

1)

```
1 • SELECT *
2     FROM nwCategories
3  /*
4   Selecting all columns from table nwCategories
5   */
6
```

Result Grid

Filter Rows:

Edit: Export/Import:

#	CategoryID	CategoryName	Description
1	1	Beverages	Soft drinks, coffees, teas, beers, an...
2	2	Condiments	Sweet and savory sauces, relishes, ...
3	3	Confections	Desserts, candies, and sweet breads
4	4	Dairy Products	Cheeses
5	5	Grains/Cereals	Breads, crackers, pasta, and cereal
6	6	Meat/Poultry	Prepared meats
7	7	Produce	Dried fruit and bean curd
8	8	Seafood	Seaweed and fish
*	NULL	NULL	NULL

2)

1 •

```
SELECT CompanyName, Address, Region, PostalCode, Phone
FROM nwSuppliers
WHERE nwSuppliers.Country = 'France' OR nwSuppliers.Country = 'Germany'
/*
Selecting all CompanyName, Address, Region, PostalCode, Phone columns from nwSuppliers
from France or germany
*/
```

Result Grid

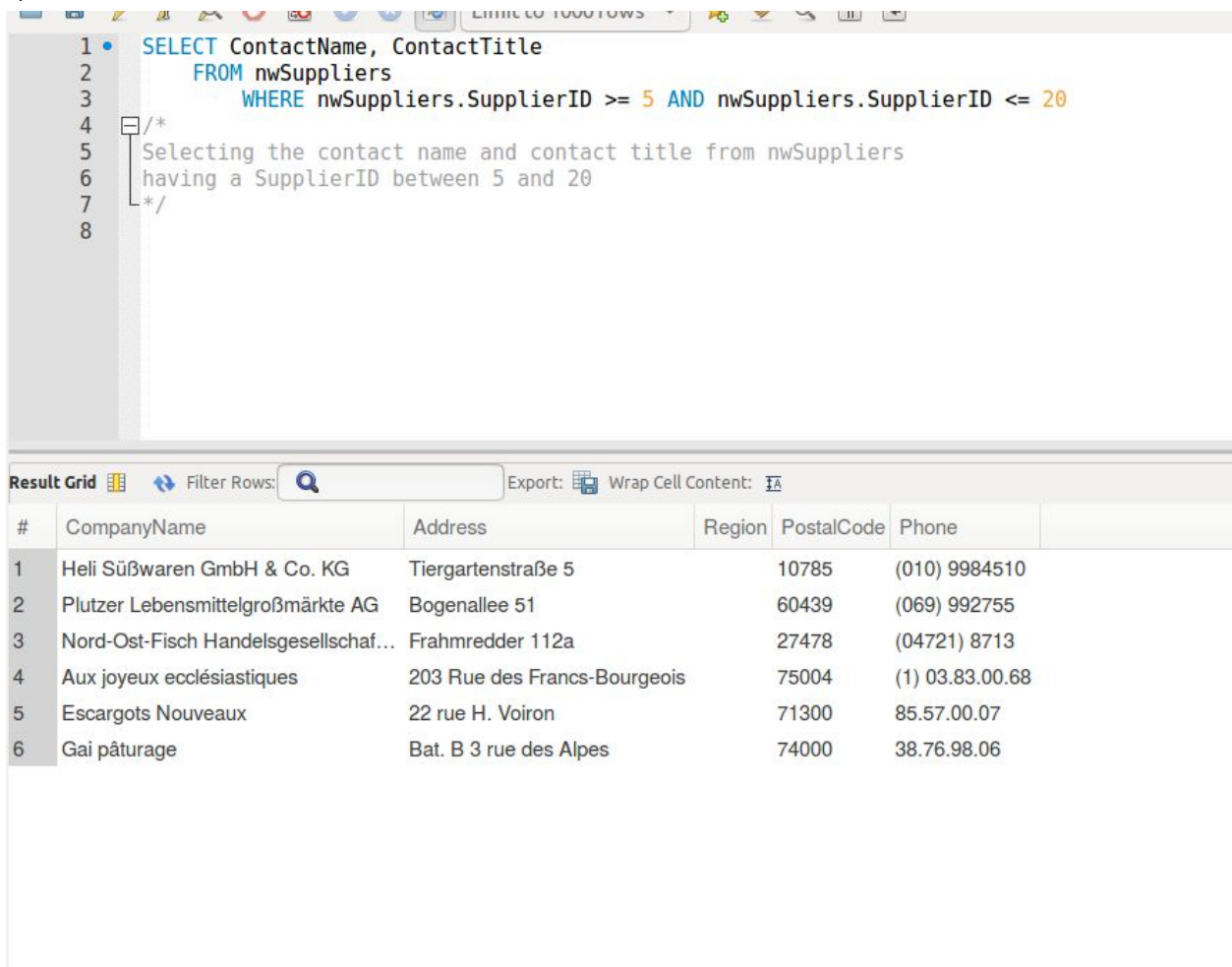
Filter Rows:

