

SQL JOINS

- Common types
 - Inner Join
 - Outter Join
 - Self Join

INNER JOIN(DEFAULT JOIN)

Because CustomerID appears in both table so we need to tell SQL which CustomerID we use
JOIN只返回有值条目

LEFT OTTER JOIN

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
```

左边所有的customer都会被返回

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 OTTER JOIN

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

为什么第六行数据没有显示CustomerID 为7 的数据?
因为select 的是c.CustomerID

Convert left join to right join

- Swap left table and right table