CAREER PATH – ORACLE CONSULTANT

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CAREER PATH – ORACLE CONSULTANT – COURSE SYLLABUS

Courses included in **Oracle Consultant Career Path Program** are:

1) Oracle Apex

2) Oracle Apex Administration

3) Oracle Forms

4) Oracle BI Publisher

5) Oracle PL /SQL

6) Oracle DBA

7) Oracle Multitenant DBA

8) Oracle WebLogic Server

9) Oracle ICS

Oracle APEX (Application Express)

Overall topics:

1. APEX Basics - Application, Pages and Regions
2. APEX Regions - Forms, Reports, Charts
3. User Interface, Templates and Themes
4. Creating Mobile Application
5. APEX Advanced - Security and Performance

Detailed-level course content:

1. Workspace
2. SQL Workshop
3. Application Builder
4. Form
5. Form with Report
6. Master-Detail Form
7. Classic Report
8. Interactive Report
9. Interactive Grid
10. Charts
11. Menus
12. Tree Region

13. Authentication
14. Authorization
15. Public Page
16. Templates

17. Theme
18. JavaScript in APEX
19. Dynamic Action
20. Validation
21. Computation
22. Page Process
23. Branches
24. Custom Process
25. Default Value
26. Shared Library
27. List of Values
28. Application Properties
29. Page Zero (Page0)
30. Performance

Oracle APEX Administration – Course Syllabus

- Overview of Oracle Application Express (APEX) Administration

- Installation of Windows 10 on Oracle Virtual Box

- Installation of Oracle 19c Database and Create Database

- Installation of Oracle APEX 20.1

- Installation of Tomcat

- Installation of ORDS

- Oracle APEX Admin Tasks

Oracle Forms

- Introduction to Oracle Forms
- Triggers and Alerts and Editors
- LOV and Record Group

- Master Detail Form
- Menu
- Visual Attribute and Property Class
- Program Units and PL-SQL Libraries
- Parameters

Oracle Forms is a component of Oracle Apps Middleware and is used for creating screens that interact with an Oracle database. It has an Integrated Development Environment (IDE) including an object navigator, code editor and property sheet that uses PL/SQL programming language.

Oracle Forms is a long-established technology to design and build enterprise applications quickly and efficiently. Many mid-to-large size enterprise applications across industries are built on Oracle Forms. Oracle Apps Forms/Templates and Reports module makes you understand the designing of reports and forms using Oracle Apps. Oracle Forms Developer is used to develop a form that can access an Oracle database and present the data. In summary, Oracle Forms is a layer of software for creating user interface (screens) that interact with an Oracle database.

This Oracle Forms course by **Uplatz** will teach you how to use Oracle Forms to design the front- end design and coding for back-end processing. You will be using PL/SQL programming to create Program units to process data held in Oracle database.

Oracle BI Publisher

1. Overview

2. Installation

3. General Navigation and Preference

- Create a new folder
- Uploading a Resource to Catalog
- Setting My Account Preferences
- Configuring Data Sources
- Creating a Data Model

4. Creating Reports

- Creating a new report
- Creating a report using report editor
- Viewing a report in interactive view
- Creating a Report Job
- Managing Report Job
- Connecting to an Email Server
- Inserting Gauge Chart or a Pivot Table

5. Reports using RTF Template

- Building RTF Template in offline mode
- Building an RTF Template in Online Model
- Using Template builder utility - Validate Template
- Using Template builder utility - Field Browser
- Using Template builder utility - Check Accessibility

6. Administering BI Publisher

Key Objectives of Oracle BI Publisher Training

- Understand and apply the uses and concepts of BI Publisher
- Create BI Publisher templates
- Create and maintain reports using BI Publisher Enterprise
- Create and run reports interactively
- Schedule and deliver reports to recipients
- Gain knowledge on X standards
- Create and apply templates for rich text format (RTF) and portable document format (PDF) formats
- Set up and configure enterprise server of BI Publisher
- Easily analyze data and schedule reports
- Explore advanced topics in BI Publisher
- Create reports effortlessly based on files, really simple syndication (RSS) feeds and web services
- Create data templates for eXtensible Markup Language (XML)

