WOMEN WHO CODE
/data-science

SQL Coding Series

WEBINAR SERIES

SESSION 4

Intermediate - Part II

| FRIDAY, FEB 3

| 10 PM ET

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womenwhocode.com/datascience/events

INTERMEDIATE SESSION 2

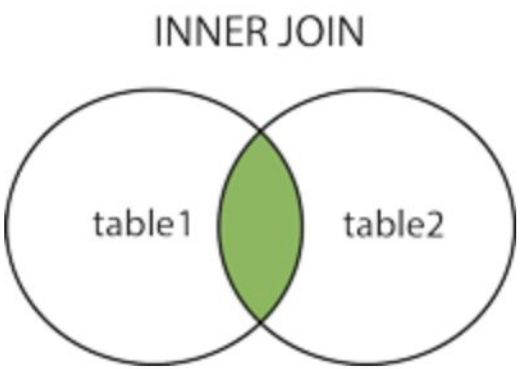
JOINS

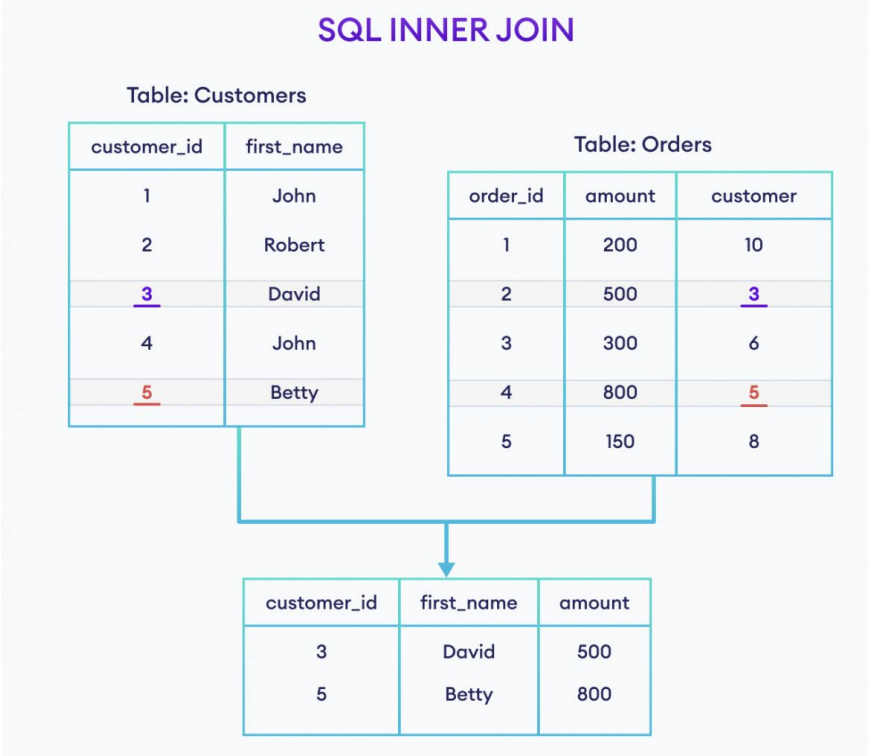
A `JOIN` clause is used to combine rows from two or more tables, based on a related column between them.

OrderID	CustomerID	OrderDate
10308	2	1996-09-18
10309	37	1996-09-19
10310	77	1996-09-20

CustomerID	CustomerName	ContactName	Country
1	Alfreds Futterkiste	Maria Anders	Germany
2	Ana Trujillo Emparedados y helados	Ana Trujillo	Mexico
3	Antonio Moreno Taquería	Antonio Moreno	Mexico

