

DQL – JOINS, SUBQUERIES, GROUP BY

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-- Q1 What is the total revenues in 1997

```
select sum(UnitPrice*Quantity) "Total revenues in 1997" from [Order Details] od inner join Orders o on  
od.OrderID = o.OrderID where YEAR(o.OrderDate)=1997;
```

	Total revenues in 1997
1	351.80

--Q2 What is the total amount each customer has paid us so far

```
select c.CustomerID, sum(od.Quantity*od.UnitPrice) 'AMOUNT PAID' from Customers c inner join  
Orders o on c.CustomerID = o.CustomerID inner join [Order Details] od on o.OrderID=od.OrderID group  
by c.CustomerID;
```

	CustomerID	AMOUNT PAID
1	ANTON	2046.00
2	AROUT	351.80
3	BOLID	1819.40

--Q3 Find the 10 Top selling products

```
select TOP 10 p.ProductID, sum(od.Quantity) 'TotalQuantity' from Products p inner join [Order Details]  
od on p.ProductID=od.ProductID group by p.ProductID order by TotalQuantity desc;
```

	ProductID	TotalQuantity
1	5	75
2	6	15
3	4	15
4	3	15
5	2	12
6	1	10

--Q4 Display the total revenues per customer

```
select c.CustomerID, sum(od.Quantity*od.UnitPrice) 'TOTAL REVENUES PER CUSTOMER' from  
Customers c inner join Orders o on c.CustomerID = o.CustomerID inner join [Order Details] od on  
o.OrderID=od.OrderID group by c.CustomerID;
```

Results Messages		
	CustomerID	TOTAL REVENUES PER CUSTOMER
1	ANTON	2046.00
2	AROUT	351.80
3	BOLID	1819.40

--Q5 Which UK Customers have paid us more than 1000 Dollars

select c.CustomerID from Customers c inner join Orders o on c.CustomerID=o.CustomerID inner join [Order Details] od on o.OrderID=od.OrderID where c.Country='UK' and (od.UnitPrice*od.Quantity)>1000;

Results Messages	
CustomerID	

-- Q6 Display OrderID, total number of Order ID as NumberofOrders from the orderdetails table grouped by OrderID and sorted by NumberofOrders in descending order.

select OrderID, count(*) 'NumberofOrders' from [Order Details] group by OrderID order by NumberofOrders Desc;

Results Messages		
	OrderID	NumberofOrders
1	1	3
2	2	3
3	4	3

-- Q7 Display the SupplierID, ProductName, CompanyName from all product Supplied by Exotic Liquids, Specialty Biscuits, Ltd., Escargots Nouveaux sorted by the supplier ID

select s.SupplierID, p.ProductName, s.CompanyName from Suppliers s inner join Products p on s.SupplierID = p.SupplierID where s.CompanyName in ('Exotic Liquids', 'Specialty Biscuits, Ltd.', 'Escargots Nouveaux') order by s.SupplierID;

Results Messages			
	SupplierID	ProductName	CompanyName
1	1	Manjimup Dried Apples	Exotic Liquids
2	1	Raclette Courdavault	Exotic Liquids
3	8	Escargots de Bourgogne	Specialty Biscuits, Ltd.

-- Q8 Display the ShipPostalCode, OrderID, OrderDate, RequiredDate, ShippedDate, ShipAddress of all orders with ShipPostalCode beginning with '98124'

select ShipPostalCode, OrderID, OrderDate, RequiredDate, ShippedDate, ShipAddress From Orders where ShipPostalCode LIKE '98124%';

Results Messages

ShipPostalCode	OrderID	OrderDate	RequiredDate	ShippedDate	ShipAddress
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--Q9 Display the ContactName, ContactTitle, CompanyName of customers that the has no 'Sales'; in their ContactTitle.

select ContactName, ContactTitle, CompanyName from Customers where ContactTitle not like '%sales%';

Results Messages

	ContactName	ContactTitle	CompanyName
1	Ana Trujillo	Owner	Ana Trujillo Emparedados y helados
2	Antonio Moreno	Owner	Antonio Moreno Taquería
3	Christina Berglund	Order Administrator	Berglunds snabbköp
4	Frédérique Citeaux	Marketing Manager	Blondesddsl père et fils
5	Martin Sommer	Owner	Bólido Comidas preparadas
6	Laurence Lebihan	Owner	Bon app'
7	Elizabeth Lincoln	Accounting Manager	Bottom-Dollar Markets

-- Q10 Display the LastName, FirstName, City of employees in cities other 'Seattle'

select LastName, FirstName, City from Employees where City <> 'Seattle';

Results Messages

	LastName	FirstName	City
1	Fuller	Andrew	Tacoma
2	Leverling	Janet	Kirkland
3	Peacock	Margaret	Redmond
4	Buchanan	Steven	London

-- Q11 Display the CompanyName, ContactTitle, City, Country of all customers in any city in Mexico or other cities in Spain other than Madrid

select CompanyName, ContactTitle, city, Country from Customers where city <> 'Madrid' or city in ('Mexico', 'Spain');

Results Messages

	CompanyName	ContactTitle	city	Country
1	Alfreds Futterkiste	Sales Representative	Berlin	Germany
2	Ana Trujillo Emparedados y helados	Owner	México D.F.	Mexico
3	Antonio Moreno Taquería	Owner	México D.F.	Mexico
4	Around the Horn	Sales Representative	London	UK
5	Berglunds snabbköp	Order Administrator	Luleå	Sweden
6	Blauer See Delikatessen	Sales Representative	Mannheim	Germany
7	Blondesddsl père et fils	Marketing Manager	Strasbourg	France
8	Bon app'	Owner	Marseille	France
9	Bottom-Dollar Markets	Accounting Manager	Tsawassen	Canada
10	Cactus Comidas para llevar	Sales Agent	Buenos Aires	Argentina

