TOP SQL QUESTIONS

PART 3

- **Find unique departments from employee table?**
- **In the given table change Gender column records from Male to Female & vice versa. Update these changes in the table?**
- **Explain Joins in SQL?**
- **Give number of output records for all types of Joins?**

- **Find unique departments from employee table?**

```
CREATE TABLE EMPLOYEE (
EMP_ID INT,
EMP_NAME VARCHAR (40),
EMP_DEPT VARCHAR (40),
EMP_CITY VARCHAR (40),
EMP_SALARY INT);
INSERT INTO EMPLOYEE VALUES (1,'A', 'SALES','MUMBAI',40000),
(2,'B', 'ADMIN','DELHI' ,50000),
(3, 'C','ANALYST','PUNE',70000),
(4,'D','HR','BANGALORE' ,60000),
(5, 'E','R&D','MUMBAI',60000),
(6,'F','SALES','MP' ,30000),
(7, 'G','R&D','MUMBAI',60000),
(8,'H','ADMIN','MP' ,40000);
SELECT * FROM EMPLOYEE;
--------USING DISTINCT----------
SELECT DISTINCT(EMP_DEPT) FROM EMPLOYEE;
-----USING GROUP BY ----------
SELECT EMP_DEPT FROM EMPLOYEE GROUP BY EMP_DEPT;
-----USING UNION SET OPERATOR----------

SELECT EMP_DEPT FROM EMPLOYEE
UNION
SELECT EMP_DEPT FROM EMPLOYEE;

-----USING ROW_NUMBER WINDOW FUNCTION----------

SELECT EMP_DEPT FROM (
SELECT EMP_DEPT, ROW_NUMBER () OVER (PARTITION BY EMP_DEPT ) AS RN FROM EMPLOYEE)
AS TEST WHERE RN=1;
```

- **In the given table change Gender column records from Male to Female & vice versa. Update these changes in the table?**

```
CREATE TABLE EMPLOYEE (
ID INT,
`NAME` VARCHAR (20),
DEPT VARCHAR (20),
GENDER VARCHAR (20),
SALARY INT);

INSERT INTO EMPLOYEE VALUES (1,'A', 'SALES','MALE',40000),
(2,'B', 'ADMIN','FEMALE' ,50000),
(3, 'C','ANALYST','FEMALE',70000),
(4,'D','HR','MALE' ,60000),
(5, 'E','R&D','MALE',60000),
(6,'F','SALES','FEMALE' ,30000);

SELECT * FROM EMPLOYEE;
/*----------------CASE STATEMENT ------------------------------*/

SELECT *, CASE WHEN GENDER='MALE' THEN 'FEMALE'
                    WHEN GENDER ='FEMALE' THEN 'MALE'
                    END AS CHANGED_GENDER
 FROM EMPLOYEE;

/*-------------UPDATE WITH CASE STATEMENT ----------------------*/

UPDATE EMPLOYEE
SET GENDER = CASE WHEN GENDER ='MALE' THEN 'FEMALE'
                                    WHEN GENDER ='FEMALE' THEN 'MALE'
                                    END;

SELECT * FROM EMPLOYEE;
```

- **Explain Joins in SQL?**
- **Give number of output records for all types of Joins?**

```
CREATE TABLE TABLE1
(
ID INT,
`NAME` VARCHAR (10));

INSERT INTO TABLE1 VALUES (1,'A'), (1,'B'), (1,'C'), (2,'D'), (2,'E'), (3,'F'), (NULL,'G'), (4,'H');

SELECT * FROM TABLE1;

CREATE TABLE TABLE2
(
ID INT,
DEPT VARCHAR (10));

INSERT INTO TABLE2 VALUES (1,'SALES'), (1,'R&D'), (2,'HR'), (3,'ADMIN'), (NULL,'ANALYST'),
(5,'HR');

SELECT * FROM TABLE2;
----------INNER JOIN----------
SELECT TABLE1.ID, TABLE1. `NAME`, TABLE2.DEPT
FROM TABLE1 INNER JOIN TABLE2 ON TABLE1.ID = TABLE2.ID;

----------LEFT OUTER JOIN----------
SELECT TABLE1.ID, TABLE1. `NAME`, TABLE2.DEPT
FROM TABLE1 LEFT JOIN TABLE2 ON TABLE1.ID = TABLE2.ID;

---------RIGHT JOIN----------
SELECT TABLE2.ID, TABLE1. `NAME`, TABLE2.DEPT
FROM TABLE1 RIGHT JOIN TABLE2 ON TABLE1.ID = TABLE2.ID;
```

---------FULL JOIN----------

```
SELECT TABLE1.ID, TABLE1. `NAME`, TABLE2.DEPT
FROM TABLE1 LEFT JOIN TABLE2 ON TABLE1.ID = TABLE2.ID
UNION
SELECT TABLE2.ID, TABLE1. `NAME`, TABLE2.DEPT
FROM TABLE1 RIGHT JOIN TABLE2 ON TABLE1.ID = TABLE2.ID;
```