SQL Task-2 solutions:-

use [Session 2];

select \* from employee;

select \* from orderdetails;

select \* from orders;

select \* from products;

select \* from shippers;

select \* from suppliers;

--1. Get the firstname and lastname of the employees who placed orders between 15th August,1996 and 15th August,1997

select e.FirstName, e.LastName from employee e join orders o

on o.EmployeeID = e.EmployeeID where

o.orderdate between '1996-08-15' and '1997-08-15'

group by e.FirstName, e.LastName;

FirstName LastName

Andrew Fuller

Anne Dodsworth

Janet Leverling

Laura Callahan

--2. Get the distinct EmployeeIDs who placed orders before 16th October,1996

select distinct(e.EmployeeID) from employee e join orders o

on o.EmployeeID = e.EmployeeID where

o.orderdate< '1996-10-16';

EmployeeID

1

2

3

4

5

6

7

8

9

--3. How many products were ordered in total by all employees between 13th of January,1997 and 16th of April,1997.

select count(distinct(p.productName)) from OrderDetails od

join products p on p.ProductID= od.productId

join Orders o on o.OrderID= od.OrderID

where o.OrderDate between '1997-01-13' and '1997-04-16';

(No column name)

69

--4. What is the total quantity of products for which Anne Dodsworth placed orders between 13th of January,1997 and 16th of April,1997

select sum(od.Quantity) 'TotalQuantity' from OrderDetails od

join orders o on o.OrderID= od.OrderID

join Employee e on e.EmployeeID= o.EmployeeID

where e.FirstName='Anne' and e.LastName='Dodsworth';

TotalQuantity

2670

--5. How many orders have been placed in total by Robert King

select count(o.OrderID) from orders o

join Employee e on e.EmployeeID= o.EmployeeID

where e.FirstName='Robert' and e.LastName='King';

(No column name)

72

--6. How many products have been ordered by Robert King between 15th August,1996 and 15th August,1997

select count(distinct((p.productId))) from OrderDetails od

join products p on p.ProductID= od.ProductID

join orders o on o.OrderID= od.OrderID

join Employee e on e.EmployeeID = o.EmployeeID

where o.OrderDate between '1996-08-15' and '1997-08-15'

and e.FirstName='Robert' and e.LastName='King';

(No column name)

51

--7. I want to make a phone call to the employees to wish them on the occasion of Christmas who placed

--orders between 13th of January,1997 and 16th of April,1997. I want the EmployeeID, Employee Full Name,

--HomePhone Number.

select distinct(e.EmployeeId), CONCAT\_WS(' ',e.FirstName,e.LastName) as name, e.HomePhone

from Employee e join orders o

on e.EmployeeID= o.EmployeeID

where o.OrderDate between '1997-01-13' and '1997-04-16'

EmployeeId name HomePhone

1 Nancy Davolio (206) 555-9857

2 Andrew Fuller (206) 555-9482

3 Janet Leverling (206) 555-3412

4 Margaret Peacock (206) 555-8122

5 Steven Buchanan (71) 555-4848

6 Michael Suyama (71) 555-7773

7 Robert King (71) 555-5598

8 Laura Callahan (206) 555-1189

9 Anne Dodsworth (71) 555-4444

--8. Which product received the most orders. Get the product's ID and Name and number of orders it received.

select top 1 p.ProductID,p.ProductName, count(od.ProductID) as NoOfOrders from products p

join orderdetails od

on od.ProductID= p.ProductID

group by p.ProductID,p.ProductName

order by NoOfOrders desc;

ProductID ProductName NoOfOrders

59 Raclette Courdavault 54

--9. Which are the least shipped products. List only the top 5 from your list

select top 5 p.ProductID,p.ProductName, count(od.ProductID) as NoOfOrders from products p

join orderdetails od

on od.ProductID= p.ProductID

group by p.ProductID,p.ProductName

order by NoOfOrders asc;

