

## Oracle DBA COURSE CONTENT

### **Details**

**CT****Lab**

#### **Module: 1 Oracle-SQL**

4 Hrs.

2 Hrs.

#### **Writing Basic SQL Select Statements**

- List the capabilities of SQL SELECT statements
- Execute a basic SELECT statement
- Differentiate between SQL statements and iSQL\*Plus commands

#### **Restricting and Sorting Data**

- Limit the rows retrieved by a query
- Sort the rows retrieved by a query
- Single-Row Functions
- Describe various types of functions available in SQL
- Use character, number, and date functions in SELECT statements
- Use conversion functions

#### **Displaying Data from Multiple Tables**

- Write SELECT statements to access data from more than one table using equality and nonequality joins
- View data that generally does not meet a join condition by using outer joins
- Join a table to itself using a self-join

#### **Aggregating Data using Group Functions**

- Identify the available group functions
- Use group functions
- Group data using the GROUP BY clause
- Include or exclude grouped rows by using the HAVING clause

#### **Subqueries**

- Describe the types of problems that subqueries can solve
- Define subqueries
- List the types of subqueries
- Write single-row and multiple-row subqueries

#### **Manipulating Data**

- Describe each DML statement
- Insert rows into a table

- Update rows in a table
- Delete rows from a table
- Merge rows in a table
- Control transactions

### **Creating and Managing Tables**

- Describe the main database objects
- Create tables
- Describe the datatypes that can be used when specifying column definition
- Alter table definitions
- Drop, rename and truncate tables

### **Constraints**

- Describe constraints
- Create and maintain constraints

### **Creating Views**

- Describe a view
- Create, alter the definition, and drop a view
- Retrieve data through a view
- Insert, update and delete data through a view

### **Creating Other Database Objects**

- Create, maintain and use sequences
- Create and maintain indexes
- Create private and public synonyms

## **Oracle Database 11g: Administration Workshop 1 Release 2**

24 Hrs. 8 Hrs.

### **Exploring the Oracle Database Architecture**

- Oracle Database Architecture Overview
- Process Architecture
- Memory structures
- Logical and physical storage structures
- Installing your Oracle Software
- Tasks of an Oracle Database Administrator
- Tools Used to Administer an Oracle Database
- Installation: System Requirements
- Oracle Universal Installer (OUI)

### **Creating an Oracle Database**

- Planning the Database
- Using the DBCA to Create a Database
- Password Management
- Using the DBCA to Delete a Database

### **Managing the Oracle Database Instance**

- Start and stop the Oracle database and components
- Use Oracle Enterprise Manager
- Access a database with SQLPlus
- Modify database installation parameters
- Describe the stages of database startup
- Describe database shutdown options
- View the alert log
- Access dynamic performance views

### **Configuring the Oracle Network Environment**

- Use tnsping to test Oracle Net connectivity
- Identify when to use shared servers and when to use dedicated servers

### **Managing Database Storage Structures**

- Storage Structures
- How Table Data Is Stored
- Anatomy of a Database Block
- Space Management in Tablespaces
- Tablespaces in the Preconfigured Database
- Actions with Tablespaces

### **Administering User Security**

- Database User Accounts
- Predefined Administrative Accounts
- Benefits of Roles
- Predefined Roles
- Implementing Profiles

### **Managing Data Concurrency**

- Data Concurrency
- Enqueue Mechanism
- Resolving Lock Conflicts

- Deadlocks

### **Managing Undo Data**

- Data Manipulation
- Transactions and Undo Data
- Undo Data Versus Redo Data
- Configuring Undo Retention
- Implementing Oracle Database Auditing
- Describe DBA responsibilities for security
- Enable standard database auditing
- Specify audit options
- Review audit information
- Maintain the audit trail

### **Database Maintenance**

- Manage optimizer statistics
- Manage the Automatic Workload Repository (AWR)
- Use the Automatic Database Diagnostic Monitor (ADDM)
- Describe and use the advisory framework
- Set alert thresholds
- Use server-generated alerts
- Use automated tasks

### **Performance Management**

- Performance Monitoring
- Managing Memory Components
- Enabling Automatic Memory Management (AMM)
- Automatic Shared Memory Advisor
- Using Memory Advisors
- Dynamic Performance Statistics