1.Ürün Analizi

**-Yeniden satın alınan ürünler**

SELECT

p.product\_id,

p.product\_name,

COUNT(DISTINCT o.order\_id) AS number\_of\_orders

FROM

order\_details AS od

INNER JOIN

products AS p ON od.product\_id = p.product\_id

INNER JOIN

orders AS o ON od.order\_id = o.order\_id

GROUP BY

p.product\_id, p.product\_name

HAVING

COUNT(DISTINCT o.order\_id ) > 1

ORDER BY

number\_of\_orders DESC;

**--Output doğruluğuna bakmak için 59 id’li ürünün sipariş sayısına bakıldı.**

select\*from order\_details

where product\_id = 59

metin, ekran görüntüsü, sayı, numara, yazı tipi içeren bir resim

Açıklama otomatik olarak oluşturuldu

**2.Müşteri Analizi**

Bu müşterileri belirleyerek, onları sadık müşteri olarak tanımlayabilir ve özel kampanyalar düzenleyebiliriz.

**-En çok sipariş veren firmalar, sipariş sayısı ve ülkeleri**

WITH CustomerOrderCounts AS (

SELECT

c.customer\_id,

c.company\_name,

COUNT(o.order\_id) AS total\_orders

FROM

customers AS c

LEFT JOIN

orders AS o ON c.customer\_id = o.customer\_id

GROUP BY

c.customer\_id, c.company\_name

),

TopCustomers AS (

SELECT

customer\_id,

company\_name,

total\_orders

FROM

CustomerOrderCounts

ORDER BY

total\_orders DESC

)

SELECT

tc.customer\_id,

tc.company\_name,

tc.total\_orders,

c.country AS customer\_country

FROM

TopCustomers AS tc

INNER JOIN

customers AS c ON tc.customer\_id = c.customer\_id

ORDER BY

tc.total\_orders DESC;

**--Output doğruluğunu kontrol için Savea firmasının orders sayılarına bakıldı.**

select\*from orders where customer\_id='SAVEA'

metin, ekran görüntüsü, sayı, numara, menü içeren bir resim

Açıklama otomatik olarak oluşturuldu

**-Toplam firma harcamaları**

**50.000 ve üzeri high value- 30.000/50.000 arası medium- 30.000 altı low value**

WITH CustomerPurchases AS (

SELECT

c.customer\_id,

c.company\_name,

COUNT(o.order\_id) AS number\_of\_orders,

SUM(od.quantity \* od.unit\_price) AS total\_spent

FROM

customers AS c

INNER JOIN

orders AS o ON c.customer\_id = o.customer\_id

INNER JOIN

order\_details AS od ON o.order\_id = od.order\_id

GROUP BY

c.customer\_id, c.company\_name

)

SELECT

customer\_id,

company\_name,

number\_of\_orders,

to\_char(total\_spent, 'FM$999,999,999.00') AS total\_spent\_formatted,

CASE

WHEN total\_spent > 50000 THEN 'High Value'

WHEN total\_spent BETWEEN 30000 AND 50000 THEN 'Medium Value'

ELSE 'Low Value'

END AS customer\_segment

FROM

CustomerPurchases

ORDER BY

total\_spent DESC;

metin, menü, sayı, numara, ekran görüntüsü içeren bir resim

Açıklama otomatik olarak oluşturuldu

**3.Order Analizi**

**-Haftanın günleri bazlı order sayısı**

WITH WeekDays AS (

SELECT 'Monday' AS day\_name, 1 AS day\_number

UNION SELECT 'Tuesday', 2

UNION SELECT 'Wednesday', 3

UNION SELECT 'Thursday', 4

UNION SELECT 'Friday', 5

UNION SELECT 'Saturday', 6

UNION SELECT 'Sunday', 7

),

OrderCounts AS (

SELECT

TO\_CHAR(o.order\_date, 'Day') AS order\_day,

TO\_CHAR(o.order\_date, 'D')::int AS day\_number,

COUNT(o.order\_id) AS number\_of\_orders

FROM

orders AS o

GROUP BY

TO\_CHAR(o.order\_date, 'Day'),

TO\_CHAR(o.order\_date, 'D')

