



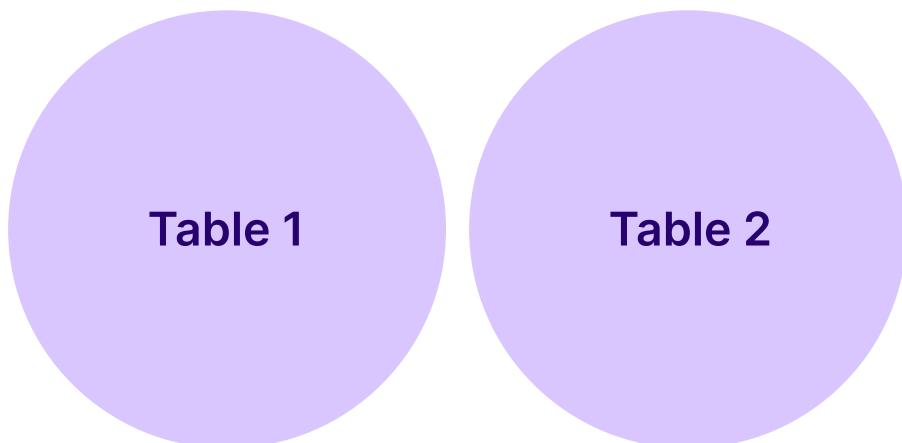
SQL Join Types

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1

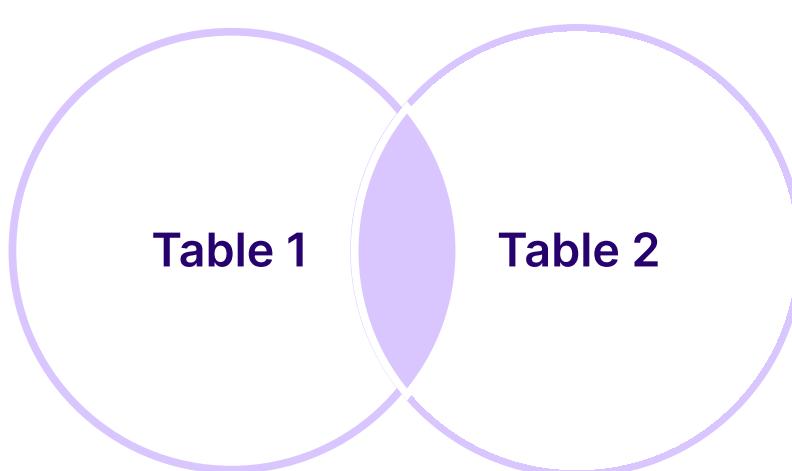


SELECT from two tables

```
SELECT *  
FROM Table_1;
```

```
SELECT *  
FROM Table_2;
```

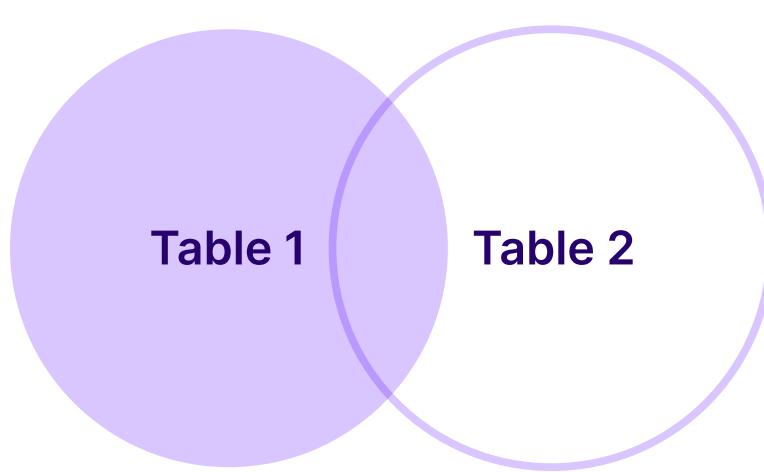
2



INNER JOIN

```
SELECT *  
FROM Table_1 t1  
INNER JOIN Table_2 t2  
ON t1.id = t2.fk
```