Export:

Wrap Cell Content:

#	CompanyName	Address	Region	PostalCode	Phone	
1	Heli Süßwaren GmbH & Co. KG	Tiergartenstraße 5		10785	(010) 9984510	
2	Plutzer Lebensmittelgroßmärkte AG	Bogenallee 51		60439	(069) 992755	
3	Nord-Ost-Fisch Handelsgesellschaft...	Frahmredder 112a		27478	(04721) 8713	
4	Aux joyeux ecclésiastiques	203 Rue des Francs-Bourgeois		75004	(1) 03.83.00.68	
5	Escargots Nouveaux	22 rue H. Voiron		71300	85.57.00.07	
6	Gai pâturage	Bat. B 3 rue des Alpes		74000	38.76.98.06	

3)



The screenshot shows a SQL query editor with a query that selects contact names and titles from the `nwSuppliers` table, filtered by `SupplierID` between 5 and 20. Below the editor is a 'Result Grid' showing the first six rows of the query results. The grid has columns for row number, company name, address, region, postal code, and phone number.

```
1 • SELECT ContactName, ContactTitle
2     FROM nwSuppliers
3     WHERE nwSuppliers.SupplierID >= 5 AND nwSuppliers.SupplierID <= 20
4 /*
5  Selecting the contact name and contact title from nwSuppliers
6  having a SupplierID between 5 and 20
7 */
8
```

