

```

select * from [dbo].[Customers]
select * from [dbo].[Orders]
select * from [dbo].[Order Details]
select * from [dbo].[Products]
select * from [dbo].[Employees]
begin transaction
rollback
update [dbo].[Orders]
set shippeddate=DATEADD(day,-19,RequiredDate)
where shippeddate is null

--Net sales
--Count of customers
-- count of orders
-- Avg days to ship the order
--Add avg ship days to requireddate
create view counts_orders_cst_shipdays_netsale as
Select
count(distinct [Order Details].OrderID) as Count_of_orders ,
count( distinct [dbo].[Customers].CustomerID) as Count_of_customers ,
round(sum((unitprice * quantity )-(unitprice * quantity* discount )),2) as Net_Sales ,
AVG(DATEDIFF(day, shippeddate , requireddate )) as AVG_To_Ship_Order
from [Order Details]
join [dbo].[Orders]
on [Order Details].OrderID=Orders.OrderID
join [dbo].[Customers]
on orders.CustomerID=customers.customerid

-----

--Top 5 customers by net sales
create view Top_5_cst as
Select top 5
[Customers].CustomerID ,[ContactName] ,round(sum((unitprice * quantity )-
(unitprice * quantity* discount )),2) as Net_Sales
from [dbo].[Orders]
join [dbo].[Customers]
on orders.CustomerID=customers.customerid
join [dbo].[Order Details]
on [Order Details].orderid=orders.orderid
group by [ContactName] , [Customers].CustomerID
order by Net_Sales desc

--Net sales by countries
create view sales_country as
Select round(sum((unitprice * quantity )-(unitprice * quantity* discount )),2)
as Net_Sales ,
ShipCountry
from [dbo].[Orders]
join [dbo].[Customers]
on orders.CustomerID=customers.customerid
join [dbo].[Order Details]

```

```

on [Order Details].orderid=orders.orderid
group by ShipCountry
order by Net_Sales desc

--Top 5 products by net sales
create view Top_5_pro_by_sales as
with Top_5_products as (
Select o.productid , round(sum((o.unitprice * quantity )-(o.unitprice *
quantity* discount )),2) as Net_Sales
from [Order Details] as o
join Products as p
on p.productid=o.ProductID
group by o.productid
)
select top 5 productname ,Net_Sales
from Top_5_products
join Products
on Top_5_products.productid=Products.ProductID
order by Net_Sales desc

--Net sales over the time (months )

create view Sales_over as
SELECT ORDERDATE
, round(sum((od.unitprice * quantity )-(od.unitprice * quantity* discount )),2)
as Net_sales
FROM [dbo].[Orders] as o
JOIN [dbo].[Order Details] as od
ON o.ORDERID = od.ORDERID
group by ORDERDATE
order by month(ORDERDATE ) asc

--part
2*****
--- Net profit , Total_discount , Shipping Cost
create view profit_discount_sales as
SELECT
round(sum((od.unitprice * quantity )-(od.unitprice * quantity* discount )-
(freight))*0.07,2) as Profit ,
round(sum((od.unitprice * quantity* discount )),2) as Total_discount ,
round(sum(freight),2) as Shipping_Cost
FROM [dbo].[Orders] as o
JOIN [dbo].[Order Details] as od
ON o.ORDERID = od.ORDERID

--Top 5 countries by net sales
Select Top 5 round(sum((unitprice * quantity )-(unitprice * quantity*
discount )),2) as Net_Sales ,
ShipCountry
from [dbo].[Orders]
join [dbo].[Customers]
on orders.CustomerID=customers.customerid
join [dbo].[Order Details]

