**What is ORM?**

**• Explain how ORM maps C# classes to database tables.**

**• Benefits: Productivity, maintainability, and abstraction from SQL**

**ORM (Object-Relational Mapping)** is a programming technique that allows developers to interact with a relational database using **object-oriented paradigms**, rather than writing raw SQL queries. It bridges the gap between **object-oriented programming languages** like C# and **relational databases** by automatically handling the conversion between **classes and tables**, **objects and rows**, and **properties and columns**.

ORM will map this class to a table called Students with columns StudentId, Name, and Age. The Courses property can define a **many-to-many** or **one-to-many** relationship using foreign keys.

Benefits of ORM

Productivity

Reduces boilerplate code for SQL queries and database access.Auto-generates SQL queries for CRUD operations.Allows faster development using LINQ (Language Integrated Query) for querying data.

Maintainability

Database schema changes can be reflected in C# models and tracked using migrations.Centralized model definitions make it easier to update and refactor.

Abstraction from SQL

Developers work in familiar C# code instead of SQL.ORM handles query generation, joins, transactions, etc.Reduces the chance of SQL injection by using parameterized queries internally.