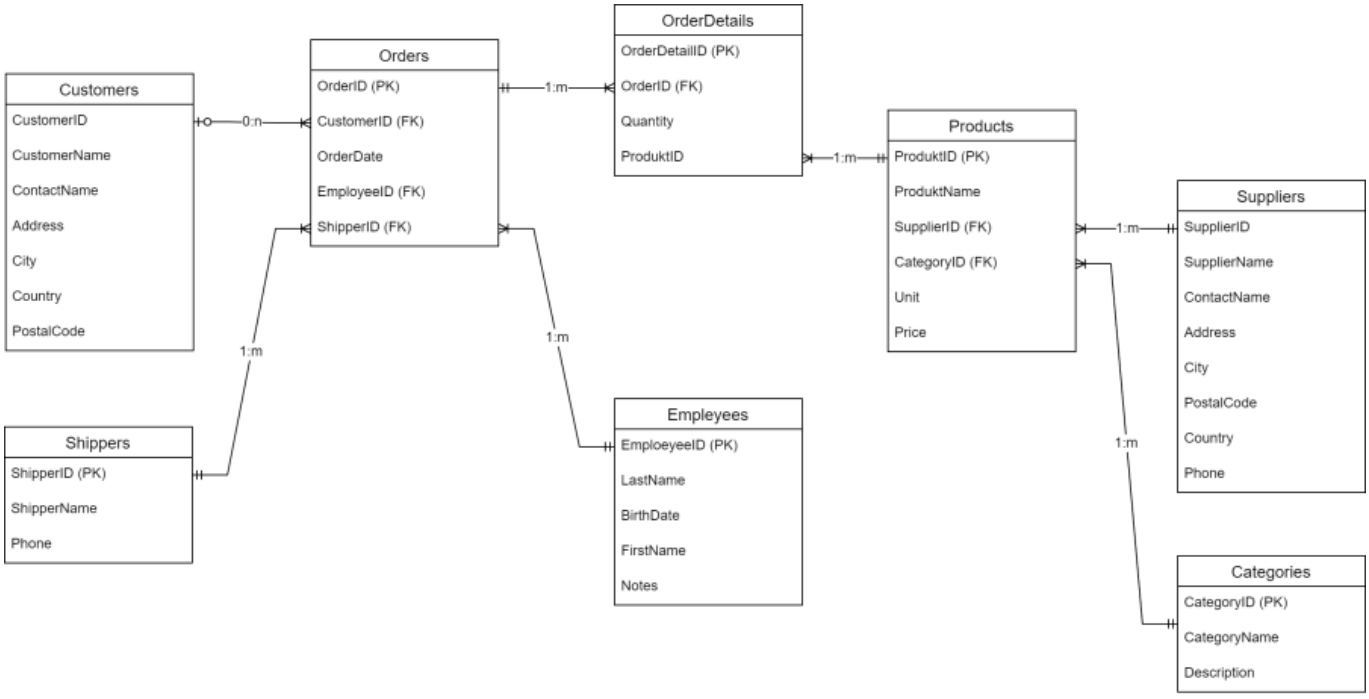
LU04.S02 - SQL-DQL: Select from multiple tables

Case studies / Assignments

The following ERD describes a order database for a a shop.



Assignments

The general assignment is to develop DQL commands that matches the requirements below:

Assignment a)

We need a list with product details as following: Name of the supplier, Supplier phone, Product ID, Name of the product, units, price. The list must be be sorted by SupplierName in descending order.

```
SELECT s.SupplierName, s.SupplierID, s.phone,  p.ProductID, p.ProductName,
p.Unit, p.Price
FROM Suppliers s, Products p
WHERE p.SupplierID = s.SupplierID
ORDER BY s.SupplierName DESC;
```

Assignment b)

Extend the the result of the Select statement from assignment a), so that it must contain only produtcs of the supplier „Leka Trading“.

There are two possible solutions.