ProductID ProductName NoOfOrders

9 Mishi Kobe Niku 5

15 Genen Shouyu 6

48 Chocolade 6

37 Gravad lax 6

66 Louisiana Hot Spiced Okra 8

--10. What is the total price that is to be paid by Laura Callahan for the order placed on 13th of January,1997

select (od.UnitPrice\*od.Quantity-od.Discount) as totalPrice

from OrderDetails od

join orders o on o.OrderID= od.OrderID

join employee e on o.EmployeeID= e.EmployeeID

where e.FirstName='Laura' and e.LastName='Callahan'

and o.OrderDate='1997-01-13';

totalPrice

371.9

--11. How many number of unique employees placed orders for Gorgonzola Telino or Gnocchi di nonna Alice or

--Raclette Courdavault or Camembert Pierrot in the month January,1997

select count(distinct(o.employeeId)) as UniqueEmployee from orders o

join OrderDetails od on od.OrderID= o.OrderID

join Products p on od.ProductID= p.ProductID

where p.ProductName in('GorGonzola Telino','Gnocchi di nonna Alice',

'raclette Courdavault','Camembert Pierrot')

and o.OrderDate between '1997-01-01' and '1997-01-31';

UniqueEmployee

5

--12. What is the full name of the employees who ordered Tofu between 13th of January,1997 and 30th of January,1997

select CONCAT\_WS(' ',e.FirstName,e.LastName) as 'FullName'

from employee e join orders o

on e.EmployeeID=o.EmployeeID

join OrderDetails od on o.OrderID= od.OrderID

join Products p on p.ProductID= od.ProductID

where p.ProductName='Tofu' and

o.OrderDate between '1997-01-13' and '1997-01-30';

FullName

Laura Callahan

Margaret Peacock

--13\*\*. What is the age of the employees in days, months and years who placed orders during the month of

--August. Get employeeID and full name as well

--https://www.c-sharpcorner.com/UploadFile/rohatash/calculating-age-in-years-months-and-days-in-sql-server-2012/

select e.EmployeeID, CONCAT\_WS(' ', e.FirstName,e.LastName) 'FullName',

datediff(year,e.BirthDate,GETDATE()) 'Years',

datediff(month,e.BirthDate,GETDATE())-(datediff(year,e.birthdate,getdate())\*12) 'Months',

datepart(d,getdate())-datepart(d,e.BirthDate) as 'Days'

from employee e;

--another solution

select e.EmployeeID, CONCAT\_WS(' ', e.FirstName,e.LastName) 'FullName',

datediff(year,e.BirthDate,GETDATE()) 'Years',

datediff(month,e.BirthDate,GETDATE()) 'Months',

datediff(d,e.BirthDate,getdate()) as 'Days'

from employee e;

EmployeeID FullName Years Months Days

1 Nancy Davolio 74 -8 0

2 Andrew Fuller 70 2 -11

3 Janet Leverling 59 -4 -22

--another solution answer:-

EmployeeID FullName Years Months Days

1 Nancy Davolio 74 880 26784

2 Andrew Fuller 70 842 25616

3 Janet Leverling 59 704 21406

4 Margaret Peacock 85 1015 30882

--14. Get all the shipper's name and the number of orders they shipped

select o.ShipName, count(o.OrderID) 'NoOfOrders' from orders o

join orders ob on o.OrderID=ob.OrderID

group by o.ShipName;

ShipName NoOfOrders

Alfreds Futterkiste 1

Alfred's Futterkiste 5

Ana Trujillo Emparedados y helados 4

--15. Get the all shipper's name and the number of products they shipped.

