the Upload Details and select the 'Save' button present at the top. The index will get saved.

5.9 Drop Index

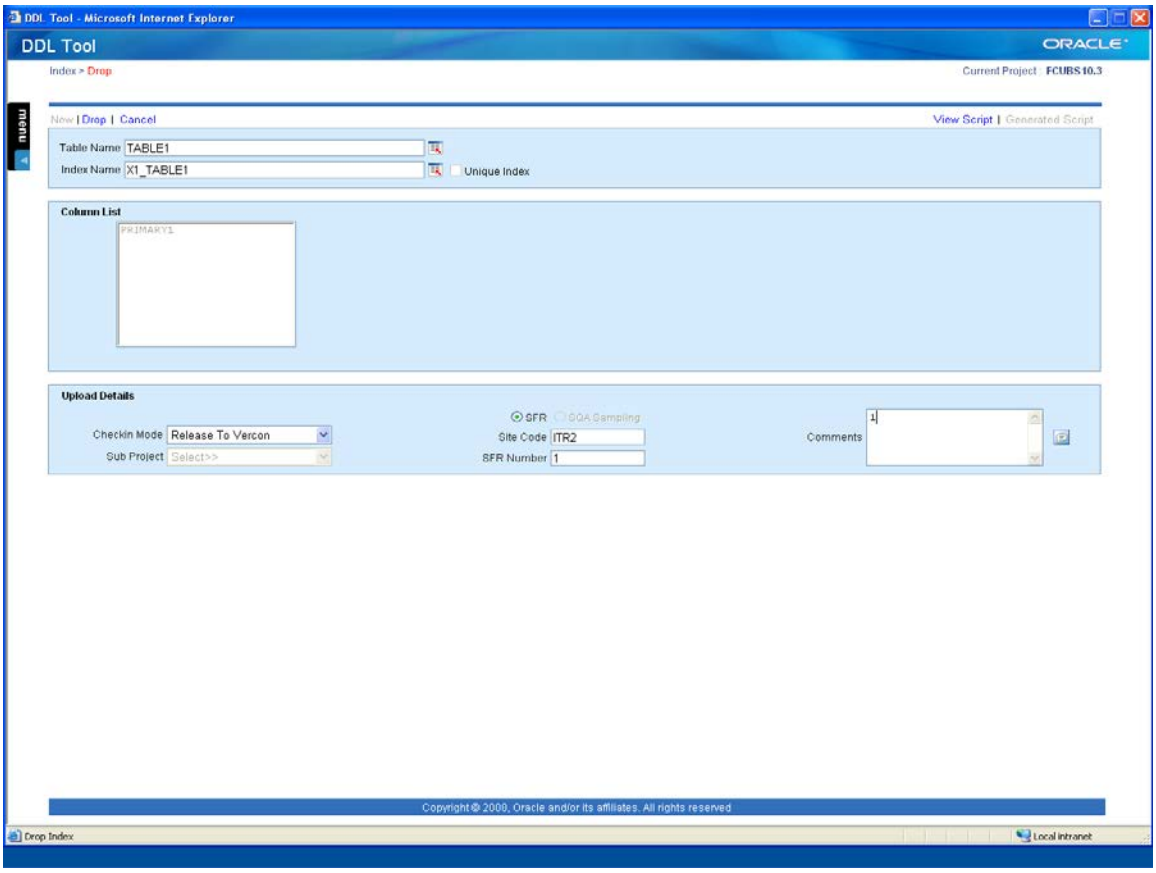


Fig.17

- To drop an index on a table select the Index>Drop option from the menu.
- Select a table whose index must be dropped.
- Select the index to be dropped from the list of indexes.
- The 'Column List' will show the columns making up the index.
- Fill in the Upload Details and select the 'Drop' button at the top.

5.10 Create Sequence

The user can create sequences either using UI or uploading from a schema.

5.10.1 **Using UI**

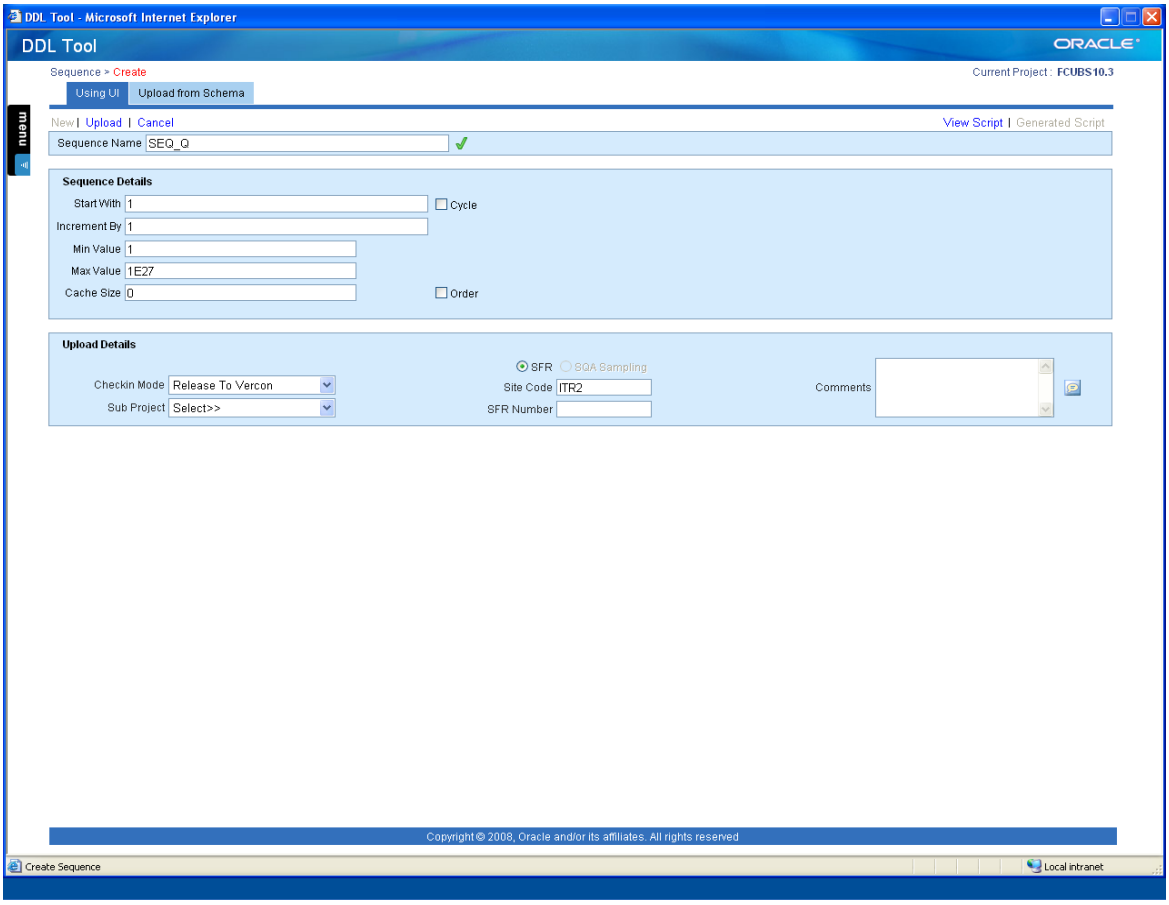


Fig.18

- To create a sequence using UI, select the Sequence>Create option from the menu.
- Select the 'Using UI' tab.
- Write the sequence name. Please note that the sequence name must start with SEQ_. If the user does not start the name with SEQ_ an error window will open up. The sequence name must of course be unique, if it is, a green tick mark appears next to the sequence name as shown in Fig.18.
- Fill in the Sequence Details and the various Upload Details and select the 'Upload' button.

5.10.2 **Upload From Schema**

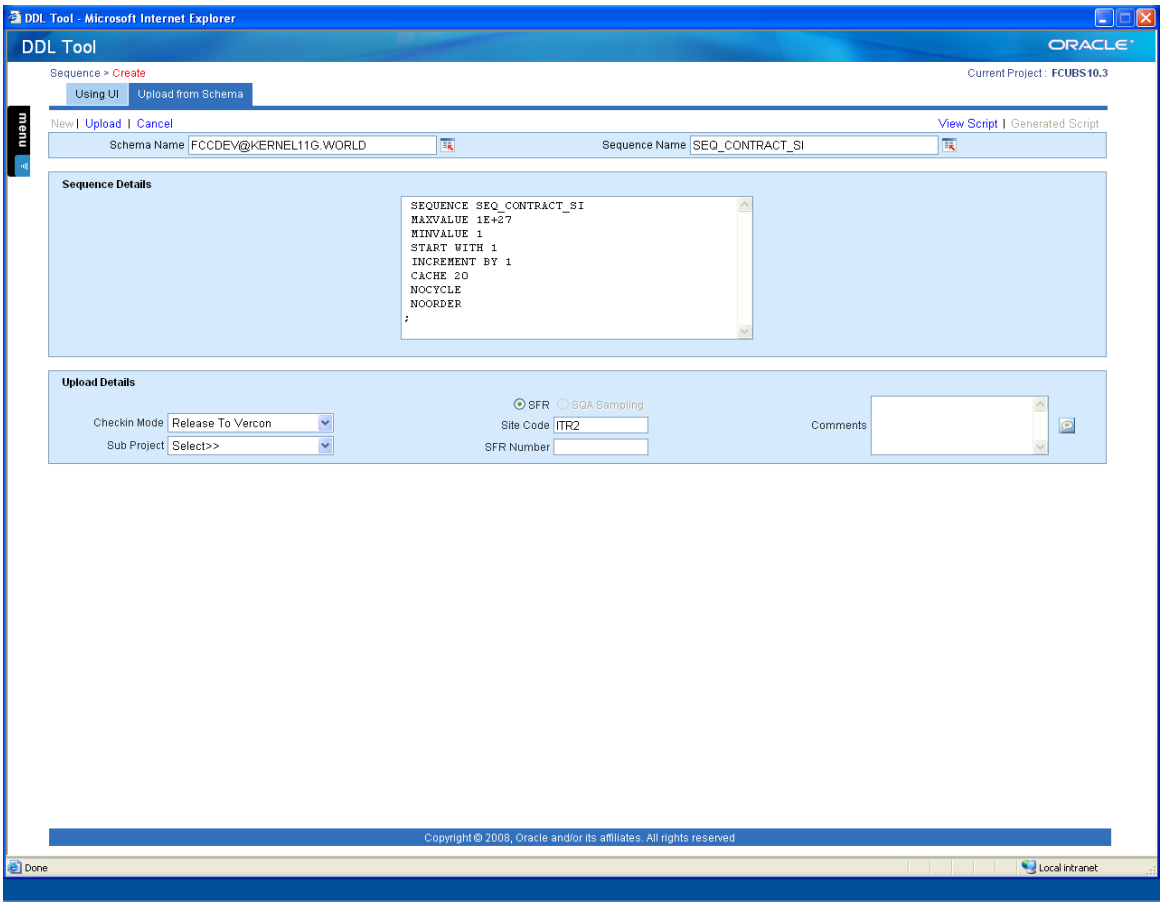


Fig.19

- The user can 'Upload' a sequence from a schema by selecting the 'Upload from Schema' tab.
- Select a schema name from the list.
- After that select a sequence name from the list. All sequence names will start with 'SEQ_' and so the user will have to type in 'SEQ_' as the search string in the window that opens up when you click on the button next to Sequence Name text box.
- Once a sequence has been selected, the Sequence Details section will show the details regarding the sequence. Finish filling the Upload Details and select the 'Upload' button at the top.

5.11 Drop Sequence

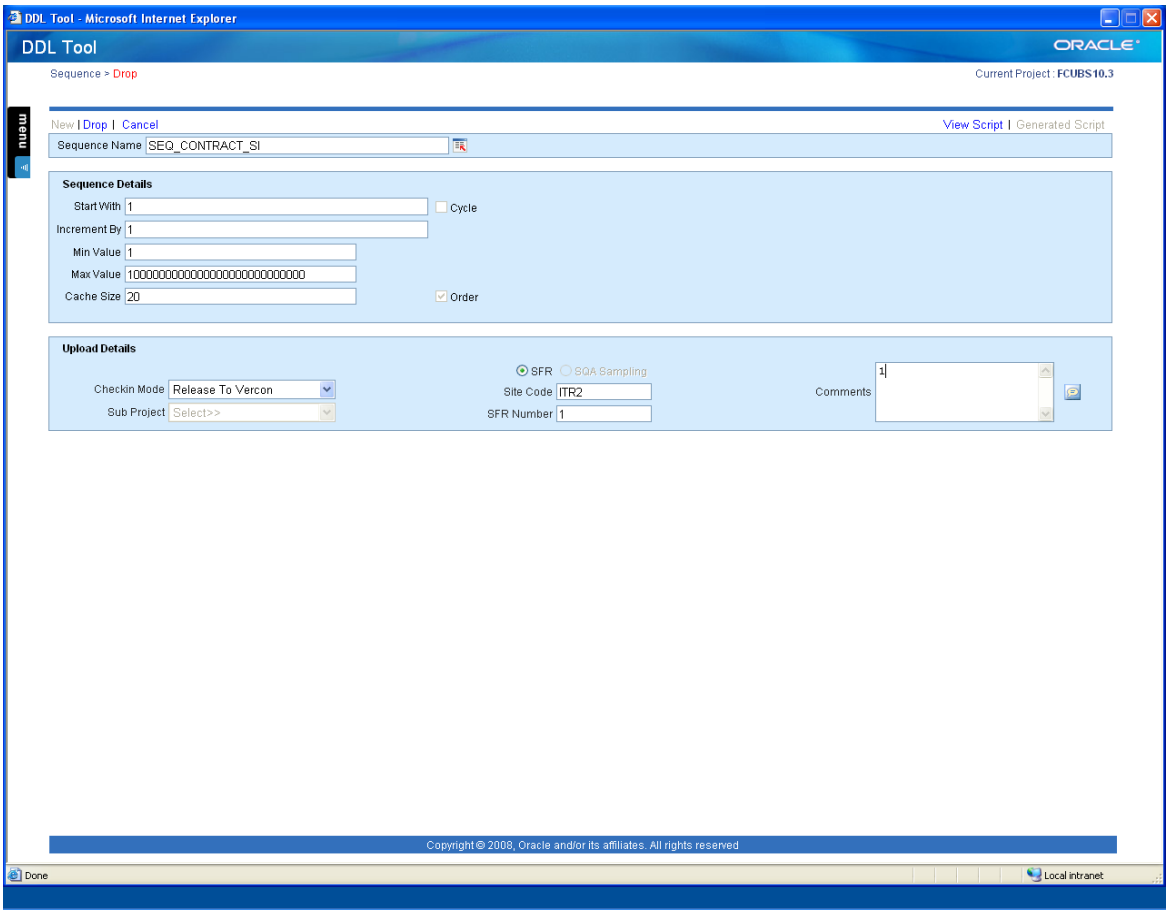


Fig.20

- To drop a sequence, select the Sequence>Drop option from the menu.
- Select the sequence to be dropped from the list of sequence names. All sequence names will start with 'SEQ_' and so The user will have to type in 'SEQ_' as the search string in the window that opens up when you click on the button next to Sequence Name text box.
- The system will show the sequence details.
- Fill in the Upload Details and select the 'Drop' button present at the top.

5.12 Create Synonym

The user can create synonyms for a table or a sequence. To create a synonym select the Synonym>Create option from the menu. Synonyms can be created using UI or can be uploaded from schema.

5.12.1 Using UI

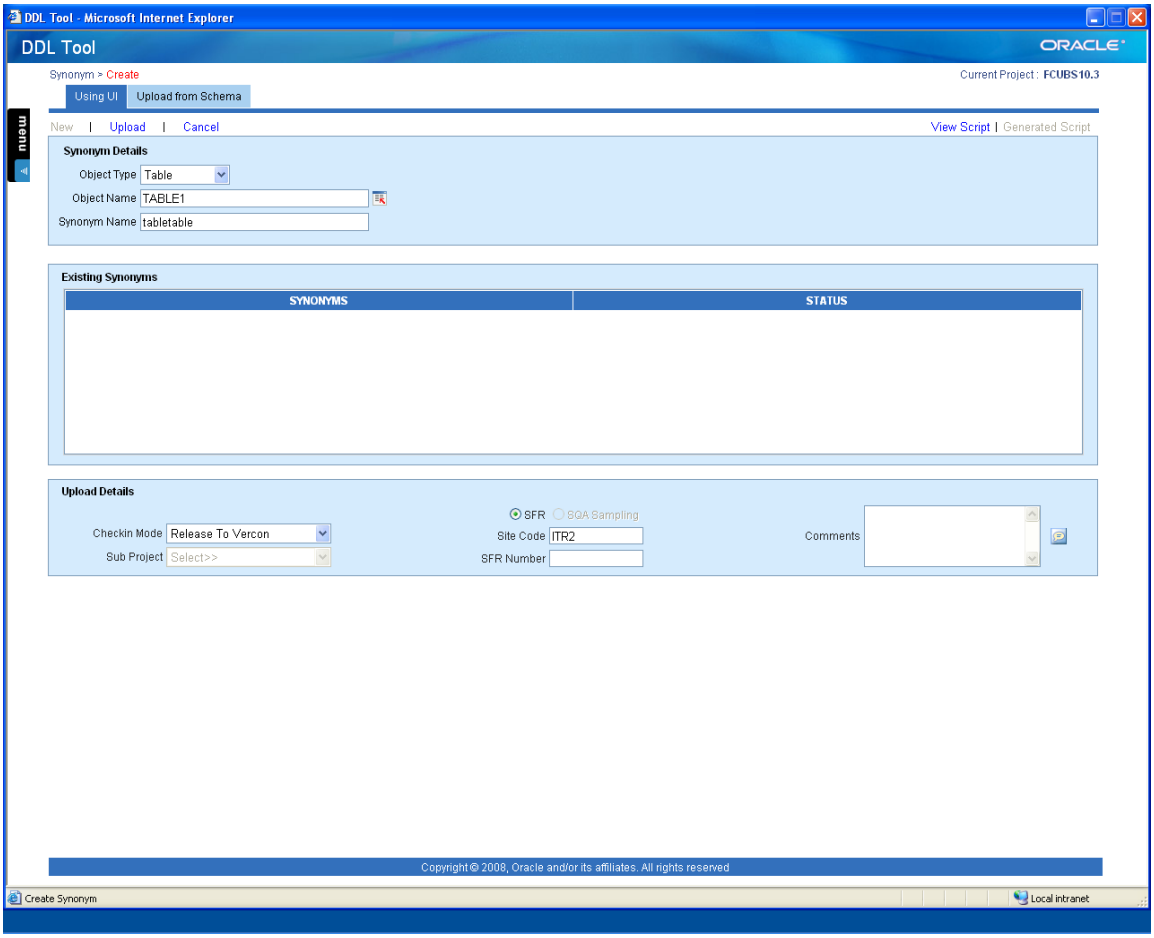
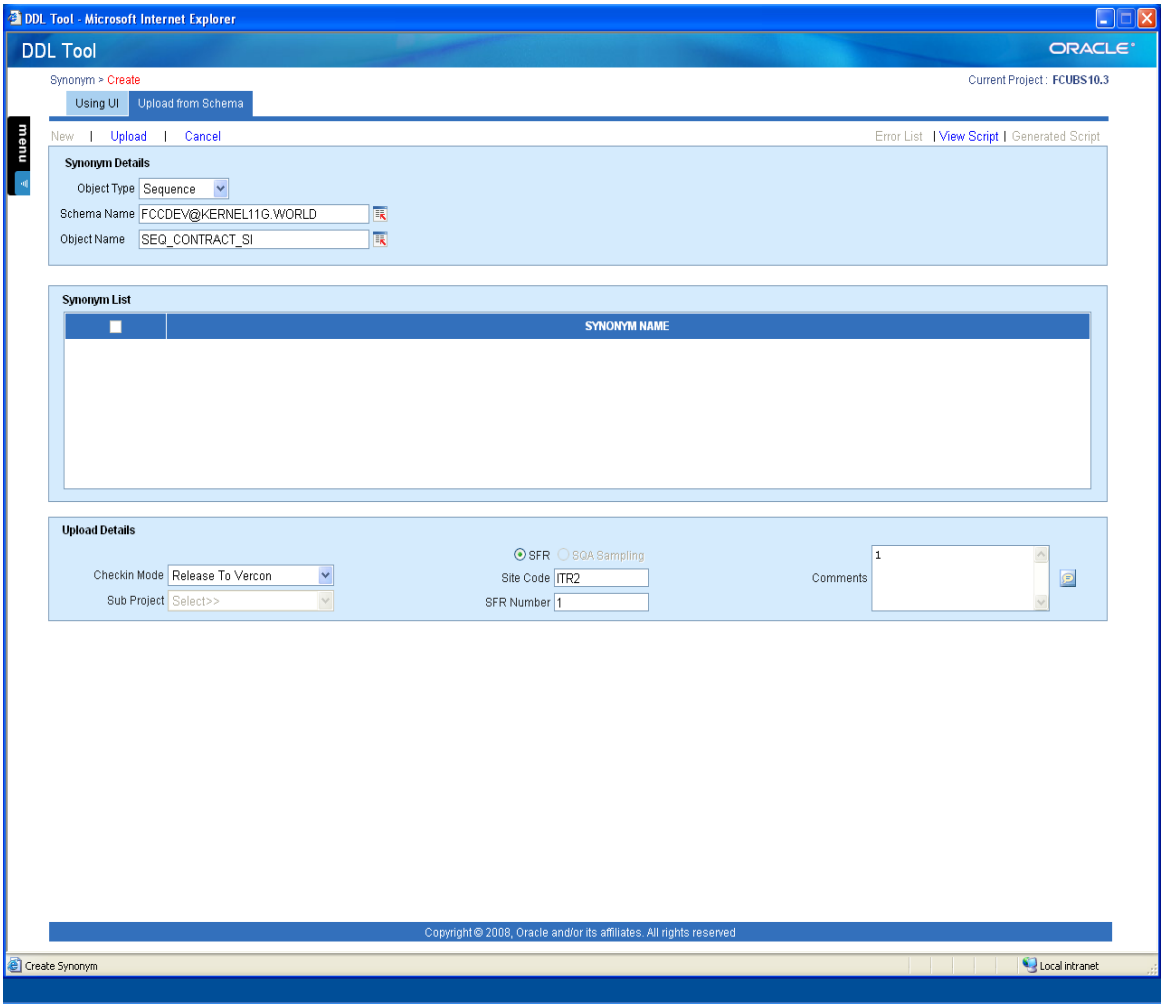


Fig.21

- To create a synonym using UI, select the 'Using UI' tab.
- Select the object type from the drop down menu. Synonyms can be created only for a table or a sequence object
- . Select the name of the object. When the user selects the object type, the system automatically suggests a unique synonym name. The user can change the name and enter any valid and a unique name.
- When the object is selected, existing synonyms will be displayed. Fill in the Upload Details and click on the 'Upload' button.

5.12.2 Upload From Schema



5.12.3 **Fig.22**

- To upload a synonym, select the 'Upload' from Schema tab.
- Select the object type from the drop down menu. Synonyms can be created only for a table or a sequence object.
- Select the schema name from the list and an object name from the selected schema (can be a table or a sequence object).
- If the selected object has any synonyms, they will be displayed in the 'Synonym List' or else a message window opens up telling the user will that no synonyms have been found for the object.
- Fill in the Upload Details and select the 'Upload' button at the top.

5.13 Drop Synonym

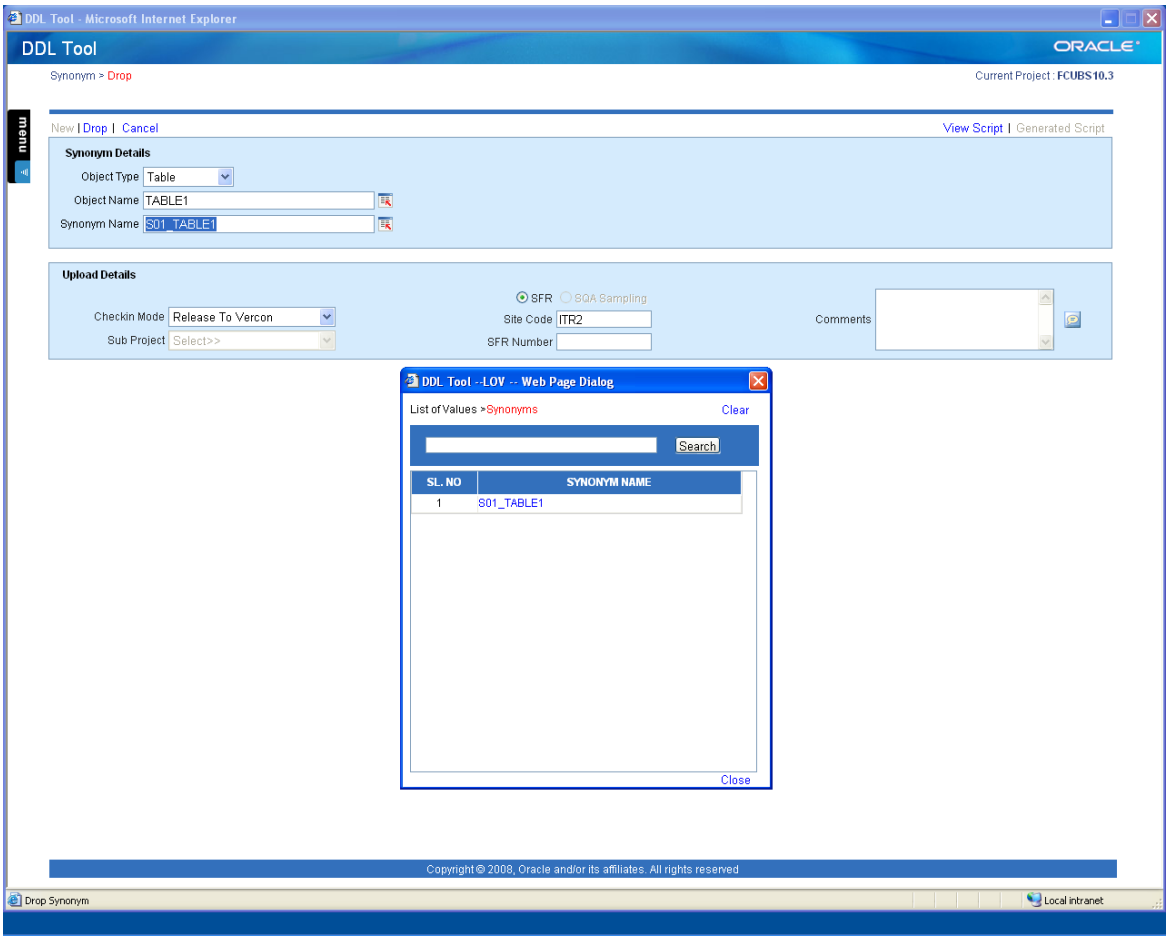


Fig.23

- To drop a synonym, select the Synonym>Drop option from the menu.
- Set the object type from the drop down menu. Synonyms can be created only for a table or a sequence object.
- Select the object name and the synonym name to be dropped from the list as shown in Fig.21.
- Fill in the Upload Details and select the 'Upload' button.

5.14 Create Constraint

The user can create constraints by selecting the option Constraint>Create from the menu. There are two ways of creating a constraint- Upload from schema or using script.

5.14.1 Upload from Schema

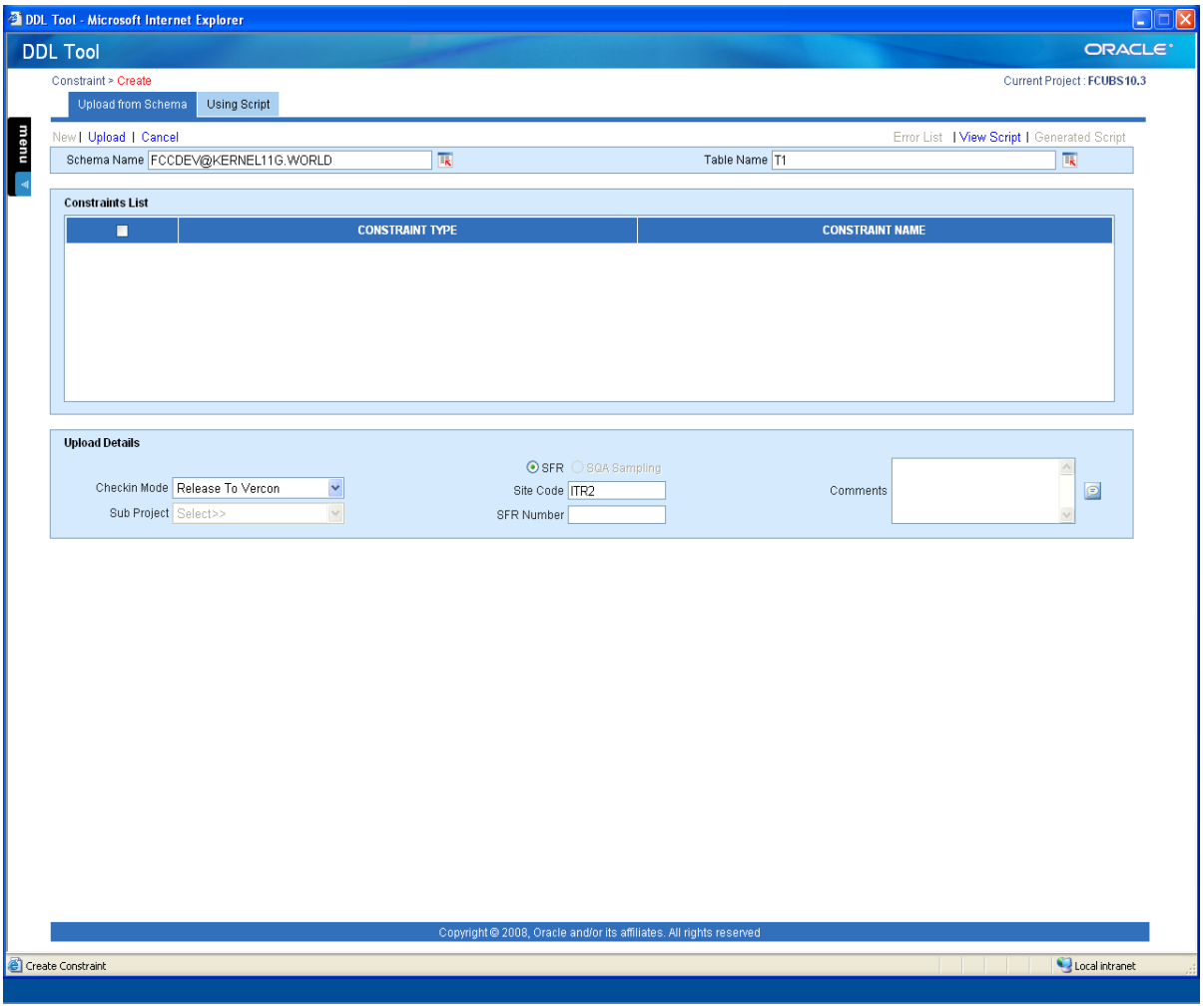


Fig.24

- To upload a constraint from a schema, select the 'Upload from Schema' tab.
- Select the schema name from the schema list and the table name from the table list.
- The Constraint List will display all the constraints existing on the table.
- Fill in the Upload Details and select the 'Upload' button.

