Experiment 2

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QUESTION 1 : Organizational Hierarchy Explorer (medium)

ANSWER :

```
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;
```

Output:

Employee Name	Employee Department
Rajiv	HR
Meera	Finance
Arjun	IT
Sneha	Finance
Vikram	IT
Pooja	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;
```

Output:

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