select o.shipname, count(distinct(od.productId)) 'NoOfProduct' from Orders o

join OrderDetails od on o.OrderID= od.OrderID

group by o.ShipName;

shipname NoOfProduct

Alfreds Futterkiste 3

Alfred's Futterkiste 9

Ana Trujillo Emparedados y helados 10

Antonio Moreno Taquería 15

--16. Which shipper has bagged most orders. Get the shipper's id, name and the number of orders

select top 1 o.ShipperID, o.ShipName, count(o.OrderID) 'NoOfOrders' from orders o

join orders ob on o.OrderID=ob.OrderID

group by o.ShipperID, o.ShipName

order by 'NoOfOrders' desc;

ShipperID ShipName NoOfOrders

1 QUICK-Stop 11

--17. Which shipper supplied the most number of products between 10th August,1996 and 20th

--September,1998. Get the shipper's name and the number of products.

select top 1 o.ShipName, count(distinct(od.productId)) 'NoOfProduct'

from Orders o join OrderDetails od

on o.OrderID= od.OrderID

where o.OrderDate between '1996-08-10' and '1998-09-20'

group by o.ShipName

order by 'NoOfProduct' desc;

ShipName NoOfProduct

Ernst Handel 54

--18. Which employee didn't order any product 4th of April 1997

select concat\_ws(' ',f.FirstName,f.LastName) 'Name' from

employee f except

(select distinct(concat\_ws(' ',e.FirstName,e.LastName)) 'Name' from

employee e

join orders o on o.EmployeeID = e.EmployeeID

where o.OrderDate='1997-04-04');

Name

Andrew Fuller

Anne Dodsworth

Janet Leverling

Laura Callahan

Margaret Peacock

Michael Suyama

Nancy Davolio

Steven Buchanan

--19. How many products where shipped to Steven Buchanan

select count(distinct(p.ProductID)) 'NoOfProduct' from products p

join orderdetails od on od.ProductID= p.ProductID

join orders o on od.orderID= o.orderID

join employee e on e.EmployeeID= o.EmployeeID

where e.FirstName='Steven' and e.LastName='Buchanan';

NoOfProduct

52

--20. How many orders where shipped to Michael Suyama by Federal Shipping

select count(o.OrderID) 'TotalOrders' from orders o

join Shippers s on o.ShipperID= s.ShipperID

join employee e on e.EmployeeID= o.EmployeeID

where e.FirstName='Michael' and e.LastName='Suyama'

and s.CompanyName='Federal Shipping';

TotalOrders

19

--21. How many orders are placed for the products supplied from UK and Germany

select count(o.ShipCountry) as 'TotalOrders' from orders o

where o.ShipCountry in ('Germany','UK')

TotalOrders

178

--22. How much amount Exotic Liquids received due to the order placed for its products in the month of

--January,1997

select sum(od.UnitPrice\*od.Quantity-od.Discount) 'Total' from OrderDetails od

join orders o on o.OrderID= od.OrderID

join Products p on p.ProductID=od.ProductID

join Suppliers s on s.SupplierID= p.SupplierID

where s.CompanyName='exotic Liquids' and

o.OrderDate between '1997-01-01' and '1997-01-31'

Total

1801.60000610352

--23. In which days of January, 1997, the supplier Tokyo Traders haven't received any orders.

select oa.orderdate from orders oa

where oa.OrderDate between'1997-01-01' and '1997-01-31'

except

select o.OrderDate from orders o

join OrderDetails od on od.OrderID=o.OrderID

join Products p on p.ProductID= od.ProductID

join Suppliers s on s.SupplierID= p.SupplierID

where s.CompanyName='Tokyo Traders' and

o.OrderDate between'1997-01-01' and '1997-01-31';

