08.09.25

TASK - 5

WRITING JOIN QUERIES, EQUIVALENT, AND/OR RECURSIVE QUERIES

Aim: To implement and execute JOIN queries, equivalent queries and recursive queries using a university Hotel database scenario

Procedure:

Create the database and table (

Insert sample data.

write SQL queries using different types of JOIN

write equivalent queries

implement a recursive query

Display results and verify correctness.

```
CREATE TABLE Customer(
    SSN VARCHAR(20) PRIMARY KEY,
    Name VARCHAR(100) NOT NULL,
    Email VARCHAR(100) UNIQUE,
    Phone VARCHAR(15) check (LENGTH(Phone) = 10),
    );

CREATE TABLE HOTEL(
        Hotel ID INT PRIMARY KEY,
        Hotel Name VARCHAR(100),
        SSN VARCHAR(20),
    );

INSERT INTO CUSTOMER VALUES
('001', 'Advaita', 'Advaita@gmail.com', '9840158936', 'Delhi');
('021', 'Selina', 'selina@gmail.com', '900000001', 'China');
('031', 'Robert', 'Robert@gmail.com', '0000110031', 'Japan');

INSERT INTO HOTEL VALUES
(001, 'Grand Palace', '001');
(1021, 'Olivia Palace', '002');
```

('031', 'City inn', 'coo3');

SELECT * FROM CUSTOMER;

SSN	Name	Email	Phone	Addrss
C001	Advaita	Advaita@gmail.Com	9000100790	Delhi
C002	Selina	selina@gmail.Com	1000010011	China
C003	Robert	Robert@gmail.Com	9500107103	Japan

SELECT * FROM HOTEL

HOTEL ID	Hotel Name	SSN
101	Grand Palace	C001
102	ocean Villa	C002
103	City Inn	C003

INNER JOIN

SELECT C.SSN, C.Name, C.Hotel Name
From customer,
INNER JOIN Hotel h
ON C.SSN = h.SSN

SSN	Name	Hotel Name
C001	Advaita	Grand palace
002	Selina	olivia palace
C003	Robert	City inn

LEFT JOIN

SELECT C.SSN, C.Name, h.hotel Name
From Customer C
LEFT JOIN Hotel h
ON C.SSN = h.SSN

SSN	Name	Hotel Name
C001	Advaita	Grand Palace
C002	selina	olivia palace
C003	Robert	City inn

RIGHT JOIN

```
SELECT C.SSN, C.Name, h.Hotel Name
FROM Customer C
RIGHT JOIN HOTEL h
ON C.SSN = h.SSN
```

SSN	Name	Hotel Name
C001	Advaita	Grand Palace
C002	Selina	olivia palace
C003	Robert	city inn

FULL OUTER JOIN

```
SELECT C.SSN, C.Name , h.Hotel, Name
FROM CUSTOMER C
Full OUTER JOIN HOTEL h
ON C.SSN = h.SSN ;
```

SSN Name Hotel Name

EQUIVALENT QUERIES

```
SELECT C.SSN, C.NAME
FROM CUSTOMER C
JOIN HOTEL ON C.SSN = h.SSN
WHERE h.Hotel Name = 'Grand Palace'
```

SSN	Name
C001	Advaita

RECURSIVE QUERIES

```
WITH RECURSIVE SUBORDINATES AS (
    SELECT SSN, Name, Affiliated By
    FROM CUSTOMER
    WHERE Affiliated By = 'C001'
```

```
UNION ALL
SELECT C.SSN, C.Name, C.ReferredBy
FROM CUSTOMER
WHERE REFERREDBY = 'C001'
UNION ALL
SELECT C.SSN, C.Name, C.ReffordBy
FROM CUSTOMER C
INNER JOIN ReffordTru R ON C.ReffordBy = R.SSN
);
SELECT* FROM ReferralTree;
```

SSN	Name	ReffordBy
C002	Bob smith	C001
C003	charlie	C002

VEL TECH - CSE	
EX NO.	5
PERFORMANCE (5)	5
RESULT AND ANALYSIS (5)	5
VIVA VOCE (5)	5
TOTAL (15)	15
	16/9

16/9

Result: Thus implementation of Join queries, equivalent and recursive queries has sucessfully executed and verified.