3



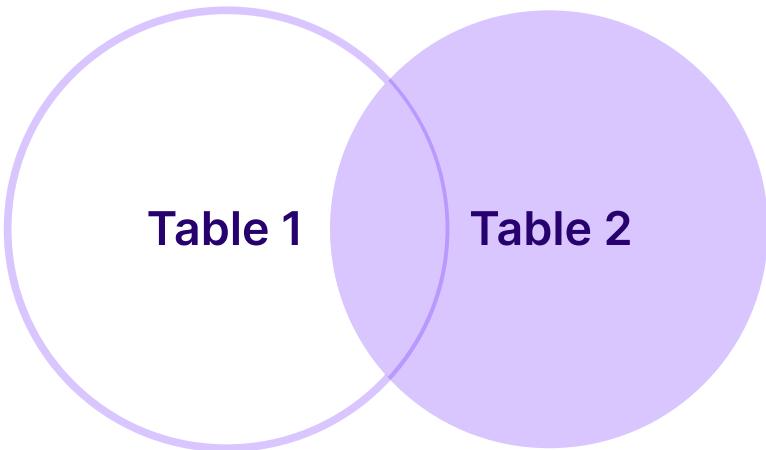
LEFT OUTER JOIN

```
SELECT *  
FROM Table_1 t1  
LEFT JOIN Table_2 t2  
ON t1.id = t2.fk;
```

SQL Join Types

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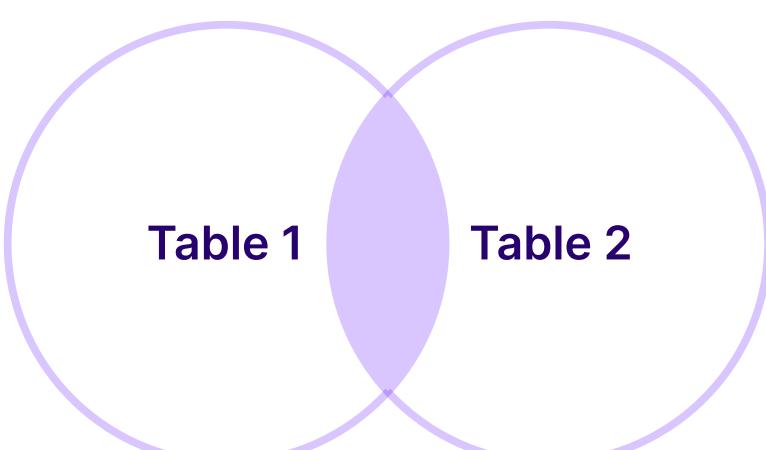
4



RIGHT OUTER JOIN

```
SELECT *
FROM Table_1 t1
RIGHT JOIN Table_2 t2
ON t1.id = t2.fk;
```

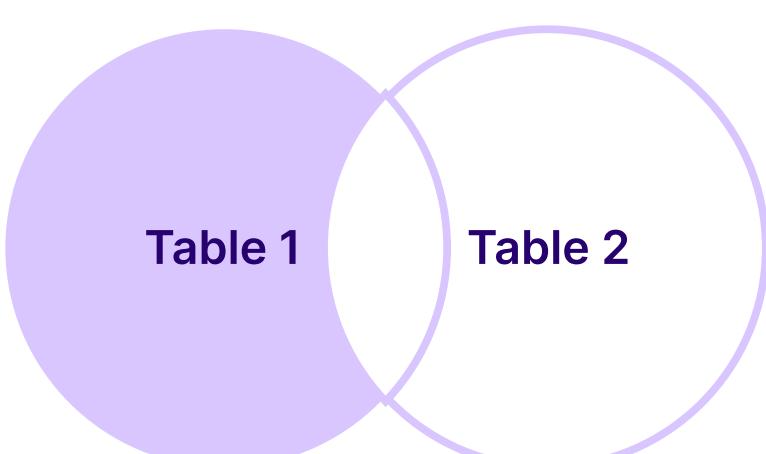
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SEMI JOIN — Similar to INNER JOIN,
with less duplication from Table 2.

```
SELECT *
FROM Table_1 t1
WHERE EXISTS (SELECT 1
FROM Table_2 t2
WHERE t2.id = t1.fk
);
```