orderdate

1997-01-01 00:00:00.000

1997-01-02 00:00:00.000

1997-01-03 00:00:00.000

1997-01-06 00:00:00.000

1997-01-07 00:00:00.000

1997-01-08 00:00:00.000

1997-01-09 00:00:00.000

1997-01-10 00:00:00.000

1997-01-13 00:00:00.000

1997-01-14 00:00:00.000

1997-01-15 00:00:00.000

1997-01-16 00:00:00.000

1997-01-20 00:00:00.000

1997-01-22 00:00:00.000

1997-01-23 00:00:00.000

1997-01-24 00:00:00.000

1997-01-27 00:00:00.000

1997-01-28 00:00:00.000

1997-01-29 00:00:00.000

1997-01-30 00:00:00.000

1997-01-31 00:00:00.000

--24. Which of the employees did not place any order for the products supplied by Ma Maison in the month of May-1997

select eb.firstname from employee eb

except

select distinct(e.FirstName) from employee e

join orders o on o.EmployeeID= e.EmployeeID

join OrderDetails od on od.OrderID= o.OrderID

join Products p on p.ProductID= od.ProductID

join Suppliers sp on sp.SupplierID= p.SupplierID

where sp.CompanyName='Ma Maison' and

o.OrderDate between '1997-05-01' and '1997-05-31';

firstname

Andrew

Anne

Janet

Margaret

Michael

Robert

--25. Which shipper shipped the least number of products for the month of September and October,1997 combined.

select top 1 s.ShipperID, count(p.productID) 'TotalProduct' from products p

join orderdetails od on od.ProductID= p.ProductID

join orders o on o.OrderID= od.OrderID

join Shippers s on s.ShipperID= o.ShipperID

where o.OrderDate between '1997-09-01' and '1997-10-31'

group by s.ShipperID

order by 'TotalProduct' asc;

ShipperID TotalProduct

3 50

--26. What are the products that weren't shipped at all in the month of August, 1997

select pa.ProductName from products pa

except

select distinct(p.ProductName) from products p

join OrderDetails od on p.ProductID= od.ProductID

join Orders o on o.OrderID= od.OrderID

where o.ShippedDate between '1997-08-01' and '1997-08-31'

ProductName

Alice Mutton

Aniseed Syrup

Chocolade

Genen Shouyu

--27. What are the products that weren't ordered by each of the employees. List each employee and the

--products that he didn't order

select concat\_ws(' ',e.FirstName,e.LastName) 'Name', pb.productName 'ProductNotOrderd' from employee e

cross join Products pb

except

select concat\_ws(' ',e.FirstName,e.LastName), pa.productName 'ProductOrdered' from employee e

join orders o on o.EmployeeID= e.EmployeeID

join OrderDetails od on od.OrderID= o.OrderID

join Products pa on od.ProductID= pa.ProductID

Name ProductNotOrderd

Andrew Fuller Aniseed Syrup

Andrew Fuller Chef Anton's Gumbo Mix

Andrew Fuller Chocolade

--28. Who is busiest shipper in the months of April, May and June during the year 1996 and 1997

select top 1 s.CompanyName ,count(o.ShipperID) 'Shippings' from orders o

join Shippers s on o.ShipperID= s.ShipperID

where o.shippedDate between '1996-04-01' and '1996-06-30'

or o.shippedDate between '1997-04-01' and '1997-06-30'

group by s.CompanyName ,o.ShipperID

order by 'Shippings' desc;

CompanyName Shippings

United Package 38

--29. Which country supplied the maximum products for all the employees in the year 1997

select top 1 su.Country, count(distinct(p.ProductID)) 'TotalProducts' from Suppliers su

join Products p on p.SupplierID= su.SupplierID

join OrderDetails od on od.ProductID= p.ProductID

join orders o on o.OrderID= od.OrderID

where o.OrderDate between '1997-01-01' and '1997-12-31'

group by su.Country

order by 'TotalProducts' desc;

Country TotalProducts

USA 12

--30. What is the average number of days taken by all shippers to ship the product after the order has been

--placed by the employees

select avg(datediff(d,o.OrderDate,o.ShippedDate)) 'AvgDay'

from Orders o;

AvgDay

8

--31. Who is the quickest shipper of all.