Result Grid

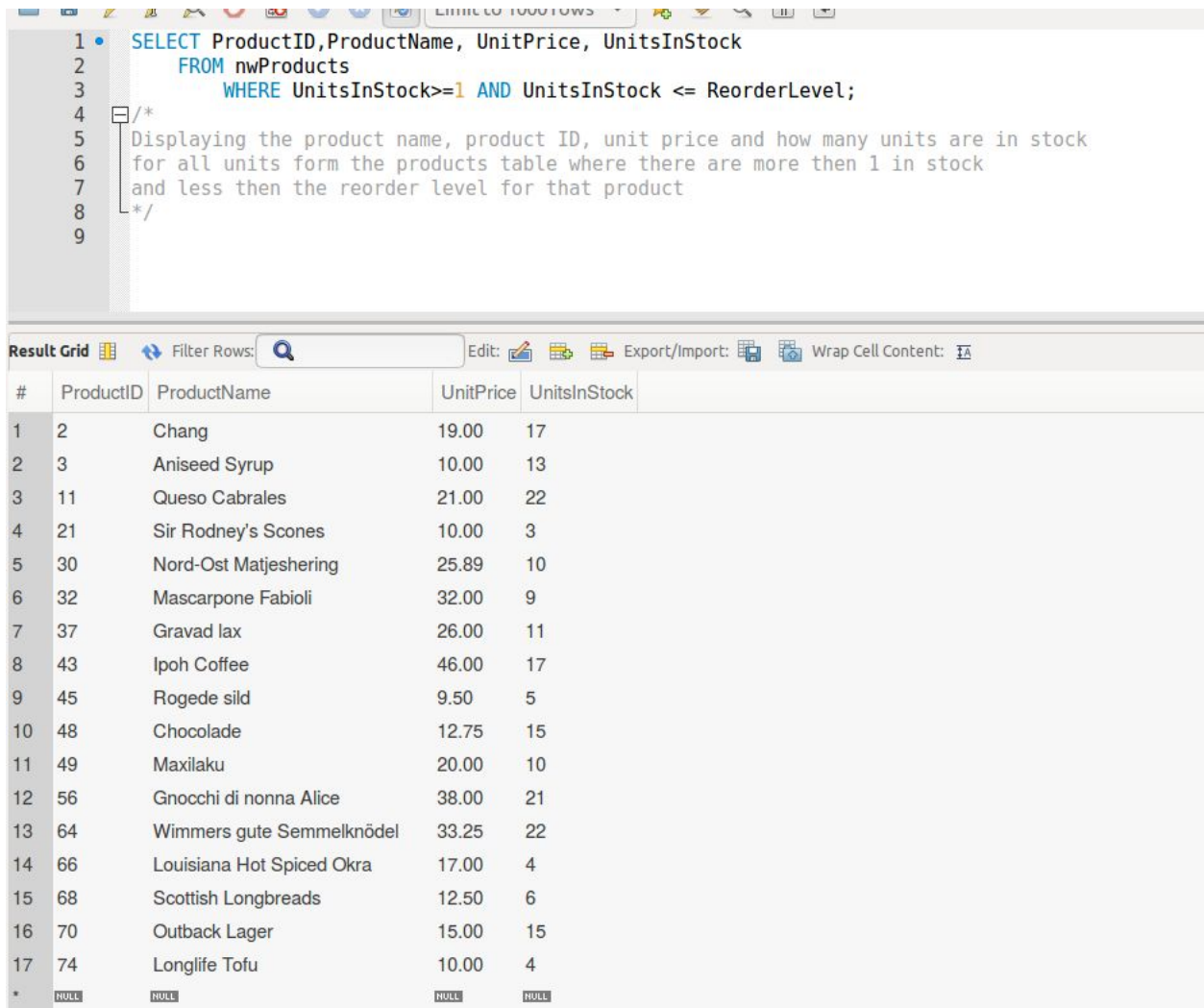
#	CompanyName	Address	Region	PostalCode	Phone
1	Heli Süßwaren GmbH & Co. KG	Tiergartenstraße 5		10785	(010) 9984510
2	Plutzer Lebensmittelgroßmärkte AG	Bogenallee 51		60439	(069) 992755
3	Nord-Ost-Fisch Handelsgesellschaft...	Frahmredder 112a		27478	(04721) 8713
4	Aux joyeux ecclésiastiques	203 Rue des Francs-Bourgeois		75004	(1) 03.83.00.68
5	Escargots Nouveaux	22 rue H. Voiron		71300	85.57.00.07
6	Gai pâturage	Bat. B 3 rue des Alpes		74000	38.76.98.06

4)

1	•	SELECT	ProductName, QuantityPerUnit, UnitPrice, UnitsInStock	
2		FROM	nwProducts	
3		WHERE	UnitPrice<10;	
4		/*		
5			Displaying the product name, quantity per unit, unit price and how many units are in stock	
6			for all units form the products table with a price greater thank 10	
7		*/		
8				

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
#	ProductName	QuantityPerUnit	UnitPrice	UnitsInStock
1	Konbu	2 kg box	6.00	24
2	Teatime Chocolate Biscuits	10 boxes x 12 pie...	9.20	25
3	Tunnbröd	12 - 250 g pkgs.	9.00	61
4	Guaraná Fantástica	12 - 355 ml cans	4.50	20
5	Geitost	500 g	2.50	112
6	Jack's New England Clam Cho...	12 - 12 oz cans	9.65	85
7	Rogede sild	1k pkg.	9.50	5
8	Zaanse koeken	10 - 4 oz boxes	9.50	36
9	Filo Mix	16 - 2 kg boxes	7.00	38
10	Tourtière	16 pies	7.45	21
11	Rhönbräu Klosterbier	24 - 0.5 l bottles	7.75	125

5)



The screenshot shows a database query editor with a SQL query and its corresponding results grid.

