Khách hàng tập trung chủ yếu ở độ tuổi nào (giả tưởng thời điểm hiện tại là năm 2014) ? Vị trí địa lý ? Ngành nghề nào ? (sử dụng Sales.vPersonDemographics)

-----Age

SELECT

(2014 - YEAR(BirthDate)) AS Tuoi,

COUNT(\*) AS CustomerCount

FROM Sales.vPersonDemographics

WHERE TotalPurchaseYTD <> '0'

GROUP BY (2014 - YEAR(BirthDate))

ORDER BY CustomerCount DESC;

-----Geo:em không tìm được cột chứa ạ

-----Occupation

SELECT

Occupation,

COUNT(\*) AS CustomerCount

FROM Sales.vPersonDemographics

WHERE TotalPurchaseYTD <> '0'

GROUP BY Occupation

ORDER BY CustomerCount DESC;

• Tỉ lệ sales đạt target theo thời gian ? Thông tin của nhân viên sales bán nhiều nhất theo từng tháng ?

-----Tỉ lệ sales (em không biết chạy sao ra full 0 ạ )

WITH REACH AS(

SELECT MONTH(Q.QuotaDate) 'MONTHQUOTA',

YEAR(Q.QuotaDate) 'YEARQUOTA',

COUNT(\*) AS 'DatChiTieu'

FROM Sales.SalesPersonQuotaHistory AS Q

LEFT JOIN Sales.SalesPerson AS P ON Q.BusinessEntityID=P.BusinessEntityID

WHERE Q.SalesQuota >= P.SalesQuota

GROUP BY YEAR(Q.QuotaDate),MONTH(Q.QuotaDate)

),

TOTAL AS(

SELECT MONTH(Q.QuotaDate) 'MONTHQUOTA',

YEAR(Q.QuotaDate) 'YEARQUOTA',

COUNT(\*) AS 'TongChiTieu'

FROM Sales.SalesPersonQuotaHistory AS Q

LEFT JOIN Sales.SalesPerson AS P ON Q.BusinessEntityID=P.BusinessEntityID

GROUP BY YEAR(Q.QuotaDate),MONTH(Q.QuotaDate)

)

SELECT

R.MONTHQUOTA,

R.YEARQUOTA,

(R.DatChiTieu/T.TongChiTieu)\*100 AS SalesQuotaRate

FROM REACH AS R

LEFT JOIN TOTAL AS T ON (T.MONTHQUOTA=R.MONTHQUOTA) AND (T.YEARQUOTA=R.YEARQUOTA)

-----Max

SELECT

MONTH(QuotaDate) AS 'THANG',

YEAR(QuotaDate) AS 'NAM',

SalesQuota,

b.BusinessEntityID,

c.\*

FROM Sales.SalesPersonQuotaHistory as b

LEFT JOIN Person.Person AS c ON b.BusinessEntityID=c.BusinessEntityID

WHERE SalesQuota = (

SELECT MAX(SalesQuota)

FROM Sales.SalesPersonQuotaHistory AS sqh

WHERE MONTH(sqh.QuotaDate) = MONTH(b.QuotaDate)

AND YEAR(sqh.QuotaDate) = YEAR(b.QuotaDate)

)

ORDER BY NAM,THANG

• Doanh số, số lượng đơn, số lượng khách hàng theo thời gian ? Theo từng loại sản phẩm ?

SELECT

COUNT(DISTINCT SalesOrderDetailID) AS 'SoLuongKhachHang',

SUM(LineTotal) AS 'DoanhThu',

SUM(OrderQty) AS 'SoLuongDon',

YEAR(ModifiedDate) AS Nam,

MONTH(ModifiedDate) AS Thang,

DAY(ModifiedDate) AS Ngay,

ProductID

FROM Sales.SalesOrderDetail

GROUP BY YEAR(ModifiedDate), MONTH(ModifiedDate), DAY(ModifiedDate), ProductID

ORDER BY YEAR(ModifiedDate) ASC, MONTH(ModifiedDate) ASC, DAY(ModifiedDate) ASC

• Lí do khách mua hàng chủ yếu ?

SELECT

COUNT(SalesOrderID) AS 'SoLuongKhachHang',

SL.SalesReasonID,

RS.Name

FROM Sales.SalesOrderHeaderSalesReason AS SL

LEFT JOIN Sales.SalesReason AS RS ON SL.SalesReasonID = RS.SalesReasonID

GROUP BY SL.SalesReasonID,RS.Name

ORDER BY COUNT(SalesOrderID) DESC

• Tỉ lệ đơn muộn theo thời gian ? Doanh số và số lượng khách hàng trên từng chương trình khuyến mãi ?

----- Số đơn muộn

SELECT

COUNT(SalesOrderID) 'SoDonMuon'

FROM Sales.SalesOrderHeader

WHERE ShipDate > DueDate

----- Theo SpecialOffer

SELECT

COUNT(DISTINCT H.CustomerID) 'SokhachHang',

SUM(H.TotalDue) 'DoanhSo',

D.SpecialOfferID,

S.Description

FROM Sales.SalesOrderDetail AS D

LEFT JOIN Sales.SalesOrderHeader AS H ON H.SalesOrderID=D.SalesOrderID

LEFT JOIN Sales.SpecialOffer AS S ON S.SpecialOfferID=D.SpecialOfferID

GROUP BY D.SpecialOfferID, S.Description

ORDER BY SokhachHang DESC

Phân tích mô tả tình trạng phòng ban, module

Chọn một module và tiến hành query vào trong cơ sở dữ liệu để tiến hành trả lời các câu hỏi sau:

- Tóm tắt ngắn gọn thực trạng hoạt động của module đó trong công ty ?

