

Oracle Database 19c SQL

40 Hours

- **Relational Database concepts**
 - Relating clauses in SQL Select Statement to Components of an ERD
 - Explaining the relationship between a database and SQL
 - Retrieving Data using the SQL SELECT Statement
 - Using Column aliases
 - Using The SQL SELECT statement
 - Using concatenation operator, literal character strings, alternative quote operator, and the DISTINCT keyword
 - Using Arithmetic expressions and NULL values in the SELECT statement
- **Restricting and Sorting Data**
 - Applying Rules of precedence for operators in an expression
 - Limiting Rows Returned in a SQL Statement
 - Using Substitution Variables
 - Using the DEFINE and VERIFY commands
 - Sorting Data
 - Using Row Limiting Clause (FETCH, OFFSET, WITH TIES)
- **Using Single-Row Functions to Customize Output**
 - Character Functions
 - Number Functions
 - Date Functions
- **Using Conversion Functions and Conditional Expressions**
 - Understanding implicit and explicit data type conversion
 - Using the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions
 - Applying the NVL, NULLIF, and COALESCE functions to data
 - Using Condition Statement
 - CASE
 - DECODE
 - Nesting Single Row functions
- **Reporting Aggregated Data Using Group Functions**
 - Restricting Group Results
 - Creating Groups of Data
 - Using Group Functions
 - Nesting Multiple Row functions
- **Displaying Data from Multiple Tables**
 - Using Various Types of Joins.
 - Using Natural Join, Using Clause, On Clause.

- Using Self-joins
- Using Non equijoins
- Using OUTER joins
- Understanding and Using Cartesian Products

- **Using Subqueries to Solve Queries**
 - Using Single Row Subqueries
 - Using Multiple Row Subqueries
 - Using Multiple Column Subqueries

 - Using Correlated subqueries.
 - Update and delete rows using correlated subqueries

- **Using SET Operators**
 - Matching the SELECT statements
 - Using the ORDER BY clause in set operations
 - Using The INTERSECT operator
 - Using The MINUS operator
 - Using The UNION and UNION ALL operators

- **Use DDL to manage tables and their relationships**
 - Describing and Working with Tables
 - Describing and Working with Columns and Data Types
 - Creating tables
 - Truncating table
 - Alter Table
 - Rename Table
 - Drop Table

- **Managing Tables using DML statements**
 - Using Database Transactions
 - Perform Insert operations
 - Perform Update operations
 - Perform Delete operations
 - COMMIT, ROLLBACK, SAVEPOINT.

- **Managing Constraints and Temporary Tables**
 - Types of Constraints
 - Primary Key Constraints
 - Unique Constraints
 - Not Null Constraints
 - Check Constraints
 - Foreign Key Constraints
 - Creating and using Constraints
 - Creating and using Temporary Tables
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- **Managing Indexes, Synonyms, Sequences and Views**
 - Creating and Managing Indexes
 - Creating and Managing Synonyms
 - Creating and Managing Sequences
 - Creating and Managing Views
- **Controlling User Access**
 - Differentiating system privileges from object privileges
 - Granting privileges
 - Revoking privileges
 - Using data dictionary views
- **Managing Data in Different Time Zones**
 - Working with CURRENT_DATE
 - Working CURRENT_TIMESTAMP
 - Working LOCALTIMESTAMP
 - Working DBTIMEZONE
 - Working SESSION TIME ZONE
 - Working with INTERVAL data types