INNER JOIN

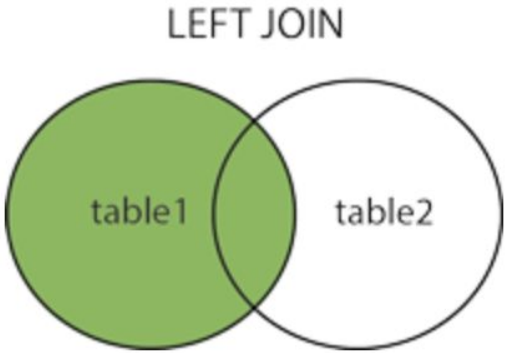

INNER JOIN
table1
table2

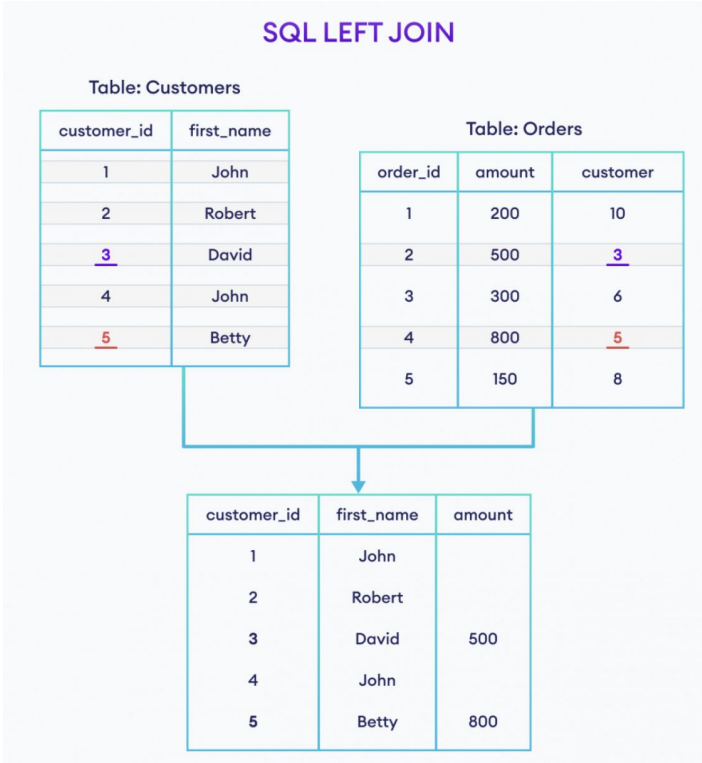

SQL INNER JOIN
Table: Customers
customer_id
first_name
1
John
2
Robert
3
David
4
John
5
Betty
Table: Orders
order_id
amount
customer
1
200
10
2
500
3
3
300
6
4
800
5
5
150
8
customer_id
first_name
amount
3
David
500
5
Betty
800

INNER JOIN: Syntax

```
SELECT columns
FROM table1
INNER JOIN table2
ON table1.column_name = table2.column_name;
```

LEFT JOIN

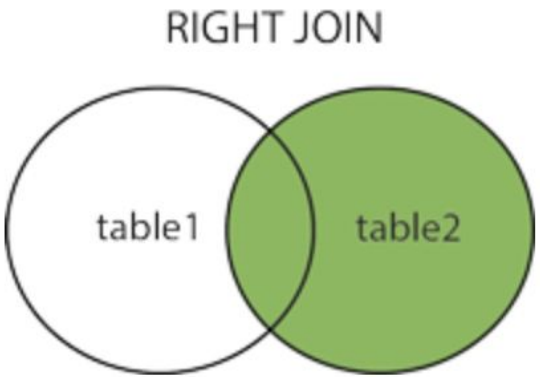

LEFT JOIN
table1
table2

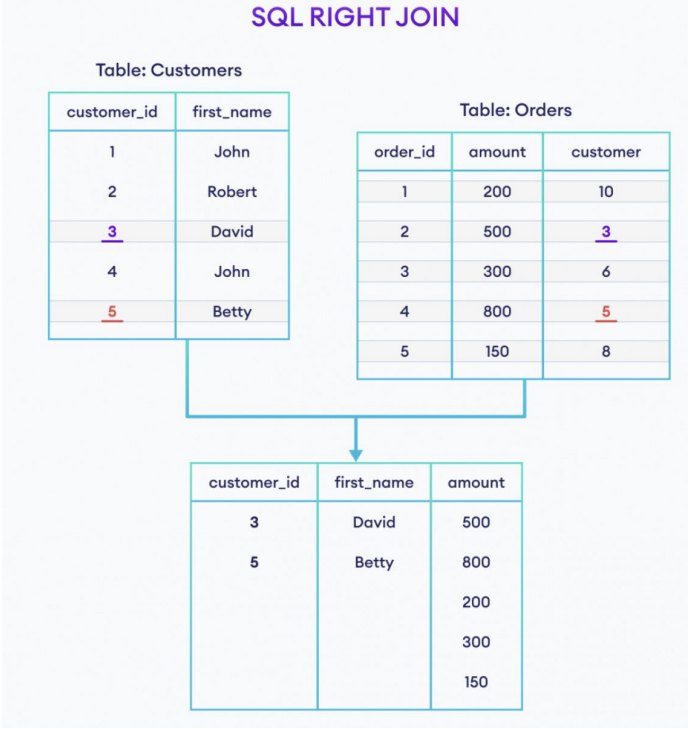

SQL LEFT JOIN
Table: Customers
customer_id
first_name
1
John
2
Robert
3
David
4
John
5
Betty
Table: Orders
order_id
amount
customer
1
200
10
2
500
3
3
300
6
4
800
5
5
150
8
customer_id
first_name
amount
1
John
2
Robert
3
David
500
4
John
5
Betty
800