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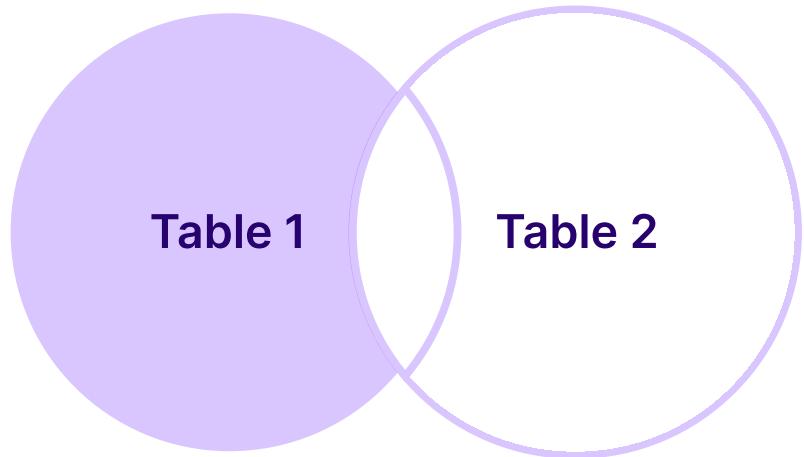
ANTI SEMI JOIN

```
SELECT *
FROM Table_1 t1
WHERE NOT EXISTS (SELECT 1
FROM Table_2 t2
WHERE t2.id = t1.fk
);
```

SQL Join Types

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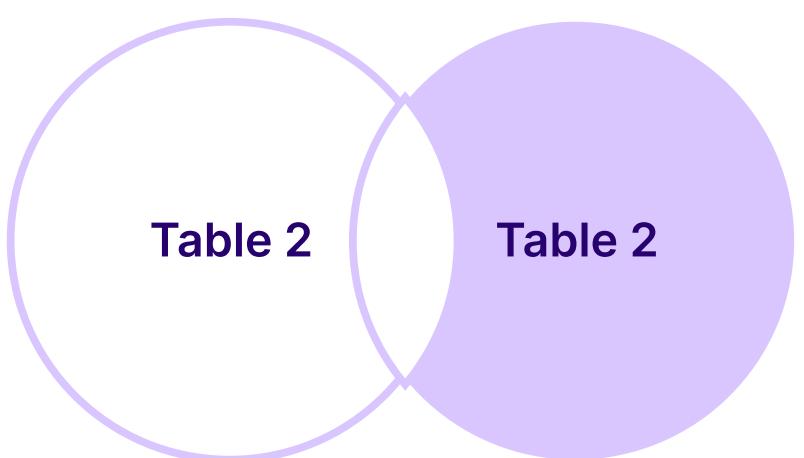
7



```
SELECT *
FROM Table_1 t1
LEFT JOIN Table_2 t2
ON t1.id = t2.fk
WHERE t2.fk is null;
```

LEFT OUTER JOIN with exclusion — replacement for a NOT IN

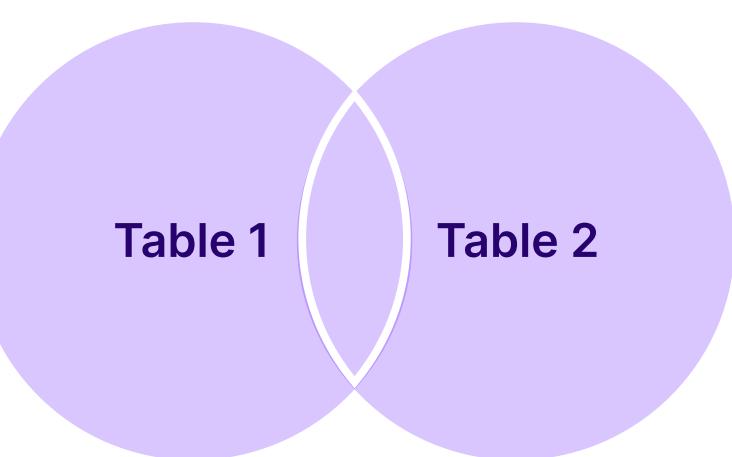
8



```
SELECT *
FROM Table_1 t1
RIGHT JOIN Table_2 t2
ON t1.id = t2.fk
WHERE t2.fk is null;
```

