



## Level 5 Diploma in Database Developer (991) 191 Credits



<b>Unit:</b> Oracle Reports Developer	<b>Guided Learning Hours:</b> 300
<b>Exam Paper No.:</b> 3	<b>Number of Credits:</b> 30
<b>Prerequisites:</b> Detailed knowledge of Oracle SQL	<b>Corequisites:</b> A pass or higher in Diploma in Database Administration or equivalence
<p><b>Aim:</b> This unit is an intensive Oracle Reports Developer guide where learners will given tutorials to enable them develop and maintain various types of reports using Oracle Reports Builder. Learners will develop reports in a graphical user interface (GUI) environment and will learn to incorporate graphic images as well as customize reports using PL/SQL. Oracle Reports is one of the most functionally rich and therefore complex topics from Oracle products. There is virtually no limit to the combination of options and features that can be used to produce reports. Within this unit, learners are introduced to the reporting tools and will explore some of the most commonly used techniques for publication of information. The major objectives of this unit are: consideration of the structure of Oracle Reports, the Oracle Development Suite (ODS) and the overall Oracle enterprise architecture; distribution of reports in all supported formats including HTML, HTML with embedded Java Server Pages, PDF and hardcopy; Quickly building prototypes with the various wizards of the Oracle Reports Builder tool; customising prototypes using the Report Editor; Individual field formatting for both web and paper layout; advanced customisation of the data model; advanced customisation of the layout objects; utilizing specialty techniques such as parameters, reusable PL/SQL programs and template files.</p>	
<b>Required Materials:</b> Recommended Learning Resources.	<b>Supplementary Materials:</b> Lecture notes and tutor extra reading recommendations.
<p><b>Special Requirements:</b> The unit requires a combination of lectures, demonstrations, discussions, and hands-on labs.</p>	
<p><b>Intended Learning Outcomes:</b></p> <p>1. Key concepts used in the Report Builder; the variety of terms used to describe a report, add parameters to a report to link related reports, to control the report appearance, to filter report data.</p> <p>2. The procedures for using Oracle Reports to create objects, function trigger Forms Reports and design reports.</p>	<p><b>Assessment Criteria:</b></p> <p>1.1 Explain the features and functionality in Reports Builder</p> <p>1.2 Compare and contrast new features and enhancements in Web based Reports</p> <p>1.3 Explain data model objects</p> <p>1.4 Explain layout objects</p> <p>1.5 Explain parameter form objects</p> <p>1.6 Describe the Property Inspector in Reports Builder</p> <p>1.7 Describe Oracle Reports executables</p> <p>1.8 Analyse and explain Web Reports</p> <p>1.9 Explain the use of PL/SQL in Reports Builder</p> <p>1.10 Explain the use of templates in Reports Builder</p> <p>1.11 Analyse the various output formats and capabilities in Reports Builder</p> <p>1.12 Describe how to access other data sources in Reports Builder.</p> <p>1.13 Describe how to debug reports in Reports Builder</p> <p>2.1 Demonstrate how to set Properties and Preferences</p> <p>2.2 Demonstrate how to perform common tasks like: connecting to a database; Opening a report; Saving a report; Renaming a report; Deleting a report; Archiving a</p>




	<p>report; Selecting and deselecting objects; Deleting an object; Hiding or showing components</p> <p>2.3 Describe how to perform data model procedures including: creating a query; modifying a query; using query builder; creating a break group; creating a matrix (cross-product) group; creating a data link; creating or editing a formula column; creating a summary column; creating or editing a placeholder column</p> <p>2.4 Describe how to access non-Oracle data sources</p> <p>2.5 Explain how to set database roles</p> <p>2.6 Explain how to Set Properties and Preferences</p>
<p>3. How Reports Builder enable users to create any type of report that displays barcodes used to make tasks like tracking shipping orders and employee identification numbers easier.</p>	<p>3.1 Demonstrate how to use the Java importer to add the barcode JavaBean for a paper report.</p> <p>3.2 Describe how to create a package to store information</p> <p>3.3 Create a Report trigger</p> <p>3.4 Explain how to use the Data Model view and toolbar to create a data model with a formula column for a paper report.</p> <p>3.5 Describe how to create a simple JSP-based Web report.</p> <p>3.6 Describe how to create formula columns to call the barcode data for a Web report.</p> <p>3.7 Demonstrate how to edit the JSP code in the Web source view.</p> <p>3.8 Describe how to run report to the Web</p> <p>3.9 Explain bursting and distributing reports</p>
<p>4. How to create reports that include the PL/SQL datatype REF CURSOR, when to base a query on a REF CURSOR and the benefits of storing program units in the Oracle database.</p>	<p>4.1 Define a ref cursor type</p> <p>4.2 Explain the process of creating a ref cursor query</p> <p>4.3 Create links between ref cursor queries</p> <p>4.4 Create columns to summarize the data</p> <p>4.5 Explain the process to create a paper layout</p> <p>4.6 Describe how to move the SELECT statement into a package</p> <p>4.7 Explain the process of moving packages into a library</p>
<p>5. Building a Report with an XML Pluggable Data Source; using the XML pluggable data source that is provided with Oracle Reports.</p>	<p>5.1 Describe how to create a report manually with SQL and XML queries</p> <p>5.2 Explain how to use the Data Wizard to create an XML query.</p> <p>5.3 Describe how create a data link between a SQL query and an XML query.</p> <p>5.4 Explain how use the Report Wizard to create a layout for a report.</p> <p>5.5 Explain how to use format triggers and procedures to apply alternating row colors.</p>