5.14.2 **Using Script**

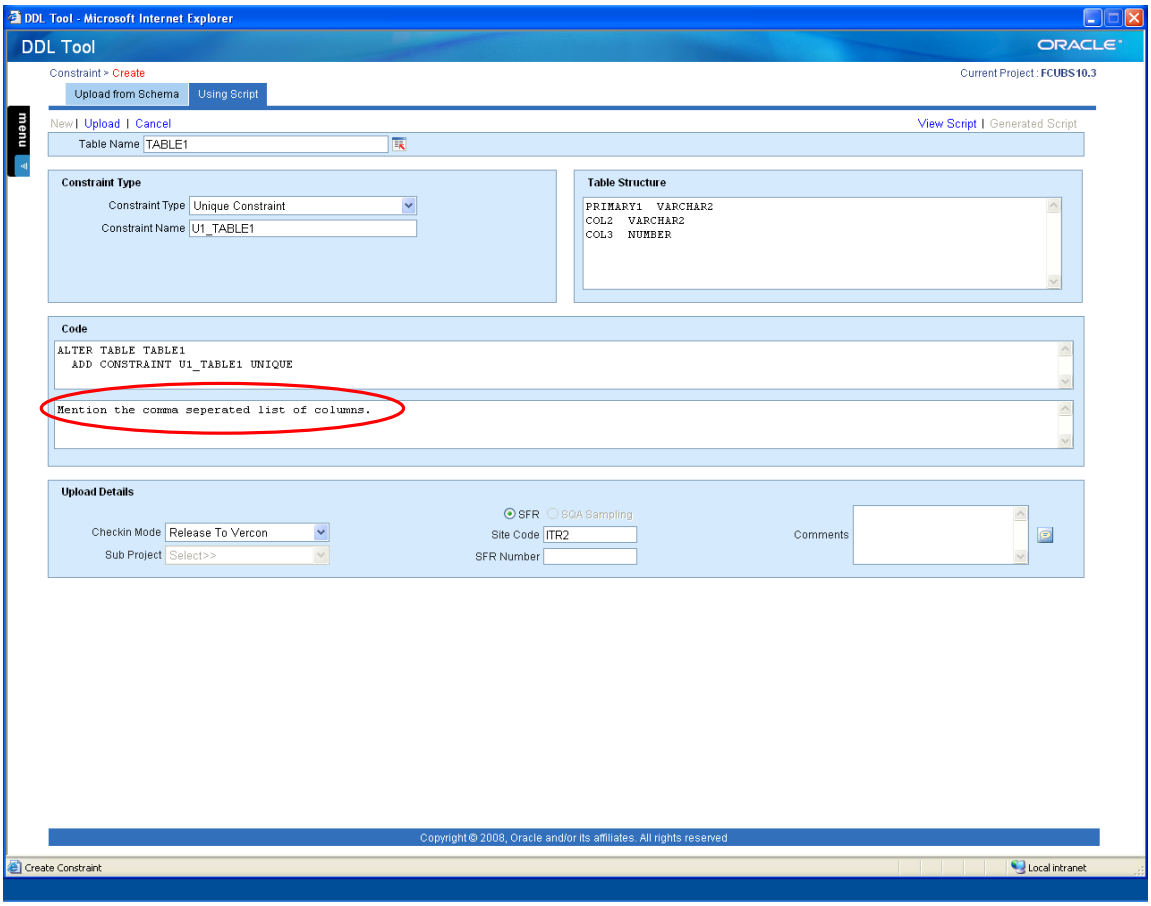


Fig.25

- The user can create a constraint by selecting the 'Using Script' tab.
- Select the table name from the table list.
- Select the constraint type from the drop down box. The constraint name will be automatically filled in by the system. The user cannot change the constraint name.
- The code section displays part of the code.
- The table structure is visible on the right hand side as shown in Fig.23. Mention the list of columns separated by commas in the code area (circled in red in Fig.23).
- Fill in the Upload Details section and select the 'Upload' button.

5.15 Alter Constraint

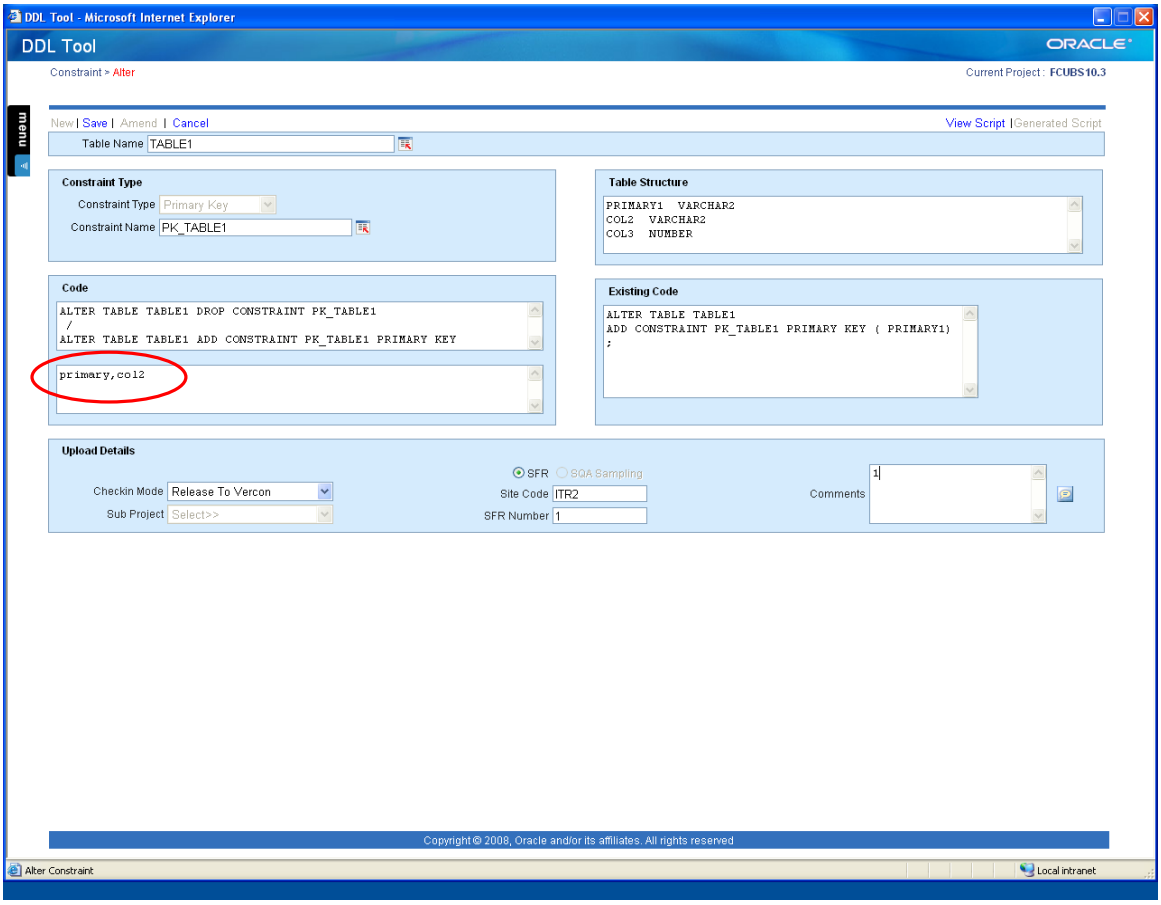


Fig.26

- To alter an existing constraint select the Constraint>Alter option from the menu.
- Select the table name from the table list.
- Set the constraint type and open the constraint names list to view all the constraints that belong to the selected constraint type. Select a constraint from the list.
- The table structure is visible on the right hand side.
- To alter the constraint select the 'Amend' button at the top next to the 'Save' button. Enter the list of columns separated by commas in the code section (circled in red in Fig.24).
- Fill in the Upload Details and select the 'Save' button. If the constraint has been successfully altered, The user will see a message window saying so.
- The user can view the generated script by selecting that option present at the right top corner of the screen.

5.16 Drop Constraint

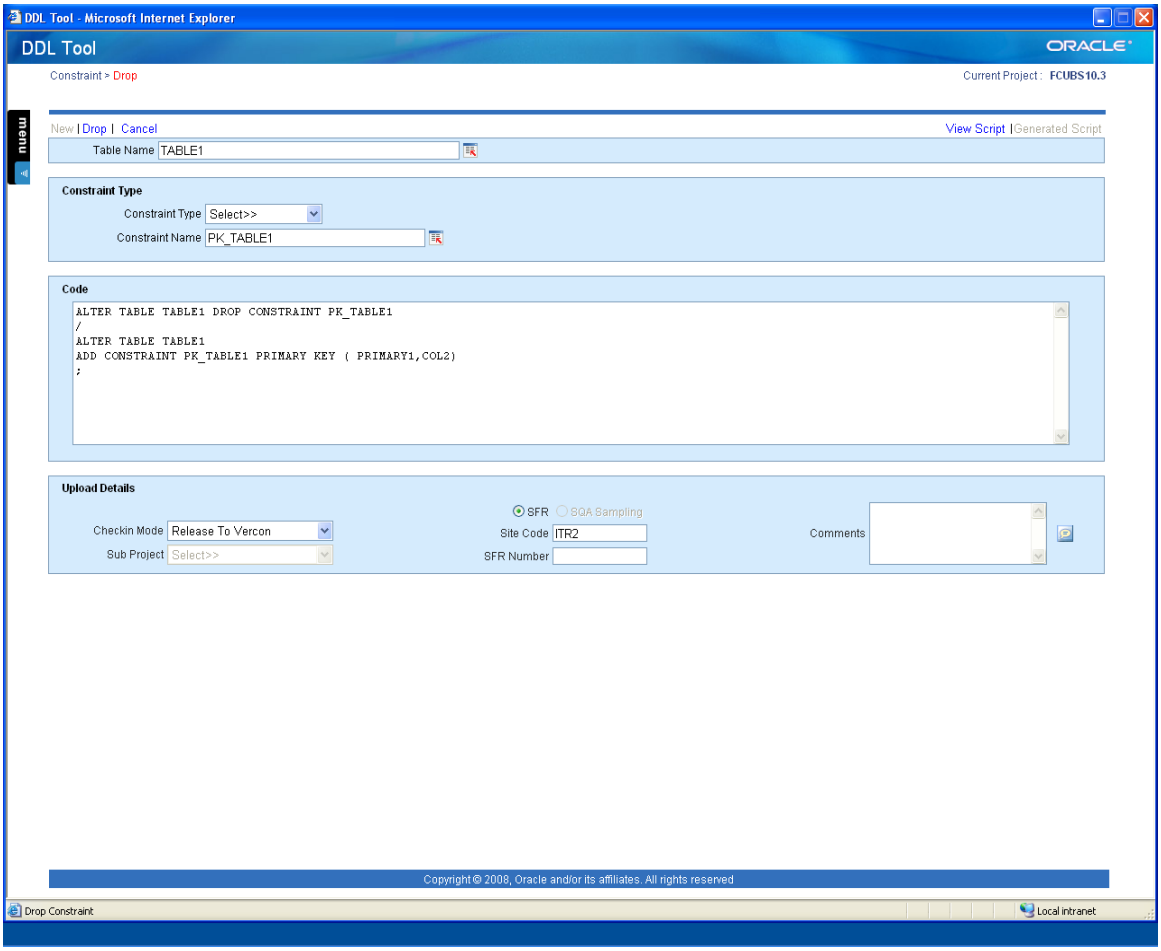


Fig.27

- To drop an existing constraint, select the Constraint>Drop option from the menu.
- Select the table name from the table list.
- Set the constraint type and open the constraint names list to view all the constraints that belong to the selected constraint type. Select a constraint from the list.
- On doing so, the user will be able to see the script in the Code section.
- Fill in the Upload Details and select the 'Drop' button. If the constraint has been successfully dropped, The user will see a message window saying so.
- The user can view the generated script by selecting that option present at the right top corner of the screen.

5.17 Create Types

To create types, select the Types>Create Types option from the menu. The user can upload an existing type from a schema, create one or go for bulk 'Upload'.

5.17.1 Upload from Schema

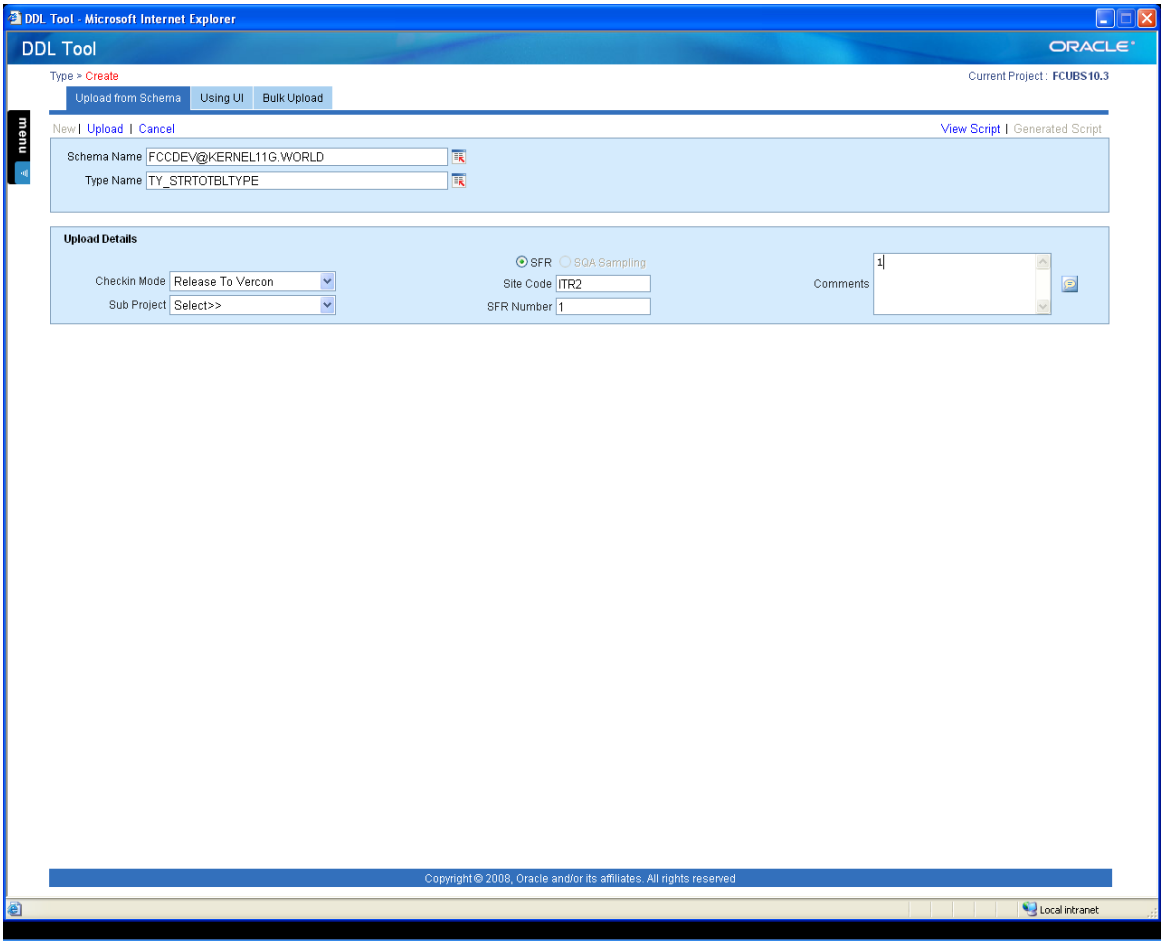
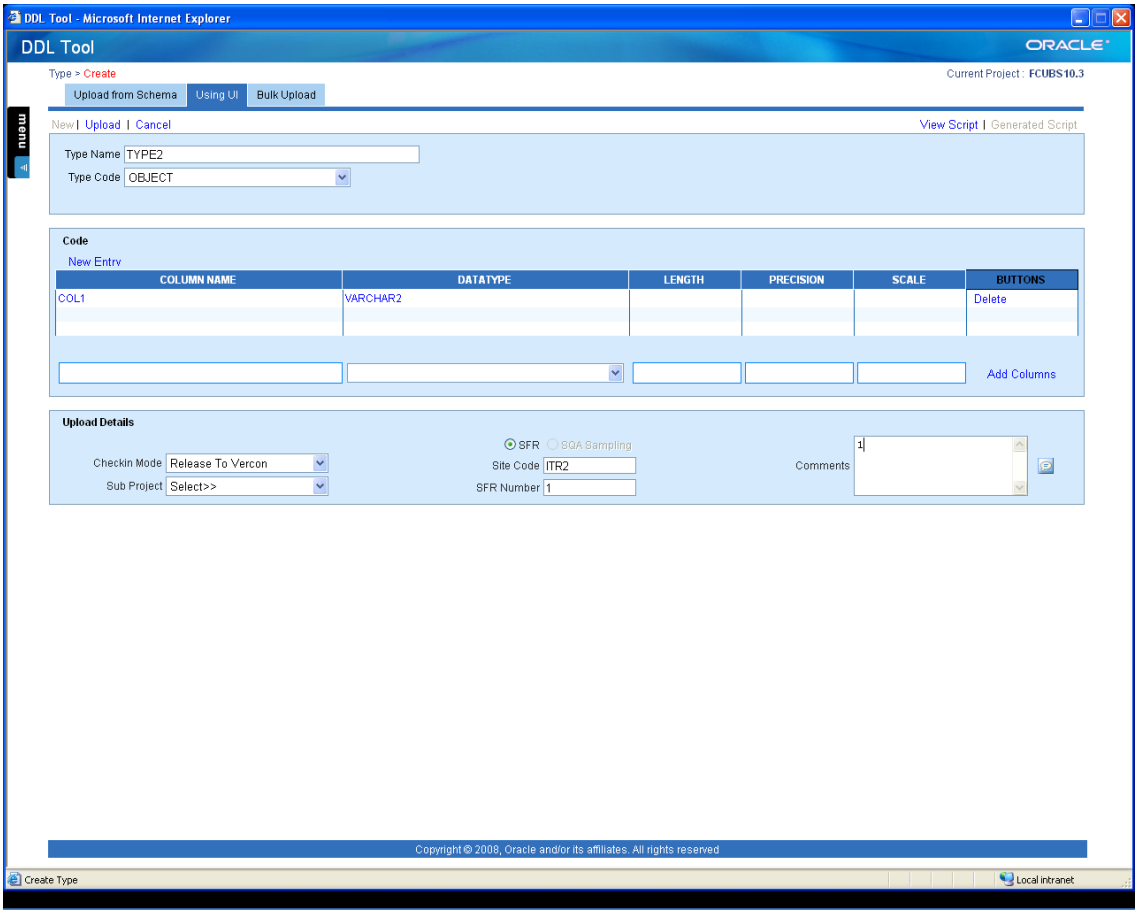


Fig.28

- To upload a type from a schema, select the 'Upload from Schema' tab.
- Select a schema name from the schema list and the type list will be populated with the existing types in the selected schema.
- Select the desired type. The Type code is visible in the type list.
- Fill in the Upload Details and select the 'Upload' button.

5.17.2 **Using UI**



5.18 Fig 29

- To create a type using UI select the 'UI' tab.
- Fill in the type name. If the name is unique a green tick mark appears next to it, else a message box appears next to it informing that the type already exists.
- Select the type code if the type code is 'collection', then fill in the Code Details.
- Fill in the Upload Details and select 'Upload' button at the top.

5.18.1 **Bulk Upload**

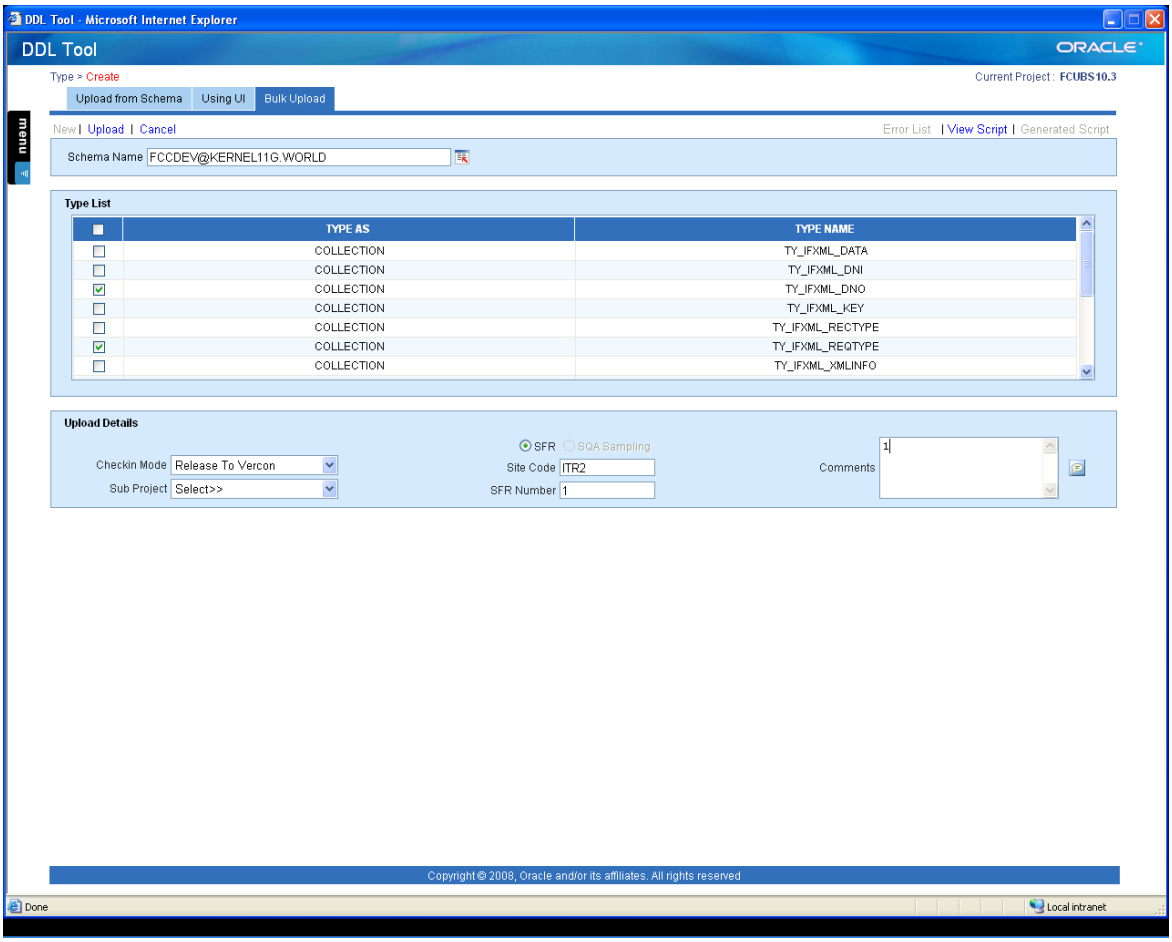


Fig.30

- Select the 'Bulk Upload' tab to upload types from a schema name.
- Select the schema name from the schema list.
- All the existing types are shown in the Type List section.
- Select those types that the user would like to upload.
- Fill in the Upload Details and select the 'Upload' button.

5.19 Alter Types

To alter types, select the Types>Alter Types option from the menu. The user can add columns, modify columns or drop columns from/to an existing type.

5.19.1 Add Columns

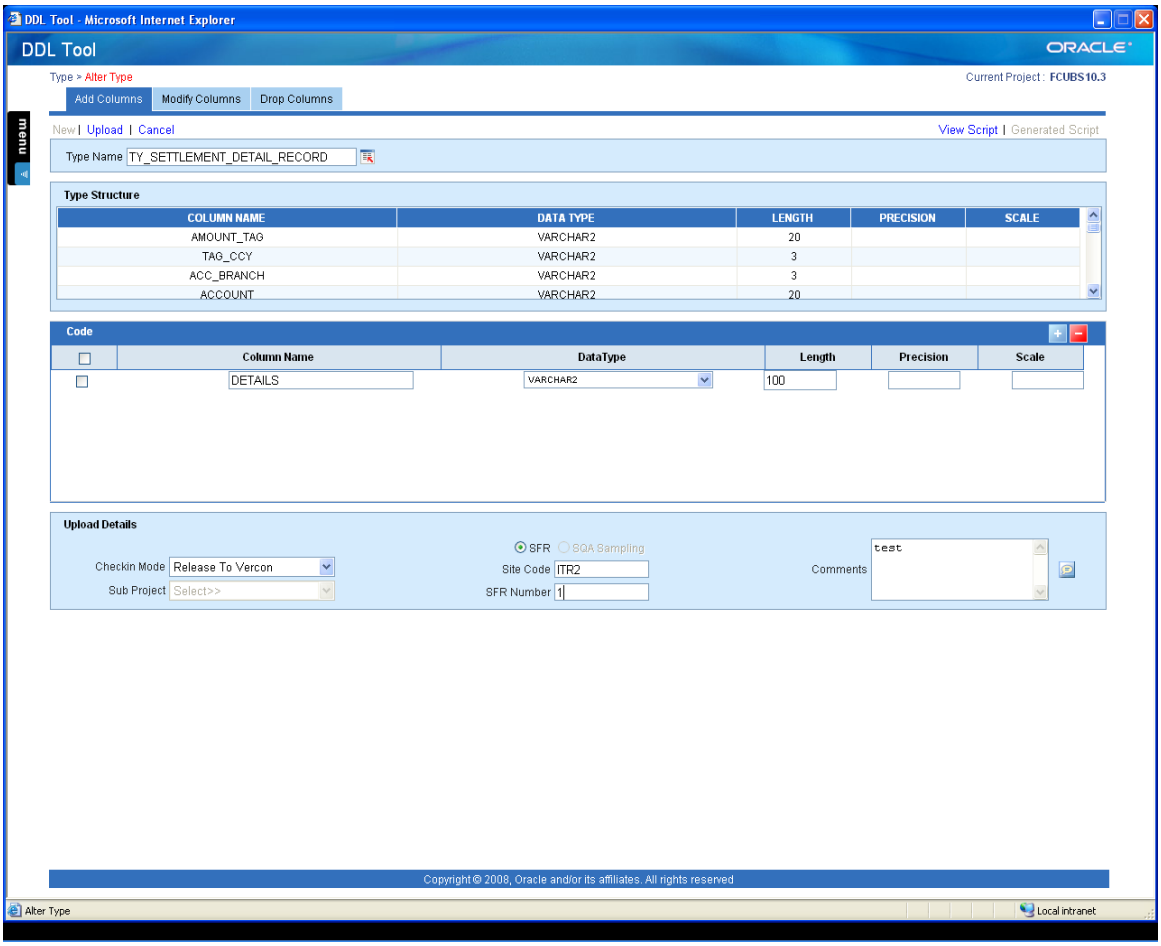


Fig.31

- Select the 'Add Columns' tab.
- Select the type name from the Type List. The type structure is made visible.
- Use the 'plus' symbol (refer Fig.31) to add more columns to the type structure. To delete any columns, tick the boxes next to those columns and select the red colored 'minus' symbol.
- Select the columns the user want to add
- Fill in the Upload Details and select the 'Upload' button.

5.19.2 **Modify Columns**

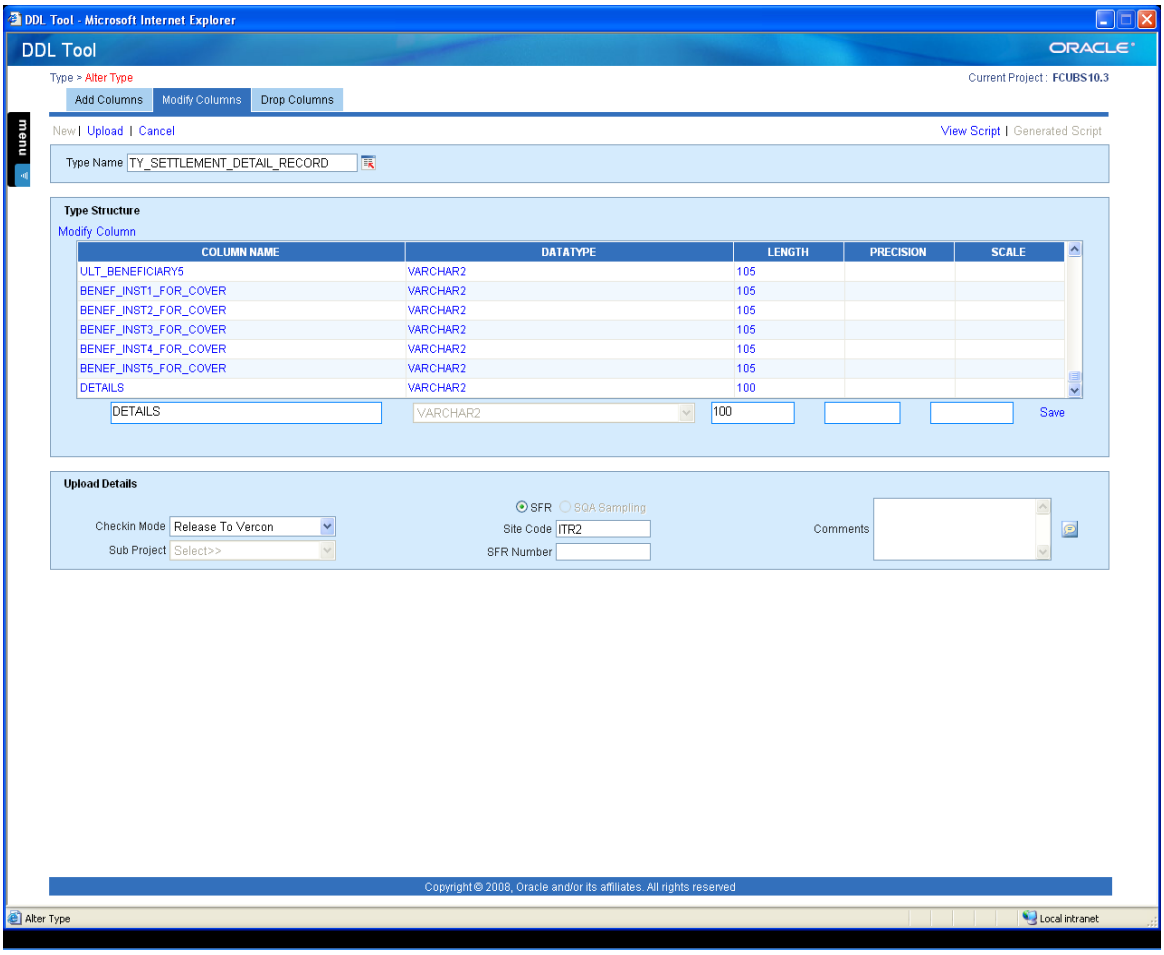


Fig.32

To modify columns, select the 'Modify Columns' tab.

