NAME : CHETAN PRAKASH

UID : 23BCS13776

SECTION : 23_KRG_1(B)

QUESTION 1 : Organizational Hierarchy Explorer (medium)

ANSWER :

```sql
CREATE TABLE Employee (
    EmpID INT PRIMARY KEY,
    Ename VARCHAR(50),
    Department VARCHAR(50),
    ManagerID INT
);

INSERT INTO Employee (EmpID, Ename, Department, ManagerID) VALUES
(1, 'Rajiv', 'HR', NULL),
(2, 'Meera', 'Finance', 1),
(3, 'Arjun', 'IT', 1),
(4, 'Sneha', 'Finance', 2),
(5, 'Vikram', 'IT', 3),
(6, 'Pooja', 'HR', 1);

ALTER TABLE Employee
ADD CONSTRAINT Fk_Employee FOREIGN KEY (ManagerID)
REFERENCES Employee(EmpID);

SELECT
    e1.Ename AS 'Employee Name',
    e1.Department AS 'Employee Department',
    e2.Ename AS 'Manager Name',
    e2.Department AS 'Manager Department'
FROM
    Employee AS e1
LEFT OUTER JOIN
```
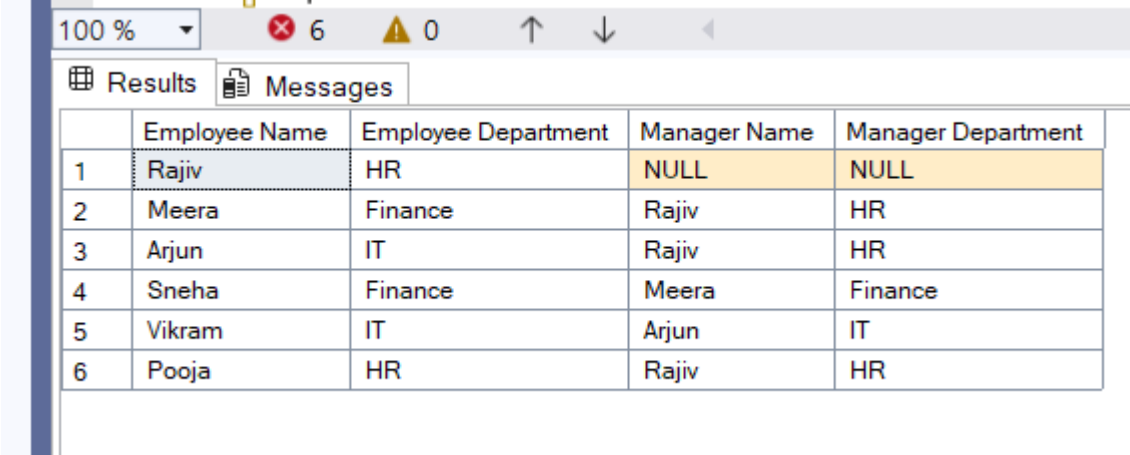
Employee AS e2
        ON
            e1.ManagerID = e2.EmpID;

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⊞ Results   ▤ Messages

	Employee Name	Employee Department	Manager Name	Manager Department
1	Rajiv	HR	NULL	NULL
2	Meera	Finance	Rajiv	HR
3	Arjun	IT	Rajiv	HR
4	Sneha	Finance	Meera	Finance
5	Vikram	IT	Arjun	IT
6	Pooja	HR	Rajiv	HR

QUESTION 2 : Financial Forecast Matching with Fallback Strategy (hard)

ANSWER :

```
CREATE TABLE Year_tbl (
    ID INT,
    YEAR INT,
    NPV INT
);


CREATE TABLE Queries (
    ID INT,
    YEAR INT
);


INSERT INTO Year_tbl (ID, YEAR, NPV)
VALUES
(1, 2018, 100),
(7, 2020, 30),
(13, 2019, 40),
(1, 2019, 113),
(2, 2008, 121),
```

```
(3, 2009, 12),

(11, 2020, 99),

(7, 2019, 0);


INSERT INTO Queries (ID, YEAR)

VALUES

(1, 2019),

(2, 2008),

(3, 2009),

(7, 2018),

(7, 2019),

(7, 2020),

(13, 2019);


SELECT

    q.*,

    ISNULL(y.NPV, 0) AS NPV

FROM

    Queries AS q

LEFT OUTER JOIN

    Year_tbl AS y

ON

    q.ID = y.ID AND q.YEAR = y.YEAR

ORDER BY

    q.ID, q.YEAR;
```

⊞ Results   ▤ Messages

	ID	YEAR	NPV
1	1	2019	113
2	2	2008	121
3	3	2009	12
4	7	2018	0
5	7	2019	0
6	7	2020	30
7	13	2019	40