PG-DAC AUGUST 25
Assignment No-3

Answers

1. Write a SQL query to create Employee & Department table with specific columns and constraints.(**Note**-Create Table, insert data as per your Choice)

```
CREATE TABLE Department (
    DeptID INT PRIMARY KEY,
    DeptName VARCHAR(50) NOT NULL,
    Location VARCHAR(50)
);

CREATE TABLE Employee (
    EmpID INT PRIMARY KEY,
    EmpName VARCHAR(50) NOT NULL,
    Salary DECIMAL(10,2),
    JoiningDate DATE,
    DeptID INT,
    CONSTRAINT fk_dept FOREIGN KEY (DeptID) REFERENCES Department(DeptID)
);

INSERT INTO Department (DeptID, DeptName, Location) VALUES
(10, 'HR', 'Mumbai'),
(20, 'IT', 'Pune'),
(30, 'Sales', 'Delhi');

INSERT INTO Employee (EmpID, EmpName, Salary, JoiningDate, DeptID) VALUES
(101, 'Amit Sharma', 60000, '2020-01-10', 10),
(102, 'Ravi Kumar', 45000, '2021-03-12', 20),
(103, 'Neha Singh', 55000, '2019-05-22', 30);
```

2. Write a SQL query to add any new column to an existing table.

```
ALTER TABLE Employee ADD COLUMN Email VARCHAR(100);
```

3. Write a SQL query to insert multiple records (At least 5) into a table in a single operation.

```
INSERT INTO Employee (EmpID, EmpName, Salary, JoiningDate, DeptID) VALUES
(104, 'Sonia Mehta', 48000, '2022-02-14', 10),
(105, 'Vikram Das', 52000, '2023-06-01', 20),
(106, 'Rohit Verma', 58000, '2021-07-10', 30),
(107, 'Priya Nair', 62000, '2020-09-18', 10),
(108, 'Karan Patel', 47000, '2024-01-12', 20);
```

4. Write a SQL query to delete all records from a table.

```
DELETE FROM Employee;
```

5. Write a SQL query to update salary records from a table where id = 5.

```
UPDATE Employee SET Salary = 70000 WHERE EmpID = 5;
```

6. Write a query to grant SELECT privilege on the Emp table to user readonly_user.

```
GRANT SELECT ON Employee TO readonly_user;
```

7. Write a query to revoke INSERT privilege on the Emp table from user temp_user.

```
REVOKE INSERT ON Employee FROM temp_user;
```

8. Write a query to insert a new employee into the Emp table and commit the transaction.

```
INSERT INTO Employee (EmpID, EmpName, Salary, JoiningDate, DeptID)
VALUES (109, 'Meena Joshi', 50000, '2025-10-05', 30);

COMMIT;
```

9. Write a query to update the Salary of an employee with EmpID = 101 and commit the transaction.

```
UPDATE Employee SET Salary = 75000 WHERE EmpID = 101;
COMMIT;
```

10. Write a query to set a SAVEPOINT before updating the DeptID of an employee.

```
SAVEPOINT before_update_dept;

UPDATE Employee SET DeptID = 20 WHERE EmpID = 101;
```

11. Write a query to rollback to the previously created SAVEPOINT.

```
ROLLBACK TO before_update_dept;
```

12. Write a query to truncate all data from the Emp table.

```
TRUNCATE TABLE Employee;
```

13. Write a query to list all employees whose salary is greater than 50,000.

```
SELECT * FROM Employee WHERE Salary > 50000;
```

14. Write a query to increase the salary of all employees in DeptID = 10 by 10%.

```
UPDATE Employee
SET Salary = Salary * 1.10
WHERE DeptID = 10;
```

15. Write a query to count the total number of employees in each department.

```
SELECT DeptID, COUNT(*) AS TotalEmployees
FROM Employee
GROUP BY DeptID;
```

16. Write a query to list departments that have no employees. & create a view for those salespeople who belong to the city of Mumbai.

```
SELECT D.DeptID, D.DeptName
FROM Department D
LEFT JOIN Employee E ON D.DeptID = E.DeptID
WHERE E.EmpID IS NULL;

CREATE VIEW Mumbai_Salespeople AS
SELECT E.EmpID, E.EmpName, D.Location
FROM Employee E
JOIN Department D ON E.DeptID = D.DeptID
WHERE D.Location = 'Mumbai' AND D.DeptName = 'Sales';
```

17. Write a query to display the highest salary among all employees.

```
SELECT MAX(Salary) AS HighestSalary FROM Employee;
```

18. Write a query to display the 2nd highest salary among all employees.

```
SELECT MAX(Salary) AS SecondHighest
FROM Employee
WHERE Salary < (SELECT MAX(Salary) FROM Employee);
```

19. Write a query to show all employees ordered by JoiningDate in descending order.

```
SELECT * FROM Employee
ORDER BY JoiningDate DESC;
```

20. Write a query to rename the DeptName column to DepartmentName.

```
ALTER TABLE Department RENAME COLUMN DeptName TO DepartmentName;
```