

# **SQL IN 8 Hours**

Course Duration: 2 days

#### **Overview**

SQL in 8 hours is an intensive training program designed to provide participants with a strong foundation in SQL, including basic querying, data manipulation, and advanced techniques like dynamic SQL and stored procedures. By the end of the day, participants will be equipped with the necessary skills to execute and optimize SQL queries.

#### **Module 1: Introduction to SQL**

- Overview of SQL and its uses in database management.
- Understanding databases, tables, and relationships.

### **Module 2: Data Manipulation Language (DML)**

- Introduction to DML: INSERT, UPDATE, DELETE commands.
- Practical exercises on modifying data within tables.

# Module 3: Basic Querying

- Writing simple SELECT statements to retrieve data.
- Using aliases to simplify query outputs.

# **Module 4: Filtering Data**

- Applying WHERE clause for data filtering.
- Using comparison and logical operators.

# **Module 5: Sorting and Grouping**

- Utilizing ORDER BY to sort query results.



- Introduction to GROUP BY for data aggregation.

### **Module 6: Advanced Query Techniques**

- Understanding JOINs: INNER, LEFT, RIGHT, and FULL.
- Using subqueries for complex data retrieval.

### Module 7: Dynamic SQL

- Introduction to dynamic SQL and its applications.
- Constructing and executing dynamic queries.

#### **Module 8: Stored Procedures**

- Overview of stored procedures and their benefits.
- Creating and executing simple stored procedures.

# **Module 9: Best Practices and Optimization**

- Tips for writing efficient and optimized SQL queries.
- Common pitfalls and how to avoid them.

#### Module 10: Hands-on Practice and Q&A

- Practical exercises to consolidate learning.
- Open session for questions and clarifications.