

## MySQL

**Duration – 40 Hours**

### Program Description

This program provides a detailed learning path for MySQL, one of the most widely used relational databases. Participants will learn SQL programming, database design, and management, along with performance tuning and practical application integration. The program emphasizes hands-on exercises for real-world scenarios.

### Learning Goals

- Understand relational database principles and MySQL architecture
- Gain proficiency in SQL for querying and data manipulation
- Design and implement effective database schemas
- Manage transactions, indexing, and database security
- Optimize performance and monitor database health
- Work with stored procedures, triggers, and functions
- Apply skills through real-world MySQL projects

### Course Topics

- Introduction to MySQL and Architecture
- SQL Basics: Queries, Joins, and Aggregations
- Data Definition and Manipulation (DDL & DML)
- Database Design and Normalization
- Transactions, Indexing, and Locking
- Stored Procedures, Triggers, and Functions
- Backup, Recovery, and Security
- Performance Tuning and Optimization
- Hands-on Projects and Case Studies

**Modules can be customized to suit client's specific needs and duration accordingly**