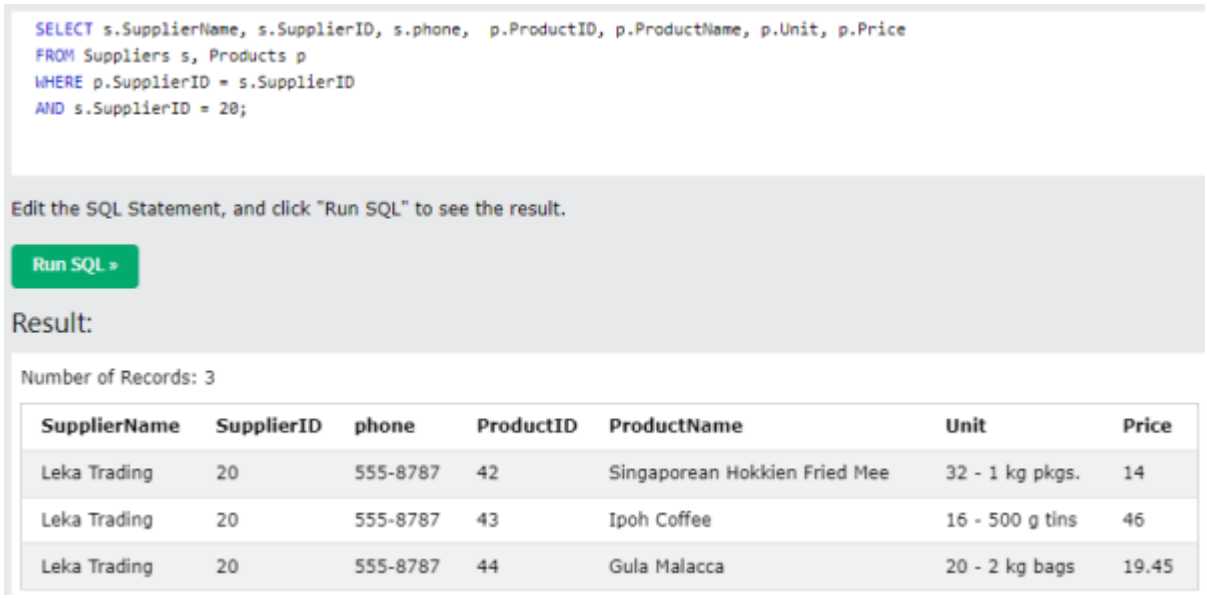
b1) The first one is to to search for the ID (SupplierID = 20) of the supplier and take that ID into our SELECT as follows:

```
SELECT s.SupplierName, s.SupplierID, s.phone,  p.ProductID, p.ProductName,
p.Unit, p.Price
FROM Suppliers s, Products p
WHERE p.SupplierID = s.SupplierID
AND s.SupplierID = 20;
```

b2) The second solution takes the name directly into the SELECT statement:

```
SELECT s.SupplierName, s.SupplierID, s.phone,  p.ProductID, p.ProductName,
p.Unit, p.Price
FROM Suppliers s, Products p
WHERE p.SupplierID = s.SupplierID
AND s.SupplierName = 'Leka Trading';
```

The result set is in both cases, as the figure below shows:



```
SELECT s.SupplierName, s.SupplierID, s.phone,  p.ProductID, p.ProductName, p.Unit, p.Price
FROM Suppliers s, Products p
WHERE p.SupplierID = s.SupplierID
AND s.SupplierID = 20;
```

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

Run SQL »

Result:

Number of Records: 3

SupplierName	SupplierID	phone	ProductID	ProductName	Unit	Price
Leka Trading	20	555-8787	42	Singaporean Hokkien Fried Mee	32 - 1 kg pkgs.	14
Leka Trading	20	555-8787	43	Ipoh Coffee	16 - 500 g tins	46
Leka Trading	20	555-8787	44	Gula Malacca	20 - 2 kg bags	19.45

Assigmment c)

We would like to know what products the customer „Hanari Carnes“ has ordered in the past. Sort the list by the quantity. In detail we require the following data: CustomerID, CustomerName, OrderID, OorderDate, Quantity, ProductName, CategoryName

