

Oracle DBA, Oracle Developer, Java, Android, SQL Server, Linux, C, C++, MySQL PHP, HTML, CSS, Java Script, MySQL DBA, Postgresql DBA, ASP.Net

Oracle 12c – Introduction to SQL

(40 Hours)

- **Audience**

Application Developers
Business Analysts
Data Warehouse Administrator
Developer
Forms Developer
PL/SQL Developer
System Analysts

- **Related Training**

Required Prerequisites
Familiarity with data processing concepts and techniques
Data processing

- **Course Objectives**

Identify the major structural components of the Oracle Database 12c
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 12c
Create tables to store data
Utilize views to display data
Control database access to specific objects
Manage schema objects
Display data from multiple tables using the ANSI SQL 99 JOIN syntax
Manage objects with data dictionary views
Write multiple-column sub-queries
Employ SQL functions to retrieve customized data
Use scalar and correlated sub-queries
Create reports of sorted and restricted data

Oracle DBA, Oracle Developer, Java, Android, SQL Server, Linux, C, C++, MySQL PHP, HTML, CSS, Java Script, MySql DBA, Postgresql DBA, ASP.Net

Oracle 12c – Introduction to SQL (40 Hours)

- **Course Topics**

- **Introduction**

Course Objectives, Course Agenda and Appendixes Used in this Course
Overview of Oracle Database 12c and Related Products
Overview of relational database management concepts and terminologies
Introduction to SQL and its development environments
What is Oracle SQL Developer?
Starting SQL*Plus from Oracle SQL Developer
The Human Resource (HR) Schema
Tables used in the Course

- **Retrieving Data using the SQL SELECT Statement**

Capabilities of the SELECT statement
Arithmetic expressions and NULL values in the SELECT statement
Column aliases
Use of concatenation operator, literal character strings, alternative quote operator, and the DISTINCT keyword
Use of the DESCRIBE command

- **Restricting and Sorting Data**

Limiting the Rows
Rules of precedence for operators in an expression
Substitution Variables
Using the DEFINE and VERIFY command

- **Using Single-Row Functions to Customize Output**

Describe the differences between single row and multiple row functions
Manipulate strings with character function in the SELECT and WHERE clauses
Manipulate numbers with the ROUND, TRUNC and MOD functions
Perform arithmetic with date data

Oracle DBA, Oracle Developer, Java, Android, SQL Server, Linux, C, C++, MySQL PHP, HTML, CSS, Java Script, MySql DBA, Postgresql DBA, ASP.Net

Oracle 12c – Introduction to SQL (40 Hours)

Manipulate dates with the date functions

- **Using Conversion Functions and Conditional Expressions**
 - Describe implicit and explicit data type conversion
 - Use the TO_CHAR, TO_NUMBER, and TO_DATE conversion functions
 - Nest multiple functions
 - Apply the NVL, NULLIF, and COALESCE functions to data
 - Use conditional IF THEN ELSE logic in a SELECT statement
- **Reporting Aggregated Data Using the Group Functions**
 - Group Functions
 - Creating Groups of Data
 - Restricting Group Results
- **Displaying Data from Multiple Tables Using Joins**
 - Introduction to JOINS
 - Types of Joins
 - Natural join
 - Self-join
 - Non equijoins
 - OUTER join
- **Using Subqueries to Solve Queries**
 - Introduction to Subqueries
 - Single Row Subqueries
 - Multiple Row Subqueries
- **Using the SET Operators**
 - Set Operators
 - UNION and UNION ALL operator
 - INTERSECT operator

Oracle DBA, Oracle Developer, Java, Android, SQL Server, Linux, C, C++, MySQL PHP, HTML, CSS, Java Script, MySql DBA, Postgresql DBA, ASP.Net

Oracle 12c – Introduction to SQL**(40 Hours)**

MINUS operator
Matching the SELECT statements
Using ORDER BY clause in set operations

- **Managing Tables using DML statements**
Data Manipulation Language
Database Transactions
 - **Introduction to Data Definition Language**
Data Definition Language
 - **Introduction to Data Dictionary Views**
Introduction to Data Dictionary
Describe the Data Dictionary Structure
Using the Data Dictionary views
Querying the Data Dictionary Views
 - **Creating Sequences, Synonyms, Indexes**
Overview of sequences
Overview of synonyms
Overview of indexes
 - **Creating Views**
Overview of views
 - **Managing Schema Objects**
Managing constraints
Creating and using temporary tables
Creating and using external tables
 - **Retrieving Data by Using Subqueries**
Retrieving Data by Using a Subquery as Source
-

Oracle DBA, Oracle Developer, Java, Android, SQL Server, Linux, C, C++, MySQL PHP, HTML, CSS, Java Script, MySql DBA, Postgresql DBA, ASP.Net

Oracle 12c – Introduction to SQL (40 Hours)

Working with Multiple-Column subqueries
Using Scalar subqueries in SQL
Correlated Subqueries
Working with the WITH clause

- **Manipulating Data by Using Subqueries**

Using Subqueries to Manipulate Data
Inserting by Using a Subquery as a Target
Using the WITH CHECK OPTION Keyword on DML Statements
Using Correlated Subqueries to Update and Delete rows

- **Controlling User Access**

System privileges
Creating a role
Object privileges
Revoking object privileges

- **Manipulating Data**

Overview of the Explicit Default Feature
Using multitable INSERTs
Using the MERGE statement
Performing flashback operations
Tracking Changes in Data

- **Managing Data in Different Time Zones**

Working with CURRENT_DATE, CURRENT_TIMESTAMP, and LOCALTIMESTAMP
Working with INTERVAL data types