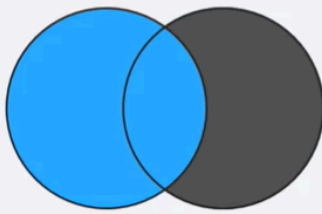


OverView Join

Outer joins

Left Outer Join

All rows from the left table to any matching rows from the right table

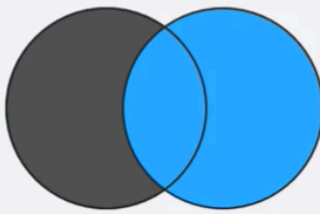


Left Table

Right Table

Right Outer Join

All rows from the right table to any matching rows from the left table

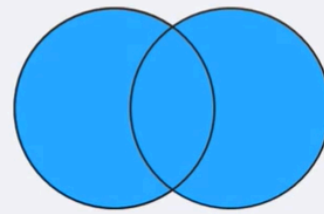


Left Table

Right Table

Full Outer Join

All rows from both tables



Left Table

Right Table

===

LEFT JOIN operator

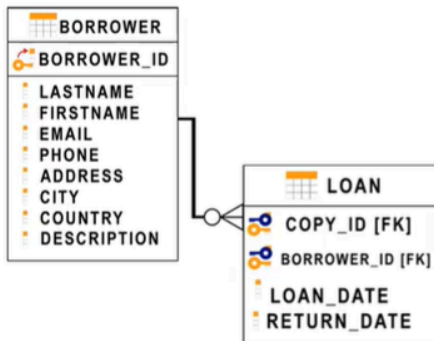
BORROWER
BORROWER_ID
LASTNAME
FIRSTNAME
EMAIL
PHONE
ADDRESS
CITY
COUNTRY
DESCRIPTION

LOAN
COPY_ID [FK]
BORROWER_ID [FK]
LOAN_DATE
RETURN_DATE

```
SELECT B.BORROWER_ID, B.LASTNAME, B.COUNTRY,  
       L.BORROWER_ID, L.LOAN_DATE  
FROM BORROWER B LEFT JOIN LOAN L  
ON B.BORROWER_ID = L.BORROWER_ID
```

In this example, the Borrower table is the Left table

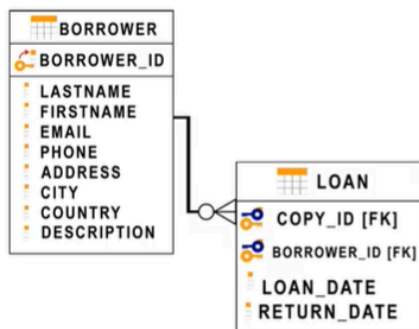
LEFT JOIN operator



```
SELECT B.BORROWER_ID, B.LASTNAME, B.COUNTRY,
       L.BORROWER_ID, L.LOAN_DATE
FROM BORROWER B LEFT JOIN LOAN L
ON B.BORROWER_ID = L.BORROWER_ID
```

BORROWER_ID	LASTNAME	COUNTRY	BORROWER_ID	LOAN_DATE
D1	SMITH	CA	D1	11/24/2010
D2	SANDLER	CA	D2	11/24/2010
D3	SOMMERS	CA	D3	11/24/2010
D4	ARDEN	CA	D4	11/24/2010
D5	XIE	CA	D5	11/24/2010
D6	PETERS	CA	NULL	NULL
D7	LI	CA	NULL	NULL
D8	WONG	CA	NULL	NULL

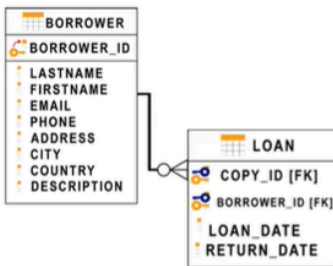
RIGHT JOIN operator



```
SELECT B. BORROWER_ID, B.LASTNAME, B.COUNTRY,
       L. BORROWER_ID, L.LOAN_DATE
FROM BORROWER B RIGHT JOIN LOAN L
ON B.BORROWER_ID = L.BORROWER_ID
```

In this example, the Loan table is the Right table

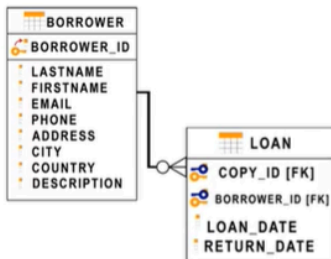
RIGHT JOIN operator



```
SELECT B. BORROWER_ID, B.LASTNAME, B.COUNTRY,
       L. BORROWER_ID, L.LOAN_DATE
FROM BORROWER B RIGHT JOIN LOAN L
ON B.BORROWER_ID = L.BORROWER_ID
```

BORROWER_ ID	LASTNAME	COUNTRY	BORROWER _ID	LOAN_DATE
D1	SMITH	CA	D1	11/24/2010
D2	SANDLER	CA	D2	11/24/2010
D3	SOMMERS	CA	D3	11/24/2010
D4	ARDEN	CA	D4	11/24/2010
D5	XIE	CA	D5	11/24/2010
NULL	NULL	NULL	D9	11/24/2010

FULL JOIN operator



```
SELECT B.BORROWER_ID, B.LASTNAME, B.COUNTRY,
       L.BORROWER_ID, L.LOAN_DATE
FROM BORROWER B FULL JOIN LOAN L
ON B.BORROWER_ID = L.BORROWER_ID
```

BORROWER _ID	LASTNAME	COUNTRY	BORROWER _ID	LOAN_DATE
D1	SMITH	CA	D1	11/24/2010
D2	SANDLER	CA	D2	11/24/2010
D3	SOMMERS	CA	D3	11/24/2010
D4	ARDEN	CA	D4	11/24/2010
D5	XIE	CA	D5	11/24/2010
D6	PETERS	CA	NULL	NULL
D7	LI	CA	NULL	NULL
D8	WONG	CA	NULL	NULL
NULL	NULL	NULL	D9	11/24/2010

Summary

In this video, you learned that:

- Left outer joins return all rows from the left table, and all the rows from the right table that have a match
- Right outer joins return all rows from the right table, and all the rows from the left that have a match
- Full outer joins return all rows from both tables and all the rows from both tables that don't have a match