

What's covered here?

- Common Types of SQL JOINS

Source Tables

Customer

CustomerID	CustomerLastName
1	Smith
2	Kim
3	Morgan
4	Reed
5	Lynch

OrderHeader

OrderID	OrderDate	OrderAmount	CustomerID
1001	10/02/14	120	2
1002	10/03/14	767	3
1003	10/14/14	855	1
1004	10/15/14	1,245	1
1005	10/16/14	330	7
1006	10/10/14	557	4
1007	10/22/14	191	3

INNER JOIN

Customer		OrderHeader			
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount	CustomerID
1	Smith	1001	10/02/14	120	2
2	Kim	1002	10/03/14	767	3
3	Morgan	1003	10/14/14	855	1
4	Reed	1004	10/15/14	1,245	1
5	Lynch	1005	10/16/14	330	7
		1006	10/10/14	557	4
		1007	10/22/14	191	3

```
SELECT c.CustomerID, CustomerLastName, OrderID, OrderDate, OrderAmount
FROM Customer c
INNER JOIN OrderHeader o
ON c.CustomerID = o.CustomerID
ORDER BY c.CustomerID, OrderID
```

INNER JOIN

Customer		OrderHeader			
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount	CustomerID
1	Smith	1001	10/02/14	120	2
2	Kim	1002	10/03/14	767	3
3	Morgan	1003	10/14/14	855	1
4	Reed	1004	10/15/14	1,245	1
5	Lynch	1005	10/16/14	330	7
		1006	10/10/14	557	4
		1007	10/22/14	191	3

```
SELECT c.CustomerID, CustomerLastName, OrderID, OrderDate, OrderAmount
FROM Customer c
INNER JOIN OrderHeader o
ON c.CustomerID = o.CustomerID
ORDER BY c.CustomerID, OrderID
```

Results of INNER JOIN				
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount
1	Smith	1003	10/14/14	855
1	Smith	1004	10/15/14	1,245
2	Kim	1001	10/02/14	120
3	Morgan	1002	10/03/14	767
3	Morgan	1007	10/22/14	191
4	Reed	1006	10/10/14	557

LEFT OUTER JOIN

Customer		OrderHeader			
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount	CustomerID
1	Smith	1001	10/02/14	120	2
2	Kim	1002	10/03/14	767	3
3	Morgan	1003	10/14/14	855	1
4	Reed	1004	10/15/14	1,245	1
5	Lynch	1005	10/16/14	330	7
		1006	10/10/14	557	4
		1007	10/22/14	191	3

```
SELECT c.CustomerID, CustomerLastName, OrderID, OrderDate, OrderAmount
FROM Customer c
LEFT OUTER JOIN OrderHeader o
ON c.CustomerID = o.CustomerID
ORDER BY c.CustomerID, OrderID
```

LEFT OUTER JOIN

Customer		OrderHeader			
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount	CustomerID
1	Smith	1001	10/02/14	120	2
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		1006	10/10/14	557	4
		1007	10/22/14	191	3

```
SELECT c.CustomerID, CustomerLastName, OrderID, OrderDate, OrderAmount
FROM Customer c
LEFT OUTER JOIN OrderHeader o
ON c.CustomerID = o.CustomerID
ORDER BY c.CustomerID, OrderID
```

Results of LEFT OUTER JOIN				
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount
1	Smith	1003	10/14/14	855
1	Smith	1004	10/15/14	1,245
2	Kim	1001	10/02/14	120
3	Morgan	1002	10/03/14	767
3	Morgan	1007	10/22/14	191
4	Reed	1006	10/10/14	557
5	Lynch	NULL	NULL	NULL

RIGHT OUTER JOIN

Customer	
CustomerID	CustomerLastName
1	Smith
2	Kim
3	Morgan
4	Reed
5	Lynch

OrderHeader			
OrderID	OrderDate	OrderAmount	CustomerID
1001	10/02/14	120	2
1002	10/03/14	767	3
1003	10/14/14	855	1
1004	10/15/14	1,245	1
1005	10/16/14	330	7
1006	10/10/14	557	4
1007	10/22/14	191	3

```
SELECT c.CustomerID, CustomerLastName, OrderID, OrderDate, OrderAmount
FROM Customer c
RIGHT OUTER JOIN OrderHeader o
ON c.CustomerID = o.CustomerID
ORDER BY c.CustomerID, OrderID
```

RIGHT OUTER JOIN

Customer		OrderHeader			
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount	CustomerID
1	Smith	1001	10/02/14	120	2
2	Kim	1002	10/03/14	767	3
3	Morgan	1003	10/14/14	855	1
4	Reed	1004	10/15/14	1,245	1
5	Lynch	1005	10/16/14	330	7
		1006	10/10/14	557	4
		1007	10/22/14	191	3

```

SELECT c.CustomerID, CustomerLastName, OrderID, OrderDate, OrderAmount
FROM Customer c
RIGHT OUTER JOIN OrderHeader o
ON c.CustomerID = o.CustomerID
ORDER BY c.CustomerID, OrderID

```

Results of RIGHT OUTER JOIN				
CustomerID	CustomerLastName	OrderID	OrderDate	OrderAmount
1	Smith	1003	10/14/14	855
1	Smith	1004	10/15/14	1,245
2	Kim	1001	10/02/14	120
3	Morgan	1002	10/03/14	767
3	Morgan	1007	10/22/14	191
4	Reed	1006	10/10/14	557
NULL	NULL	1005	10/16/14	330