SQL Query:

```

1 • SELECT ProductID, ProductName, UnitPrice, UnitsInStock
2     FROM nwProducts
3     WHERE UnitsInStock >= 1 AND UnitsInStock <= ReorderLevel;
4
5 /*
6  Displaying the product name, product ID, unit price and how many units are in stock
7  for all units form the products table where there are more then 1 in stock
8  and less then the reorder level for that product
9  */

```

Result Grid:

#	ProductID	ProductName	UnitPrice	UnitsInStock
1	2	Chang	19.00	17
2	3	Aniseed Syrup	10.00	13
3	11	Queso Cabrales	21.00	22
4	21	Sir Rodney's Scones	10.00	3
5	30	Nord-Ost Matjeshering	25.89	10
6	32	Mascarpone Fabioli	32.00	9
7	37	Gravad lax	26.00	11
8	43	Ipoh Coffee	46.00	17
9	45	Rogede sild	9.50	5
10	48	Chocolade	12.75	15
11	49	Maxilaku	20.00	10
12	56	Gnocchi di nonna Alice	38.00	21
13	64	Wimmers gute Semmelknödel	33.25	22
14	66	Louisiana Hot Spiced Okra	17.00	4
15	68	Scottish Longbreads	12.50	6
16	70	Outback Lager	15.00	15
17	74	Longlife Tofu	10.00	4
*	NULL	NULL	NULL	NULL

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SELECT LastName, FirstName

FROM nwEmployees

WHERE Country!='USA' AND HireDate<=(CURDATE()-INTERVAL '5' YEAR)

ORDER BY LastName ASC;

/*

We are looking for all employees outside the USA who have been hired within the last 5 years as of today.

To do the date calculation, we use CURDATE() to get the date the query is run

and INTERVAL method in to format and utalize the YEAR attribute to make the math easy

We then order the results in ascending order for readability

*/

Result Grid

Filter Rows:

Export: Wrap Cell Content:

#	LastName	FirstName
1	Dodsworth	Anne
2	King	Robert
3	Suyama	Michael

7)

1	•	SELECT	ProductName, UnitPrice
2		FROM	nwProducts
3		WHERE	UnitPrice = (
4			SELECT MAX(UnitPrice)
5			FROM nwProducts
6);
7			
8		/*	
9			We want to find the product with the highest value in the products table
10			To do this, we need to run a subquery using the MAX() method to find
11			the highest value unitprice in the product table
12			*/

Result Grid			Filter Rows: <input type="text"/>	Export: <input type="text"/> Wrap Cell Content: <input type="text"/>
#	ProductName	UnitPrice		
1	Côte de Blaye	263.50		

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1	•	SELECT ProductID, ProductName, (UnitsInStock * UnitPrice) AS TotalInventoryValue
2		FROM nwProducts
3		HAVING TotalInventoryValue > 2000.00
4		ORDER BY TotalInventoryValue DESC;
5		
6		/*
7		We create an ALIAS Column for the total inventory value by doing the calculation
8		in the SELECT statement
9		We order the values in descending order so we can see the products
10		with the highest total value first
11		*/
12		

Result Grid				Filter Rows:	Export:	Wrap Cell Content:
#	ProductID	ProductName	TotalInventoryValue			
1	38	Côte de Blaye	4479.50			
2	59	Raclette Courdavault	4345.00			
3	12	Queso Manchego La Pastora	3268.00			
4	20	Sir Rodney's Marmalade	3240.00			
5	61	Sirop d'érable	3220.50			
6	6	Grandma's Boysenberry Spread	3000.00			
7	9	Mishi Kobe Niku	2813.00			
8	55	Pâté chinois	2760.00			
9	18	Carnarvon Tigers	2625.00			
10	40	Boston Crab Meat	2263.20			
11	22	Gustaf's Knäckebröd	2184.00			
12	27	Schoggi Schokolade	2151.10			
13	36	Inlagd Sill	2128.00			