Select the schema name from the schema list. The structure of the selected type is visible in Type Structure section.

Select the column to be modified. Modify it and select the 'Save' button.

Fill in the Upload Details and select the 'Upload' button.

5.19.3 **Drop Columns**

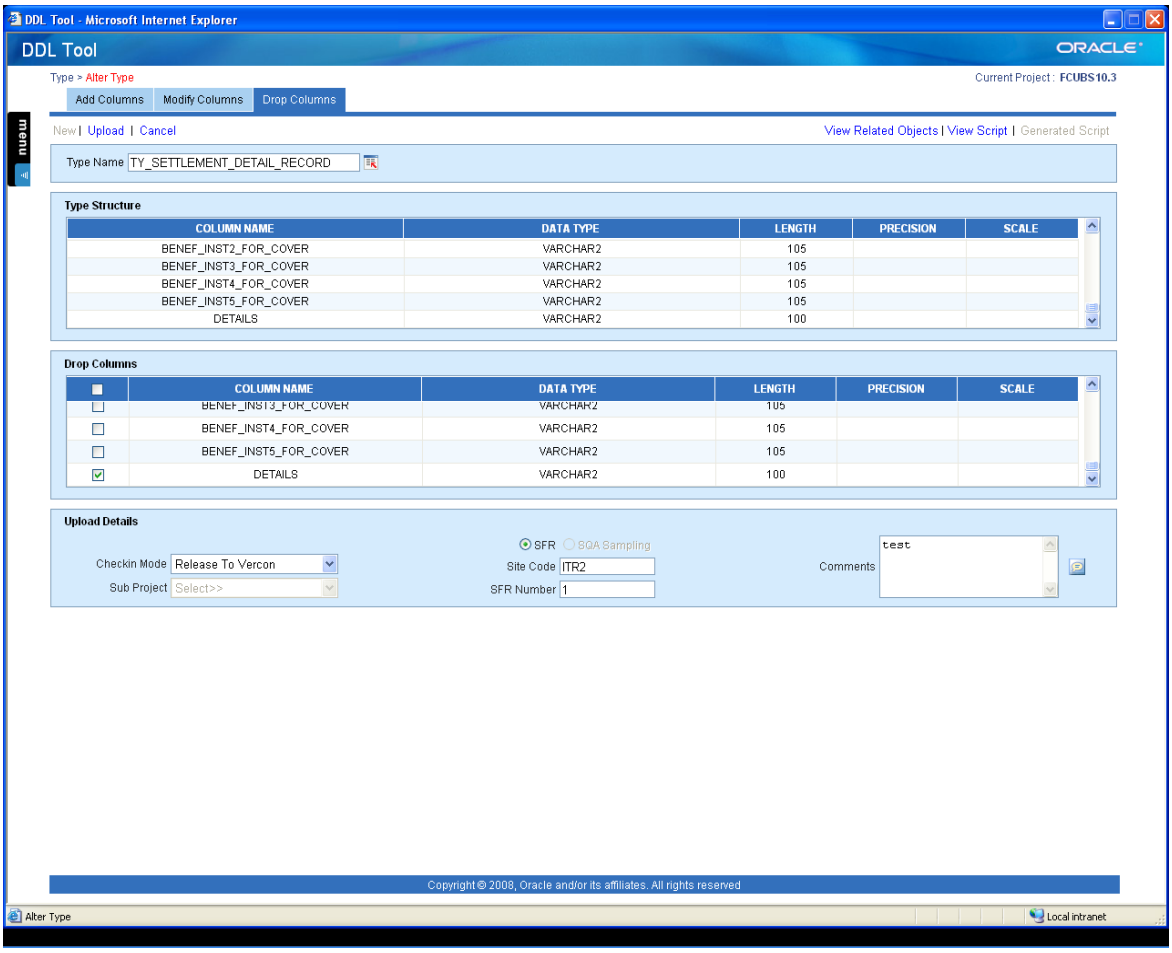


Fig.33

- To drop columns, select the 'Drop Columns' tab.
- Select the type name to be modified from the type list. The structure of the selected type is visible in Type Structure section.
- Select the columns to be dropped.
- Fill in the Upload Details, select the 'Upload' button at the top.
- Before dropping, The user can view the related objects concerning the columns being dropped by selecting the 'View Related Objects' button at the top.

5.20 Drop Type

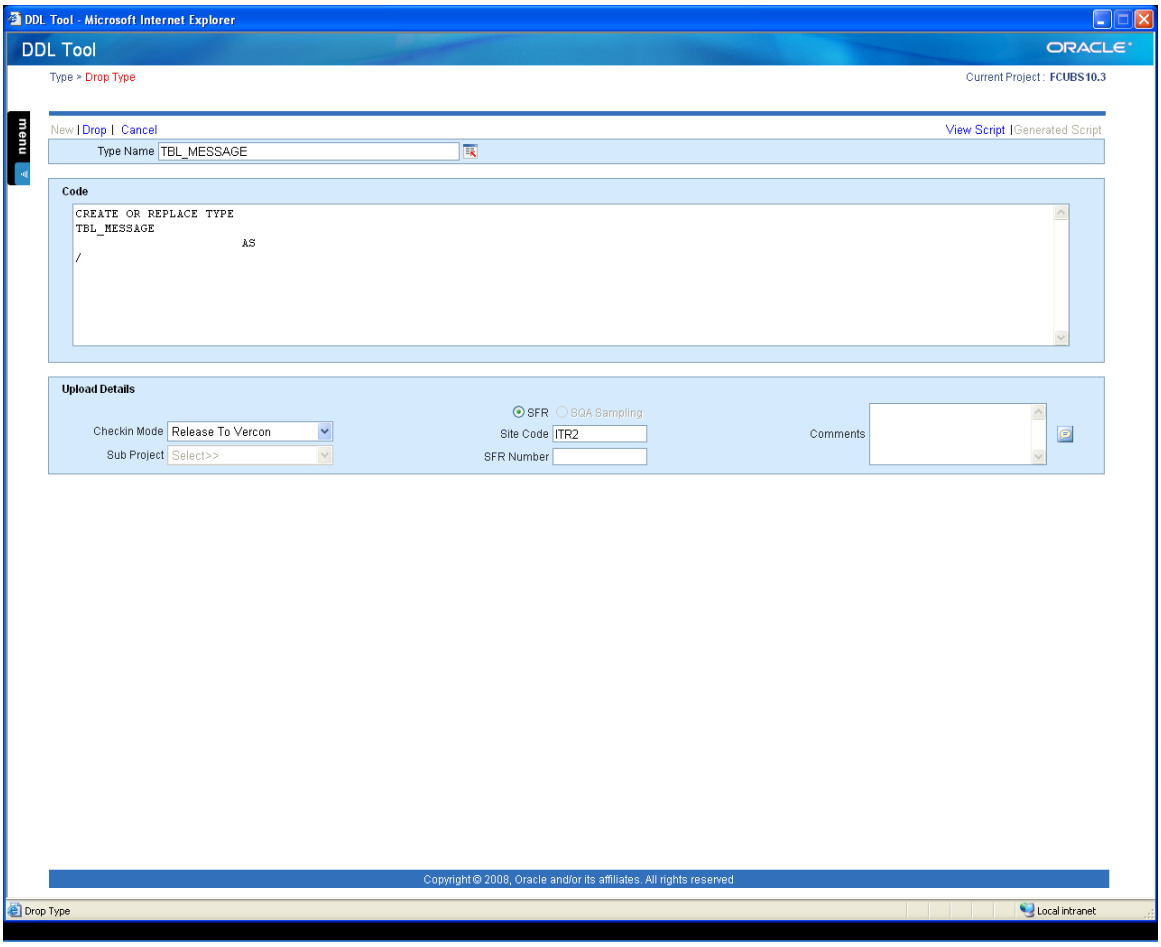


Fig.34

To drop an existing type, select the Type>Drop Type option from the menu. Select the type name from the type list to be dropped. The script (or the structure) is visible in the Code section. Fill in the Upload Details and select the 'Upload' button.

5.21 Insert into Static Table

The user can insert data into a table by selecting the option Static Table>Insert Data from the menu. Select the 'Upload from schema' tab to upload the data from a schema or 'Upload through Excel' tab to upload the data through an excel file.

5.21.1 Upload from Schema

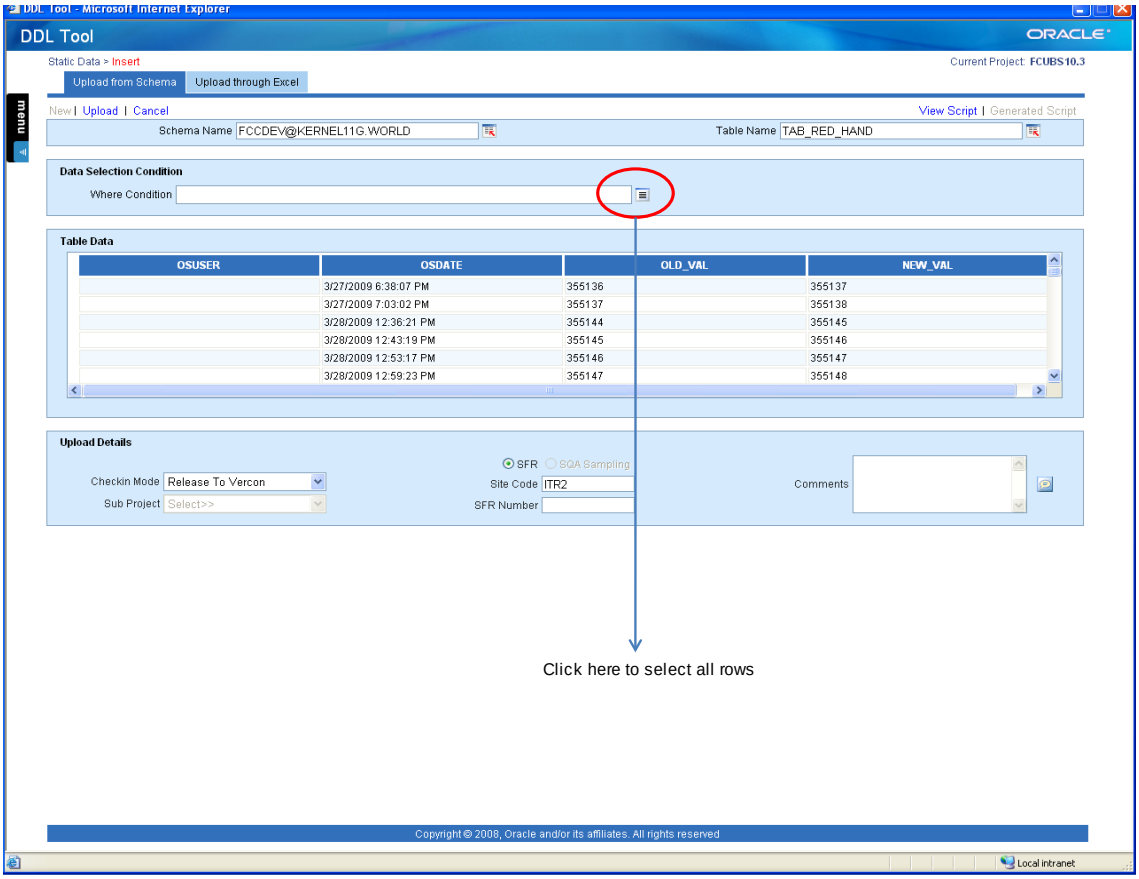


Fig.35

- To upload from schema, select the 'Upload from Schema' tab.
- Select the schema name from the schema list and the table name from the table list.
- A message window opens up showing the number of rows present in the table.
- In the Data Selection Condition section, the user can enter the where condition to select specific rows from the table or click on the adjacent button (circled in red in Fig.35) to select all rows. The system will show the first 100 rows on the screen.
- Fill in the Upload Details and select the 'Upload' button to upload the data.

5.21.2 **Upload through Excel**

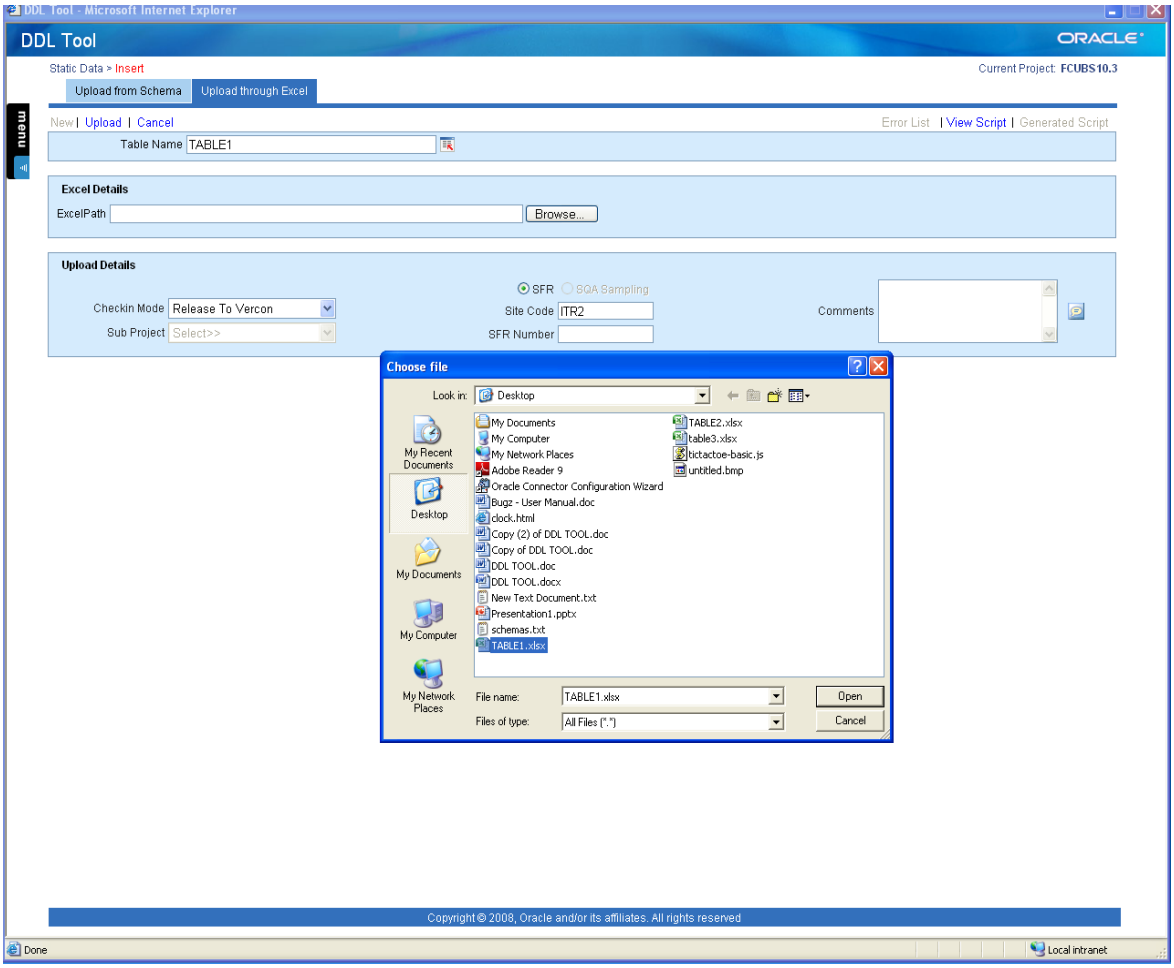


Fig.36

- The user can upload data through excel if the table template is already present on the user's system in the form of an excel file.
- If the template does not exist, then first create a custom excel template (see 4.20 Custom Excel Template section).
- Select the 'Upload through Excel' tab. Select the table name from the table list.
- Select the excel file corresponding to that table and fill in the Upload Details and click on the 'Upload' button.

5.22 Update Data

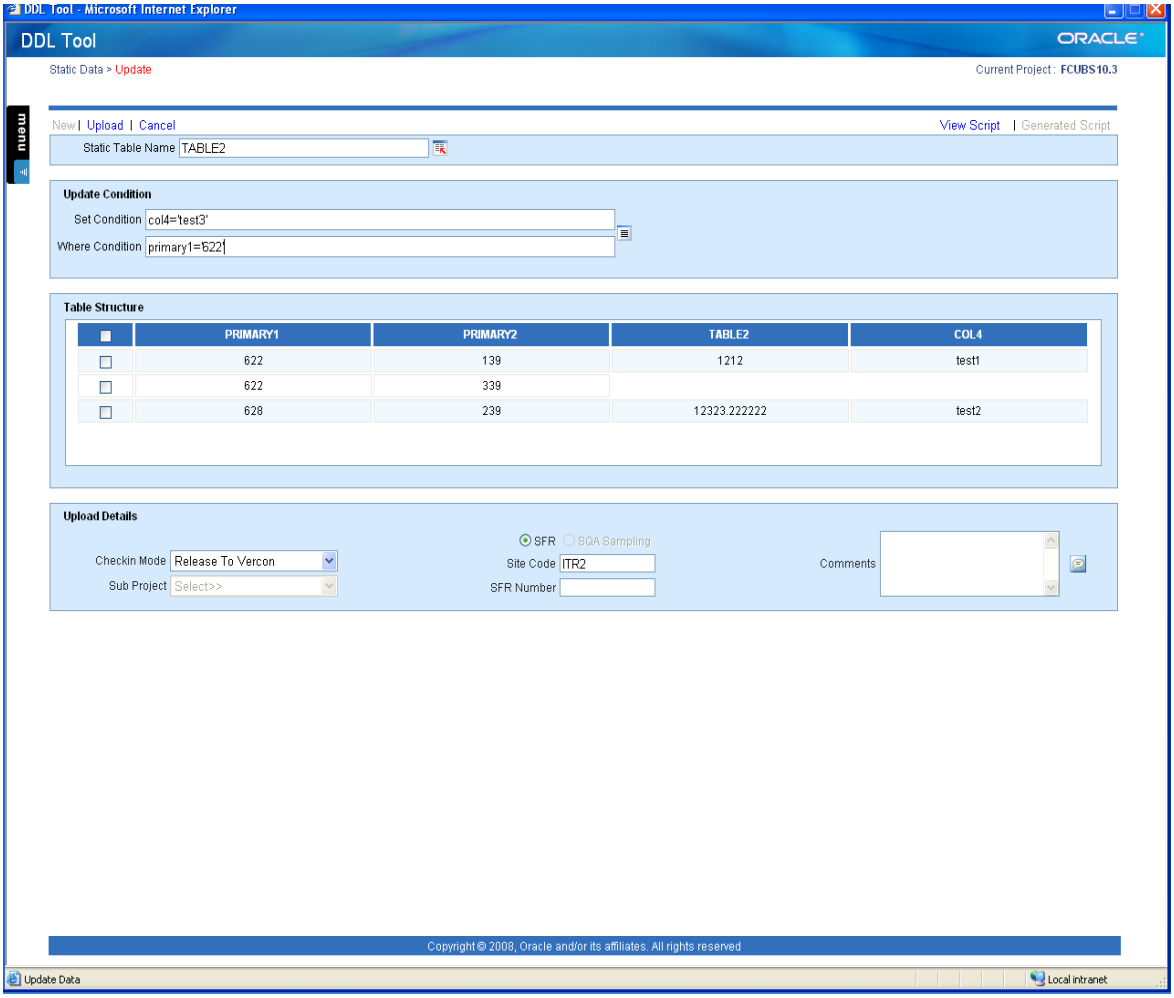


Fig.37

- To update data, select the Static Table>Update Data option from the menu.
- Select the Static table name from the table list.
- Click on the button in the Update Condition section to view all rows. The rows of the table are visible in the Table Structure section.
- The user can also fill in the Where Condition to view only specific rows and click on the button.
- Fill in the Set Condition and check the rows whose column values must be updated as specified in the set condition clause.
- Fill in the Upload Details and select the 'Upload' button to update the table.

5.23 Delete Data

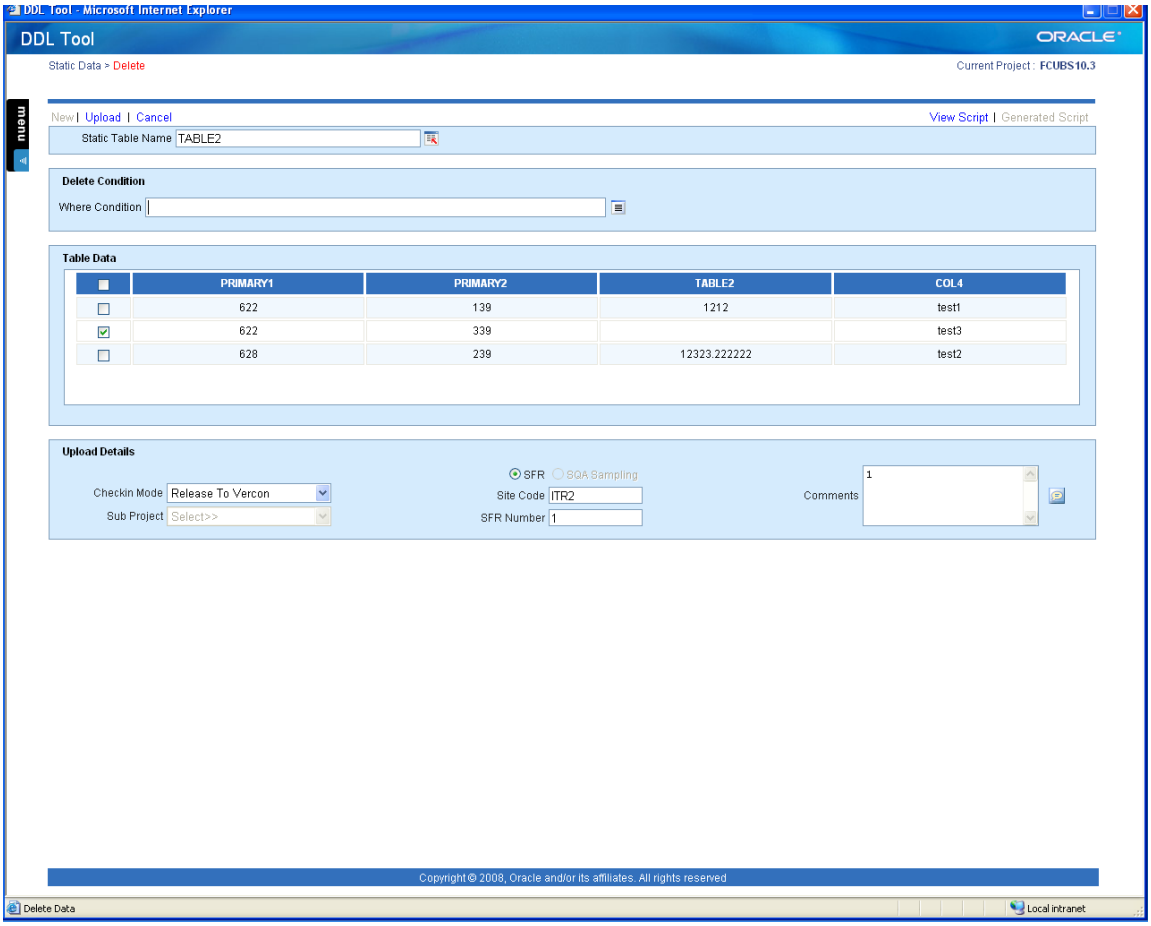


Fig.38

- To delete data select the Static Data>Delete option from the menu.
- Select the static table name from the table list.
- To view all the rows of the table click on the button adjacent to the Where Condition text box. To view only specific rows, fill in the Where Condition and click on the button.
- The selected rows of the table will be visible in Table Data section.
- To delete certain rows, check those rows. For example, in Fig.38, the second row is checked to mark it for deletion.
- Fill in the Upload Details and select the 'Upload' button

5.24 Custom Excel Template

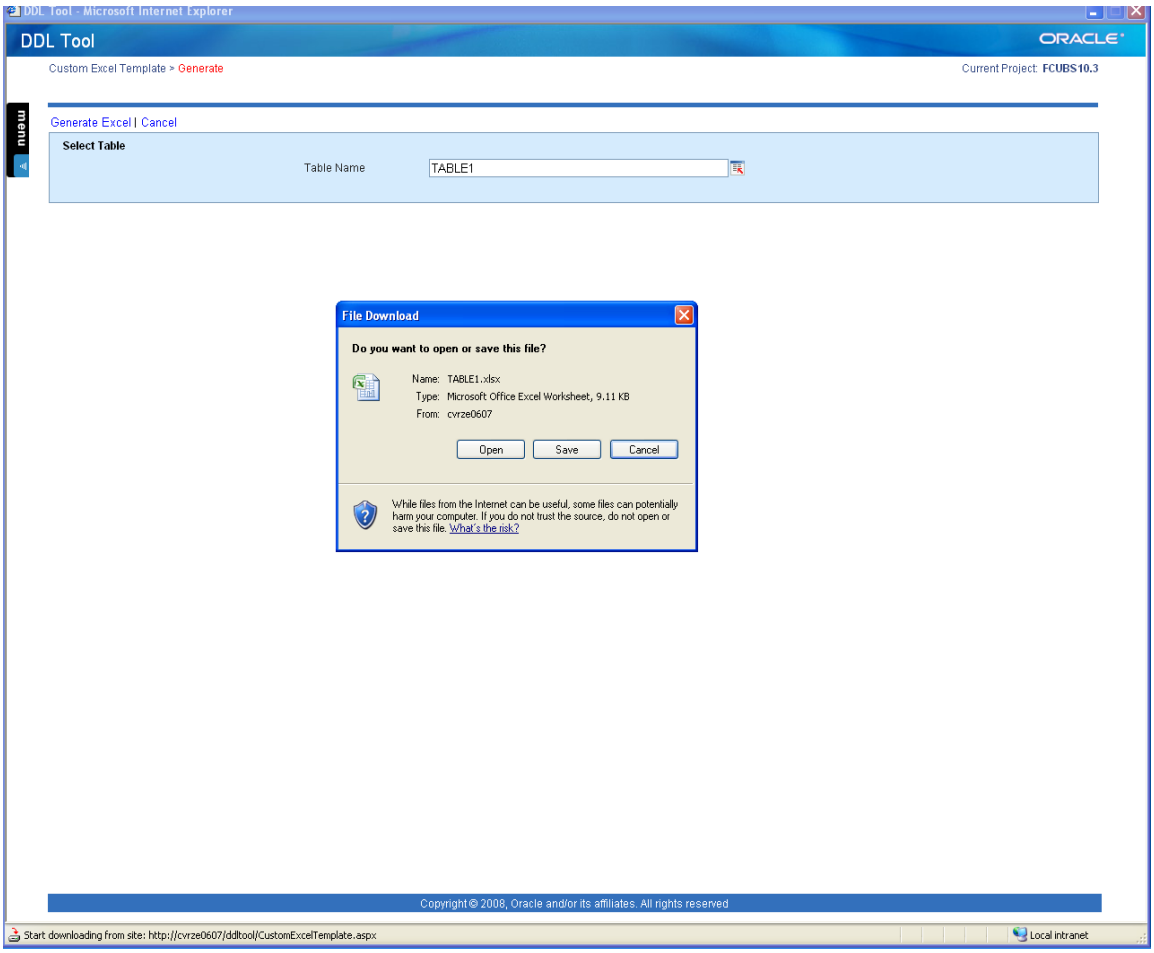


Fig.39

- To create an excel template for a table, select Excel Template>Custom Table from the menu.
- Select the table from the table list and click on 'Generate Excel' button at the top of the screen.
- A window opens up, select the 'Save' option to save the template on to the user system.
- To view the template, select the 'Open' option.

5.25 Table Creation through Excel Template

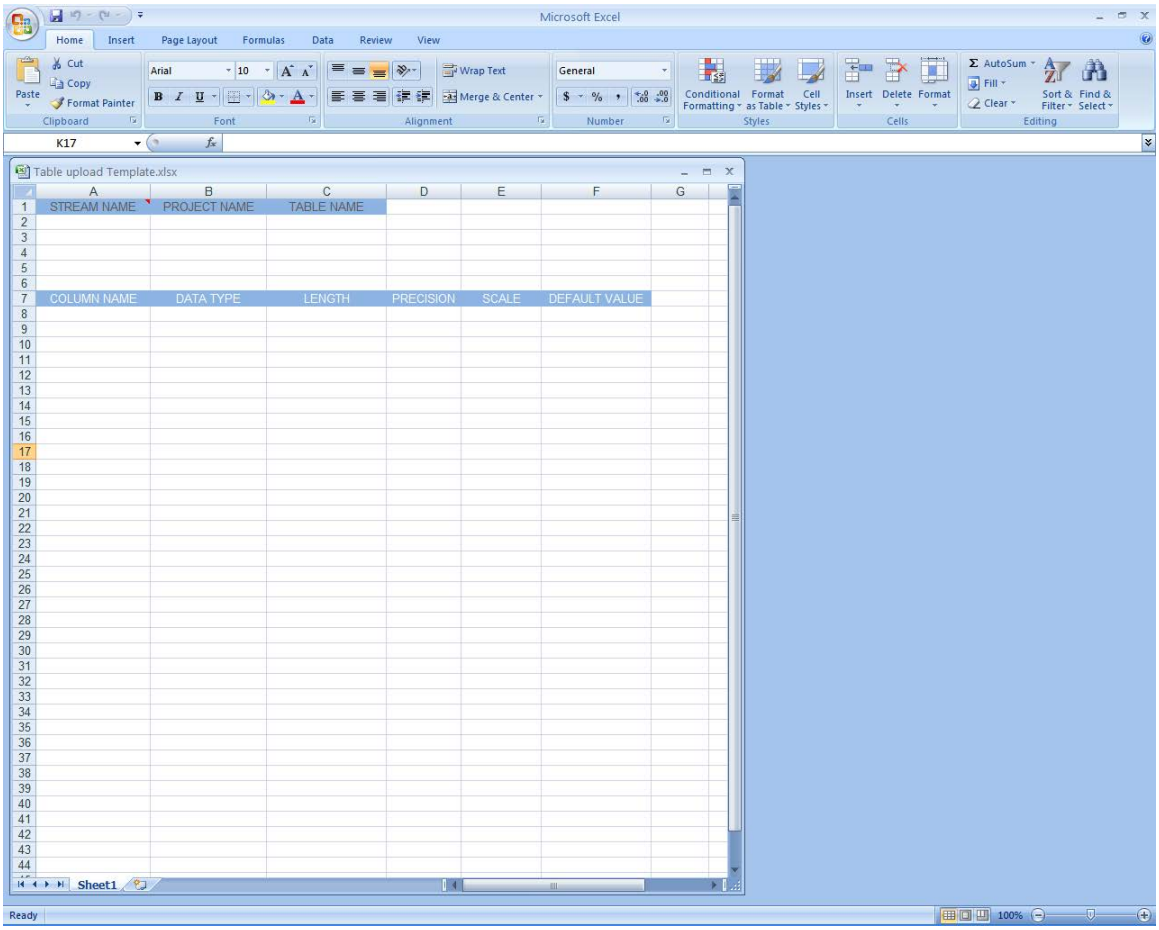


Fig.40

- To create a table from an excel template, select the Excel Template>Table Creation from the menu.
- Save the file called 'Table Upload Template.xlsx' on to the user's system. The file gets downloaded from the server.
- Open the excel file. The template looks like the one shown in Fig.40.
- Fill in the details and save the file.

