



EXPERIMENT 2.2

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Subject Name: ADBMS

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1. Aim:

To create and manage a relational database that stores information about faculties and their respective subjects, and to retrieve faculties that offer more than two subjects.

2. Objective:

Create two related tables:

TBL_FACULTY: Stores faculty information (like Engineering, Mathematics, etc.).

TBL_SUBJECTS: Stores subjects offered under each faculty.

Link the two tables using a foreign key:

The FACULTY_REF column in the TBL_SUBJECTS table is a foreign key that refers to FACULTY_ID in the TBL_FACULTY table.

Insert sample data into both tables to simulate a real-world college or university faculty-subject structure.

Use a JOIN and GROUP BY with HAVING clause to:

Count the number of subjects each faculty offers.

Show only those faculties that offer more than 2 subjects.

3. Code:

-- 1. Create table to hold actual NPV values

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

-- 2. Create table for query requests

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

-- 3. 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);
```

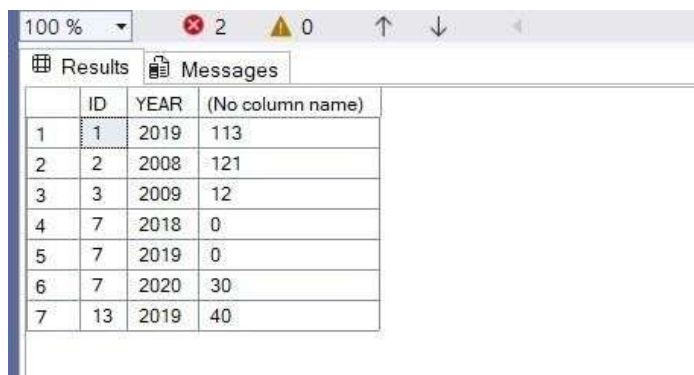
-- 4. Insert data into Queries

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

-- 5. Final query: Return (ID, YEAR) with NPV if available, else 0

```
SELECT  
    Q.ID,  
    Q.YEAR,  
    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;
```

4. Output:



The screenshot shows a SQL Server query results window with the following data:

	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