Level 5 Diploma in Database Developer (991) 191Credits

Unit: Oracle Forms Developer	**Guided Learning Hours:** 280
Exam Paper No.: 2	**Number of Credits:** 28
Prerequisites: Detailed knowledge of Oracle SQL	**Corequisites:** A pass or higher in Diploma in Database Administration or equivalence

Aim: This unit aims to introduce the fundamentals of building applications with Oracle Forms; part of the Oracle Developer Suite. The unit will provide learners with practical experience of the functionality of Oracle Forms. Oracle Forms is a software product for creating screens that interact with an Oracle Database. It has a typical Integrated Development Environment (IDE) including an object navigator, property sheet and code editor that uses PL/SQL. The primary focus of Forms is to create data entry systems that access an Oracle database. Oracle Developer Forms is a powerful and flexible development tools and it is complex by virtue of its power. Today users leverage their investment by taking advantage of Web technologies by easily and quickly constructing sophisticated database forms and business logic with minimal effort. Learners will use Oracle Forms Developer to rapidly build scalable, high-performance applications for the Internet; build, test, debug, and deploy interactive Internet applications. Working in a graphical user interface (GUI) environment, learners develop an order entry application from the ground up. The unit provides a productive development environment for building enterprise class, scalable database applications for the Internet. The unit is designed to enhance the skills of programmers and software developers who might or might not already be familiar with the basics of Oracle Forms. On completion of this unit, the learners will be able to: Program Key Triggers to enhance standard Forms functionality, Cause Forms to respond to mouse events, Generate timers, Manipulate record groups, Create Master/Detail relationships explicitly, Handle query processing, Control transaction processing, Handle multiple canvas and window applications, Write multi-form applications, Generate customised menus.

Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.

Special Requirements: The unit requires a combination of lectures, demonstrations, discussions, and hands-on labs.

Intended Learning Outcomes:	Assessment Criteria:
1. The visual, structural and technical design of the Forms Builder Main Screen.	1.1 Examine Oracle Forms Object Navigator 1.2 Describe the content of the Object Navigator sections 1.3 Demonstrate how to connect to the Database 1.4 Explain the architecture of Oracle Forms Services
2. The Oracle Forms Rapid Application Development (RAD) environment, the Forms Runtime environment and the Oracle Internet Application Server (IAS) Forms Services.	2.1 Describe the Single Block Form. 2.2 Describe the Single block Form with lookup field. 2.3 Describe the Master/Detail Form. 2.4 Describe Master/Detail Form with lookup fields. 2.5 Describe Text Items and Display Items 2.6 Explain Buttons, List Items, Radio Groups, and Check Boxes
3. The basic steps for creating a basic data entry and query form for a single database table	3.1 Describe Data Block wizard 3.2 Describe Layout wizard 3.3 Demonstrate how to create a data block using Data Block wizard 3.4 Demonstrate how to use Layout wizard to lay out items of a data block

		3.5	Explain the two main styles for forms
		3.6	Demonstrate how to use Layout Editor to move fields and labels
		3.7	Demonstrate how to display object properties
		3.8	Explain how to save a Form
		3.9	Demonstrate how to compile/build a Form
4.	The Basic Forms function; the standard actions of the Design Console and the field and window types in the Design Console main screen.	4.1	Demonstrate how to query a form
		4.2	Explain how to insert new records
		4.3	Demonstrate how to update existing records
		4.4	Analyse how to delete records
		4.5	Demonstrate exiting the Form
		4.6	Explain the Oracle Forms environment for built-in record creation, query, and update modes.
5.	The tasks to perform when using Oracle Forms Builder to create a master-detail form. and creating a form with one-master-two-detail data blocks	5.1	Describe Master-Detail relationship
		5.2	Describe the steps in creating a Master-Detail Form
		5.3	Explain the Relation Properties of a Master-Detail Form
		5.4	Describe the Program Units (PL/SQL Procedures) in a Master-Detail Form
6.	How Oracle Forms developers can centrally manage List of Values (LOV) components to populate an attribute for one object.	6.1	Describe a List of Values
		6.2	Explain the steps in creating a List of Values
		6.3	Define Non-Base Table fields
		6.4	Define List-of-Values Components
		6.5	Demonstrate creating the ListOfValues Data Model
		6.6	Demonstrate using the inputListOfValues Component
		6.7	Demonstrate using the InputComboboxListOfValues Component
		6.8	Describe how to use a list-of-values component to display a model-driven list of objects from which a user can select a value
7.	Various Oracle Forms components for developing and deploying Forms applications and the steps to convert applications from Oracle Forms.	7.1	Explain how to create procedures in Oracle Forms
		7.2	Explain how to create a Trigger to call the Procedure
		7.3	Describe how to create Stored Procedures in SQL*Plus
		7.4	Explain how to generate unique or consecutive identifiers using the table
		7.5	Demonstrate how to generate unique or consecutive identifiers using an Oracle Sequence
		7.6	Outline how to check constraints at the client
		7.7	Analyse how to add Alerts (Pop-up Messages)
		7.8	Describe how to automate Forms Query

	7.9	Demonstrate how to populate items with default values
	7.10	Explain how to attach functionality to command buttons
	7.11	Describe how to pass parameters between forms
8. Interoperability and compatibility issues associated with Oracle Reports and how clients connect to Oracle Reports Servers.	8.1	Demonstrate how to run Oracle Reports Builder under Windows
	8.2	Examine and identify the Oracle Reports Object Navigator sections
	8.3	Explain the steps in creating Reports in Oracle Reports
	8.4	Explain the procedure for creating a Single-Table Report
	8.5	Describe the steps for creating a report that views the contents of two tables in a Master-Detail (one to many) relationship
	8.6	Examine and identify parameter forms in Oracle Reports
9. How to develop menu modules to replace the Forms default menu, enhance applications by including menu toolbars; pop-up menus and modifying the Forms default menu.	9.1	Describe the default menu
	9.2	Define custom menu
	9.3	Demonstrate how to explicitly specify the default menu in Forms
	9.4	Describe the Oracle Forms menu hierarchy object categories
	9.5	Describe the process of creating a Custom Menu.

Methods of Evaluation: A 2½-hour written examination paper with five essay questions, each carrying 20 marks. Candidates are required to answer all questions. Candidates also undertake project/coursework in Oracle Forms Developer with a weighting of 100%.

Recommended Learning Resources: Oracle Developer Forms

Text Books	• Oracle Developer Advanced Forms and Reports by Peter Koletzke and Paul Dorsey. ISBN-10: 0072120487 • Oracle Forms Interactive Workbook by Baman Motivala. ISBN-10: 0130158089 • Oracle Developer Forms Techniques by Bulusu Lakshman. ISBN-10: 0672318466
Study Manuals	BCE produced study packs
CD ROM	Power-point slides
Software	Oracle Database