5.26 Import User

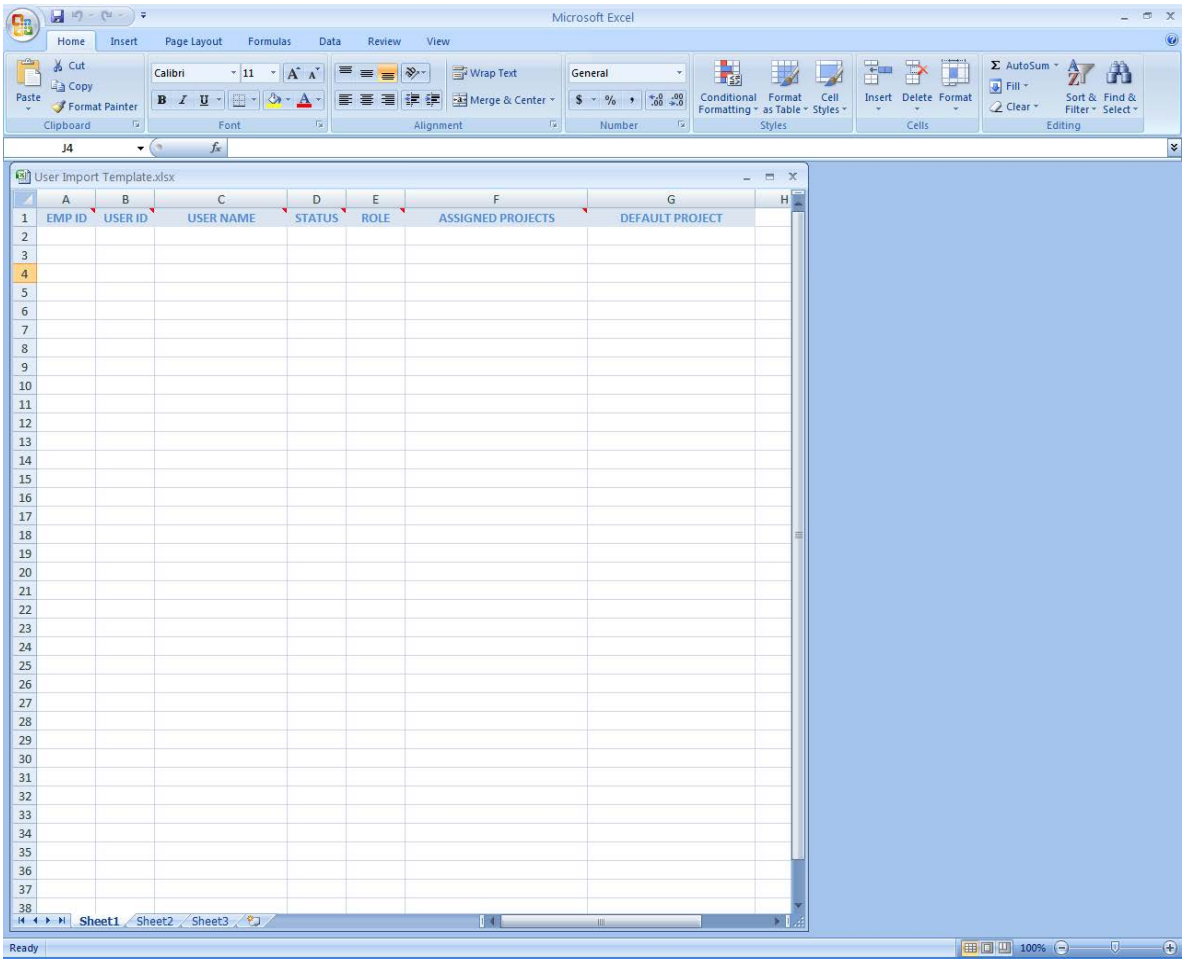


Fig.41

- To import a user from an excel template, select the Excel Template>Import User from the menu.
- Save the file called 'Import User Template.xlsx' on to the user's system. The file gets downloaded from the server.
- Open the excel file. The template looks like the one shown in Fig.41. Fill in the details and save the file.

5.27 Export Script

The user can export scripts on to the user's system for both DDL objects and Static data. Select the Export Script option from the menu.

5.27.1 For DDL Objects

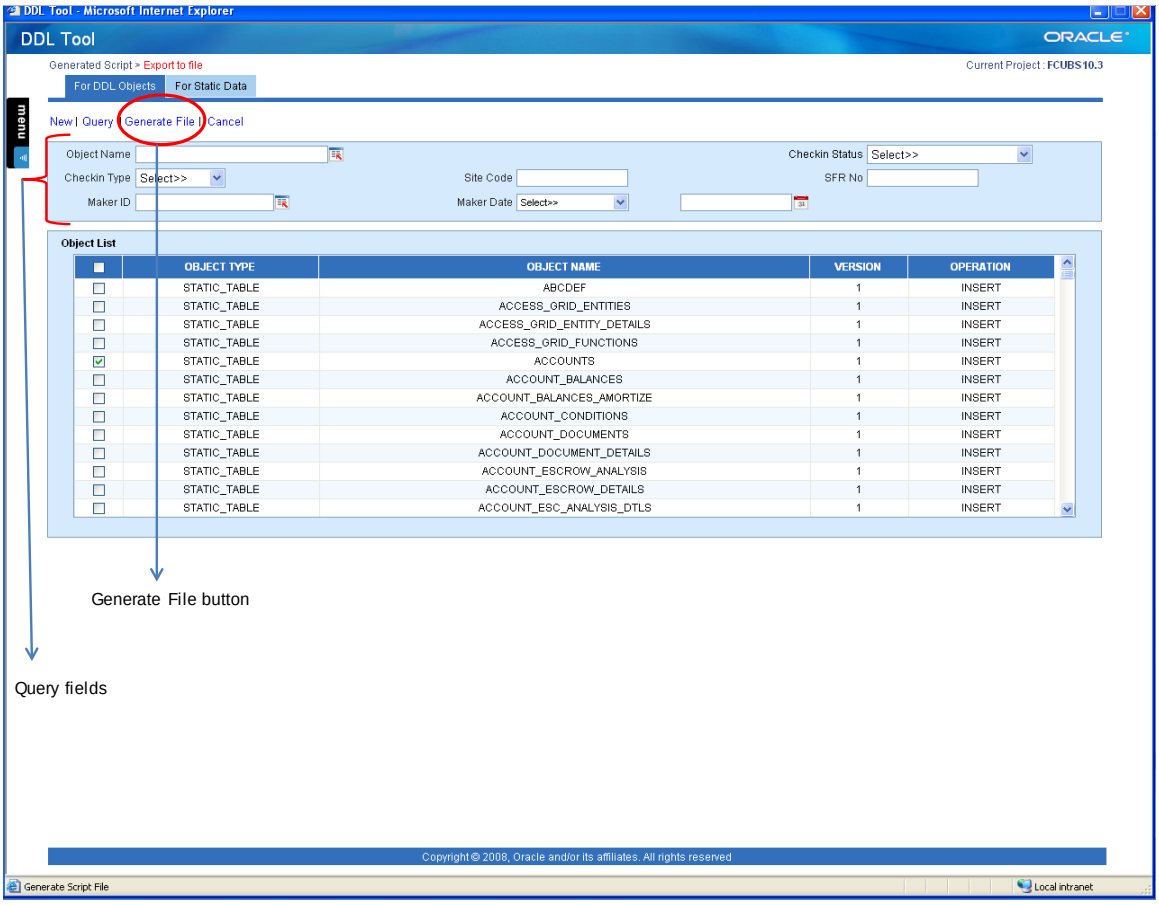


Fig.42

- To export scripts for DDL objects, select the 'DDL Objects' tab.
- To view all the objects, click on the 'Query' button. A message window opens up showing the number of objects present and these objects are visible in the 'Object List' section.
- To select specific objects, the user can fill in the query details (shown in red in Fig.36) and select the 'Query' button.
- Select object(s) from the Object List whose script the user would like to import by checking the box next to it.
- Select the 'Generate File' button at the top.

- Save the file on to the system. The file will have a .ddl extension.

- Please note that if the user hasn't enabled 'Initialize and script ActiveX controls not marked as safe option in the browser, then a script window will open up telling the user to enable it. Follow the instructions to enable it.

5.27.2 **For Static Data**

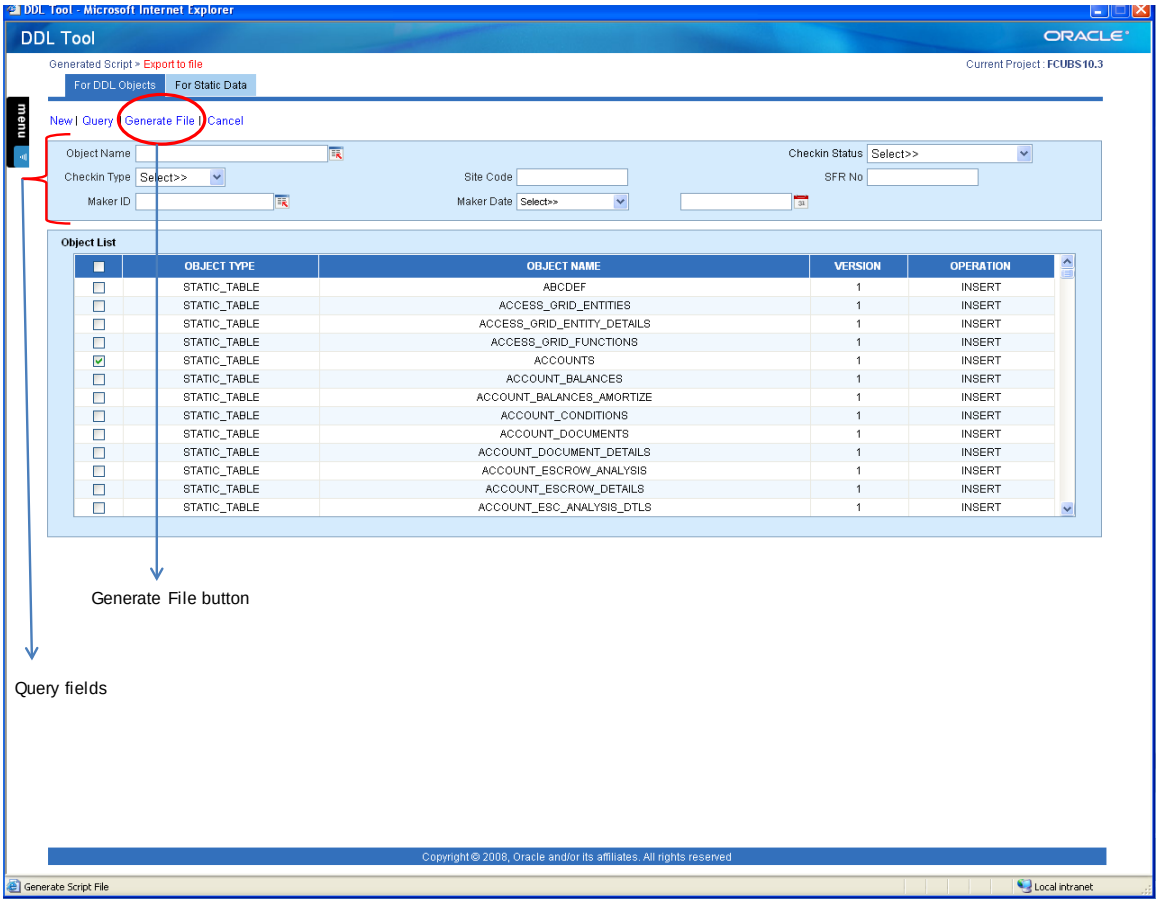


Fig.43

- To export scripts for static data objects, select the 'For Static Data'.
- To view all the objects, click on the 'Query' button. The user will have to fill in at least one of the query fields before selecting the 'Query' button. A message window opens up showing the number of objects present and these objects are visible in the 'Object List' section.
- To select specific objects, fill in the query details (shown in red in Fig.42) and select the 'Query' button.
- Select object(s) from the Object List whose script the user would like to import by checking the box next to it.
- Select the 'Generate File' button at the top. Save the file on to the system. The file will have a .ddl extension.
- Please note that if the user hasn't enabled 'Initialize and script ActiveX controls not marked as safe' option in the browser, then a script window will open up informing the user to enable it. Follow the instructions to enable it.

5.28 Edit Parameters

The user can edit the parameters – sub project name, table type and checkin status. Select the Edit Parameters option from the menu.

5.28.1 Edit Sub Project

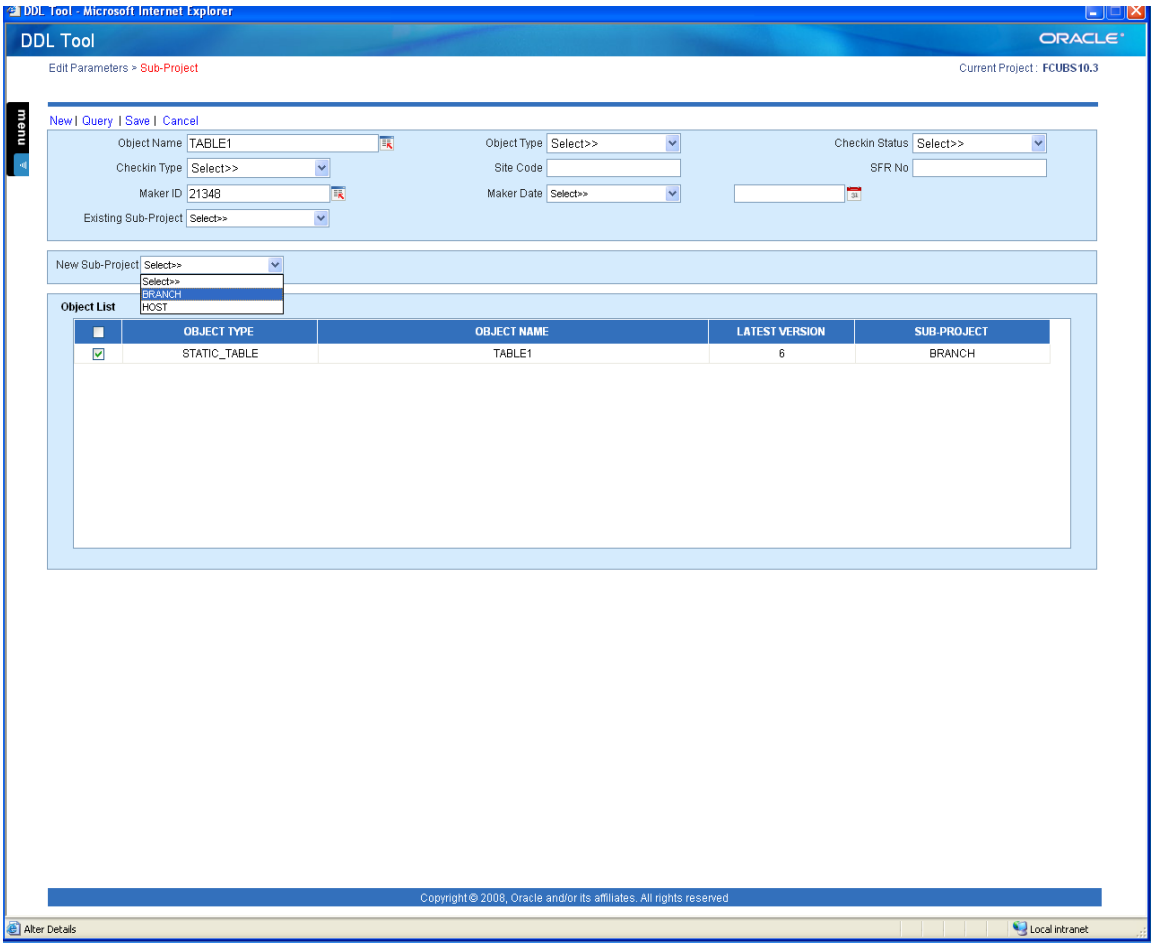


Fig.43

- To edit the sub project name of an object, select the Edit Parameters>Sub-Project option from the menu.
- Fill in the query details (please note that at least one of the query fields must be filled before selecting the 'Query' button) and select the 'Query' button.
- Details of the queried objects will be displayed in the Object List.
- Select the new sub project name for the object and check the objects whose sub project names the user would like to change. Select the 'Save' button after that.

5.28.2 **Edit Table Type**

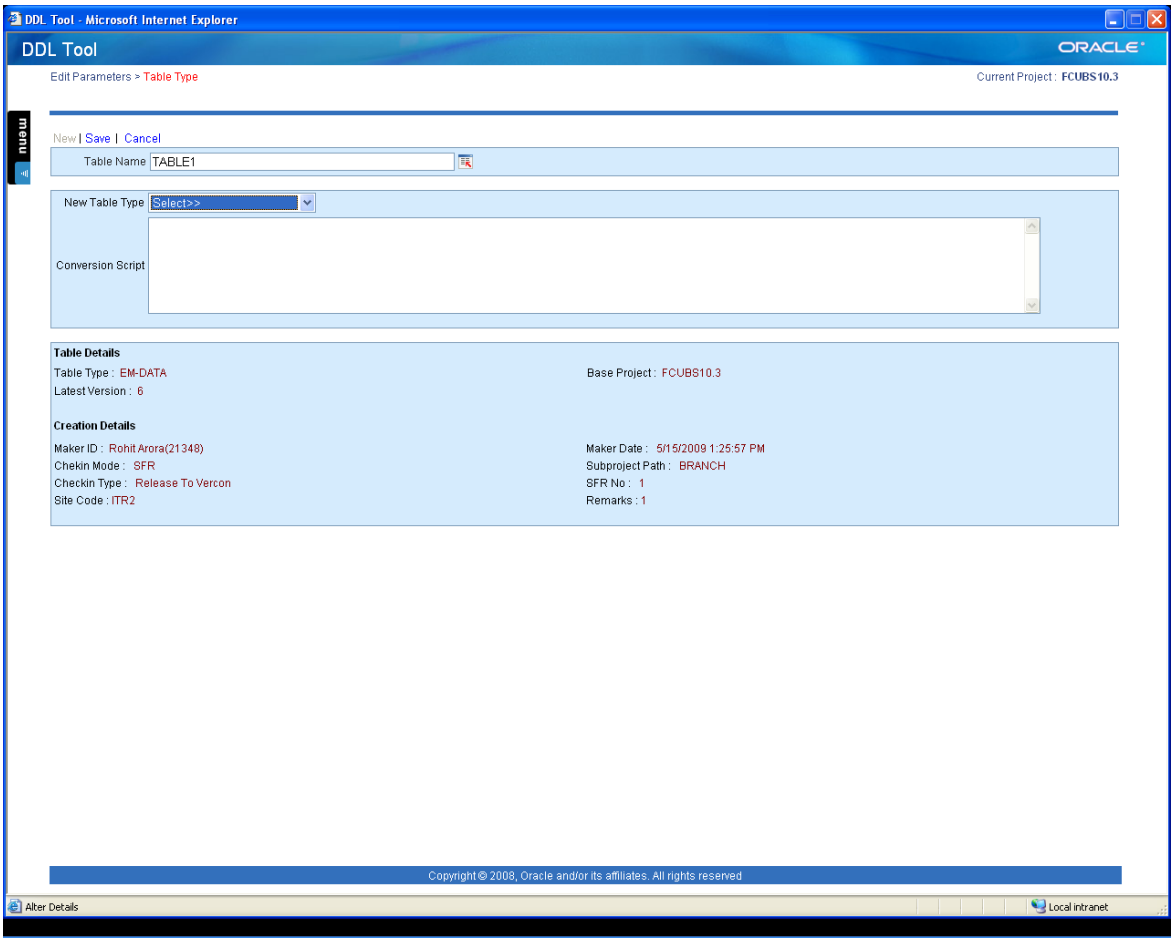


Fig.44

To edit the table type, select the Edit Parameters>Table Type option from the menu. Select the table name from the table list and select the new table type from the dropdown menu. Select the 'Save' button from the top.

5.28.3 **Edit Checkin Status**

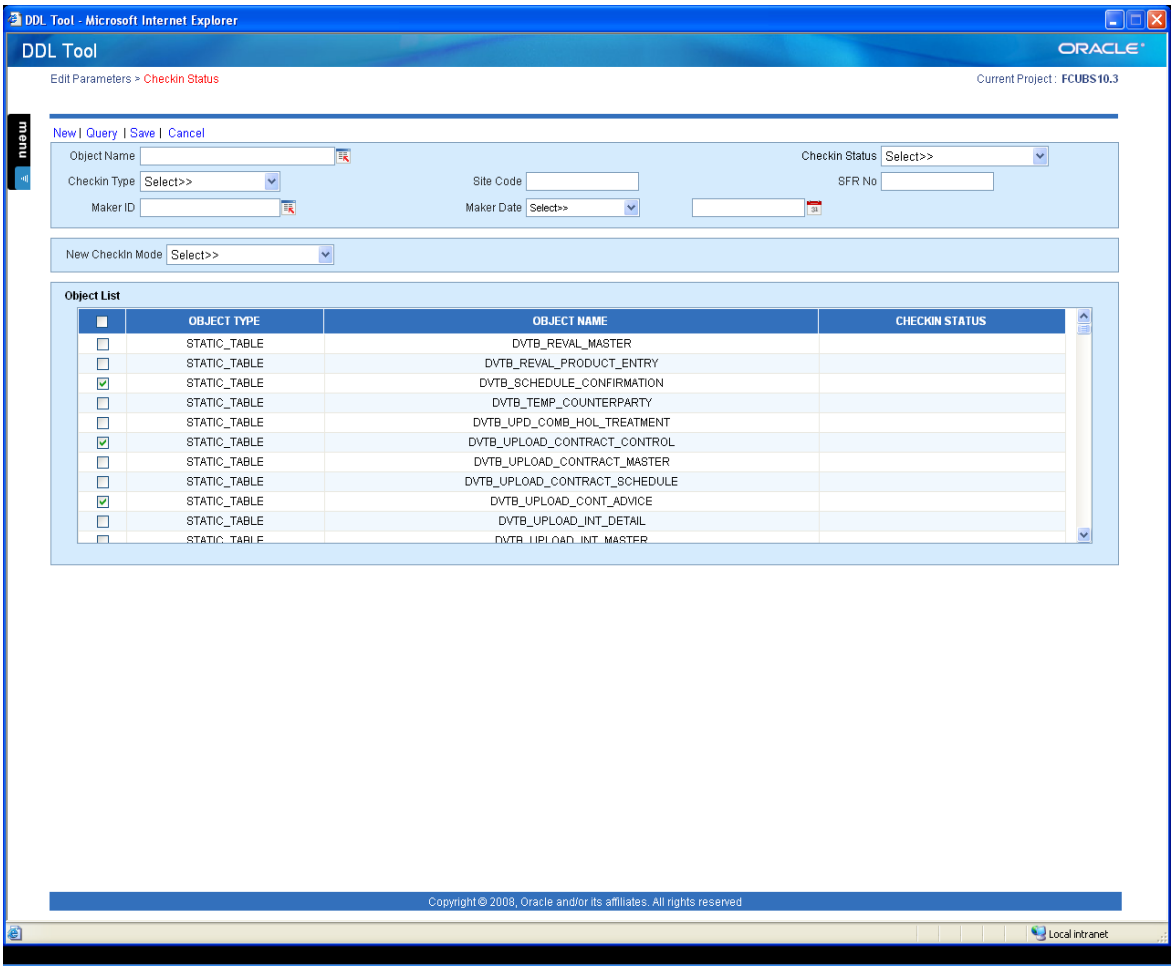


Fig.45

To edit the checkin status of any object, select the Edit Parameters>Checkin Status option from the menu. Select the 'Query' button to view all the objects present. The user can view them in the Object List section. Select the new checkin status and check the objects whose status must be changed. Select the 'Save' button.

5.29 View Objects

5.29.1 View Details

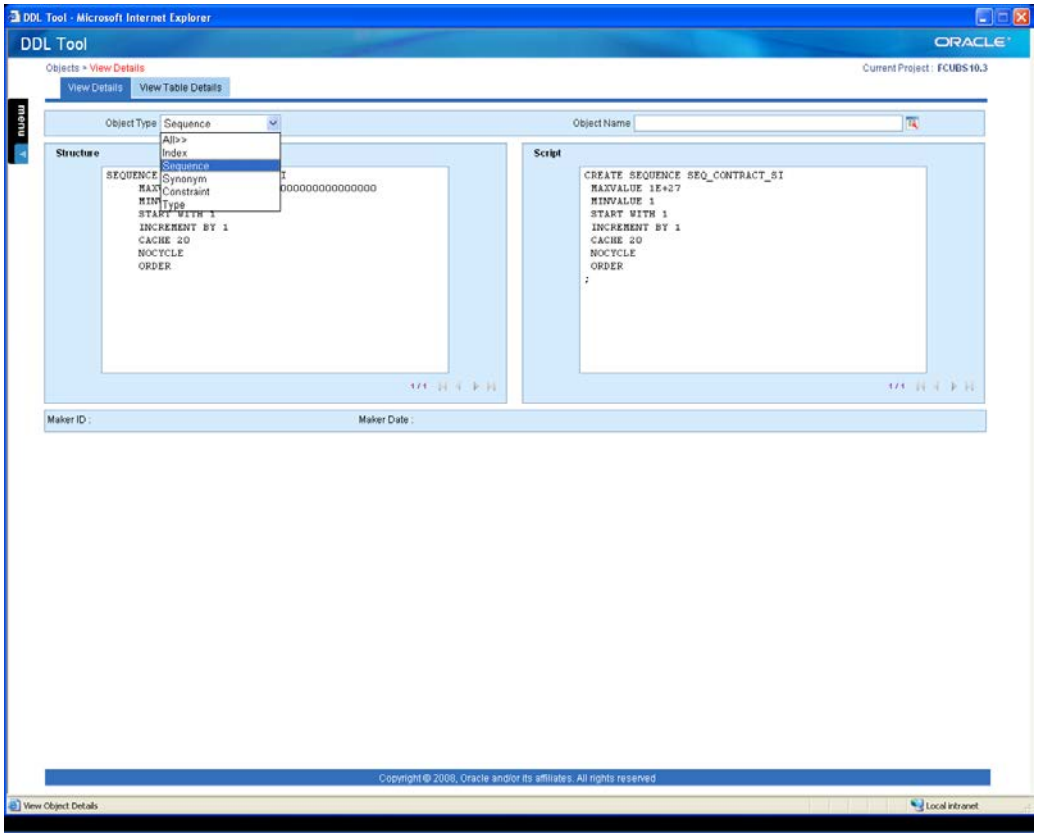


Fig.46

- The user can view the details of any of the object present using this option.
- Select an object type from the drop down list.
- Select the object name from the object list. Remember that some names have a particular structure, for example, all sequences start with SEQ_ , primary key constraints start with PK, etc. The user can use this information while searching for an object name from the object list
- . Once an object has been selected, the details(the structure of the object will be made visible).
- The user can view both the structure and the script. There might be several versions of the same object. To view different versions, make use of the arrow buttons present in the Structure and Script section. Maker ID and Maker Date are also visible for each version.

