**✅ 1. CREATE TABLE Schema**

CREATE TABLE employees (

emp\_id INT PRIMARY KEY,

full\_name VARCHAR(100),

department VARCHAR(50),

salary DECIMAL(10, 2),

join\_date DATE,

city VARCHAR(50)

);

**✅ 2. INSERT Data**

INSERT INTO employees (emp\_id, full\_name, department, salary, join\_date, city) VALUES

(1, 'Ali Khan', 'HR', 55000.00, '2022-01-10', 'Lahore'),

(2, 'Sara Malik', 'IT', 75000.00, '2021-03-15', 'Karachi'),

(3, 'Usman Tariq', 'Finance', 60000.00, '2023-07-01', 'Islamabad'),

(4, 'Nadia Ahmed', 'Marketing', 52000.00, '2020-11-30', 'Lahore'),

(5, 'Hassan Raza', 'IT', 78000.00, '2021-06-20', 'Karachi'),

(6, 'Ayesha Noor', 'Finance', 62000.00, '2022-09-10', 'Faisalabad'),

(7, 'Bilal Iqbal', 'IT', 81000.00, '2023-01-25', 'Rawalpindi'),

(8, 'Mehwish Arif', 'HR', 54000.00, '2019-05-17', 'Lahore'),

(9, 'Zainab Fatima', 'Marketing', 51000.00, '2020-03-10', 'Multan'),

(10, 'Tariq Jameel', 'IT', 85000.00, '2024-01-01', 'Karachi');

**✅ 1. WHERE Clause**

**Query:**

SELECT \* FROM employees

WHERE department = 'IT';

**Explanation:**  
This query fetches **all columns** (\*) for those **employees who work in the IT department**.  
The WHERE clause filters rows based on a condition—in this case, department = 'IT'.

**✅ 2. BETWEEN Condition**

**Query:**

SELECT \* FROM employees

WHERE salary BETWEEN 60000 AND 80000;

**Explanation:**  
This query returns all employees **whose salary is between 60,000 and 80,000 inclusive**.

* BETWEEN is a shorthand for salary >= 60000 AND salary <= 80000.
* It's useful for checking if a value lies in a **numeric or date range**.

**✅ 3. IN Condition**

**Query:**

SELECT \* FROM employees

WHERE department IN ('HR', 'Marketing');

**Explanation:**  
This filters the rows and returns only those employees whose **department is either HR or Marketing**.

* IN is a cleaner way to check multiple values instead of writing:  
  department = 'HR' OR department = 'Marketing'.

**✅ 4. LIKE Condition**

**Query:**

SELECT \* FROM employees

WHERE full\_name LIKE 'S%';

**Explanation:**  
This fetches all employees **whose names start with the letter 'S'**.

* The % symbol is a wildcard that matches **zero or more characters**.
* 'S%' means: any name that **starts with "S" and has anything after**.

**✅ 5. Limiting Rows (LIMIT)**

**Query:**

SELECT \* FROM employees

ORDER BY salary DESC

LIMIT 5;

**Explanation:**  
This query sorts employees in **descending order of salary** and returns **only the top 5 highest-paid employees**.

* ORDER BY salary DESC sorts the data.
* LIMIT 5 returns **only the first 5 records** after sorting.

**✅ 6. Character Strings and Dates**

**Query:**

SELECT emp\_id, full\_name, join\_date

FROM employees

WHERE join\_date > '2022-01-01'

AND city = 'Karachi';

**Explanation:**  
This returns the emp\_id, full\_name, and join\_date of employees who:

* **Joined after January 1, 2022**
* **Live in Karachi**

It shows how to filter **by date and string (city)** together using the AND operator.