Oracle Database 19c/21c/23ai SQL Fundamentals I

Course information

Days : 3
Total lessons : 12
Suggested Prerequisites :
- Familiarity with data processing concepts and techniques

Training includes :
- Experienced trainer(s)
- Pre-test and Post-test
- Practices and solutions

Public price :
- 15,000 baht(THB) per person

In-house price :
- 45,000 baht(THB) : Economic Class : 1 – 5 people
- 55,000 baht(THB) : Small Class : 6 - 10 people
- 70,000 baht(THB) : Medium Class : 11 - 15 people

All prices exclude VAT 7 %

Course details

Day 1
Lesson 1 : Introduction to Oracle Database
Lesson 2 : Retrieve Data using the SQL SELECT Statement
Lesson 3 : Learn to Restrict and Sort Data
Lesson 4 : Usage of Single-Row Functions to Customize Output

Day 2
Lesson 5 : Invoke Conversion Functions and Conditional Expressions
Lesson 6 : Aggregate Data Using the Group Functions
Lesson 7 : Display Data From Multiple Tables Using Joins

Day 3
Lesson 8 : Use Sub-queries to Solve Queries
Lesson 9 : The SET Operators
Lesson 10 : Data Manipulation Statements
Lesson 11 : Use of DDL Statements to Create and Manage Tables
Lesson 12 : Other Schema Objects

Lesson details

Lesson 1 : Introduction to Oracle Database
- List the features of Oracle Database 12c
- Discuss the basic design, theoretical, and physical aspects of a relational database
- Categorize the different types of SQL statements
- Describe the data set used by the course
- Log on to the database using SQL Developer environment
- Save queries to files and use script files in SQL Developer

Lesson 2 : Retrieve Data using the SQL SELECT Statement
- List the capabilities of SQL SELECT statements
- Generate a report of data from the output of a basic SELECT statement
- Select All Columns
- Select Specific Columns
- Use Column Heading Defaults
- Use Arithmetic Operators
- Understand Operator Precedence

- Learn the DESCRIBE command to display the table structure

Lesson 3 : Learn to Restrict and Sort Data
- Write queries that contain a WHERE clause to limit the output retrieved
- List the comparison operators and logical operators that are used in a WHERE clause
- Describe the rules of precedence for comparison and logical operators
- Use character string literals in the WHERE clause
- Write queries that contain an ORDER BY clause to sort the output of a SELECT statement
- Sort output in descending and ascending order

Lesson 4 : Usage of 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
- Manipulate dates with the DATE functions

Lesson 5 : Invoke 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

Lesson 6 : Aggregate Data Using the Group Functions
- Use the aggregation functions to produce meaningful reports
- Divide the retrieved data in groups by using the GROUP BY clause
- Exclude groups of data by using the HAVING clause

Lesson 7 : Display Data From Multiple Tables Using Joins
- Write SELECT statements to access data from more than one table
- View data that generally does not meet a join condition by using outer joins
- Join a table to itself by using a self join

Lesson 8 : Use Sub-queries to Solve Queries
- Describe the types of problem that sub-queries can solve
- Define sub-queries
- List the types of sub-queries
- Write single-row and multiple-row sub-queries

Lesson 9 : The SET Operators
- Describe the SET operators
- Use a SET operator to combine multiple queries into a single query
- Control the order of rows returned

Lesson 10 : Data Manipulation Statements
- Describe each DML statement
- Insert rows into a table
- Change rows in a table by the UPDATE statement
- Delete rows from a table with the DELETE statement
- Save and discard changes with the COMMIT and ROLLBACK statements
- Explain read consistency

Lesson 11 : Use of DDL Statements to Create and Manage Tables
- Categorize the main database objects
- Review the table structure
- List the data types available for columns

- Create a simple table
- Decipher how constraints can be created at table creation
- Describe how schema objects work

Lesson 12 : Other Schema Objects
- Create a simple and complex view
- Retrieve data from views
- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

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