

Introduction to MySQL Programming

Instructor: Sriya Ivaturi

Overview of MySQL

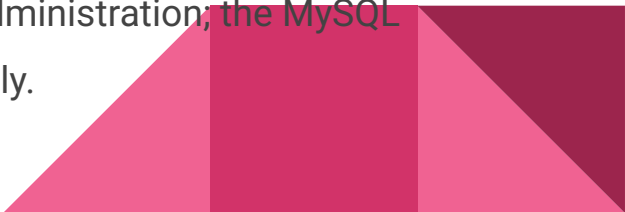
➤ What is MySQL:

- An open-source relational database management system (RDBMS) that uses SQL to store, manage, and retrieve data.

➤ MySQL Architecture:

- Follows a client-server model with components like the MySQL Server (processing queries), storage engines (InnoDB, MyISAM), and client programs.

➤ MySQL Tools (Workbench / CLI):

- MySQL Workbench provides a GUI for database design and administration; the MySQL Command-Line Client allows executing SQL commands directly.
- 

Basic SQL in MySQL

- Data Definition Language (DDL)
- Data Manipulation Language (DML)
- Data Control Language (DCL)



MySQL Data Types

- Numeric
- String
- Date/Time



MySQL Programming Elements

- **Variables** – Store temporary data for use within queries or stored programs.
 - **Comments** – Add explanations or notes inside SQL code without affecting execution.
 - **Control Flow Statements** – Direct the logic of execution using IF, CASE, LOOP, WHILE, and REPEAT.
 - **Cursors** – Retrieve and process rows from a query result set one at a time.
 - **Condition Handlers (Error Handling)** – Catch and handle errors or warnings during execution.
 - **Stored Routines (Procedures/Functions)** – Group reusable SQL code blocks for repeated tasks.
 - **Triggers** – Automatically run code in response to INSERT, UPDATE, or DELETE events on tables.
- 