5.29.2 **View Table Details**

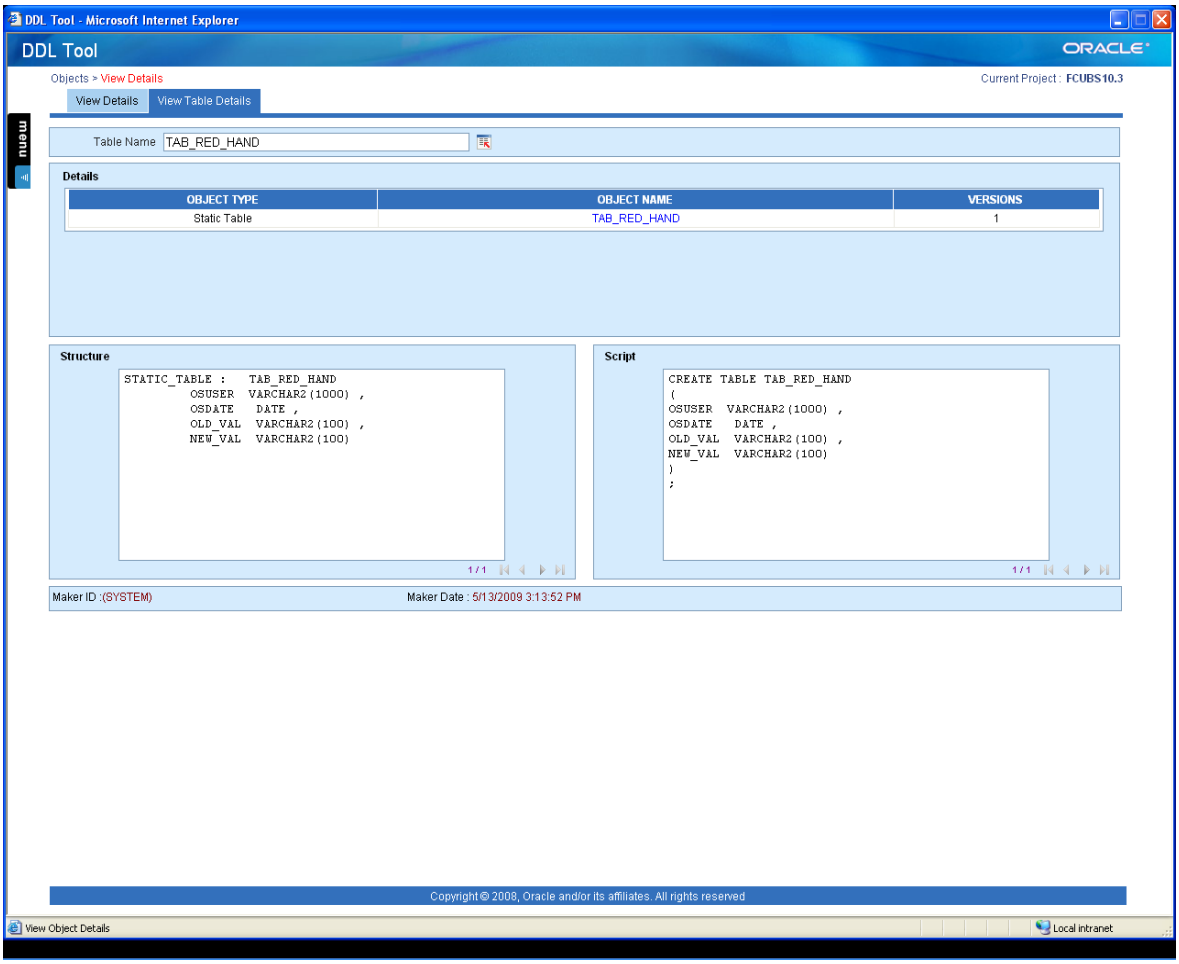


Fig.47

- The user can exclusively view table details by selecting that option.
- Select a table name from the table list.
- The details of the table such as object type, object name(which is table name) and the version number is visible. Select the required version and view the structure and the script.
- To view different versions, make use of the arrow buttons present in the Structure and Script section. Maker ID and Maker Date are also visible for each version.

5.30 View Static Data

To view static current data select View Objects>View Static Data from the menu. The user can view the data present in the table as well as all the different operations done on the static table till date.

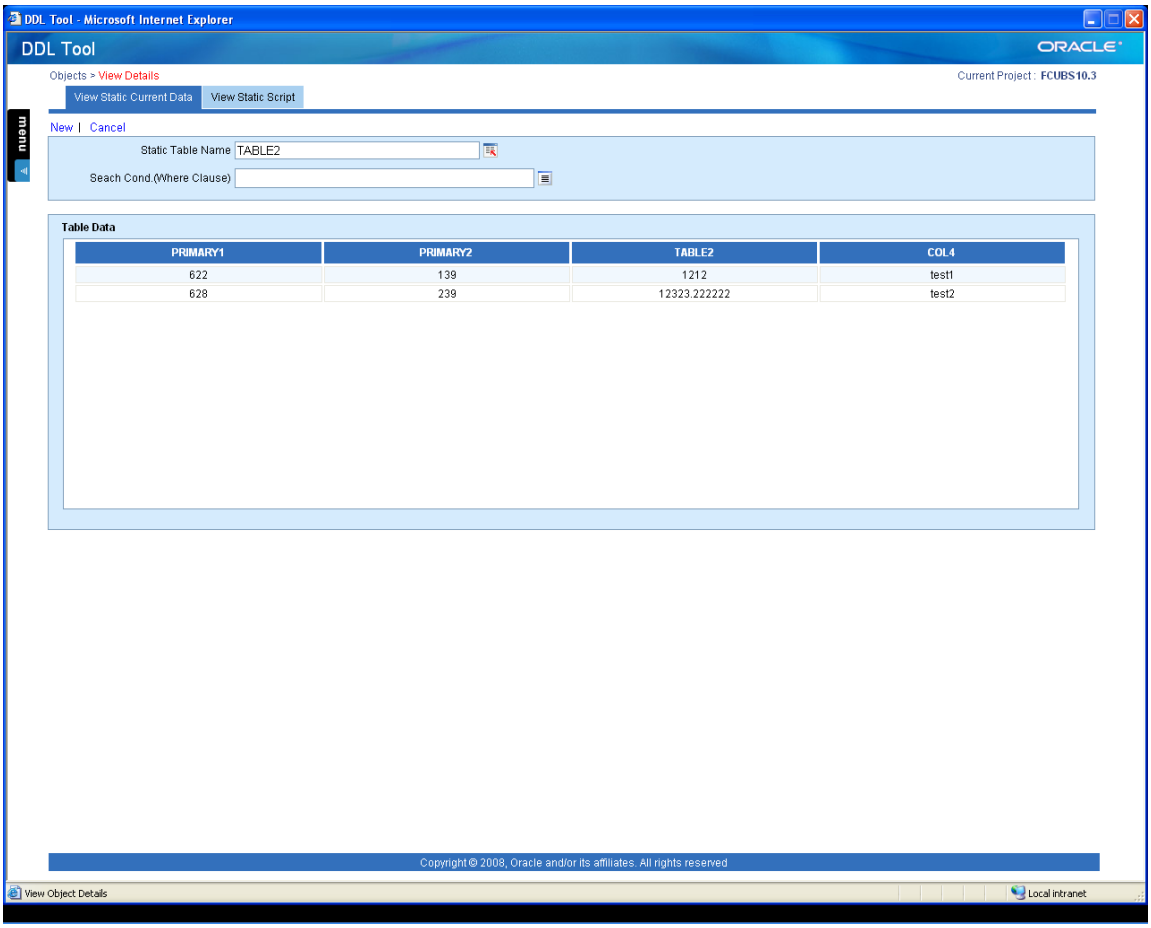


Fig.48

- To view static data, select the table name from the table list. If the table has data, a message box will display the number of rows in the table.

- Fill in the Search Condition which must be a where clause, to view specific rows. To select all the rows, select the button next to the where clause. The selected rows will be visible in the Table Data section.

- The user can also view all the operations done on the table till date. Select the 'View Static Script' option. To view different versions, select the arrow keys.

5.31 Report

5.31.1 For DDL Objects

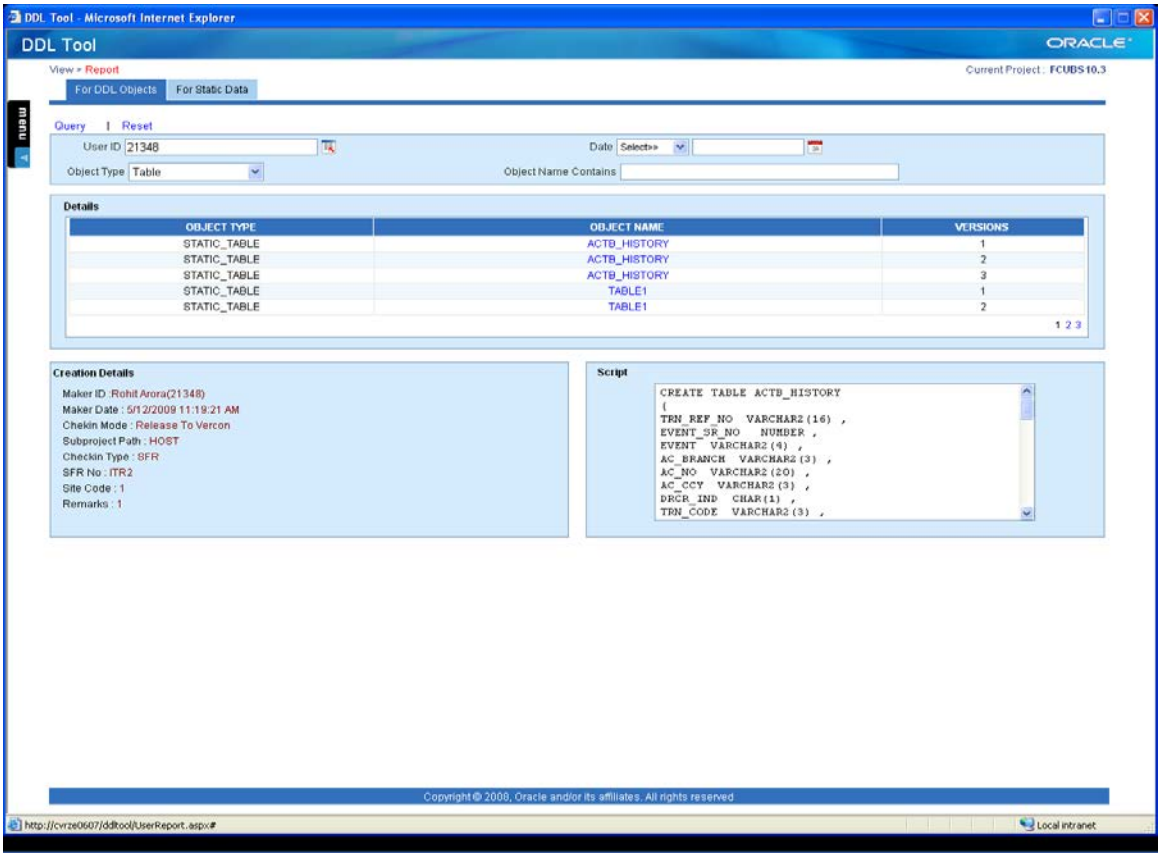


Fig.49

- To view the report for DDL objects, select the View Objects>Report> option from the menu.
- Select the 'For DDL Objects' tab. A screen like the one shown in Fig.45 will appear.
- First select the User ID from the list of users.
- To view all the objects, select the 'Query' button. All the objects including their different versions are visible in the Details section.
- The user can also select specific objects depending upon their types, date of creation etc by filling up the query fields.
- The small red button next to the Date field is to expand a calendar upon selecting it.
- Once the objects and their versions are made visible, select one of them to view its details. All the details are made visible along with the script.

5.31.2 **For Static Data**

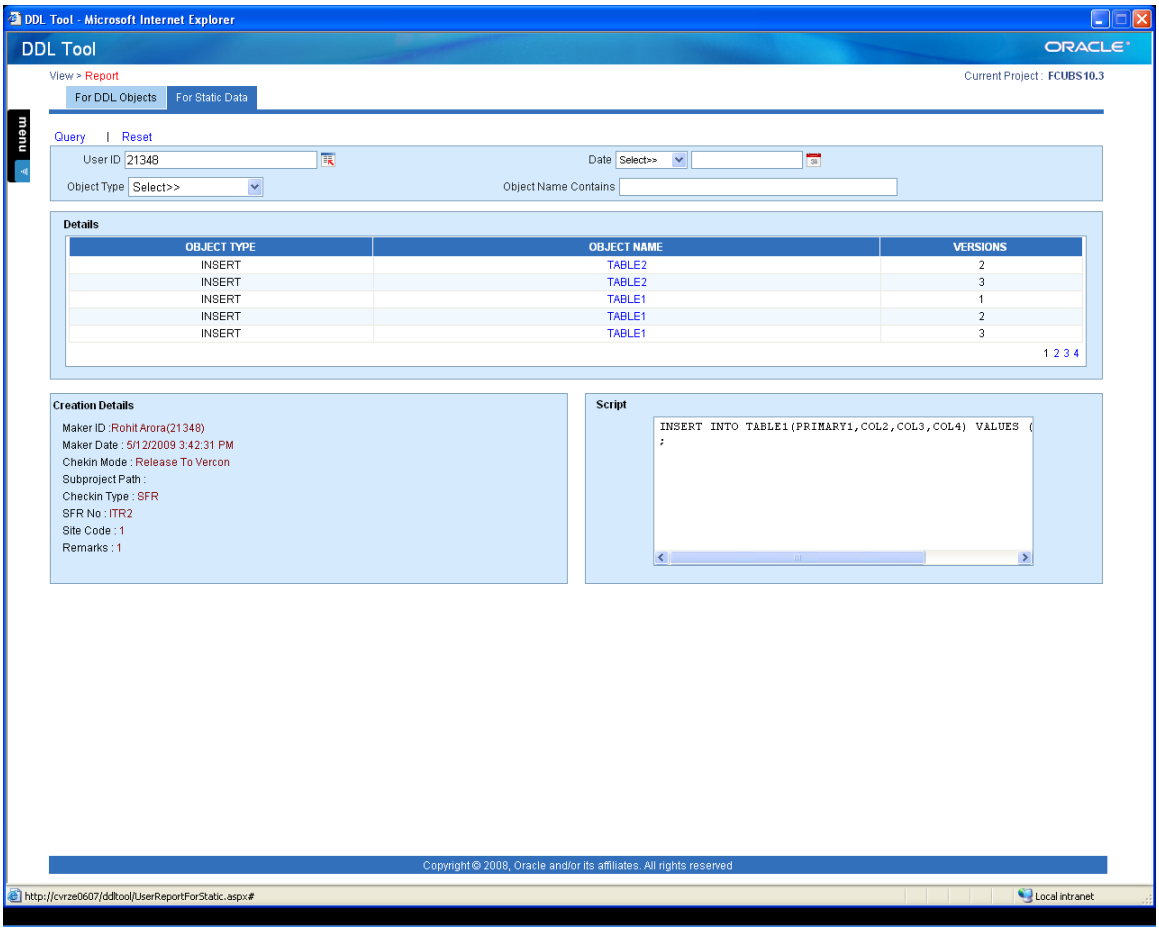


Fig.50

- To view the report for static data select the View Objects>Report> option from the menu.
- Select the 'For Static Data' tab. A screen like the one shown in Fig.45 will appear.
- First select the User ID from the list of users.
- To view all the objects, select the 'Query' button. All the objects including their different versions are visible in the Details section.
- The user can also select specific objects depending upon their types, date of creation etc by filling up the query fields.
- The small red button next to the Date field is to expand a calendar upon selecting it.
- Once the objects and their versions are made visible, select one of them to view its details. All the details are made visible along with the script.

5.32 Log Off

A user can log off by selecting the Log Off option from the menu. If the window is closed, the user is automatically logged out.

6 Data Model

6.1 Data Model Overview

As a part of FLEXCUBE IS data dictionary, the following features are supported

- Entity Table Mapping
- Data Dictionary
- Foreign Key Uploads

6.2 Entity Table Mapping

As the name suggests, we would be mapping an Entity to a table or multiple tables. The following would be the pre requisites.

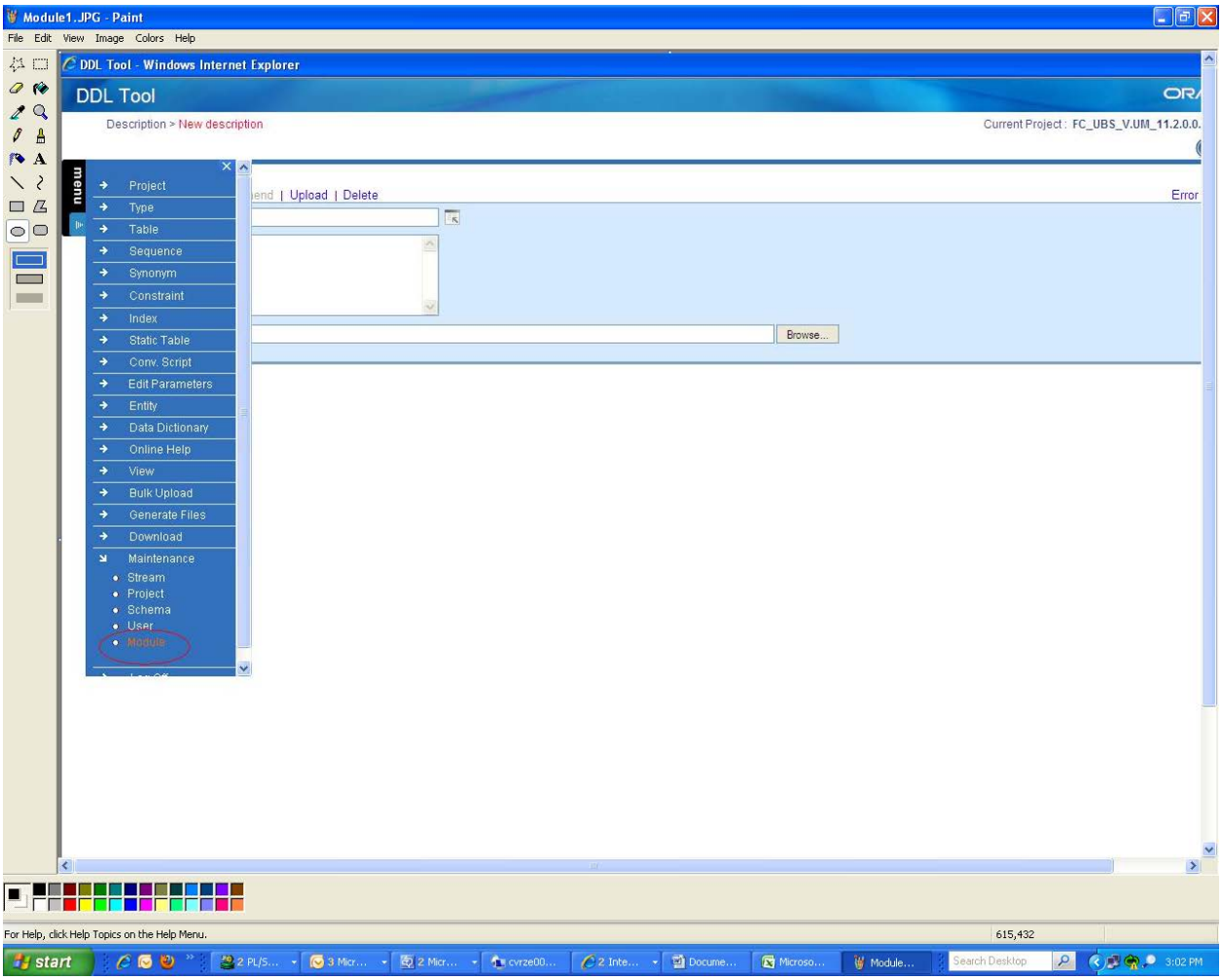
- For an entity to be mapped, we need to first maintain the entity.
- Every entity that we maintain must belong to a particular module.
- In order to have an entity table mapping done, we need to check if the module exists and if the entity has been maintained.

Lets us take an illustration where we try to map an entity called **FLEXCUBE Core Entity** to the tables **STTM_BANK, STTM_BRANCH.** This entity would belong to the module Core.

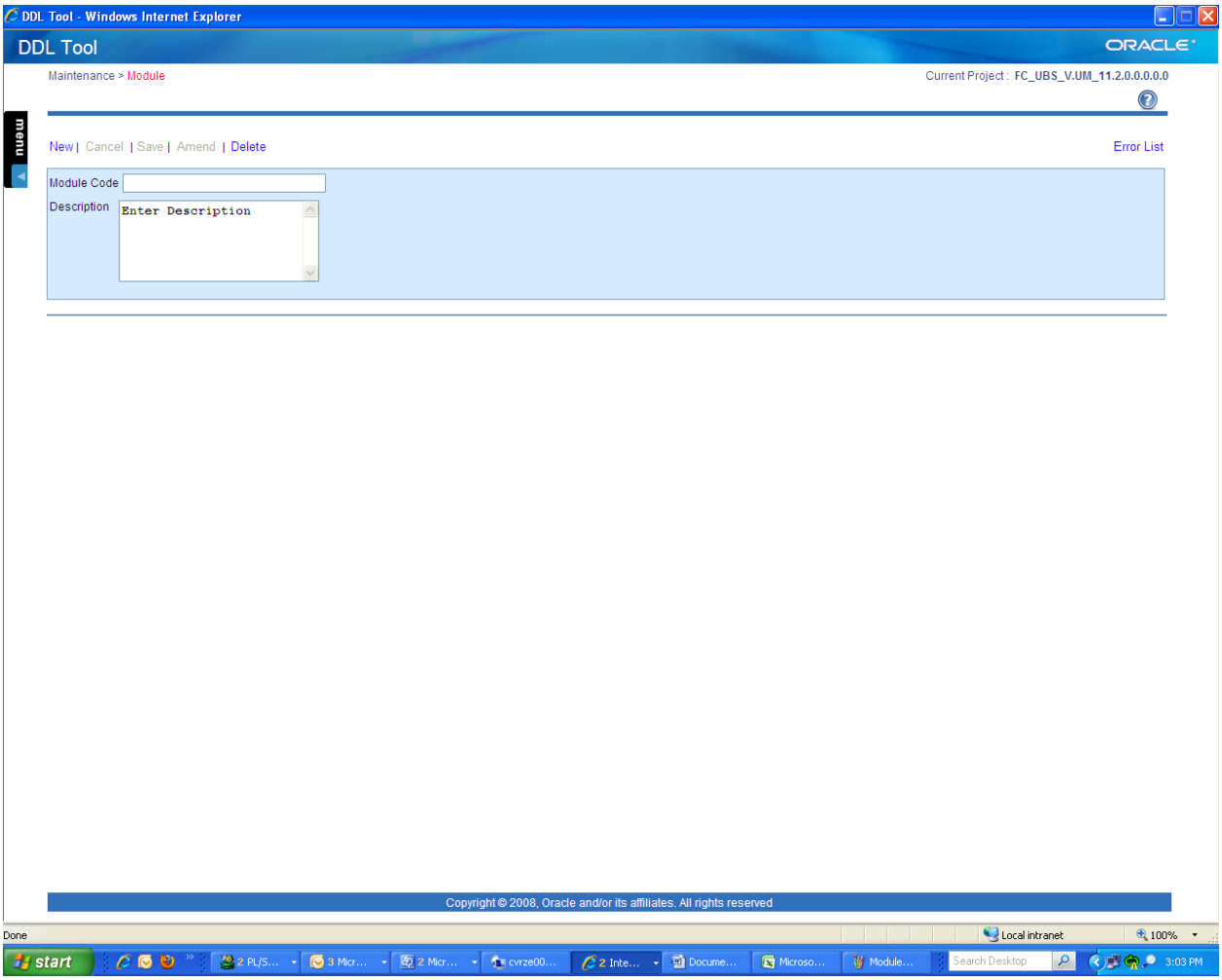
This is split into the following

- Module Maintenance: We first check whether the module Core exists in DDL. If the module does not exist, it can be maintained using the following screen in DDL (Menu->Maintenance->Module)

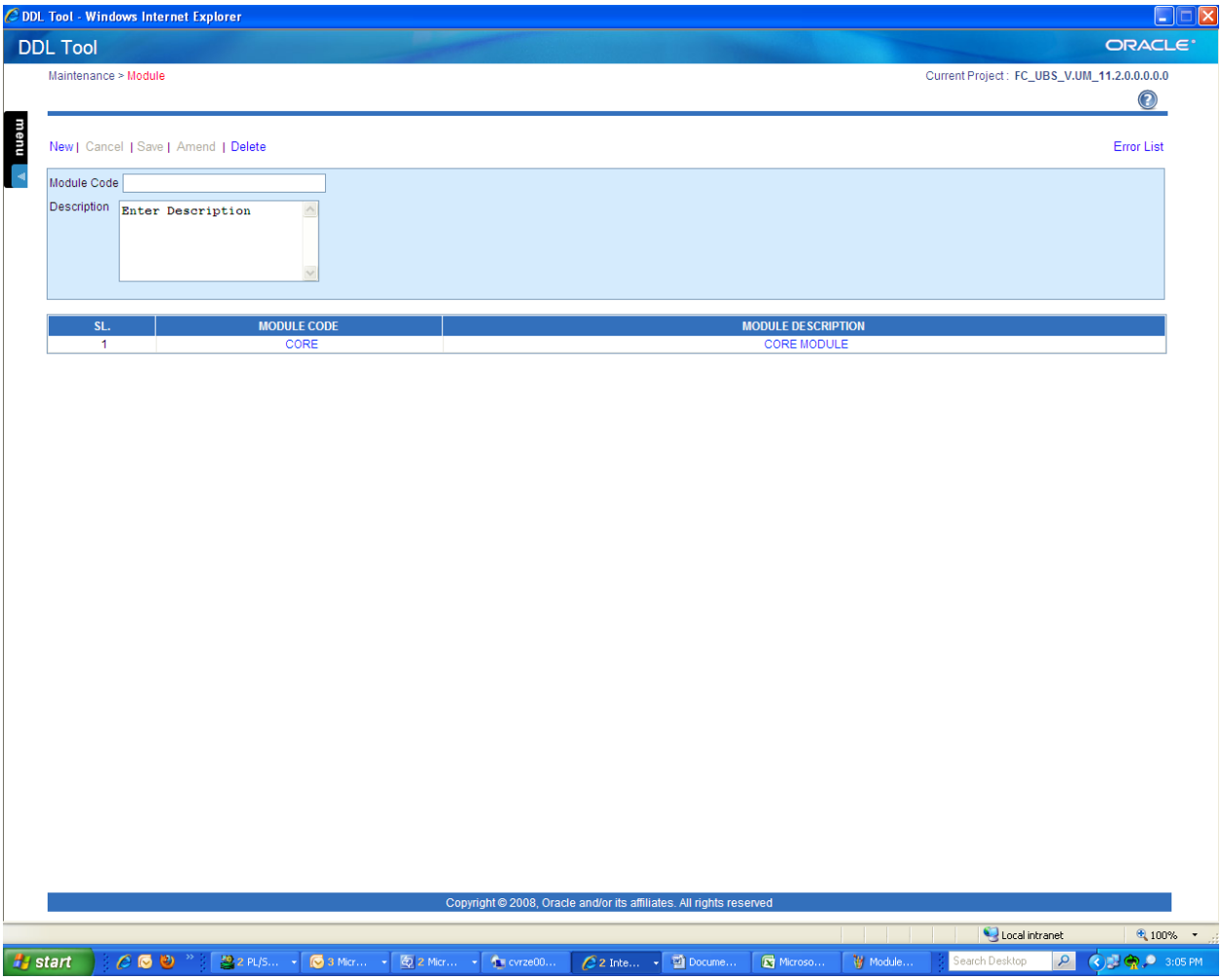
Click on Menu->Maint->Module to open a page for Module maintenance.



Module Maintenance Page in DDL.



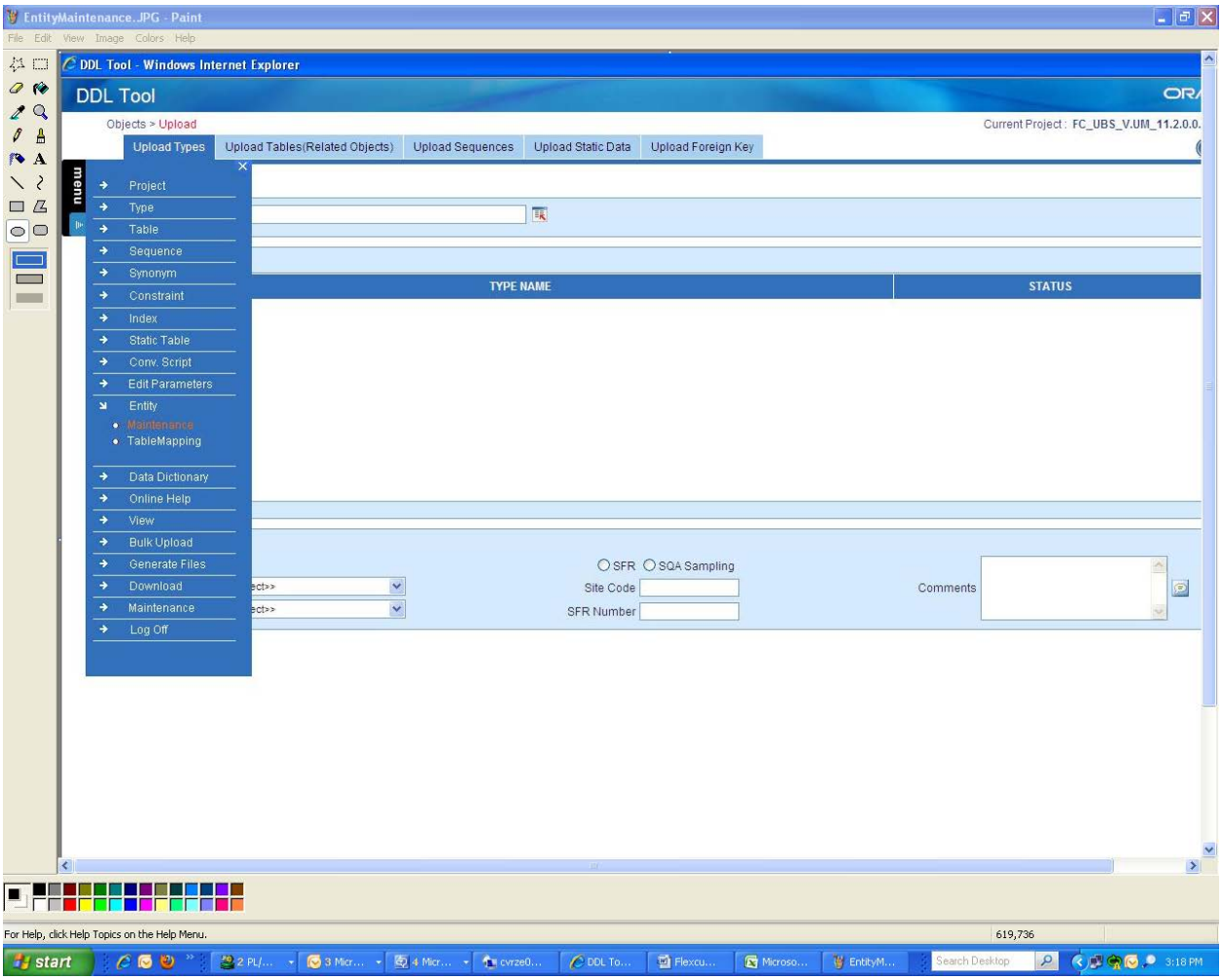
Once the Module is maintained it would appear up in the grid as shown below.



