

MYSQL BACKEND DEVELOPER COURSE SCHEDULE

Week 1: Introduction and Database Management

Monday: Module 1 - Introduction to MySQL

- Overview of MySQL
- Installation and setup of MySQL Workbench

Tuesday: Module 2 - Database Creation

- Creating a MySQL schema
- Connecting to the MySQL database through Workbench

Wednesday: Module 2 - Database Management

- Managing databases: Create, alter, and delete

Thursday: Module 3 - Data Types

- Understanding common MySQL data types
- Identifying and implementing constraints

Friday: Module 3 - Table Design

- Designing tables with appropriate data types and constraints

Week 2: Data Manipulation and Database Design

Monday: Module 4 - SQL Commands

- Creating tables with SQL commands
- Altering tables: Adding and removing columns

Tuesday: Module 4 - Data Manipulation

- Selecting data with conditions
- Inserting new records and updating existing records

Wednesday: Module 4 - Deleting and Joining Data

- Deleting records based on conditions
- Understanding and writing join queries

Thursday: Module 5 - Database Design

- Introduction to ER diagrams
- Understanding normalization concepts

Friday: Module 5 - Keys and Relationships

**Students will receive a certificate of completion upon successful completion of this course.*



- Implementing primary and foreign keys
 - Designing a normalized database schema
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Week 3: Security, User Management, and Backup

Monday: Module 6 - MySQL Security

- Implementing authentication and authorization
- Data encryption techniques

Tuesday: Module 6 - SQL Injection Prevention

- Understanding SQL injection and prevention techniques

Wednesday: Module 7 - User Management

Creating and managing MySQL users Assigning privileges and managing roles

Thursday: Module 8 - Backup Strategies

- Backing up databases using MySQL Workbench
- Understanding full vs. incremental backups

Friday: Module 8 - Recovery Techniques

- Implementing recovery strategies
 - Restoring databases from backups
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Week 4: Advanced Concepts and Final Project

Monday: Module 9 - Stored Procedures

- Creating stored procedures and passing parameters

Tuesday: Module 9 - Debugging Procedures

- Debugging stored procedures and functions

Wednesday: Module 10 - Triggers and Events

Creating triggers for automated actions Scheduling events for routine database tasks

Thursday: Module 11 - Performance Tuning

- Monitoring database performance

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- Techniques for query optimization and indexing

Friday: Module 12 - Advanced SQL Techniques

- Creating and managing views
 - Implementing subqueries and correlated subqueries
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Conclusion

Final Project and Course Review

- Students design and implement a complete MySQL database solution.
- Q&A session to address questions and discuss real-world applications.

This schedule allows for a thorough exploration of MySQL fundamentals, ensuring participants have a solid foundation by the end of the course.

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