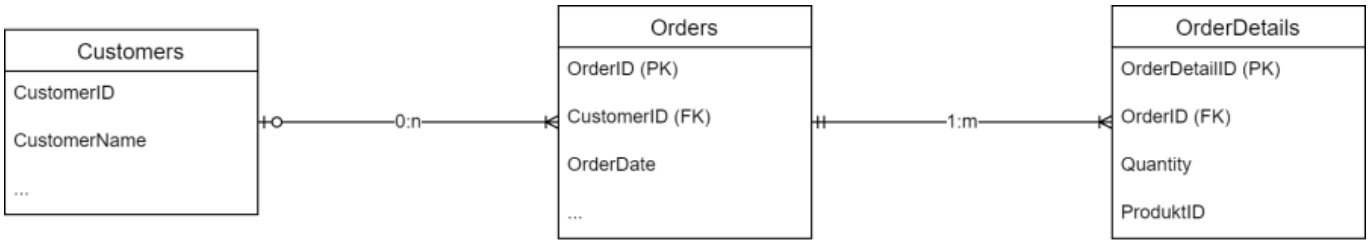
LU06c - SQL-DQL: Select from multiple tables

Source: W3Schools.co: SELECT with WHERE

As we know, a RDB essentially consists of tables which are linked together to increase quality and performance and reduce unintended redundancies and inconsistencies. The following ERD shows such a data structure of a shop including some details.



If we want to know which orders were placed by which customer we have to deal with the two tables **CUSTOMERS** and **ORDERS**, and the key that connects the two is logically the CustomerID.

Select on two tables

In practice, we would like to know which customer, e.g. with ID =3, has ordered which product. The following SQL statement would read as follows:

```
SELECT c.*, o.orderdate
FROM CUSTOMERs c, ORDERS o
WHERE c.CustomerID = 3
AND c.CustomerID = o.CustomerID;
```

In the line **FROM CUSTOMER c, ORDERS o**, we use an alias for the tablename. This is practical because we can use the alias instead of the full table name in the rest of the statement. The result of the SQL statement you find below

```
SELECT c.*, o.orderdate
FROM CUSTOMERS c, ORDERS o
WHERE c.CustomerID = 3
AND c.CustomerID = o.CustomerID;
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

Number of Records: 1

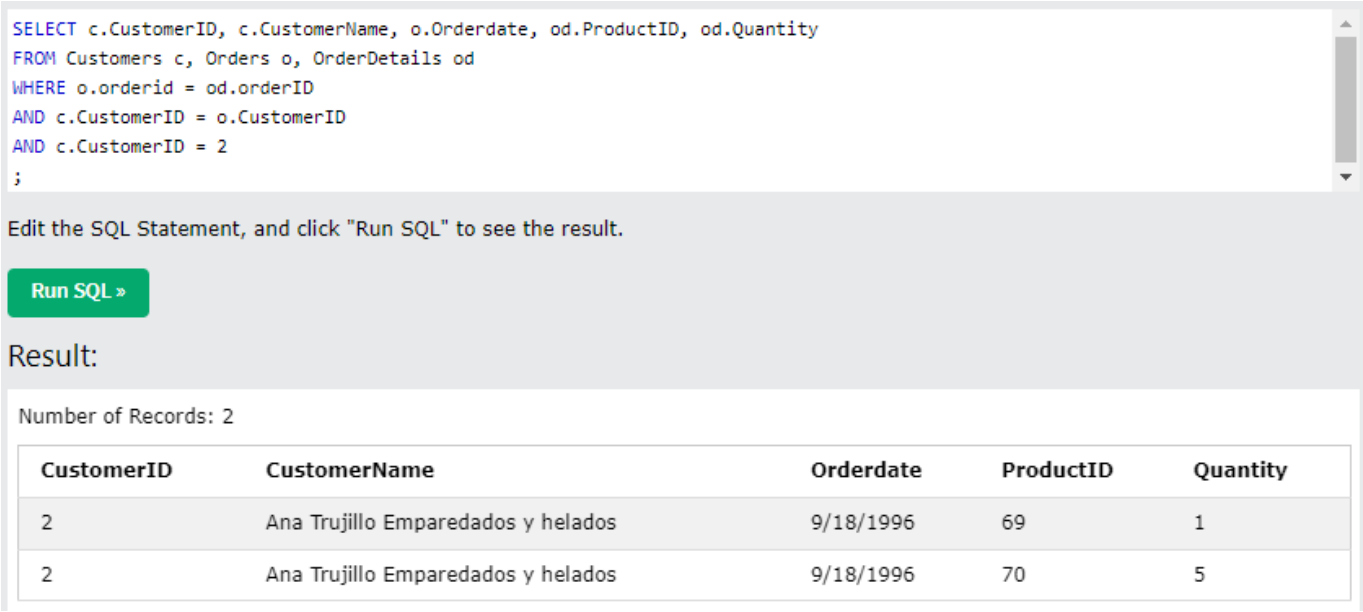
CustomerID	CustomerName	ContactName	Address	City	PostalCode	Country	orderdate
3	Antonio Moreno Taquería	Antonio Moreno	Mataderos 2312	México D.F.	05023	Mexico	11/27/1996

Select on three or more tables

The basic idea how to receive data from two table shows us the way how we can retrieve data from three or more tables, as the approach is similar. In that case the three or more tables require a common ID, that linkes the tables involved. The requirements could contain some order details, e.g. which product and the which quantity the customers had ordered. The according SQL select statement would be like:

```
SELECT c.CustomerID, c.CustomerName, o.Orderdate, od.ProductID, od.Quantity
FROM Customers c, Orders o, OrderDetails od
WHERE o.orderid = od.orderID
AND c.CustomerID = o.CustomerID
AND c.CustomerID = 2;
```

The result is shown in the figure below:



```
SELECT c.CustomerID, c.CustomerName, o.Orderdate, od.ProductID, od.Quantity
FROM Customers c, Orders o, OrderDetails od
WHERE o.orderid = od.orderID
AND c.CustomerID = o.CustomerID
AND c.CustomerID = 2
;
```

Edit the SQL Statement, and click "Run SQL" to see the result.

Run SQL »

Result:

Number of Records: 2

CustomerID	CustomerName	Orderdate	ProductID	Quantity
2	Ana Trujillo Emparedados y helados	9/18/1996	69	1
2	Ana Trujillo Emparedados y helados	9/18/1996	70	5

Vocabulary

English	German
essentially	im Grunde genommen, hauptsächlich
requirement	Anforderung