ASSIGNMENT 4

SQL queries

Dept Table:

DeptNo	Dname	Loc
10	Accounts	Bangalore
20	IT	Delhi
30	Production	Chennai
40	Sales	Hyd
50	Admn	London

Emp Table:

EmpNo	Ename	Sal	Hire_Date	Commission	DeptNo	Mgr
1001	Sachin	19000	1-Jan-1980	2100	20	1003
1002	Kapil	15000	1-Jan-1970	2300	10	1003
1003	Stefen	12000	1-Jan-1990	500	20	1007
1004	Williams	9000	1-Jan-2001	NULL	30	1007
1005	John	5000	1-Jan-2005	NULL	30	1006
1006	Dravid	19000	1-Jan-1985	2400	10	1007
1007	Martin	21000	1-Jan-2000	1040	NULL	NULL

Following includes the questions and answers of above data given

Select employee details of dept number 10 or 30

```
SELECT *
FROM Emp
WHERE DeptNo = 10 OR DeptNo = 30;
```

Write a query to fetch all the dept details with more than 1 Employee.

```
SELECT D.DeptNo, D.Dname, D.Loc, COUNT(E.EmpNo) AS EmployeeCount
FROM Dept D
JOIN Emp E ON D.DeptNo = E.DeptNo
GROUP BY D.DeptNo, D.Dname, D.Loc
HAVING COUNT(E.EmpNo) > 1;
```

Write a query to fetch employee details whose name starts with the letter "**S"**

```
SELECT *
FROM Emp
WHERE Ename LIKE 'S%';
```

Select Emp Details Whose experience is more than 2 years

```
SELECT *,
  (DATEDIFF(CURRENT_DATE, Hire_Date) / 365) AS ExperienceInYears
FROM Emp
WHERE (DATEDIFF(CURRENT_DATE, Hire_Date) / 365) > 2;
```

Write a SELECT statement to replace the char "a" with "#" in Employee Name (Ex: **Sachin** as **S#chin)**

```
SELECT REPLACE(Ename, 'a', '#') AS ModifiedName
```

```
FROM Emp;
```

Write a query to fetch employee name and his/her manager name.

```
SELECT E.Ename AS EmployeeName, M.Ename AS ManagerName
FROM Emp E
LEFT JOIN Emp M ON E.Mgr = M.EmpNo;
```

Fetch Dept Name , Total Salry of the Dept

```
SELECT D.Dname AS DepartmentName, SUM(E.Sal) AS TotalSalary
FROM Dept D
JOIN Emp E ON D.DeptNo = E.DeptNo
GROUP BY D.Dname;
```

Write a query to fetch **ALL** the employee details along with department name, department location, irrespective of employee existance in the department.

```
SELECT E.EmpNo, E.Ename, E.Sal, E.Hire_Date, E.Commission, E.DeptNo,
      D.Dname AS DepartmentName, D.Loc AS DepartmentLocation
FROM Emp E
LEFT JOIN Dept D ON E.DeptNo = D.DeptNo;
```

Write an update statement to increase the employee salary by 10 %

```
UPDATE Emp
SET Sal = Sal * 1.10;
```

Write a statement to delete employees belong to Chennai location.

```
DELETE FROM Emp
WHERE DeptNo IN (SELECT DeptNo FROM Dept WHERE Loc = 'Chennai');
```

Get Employee Name and gross salary (sal + comission) .

```
SELECT E.Ename AS EmployeeName, (E.Sal + COALESCE(E.Commission, 0)) AS
GrossSalary
FROM Emp E;
```

Increase the data length of the column Ename of Emp table from 100 to 250 using ALTER statement

```
ALTER TABLE Emp
ALTER COLUMN Ename VARCHAR(250);
```

Write query to get current datetime

```
SELECT CURRENT_TIMESTAMP AS CurrentDateTime;
```

Write a statement to create STUDENT table, with related 5 columns

```
CREATE TABLE STUDENT (
    StudentID INT PRIMARY KEY,
    FirstName VARCHAR(50),
    LastName VARCHAR(50),
    Age INT,
    GPA DECIMAL(3, 2)
);
```

Write a query to fetch number of employees in who is getting salary more than 10000

```
SELECT COUNT(*) AS NumberOfEmployees
FROM Emp
WHERE Sal > 10000;
```

Write a query to fetch minimum salary, maximum salary and average salary from emp table

```
SELECT MIN(Sal) AS MinimumSalary, MAX(Sal) AS MaximumSalary, AVG(Sal) AS AverageSalary
FROM Emp;
```

