DATE 8/9/25
TASK 5

JOIN QUIRES, EQUIVALENT AND RECURSIVE QUIRES

AIM: To implement and execute Joins, equivalent Queries and Recursive Queries in SQL.

PROCEDURE:

1. Create table DEPARTMENT 4 & STUDENT 4.
2. Insert The values into tables.
3. perform Join Operation
4. perform equivalent & Recursive Query.
5. Display result.

```
CREATE TABLE DEPARTMENT4 (
    DEPTID INT PRIMARY KEY,
    DEPTNAME VARCHAR(50));

CREATE TABLE STUDENT4 (
    STU-ID INIT PRIMARY KEY,
    NAME VARCHAR(50),
    AGE INT,
    DEPTID INT,
    FOREIGN KEY (DEPTID)
);  REFERENCES DEPARTMENT
```

```
INSERT INTO DEPARTMENT4 VALUES
(201, 'COMPUTER Selenie'),
(202, 'electronics'),
(203, 'Mechanical');

INSERT INTO STUDENT4 VALUES
(1, 'Ravi', 20, 201),
(2, 'Sneha', 22, 201),
(3, 'Amit', 19, 202),
(4, 'Priya', 24, 203),
(5, 'kiran', 23, 201);
```

SELECT * FROM DEPARTMENT4;

	DEPTID	DETNAME
1	201	Computer selenie
2	202	electronics
3	203	Mechanical

SELECT * FROM STUDENT4;

	STUID	NAME	AGE	DEPTID
1	1	Ravi	20	201
2	2	Sneha	22	201
3	3	Amit	19	202
4	4	priya	24	203
5	5	kiran	23	201

```
SELECT    S.Name, S. AGE, D. DEPTNAME
FROM      STUDENT 4 .S
INNER     JOIN    DEPARTMENT 4 D.
ON        S. DEPT ID = D. DEPT  ID;
```

-- INNER JOIN

	Name	AGE	DEPT NAME
1	Ravi	20	Computer Scienie.
2	Sneha	22	Computer Scienie
3	Amit	19	electronics
4	Priya	24	Mechanila
5	kiran	23	Computer Scienie

-- LEFT OUTER JOIN

```
SELECT    S. NAME, S. Age . D. DeptName.
FROM      STUDENT 4
LEFT      Join    DEPARTMENT 4 D
ON . S . DEPT ID = D. DEPT ID;
```

	Name	Age	Dept name
1	Ravi	20	Computer Science
2	Sneha	22	computer Sience.
3	Amet	19	electrobics.
4	priya	24	Mechanics.
5	kiran	21	computesscience.

```
SELECT    S.NAME , S.AGE , D.DEPARTNAME
FROM      STUDENT AS S
RIGHT     JOIN    DEPARTMENT AS D
ON        DEPTID = D.DEPTID;
```

	Name	Age	DEPTID
1	Ravi	20	computer science
2	Sneha	22	computer science
3	kiran	23	computer science
4	Amit	19	electronics
5	priya	24	Mechanical

```
SELECT    TOP 3    S.NAME, S.AGE, D.DEPTNAME
FROM      STUDENT US
FULL      OUTER Join   DEPARTMENT AS D
ON .S     DEPTID = D.DEPTID;
```

	Name	Age	Deptname
1	Ravi	20	computer Science
2	Sneha	22	computer Science
3	Amit	19	Electronics.

--EQUIVALENT QUERIES

-- using join

```
SELECT S.NAME, S.AGE
FROM STUDENTS
JOIN DEPARTMENT D ON S.DEPTID = D.DEPTID
WHERE D.DEPTNAME = 'Computer Science';
```

	NAME	AGE
1	Ravie	20
2	Sneeha	22
3	Kiran	23

-- RECURSIVE QUERIES

```
WITH COUNTCTE AS(
    SELECT 1 AS N
    UNION ALL
    SELECT N+1
    FROM COUNTCTE
    WHERE N<5
    )
SELECT * FROM COUNTCTE;
```

	NO
1	1
2	2
3	3
4	4
5	5

EX No	5
PERFORMANCE (5)	5
RESULT AND ANALYSIS	5
VIVA VOCE (5)	5
RECORD (5)	
TOTAL (20)	15
SIGN WITH DATE	

8/9/25

RESULT: Thus, implementation Join Quires, Equivalent and Recursive Quires has successfully excuted and verifed.