Oracle PL/SQL Course Syllabus

Description: Introduction

ORACLE PL-SQL PROGRAMMING - COURSE CONTENT

- Course Objectives
- Course Agenda
- Describe the ER Schema
- PL/SQL development environments available in this course
- Introduction to SQL Developer

Working with Oracle Cloud Exadata Express Cloud Service

- Introduction to Oracle Database Exadata Express Cloud Service
- Accessing Cloud Database using SQL Workshop
- Connecting to Exadata Express using Database Clients

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Introduction to PL/SQL

- Overview of PL/SQL
- Identify the benefits of PL/SQL Subprograms
- Overview of the types of PL/SQL blocks
- Create a Simple Anonymous Block
- How to generate output from a PL/SQL Block?

Declare PL/SQL Variables

- List the different Types of Identifiers in a PL/SQL subprogram
- Usage of the Declarative Section to Define Identifiers
- Use variables to store data
- Identify Scalar Data Types
- The %TYPE Attribute
- What are Bind Variables?
- Sequences in PL/SQL Expressions

Write Anonymous PL/SQL Blocks

- Describe Basic PL/SQL Block Syntax Guidelines
- Learn to Comment the Code
- Deployment of SQL Functions in PL/SQL
- How to convert Data Types?
- Describe Nested Blocks
- Identify the Operators in PL/SQL

SQL Statements in a PL/SQL block

- Invoke SELECT Statements in PL/SQL
- Retrieve Data in PL/SQL
- SQL Cursor concept
- Avoid Errors by using Naming Conventions when using Retrieval and DML Statements
- Data Manipulation in the Server using PL/SQL
- Understand the SQL Cursor concept
- Use SQL Cursor Attributes to Obtain Feedback on DML
- Save and Discard Transactions

Control Structures

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- Conditional processing using IF Statements
- Conditional processing using CASE Statements
- Describe simple Loop Statement
- Describe While Loop Statement
- Describe For Loop Statement
- Use the Continue Statement

Composite Data Types

- Use PL/SQL Records
- The %ROWTYPE Attribute
- Insert and Update with PL/SQL Records
- INDEX BY Tables
- Examine INDEX BY Table Methods
- Use INDEX BY Table of Records

Explicit Cursors

- What are Explicit Cursors?
- Declare the Cursor
- Open the Cursor
- Fetch data from the Cursor
- Close the Cursor
- Cursor FOR loop
- The %NOTFOUND and %ROWCOUNT Attributes
- Describe the FOR UPDATE Clause and WHERE CURRENT Clause

Exception Handling

- Understand Exceptions
- Handle Exceptions with PL/SQL
- Trap Predefined Oracle Server Errors
- Trap Non-Predefined Oracle Server Errors
- Trap User-Defined Exceptions
- Propagate Exceptions
- RAISE_APPLICATION_ERROR Procedure

Stored Procedures

- Create a Modularized and Layered Subprogram Design

- Modularize Development With PL/SQL Blocks

- Understand the PL/SQL Execution Environment
- List the benefits of using PL/SQL Subprograms
- List the differences between Anonymous Blocks and Subprograms
- Create, Call, and Remove Stored Procedures
- Implement Procedures Parameters and Parameters Modes
- View Procedure Information

Stored Functions

- Create, Call, and Remove a Stored Function
- Identify the advantages of using Stored Functions
- Identify the steps to create a stored function
- Invoke User-Defined Functions in SQL Statements
- Restrictions when calling Functions
- Control side effects when calling Functions
- View Functions Information

Debugging Subprograms

- How to debug Functions and Procedures?
- Debugging through SQL Developer

Packages

- Listing the advantages of Packages
- Describe Packages
- What are the components of a Package?
- Develop a Package
- How to enable visibility of a Packages Components?
- Create the Package Specification and Body using the SQL CREATE Statement and SQL Developer
- Invoke the Package Constructs
- View the PL/SQL Source Code using the Data Dictionary

