

CETPA INFOTECH PVT LTD

CURRICULUM OF ORACLE DBA

Working With SQL

- Retrieving Data Using the SQL SELECT Statement
 - List the capabilities of SQL SELECT statements
 - Execute a basic SELECT statement
- Restricting and Sorting Data
 - Limit the rows that are retrieved by a query
 - Sort the rows that are retrieved by a query
 - Use ampersand substitution to restrict and sort output at runtime
- Using Single-Row Functions to Customize Output
 - Describe various types of functions available in SQL
 - Use character, number, and date functions in SELECT statements
- Using Conversion Functions and Conditional Expressions
 - Describe various types of conversion functions that are available in SQL
 - Use the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions
 - Apply conditional expressions in a SELECT statement
- Reporting Aggregated Data Using the Group Functions
 - Identify the available group functions
 - Describe the use of group functions
 - Group data by using the GROUP BY clause
 - Include or exclude grouped rows by using the HAVING clause
- Displaying Data from Multiple Tables
 - Write SELECT statements to access data from more than one table using equijoins and nonequijoins
 - Join a table to itself by using a self-join
 - View data that generally does not meet a join condition by using outer joins
 - Generate a Cartesian product of all rows from two or more tables
- Using Subqueries to Solve Queries
 - Define subqueries
 - Describe the types of problems that the subqueries can solve
 - List the types of subqueries Write single-row and multiple-row subqueries
- Using the Set Operators
 - Describe set operators
 - Use a set operator to combine multiple queries into a single query
 - Control the order of rows returned
- Manipulating Data
 - Describe each data manipulation language (DML) statement
 - Insert rows into a table
 - Update rows in a table
 - Delete rows from a table
 - Control transactions

- Using DDL Statements to Create and Manage Tables
 - Categorize the main database objects
 - Review the table structure
 - List the data types that are available for columns
 - Create a simple table
 - Explain how constraints are created at the time of table creation
 - Describe how schema objects work
- Creating Other Schema Objects
 - Create simple and complex views
 - Retrieve data from views
 - Create, maintain, and use sequences
 - Create and maintain indexes
 - Create private and public synonyms

Performing Database Administration

- Exploring the Oracle Database Architecture
 - Explain the Memory Structures
 - Describe the Process Structures
 - Overview of Storage Structures
- Preparing the Database Environment
 - Identify the tools for Administering an Oracle Database
 - Plan an Oracle Database installation
 - Install the Oracle software by using Oracle Universal Installer (OUI)
- Creating an Oracle Database
 - Create a database by using the Database Configuration Assistant (DBCA)
- Managing the Oracle Instance
 - Setting database initialization parameters
 - Describe the stages of database startup and shutdown
 - Using alert log and trace files
 - Using data dictionary and dynamic performance views
- Configuring the Oracle Network Environment
 - Configure and Manage the Oracle Network
 - Using the Oracle Shared Server architecture
- Managing Database Storage Structures
 - Overview of tablespace and datafiles
 - Create and manage tablespaces
 - Space management in tablespaces
- Administering User Security
 - Create and manage database user accounts
 - Grant and revoke privileges

- Managing Undo Data
 - Overview of Undo
 - Transactions and undo data
 - Managing undo
- Implementing Oracle Database Security
 - Database Security and Principle of Least Privilege
 - Work with Standard Database Auditing
- Database Maintenance
 - Use and manage optimizer statistics
 - Use and manage Automatic Workload Repository (AWR)
 - Use advisory framework
 - Manage Alerts and Thresholds
- Performance Management
 - Use Automatic Memory Management
 - Use Memory Advisors
 - Troubleshoot invalid and unusable objects
- Intelligent Infrastructure Enhancements
 - Use the Enterprise Manager Support Workbench
 - Managing Patches
- Backup and Recovery Concepts
 - Identify the types of failure that can occur in an Oracle database
 - Describe ways to tune instance recovery
 - Identify the importance of checkpoints, redo log files, and archived log files
 - Overview of flash recovery area
 - Configure ARCHIVELOG mode
- Performing Database Backups
 - Create consistent database backups
 - Back up your database without shutting it down
 - Create incremental backups
 - Automate database backups
 - Manage backups, view backup reports and monitor the flash recovery area
- Performing Database Recovery
 - Overview of Data Recovery Advisor
 - Use Data Recovery Advisor to Perform recovery (Control file, Redo log file and Data file)

- Moving Data
 - Describe and use methods to move data (Directory objects, SQL*Loader, External Tables)
 - Explain the general architecture of Oracle Data Pump
 - Use Data Pump Export and Import to move data between Oracle databases
 - Create and manage roles
 - Create and manage profiles
- Managing Data and Concurrency
 - Monitor and resolve locking conflicts

Working With PL / SQL

- Introduction to PL/SQL
 - Explain the need for PL/SQL
 - Explain the benefits of PL/SQL
- PL/SQL Cursor
 - Using Explicit Cursors
 - Distinguish between usage of implicit and explicit cursors
 - Declare and control explicit cursors, use simple loops and cursor FOR loops to fetch data
- Creating Procedures and Functions
 - Work with procedures
 - Differentiate between a procedure and a function
 - Describe the uses of functions
 - Work with functions (create, invoke and remove functions)
- Creating Database triggers
 - Creating Triggers
 - Describe different types of triggers and their uses
 - Create database triggers
 - Manage triggers

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