



# Oracle Database SQL Certified Expert

(Exam Code : 1Z0-047)

## Course Objective :

**Oracle Database SQL Certified Experts** demonstrate the complete programming language and have mastered the key concepts of a relational database and the advanced features of SQL in order to query and manipulate data and system level, and use advanced querying and reporting techniques, understand storing and retrieving dates according to different time of controlling access and privileges for schema objects.

## Prerequisite:

Familiarity with data processing concepts and techniques Data processing.

## Certificate Of Attendance :

Certificate Of Attendance will be awarded to participants completing the course achieving minimum 75% attendance.

## Training Duration:

Full-Time : 5 Weekdays or 5 Sats / Time : 9.30am – 5.30pm  
Part-Time : 10 Sessions / Time : 7pm to 10pm (twice a week)

## Course Fee :

Course Fee : S\$2999  
Regn Fee : S\$50  
Course fee excludes Oracle Exam.  
All fees subject to GST 7%.

## Detailed Course Outline

### 1. Retrieving Data Using the SQL SELECT Statement

- List the capabilities of SQL SELECT statements
- Execute a basic SELECT statement
- Describe how schema objects work

### 2. Restricting and Sorting Data

- Limit the rows that are retrieved by a query
- Sort the rows that are retrieved by a query

### 3. Using Single-Row Functions to Customize Output

- Describe various types of functions that are available in SQL
- Use character, number, and date functions in SELECT statements
- Describe the use of conversion functions

### 4. 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

### 5. 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

**6. Using Subqueries to Solve Queries**

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

**7. Using the Set Operators**

- Describe set operators
- Use a set operator to combine multiple a single query
- Control the order of rows returned

**8. 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

**9. 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

**10. 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

**11. Managing Objects with Data Dictionary Views**

- Use the data dictionary views to research data on your objects
- Query various data dictionary views

**12. Controlling User Access**

- Differentiate system privileges from object privileges
- Grant privileges on tables
- View privileges in the data dictionary
- Grant roles
- Distinguish between privileges and roles

**13. Managing Schema Objects**

- Add constraints
- Create indexes
- Create indexes using the CREATE TABLE statement
- Creating function-based indexes
- Drop columns and set column UNUSED
- Perform FLASHBACK operations
- Create and use external tables

**14. Manipulating Large Data Sets**

- Manipulate data using subqueries
- Describe the features of multitable INSERTs
- Use the following types of multitable INSERTs (Unconditional, Conditional and Pivot)
- Merge rows in a table
- Track the changes to data over a period of time

**15. Generating Reports by Grouping Related Data**

- Use the ROLLUP operation to produce subtotal values
- Use the CUBE operation to produce crosstabulation values
- Use the GROUPING function to identify the row values created by ROLLUP or CUBE
- Use GROUPING SETS to produce a single result set

**16. Retrieving Data Using Subqueries**

- Write a multiple-column subquery
- Use scalar subqueries in SQL
- Solve problems with correlated subqueries
- Update and delete rows using correlated subqueries
- Use the EXISTS and NOT EXISTS operators
- Use the WITH clause

**17. Hierarchical Retrieval**

- Interpret the concept of a hierarchical query
- Create a tree-structured report
- Format hierarchical data
- Exclude branches from the tree structure

**18. Regular Expression Support**

- Using Meta Characters
- Regular Expression Functions
- Replacing Patterns
- Regular Expressions and Check Constraints

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