Deploying Packages

- Overloading Subprograms in PL/SQL
- Use the STANDARD Package
- Use Forward Declarations to solve Illegal Procedure Reference

- Implement Package Functions in SQL and Restrictions
- Persistent State of Packages
- Persistent State of a Package Cursor
- Control side effects of PL/SQL Subprograms
- Invoke PL/SQL Tables of Records in Packages

Implement Oracle-Supplied Packages in Application Development

- What are Oracle-Supplied Packages?
- Examples of some of the Oracle-Supplied Packages
- How does the DBMS_OUTPUT Package work?
- Use the UTL_FILE Package to Interact with Operating System Files
- Invoke the UTL_MAIL Package
- Write UTL_MAIL Subprograms

Dynamic SQL

- The Execution Flow of SQL
- What is Dynamic SQL?
- Declare Cursor Variables
- Dynamically Executing a PL/SQL Block
- Configure Native Dynamic SQL to Compile PL/SQL Code
- How to invoke DBMS_SQL Package?
- Implement DBMS_SQL with a Parameterized DML Statement
- Dynamic SQL Functional Completeness

Design Considerations for PL/SQL Code

- Standardize Constants and Exceptions
- Understand Local Subprograms
- Write Autonomous Transactions
- Implement the NOCOPY Compiler Hint
- Invoke the PARALLEL_ENABLE Hint
- The Cross-Session PL/SQL Function Result Cache
- The DETERMINISTIC Clause with Functions
- Usage of Bulk Binding to Improve Performance

Triggers

- Describe Triggers

ORACLE DBA – course curriculum

Introduction to Linux

- History of Linux
- Components of Linux
- Linux Basic Commands
- File permission to users

Introduction to DBMS

- What is a database?
- History of Oracle database
- Role of a Database Administrator

Basic SQL

- What are DML, DDL and DCL Statement
- Examples on DML, DDL and DCL
- Creation of Table, Views, Sequence, Synonyms & Index

Oracle Database Architecture

- Detail explanation on components of an Oracle database architecture
- Oracle database memory and process architecture

Installing Oracle database software (11g R2)

- Pre-requisites for a successful Oracle software installation
- Installation of oracle software using GUI and Manual Method
- Installation of Oracle 11g R2 database software

Oracle Database Creation

- Introduction
- Planning for an Oracle database creation
- Creating an Oracle database using the MANUAL method
- Creating an Oracle database using the GUI Tool (DBCA)
- Startup and Shutdown Methods
- Best practices using OFA for database creation

Database Storage Management

- Introduction
- Tablespaces creation methods
- Datafiles creation methods
- How to resize/rename the table space/datafiles
- How to Change the location of datafiles
- Redo log file architecture and best practices
- How to resize/rename the redo log file
- Benefits of Archiving, how to enable/disable Archive log mode for a database
- Temporary tablespaces and temporary table space groups

Oracle Networking

- Oracle listener & TNS configuration using NETMGR
- Managing & Distributing by using DB-link concept
- Oracle database connections from other systems
- Oracle Shared server Dispatcher & Architecture

User Administration and Security

- Create database users
- Database resource management (User's Profile and Role)
- Locking/unlocking a user account
- User's password management

User Managed Backup and Recovery

- Introduction: Backup and Recovery Strategy for user managed backup
- How to backup an Oracle database using COLD BACKUP
- How to backup an Oracle database using HOT BACKUP
- Recovery scenarios using User managed backup

RMAN Backup and Recovery

- RMAN backup of Database, controlfile,Archivelogfiles
- Database backup using RMAN with normal and compressed mode
- Database backup using catalog and no-catalog and virtual catalog
- Querying the backup details using Catalog database
- Benefits of Fast Recovery Area using RMAN backup for storage
- How to backup incremental database
- Recovery scenarios using RMAN
- Tablespace Point in time recovery (TSPITR)