--Q12 Display the ContactName of all customers that do not have letter A as the second alphabet in their Contactname

select ContactName from Customers where ContactName not like '_a%';

Results Messages	
	ContactName
1	Ana Trujillo
2	Antonio Moreno
3	Thomas Hardy
4	Christina Berglund
5	Frédérique Citeaux
6	Elizabeth Lincoln

--Q13 Display the average UnitPrice rounded to the next whole number, total price of UnitsInStoc and maximum number of orders from the products table. All saved as AveragePrice, TotalStock and MaxOrder respectively.

select top 1 round(UnitPrice, 0) 'AveragePrice', UnitPrice*UnitsInStock 'TotalStock', UnitsOnOrder 'MaxOrder' from Products order by MaxOrder;

Results

Messages

	AveragePrice	TotalStock	MaxOrder
1	7.00	266.00	0

--Q14 Display the SupplierID, CompanyName, CategoryName, ProductName and UnitPrice from the products, suppliers and categories table.

select s.SupplierID, s.CompanyName, c.CategoryName, p.ProductName, p.UnitPrice from Suppliers s inner join Products p on s.SupplierID = p.SupplierID inner join Categories c on c.CategoryID = p.CategoryID;

Results Messages

	SupplierID	CompanyName	CategoryName	ProductName	UnitPrice
1	1	Exotic Liquids	Produce	Manjimup Dried Apples	53.00
2	2	New Orleans Cajun Delights	Grains/Cereals	Filo Mix	7.00
3	3	Grandma Kelly's Homestead	Meat/Poultry	Perth Pasties	32.80
4	4	Tokyo Traders	Meat/Poultry	Tourtière	7.45
5	5	Cooperativa de Quesos 'Las Cabras'	Meat/Poultry	Pâté chinois	24.00
6	6	Mayumi's	Grains/Cereals	Gnocchi di nonna Alice	38.00
7	7	Pavlova, Ltd.	Grains/Cereals	Ravioli Angelo	19.50
8	8	Specialty Biscuits, Ltd.	Seafood	Escargots de Bourgogne	13.25
9	1	Exotic Liquids	Dairy Products	Raclette Courdavault	55.00
10	2	New Orleans Cajun Delights	Dairy Products	Camembert Pierrot	34.00

--Q15 Display the CustomerID, sum of Freight, from the orders table with sum of freight greater \$200, grouped by CustomerID.

select CustomerID, sum(Freight) 'Sum of Freight' from Orders group by CustomerID HAVING sum(Freight)>200;

Results	Messages
CustomerID	Sum of Freight

--Q16 Display the OrderID ContactName, UnitPrice, Quantity, Discount from the order details, orders and customers table with discount given on every purchase.

```
select o.OrderID, c.ContactName, od.UnitPrice, od.Quantity, od.Discount from Customers c inner join
Orders o on c.CustomerID = o.CustomerID inner join [Order Details] od on o.OrderID=od.OrderID
where od.Discount <> 0;
```

	OrderID	ContactName	UnitPrice	Quantity	Discount
1	1	Martin Sommer	42.40	35	0.15
2	2	Antonio Moreno	16.80	15	0.15
3	4	Thomas Hardy	16.80	6	0.05

--Q17 Display the EmployeeID, the LastName and FirstName as employee, and the LastName and FirstName of who they report to as manager from the employees table sorted by Employee ID

```
select E1.EmployeeID, concat(E1.LastName, E1.FirstName) 'Employee', concat(E2.LastName,
E2.FirstName) 'Manager' from Employees E1 join Employees E2 on E2.EmployeeID=E1.ReportsTo
order by e1.EmployeeID;
```

	EmployeeID	Employee	Manager
1	2	DavolioNancy	FullerAndrew
2	3	LeverlingJanet	DavolioNancy
3	4	PeacockMargaret	DavolioNancy
4	5	BuchananSteven	LeverlingJanet

--Q18 Display the average, minimum and maximum UnitPrice of all products as AveragePrice, MinimumPrice and MaximumPrice respectively

```
select avg(UnitPrice)'AveragePrice', min(UnitPrice)'MinimumPrice', max(UnitPrice)'MaximumPrice'
from Products;
```

	AveragePrice	MinimumPrice	MaximumPrice
1	28.40	7.00	55.00

```
--Q19 Display the first 5 character of categoryName from the category tables and renamed as ShortInfo
select SUBSTRING(CategoryName, 1, 5) 'ShortInfo' from Categories;
```

Results Messages	
	ShortInfo
1	Bever
2	Condi
3	Confe
4	Dairy
5	Grain
6	Meat/
7	Produ
8	Seafo

--Q20 Display the CompanyName and total number of orders by customer renamed as number of orders since December 31, 1994. Show number of Orders greater than 10.

```

SELECT c.CompanyName, COUNT(o.OrderID) AS "Number of orders since Dec 31, 1994"
FROM Customers c
INNER JOIN Orders o ON c.CustomerID = o.CustomerID
WHERE o.OrderDate >= '1994-12-31'
GROUP BY c.CompanyName
HAVING COUNT(o.OrderID) > 10
ORDER BY COUNT(o.OrderID) DESC;

```

Results Messages	
CompanyName	Number of orders since Dec 31, 1994