)

SELECT

wd.day\_name AS order\_day,

wd.day\_number,

COALESCE(oc.number\_of\_orders, 0) AS number\_of\_orders

FROM

WeekDays AS wd

LEFT JOIN

OrderCounts AS oc ON wd.day\_number = oc.day\_number

ORDER BY

wd.day\_number;

metin, ekran görüntüsü, yazı tipi, sayı, numara içeren bir resim

Açıklama otomatik olarak oluşturuldu

-Yıllara göre aylık order sayısı

SELECT

TO\_CHAR(o.order\_date, 'YYYY-MM') AS order\_month,

COUNT(o.order\_id) AS number\_of\_orders

FROM

orders AS o

GROUP BY

TO\_CHAR(o.order\_date, 'YYYY-MM')

ORDER BY

order\_month;

metin, ekran görüntüsü, çizgi, öykü gelişim çizgisi; kumpas; grafiğini çıkarma içeren bir resim

Açıklama otomatik olarak oluşturuldu

-Aylık order sayısı

SELECT

TO\_CHAR(o.order\_date, 'Month') AS order\_month,

COUNT(o.order\_id) AS number\_of\_orders

FROM

orders AS o

GROUP BY

TO\_CHAR(o.order\_date, 'Month'),

EXTRACT(MONTH FROM o.order\_date)

ORDER BY

EXTRACT(MONTH FROM o.order\_date);

metin, ekran görüntüsü, sayı, numara, yazı tipi içeren bir resim

Açıklama otomatik olarak oluşturuldu

**Teslimat süresi \*\*\*\*\*\*\***

-Öncelikle müşterinin istediği tarih ve sipariş tarihi arasında geçen zamana bakıldı. Daha sonra sevk tarihi ve sipariş tarihi arasında ki fark incelendi ve istenen tarih ve sevk tarihi arasındaki fark incelendi. Teslim tarihi veri setinde yoktu.

SELECT

s."supplier\_id",

ROUND(AVG(o."required\_date" - o."order\_date")) AS average\_last\_day,

ROUND(AVG(o."shipped\_date" - o."order\_date")) AS average\_processing\_days,

ROUND(AVG(o."required\_date" - o."shipped\_date")) AS average\_delivery\_days

FROM

"orders" o

JOIN

"order\_details" od ON o."order\_id" = od."order\_id"

JOIN

"products" p ON od."product\_id" = p."product\_id"

JOIN

"suppliers" s ON p."supplier\_id" = s."supplier\_id"

GROUP BY

s."supplier\_id"

ORDER BY

average\_processing\_days, average\_delivery\_days;

metin, sayı, numara içeren bir resim

Açıklama otomatik olarak oluşturuldu

4.Gelir analizi

-Aylık gelir analizi

(Discount oranı dahilinde gelir hesaplanmıştır.)

SELECT

DATE\_PART('year', o."order\_date") AS year,

DATE\_PART('month', o."order\_date") AS month,

TO\_CHAR(SUM(od.quantity \* od.unit\_price \* (1 - od.discount)), '$999,999,999.99') AS monthly\_income

FROM

"orders" o

JOIN

"order\_details" od ON o."order\_id" = od."order\_id"

GROUP BY

DATE\_PART('year', o."order\_date"),

DATE\_PART('month', o."order\_date")

ORDER BY

year,

month;

metin, sayı, numara, menü, doküman, belge içeren bir resim

Açıklama otomatik olarak oluşturuldu

-Kategori bazlı aylık gelir analizi

SELECT

c."category\_name" AS category,

DATE\_PART('year', o."order\_date") AS year,

DATE\_PART('month', o."order\_date") AS month,

TO\_CHAR(SUM(od.quantity \* od.unit\_price \* (1 - od.discount)), '$999,999,999.99') AS monthly\_income

FROM

"orders" o

JOIN

"order\_details" od ON o."order\_id" = od."order\_id"

JOIN

"products" p ON od."product\_id" = p."product\_id"