Oracle Datapump {Logical backup & Restore}

- Introduction on Datapump(Expdp,Impdp) Utilities
- Benefits of Logical backup & Physical backup

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- Exporting/Importing Tables, Schema Tablespace
- database and Transportable tablespace
- Backup methods using datapump

Flashback Feature

- Types of flashback and their benefits
- Flashback Query, Flashback Table to past time
- Flash back of Recovering Drop tables
- Flashback Archive

Oracle Enterprise Manager (grid Control)

- Introduction
- How to install and configure
- Monitor databases and performance of the databases

Cloning

- Cloning database using RMAN from Active Database
- Cloning database using same datafile storage locations and different datafile
- storage locations

Logminer and SQL Loader

- Reading/Extracting the content of Redologs (Online/Archived)

Oracle Dbase Patching/Patch Management

- Downloading/Applying Interim & Patchset patches using Opatch
- Applying cpu and psu patches
- Oracle DBase Upgradation and Migration
- Upgrating database from 11g to 12c version

Oracle Data Guard

- Oracle Dataguard Architecture
- Creation of physical standby database using RMAN and Manual Method
- How to configure Active standby database and snapshot standby database
- Data guard Modes and Switchover/Failover
- Scenarios on restore and recovery

ORACLE MULTITENANT DBA – course curriculum

1. Architecture & Configuration
Overview of Oracle DBA tasks
Oracle as a flexible, complex & robust RDBMS

- **The evolution of hardware and the relation to Oracle**

- **Different DBA job roles(VP of DBA, developer DBA,production DBA, database babysitter)**

- **The changing job role of the Oracle DBA Environment management (network, CPU, disk and RAM) Instance management (managing SGA regions)**

- **Oracle table and index management Instance Architecture**

Instance vs. database

- **Components of an instance**

- **Creating the OFA file structure ($DBA, bdump, udump, pfile)**
- **Oracle Instance Internals**

SGA vs. PGA

- **Background processes**

- **Interfaces with server and disk I/O subsystem**

- **Using SQL*Plus for DBA management**

Connecting and executing SQL

- **Using the "as sysdba" syntax**

- **Overview of SQL*Plus DBA commands (startup, etc.)**

- **Control file, UNDO and REDO management**

- **Explaining the use of control files Listing the**

Contents of the control

1. **File File locations for control Files Obtaining Control**

2. **File Information Listing control file contents**

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3. **Displaying and Creating Undo segments**

4. **Altering Undo Segments**

5. **Determining the Number and Size of Undo segments**

6. **Understanding flashback technology**

7. **Troubleshooting Undo – snapshot too old Redo log concepts for recovery**

8. **Online redo log (log_buffer)**

9. **online redo logs and archived redo logs**

10. **Oracle ARCH and LGWR background processes**

11. **Redo log dictionary queries**

ORACLE WEB LOGIC SERVER – Course Syllabus

- Installation of Linux 6.7 in Oracle Virtual Box
- Installing WebLogic
- Creating a Domain
- Admin Servers
- Managed Servers
- Data Sources
- JMS Resources
- Application Deployment
- WebLogic Security
- Clusters
- Node Manager
- WLST

ORACLE INTEGRATION CLOUD SERVICES – Course Syllabus

MODULE 1: OIC OVERVIEW

MODULE 2: VARIOUS OIC NAVIGATIONS & DASHBOARD

MODULE 3: INTEGRATION PATTERS, ADAPTERS & WEB SERVICES

MODULE 4: CONNECTION, INTEGRATIONS AND PACKAGES

MODULE 5: CONNECTIVITY AGENT

MODULE 6: ADMINISTRATING & MONITORING INTEGRATIONS

MODULE 7: CODE PROMOTION & VERSIONING

MODULE 8: VISUAL BUILDER CLOUD SERVICE & EXAMPLES

MODULE 9: PROCESS CLOUD OVERVIEW