

#### 1. Introduction to Databases

#### What is a Database?

A database is an organized collection of data, generally stored and accessed electronically from a computer system. Databases allow for the efficient retrieval, insertion, and deletion of data.

#### **Types of Databases**

- Relational Databases: Store data in tables and use SQL for data manipulation.
- NoSQL Databases: Designed for specific data models such as document, key-value, graph, or column-family.

### **Relational Databases and SQL**

Relational databases use SQL (Structured Query Language) for querying and maintaining the database. SQL allows you to interact with the database by writing queries to perform operations like creating, reading, updating, and deleting data.

# 2. Setting Up Your Environment

## **Installing MySQL**

- 1. **Download MySQL**: Visit the MySQL official website.
- 2. **Install MySQL**: Follow the installation instructions specific to your operating system.
- 3. **Set up MySQL**: During installation, set a root password and configure MySQL settings.

#### **Accessing MySQL**

After installation, you can access MySQL using the command line:

mysal -u root -n