LEFT JOIN: Syntax

```
SELECT columns
FROM table1
LEFT JOIN table2
ON table1.column_name = table2.column_name;
```

RIGHT JOIN

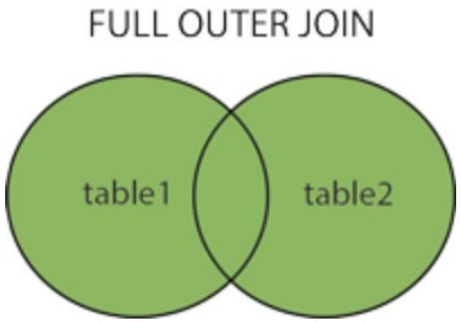

RIGHT JOIN
table1
table2

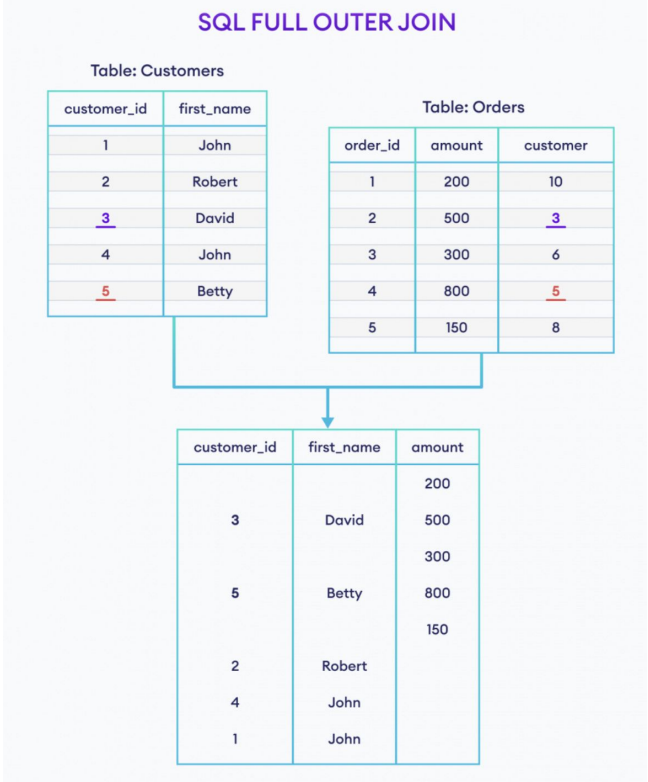

SQL RIGHT JOIN
Table: Customers
customer_id
first_name
1
John
2
Robert
3
David
4
John
5
Betty
Table: Orders
order_id
amount
customer
1
200
10
2
500
3
3
300
6
4
800
5
5
150
8
customer_id
first_name
amount
3
David
500
5
Betty
800
200
300
150

RIGHT JOIN: Syntax

```
SELECT columns
FROM table1
RIGHT JOIN table2
ON table1.column_name = table2.column_name;
```

OUTER JOIN


FULL OUTER JOIN
table1
table2


SQL FULL OUTER JOIN
Table: Customers
customer_id
first_name
1
John
2
Robert
3
David
4
John
5
Betty
Table: Orders
order_id
amount
customer
1
200
10
2
500
3
3
300
6
4
800
5
5
150
8
customer_id
first_name
amount
3
David
200
500
300
5
Betty
800
150
2
Robert
4
John
1
John

OUTER JOIN: Syntax

```
SELECT columns
FROM table1
FULL OUTER JOIN table2
ON table1.column_name = table2.column_name;
```

Special case: SELF JOIN

Id	FullName	Salary	ManagerId
1	John Smith	10000	3
2	Jane Anderson	12000	3
3	Tom Lanon	15000	4
4	Anne Connor	20000	
5	Jeremy York	9000	1

I want to have employee name and manager name next to each other

Special case: SELF JOIN

Id	FullName	ManagerId	ManagerName
1	John Smith	3	Tom Lanon
2	Jane Anderson	3	Tom Lanon
3	Tom Lanon	4	Anne Connor
5	Jeremy York	1	John Smith

```
SELECT
    employee.Id,
        employee.FullName,
        employee.ManagerId,
        manager.FullName as ManagerName
FROM Employees employee
JOIN Employees manager
ON employee.ManagerId = manager.Id
```

Join us on Slack to ask questions and keep the discussion going!

Use the channel:

#sql-coding-series

Code with SQL

https://www.sql-practice.com/

Thank you!

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