

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

```
SELECT
    MONTH(OrderDate) as month_,
    COUNT(DISTINCT CustomerID) as customer_counts
FROM Orders
WHERE year(OrderDate) = 1997
GROUP BY MONTH(OrderDate)
ORDER BY month_
```

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

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

```
SELECT (LastName + ' ' + FirstName) AS sales_representative
FROM Employees
WHERE Title = 'Sales Representative'
```

	sales_representative
1	Davolio Nancy
2	Leverling Janet
3	Peacock Margaret
4	Suyama Michael
5	King Robert
6	Dodsworth Anne

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

```

SELECT TOP(5)
    ProductName,
    SUM(od.Quantity) as quantity
FROM [Products] AS p
    JOIN [Order Details] AS od ON p.ProductID = od.ProductID
    JOIN [Orders] AS o ON od.OrderID = o.OrderID
WHERE OrderDate BETWEEN '19970101' AND '19970131'
GROUP BY p.ProductName
ORDER BY SUM(od.Quantity) DESC

```

	ProductName	quantity
1	Geitost	119
2	Raclette Courdavault	115
3	Gnocchi di nonna Alice	105
4	Vegie-spread	100
5	Côte de Blaye	99

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

```

SELECT DISTINCT(CompanyName)
FROM [Customers] AS c
    JOIN [Orders] AS o ON c.CustomerID = o.CustomerID
    JOIN [Order Details] AS od ON o.OrderID = od.OrderID
    JOIN [Products] AS p ON od.ProductID = p.ProductID
WHERE OrderDate BETWEEN '19970601' AND '19970630'
AND ProductName = 'Chai'

```

	CompanyName
1	Tortuga Restaurante

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

```

WITH a AS (SELECT
    OrderID,
    CASE WHEN SUM((UnitPrice - UnitPrice * Discount) * Quantity) <=
100 THEN '<= 100'
        WHEN SUM((UnitPrice - UnitPrice * Discount) * Quantity)
BETWEEN 100 AND 250 THEN '100 < x <= 250'

```

```

        WHEN SUM((UnitPrice - UnitPrice * Discount) * Quantity)
        BETWEEN 250 AND 500 THEN '250 < x <= 500'
        ELSE '> 500'
        END AS category
    FROM [Order Details]
    GROUP BY OrderID)
SELECT COUNT(OrderID) AS order_counts, category
FROM a
GROUP BY category

```

	order_counts	category
1	594	> 500
2	37	<= 100
3	124	250 < ...
4	75	100 < ...

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

```

SELECT CompanyName,
SUM((UnitPrice - UnitPrice * Discount) * Quantity) AS purchase_amt
FROM [Order Details] AS od
    JOIN [Orders] AS o ON od.OrderID = o.OrderID
    JOIN [Customers] AS c ON o.CustomerID = c.CustomerID
WHERE YEAR(OrderDate) = 1997
GROUP BY CompanyName
HAVING SUM((UnitPrice - UnitPrice * Discount) * Quantity) > 500
ORDER BY purchase_amt

```

	CompanyName	purchase_amt
1	North/South	604
2	Santé Gourmet	700
3	Consolidated ...	787,599987...
4	Ana Trujillo E...	799,75
5	France restaur...	920,099990...
6	Blauer See D...	1079,79998...
7	Comércio Min...	1128
8	Rancho grande	1149,39999...
9	Wilman Kala	1174,35000...
10	Wolski Zajazd	1207,84999...
11	Tradição Hipe...	1320,39999...
12	Trail's Head G...	1333,29999...
13	Princess Leah	1400,10000

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

```

WITH ranked_sales AS (
  SELECT
    ProductName,
    SUM((od.UnitPrice - od.UnitPrice * Discount) * Quantity) AS net_sales,
    MONTH(OrderDate) as month_,
    DENSE_RANK() OVER(PARTITION BY MONTH(OrderDate)
      ORDER BY SUM((od.UnitPrice - od.UnitPrice * Discount) * Quantity)
    DESC) AS sales_rank
  FROM [Order Details] AS od
  JOIN [Orders] as o ON od.OrderID = o.OrderID
  JOIN [Products] as p ON p.ProductID = od.ProductID
  WHERE YEAR(OrderDate) = 1997
  GROUP BY ProductName, MONTH(OrderDate)
)
SELECT *
FROM ranked_sales
WHERE sales_rank <= 5