9)

To look for discontinued items, we need to know that `nwProducts.Discontinued` is a boolean value with 0 meaning NOT DISCONTINUED and 1 meaning that YES DISCONTINUED

We can search for a string literal in `QuantityPerUnit` column by using `LIKE`

Side note, why are we putting text in `QuantityPerUnit`?

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```
SELECT DISTINCT(ShipCountry), COUNT(OrderID) AS Orders
FROM nwOrders
WHERE ShipCountry!='USA' AND ShippedDate BETWEEN '2013-09-01' AND '2013-09-31'
GROUP BY ShipCountry ASC;
```

/*

We filter all duplicate countries by using the DISTINCT() method

and use a simple BETWEEN (string value date 1) AND (string value date 2)

to find all queries between that date range

*/

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

#	ShipCountry	Orders
1	Brazil	4
2	France	3
3	Germany	1
4	Ireland	1
5	Italy	2
6	Mexico	3
7	Spain	2
8	Sweden	1
9	Venezuela	1

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SELECT ROUND(AVG(UnitPrice),2) AS 'Average Price Of Products'

FROM nwProducts;

/*

We ROUND to 2 decimals since we are dealing with money and only need to be accurate to within 100th's

Since our ALIAS table does not have underscores or camelCase, we need to make it a string literal

*/

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

#	Average Price Of Products
1	28.87

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```
SELECT COUNT(CustomerID) AS 'Customers In France'
FROM nwCustomers
WHERE Country = 'FRANCE';

/*
Finding how many customers are from France
Since our ALIAS table does not have underscores or camelCase, we need to make it a string literal
*/
```

Result Grid

Filter Rows:

Export: Wrap Cell Content:

#	Customers In France
1	8

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```
SELECT nwCustomers.CustomerID, nwCustomers.CompanyName
FROM nwCustomers JOIN nwOrders
ON nwCustomers.CustomerID = nwOrders.CustomerID
GROUP BY nwOrders.CustomerID
HAVING COUNT(nwOrders.CustomerID)>20;
```

/*
Since we are doing an explicit JOIN, we need to distinguish which table each attribute
came from by writing the full tableName.DesiredAttribute
*/

Result Grid

Filter Rows:

Export: Wrap Cell Content:

#	CustomerID	CompanyName
1	ERNSH	Ernst Handel
2	QUICK	QUICK-Stop
3	SAVEA	Save-a-lot Markets

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SELECT SupplierID, SUM(UnitsInStock*UnitPrice) AS ValueOfInventory

FROM nwProducts

GROUP BY SupplierID

HAVING COUNT(SupplierID)>3;

/*

We can calculate the inventory value by multiplying how many units are

in stock times the unit price and sum all those columns together in a single step

*/

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

#	CustomerID	CompanyName
1	ERNSH	Ernst Handel
2	QUICK	QUICK-Stop
3	SAVEA	Save-a-lot Markets

15)

```

9  */
10 We find all supplier in the USA and their products by JOINING products and Suppliers
11 We organize the information in descending order of price for readability
12 */

```

Result Grid		Filter Rows:	Export:	Wrap Cell Content:
#	CompanyName	ProductName	UnitPrice	
1	Grandma Kelly's Homestead	Northwoods Cranberry Sauce	40.00	
2	Grandma Kelly's Homestead	Uncle Bob's Organic Dried Pears	30.00	
3	Grandma Kelly's Homestead	Grandma's Boysenberry Spread	25.00	
4	New Orleans Cajun Delights	Chef Anton's Cajun Seasoning	22.00	
5	New Orleans Cajun Delights	Chef Anton's Gumbo Mix	21.35	
6	New Orleans Cajun Delights	Louisiana Fiery Hot Pepper Sa...	21.05	
7	New England Seafood Cannery	Boston Crab Meat	18.40	
8	Bigfoot Breweries	Steeleye Stout	18.00	
9	New Orleans Cajun Delights	Louisiana Hot Spiced Okra	17.00	
10	Bigfoot Breweries	Sasquatch Ale	14.00	
11	Bigfoot Breweries	Laughing Lumberjack Lager	14.00	
12	New England Seafood Cannery	Jack's New England Clam Cho...	9.65	