JOIN

"categories" c ON p."category\_id" = c."category\_id"

GROUP BY

c."category\_name",

DATE\_PART('year', o."order\_date"),

DATE\_PART('month', o."order\_date")

ORDER BY

year,

month,

category;

metin, sayı, numara, menü, ekran görüntüsü içeren bir resim

Açıklama otomatik olarak oluşturuldu

-Yıl bazlı gelir analizi

SELECT

DATE\_PART('year', o."order\_date") AS year,

TO\_CHAR(SUM(od.quantity \* od.unit\_price \* (1 - od.discount)), '$999,999,999.99') AS yearly\_income

FROM

"orders" o

JOIN

"order\_details" od ON o."order\_id" = od."order\_id"

GROUP BY

DATE\_PART('year', o."order\_date")

ORDER BY

year;

metin, ekran görüntüsü, yazı tipi, çizgi içeren bir resim

Açıklama otomatik olarak oluşturuldu

-Kategori bazlı yıllık gelir analizi

SELECT

c."category\_name" AS category,

DATE\_PART('year', o."order\_date") AS year,

TO\_CHAR(SUM(od.quantity \* od.unit\_price \* (1 - od.discount)), '$999,999,999.99') AS yearly\_income

FROM

"orders" o

JOIN

"order\_details" od ON o."order\_id" = od."order\_id"

JOIN

"products" p ON od."product\_id" = p."product\_id"

JOIN

"categories" c ON p."category\_id" = c."category\_id"

GROUP BY

c."category\_name",

DATE\_PART('year', o."order\_date")

ORDER BY

year,

category;

metin, menü, ekran görüntüsü, sayı, numara içeren bir resim

Açıklama otomatik olarak oluşturuldu

-Yeniden satın alınan ürünlerde ilk 15 i getirip yıllık gelirini hesapladım.

WITH ReorderedProducts AS (

SELECT

od."product\_id",

p."product\_name",

DATE\_PART('year', o."order\_date") AS year,

SUM(od."quantity") AS total\_quantity

FROM

"orders" o

JOIN

"order\_details" od ON o."order\_id" = od."order\_id"

JOIN

"products" p ON od."product\_id" = p."product\_id"

WHERE

EXISTS (

SELECT 1

FROM "order\_details" od2

WHERE od2."product\_id" = od."product\_id"

AND od2."order\_id" <> od."order\_id"

)

GROUP BY

od."product\_id",

p."product\_name",

DATE\_PART('year', o."order\_date")

),

RankedProducts AS (

SELECT

product\_id,

product\_name,

year,

total\_quantity,

RANK() OVER (PARTITION BY year ORDER BY total\_quantity DESC) AS rnk

FROM

ReorderedProducts

)

, Top5ReorderedProducts AS (

SELECT

product\_id,

product\_name,

year

FROM

RankedProducts

WHERE

rnk <= 5

)

SELECT

p."product\_name",

tp.year,

TO\_CHAR(SUM(od."quantity" \* od."unit\_price" \* (1 - od."discount")), '$999,999,999.99') AS yearly\_income

FROM

"order\_details" od

JOIN

"products" p ON od."product\_id" = p."product\_id"

JOIN

Top5ReorderedProducts tp ON p."product\_id" = tp."product\_id"

GROUP BY

p."product\_name",

tp.year

ORDER BY

tp.year,

yearly\_income DESC;

metin, ekran görüntüsü, sayı, numara, yazı tipi içeren bir resim

Açıklama otomatik olarak oluşturuldu

**5.RFM Analizi**

**--"1998-05-05" en son alışveriş yapılan tarih 5 gün sonrası olan "1998-05-10" tarihini aldım**

WITH max\_o\_d AS (

SELECT customer\_id,

MAX(order\_date) AS max\_order\_date

FROM orders

GROUP BY customer\_id

),

recency AS (

SELECT customer\_id,

max\_order\_date,

('1998-05-10'::date - max\_order\_date::date) AS recency

FROM max\_o\_d

),

frequency AS (

SELECT customer\_id,

COUNT(\*) AS frequency

FROM orders

GROUP BY customer\_id

),

monetary AS (

SELECT o.customer\_id,

ROUND(SUM(od.unit\_price \* od.quantity \* (1 - od.discount))::numeric, 0) AS monetary

