# Part 4

## Group functions

------ 1 ------

select count(\*),c.CategoryName

from Categories c join Products p

on c.CategoryID = p.CategoryID

group by CategoryName

having count(\*)>5

------ 2 ------

------------- MAX -------------

select max(orderdate)

from Orders

where CustomerID = 'VICTE'

------------- LAST\_VALUE -------------

select distinct LAST\_VALUE(orderdate) over (partition by customerID order by orderdate RANGE BETWEEN UNBOUNDED PRECEDING AND UNBOUNDED FOLLOWING)

from Orders

where CustomerID = 'VICTE'

------ 3 ------

select min(lastname)

from Employees

------ 4 ------

select count(\*)

from Customers

------ 5 ------

select count(distinct customerID)

from Orders

------ 6 ------

select

(select count(\*)

from Employees) NumOfEmp,

(select count(\*)

from Products) NumOfProducts,

(select count(\*)

from Employees

where City = 'London') NumEmpinLon,

(select count(\*)

from Employees

where City = 'Seattle') NumEmpinSea,

(select count(\*)

from Products

where ProductID%2=0) NumOfEvenPID,

(select count(\*)

from Products

where ProductID%2=1) NumofunEvenPID,

(select max(count)

from (select count(\*) count

from Orders

group by EmployeeID) t1) MaxNumofOrders

------ 7 ------

/\*D\*/ group by productID

--there are columns in select that weren't included in group function or group clause

------ 8 ------

select avg(unitprice)

from products

group by SupplierID

having avg(unitprice)>40

------ 9 ------

select max(unitprice)

from Products

group by SupplierID

order by SupplierID desc

------ 10 ------

select \*

from Employees

where FirstName not like '%[a,b]%'

and Region is not Null

and ReportsTo is not null

------ 11 ------

select distinct \*

from

(select region, City, count(\*) over(partition by region) NumOfCustomers

from Customers

where city like '%[m,n]%'

and Region is not null) t1

where NumOfCustomers>=2

------ 12 ------

select min(lastname), max(firstname)

from Employees

------ 13 ------

select max(unitprice), min(unitprice), avg(unitprice), CategoryID, SupplierID

from Products

group by CategoryID, SupplierID

------ 14 ------

select max(unitprice), CategoryID

from Products

where unitprice>40

group by CategoryID

------ 15 ------

select avg(unitprice), CompanyName

from products p join Suppliers s

on p.supplierid = s.supplierid

group by CompanyName

having avg(unitprice)>20

------ 16 ------

select distinct Year(orderdate)

from Orders

------ 17 ------

select distinct CompanyName

from Orders o join Customers c on o.CustomerID = c.CustomerID

join [Order Details] od on o.OrderID = od.OrderID

where year(OrderDate) = 1996

and ProductID in ( select ProductID

from Orders o join Customers c on o.CustomerID = c.CustomerID

join [Order Details] od on o.OrderID = od.OrderID

where CompanyName = 'Alfreds Futterkiste'

and year(OrderDate) in (1997,1998))

------ 18 ------

select CONVERT(nvarchar, max(BirthDate), 113), CONVERT(nvarchar, min(BirthDate), 113)

from Employees

------ 19 ------

select p2.ProductName

from Products P1 join Products P2

on P1.ProductID = 8 and P2.UnitPrice< P1.UnitPrice

------ 20 ------

select p2.ProductName, p2.UnitPrice

from Products P1 join Products P2

on P1.ProductName = 'Tofu' and P2.UnitPrice> P1.UnitPrice

------ 21 ------

select ProductID, ProductName, UnitPrice

from Products p1, (select AVG(unitprice) AVG from Products) p2

where p1.UnitPrice> p2.AVG

------ 22 ------

select \*

from Products

where CategoryID in (

select CategoryID

from Products

where ProductName ='Tofu')

and ProductName <>'Tofu'

------ 23 ------

select ProductName, UnitPrice

from Products

where UnitPrice> (select max(unitprice)

from Products

where CategoryID=5)

------ 24 ------

select ProductName, UnitPrice

from Products

where UnitPrice> (select min(unitprice)

from Products

where CategoryID=5)

------ 25 ------

select OrderID, OrderDate

from Orders o join Customers c on o.CustomerID=c.CustomerID

where Country in ('Germany', 'Sweden','France')

and YEAR(OrderDate)= 1997

------ 26 ------

select \*

from Products p join Categories c on p.CategoryID = c.CategoryID

join Suppliers s on p.SupplierID = s.SupplierID

where CategoryName in ('Beverages', 'Condiments')

and Region is null

------ 27 ------

select productname, productID

from Products

where unitprice>( select avg(unitprice)

from Products

where UnitsInStock>50)