

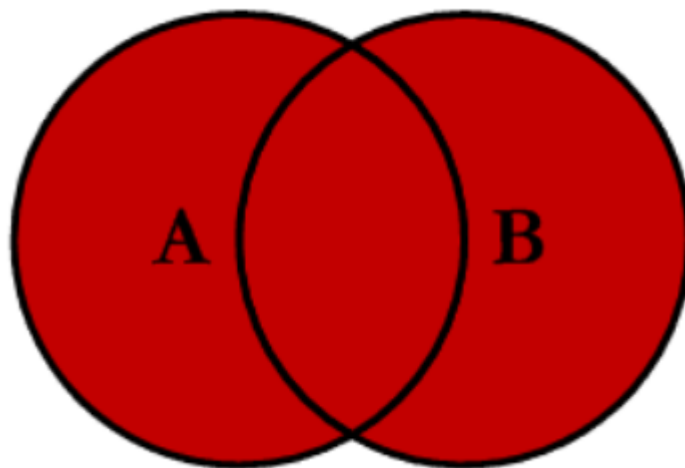


FULL OUTER JOIN & (LEFT, RIGHT, FULL OUTER) JOIN EXCLUDING INNER JOIN

MySQL doesn't have FULL OUTER JOIN

Simulate using UNION, LEFT and RIGHT JOINS

```
SELECT * FROM TableA LEFT JOIN TableB ON TableA.PK = TableB.PK
UNION
SELECT * FROM TableA RIGHT JOIN TableB
ON TableA.PK = TableB.PK
```



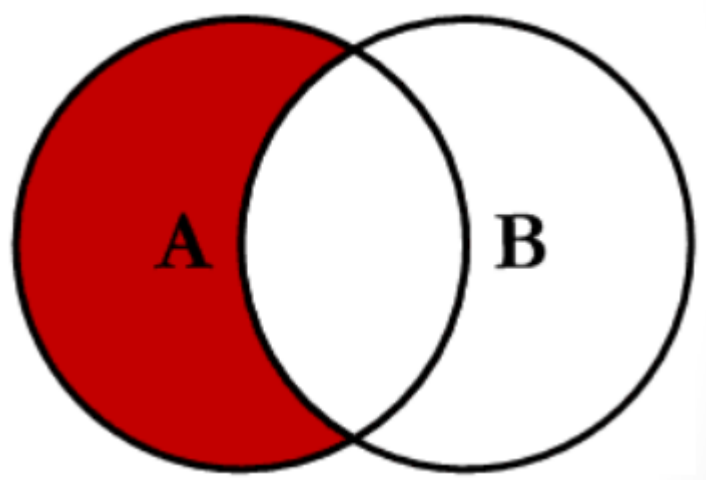
A full outer join is a type of join that returns all rows from both tables, even if there are no matching rows between the two tables. This means that the full outer join will return all rows from the left table, all rows from the right table, and any unmatched rows from either table.

```
SELECT *
FROM table1 FULL OUTER JOIN table2 ON table1.column1 = table2.column2;
```

Here are some business cases where full outer joins can be used:

- **Identifying customers who have not placed any orders.** A full outer join can be used to identify customers who have not placed any orders. This can be useful for marketing purposes, as you can target these customers with special offers or promotions.
- **Identifying products that have not been ordered by any customers.** A full outer join can be used to identify products that have not been ordered by any customers. This can be useful for product development purposes, as you can identify products that are not in demand and focus on developing new products that are more likely to be successful.
- **Getting a complete view of the data.** A full outer join can be used to get a complete view of the data. This can be useful for getting a better understanding of the data and for identifying trends.
- **Combining data from different sources.** A full outer join can be used to combine data from different sources. This can be useful for getting a more complete picture of the data and for identifying patterns that would not be visible if you only looked at one source of data.

LEFT JOIN EXCLUDING INNER JOIN



This query will return all of the records in the left table (table A) that do not match any records in the right table (table B).

