



# ILP PROGRAM - ORACLE APPLICATIONS

## Tata Consultancy Services Custom.pll Study Guide

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## Document Control

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## How to use this manual



Video1: Script: Vid1-Introduction to the chapter and its content – Face recording.

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This video will introduce the material covered in this pdf, the goals,

1. How this document is organized
2. What is the purpose of this document
3. What will you achieve after going through the document and related videos
4. How to read this document
5. How does it relate to the work you will be doing on real project
6. Reference to other reading materials for further references

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This manual has been organized as a step by step guide to teach how to create reports using Oracle Developer Suite 10G. The target audience is new comes to Oracle Developer suite. It assumes that the reader has basic knowledge of Oracle concepts and PL/SQL. After completing this course, you will be able to create variety of reports using Oracle Developer Suite 10G.

This manual is organized to be read in a serial fashion and follow the instructions given in the document as it is. Practical examples are given in each section to guide you through every step. The tables referred here are common (shared) tables used by different batches, so care should be taken not to delete or update the rows which does not belong to you, this may create problem for the other batches. At the end of the course, you should delete the data you have created.

There are several symbols used to designate particular sections, which are described below:



- Describes the purpose of the section.



- Notes relevant to the section above



- This denotes the task to be completed by the audience on his own PC. The layout of the output has to be followed as it is. For any confusion, the faculty should be contacted.

## 1. Introduction of Custom.pll

### What is CUSTOM.pll

CUSTOM.pll is a collection of PL/SQL stored procedures, functions and packages which are used for customizing the pre – seeded Oracle Application Form Modules as per the business requirements without modifying the existing code written inside the Form Module.

The Custom Library is an Oracle Forms PL/SQL Library File. It allows us to take full advantage of all the capabilities of the Developer Suite of products.

### Why it's used:

Oracle e-Business Suite is shipped with Pre – Seeded Products/Modules and Applications which is tailored to meet the requirements of any industry. As the business expands with growth happening periodically in the organization, products and applications pre – installed in Oracle e-Business Suite might not be able to address to new changes happening in the business. In order to address these new business changes Oracle e-Business Suite allows us to customize the Application according to each organization's requirements.

Oracle e-Business Suite Modules comes with pre – seeded Oracle Form Modules. These Forms Modules reside under the \$APPL\_TOP/au/forms directory in the server in .fmb file extensions.

As discussed earlier if the organization would want to customize the Oracle Application package to suit its business needs, it would want some facility in Oracle Application to meet the customization requirement. One such requirement is Customization of Forms using CUSTOM.pll the CUSTOM.pll Library File allows extension and customization of Oracle Applications without modification of Oracle Application Forms.

We can use the Custom Library for customization such as:

- Calling other Oracle Application Forms.
- Enforcing Business Rules
- Disabling fields in Oracle Application Forms.

### How does CUSTOM.pll work?

In Oracle Application every form having Form Level Trigger makes a call to the CUSTOM.pll Standard Event Triggers in these Forms call the APPCORE2.pll routines which in turn call the Custom Library File. CUSTOM.pll is attached to APPCORE2.pll and this APPCORE2.pll is attached to all the Oracle Application Forms by default. In short this Custom Library File is global to all the Oracle e-Business Suite products.

### Scenarios where CUSTOM.pll can work:

CUSTOM.pll is used to add extensions to Oracle's Form functionality. Some of the common scenarios where CUSTOM.pll can be used are:

- Enable/Disable the Fields

- Changing the List of Values in a LOV field at runtime
- Defaulting Values for fields
- Additional Record Level Validations
- Navigation to other Forms
- Enabling Special Menus

## 2. Building Blocks of Custom.pll

### Events that are trapped using CUSTOM.pll:

Following are the events or built – ins that is trapped using CUSTOM.pll:

- WHEN-FORM-NAVIGATE
- WHEN-NEW-FORM-INSTANCE
- WHEN-NEW-BLOCK-INSTANCE
- WHEN-NEW-RECORD-INSTANCE
- WHEN-NEW-ITEM-INSTANCE
- WHEN-VALIDATE-RECORD
- SPECIALn (where n is a number between 1 and 45)
- ZOOM
- EXPORT
- KEY-Fn (where n is a number between 1 – 8)

### Prerequisites:

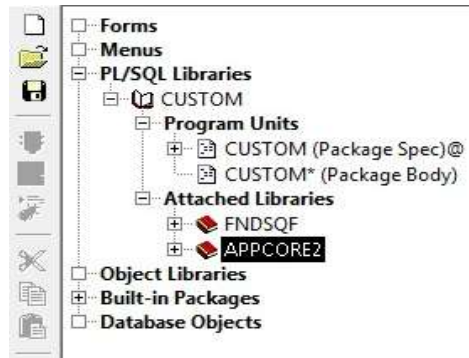
The Built – Ins of CUSTOM.pll are internally called by the Built – Ins of a pre – seeded Oracle Forms PL/SQL Library File APPCORE.pll

For CUSTOM.pll to work according to the business requirement we would have to attach the following PL/SQL Library File:

- FNDSQF.pll
- APPCORE2.pll

CUSTOM.pll makes a reference to FNDSQF.pll file if we use the Flexfield routines, Message Dictionary routines, Multi – Org routines, FND Standard WHO column routines etc...

CUSTOM.pll also makes a reference to APPCORE2.pll if we use built – ins to enable/disable fields in a particular form.



### 3. Steps to modify CUSTOM.pll

Following list the steps to modify the CUSTOM.pll Library File:

1. Locate the CUSTOM.pll which resides in \$AU\_TOP/resource directory.
2. Copy the file to the local directory
3. Take a backup of the original CUSTOM.pll residing in \$AU\_TOP/resource directory by renaming the file according to naming conventions.
4. Open Oracle Forms Builder Application.
5. Click on File – Open to locate the CUSTOM.pll file from local directory
6. You will find the CUSTOM.pll under the PL/SQL Program Units Section
7. Double Click on the CUSTOM Package Body to open the PL/SQL Program Unit section
8. Make the changes as required with proper comments and version controls
9. We are not supposed to make any changes to Package Specifications and Package Body
10. Write the PL/SQL code under the 'EVENT' procedure.
11. Once we are done with writing the PL/SQL code move the updated CUSTOM.pll file to \$AU\_TOP/resource directory
12. Login to Linux/Unix Box using TELNET/PUTTY software.
13. Navigate to \$AU\_TOP/resource directory
14. Use the following command to create executable file CUSTOM.plx
15. frmcmp\_batch Module=CUSTOM.pll Userid=apps/apps Module\_Type=LIBRARY compile\_all=YES
16. Login to Oracle e-Business Suite to see the changes incorporated.

### Enable Show Custom Events:

For CUSTOM.pll to work in Oracle e-Business Suite we need to enable Show Custom Events option. The Show Custom Events option helps a developer to control the customizations done through CUSTOM.pll We can toggle between on and off in Show Custom Events.

Access to Enable Show Custom Events is further controlled through a Profile Option FND: Show Diagnostics – Set the value either to Yes or No.

If the value is set to Yes we can access the Enable Show Custom Events.

If the value is set to No we will not be able to access the Enable Show Custom Events.



## Gather Information:

Gathering information phase is one of the most important phases in CUSTOM.pll.

Before starting the customization we need to gather the following:

1. The Form Name/Function Name for which we need to apply the customization  
Retrieve the form name by navigating to  
Help > About Oracle Applications. Scroll down to find the Forms Path wherein the Form Name will be mentioned along with .fmx extension
2. The Block Name.  
Retrieve the Block Name by navigating to  
Help > Diagnostics > Examine
3. Field Name
4. Customization
5. When Customization will be executed. E.g. When the Form is opened.  
WHEN-NEW-FORM-INSTANCE

## Writing Code in CUSTOM.pll

Open the CUSTOM.pll file using Oracle Forms Builder and make appropriate changes in the EVENT Procedure under the Custom Package.

