EXCEPT OPERATOR

In SQL, EXCEPT returns those tuples that are returned by the first SELECT operation, and not returned by the second SELECT operation.

This is the same as using a subtract operator in relational algebra.

Example

Say we have two relations, Students and TA (Teaching Assistant). We want to return all those students who are not teaching assistants. The query can be formulated as:

Students Table

StudentID	Name	Course
1	Rohan	DBMS
2	Kevin	OS
3	Mansi	DBMS
4	Mansi	ADA
5	Rekha	ADA
6	Megha	OS

TA Table

StudentID	Name	Course
1	Kevin	TOC
2	Sita	IP
3	Manik	AP
4	Rekha	SNS

```
SELECT Name FROM Students
EXCEPT
SELECT NAME FROM TA;
```

Output

```
Rohan
Mansi
Megha
```

To retain duplicates, we must explicitly write EXCEPTALL instead of EXCEPT.

```sql
SELECT Name FROM Students
EXCEPTALL
SELECT Name FROM TA;
```

Difference between EXCEPT and NOT IN Clause

EXCEPT automatically removes all duplicates in the final result, whereas NOT IN retains duplicate tuples. It is also important to note that EXCEPT is not supported by MySQL.