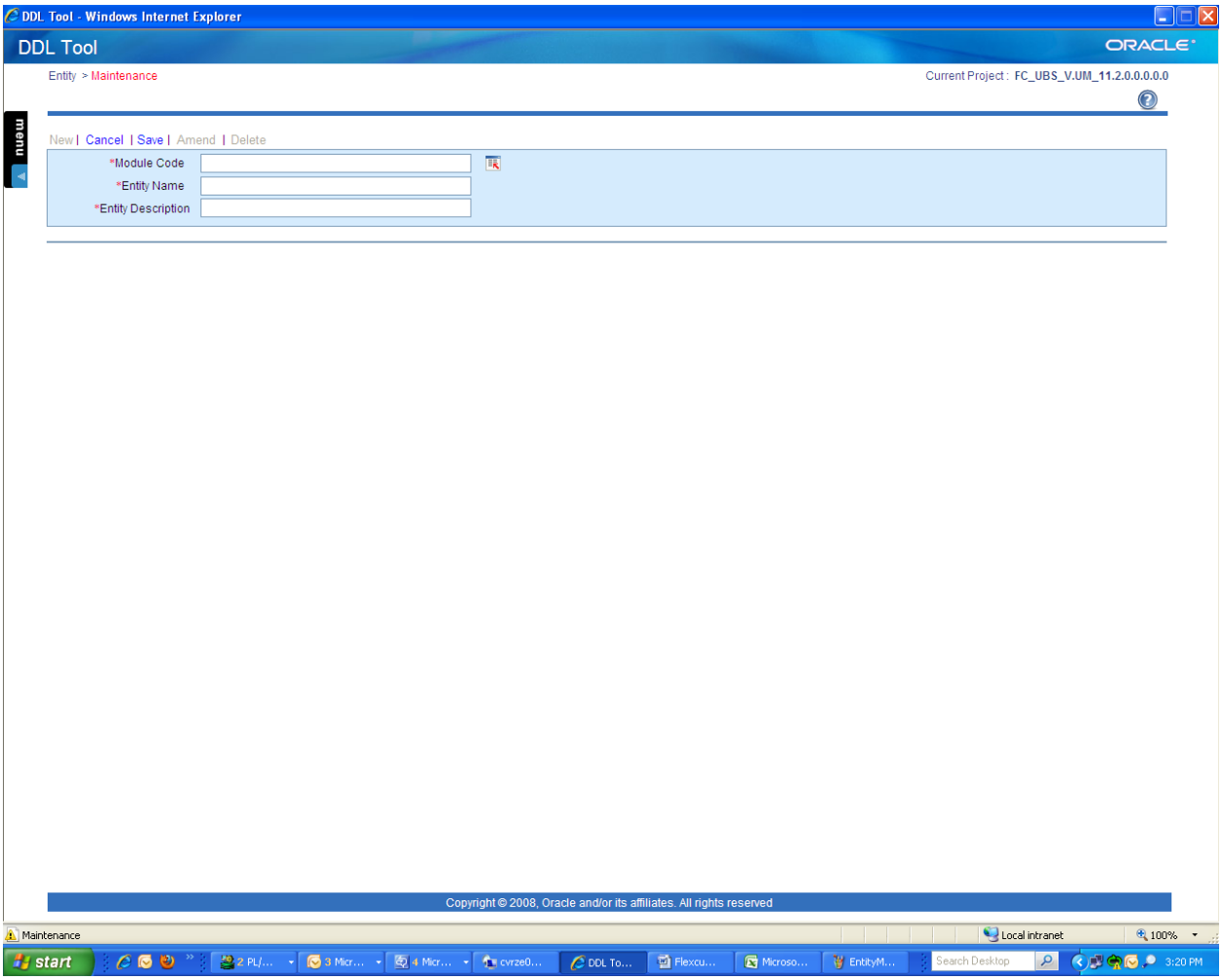
- Entity Maintenance: Once the module has been created, we then proceed to create an entity by name **FLEXCUBE Core Entity** using the UI (Menu ->Entity->Maintenance)

  Note: This is a onetime maintenance, once created the entity can be mapped to one or more tables.

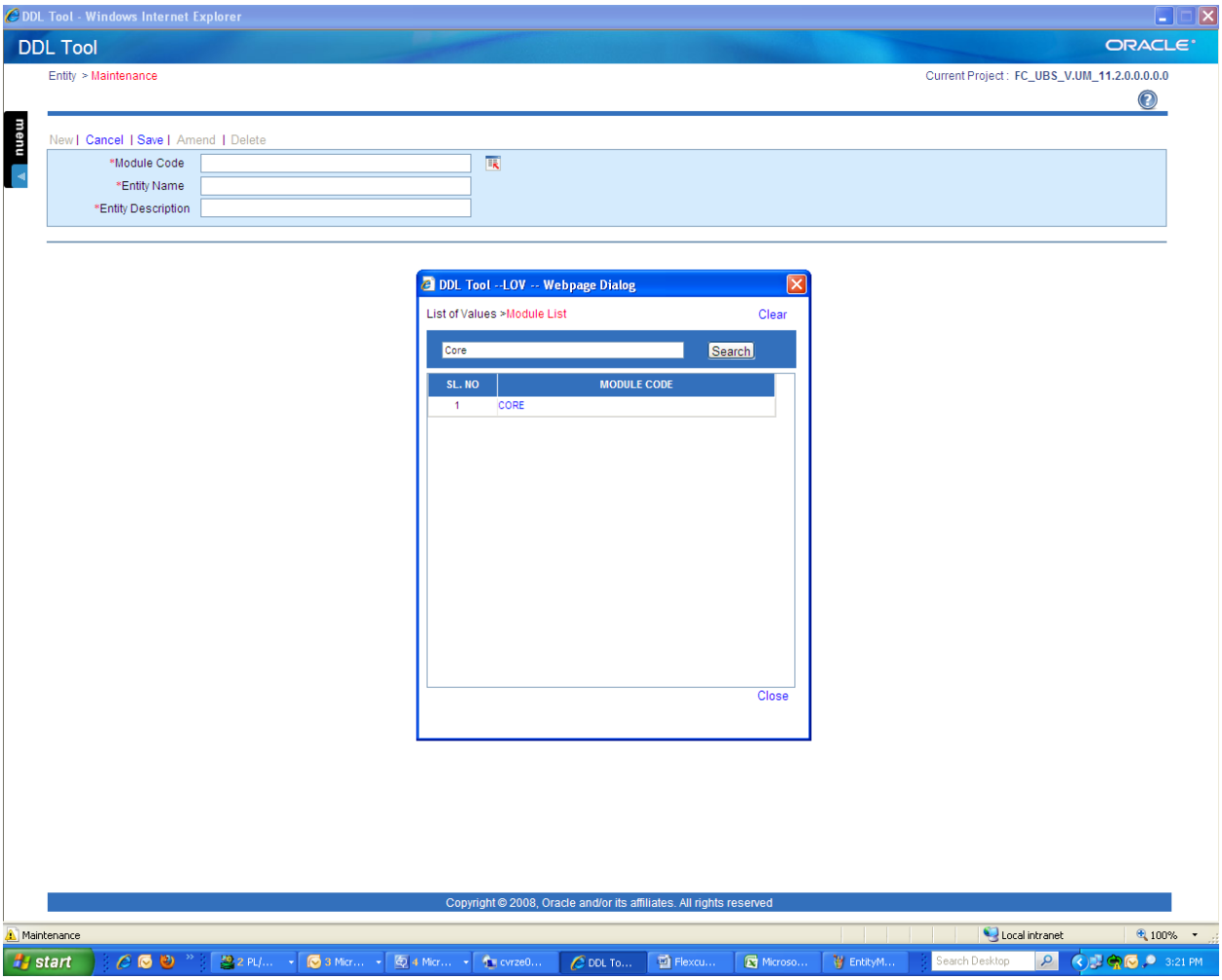
Menu->Entity->Entity Maintenance



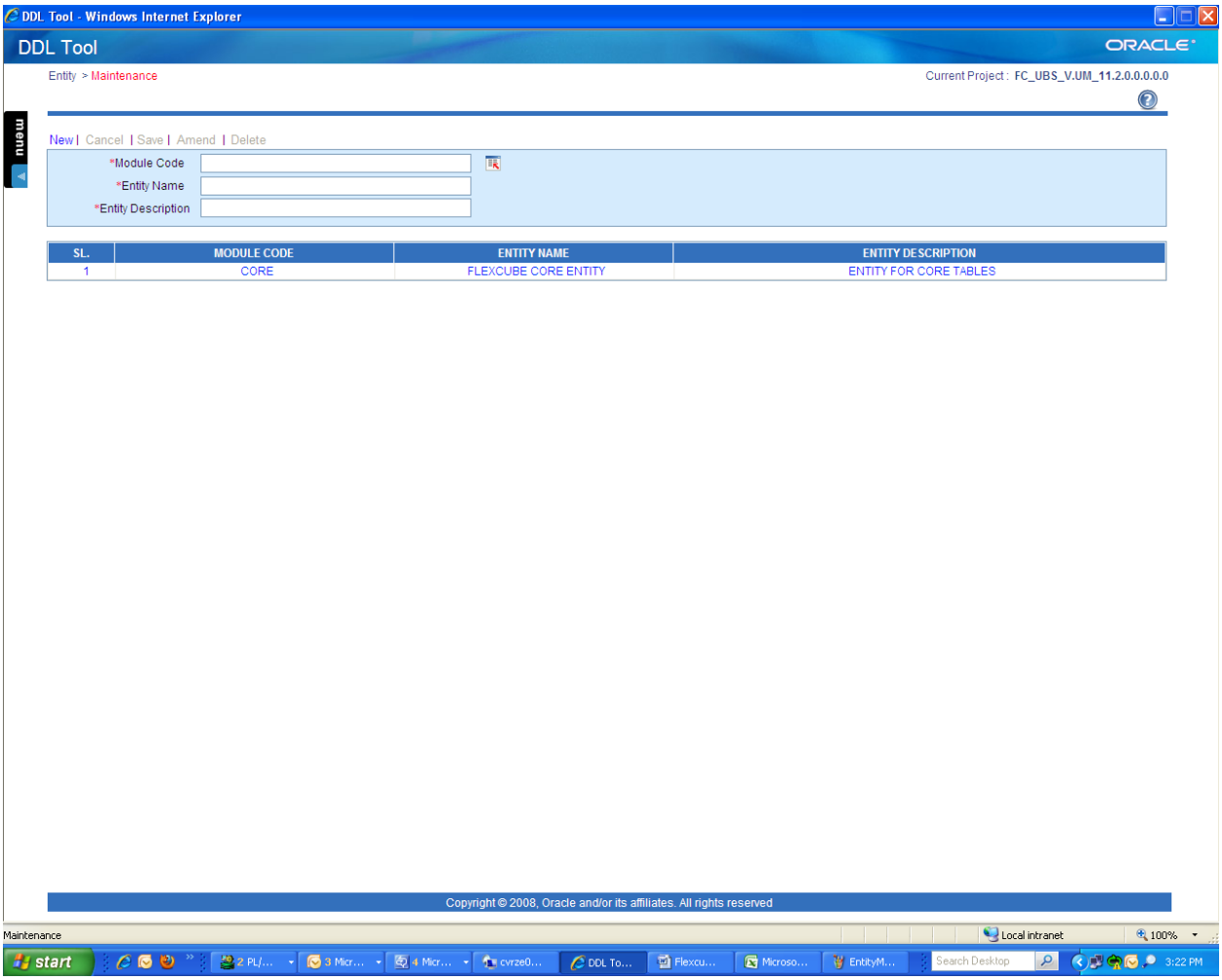
The following screen opens to maintain an entity.



Query the Module first, before maintaing the entity.



Once the Entity is maintained it appears in the grid below.



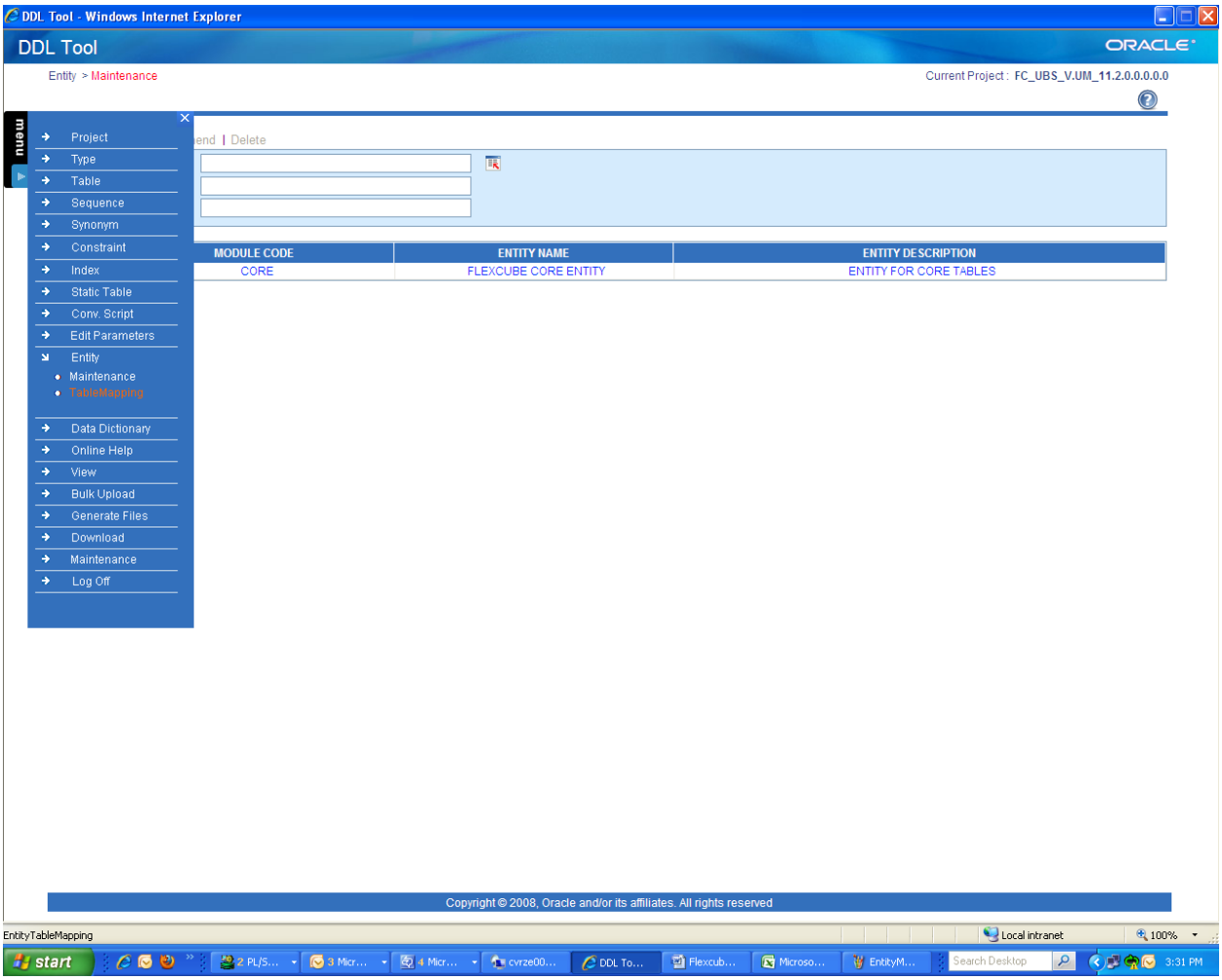
Once the entity is maintained we need to map the entity to the tables. In this case we would mapping the entity that we created to the tables STTM_BANK and STTM_BRANCH. In oder to map an entity we can either use the UI or an Excel.

Both the options would be illustrated below

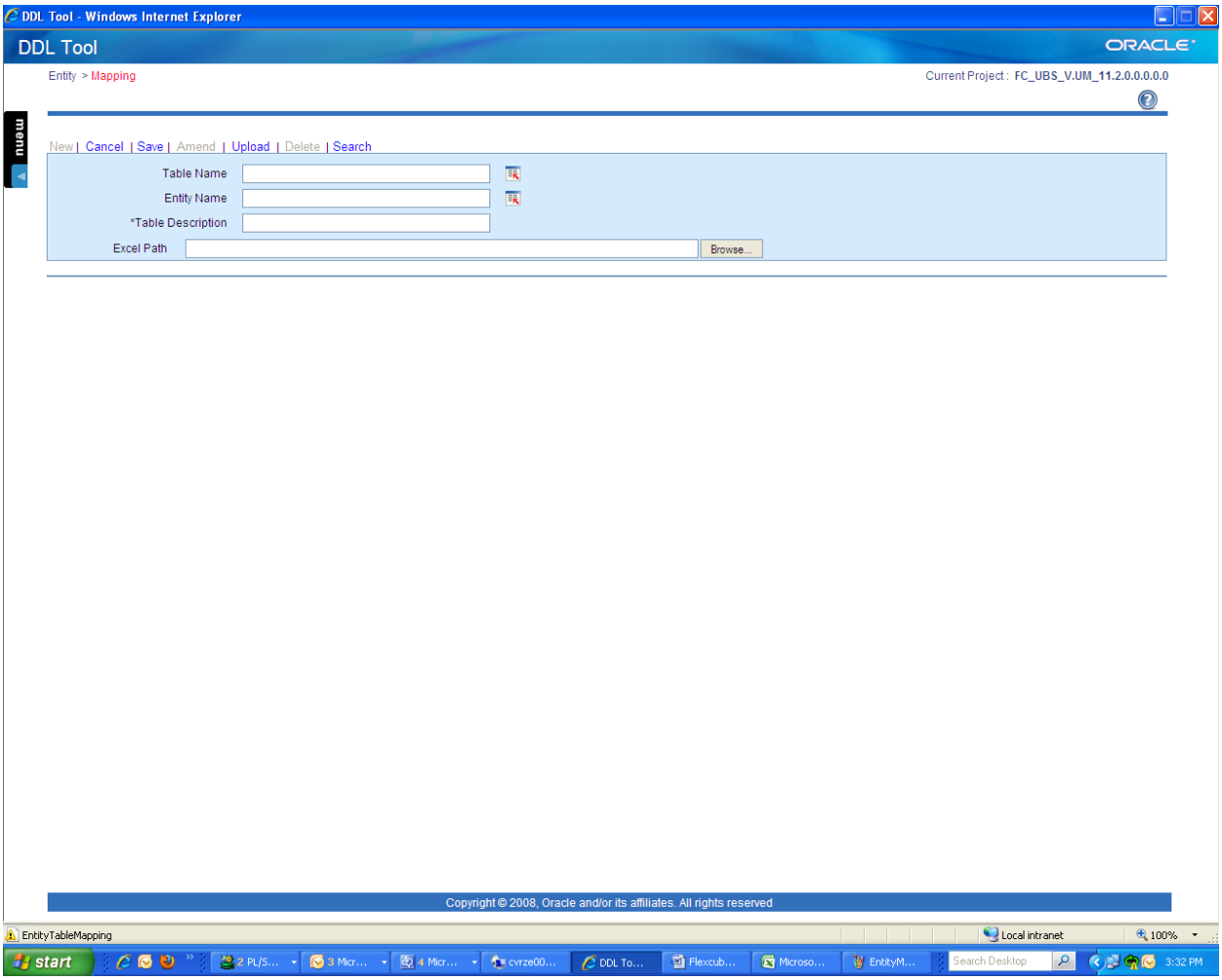
- Using UI: Go To Entity->TableMapping
- Using Excel: Go To Downloads-> Entity

Using UI

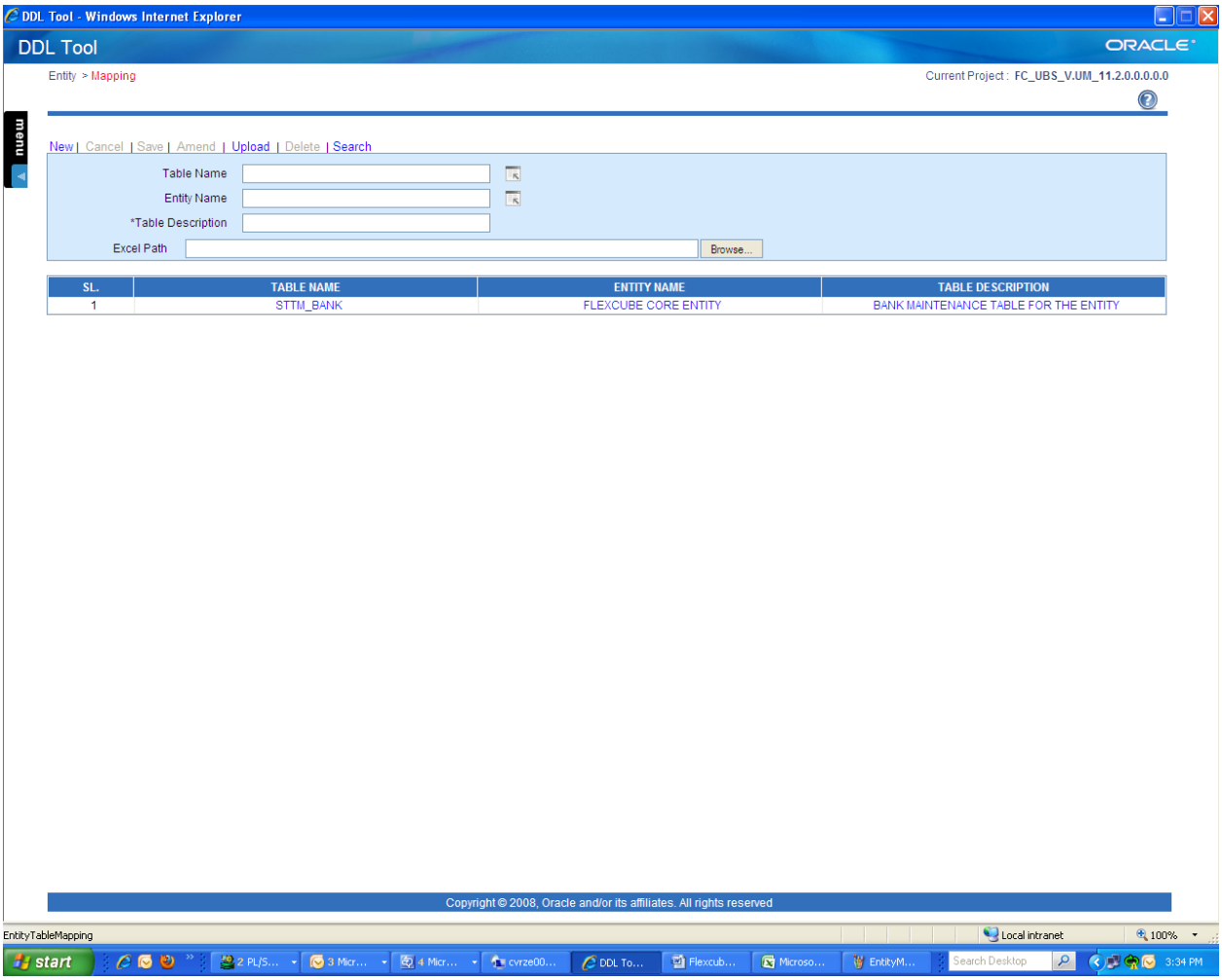
UI Option for mapping Entity to a Table. Menu->Entity->Table Mapping



When we click on table mapping the following screen appears.



Query the Lov and select the Table name and bank name as shown. Entity Mapped to the Table STTM_BANK

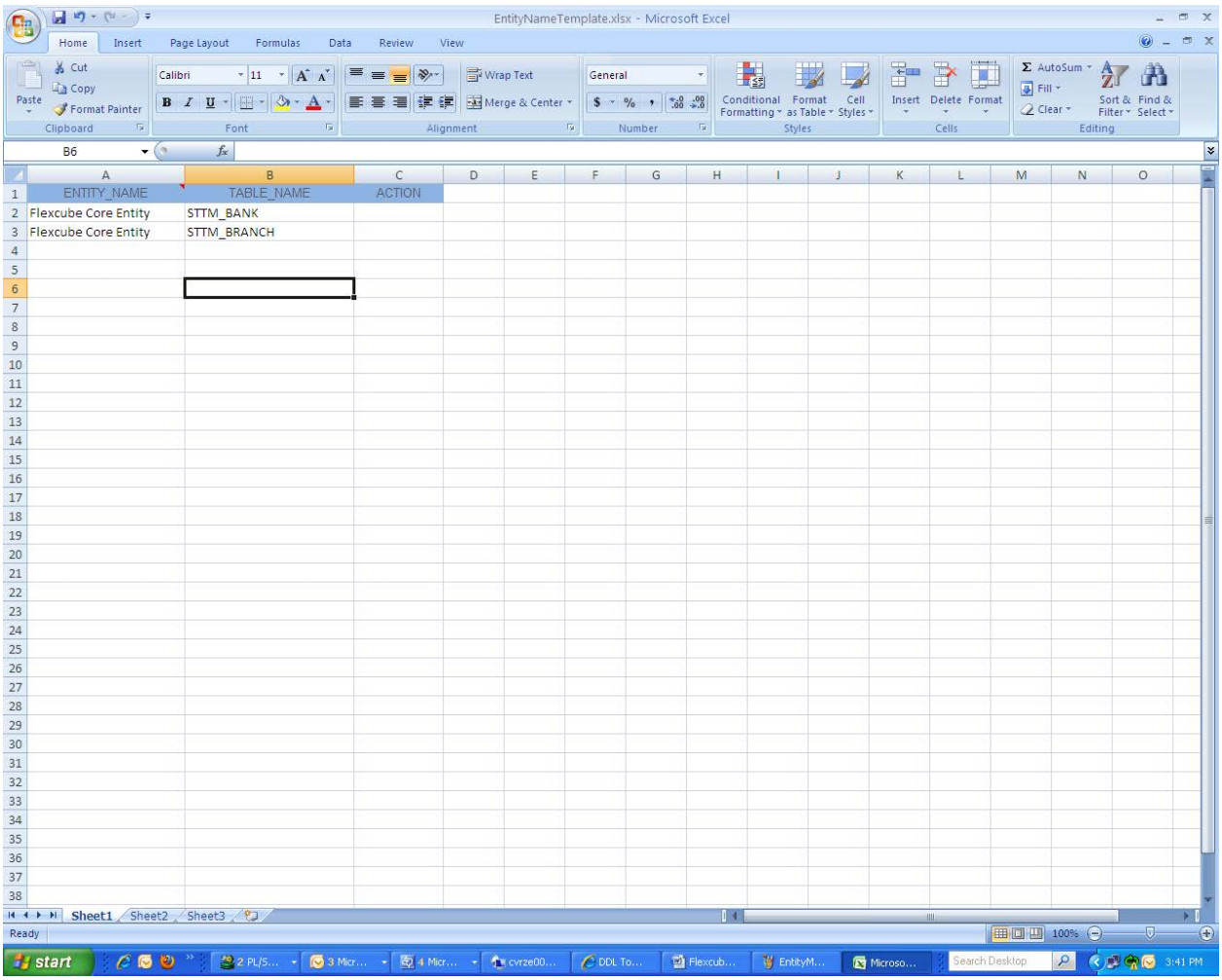


Using Excel

Download the template as specified using Downloads->entity, fill the excel sheet and upload using the same screen. Click on Browse to pick up the Excel file and press save. Similarly we can maintain for STTM_BRANCH.

If multiple tables need to be mapped, have them as separate rows in the excel sheet as shown below.

Using Excel to have Multiple Tables mapped to an Entity. Action can be left blank,deletion of the entity mapping is required.



This completes mapping Entity Mapping, which involves module & entity maintenance, and then the Entity Table mapping.

6.3 Data Dictionary

Like help files in FLEXCUBE, we would have description keyed in for every column of the table. This would give us more clarity on the usage of the column (Metadata). We have about 5000 tables in FLEXCUBE, for which description needs to be maintained. However there are certain set of columns which are repetitive in nature.

For example, columns like Auth_stat, Record_Stat, maker_id, Checker_id etc are present across most of the tables. Therefore description need not be written for the columns whenever they repeat across tables. We would only write description once, and the same would be reused across other tables.

We predominantly use the following while maintain description for the columns of the tables.

- Common Context Id (Corresponds to New in the DDL Menu):- As explained above these are the common set of columns for which the description needs to be once maintained and reused for other tables.
- Non repetitive columns (Corresponds to Edit in the DDL Menu):- These are the columns for which description needs to be maintained.

The common context id's can be maintained either by using excel or the UI. However the Non repetitive columns can be only maintained using Excel.

