

A Relational Database Management System (RDBMS) is a software system that allows you to create and manage a relational database. Minimum requirements for such a system are defined by both ANSI and ISO. The Structured Query Language (SQL) is the international standard language for relational database management systems. SQL is robust enough to be used by users with non-technical backgrounds, as well as by professional developers and administrators.

Oracle 12c is the next generation database. Its advanced capabilities promote better performance, increased scalability and easier data management.

Course Objectives:

- Describe the features of a Relational Database.
- Interact with a Relational Database Management System.
- Use SQL*Plus to connect to an Oracle database and submit SQL statements.
- Write SQL queries.
- Use SQL functions.
- Use a query to join together data items from multiple tables.
- Write nested queries.
- Perform summary analysis of data in a query.
- Add, change, and remove data in a database.
- Manage database transactions.
- Work in a multi-user database environment.
- Create and manage tables and other database objects.
- Control access to data.

Audience: Application developers, database administrators, system administrators and users who write applications and procedures that access an Oracle 11g database.

Prerequisites: Familiarity with relational database concepts is recommended.

Number of Days: 2 days

1	<p>Course Introduction Course Objectives Course Overview Using the Workbook Suggested References</p>		
2	<p>Relational Database and SQL Overview Review of Relational Database Terminology Relational Database Management Systems SQL Datatypes</p>	3	<p>Introduction to SQL Oracle Database Oracle Versioning and History Logical and Physical Storage Structures Datatypes Overview of Oracle Architecture Connecting to Oracle SQL*Plus Graphical Clients The Oracle Data Dictionary Sample Database</p>

4	SQL Queries – The SELECT Statement The SELECT Statement Choosing Rows with the WHERE Clause NULL Values Compound Expressions IN and BETWEEN Pattern Matching: LIKE and REGEXP_LIKE The CASE...WHEN Expression Creating Some Order		
5	Scalar Functions SQL Functions Using SQL Functions String Functions Regular Expression Functions Numeric Functions Date Functions Date Formats Conversion Functions Literal Values Intervals Oracle Pseudocolumns		
6	SQL Queries - Joins Selecting from Multiple Tables Joining Tables Self Joins Outer Joins Equijoins, Non-equijoins, and Antijoins		
7	Aggregate Functions and Advanced Techniques Subqueries Correlated Subqueries The EXISTS Operator The Aggregate Functions Nulls and DISTINCT Grouping Rows Combining SELECT Statements		
8	Data Manipulation and Transactions The INSERT Statement The UPDATE Statement The DELETE Statement Transaction Management Concurrency Explicit Locking		
			Data Inconsistencies Loading Tables From External Sources
		9	Data Definition and Control Statements Datatypes Defining Tables Constraints Foreign Keys Modifying Table Definitions Deleting a Table Definition Controlling Access to Your Tables
		10	Other Database Objects Views Creating Views Updatable Views Sequences Synonyms
		11	Appendix A – Using Oracle SQL*Plus SQL*Plus The SQL Buffer Buffer Manipulation Commands Running SQL*Plus Scripts Tailoring Your SQL*Plus Environment Viewing Table Characteristics SQL*Plus Substitution Variables Interactive SQL*Plus Scripts SQL*Plus LOB Support
		12	Appendix B – The Data Dictionary Introducing the Data Dictionary DBA, ALL, and USER Data Dictionary Views Some Useful Data Dictionary Queries