FROM order\_details od

JOIN orders o ON od.order\_id = o.order\_id

GROUP BY o.customer\_id

),

scores AS (

SELECT

r.customer\_id,

r.recency,

NTILE(5) OVER(ORDER BY r.recency DESC) AS recency\_score,

f.frequency,

NTILE(5) OVER(ORDER BY f.frequency DESC) AS frequency\_score,

m.monetary,

NTILE(5) OVER(ORDER BY m.monetary ASC) AS monetary\_score

FROM recency r

LEFT JOIN frequency f ON r.customer\_id = f.customer\_id

LEFT JOIN monetary m ON f.customer\_id = m.customer\_id

),

monetary\_frequency AS (

SELECT customer\_id,

recency\_score,

frequency\_score + monetary\_score AS mon\_fre\_score

FROM scores

),

rfm\_score AS (

SELECT customer\_id,

recency\_score,

NTILE(5) OVER(ORDER BY mon\_fre\_score) AS mon\_fre\_score

FROM monetary\_frequency

)

SELECT

customer\_id,

recency\_score,

frequency\_score,

monetary\_score,

(recency\_score + frequency\_score + monetary\_score) AS total\_score,

((recency\_score + frequency\_score + monetary\_score) / 3) AS average\_score

FROM

scores;

metin, sayı, numara, ekran görüntüsü içeren bir resim

Açıklama otomatik olarak oluşturuldu

6.Kohort Analizi

-- Müşterilerin ilk sipariş verdikleri ayı belirleme

WITH first\_order AS (

SELECT customer\_id,

MIN(DATE\_TRUNC('month', order\_date)) AS first\_order\_month

FROM orders

GROUP BY customer\_id

),

-- Her sipariş için ilgili dönemi belirleme

orders\_with\_period AS (

SELECT o.customer\_id,

o.order\_id,

DATE\_TRUNC('month', o.order\_date) AS order\_month,

fo.first\_order\_month,

EXTRACT(YEAR FROM age(DATE\_TRUNC('month', o.order\_date), fo.first\_order\_month)) \* 12 +

EXTRACT(MONTH FROM age(DATE\_TRUNC('month', o.order\_date), fo.first\_order\_month)) AS period

FROM orders o

JOIN first\_order fo ON o.customer\_id = fo.customer\_id

)

-- Kohort analizi

SELECT

TO\_CHAR(first\_order\_month, 'YYYY-MM') AS cohort\_month,

period,

COUNT(DISTINCT owp.customer\_id) AS num\_customers,

TO\_CHAR(ROUND(SUM(od.quantity \* od.unit\_price \* (1 - od.discount))::numeric, 2), 'FM$999,999,999.00') AS total\_revenue

FROM

orders\_with\_period owp

JOIN

order\_details od ON owp.order\_id = od.order\_id

GROUP BY

first\_order\_month, period

ORDER BY

first\_order\_month, period;

metin, sayı, numara, ekran görüntüsü, menü içeren bir resim

Açıklama otomatik olarak oluşturuldu

7.Çalışan Analizi

-Hangi çalışan ne kadar satış yaptı ve ne kadar gelir getirdi

SELECT

e.employee\_id,

e.first\_name,

e.last\_name,

COUNT(o.order\_id) AS order\_count,

TO\_CHAR(SUM(od.unit\_price \* od.quantity \* (1 - od.discount)), 'FM$999,999,999.00') AS total\_revenue

FROM

employees e

LEFT JOIN

orders o ON e.employee\_id = o.employee\_id

LEFT JOIN

order\_details od ON o.order\_id = od.order\_id

GROUP BY

e.employee\_id,

e.first\_name,

e.last\_name

ORDER BY

total\_revenue asc;

metin, sayı, numara, yazı tipi, ekran görüntüsü içeren bir resim

Açıklama otomatik olarak oluşturuldu