Let us take an illustration, where we maintain column descriptions for the table **SMTB_MENU**. The structure of the table is as follows

```
CREATE TABLE SMTB_MENU
(
CONTROL_STRING VARCHAR2(16) DEFAULT '0000000000000000',
HO_FUNCTION CHAR(1) DEFAULT 'N',
FUNCTION_ID VARCHAR2(8),
EXECUTABLE_NAME VARCHAR2(35),
EXECUTABLE_TYPE CHAR(1) DEFAULT 'F',
AVAILABLE NUMBER(1,0) DEFAULT 0,
AEOD_AWARE NUMBER(1,0) DEFAULT 0,
LOG_EVENT NUMBER(1,0) DEFAULT 0,
CUST_ACCESS NUMBER(1,0) DEFAULT 0,
MENU_HEAD VARCHAR2(10),
TYPE_STRING VARCHAR2(4),
MODULE VARCHAR2(2),
ALLOW_ONLY_IN_NORMAL CHAR(1),
ALLOW_IN_DEMO CHAR(50),
AUTO_AUTH CHAR(1),
BRANCH_PROGRAM_ID NUMBER DEFAULT 0,
LOGGING_REQD VARCHAR2(1),
ROUTING_TYPE VARCHAR2(1),
SESSION_INTERVAL NUMBER(22,0),
MAX_RES_ROWS NUMBER(22,0) DEFAULT 10,
BL_AVAILABLE VARCHAR2(1),
UI_NAME VARCHAR2(8),
RECORD_STAT VARCHAR2(1) DEFAULT 'O',
AUTH_STAT VARCHAR2(1) DEFAULT 'A',
ONCE_AUTH VARCHAR2(1) DEFAULT 'Y',
MOD_NO NUMBER(4,0) DEFAULT 1,
MAKER_ID VARCHAR2(12),
MAKER_DT_STAMP DATE,
CHECKER_ID VARCHAR2(12),
CHECKER_DT_STAMP DATE,
PROCESS_CODE VARCHAR2(4),
MASTER_FUNC_ID VARCHAR2(8),
FUNCTION_ORIGIN VARCHAR2(10),
PARENT_ORIGIN VARCHAR2(10),
```

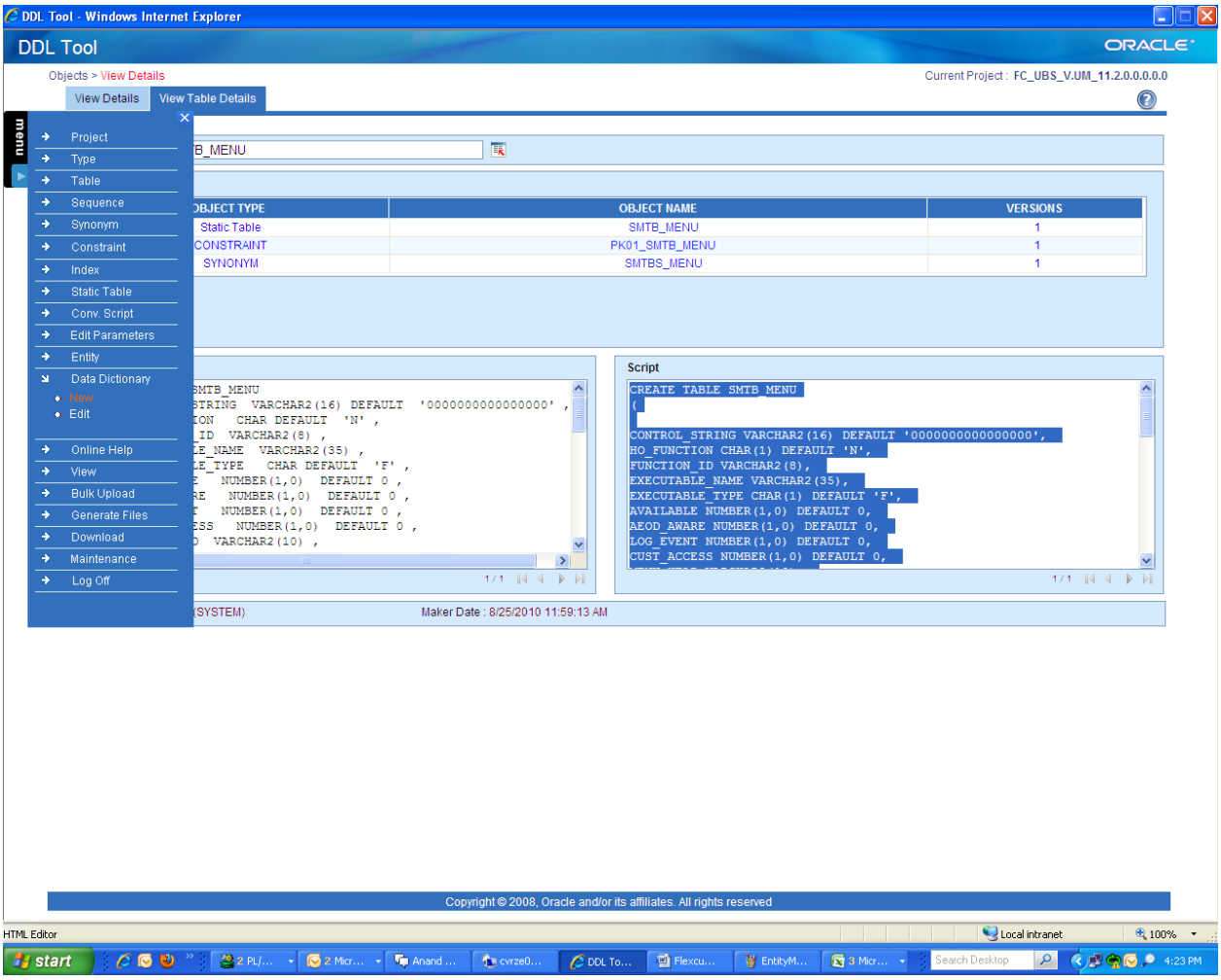
```
PARENT_FUNCTION VARCHAR2(8),
DUPLICATE_TASK_CHK CHAR(1),
FIELD_LOG_REQD VARCHAR2(1) DEFAULT 'N',
TANK_MODIFICATIONS VARCHAR2(1),
EOD_FUNCTION CHAR(1) DEFAULT 'N',
USER_FUNCTION_ID VARCHAR2(8),
REMARKS_REQD VARCHAR2(1) DEFAULT 'N',
DUAL_AUTH_REQD VARCHAR2(1) DEFAULT 'N',
EXPORT_REQD VARCHAR2(1) DEFAULT 'N')
;
```

Note: The structure of the table can be picked up from DDL using View Objects.

Step1: Identify those columns which are common and that would get reused across tables. Few of them have been highlighted in red.

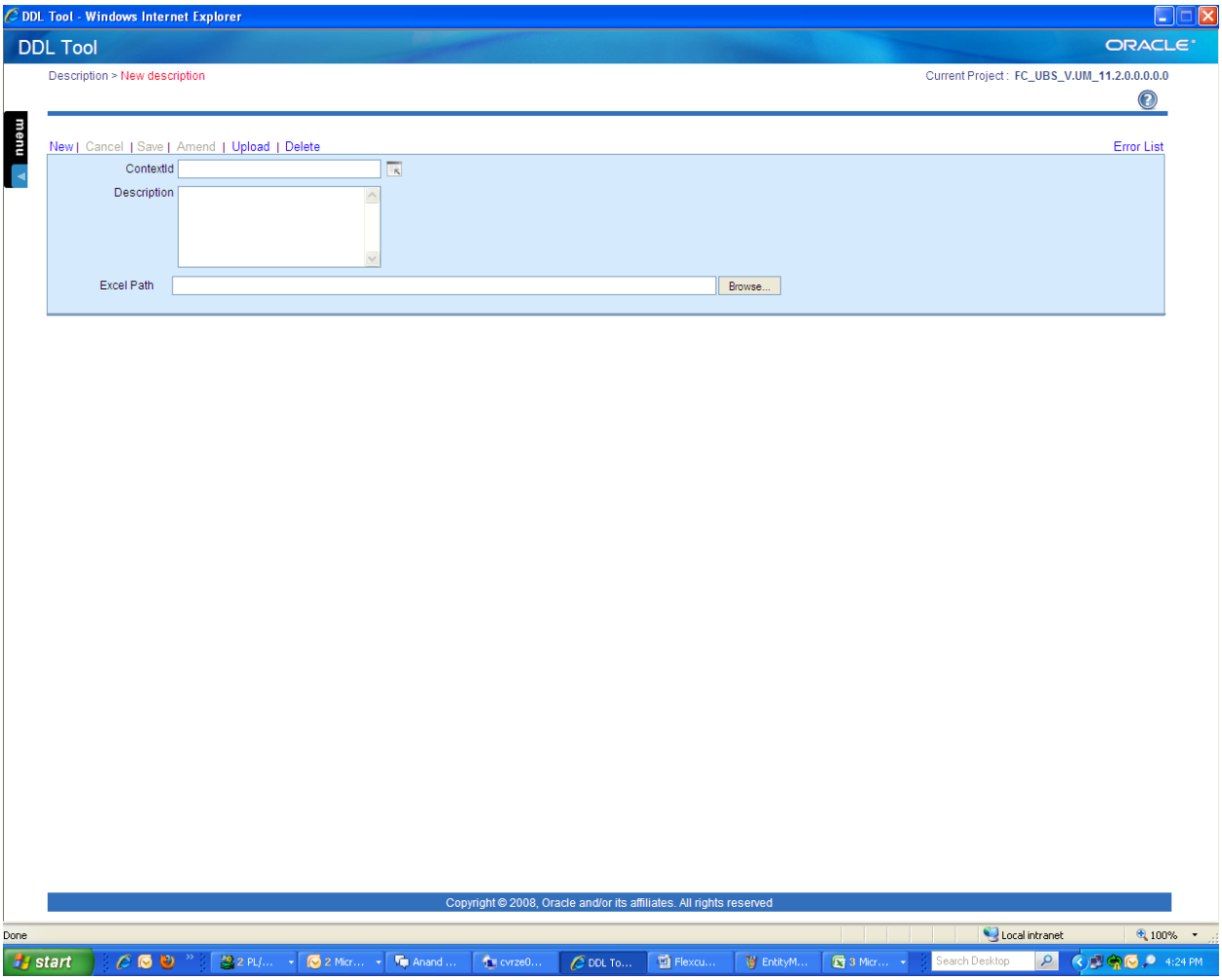
For such columns check if maintenance has already been done, if not the description needs to be maintained using the UI or excel. Both the methods have been illustrated below.

For UI:- Goto Menu->Data Dictionary ->New
Maintaing Common ContextID's. Menu-> Data Dictionary->New



The following screen would appear.

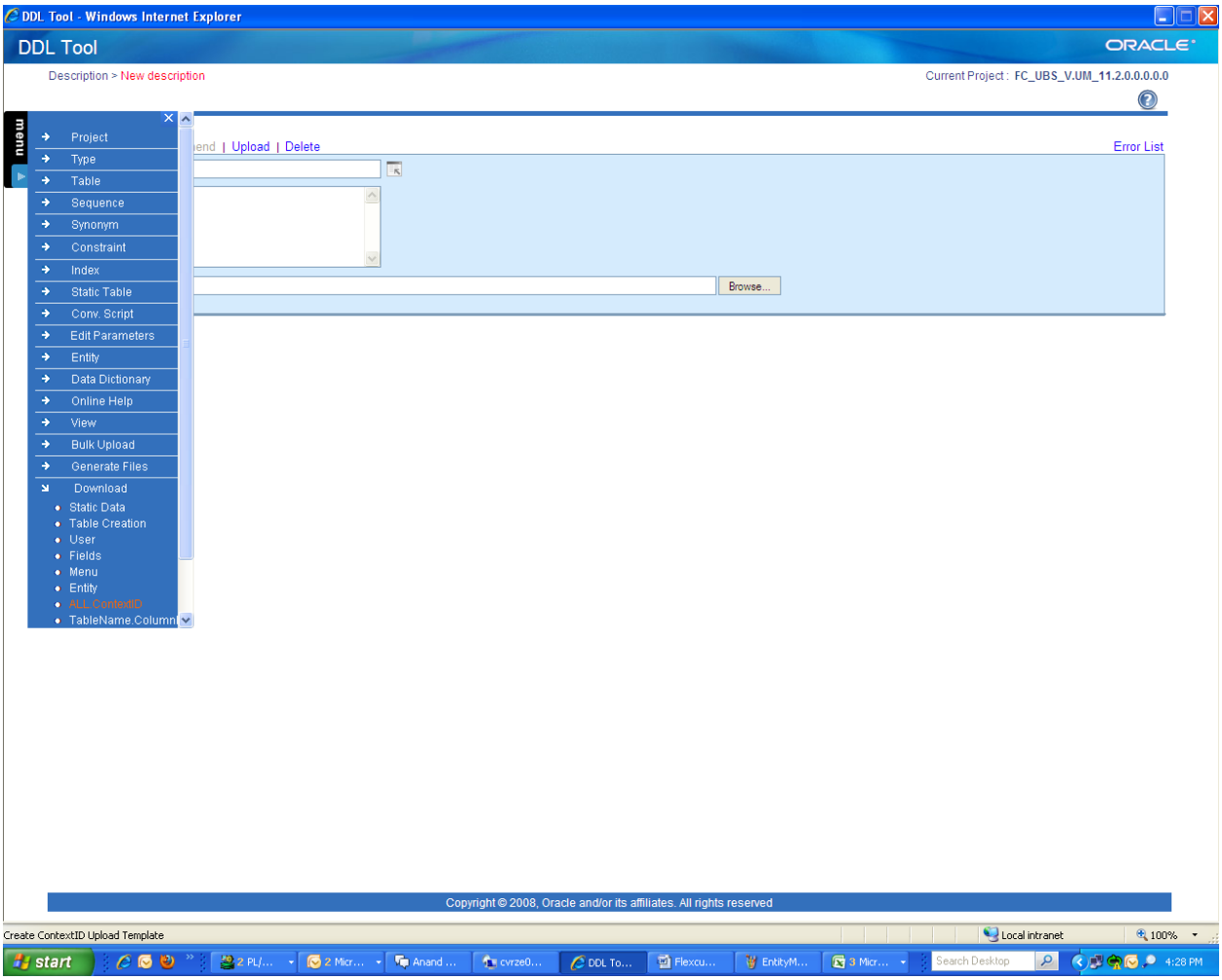
Context Ids for Common columns if any, would be dispalyed in the grid below. One can also query using the lov After aclicking on New.



Since RECORD_STAT is a common column, we would maintain it here. We would enter in the format "**TableName.ColumnName**". So for RECORD_STAT we would have SMTB_MENU.RECORD_STAT in the context id textbox. Also we would maintain the corresponding description for RECORD_STAT. Once saved, it would populate in the grid, also for any other table having the column RECORD_STAT, the same description would be reused.

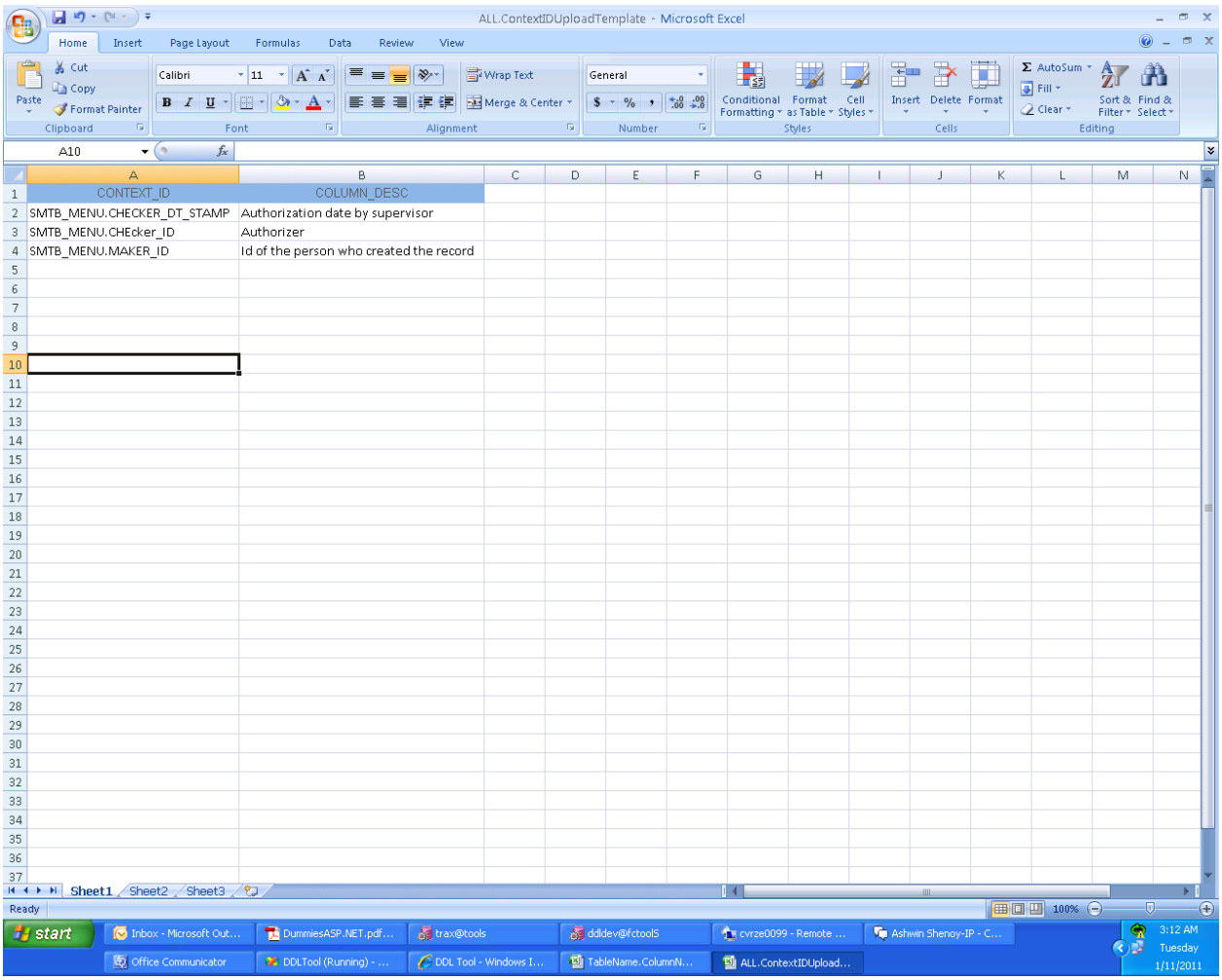
The columns marked in Red can be individually maintained here using the UI or the corresponding excel can be downloaded using the link menu->Download->All.Contextid

Excel can be downloaded using the link menu->Download->All.Contextid



Download the excel and fill the values as shown below and upload it in the same screen as UI. Click on Upload details ,browse and then save.

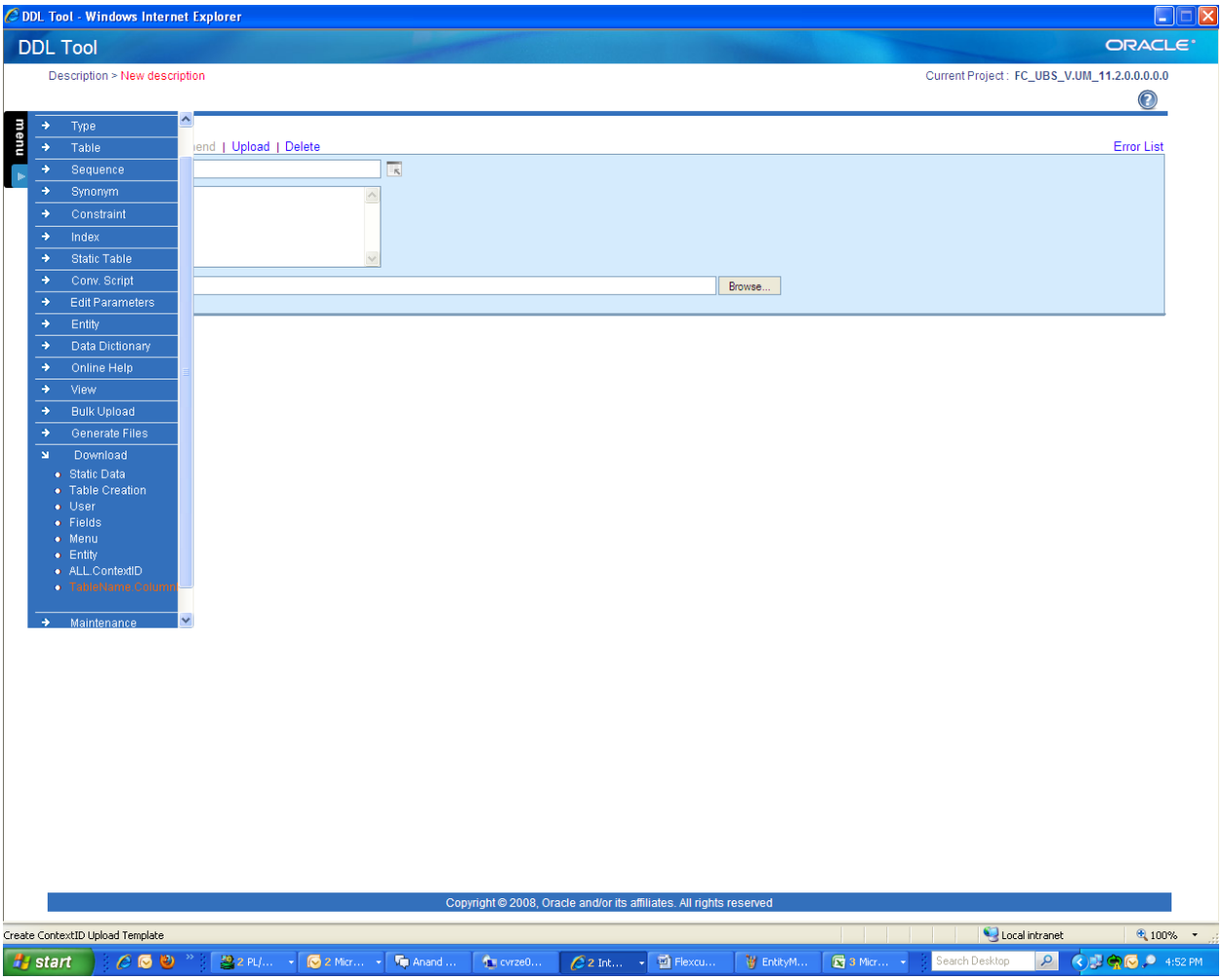
*Note: In the excel,Context_id column should be mainatined in the format "**TableName.ColumnName**" as shown below.*



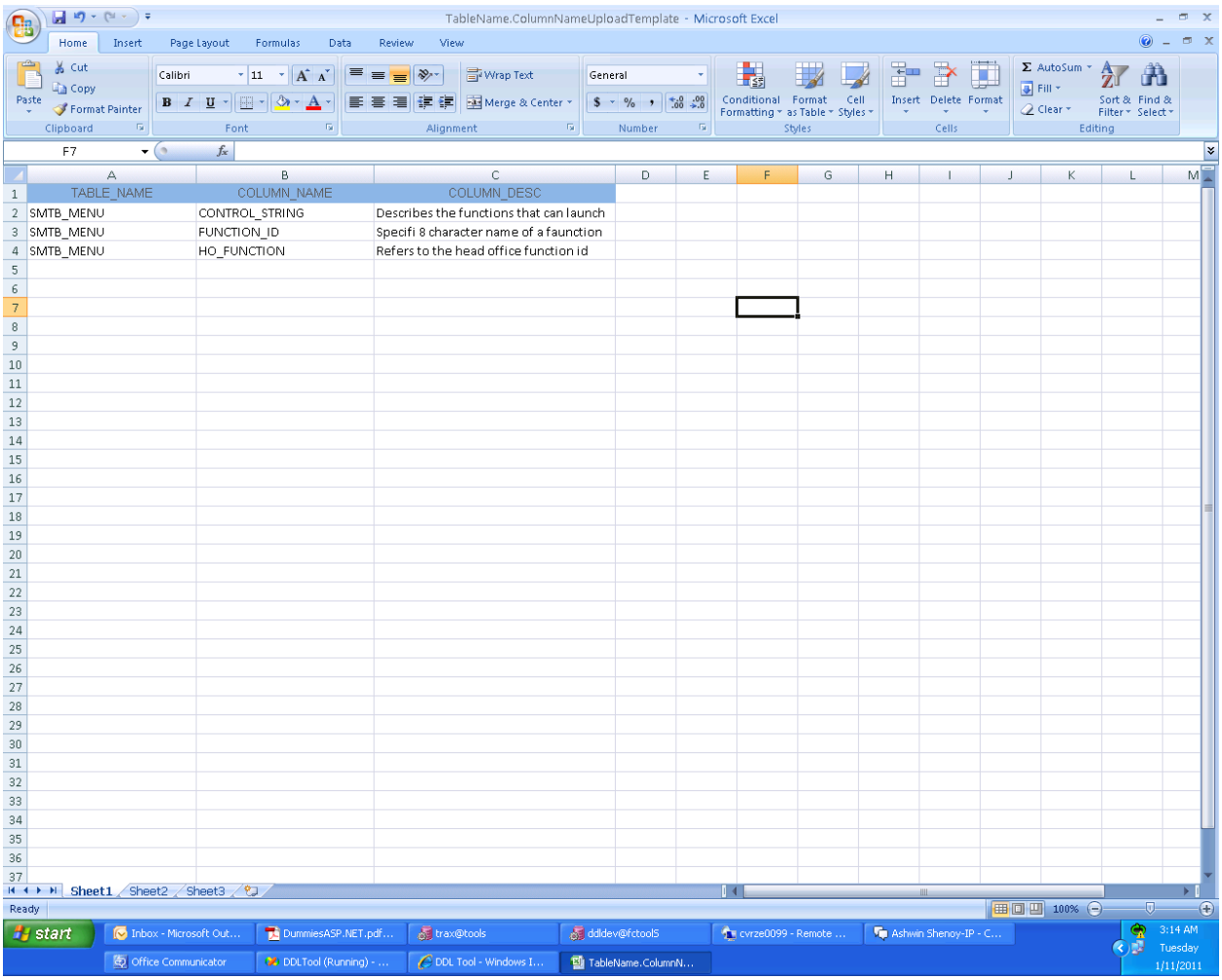
This would create description for the common set of columns that would be used across the tables of flex cube. Going forward we would not have to maintain description for the corresponding fields.

Note: However in other tables we would still have to link the corresponding column (Common columns) to the description that we have already maintained.

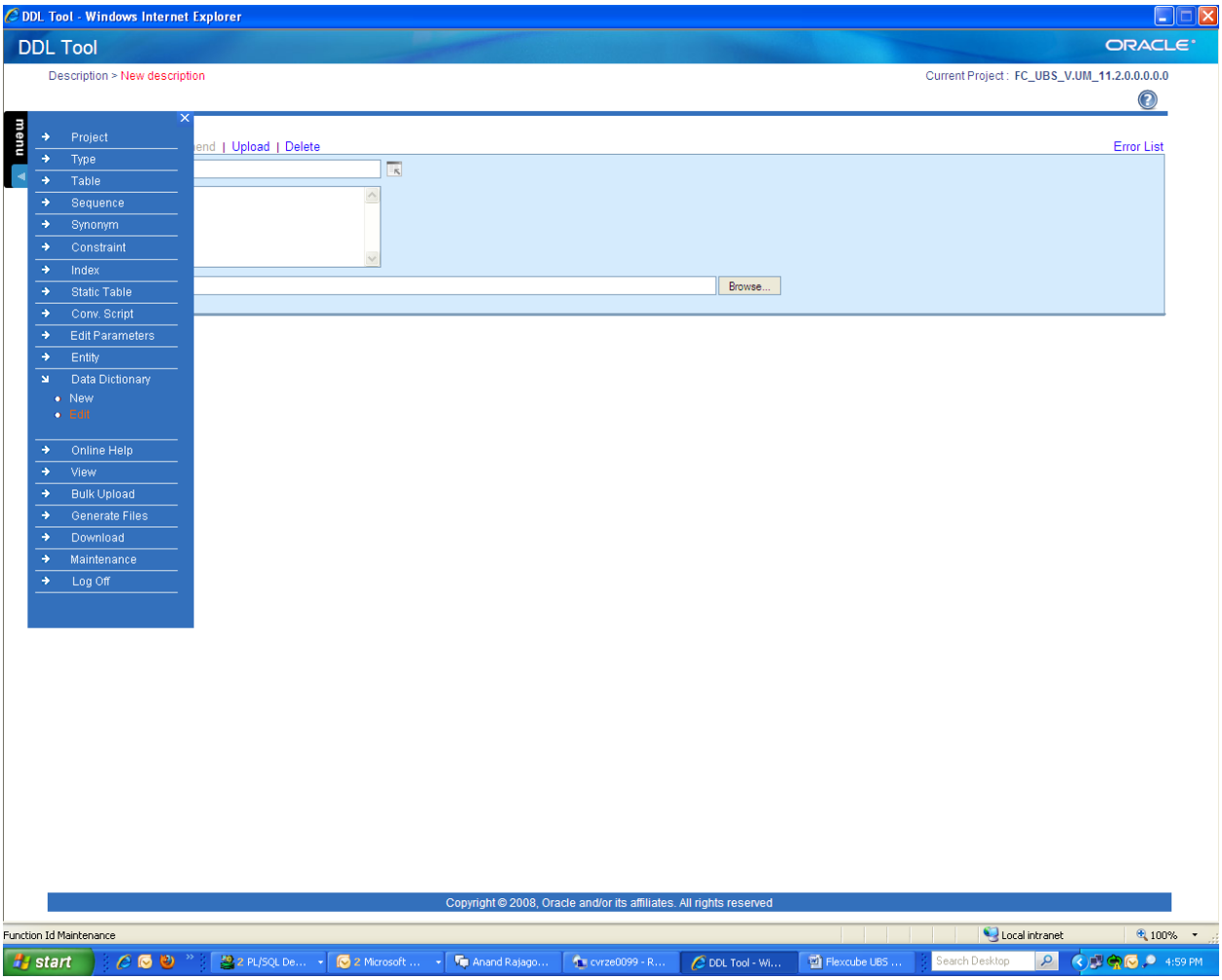
Now for the remaining columns of the table SMTB_MENU which are non repeating, the excel needs to be downloaded from the location Menu->Downloads->TableName.ColumnName Excel Download For non repetitive Columns



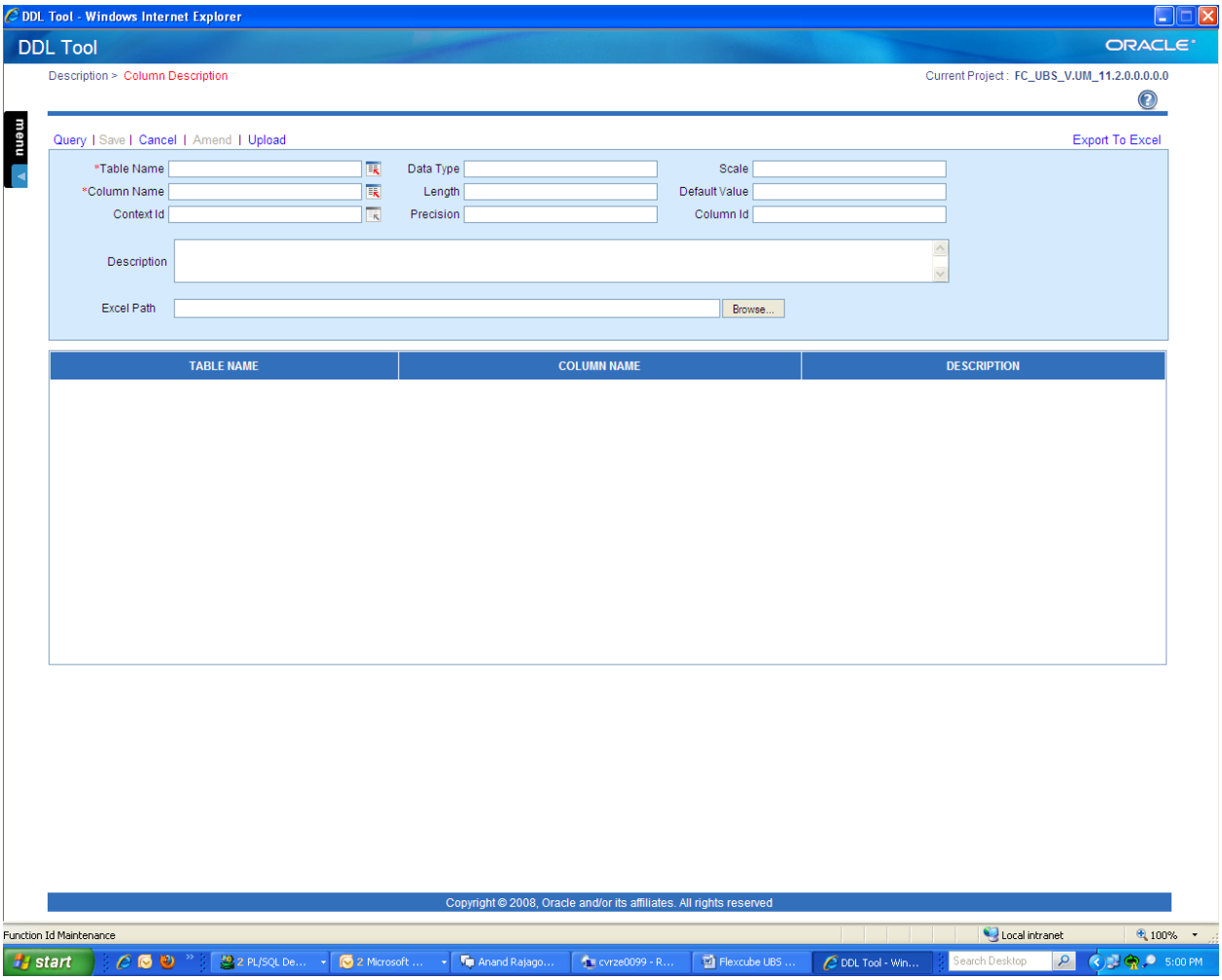
Once the excel is downloaded, values need to be filled as shown in the snapshot below.



