Table Schema: Employee Attendance Table

Let's create a new table called **Employee Attendance** to practice various SQL operations.

Employee Attendance Table Structure:

AttendanceID (PK)	EmployeeName	Department	Date	Status	HoursWorked
1	John Doe	IT	2025-05-01	Present	8
2	Priya Singh	HR	2025-05-01	Absent	0
3	Ali Khan	IT	2025-05-01	Present	7
4	Riya Patel	Sales	2025-05-01	Late	6
5	David Brown	Marketing	2025-05-01	Present	8

Tasks:

1. CRUD Operations:

1. **Add a new attendance record:**
   - Insert a record for **Neha Sharma**, from **Finance**, on **2025-05-01**, marked as **Present**, with **8** hours worked.
2. **Update attendance status:**
   - Change **Riya Patel's** status from **Late** to **Present**.
3. **Delete a record:**
   - Remove the attendance entry for **Priya Singh** on **2025-05-01**.
4. **Read all records:**
   - Display all attendance records sorted by **EmployeeName** in **ascending order**.

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2. Sorting and Filtering:

5. **Sort by Hours Worked:**
   - List employees sorted by **HoursWorked** in **descending order**.
6. **Filter by Department:**
   - Display all attendance records for the **IT** department.
7. **Filter with AND condition:**
   - List all **Present** employees from the **IT** department.
8. **Filter with OR condition:**
   - Retrieve all employees who are either **Absent** or **Late**.

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3. Aggregation and Grouping:

9. **Total Hours Worked by Department:**
   - Calculate the **total hours worked** grouped by **Department**.
10. **Average Hours Worked:**
    - Find the **average hours worked** per day across all departments.

11. **Attendance Count by Status:**
    - Count how many employees were **Present**, **Absent**, or **Late**.

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4. Conditional and Pattern Matching:

12. **Find employees by name prefix:**

- List all employees whose **EmployeeName** starts with **'R'**.

13. **Filter by multiple conditions:**

- Display employees who worked **more than 6 hours** and are marked **Present**.

14. **Filter using BETWEEN operator:**

- List employees who worked between **6 and 8 hours**.

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5. Advanced Queries:

15. **Top 2 employees with the most hours:**
    - Display the **top 2 employees** with the **highest number of hours worked**.
16. **Employees who worked less than the average hours:**
    - List all employees whose **HoursWorked** are **below the average**.
17. **Group by Status:**
    - Calculate the **average hours worked** for each **attendance status** (Present, Absent, Late).
18. **Find duplicate entries:**
    - Identify any employees who have **multiple attendance records** on the **same date**.

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6. Join and Subqueries (if related tables are present):

19. **Department with most Present employees:**
    - Find the **department** with the **highest number of Present employees**.
20. **Employee with maximum hours per department:**
    - Find the **employee with the most hours worked** in each **department**.