While writing code inside CUSTOM.pll we should consider the following things :

- We should not run any SQL statement inside this.
- We should not perform any DML operations instead we should call database procedure and functions for the same.

Locate the CUSTOM.pll which resides in \$AU\_TOP/resource directory.

Copy the file to the local directory and take a backup of the original CUSTOM.pll which resides in \$AU\_TOP/resource directory by renaming the file according to naming conventions.

Open Oracle Forms Builder Application. Click on File – Open to locate the CUSTOM.pll file from local directory. You will find the CUSTOM.pll under the PL/SQL Program Units Section.

Double Click on the CUSTOM Package Body to open the PL/SQL Program Unit section. Make the changes as required with proper comments and version controls. We are not supposed to make any changes to Package Specifications and Package Body. Write the PL/SQL code under the 'EVENT' procedure.

Custom Library contains Custom Package which is having two functions and one procedure.

### Function 1: ZOOM\_AVAILABLE

This function allows us to specify if Zooms exists for the current context. If Zooms exists for the block referred to in the PL/SQL code then return TRUE else return FALSE. By default this routine must return FALSE.

### Function 2: STYLE

This function returns an integer value. This function allows us to override the execution style of product specific

events but doesn't affect generic events like WHEN-NEW-FORM-INSTANCE. By default it returns CUSTOM.STANDARD.

### Procedure 3: EVENT

This procedure allows you to execute your code at specific events including:

- ZOOM
- WHEN-NEW-FORM-INSTANCE
- WHEN-NEW-BLOCK-INSTANCE
- WHEN-NEW-RECORD-INSTANCE
- WHEN-NEW-ITEM-INSTANCE
- WHEN-VALIDATE-RECORD

By default this routine must perform NULL.

### **Sample Code:**

```
procedure event (event_name varchar2)
is
form_name VARCHAR2(30):=name_in('system.current_form');
block_name VARCHAR2(30):=name_in('system.cursor_block');
begin
if (form_name = <form_name> and block_name=<block_name>) then
If (event_name='WHEN-NEW-FORM-INSTANCE') then
** Write PL/SQL Code Here **
elsif (event_name = 'WHEN-VALIDATE-RECORD') then
** Write PL/SQL Code Here **
else
null;
end if;
end if;
end;
```

## Transfer CUSTOM.pll to \$AU\_TOP/resource directory:

Once we have written the code in CUSTOM.pll we need to compile this and convert it to CUSTOM.plx file for Oracle Applications to read the .plx file and apply the changes.

Copy the CUSTOM.pll file to \$AU\_TOP/resource directory either using ftp or Winscp file transfer software.

Login to Linux/Unix Box using Putty or Telnet software. Go to \$AU\_TOP/resource directory.

Run the below mentioned command to compile and convert the CUSTOM.pll to CUSTOM.plx (Executable File)  
frmcmp\_batch Module=CUSTOM.pll Userid=apps/apps Module\_Type=LIBRARY compile\_all=YES

Once we run the command the system will compile all the program units under CUSTOM.pll library file and create an executable file in the name of CUSTOM.plx. Oracle e-Business Suite reads this CUSTOM.plx for applying the changes done to the CUSTOM.pll depending on the events handled.

## Test your Changes:

Once we make all the necessary changes to CUSTOM.pll, compile the .pll file and generate the .plx file accordingly. Since the CUSTOM Library is loaded once for a given session, a user must log out of Oracle e-Business Suite and Sign – On again before any changes will become apparent

## 4. Hands – One Exercises

Exercise 1: Display Messages

Exercise 2: Make a Field Mandatory/Required

Exercise 3: Change the Label of a Form Field

Exercise 4: Default a Value

Please check with your faculty for the exercise details