```

	ProductName	net_sales	month_	sales_rank
1	Côte de Blaye	18803,3603515625	1	1
2	Raclette Courdavault	4364,80001831055	1	2
3	Vegie-spread	3202,87493896484	1	3
4	Gnocchi di nonna A...	3192	1	4
5	Tarte au sucre	2955	1	5
6	Pâté chinois	2937,60015869141	2	1
7	Gnocchi di nonna A...	2401,60003662109	2	2
8	Sirop d'érable	2314,19995117188	2	3
9	Rössle Sauerkraut	2074,80001831055	2	4
10	Thüringer Rostbrat...	2019,60009765625	2	5
11	Raclette Courdavault	7128	3	1
12	Côte de Blaye	6324	3	2
13	Manjimup Dried Ap...	1950,40001678467	3	3
14	Camembert Pierrot	1632	3	4
15	Thüringer Rostbrat...	1603,79992675781	3	5
16	Gnocchi di nonna A...	5517,6000610252	4	1

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

```

SELECT
    OrderID,
    od.ProductID,
    ProductName,
    od.UnitPrice,
    Quantity,
    Discount,
    (od.UnitPrice - Discount * od.UnitPrice) AS net_price
FROM [Order Details] AS od
JOIN [Products] AS p ON p.ProductID = od.ProductID

```

	OrderID	ProductID	ProductName	UnitPrice	Quantity	Discount	net_price
1	10248	11	Queso Cabrales	14,00	12	0	14
2	10248	42	Singaporean ...	9,80	10	0	9,8
3	10248	72	Mozzarella di ...	34,80	5	0	34,8
4	10249	14	Tofu	18,60	9	0	18,6
5	10249	51	Manjimup Dri...	42,40	40	0	42,4
6	10250	41	Jack's New En...	7,70	10	0	7,7
7	10250	51	Manjimup Dri...	42,40	35	0,15	36,04
8	10250	65	Louisiana Fier...	16,80	15	0,15	14,28
9	10251	22	Gustaf's Knäc...	16,80	6	0,05	15,96
10	10251	57	Ravioli Angelo	15,60	15	0,05	14,82
11	10251	65	Louisiana Fier...	16,80	20	0	16,8
12	10252	20	Sir Rodney's ...	64,80	40	0,05	61,56
13	10252	33	Geitost	2,00	25	0,05	1,9

9. Buatlah procedure **Invoice** untuk memanggil **CustomerID**, **CustomerName/CompanyName**, **OrderID**, **OrderDate**, **RequiredDate**, **ShippedDate** jika terdapat inputan **CustomerID** tertentu.

```

CREATE PROCEDURE Invoice
@CustomerID nchar(5)
AS SELECT
    c.CustomerID,
    CompanyName,
    OrderID,
    OrderDate,
    RequiredDate,
    ShippedDate
FROM Customers AS c
JOIN Orders AS o ON c.CustomerID = o.CustomerID
WHERE c.CustomerID = @CustomerID

```

Contoh hasil execute dengan CustomerID = 'CACTU'

EXEC Invoice @CustomerID = 'CACTU'

100 %

Results Messages

	CustomerID	CompanyName	OrderID	OrderDate	RequiredDate	ShippedDate
1	CACTU	Cactus Comidas para llevar	10521	1997-04-29 00:00:00.000	1997-05-27 00:00:00.000	1997-05-02 00:00:00.000
2	CACTU	Cactus Comidas para llevar	10782	1997-12-17 00:00:00.000	1998-01-14 00:00:00.000	1997-12-22 00:00:00.000
3	CACTU	Cactus Comidas para llevar	10819	1998-01-07 00:00:00.000	1998-02-04 00:00:00.000	1998-01-16 00:00:00.000
4	CACTU	Cactus Comidas para llevar	10881	1998-02-11 00:00:00.000	1998-03-11 00:00:00.000	1998-02-18 00:00:00.000
5	CACTU	Cactus Comidas para llevar	10937	1998-03-10 00:00:00.000	1998-03-24 00:00:00.000	1998-03-13 00:00:00.000
6	CACTU	Cactus Comidas para llevar	11054	1998-04-28 00:00:00.000	1998-05-26 00:00:00.000	NULL