```

9  --*/
10 To find all employees plus their information, who have more then 100 orders
11 we join our employee and orders tables and distinguish which table the information
12 is coming from, we prefix it with its destination table name
13 */
14

```

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```
SELECT DISTINCT nwCustomers.CustomerID, nwCustomers.CompanyName
FROM nwOrders RIGHT OUTER JOIN nwCustomers
ON nwOrders.CustomerID = nwCustomers.CustomerID
WHERE nwOrders.CustomerID IS NULL;
```

/*
Since we do not need ALL the information from both tables, we
can do a RIGHT OUTER JOIN on the Orders and Customer tables to get
the information we need
*/

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

#	CustomerID	CompanyName
1	FISSA	FISSA Fabrica Inter. Salchichas S.A.
2	PARIS	Paris specialites

Result 14

Action Output

18)

```

1  /*Create an OUT OF STOCK LIST showing the Supplier CompanyName, Supplier ContactName,
2  Product CategoryName, CategoryDescription, ProductName and UnitsOnOrder
3  for all products that are out of stock (UnitsInStock = 0). (5)*/
4  • SELECT nwSuppliers.CompanyName, nwSuppliers.ContactName, nwCategories.CategoryName, nwCategories.Description,
5          nwProducts.ProductName, nwProducts.UnitsOnOrder
6  FROM nwProducts, nwSuppliers, nwCategories
7  WHERE (nwProducts.CategoryID = nwCategories.CategoryID)
8         AND (nwSuppliers.SupplierID = nwProducts.SupplierID)

```

#	CompanyName	ContactName	CategoryName	Description	ProductName	UnitsOnOrder
1	New Orleans Cajun Delights	Shelley Burke	Condiments	Sweet and savory sauces, relishes, ...	Chef Anton's Gumbo Mix	0
2	Pavlova Ltd.	Ian Devling	Meat/Poultry	Prepared meats	Alice Mutton	0
3	Plutzer Lebensmittelgroßmärkte AG	Martin Bein	Meat/Poultry	Prepared meats	Thüringer Rostbratwurst	0
4	Formaggi Fortini s.r.l.	Elio Rossi	Dairy Products	Cheeses	Gorgonzola Telino	70
5	G'day Mate	Wendy Mackenzie	Meat/Poultry	Prepared meats	Perth Pasties	0

19)

```

1  • SELECT nwProducts.ProductName, nwSuppliers.CompanyName AS 'Supplier Name', nwSuppliers.Country, nwProducts.UnitsInStock
2  FROM nwProducts, nwSuppliers
3  WHERE (nwProducts.QuantityPerUnit LIKE('%bottle%'))
4         AND nwProducts.SupplierID = nwSuppliers.SupplierID;
5
6
7
8
9
10 /*
11 Since we are trying to locate items based on a string again, we need to use the LIKE method again
12 Here, we are doing an implicit JOIN by simply stating the two tables we are selecting from without
13 actually explicitly joining them on their key
14 */

```

#	CustomerID	CompanyName
1	FISSA	FISSA Fabrica Inter. Salchichas S.A.
2	PARIS	Paris specialites

Result 14 ✕

Action Output ▼

20)

