

Intermediate Queries

1. Tulis query untuk mendapatkan jumlah customer tiap bulan yang melakukan order pada tahun 1997.

Code:

```
SELECT MONTH(OrderDate) as 'Order Month',  
        COUNT(DISTINCT(CustomerId)) AS 'TotalCustomers'  
FROM dbo.Orders  
Where Year(OrderDate) = 1997  
Group By MONTH(OrderDate)
```

Result Snippet:

Order Month	TotalCustomers
1	27
2	21
3	24
4	27
5	26
6	25
7	25
8	30
9	27
10	28
11	27
12	37

2. Tulis query untuk mendapatkan nama employee yang termasuk Sales Representative.

Code:

```
SELECT Concat(FirstName, ' ', LastName) AS 'Employee Name'  
FROM dbo.Employees  
WHERE Title = 'Sales Representative'
```

Result Snippet:

Employee Name
Nancy Davolio
Janet Leverling
Margaret Peacock
Michael Suyama
Robert King
Anne Dodsworth

3. Tulis query untuk mendapatkan top 5 nama produk yang quantitynya paling banyak diorder pada bulan Januari 1997.

Code:

```
SELECT TOP 5 ProductName
From dbo.Orders O
LEFT JOIN dbo."Order Details" OD on O.OrderID = OD.OrderID
LEFT JOIN dbo.Products P on OD.ProductId = P.ProductId
WHERE YEAR(O.OrderDate) = 1997 AND MONTH(O.OrderDate) =1
GROUP BY MONTH(O.OrderDate), ProductName
ORDER BY MONTH(O.OrderDate) ASC, SUM(OD.Quantity) DESC
```

Result Snippet:

ProductName
Geitost
Raclette Courdavault
Gnocchi di nonna Alice
Vegie-spread
Côte de Blaye

4. Tulis query untuk mendapatkan nama company yang melakukan order Chai pada bulan Juni 1997.

Code:

```
SELECT Distinct(CompanyName)
FROM dbo.Orders O
LEFT JOIN dbo.Customers C on O.CustomerID = C.CustomerID
LEFT JOIN dbo."Order Details" OD on O.OrderID = OD.OrderID
LEFT JOIN dbo.Products P on OD.ProductID = P.ProductID
WHERE P.ProductName = 'Chai' AND YEAR(O.OrderDate) = 1997
```

Result Snippet:

CompanyName
Berglunds snabbköp
Blondesddsl père et fils
Du monde entier
Hungry Owl All-Night Grocers
La maison d'Asie
Lehmanns Marktstand
LINO-Delicatesses
Mère Paillarde
North/South
Princesa Isabel Vinhos
Queen Cozinha
QUICK-Stop
Save-a-lot Markets
Tortuga Restaurante
Wartian Herkku

5. Tulis query untuk mendapatkan jumlah OrderID yang pernah melakukan pembelian (unit_price dikali quantity) ≤ 100 , $100 < x \leq 250$, $250 < x \leq 500$, dan > 500 .

Code:

```
SELECT Sales_Category, COUNT(OrderID) Orders
FROM (
SELECT
    CASE
        WHEN Sales <=100 THEN '1. <=100'
        WHEN Sales <=250 THEN '2. 100<x<=250'
        WHEN Sales <=500 THEN '3. 250<x<=500'
        WHEN Sales >500 THEN '4. >500'
    END AS Sales_Category,
    OrderID
FROM (
    SELECT OrderID, (SUM(UnitPrice) * Sum(Quantity)) Sales
    FROM dbo."Order Details"
    GROUP BY OrderID
) AOS
) SC
GROUP BY Sales_Category
ORDER BY 1
```

Result Snippet:

Sales_Category	Orders
1. <=100	30
2. 100<x<=250	39
3. 250<x<=500	61
4. >500	700

6. Tulis query untuk mendapatkan Company name pada tabel customer yang melakukan pembelian di atas 500 pada tahun 1997.

Code:

```
SELECT *
FROM (
    SELECT C.CompanyName, (SUM(OD.UnitPrice) * Sum(OD.Quantity)) Sales
    FROM dbo."Order Details" OD
    LEFT JOIN dbo.Orders O on OD.OrderID = O.OrderID
    LEFT JOIN dbo.Products P on OD.ProductID = P.ProductID
    LEFT JOIN dbo.Customers C on O.CustomerID = C.CustomerID
    WHERE YEAR(O.OrderDate) = 1997
    GROUP BY C.CompanyName
) AOS
WHERE Sales >500
ORDER BY 2 DESC
```

Result Snippet:

CompanyName	Sales
Save-a-lot Markets	4065298.38
QUICK-Stop	3241319.04
Ernst Handel	2311764.00
Hungry Owl All-Night Grocers	677304.31
Mère Paillarde	588825.00
Berglunds snabbköp	388979.89
Wartian Herkku	384279.50
HILARION-Abastos	335289.50
Frankenversand	335233.41
Lehmanns Marktstand	334951.65
Rattlesnake Canyon Grocery	316359.00
White Clover Markets	308173.74
Bon app'	254226.60
Queen Cozinha	244069.51
Folk och fä HB	200608.20

