



SQL Querying 2

Course Description

Students should have basic computer skills, SQL skills, and be familiar with concepts related to database structure and terminology.

Learning Objectives

Use Nested Queries

- Search Based on Values from a Subquery
 - The IN Operator
- Compare Values from a Subquery
 - Modified Comparison Operators
 - Comparison Operators Used with ANY and ALL
- Search Based on the Existence of Records
 - The EXISTS Operator
- Generate Output Using Correlated Subqueries
 - The APPLY Operator
- Filter Grouped Data Within Subqueries
 - The GROUP BY Clause
 - The HAVING Clause
- Perform Multiple-Level Subqueries
 - Nested Subqueries

Manipulate Table Data

- Insert Rows
 - The INSERT Statement
 - Record Insertion Methods
 - The OUTPUT Clause
 - Table Value Constructors
- Modify and Delete Data
 - The UPDATE Statement
 - Data Updating Rules
 - The DELETE Statement
 - The TRUNCATE TABLE Statement
 - The MERGE Statement

Manipulate Table Structure

- Create a Table
 - The CREATE TABLE Statement
 - The INSERT INTO Statement
 - Displaying the Table Structure
 - SQL Data Types
 - Table Design
 - Table Backup
- Create a Table with Constraints
 - Data Integrity
 - Primary Keys
 - Constraints
 - PRIMARY KEY Constraints
 - Foreign Keys
 - FOREIGN KEY Constraints
 - DEFAULT Constraints
 - CHECK Constraints
- Modify a Table's Structure
 - The ALTER TABLE Statement
- Delete Tables
 - The DROP TABLE Statement

Work with Views

- Create a View
 - Views
 - The CREATE VIEW Statement
 - Encryption
 - Schema Binding
 - The TOP Keyword
 - Benefits and Disadvantages of Views
 - Guidelines for Creating a View
- Manipulate Data in Views
 - Data Insertion
 - Data Modification
 - Data Deletion
- Modify and Delete Views
 - The ALTER VIEW Statement
 - The DROP VIEW Statement

Index Data

- Create Indexes
 - Query Execution
 - Types of Indexes
 - The Query Optimizer
 - The CREATE INDEX Statement
- Drop Indexes
 - The DROP INDEX Statement

Manage Transactions

- Define Transactions
 - Transactions
 - ACID Properties
 - Protection for Simultaneous Database Access
 - Transaction Management
 - The ROLLBACK TRAN Statement
- Commit Transactions
 - The COMMIT TRAN Statement