



Course: Data Base Semester: 1 st term 2025/2026	Lecturers: Dr. Nehal El Azaly, Dr. Dina Abdelhafiz
<i>Tutorial 6: Introduction to SQL, Review on Lecture 5</i>	

1. SQL Overview

- SQL (Structured Query Language) is used to communicate with databases.
- It allows users to define, manipulate, and retrieve data efficiently.

2. SQL Categories

SQL commands are grouped into three main categories:

- Data Query Language (DQL): SELECT, SELECT DISTINCT.
- Data Definition Language (DDL): CREATE DATABASE, DROP DATABASE, CREATE TABLE, DROP TABLE.
- Data Manipulation Language (DML): INSERT INTO, UPDATE, DELETE FROM.

3. Common SQL Commands and Syntax

SELECT

Syntax: SELECT column1, column2 FROM table_name WHERE condition;

Example: SELECT Name, Age FROM Students WHERE Age > 20;

SELECT DISTINCT

Syntax: SELECT DISTINCT column_name FROM table_name;

Example: SELECT DISTINCT Department FROM Employees;

CREATE DATABASE

Syntax: CREATE DATABASE database_name;

Example: CREATE DATABASE SchoolDB;

DROP DATABASE

Syntax: DROP DATABASE database_name;

Example: DROP DATABASE SchoolDB;

CREATE TABLE

Syntax: CREATE TABLE table_name (column_name datatype, ...);

Example: CREATE TABLE Students (StudentID INT, Name VARCHAR(50), Age INT);

DROP TABLE

Syntax: DROP TABLE table_name;

Example: DROP TABLE Students;

INSERT INTO

Syntax: INSERT INTO table_name (col1, col2) VALUES (val1, val2);

Example: INSERT INTO Students (Name, Age) VALUES ('Ali', 22);

UPDATE





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Syntax: UPDATE table_name SET column=value WHERE condition;

Example: UPDATE Students SET Age=23 WHERE Name='Ali';

DELETE FROM

Syntax: DELETE FROM table_name WHERE condition;

Example: DELETE FROM Students WHERE Age<18;