TableA

| PK | Value |
|----|------------|
| 1 | FOX |
| 2 | COP |
| 3 | TAXI |
| 6 | WASHINGTON |
| 7 | DELL |
| 5 | ARIZONA |
| 4 | LINCOLN |
| 10 | LUCENT |

TableB

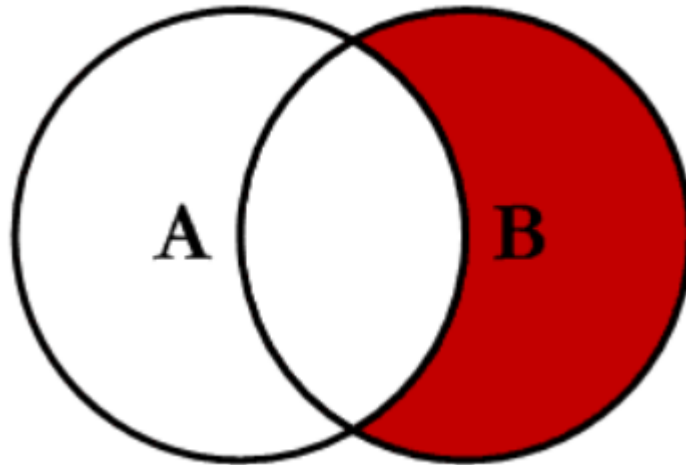
| PK | Value |
|----|-----------|
| 1 | TROT |
| 2 | CAR |
| 3 | CAB |
| 6 | MONUMENT |
| 7 | PC |
| 8 | MICROSOFT |
| 9 | APPLE |
| 11 | SCOTCH |

```
SELECT * FROM TableA LEFT JOIN TableB ON TableA.PK = TableB.PK
WHERE TableB.PK IS NULL
```

OUTPUT

| TableA Value | PK | TableB PK | Value |
|-----------------|----|--------------|-------|
| LINCOLN | 4 | NULL | NULL |
| ARIZONA | 5 | NULL | NULL |
| LUCENT | 10 | NULL | NULL |

RIGHT JOIN EXCLUDING INNER JOIN



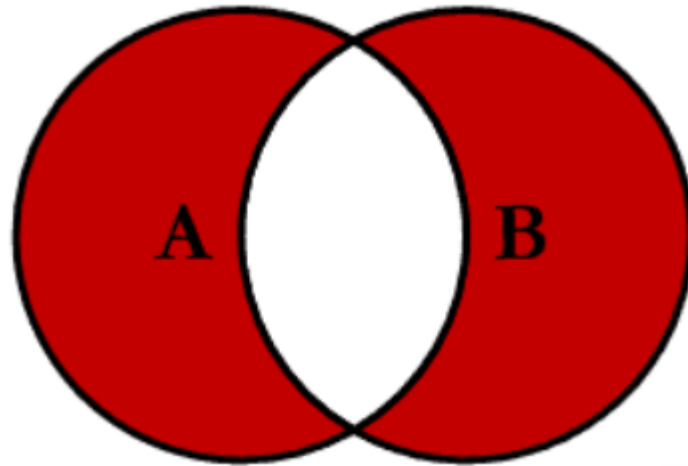
This query will return all of the records in the right table (table B) that do not match any records in the left table (table A)

```
SELECT * FROM TableA RIGHT JOIN TableB ON TableA.PK = TableB.PK
WHERE TableA.PK IS NULL
```

OUTPUT

| TableA Value | PK | TableB PK | Value |
|-----------------|------|--------------|-----------|
| NULL | NULL | 8 | MICROSOFT |
| NULL | NULL | 9 | APPLE |
| NULL | NULL | 11 | SCOTCH |

FULL OUTER JOIN EXCLUDING INNER JOIN



- This query will return all of the records in Table A and Table B that do not have a matching record in the other table.

```
SELECT * FROM TableA FULL OUTER JOIN TableB ON TableA.PK = TableB.PK
WHERE TableA.PK IS NULL OR TableB.PK IS NULL
```

OUTPUT

| TableA Value | PK | TableB PK | Value |
|-----------------|------|--------------|-----------|
| NULL | NULL | 8 | MICROSOFT |
| NULL | NULL | 9 | APPLE |
| NULL | NULL | 11 | SCOTCH |
| LINCOLN | 4 | NULL | NULL |
| ARIZONA | 5 | NULL | NULL |
| LUCENT | 10 | NULL | NULL |

How can we do this in MySQL?

- MySQL doesn't have FULL OUTER JOIN
- Simulate using UNION, LEFT and RIGHT JOINS

```
SELECT * FROM TableA
LEFT JOIN TableB ON TableA.PK = TableB.PK
WHERE TableB.PK IS NULL
UNION
SELECT * FROM TableA RIGHT JOIN TableB
ON TableA.PK = TableB.PK WHERE TABLEA.PK IS NULL
```