----- Tổng lợi nhuận, số nhân viên

WITH CTE AS(

SELECT

COUNT(DISTINCT(P.BusinessEntityID)) AS TotalSalesPeople,

SUM(D.LineTotal) AS TotalSalesAmount,

SUM(H.TotalDue) AS TotalDue

FROM Sales.SalesPerson AS P

INNER JOIN Sales.SalesOrderHeader AS H ON H.SalesPersonID = P.BusinessEntityID

INNER JOIN Sales.SalesOrderDetail AS D ON D.SalesOrderID=H.SalesOrderID

)

SELECT

TotalSalesPeople,

TotalDue-TotalSalesAmount AS TotalProfit

FROM CTE

- Module đó có dấu hiệu đi lên hay đi xuống ? Điểm tốt và điểm xấu ?

--Doanh số theo tháng,năm

SELECT

MONTH(OrderDate) AS OrderMonth,

YEAR(OrderDate) AS OrderYear,

SUM(TotalDue) AS TotalSalesAmount

FROM Sales.SalesOrderHeader

GROUP BY MONTH(OrderDate),YEAR(OrderDate)

ORDER BY YEAR(OrderDate),MONTH(OrderDate) ASC

**Điểm tốt:**

-Tỷ lệ tăng trưởng doanh số qua năm cao

-Lợi nhuận qua năm cao

**Điểm xấu:**

-Doanh số bán hàng biến thiên, không bền vững (tháng tăng, tháng giảm)

- So sánh tình trạng của module đó qua các thời kì ?

---So sánh doanh số theo năm và tháng

WITH T AS(

SELECT

YEAR(OrderDate) AS Year,

MONTH(OrderDate) AS Month,

SUM(TotalDue) AS TotalSalesAmount

FROM Sales.SalesOrderHeader

GROUP BY MONTH(OrderDate),YEAR(OrderDate)

)

SELECT

Month,

Year,

TotalSalesAmount,

(TotalSalesAmount - LAG(TotalSalesAmount) OVER (ORDER BY Year,Month)) AS Growth

FROM T

--Tính RetetaionRate( Nhưng mà em chưa tìm được lỗ hổng của code ạ)

WITH CustomerCounts AS (

SELECT

YEAR(sod.OrderDate) AS OrderYear,

MONTH(sod.OrderDate) AS OrderMonth,

COUNT(DISTINCT c.CustomerID) AS TotalCustomers

FROM Sales.Customer AS c

INNER JOIN Sales.SalesOrderHeader AS sod ON sod.CustomerID = c.CustomerID

GROUP BY YEAR(sod.OrderDate), MONTH(sod.OrderDate)

),

StartingCustomers AS (

SELECT

YEAR(OrderDate) AS OrderYear,

MONTH(OrderDate) AS OrderMonth,

COUNT(DISTINCT CustomerID) AS StartingCustomers

FROM Sales.SalesOrderHeader

GROUP BY YEAR(OrderDate), MONTH(OrderDate)

),

MonthlyRetention AS (

SELECT

cc.OrderYear,

cc.OrderMonth,

StartingCustomers.StartingCustomers,

CASE

WHEN LAG(TotalCustomers) OVER (ORDER BY cc.OrderYear ASC, cc.OrderMonth ASC) IS NULL THEN 0

ELSE ((TotalCustomers - LAG(TotalCustomers) OVER (ORDER BY cc.OrderYear ASC, cc.OrderMonth ASC)) / StartingCustomers.StartingCustomers) \* 100

END AS RetentionRate

FROM CustomerCounts AS cc

INNER JOIN StartingCustomers ON cc.OrderYear = StartingCustomers.OrderYear AND cc.OrderMonth = StartingCustomers.OrderMonth

)

SELECT

OrderYear,

OrderMonth,

StartingCustomers,

RetentionRate

FROM MonthlyRetention

ORDER BY OrderYear ASC, OrderMonth ASC

-- MonthlySalesGrowth=((Sales for the current month - sales for the prior month) / sales for the prior month) x 100

WITH MonthlySales AS (

SELECT

MONTH(soh.OrderDate) AS OrderMonth,

SUM(od.LineTotal) AS TotalSales,

YEAR(soh.OrderDate) AS Order5

FROM Sales.SalesOrderHeader AS soh

INNER JOIN Sales.SalesOrderDetail AS od ON od.SalesOrderID = soh.SalesOrderID

GROUP BY MONTH(soh.OrderDate),YEAR(soh.OrderDate)

)

SELECT

m.OrderMonth,

m.Order5,

CASE WHEN LAG(m.TotalSales) OVER (ORDER BY m.OrderMonth) IS NULL THEN 0

ELSE ((m.TotalSales - LAG(m.TotalSales) OVER (ORDER BY m.OrderMonth)) / LAG(m.TotalSales) OVER (ORDER BY m.OrderMonth)) \* 100

END AS MonthlySalesGrowth

FROM MonthlySales AS m

ORDER BY Order5, OrderMonth