

SQL- Fundamental - I

Course Objectives

- Display data from multiple tables using the ANSI SQL 99 JOIN syntax.
- Identify the major structural components of the Oracle Database 11g.
- Create reports of aggregated data.
- Write SELECT statements that include queries.
- Retrieve row and column data from tables.
- Run data manipulation statements (DML) in Oracle Database 11g.
- Create tables to store data.
- Utilize views to display data.
- Control database access to specific objects.
- Write multiple-column sub-queries.
- Employ SQL functions to retrieve customized data.

Duration : 52 Hrs

Oracle and Structured Query Language (SQL)

- Identify the connection between an ERD and a Relational Database
- Explain the relationship between a database and SQL
- Describe the purpose of DDL
- Describe the purpose of DML
- Build a SELECT statement to retrieve data from an Oracle Database table

Restricting and Sorting Data

- Use the ORDER BY clause to sort SQL query results
- Limit the rows that are retrieved by a query
- Use ampersand substitution to restrict and sort output at runtime
- Use SQL row limiting clause

Using Single-Row Functions to Customize Output

- Use various types of functions available in SQL
- Use character, number, and date and analytical (PERCENTILE_CONT, STDDEV, LAG, LEAD) functions in SELECT statements

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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 general functions and conditional expressions in a SELECT statement

Reporting Aggregated Data Using the 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

- Describe the different types of joins and their features
- Use 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

Using Subqueries to Solve Queries

- Define subqueries
- Describe the types of problems subqueries can solve
- Describe the types of subqueries
- Query data using correlated subqueries
- Update and delete rows using correlated subqueries
- Use the EXISTS and NOT EXISTS operators
- Use the WITH clause
- Use 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

- Truncate data
- 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

- Describe data types that are available for columns
- Create a simple table
- Create constraints for tables
- Drop columns and set column UNUSED
- Create and use external tables

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