7. Tulis query untuk mendapatkan nama produk yang merupakan Top 5 sales tertinggi tiap bulan di tahun 1997.

Code:

```
SELECT Order_month, ProductName
FROM(
    SELECT *, ROW_NUMBER() OVER(PARTITION BY Order_month ORDER BY Sales DESC) Sales_Rank
    FROM (
        SELECT MONTH(O.OrderDate) Order_month,
            P.ProductName,
            (SUM(OD.UnitPrice) * Sum(OD.Quantity)) Sales
        FROM dbo."Order Details" OD
        LEFT JOIN dbo.Orders O on OD.OrderID = O.OrderID
        LEFT JOIN dbo.Products P on OD.ProductID = P.ProductID
        WHERE YEAR(O.OrderDate) = 1997
        GROUP BY MONTH(O.OrderDate), P.ProductName
    ) PS ) Sr
WHERE Sales_Rank <= 5
```

Result Snippet:

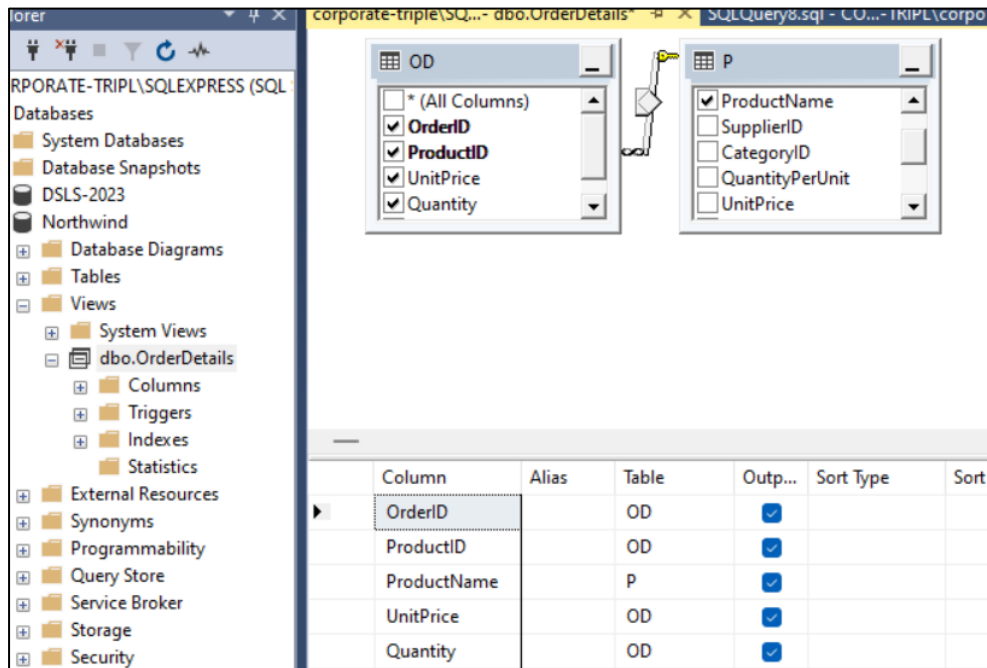
Order_month	ProductName
1	Côte de Blaye
1	Raclette Courdavault
1	Gnocchi di nonna Alice
1	Alice Mutton
1	Gumbär Gummibärchen
2	Gnocchi di nonna Alice
2	Pâté chinois
2	Rössle Sauerkraut
2	Wimmers gute Semmelknödel
2	Sirop d'érable
3	Raclette Courdavault
3	Côte de Blaye
3	Manjimup Dried Apples
3	Boston Crab Meat
3	Camembert Pierrot

8. Buatlah view untuk melihat Order Details yang berisi OrderID, ProductID, ProductName, UnitPrice, Quantity, Discount, Harga setelah diskon.

Code:

```
CREATE VIEW dbo.OrderDetails
AS
SELECT OD.OrderID, OD.ProductID, P.ProductName, OD.UnitPrice,
    OD.Quantity, OD.Discount, ((OD.UnitPrice * OD.Quantity)*(1-OD.Discount)) PriceAfterDiscount
FROM dbo."Order Details" OD
LEFT JOIN dbo.Products P on OD.ProductID = P.ProductID
```

Result Snippet :



- Buatlah procedure Invoice untuk memanggil CustomerID, CustomerName/company name, OrderID, OrderDate, RequiredDate, ShippedDate jika terdapat inputan CustomerID tertentu.

Code:

```
CREATE PROCEDURE Invoice
    @CustomerID VARCHAR(5)
AS
SELECT O.CustomerID, C.CompanyName, O.OrderID, O.OrderDate, O.RequiredDate, O.ShippedDate
FROM dbo.Orders O
LEFT JOIN dbo.Customers C ON O.CustomerID = C.CustomerID
WHERE O.CustomerID = @CustomerID
```

Result Snippet :

EXEC Invoice 'ALFKI'

CustomerID	CompanyName	OrderID	OrderDate	RequiredDate	ShippedDate
ALFKI	Alfreds Futterkiste	10643	1997-08-25 00:00:00.000	1997-09-22 00:00:00.000	1997-09-02 00:00:00.000
ALFKI	Alfreds Futterkiste	10692	1997-10-03 00:00:00.000	1997-10-31 00:00:00.000	1997-10-13 00:00:00.000
ALFKI	Alfreds Futterkiste	10702	1997-10-13 00:00:00.000	1997-11-24 00:00:00.000	1997-10-21 00:00:00.000
ALFKI	Alfreds Futterkiste	10835	1998-01-15 00:00:00.000	1998-02-12 00:00:00.000	1998-01-21 00:00:00.000
ALFKI	Alfreds Futterkiste	10952	1998-03-16 00:00:00.000	1998-04-27 00:00:00.000	1998-03-24 00:00:00.000
ALFKI	Alfreds Futterkiste	11011	1998-04-09 00:00:00.000	1998-05-07 00:00:00.000	1998-04-13 00:00:00.000