RIGHT OUTER JOIN with exclusion — replacement for a NOT IN

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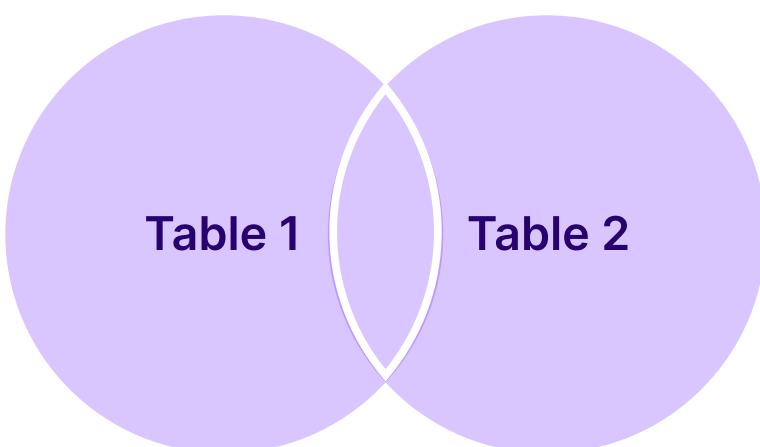
```
SELECT *
FROM Table_1 t1
FULL OUTER JOIN Table_2 t2
ON t1.id = t2.fk;
```

FULL OUTER JOIN

SQL Join Types

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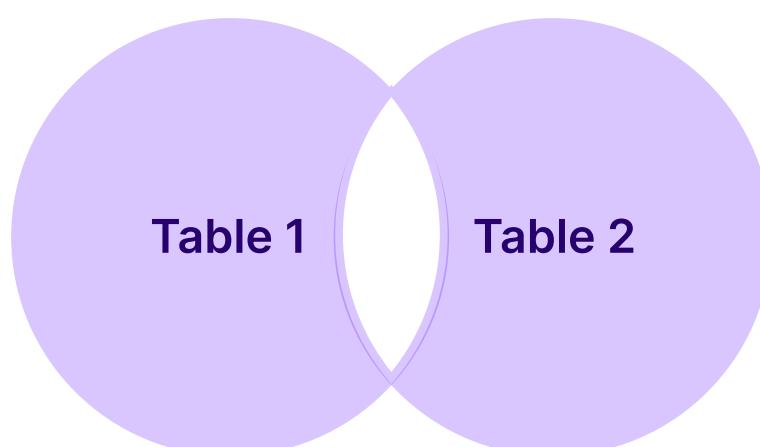
10



```
SELECT *
FROM Table_1 t1
CROSS JOIN Table_2 t2;
```

CROSS JOIN, like a FULL OUTER JOIN
with out specifying JOIN condition.

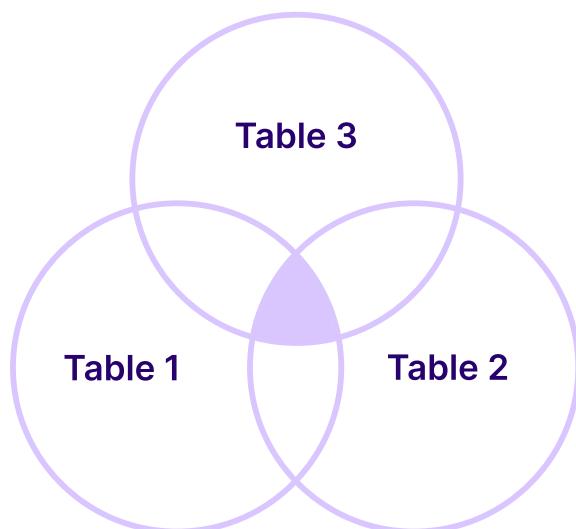
11



```
SELECT *
FROM Table_1 t1
FULL OUTER JOIN Table_2 t2
ON t1.id = t2.fk
WHERE t1.id is null
OR t2.fk is null;
```