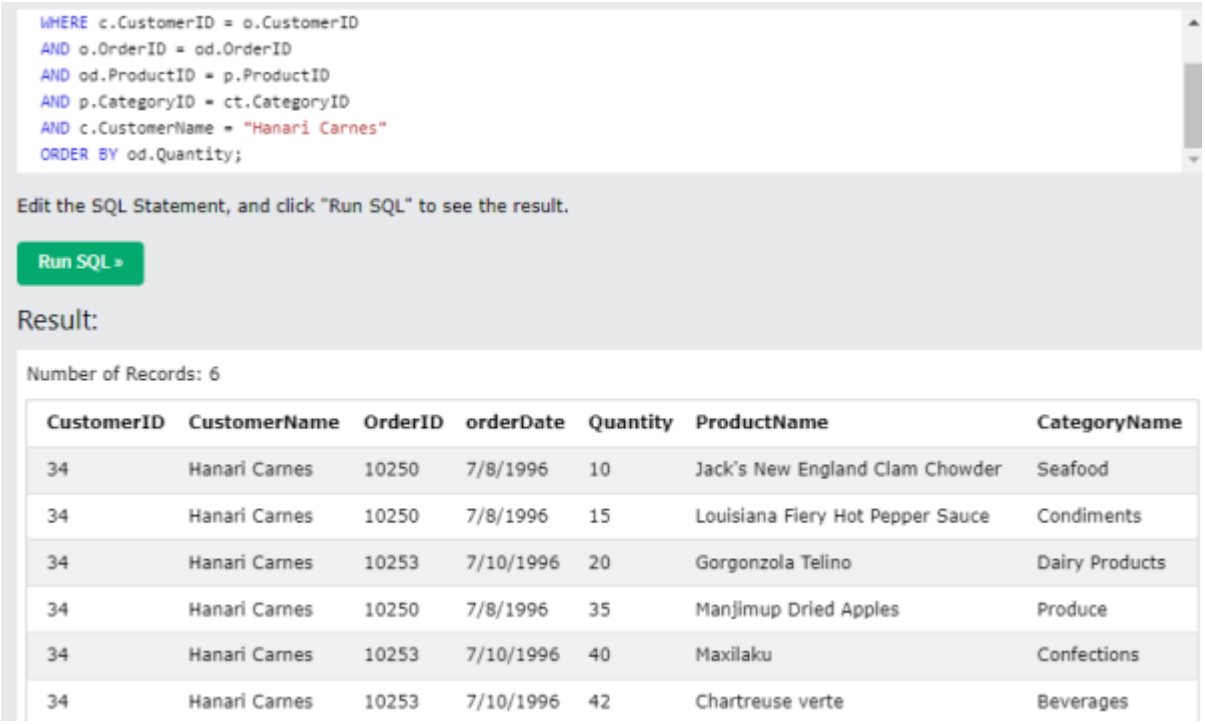
c1) Like in assignment b) here a two approaches possible: 1. find the customerID (34) and select according to the customer id.

```
select c.CustomerID, c.CustomerName , o.OrderID, o.orderDate, od.Quantity,
p.ProductName, ct.CategoryName
FROM customers c, orders o, OrderDetails od, Products p, Categories ct
WHERE c.CustomerID = o.CustomerID
AND o.OrderID = od.OrderID
AND od.ProductID = p.ProductID
AND p.CategoryID = ct.CategoryID
AND c.CustomerID = 34
ORDER BY od.Quantity;
```

**C1)„“ The second approach, as in b2), is to filter the result set directly by customer name.

```
select c.CustomerID, c.CustomerName , o.OrderID, o.orderDate, od.Quantity,
p.ProductName, ct.CategoryName
FROM customers c, orders o, OrderDetails od, Products p, Categories ct
WHERE c.CustomerID = o.CustomerID
AND o.OrderID = od.OrderID
AND od.ProductID = p.ProductID
AND p.CategoryID = ct.CategoryID
AND c.CustomerName = "Hanari Kanes"
ORDER BY od.Quantity;

The result set is in both cases as shown in the following figure.
```



```
WHERE c.CustomerID = o.CustomerID
AND o.OrderID = od.OrderID
AND od.ProductID = p.ProductID
AND p.CategoryID = ct.CategoryID
AND c.CustomerName = "Hanari Carnes"
ORDER BY od.Quantity;
```

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

Run SQL »

Result:

Number of Records: 6

CustomerID	CustomerName	OrderID	orderDate	Quantity	ProductName	CategoryName
34	Hanari Carnes	10250	7/8/1996	10	Jack's New England Clam Chowder	Seafood
34	Hanari Carnes	10250	7/8/1996	15	Louisiana Fiery Hot Pepper Sauce	Condiments
34	Hanari Carnes	10253	7/10/1996	20	Gorgonzola Telino	Dairy Products
34	Hanari Carnes	10250	7/8/1996	35	Manjimup Dried Apples	Produce
34	Hanari Carnes	10253	7/10/1996	40	Maxilaku	Confections
34	Hanari Carnes	10253	7/10/1996	42	Chartreuse verte	Beverages

Solution

Lösung

Vocabulary

English	German
respectively	beziehungsweise
assignment	Auftrag