<p>6. Building a Report Using Express Data; how Reporting Services in SQL Server Express with Advanced Services (SQL Server Express) lets users create, view, and manage reports.</p>	<p>5.6 Demonstrate how to use a group filter to sort XML data.</p> <p>6.1 Explain how to use the Report Wizard to define the Express query.</p> <p>6.2 Describe how to streamline the Express query by specifying dimension values.</p> <p>6.3 Explain how add summary and calculated totals using the Data Model view</p> <p>6.4 Explain how to re-arrange the report layout, add the summary and custom measure columns</p>
<p>7. Building a Report with a Text Pluggable Data Source and using character-delimited text as a data source.</p>	<p>7.1 Describe how to set up the text PDS configuration file (textpds.conf)</p> <p>7.2 Describe how to use the Report Wizard to create a report</p> <p>7.3 Demonstrate how to use the Report Wizard to create a tabular report with a paper layout.</p> <p>7.3 Demonstrate using the Report Wizard to create a mailing label report</p> <p>7.4 Demonstrate using the Report Wizard to create a form letter report</p>
<p>8. Building a Master-Master Report and learning about master/master reports generating the report output.</p>	<p>8.1 Explain how to create a new report manually</p> <p>8.2 Demonstrate using the Data Wizard to create queries</p> <p>8.3 Demonstrate using the Report Wizard to layout the data</p> <p>8.4 Demonstrate using the Paper Layout view to add white space</p> <p>8.5 Explain how to format fields in monetary values</p>
<p>9. Building a Single-Query/Two-Query Group Report where rows of output are displayed as groups based on a single query or on multiquery report and building a Header and Footer Report;</p>	<p>9.1 Explain how to use the Report Wizard to create the data model and layout simultaneously.</p> <p>9.2 Describe how to assign a format mask to monetary values</p> <p>9.3 Describe how to use the Property Inspector to add white space</p> <p>9.4 Describe how to add a column to the break group</p> <p>9.5 Explain how to re-default the layout with the Report Wizard</p> <p>9.6 Demonstrate how footers commonly display a page number; display a page number in the header or footer of a report, create a text box in the footer.</p> <p>9.7 Describe how to create a data model and a layout</p> <p>9.8 Demonstrate how to move data summary closer to its label</p> <p>9.9 Demonstrate how to add a heading that repeats on all pages</p> <p>9.10 Describe how to add white space and format monetary values</p>

<p>10. Building a Summary Report appearing at the end of a report or creating a grouped or summary report.</p>	<p>10.1 Demonstrate creating a data model with summaries and lay out the data with the Report</p> <p>10.2 Explain how to format fields in the Paper Design view</p> <p>10.3 Demonstrate examining the summaries and their properties</p> <p>10.4 Build a Report with Graphics, Text and Color; explain how you can build reports with special formats.</p> <p>10.5 Analyse how use the Report Wizard to create a simple report definition.</p> <p>10.6 Explain how to modify the appearance of a report in the Paper Layout view: adding a border around the report; changing the font size and style; adding bullets a report; displaying a line between each record; adding a title to the report</p> <p>10.7 Create a matrix report using Report Designer with nested row and column groups and with multiple queries in the data model.</p> <p>10.8 Create a matrix report with a single/multiple query data model</p> <p>10.9 Explain how to add summaries and format monetary values</p> <p>10.10 Demonstrate how to substitute zeroes for blanks in a matrix layout</p> <p>10.11 Explain how to add a grid.</p>
<p>11. Building a Cheque Printing Report with Spelled-Out Cash Amounts creating a PL/SQL function that returns spelled-out numerical values and how to import an image of a pre-printed form.</p>	<p>11.1 Demonstrate how to use the Report Wizard to create a simple form report.</p> <p>11.2 Explain how use the PL/SQL Editor to create a PL/SQL function and the DataModel view to create a formula column.</p> <p>11.3 Use the DataModel view to create a second query and link the two queries together.</p> <p>11.4 Describe using the Paper Layout view to import a blank cheque image and add fields necessary for printing the cheque and cheque stub.</p> <p>11.5 Use the Paper Design view to arrange the new fields on the blank cheque image.</p> <p>11.6 Analyse how to use the Paper Design view to create a check stub and the Report Block Wizard to create a simple tabular report that displays order details.</p>
<p>12. Building an Invoice Report; importing an image of a pre-printed form and working with customer/order discounts, sales/valued add tax rates.</p>	<p>12.1 Describe how to create a new, empty report</p> <p>12.2 Demonstrate creating two queries with a data link between them</p> <p>12.3 Outline how to add two summary columns and a formula column to the data model to include on the invoice</p> <p>12.4 Analyse how to prepare the layout for</p>

	12.5	inserting the invoice information Demonstrate creating new fields for the invoice information, positioning them in the correct locations on the invoice form
<b>Methods of Evaluation:</b> 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 Reports v with a weighting of 100%.		

### Recommended Learning Resources: Oracle Developer Reports

<b>Text Books</b>	<ul style="list-style-type: none"> <li>• Oracle Reports: Oracle Reports Certification Review by Mark Schmitz. ISBN-10: 1603320660</li> <li>• Crystal Reports on Oracle by Marie Annette Harper. ISBN-10: 0072230797</li> <li>• Crystal Reports Professional Results by George Peck. ISBN-10: 0072229519</li> </ul>
<b>Study Manuals</b> 	BCE produced study packs
<b>CD ROM</b> 	Power-point slides
<b>Software</b> 	Oracle Database

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