

## DML & DQL Task

**Restore (the provided Company DB) then create the following Queries:**

### 1) Company Database – DQL & DML Tasks

#### DQL

1. Display all employee data.
2. Display employee first name, last name, salary, and department number.
3. Display each employee's full name and their annual commission (10% of annual salary) as **ANNUAL\_COMM**.
4. Display employee ID and name for employees earning more than **1000 LE monthly**.
5. Display employee ID and name for employees earning more than **10000 LE annually**.
6. Display names and salaries of all female employees.
7. Display employees whose salary is between **2000 and 5000**.
8. Display employee names ordered by **salary descending**.
9. Display the **maximum, minimum, and average** salary.
10. Display the total number of employees.
11. Display employees whose first name starts with '**A**'.
12. Display employees who have **no supervisor**.
13. Display employees hired after **2020**.

#### DML

14. Insert your personal data into the employee table (Department = 30, SSN = 102672, Superssn = 112233, Salary = 3000).
15. Insert another employee (your friend) in department 30 with SSN = 102660, leaving salary and supervisor number **NULL**.
16. Update your salary by **20%**.
17. Increase salaries by **5%** for all employees in department 30.
18. Set commission to **NULL** for employees earning less than **2000**.

19. Delete employees with **NULL salary**.

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## 2) University Database – DQL & DML Tasks

### DQL

1. Display all student records.
2. Display each student's full name, enrollment date, and current status.
3. Display each course title and credits.
4. Display each student's full name and GPA as **GPA Score**.
5. List student IDs and names of students with GPA greater than **3.5**.
6. List students who enrolled before **2022**.
7. Display students with GPA between **3.0 and 3.5**.
8. Display students ordered by **GPA descending**.
9. Display the **maximum, minimum, and average** GPA.
10. Display total number of students.
11. Display students whose names end with '**a**'.
12. Display students with **NULL advisor**.
13. Display students enrolled in **2021**.

### DML

14. Insert your data as a new student (Student ID = 300045, Program ID = 2, GPA = 3.6).
  15. Insert another student (your friend) with GPA and advisor set to **NULL**.
  16. Increase your GPA by **0.2**.
  17. Set GPA to **2.0** for students with GPA below **2.0**.
  18. Increase GPA by **0.1** for students enrolled before **2020**.
  19. Delete students with status '**Inactive**'.
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## 3) Airline Database – DQL & DML Tasks

## DQL

1. Display all flight leg records.
2. Display each flight leg ID, scheduled departure time, and arrival time.
3. Display each airplane's ID, type, and seat capacity.
4. Display each flight leg's ID and available seats as **AvailableSeats**.
5. List flight leg IDs with available seats greater than **100**.
6. List airplane IDs with seat capacity above **300**.
7. Display airport codes and names where city = '**Cairo**'.
8. Display flight legs scheduled on **2025-06-10**.
9. Display flight legs ordered by departure time.
10. Display the **maximum**, **minimum**, and **average** available seats.
11. Display total number of flight legs.
12. Display airplanes whose type contains '**Boeing**'.

## DML

13. Insert a new flight leg departing from '**CAI**' to '**DXB**' on **2025-06-10**.
  14. Insert a customer with **NULL contact number**.
  15. Reduce available seats of your inserted flight leg by **5**.
  16. Increase available seats by **10** for all domestic flights.
  17. Update airplane seat capacity by **+20** where capacity < 150.
  18. Delete canceled flight legs.
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## 4) Hotel Database – DQL & DML Tasks

### DQL

1. Display all guest records.
2. Display each guest's name, contact number, and proof ID type.
3. Display all bookings with booking date, status, and total cost.

4. Display each room number and its price per night as **NightlyRate**.
5. List rooms priced above **1000** per night.
6. Display staff members working as '**Receptionist**'.
7. Display bookings made in **2024**.
8. Display bookings ordered by **total cost descending**.
9. Display the **maximum, minimum, and average** room price.
10. Display total number of rooms.
11. Display guests whose names start with '**M**'.
12. Display rooms priced between **800 and 1500**.

#### DML

13. Insert yourself as a guest (Guest ID = 9011).
  14. Create a booking for room **205**.
  15. Insert another guest with **NULL contact and proof details**.
  16. Update your booking status to '**Confirmed**'.
  17. Increase room prices by **10%** for luxury rooms.
  18. Update booking status to '**Completed**' where checkout date is before today.
  19. Delete bookings with status '**Cancelled**'.
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## 5) Bank Database – DQL & DML Tasks

#### DQL

1. Display all customer records.
2. Display customer full name, phone, and membership start date.
3. Display each loan ID, amount, and type.
4. Display account number and annual interest (5% of balance) as **AnnualInterest**.
5. List customers with loan amounts greater than **100000 LE**.
6. List accounts with balances above **20000**.

7. Display accounts opened in **2023**.
8. Display accounts ordered by **balance descending**.
9. Display the **maximum, minimum, and average** account balance.
10. Display total number of customers.
11. Display customers with **NULL phone numbers**.
12. Display loans with duration greater than **10 years**.

#### DML

13. Insert yourself as a new customer and open an account with balance **10000**.
  14. Insert another customer with **NULL phone and address**.
  15. Increase your account balance by **20%**.
  16. Increase balance by **5%** for accounts with balance less than **5000**.
  17. Update phone number to '**Not Provided**' where phone is NULL.
  18. Delete closed accounts.
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## 6) Library Database – DQL & DML Tasks

#### DQL

1. Display all book records.
2. Display each book's title, genre, and availability.
3. Display all member names, email, and membership start date.
4. Display each book's title and price as **BookPrice**.
5. List books priced above **250 LE**.
6. List members who joined before **2023**.
7. Display books published after **2018**.
8. Display books ordered by **price descending**.
9. Display the **maximum, minimum, and average** book price.
10. Display total number of books.

11. Display members with **NULL email**.
12. Display books whose title contains '**Data**'.

#### **DML**

13. Insert yourself as a member (Member ID = 405).
14. Register yourself to borrow book ID **1011**.
15. Insert another member with **NULL email and phone**.
16. Update the return date of your loan to **today**.
17. Increase book prices by **5%** for books priced under **200**.
18. Update member status to '**Active**' for recently joined members.
19. Delete members who never borrowed a book.