```

```
on [Order Details].orderid=orders.orderid
group by ShipCountry
order by Net_Sales desc
```

```
--Net sales , profits and discounts over the time
```

```
create view profit_discount_sales_over_time as
```

```
SELECT cast (ORDERDATE as date ) as Dates ,
    round(sum((od.unitprice * quantity )-(od.unitprice * quantity* discount )-
    (freight))*0.07,2) as Profit
, round(sum((od.unitprice * quantity )-(od.unitprice * quantity* discount )),2)
    as Net_sales ,
    round(sum((od.unitprice * quantity* discount )),2) as discounts
FROM [dbo].[Orders] as o
JOIN [dbo].[Order Details] as od
ON o.ORDERID = od.ORDERID
group by cast (ORDERDATE as date )
order by cast (ORDERDATE as date ) asc
```

```
--Top 5 countries by discounts
```

```
create view Top_5_countries_by_disc as
```

```
Select round(sum(unitprice * quantity* discount ),2) as Total_discounts ,
    ShipCountry
from [dbo].[Orders]
join [dbo].[Customers]
on orders.CustomerID=customers.customerid
join [dbo].[Order Details]
on [Order Details].orderid=orders.orderid
group by ShipCountry
order by Total_discounts desc
```

```
--Pivot table to show the net sales , net profit and Net sales YOY for each
countries
```

```
create view Pivot_table_YOY as
```

```
SELECT orderdate as Date_YOY , shipcountry ,
    round(sum((od.unitprice * quantity )-(od.unitprice * quantity* discount )),2)
    as Net_sales ,
    round(sum((od.unitprice * quantity )-(od.unitprice * quantity* discount )-
    (freight))*0.07,2) as Profit
FROM [dbo].[Orders] as o
JOIN [dbo].[Order Details] as od
ON o.ORDERID = od.ORDERID
group by orderdate , shipcountry
order by shipcountry asc , year(orderdate) asc
```

```
--3- Customers Report 1- avg net sales per customer 2- avg profit per
customer 3- avg shipping cost er customer
```

```
CREATE VIEW CST_INFO AS
```

```
WITH Total_profit_sales_ship AS (
```

```
SELECT
```

```
    ROUND(SUM((od.unitprice * quantity) - (od.unitprice * quantity *
    discount) - (freight))*0.07, 2) AS profit,
    ROUND(SUM((od.unitprice * quantity) - (od.unitprice * quantity *
```

```

        discount)), 2) AS Net_sales,
        ROUND(SUM(freight), 2) AS shipping_cost,
        COUNT(DISTINCT o.customerid) AS distinct_customers
FROM [dbo].[Orders] AS o
JOIN [dbo].[Order Details] AS od ON o.ORDERID = od.ORDERID
JOIN [dbo].[Customers] AS c ON o.customerid = c.customerid
)
SELECT
    ROUND((profit / distinct_customers), 2) AS AVG_profit,
    ROUND((Net_sales / distinct_customers), 2) AS AVG_Net_sales,
    ROUND((shipping_cost / distinct_customers), 2) AS AVG_shipping_cost
FROM Total_profit_sales_ship;

--Count of customers over the time
CREATE VIEW CST_OVER_TIME AS
select cast (orderdate as date ) as D_Date , count(customerid) as
    Number_of_customers
from [dbo].[Orders]
group by cast (orderdate as date )
order by cast (orderdate as date ) asc

--Count of customers by countries
CREATE VIEW CST_OVER_COUNTRY AS
select shipcountry , count(customerid) as Number_of_customers
from [dbo].[Orders]
group by shipcountry
order by Number_of_customers desc

--Products report : 1- Net profit per order - Shipping cost per order 3 -Net
sales per order

SELECT od.orderid ,( select count( distinct orderid ) from [dbo].[Orders]) as
count_of_orders ,
    ROUND(SUM((od.unitprice * quantity) - (od.unitprice * quantity *
discount) - (freight))*0.07, 2) AS profit,
    ROUND(SUM((od.unitprice * quantity) - (od.unitprice * quantity *
discount)), 2) AS Net_sales ,
    ( SELECT count (distinct products.productname ) from [dbo].[Products] )
as count_of_products ,
    ( SELECT count (distinct products.categoryid ) from [dbo].[Products] )as
count_of_categories

FROM [dbo].[Order Details] AS od
JOIN products AS p
    ON od.productid = p.productid
join [dbo].[Orders] AS o
    on o.orderid=od.orderid
group by od.orderid
=====
WITH disc_pro AS (
    SELECT
        orderid,
        SUM(CASE WHEN discount > 0 THEN 1 ELSE 0 END) AS discontinued_products

```

```

FROM
    [dbo].[Order Details] AS od
GROUP BY
   orderid
)
SELECT
    SUM(discontinued_products) * 1.0 / (SELECT COUNT(*) FROM [dbo].[Order
    Details]) AS N_Disc_Pro
FROM
    disc_pro;

-----

WITH Nondisc_pro AS (
    SELECT
       orderid,
        SUM(CASE WHEN discount = 0 THEN 1 ELSE 0 END) AS
        Nondiscontinued_products
    FROM
        [dbo].[Order Details] AS od
    GROUP BY
       orderid
)
SELECT
    SUM(Nondiscontinued_products) * 1.0 / (SELECT COUNT(*) FROM [dbo].[Order
    Details]) AS N_Disc_Pro
FROM
    Nondisc_pro;

-----

WITH product_info AS (
    SELECT
        p.productname,
        ROUND(SUM((od.unitprice * od.quantity) - (od.unitprice * od.quantity *
        od.discount)), 2) AS Net_sales,
        (
            SELECT ISNULL(ROUND(SUM((od2.unitprice * od2.quantity) -
            (od2.unitprice * od2.quantity * od2.discount)), 2), 0)
            FROM [dbo].[Order Details] AS od2
            JOIN products AS p2 ON od2.productid = p2.productid
            JOIN [dbo].[Orders] AS o2 ON o2.orderid = od2.orderid
            WHERE YEAR(o2.orderdate) = 1998 AND p2.productname = p.productname
        ) AS Current_year_sales,
        (
            SELECT ROUND(SUM((od2.unitprice * od2.quantity) - (od2.unitprice *
            od2.quantity * od2.discount)), 2)
            FROM [dbo].[Order Details] AS od2
            JOIN products AS p2 ON od2.productid = p2.productid
            JOIN [dbo].[Orders] AS o2 ON o2.orderid = od2.orderid
            WHERE YEAR(o2.orderdate) = 1997 AND p2.productname = p.productname
        ) AS Net_sales_previos_year,
        AVG(p.unitprice) AS AVG_unitprice,