select top 1 o.ShipperID , sp.CompanyName , avg(datediff(d,o.OrderDate,o.ShippedDate)) as 'AvgTime'

from Orders o join Shippers sp on sp.ShipperID= o.ShipperID

group by o.ShipperID,sp.CompanyName

order by 'AvgTime' asc;

ShipperID CompanyName AvgTime

3 Federal Shipping 7

--32. Which order took the least number of shipping days. Get the orderid, employees full name, number of products,

--number of days took to ship and shipper company name

select top 1 datediff(d,o.OrderDate,o.ShippedDate) 'Days', o.OrderID,

concat\_ws(' ',e.FirstName,e.LastName) 'EmployeeName' ,count(od.productId) 'NoOfProduct',

sp.CompanyName

from orders o join employee e on e.EmployeeID= o.EmployeeID

join Shippers sp on sp.ShipperID= o.ShipperID

join OrderDetails od on od.OrderID=o.OrderID

where o.ShippedDate is not null

group by datediff(d,o.OrderDate,o.ShippedDate),o.OrderID, concat\_ws(' ',e.FirstName,e.LastName),sp.CompanyName

order by 'Days' asc;

Days OrderID EmployeeName NoOfProduct CompanyName

1 10270 Nancy Davolio 2 Speedy Express

--Union Exercise:-

--1\*\*. Which orders took the least number and maximum number of shipping days? Get the orderid, employees

--full name, number of products, number of days taken to ship the product and shipper company name. Use

--1 and 2 in the final result set to distinguish the 2 orders

select datediff(d,o.OrderDate,o.ShippedDate) 'Days', o.OrderID,

concat\_ws(' ',e.FirstName,e.LastName) 'EmployeeName' ,count(od.productId) 'NoOfProduct',

sp.CompanyName

from orders o join employee e on e.EmployeeID= o.EmployeeID

join Shippers sp on sp.ShipperID= o.ShipperID

join OrderDetails od on od.OrderID=o.OrderID

where o.ShippedDate is not null

group by datediff(d,o.OrderDate,o.ShippedDate),o.OrderID, concat\_ws(' ',e.FirstName,e.LastName),sp.CompanyName

--order by 'Days' asc

UNION

select top 1 datediff(d,o.OrderDate,o.ShippedDate) 'Days', o.OrderID,

concat\_ws(' ',e.FirstName,e.LastName) 'EmployeeName' ,count(od.productId) 'NoOfProduct',

sp.CompanyName

from orders o join employee e on e.EmployeeID= o.EmployeeID

join Shippers sp on sp.ShipperID= o.ShipperID

join OrderDetails od on od.OrderID=o.OrderID

where o.ShippedDate is not null

group by datediff(d,o.OrderDate,o.ShippedDate),o.OrderID, concat\_ws(' ',e.FirstName,e.LastName),sp.CompanyName

order by 'Days' desc;

--2\*\*. Which is cheapest and the costliest of products purchased in the second week of October, 1997. Get the

--product ID, product Name and unit price. Use 1 and 2 in the final result set to distinguish the 2 products.

--'Case' Exercise:-

--1. Find the distinct shippers who are to ship the orders placed by employees with IDs 1, 3, 5, 7

--Show the shipper's name as "Express Speedy" if the shipper's ID is 2 and "United Package" if the shipper's

--ID is 3 and "Shipping Federal" if the shipper's ID is 1.

select distinct(o.EmployeeID),

case

when o.ShipperID = 1 then 'Shipping Federal'

when o.ShipperID = 2 then 'Express Speedy'

else 'United Package'

end as 'ShipperName'

from orders o

where o.employeeID in (1,3,5,7);

EmployeeID ShipperName

1 Express Speedy

1 Shipping Federal

1 United Package

3 Express Speedy

3 Shipping Federal

3 United Package

5 Express Speedy

5 Shipping Federal

5 United Package

7 Express Speedy

7 Shipping Federal

7 United Package