FULL OUTER JOIN with exclusion — replacement for a double NOT IN

12



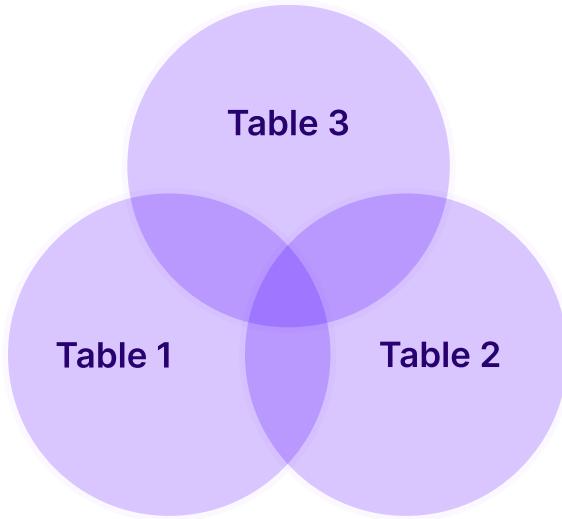
Two INNER JOINS

```
SELECT *
FROM Table_1 t1
INNER JOIN Table_2 t2
ON t1.id = t2.fk
INNER JOIN Table_3 t3
ON t1.id = t3.fk;
```

SQL Join Types

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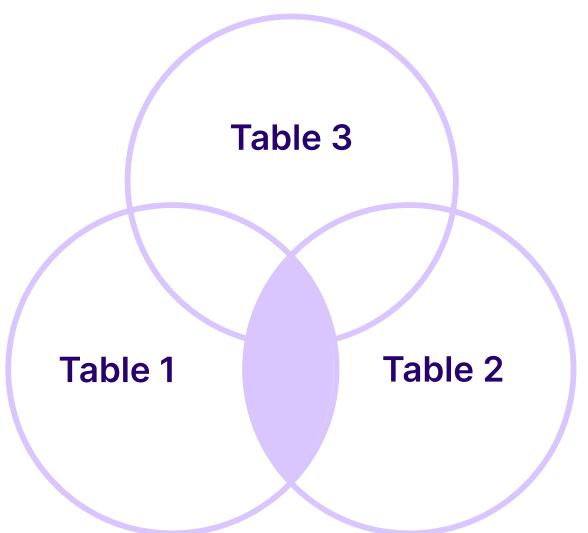
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Two FULL OUTER JOINS

```
SELECT *
FROM Table_1 t1
FULL OUTER JOIN Table_2 t2
ON t1.id = t2.fk
FULL OUTER JOIN Table_3 t3
ON t1.id = t3.fk;
```

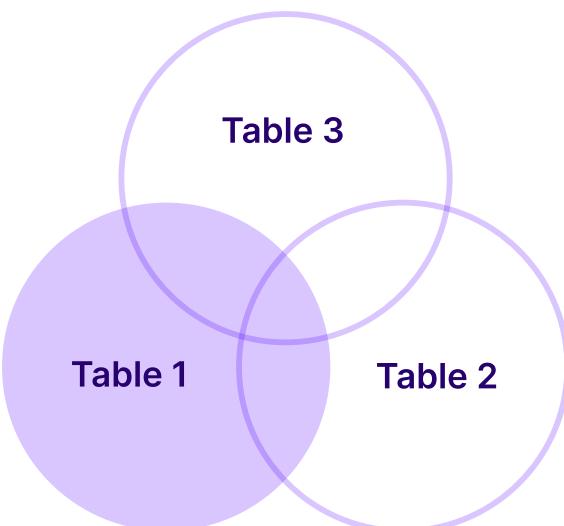
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```
SELECT *
FROM Table_1 t1
INNER JOIN Table_2 t2
ON t1.id = t2.fk
LEFT OUTER JOIN Table_3 t3
ON t1.id = t3.fk;
```

INNER JOIN and LEFT OUTER JOIN

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Two LEFT OUTER JOINS

```
SELECT *
FROM Table_1 t1
LEFT JOIN Table_2 t2
ON t1.id = t2.fk
LEFT JOIN Table_3 t3
ON t1.id = t3.fk;
```