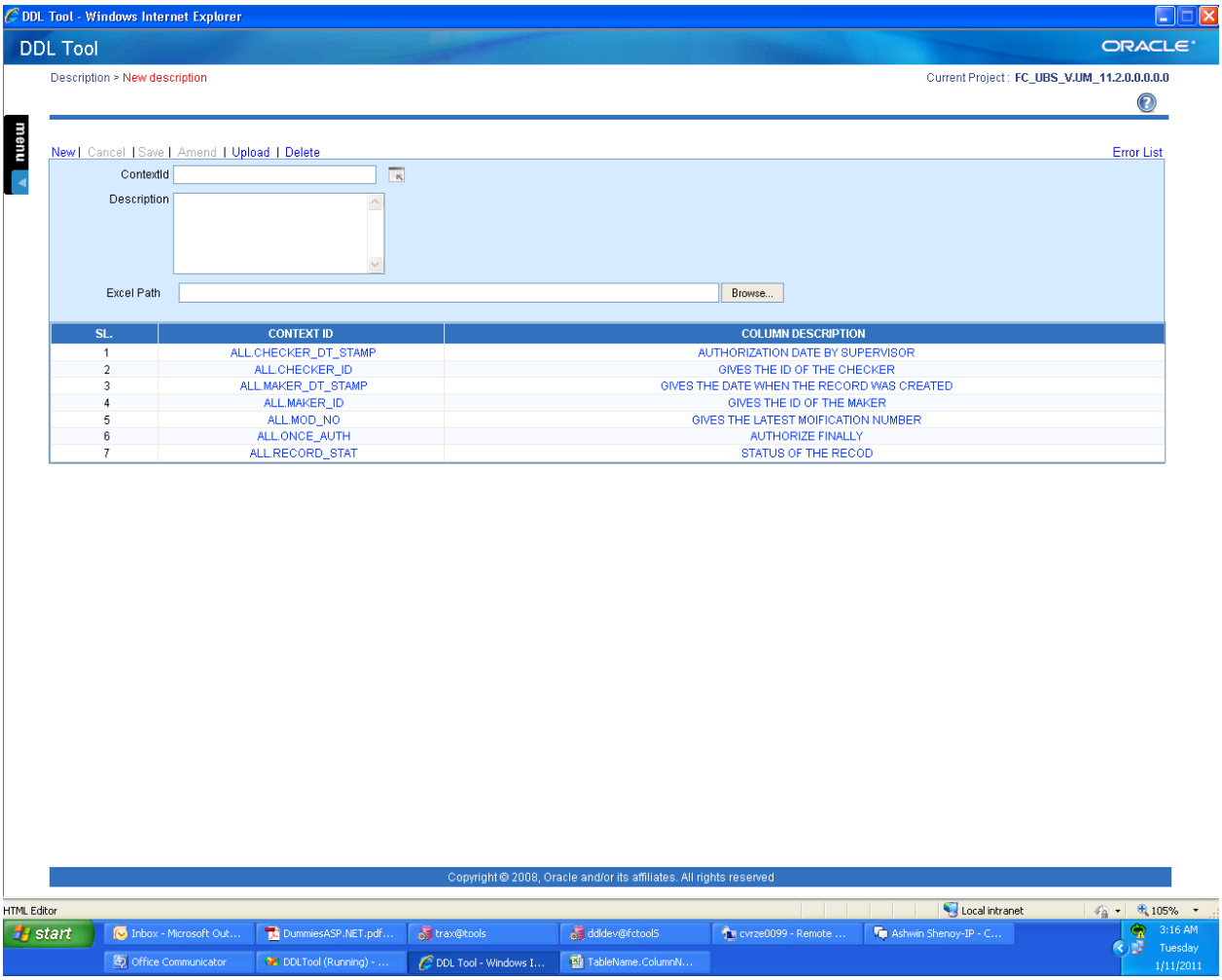
Once we have the excel filled we can upload it in DDL using the following screen.
Menu->Data Dictionary->Edit



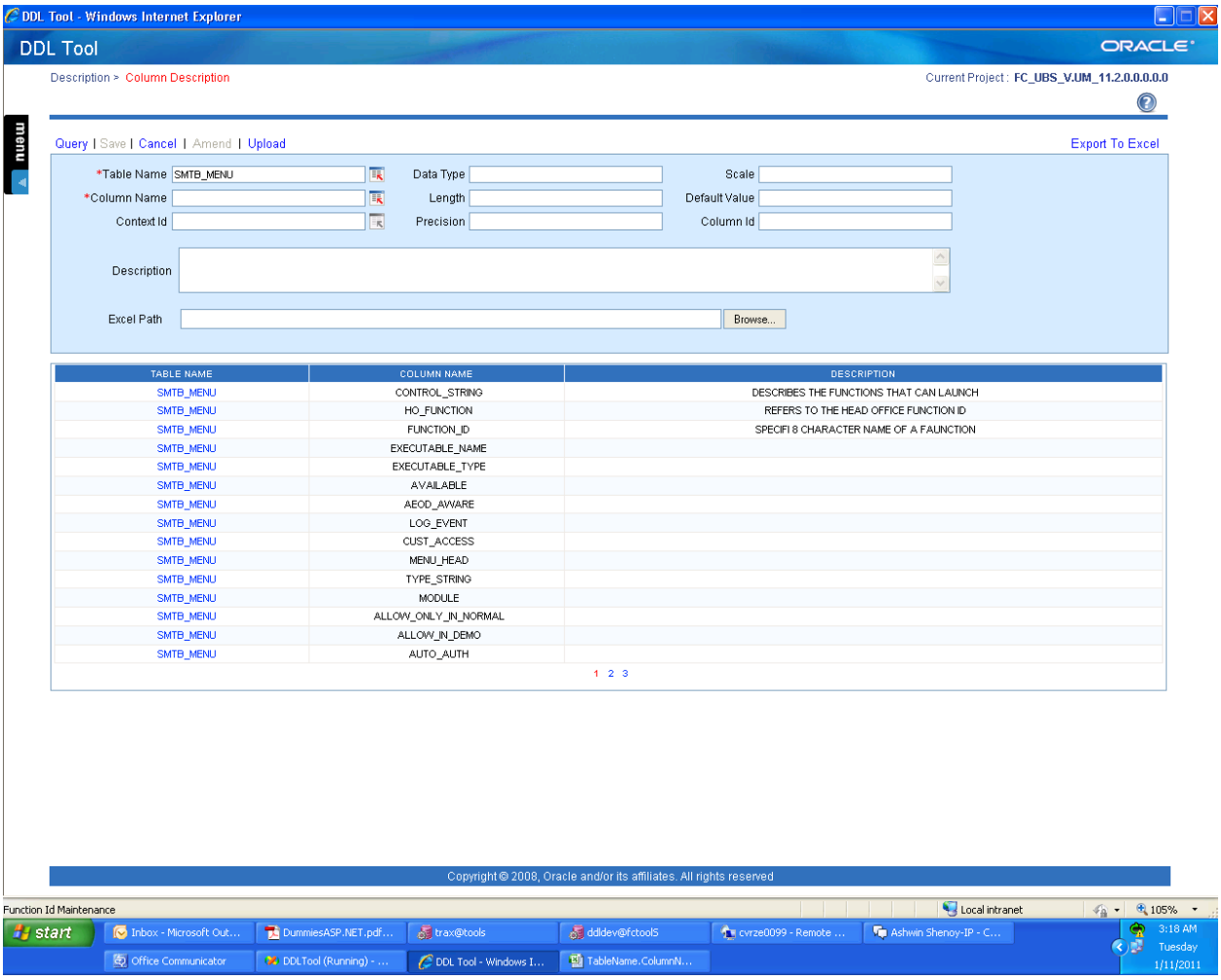
The Following screen would be dispalyed. Click on Upload and browse the excel containing the records and then save.



SnapShot of the screen containing Common Context Ids:-

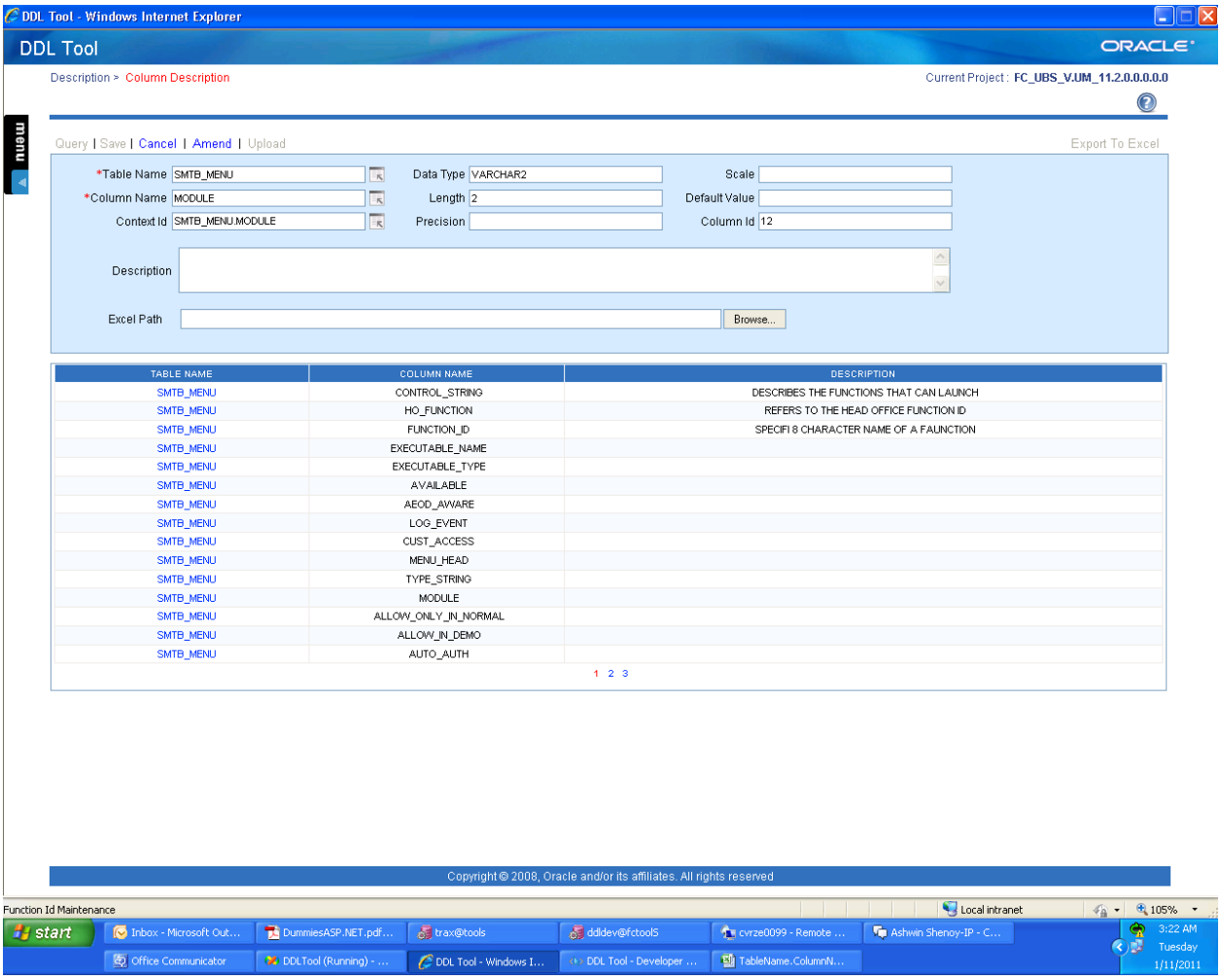


Snap shot of the screen containing Non Repetitive Columns.

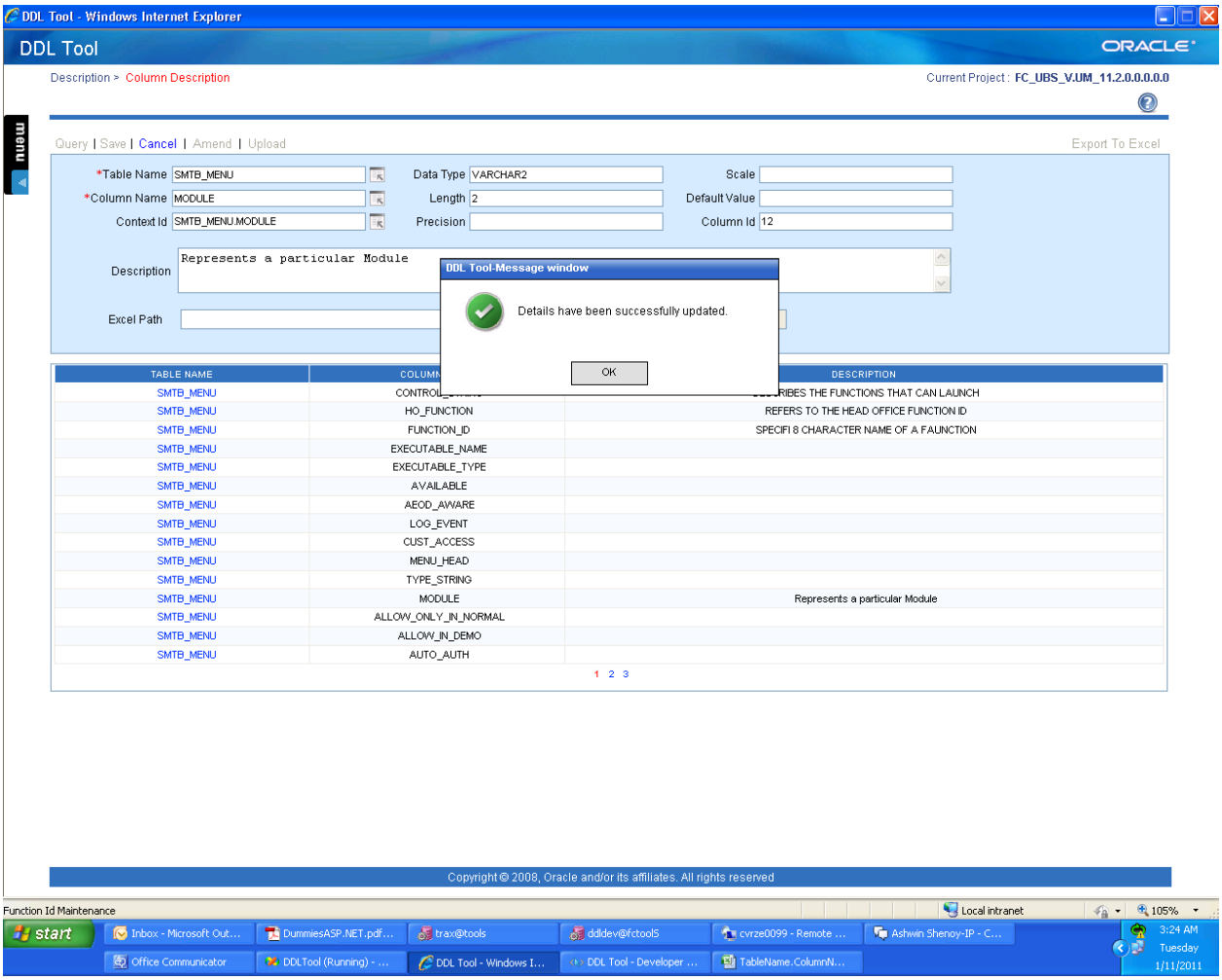


The columns for which description is maintained gets populated in the right hand side of the grid.

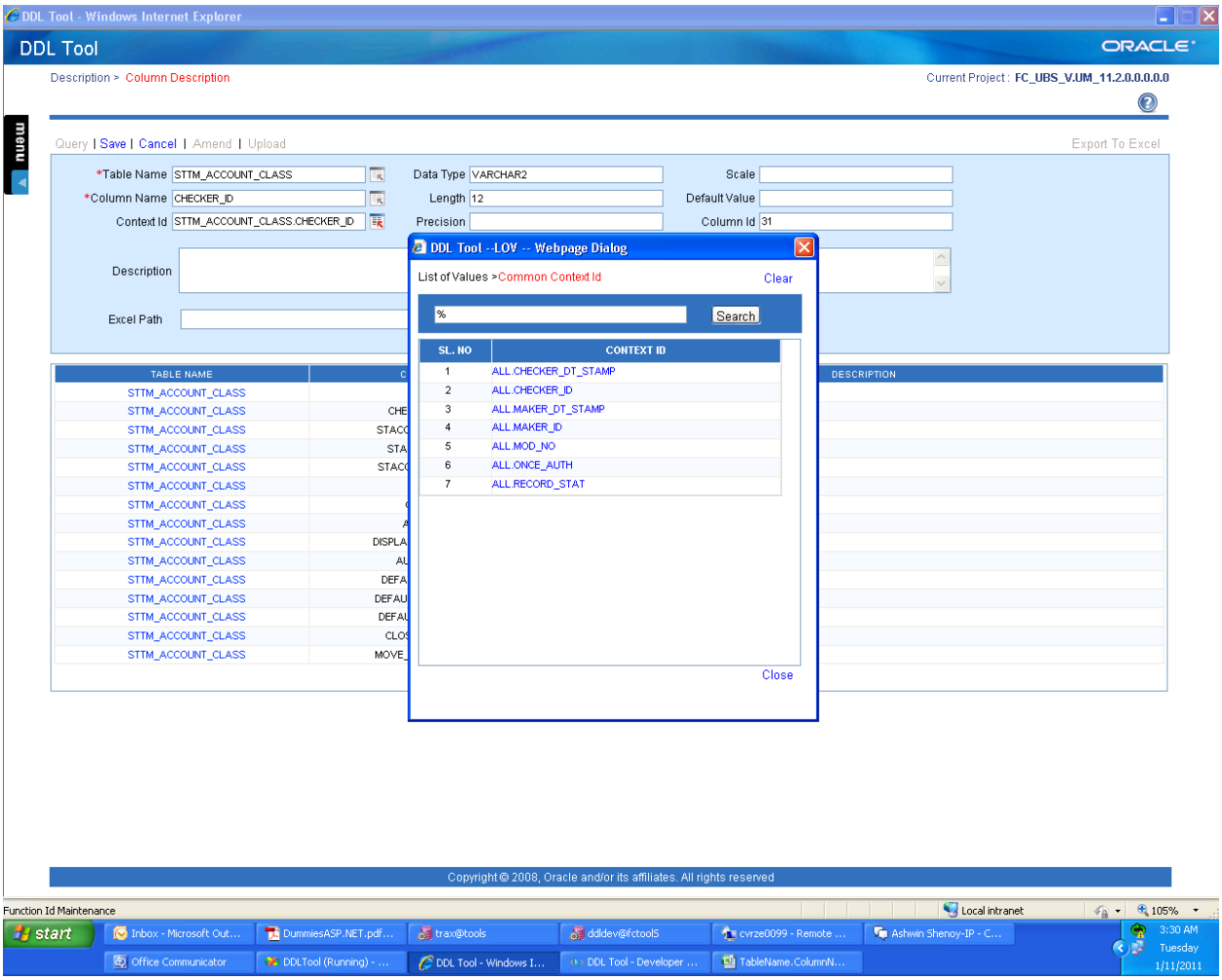
One can also add description from the front end. Click on SMTB_MENU for a particular columns name, for ex: Module. Then the text boxes above would get populated.



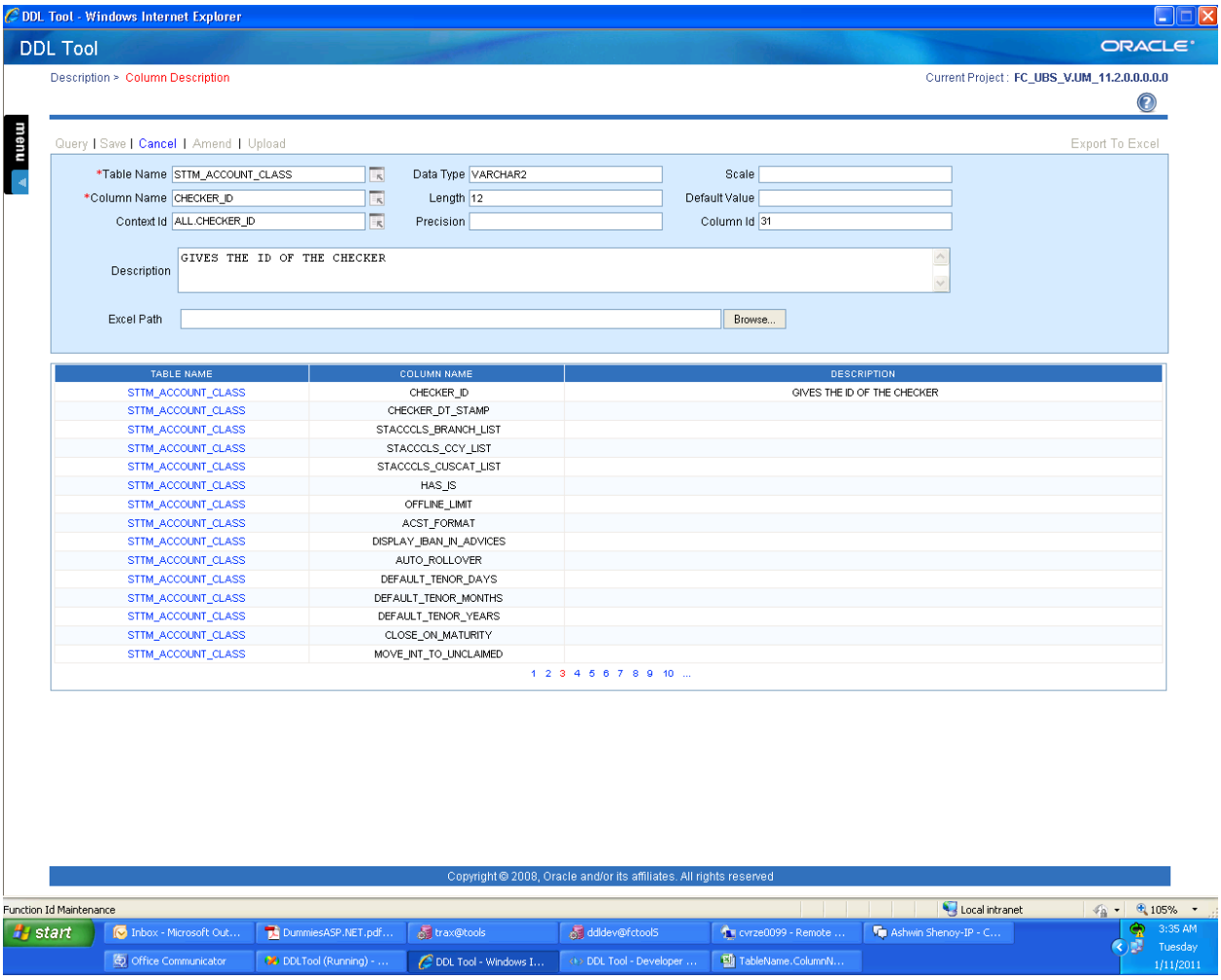
Click on amend and key in the description for Module. Attached is the snapshot



We have already maintained checker id for SMTB_MENU. Now for checker id in STTM_ACCOUNT_CLASS, then click on the table name link having checker id as the column, click on amend and pick up checker id from the contextid LOV and then save.
Select All.Checker_id, as its already been maintained



Checker ID gets populated.



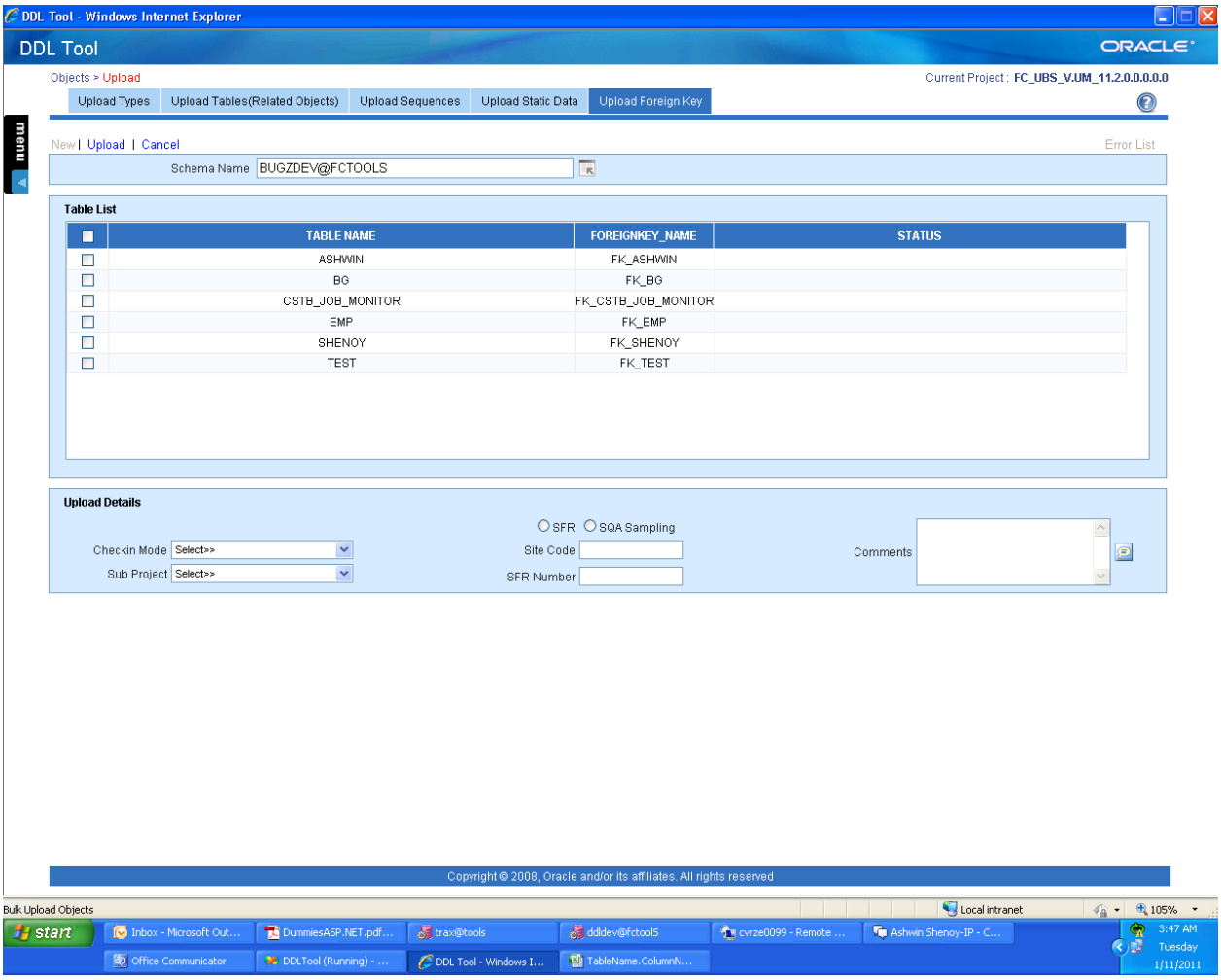
Hence we can maintain descriptions for various columns of the tables.

6.4 Data Model - Foreign Key Maintenance

Foreign Key's can be maintained using the bulk upload option. We use the upload from schema option. In the schema foreign keys need to be maintained for the tables. The bulk upload option would give out a list of foreign keys that you wish to upload.

Attached below is the snapshot.

Note: The schema needs to be maintained from which you would be trying to upload. Also, the corresponding foreign keys need to be maintained.


DDL Tool - Windows Internet Explorer
DDL Tool
ORACLE
Objects > Upload
Current Project : FC_UBS_V.UM_11.2.0.0.0.0.0
Upload Types
Upload Tables(Related Objects)
Upload Sequences
Upload Static Data
Upload Foreign Key
menu
New | Upload | Cancel
Error List
Schema Name BUGZDEV@FCTOOLS
Table List
TABLE NAME
FOREIGNKEY_NAME
STATUS
ASHWIN
FK_ASHWIN
BG
FK_BG
CSTB_JOB_MONITOR
FK_CSTB_JOB_MONITOR
EMP
FK_EMP
SHENOY
FK_SHENOY
TEST
FK_TEST
Upload Details
SFR
SQA Sampling
Checkin Mode
Select>>
Site Code
Comments
Sub Project
Select>>
SFR Number
Copyright © 2008, Oracle and/or its affiliates. All rights reserved
Bulk Upload Objects
Local intranet
105%
start
Inbox - Microsoft Out...
DummiesASP.NET.pdf...
traxi@tools
ddldevi@fctoolS
cvrze0099 - Remote ...
Ashwin Shenoy-IP - C...
Office Communicator
DDLTool (Running) - ...
DDL Tool - Windows I...
TableName.ColumnN...
3:47 AM
Tuesday
1/11/2011

FCIS-FD05-03-01-DDL-Reference
April [2014]
Version 12.0.1.0.0

Oracle Financial Services Software Limited
Oracle Park
Off Western Express Highway
Goregaon (East)
Mumbai, Maharashtra 400 063
India

Worldwide Inquiries:
Phone: +91 22 6718 3000
Fax:+91 22 6718 3001
www.oracle.com/financialservices/