```

```

COUNT(DISTINCT od.orderid) AS counts_of_order,
ROUND(SUM(od.discount), 2) AS Discount
FROM
    [dbo].[Order Details] AS od
JOIN
    products AS p ON od.productid = p.productid
JOIN
    [dbo].[Orders] AS o ON o.orderid = od.orderid
GROUP BY
    p.productname
)
SELECT
    productname, counts_of_order,
    ROUND((Current_year_sales - Net_sales_previos_year) /
        Net_sales_previos_year, 2) AS Net_sales_YOY
FROM
    product_info;

-----

SELECT
    c.CategoryName,
    ROUND(SUM((od.unitprice * od.quantity) - (od.unitprice * od.quantity *
        od.discount)), 2) AS Net_sales,
    (
        SELECT
            ROUND(SUM((odsub.unitprice * odsub.quantity) - (odsub.unitprice *
                odsub.quantity * odsub.discount)), 2)
        FROM
            [dbo].[Categories] as c2
        JOIN
            [dbo].[Products] as psub ON psub.Categoryid = c2.Categoryid
        JOIN
            [Order Details] as odsub ON odsub.productid = psub.productid
        JOIN
            [dbo].[Orders] AS o2sub ON o2sub.orderid = odsub.orderid
        WHERE
            YEAR(o2sub.orderdate) = 1997
            AND c2.Categoryid = c.Categoryid
        ) AS Net_sales_Lyear ,
    ROUND(SUM((od.unitprice * quantity) - (od.unitprice * quantity * discount) -
        (freight))*0.07, 2) AS profit
FROM
    [dbo].[Categories] as c
JOIN
    [dbo].[Products] as p ON p.Categoryid = c.Categoryid
JOIN
    [Order Details] as od ON od.productid = p.productid
join
    [dbo].[Orders] AS o2 ON o2.orderid = od.orderid
GROUP BY
    c.CategoryName , c.Categoryid
-----

```

```
SELECT COUNT(*) FROM [dbo].[Employees] AS [count of employees ]
```

```
SELECT
```

```
    COUNT(*) as [count of supervisors ] FROM [dbo].[Employees]
WHERE Title= 'Sales Manager'
```

```
--
```

```
=====
=====
```

```
SELECT
```

```
    Lastname+' ' + FirstName as Full_name,
    FORMAT(orderdate, 'MMMM') AS Monthly_Net,
    COUNT(DISTINCT [dbo].[Orders].orderid) AS [Count Orders per Employee],
    ROUND(SUM((od.unitprice * od.quantity) - (od.unitprice * od.quantity *
    od.discount)), 2) AS Net_sales
```

```
FROM
```

```
    [dbo].[Orders]
```

```
JOIN
```

```
    [dbo].[Employees]
```

```
ON [dbo].[Employees].employeeid = [dbo].[Orders].employeeid
```

```
JOIN
```

```
    [Order Details] AS od
```

```
ON od.orderid = [dbo].[Orders].orderid
```

```
GROUP BY
```

```
    FORMAT(orderdate, 'MMMM'),
```

```
    MONTH(orderdate) ,
```

```
    Lastname+' ' + FirstName
```

```
ORDER BY
```

```
    MONTH(orderdate);
```

```
-----
```

```
select Lastname+' ' + FirstName as Full_name ,count( distinct orderid) as
```

```
    N_orders ,
```

```
    sum(case when requireddate >= shippeddate then 1 else 0 end) as on_time ,
```

```
    sum(case when requireddate < shippeddate then 1 else 0 end) as delayed
```

```
from [dbo].[Orders]
```

```
join [dbo].[Employees]
```

```
on [dbo].[Orders].employeeid = [dbo].[Employees].employeeid
```

```
group by Lastname+' ' + FirstName
```

```
-----
```

```
with on_time as (
```

```
SELECT companyname , sum(case when requireddate >= shippeddate then 1 else
```

```
    0 end) as on_time_order , ( select count(*) from [dbo].[Orders] where
```

```
    requireddate >= shippeddate ) as totallo
```

```
from [dbo].[Shippers]
```

```
JOIN [dbo].[Orders] on [dbo].[Orders].shipvia=[dbo].[Shippers].shipperid
```

```
GROUP BY companyname)
```

```
select companyname , cast(on_time_order as float )/totallo
```

```
from on_time
```

```
GROUP by companyname
-----
WITH Newcst AS (
    SELECT Customerid,
           MIN(YEAR(orderdate)) AS First_order,
           MAX(YEAR(orderdate)) AS Last_order
    FROM [dbo].[Orders]
    GROUP BY Customerid
)
SELECT COUNT(Customerid) AS count_of_repeated_Cst
FROM Newcst
WHERE First_order < 1998 AND Last_order = 1998;
-----

select * from [Order Details]
select productid , productname ,quantityperunit , unitsinstock from [dbo].[Products]

select sum(quantity)

from [Order Details]

select * from products
from [Order Details] as od

select count (distinct categoryid) from [dbo].[Products]

select productname , round(avg(discount)
from products
join [Order Details] as od
on od.productid=products.productid
group by productname
```