1 • **SELECT** nwCustomers.CompanyName, nwCustomers.Country, **CAST**(SUM((nwOrderDetails.UnitPrice * nwOrderDetails.Quantity) -
 2 nwOrderDetails.Discount*nwOrderDetails.UnitPrice*nwOrderDetails.Quantity) **AS DECIMAL**(9,2)) **AS Value**
 3 **FROM** nwCustomers **JOIN** nwOrders
 4 **ON** nwOrders.CustomerID = nwCustomers.CustomerID
 5 **JOIN** nwOrderDetails
 6 **ON** nwOrderDetails.OrderID = nwOrders.OrderID
 7 **GROUP BY**(nwCustomers.CustomerID)
 8 **HAVING**(Value)>30000
 9 **ORDER BY**(Value) **DESC**;

12 **/***
 13 Here we need to be very carerful since there is a lot going on
 14 We ahve a double JOIN (indented for readability)
 15 and we calualte the full price of the products in our select statement by
 16 summing the unitprice times the quantity of the order less the FULL numeric discount
 17 value. We then sort on a dollar value constraint and order in descending order for readability

Result Grid Filter Rows: Export: Wrap Cell Content:

#	CompanyName	Country	Value
1	QUICK-Stop	Germany	110277.31
2	Ernst Handel	Austria	104874.98
3	Save-a-lot Markets	USA	104361.95
4	Rattlesnake Canyon Grocery	USA	51097.80
5	Hungry Owl All-Night Grocers	Ireland	49979.91
6	Hanari Carnes	Brazil	32841.37
7	Koniglich Essen	Germany	30908.38

Result 15 ✕

Action Output ▾

21)

/*Create an "Employees Orders" VIEW listing employee lastname, firstname, and the total
 count of each employee's orders. (No answer set needed.)
***/**
 Run a query against the Employee Orders view listing the employees and their order counts in
 order from largest to smallest number of orders. (9 rows, one for each employee.)
CREATE OR REPLACE VIEW Employees_Orders **AS**
SELECT nwEmployees.LastName, nwEmployees.FirstName, **COUNT**(nwOrders.EmployeeID) **AS** 'Number Of Orders'
FROM nwEmployees **JOIN** nwOrders
ON nwEmployees.EmployeeID = nwOrders.EmployeeID
GROUP BY nwEmployees.EmployeeID;

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SELECT LastName, FirstName, Number_Of_Orders

FROM Employees_Orders

ORDER BY (Number_Of_Orders)DESC;

/*

find the number of orders each employee has placed and order in descending order

*/

Result Grid

Filter Rows:

Export:

Wrap Cell Content:

#	LastName	FirstName	Number_Of_Orders
1	Peacock	Margaret	156
2	Leverling	Janet	127
3	Davolio	Nancy	123
4	Callahan	Laura	104
5	Fuller	Andrew	96
6	King	Robert	72
7	Suyama	Michael	67
8	Dodsworth	Anne	43
9	Buchanan	Steven	42

Employees_Orders 16

Action Output

23)

```
1 DROP TABLE IF EXISTS Top_Items;
2 CREATE TABLE Top_Items(
3     ItemId INT NOT NULL,
4     ItemCode INT NOT NULL,
5     ItemName VARCHAR(40) NOT NULL,
6     InventoryDate DATE NOT NULL,
7     SupplierId INT NOT NULL,
8     ItemQuantity INT NOT NULL,
9     ItemPrice DECIMAL(9,2) NOT NULL,
10    PRIMARY KEY(ItemID)
11 ) DEFAULT CHARSET = utf8;
12
13 /*
14  creating a new table Top_Items with a primary key of itemId and
15  default char set of utf8
16  */
17
```

Action Output ▼

24)

```

1 • INSERT INTO Top_Items(ItemID, ItemCode, ItemName, InventoryDate, ItemQuantity, ItemPrice, SupplierId)
2   SELECT nwProducts.ProductID, nwProducts.ProductID, nwProducts.ProductName, CURDATE(), nwProducts.UnitsInStock,
3     nwProducts.UnitPrice, nwProducts.SupplierID
4   FROM nwProducts
5   HAVING(nwProducts.UnitPrice*nwProducts.UnitsInStock)>2500;
6
7 • SELECT *
8   FROM Top_Items;
9
10 /*
11  Populating the new Top_Items table with items their
12  corresponding information from our Products table with an inventory value (Unitprice * units in stock)
13  more then $2500
14  */
15

