Experiment 2-B

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Semester: 5th **Subject Name: ADBMS**
Subject Code: 23CSH-301 **Date: 24 / 07 / 2025**

Aim:

Financial Forecast Matching with Fallback Strategy (Hard)

You are a Data Engineer at FinSight Corp, a company that models Net Present Value (NPV) projections for investment decisions. Your system maintains two key datasets:

1. Year_tbl: Actual recorded NPV's of various financial instruments over different years:
   ID: Unique Financial instrument identifier.
   YEAR: Year of record
   NPV: Net Present Value in that year
2. Queries_tbl: A list of instrument-year pairs for which stakeholders are requesting NPV values:
   ID: Financial instrument identifier
   YEAR: Year of interest.

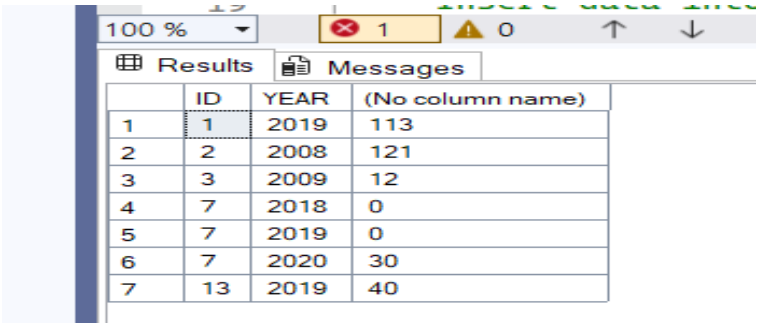
Find the NPV of each query from the Queries table. Return the output order by ID and Year in the sorted form.
However, not all ID-YEAR combinations in the Queries table are present in the Year_tbl. If an NPV is missing for a requested combination, assume it to be 0 to maintain a consistent financial report.

Code:

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

CREATE TABLE Queries (
   ID INT,
   YEAR INT
);
```

```
-- Insert data into Year_tbl
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 data into Queries
INSERT INTO Queries (ID, YEAR)
VALUES
(1, 2019),
(2, 2008),
(3, 2009),
(7, 2018),
(7, 2019),
(7, 2020),
(13, 2019);

SELECT Q.ID, Q.YEAR, ISNULL(Y.NPV,0)
from Queries AS Q
LEFT OUTER JOIN
Year_tbl AS Y
ON
Q.ID = Y.ID
AND
Q.YEAR = Y.YEAR;
```

Output:



	ID	YEAR	(No column name)
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