

Introduction to Databases and SQL Basics (40 hours)

Module 1: Introduction to Databases and SQL Basics (14 hours)

- Overview of Databases
- Introduction to databases and their types
 - Importance of databases in computing
- SQL Fundamentals
 - Basic SQL syntax and data types
 - Creating and modifying databases, tables, and records
 - Primary keys and foreign keys
- Basic SQL Queries
 - SELECT statement
 - Sorting and filtering data with ORDER BY and WHERE clauses

Module 2: Advanced SQL Queries (14 hours)

- Working with Multiple Tables
 - JOIN operations (INNER, LEFT, RIGHT, FULL OUTER)
 - Combining data from multiple tables
- Subqueries and Nested Queries
 - Understanding subqueries and their applications
 - Correlated subqueries
- Aggregation and Grouping
 - Aggregation functions (SUM, AVG, COUNT, MAX, MIN)
 - GROUP BY and HAVING clauses

Module 3: Data Manipulation and Transaction Control (12 hours)

- Data Manipulation
 - Inserting, updating, and deleting data
 - Managing transactions (BEGIN, COMMIT, ROLLBACK)
- Constraints and Indexes
 - Constraints (UNIQUE, NOT NULL, CHECK)
- Views and Stored Procedures
 - Creating and managing views
 - Introduction to stored procedures
- Working with Dates and Times
 - Date and time functions
 - Formatting query results

- Case Statements and Conditional Logic
 - Using CASE statements
 - Advanced filtering techniques

Optional (add more hours to course) Advanced Database Concepts (14 hours)

- Triggers and Optimization
 - Indexes and their impact on performance
 - Overview of triggers and their applications
 - Optimizing SQL queries
- Window Functions
 - Introduction to window functions
 - ROW_NUMBER(), RANK(), DENSE_RANK(), etc.

מבין לקוחותינו:

J.P.Morgan



דיסקונט



Cal.



Google

ebay



SONY

בנק הפועלים

Qualcomm



BROADCOM

harmonic