```

Result Grid

#	ItemId	ItemCode	ItemName	InventoryDate	SupplierId	ItemQuantity	ItemPrice
1	6	6	Grandma's Boysenberry Spread	2018-03-11	3	120	25.00
2	9	9	Mishi Kobe Niku	2018-03-11	4	29	97.00
3	12	12	Queso Manchego La Pastora	2018-03-11	5	86	38.00
4	18	18	Carnarvon Tigers	2018-03-11	7	42	62.50
5	20	20	Sir Rodney's Marmalade	2018-03-11	8	40	81.00
6	38	38	Côte de Blaye	2018-03-11	18	17	263.50
7	55	55	Pâté chinois	2018-03-11	25	115	24.00
8	59	59	Raclette Courdavault	2018-03-11	28	79	55.00
9	61	61	Sirop d'érable	2018-03-11	29	113	28.50
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL

Top_Items 17 ✕

Action Output ▾

25)

```
1 • SET SQL_SAFE_UPDATES = 0;
2 • DELETE FROM Top_Items
3   WHERE Top_Items.SupplierId = ANY(
4     SELECT nwSuppliers.SupplierID
5     FROM nwSuppliers
6     WHERE nwSuppliers.Country = 'Canada'
7   );
8 /*
9 SET SQL_SAFE_UPDATES = 0; is used to allow me to delete from a table without querying on a primary
10 key
11 other then that, we perform a subquery to find suppliers from Canada and remove them from our Top_Items table
12 based on their SupplierId
13 */
14
```

Action Output ▾

26)

```
1 /* Add a new column to the Top_Items table called InventoryValue ((decimal (9,2))) after the
2 inventory date. No answer set needed.
3 */
4 • ALTER TABLE Top_Items
5   ADD COLUMN InventoryValue decimal (9,2) AFTER InventoryDate;
6
7
8 • SELECT *
9   FROM Top_Items;
10
11
12
13
14
```

Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

#	ItemID	ItemCode	ItemName	InventoryDate	InventoryValue	SupplierID	ItemQuantity	ItemPrice
1	6	6	Grandma's Boysenberry Spread	2018-03-03	NULL	3	120	25.00

Top_Items 24 ✕

27)

```

1 • SET SQL_SAFE_UPDATES = 0;
2 • UPDATE Top_Items
3     SET InventoryValue = (ItemPrice*ItemQuantity);
4
5 • SELECT *
6     FROM Top_Items;
7
8 /*
9 SET SQL_SAFE_UPDATES = 0; is used to allow me to update from a table without querying on a primary
10 key
11 */

```

Action Output ▾

28)

```

8 • SELECT *
9     FROM Top_Items;
10
11
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13
14

```

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Result Grid Filter Rows: Edit: Export/Import: Wrap Cell Content:

#	ItemID	ItemCode	ItemName	InventoryDate	InventoryValue	SupplierID	ItemQuantity	ItemPrice
1	6	6	Grandma's Boysenberry Spread	2018-03-03	3000.00	3	120	25.00
2	9	9	Mishi Kobe Niku	2018-03-03	2813.00	4	29	97.00
3	12	12	Queso Manchego La Pastora	2018-03-03	3268.00	5	86	38.00
4	18	18	Carnarvon Tigers	2018-03-03	2625.00	7	42	62.50
5	20	20	Sir Rodney's Marmalade	2018-03-03	3240.00	8	40	81.00
6	38	38	Côte de Blaye	2018-03-03	4479.50	18	17	263.50
7	59	59	Raclette Courdavault	2018-03-03	4345.00	28	79	55.00
*	NULL	NULL	NULL	NULL	NULL	NULL	NULL	NULL

29)


```
DROP TABLE Top_items;
```