Write a query to fetch number of employees in each location

```
SELECT Loc AS Location, COUNT(*) AS NumberOfEmployees
FROM Dept
GROUP BY Loc;
```

Write a query to display emplyee names in descending order

```
SELECT Ename
FROM Emp
ORDER BY Ename DESC;
```

Write a statement to create a new table(**EMP_BKP**) from the existing **EMP** table

```
CREATE TABLE EMP_BKP AS
SELECT *
FROM Emp;
```

Write a query to fetch first 3 characters from employee name appended with salary.

```
SELECT LEFT(Ename, 3) || Sal AS NameAndSalary
FROM Emp;
```

Get the details of the employees whose name starts with **S**

```
SELECT *
FROM Emp
WHERE Ename LIKE 'S%';
```

Get the details of the employees who works in Bangalore location

```
SELECT *
FROM Emp
WHERE DeptNo IN (SELECT DeptNo FROM Dept WHERE Loc = 'Bangalore');
```

Write the query to get the employee details whose name started within any letter between A and K

```
SELECT *
FROM Emp
WHERE Ename >= 'A' AND Ename < 'L';
```

Write a query in SQL to display the employees whose manager name is **Stefen**

```
SELECT E.Ename AS EmployeeName
FROM Emp E
JOIN Emp M ON E.Mgr = M.EmpNo
```

```
WHERE M.Ename = 'Stefen';
```

Write a query in SQL to list the name of the managers who is having maximum number of employees working under him

```
SELECT M.Ename AS ManagerName
FROM Emp M
WHERE M.EmpNo = (
    SELECT E.Mgr
    FROM Emp E
    GROUP BY E.Mgr
    HAVING COUNT(*) = (
        SELECT MAX(EmployeeCount)
        FROM (
            SELECT Mgr, COUNT(*) AS EmployeeCount
            FROM Emp
            GROUP BY Mgr
        ) AS EmployeeCounts
    )
);
```

Write a query to display the employee details, department details and the manager details of the employee who has second highest salary

```
SELECT E.EmpNo AS EmployeeID, E.Ename AS EmployeeName, E.Sal AS Salary,
          D.DeptNo AS DepartmentID, D.Dname AS DepartmentName, D.Loc
          AS DepartmentLocation,
          M.EmpNo AS ManagerID, M.Ename AS ManagerName
FROM Emp E
JOIN Dept D ON E.DeptNo = D.DeptNo
LEFT JOIN Emp M ON E.Mgr = M.EmpNo
WHERE E.Sal = (
    SELECT DISTINCT TOP 1 Sal
    FROM (
        SELECT DISTINCT TOP 2 Sal
        FROM Emp
        ORDER BY Sal DESC
    ) AS SecondHighestSalaries
    ORDER BY Sal ASC
);
```

Write a query to list all details of all the managers

```
SELECT M.EmpNo AS ManagerID, M.Ename AS ManagerName, M.Sal
AS   ManagerSalary,
D.DeptNo AS DepartmentID, D.Dname AS DepartmentName, D.Loc AS
DepartmentLocation
FROM Emp M
JOIN Dept D ON M.DeptNo = D.DeptNo;
```

Write a query to list the details and total experience of all the managers

```
SELECT M.EmpNo AS ManagerID, M.Ename AS ManagerName, M.Sal AS ManagerSalary,
      SUM(DATEDIFF(YEAR, M.Hire_Date, GETDATE())) AS TotalExperienceYears
FROM Emp M
WHERE EXISTS (
   SELECT 1
   FROM Emp E
   WHERE E.Mgr = M.EmpNo
)
GROUP BY M.EmpNo, M.Ename, M.Sal;
```

Write a query to list the employees who is manager and takes commission less than 1000 and works in Delhi

```
SELECT E.EmpNo AS EmployeeID, E.Ename AS EmployeeName, E.Commission AS EmployeeCommission, E.DeptNo AS DepartmentID, E.Sal AS EmployeeSalary, D.Loc AS DepartmentLocation
FROM Emp E
JOIN Dept D ON E.DeptNo = D.DeptNo
WHERE E.EmpNo IN (
   SELECT DISTINCT M.Mgr
   FROM Emp M
   WHERE M.Commission < 1000
)
AND D.Loc = 'Delhi';
```

Write a query to display the details of employees who are senior to Martin

```
SELECT *
FROM Emp
WHERE Hire_Date < (
   SELECT Hire_Date
   FROM Emp
   WHERE Ename = 'Martin'
);
```