1. select month(Date) as months, sum(Sales\_Amount) as 每月銷售總額,

count(distinct Customer\_ID) as 每月消費人數,

sum(Quantity) as 每月消費數量,

count(id) as 每月消費次數

from 2020scanner\_data

where year(Date) ='2020'

group by month(Date);

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自動產生的描述

2.select month(Date) as 月 , avg(Sales\_Amount) as 平均消費額

from 2020scanner\_data

where year(Date) = '2020'

group by month(Date);

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自動產生的描述

3. select sum(Sales\_Amount) as 銷售總額,

count(distinct Customer\_ID) as 消費人數,

sum(Quantity) as 消費數量,

count(id) as 消費次數

from 2020scanner\_data

where year(Date) ='2020'

group by quarter(Date);

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自動產生的描述

4. select avg(Sales\_Amount) as 平均消費額

from 2020scanner\_data

where year(Date) = '2020'

group by quarter(Date);

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自動產生的描述

5.SELECT DATE(Date) AS date, COUNT(DISTINCT Customer\_ID) AS 每天新用戶數量

FROM 2020scanner\_data AS t1

WHERE NOT EXISTS (

SELECT 1

FROM 2020scanner\_data AS t2

WHERE t2.Customer\_ID = t1.Customer\_ID AND t2.id > t1.id

)

GROUP BY DATE(`Date`);

6.

SELECT MONTH(Date) AS Month, COUNT(DISTINCT Customer\_ID) AS 每月新用戶數量

FROM 2020scanner\_data AS t1

WHERE NOT EXISTS (

SELECT 1

FROM 2020scanner\_data AS t2

WHERE t2.Customer\_ID = t1.Customer\_ID AND t2.id > t1.id

)

GROUP BY MONTH(`Date`);

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自動產生的描述

7. SELECT COUNT(DISTINCT Customer\_ID) / (SELECT COUNT(DISTINCT Customer\_ID) FROM 2020scanner\_data) AS 僅消費一次客戶占比

FROM (

SELECT Customer\_ID, COUNT(DISTINCT Transaction\_ID) AS num\_transactions

FROM 2020scanner\_data

GROUP BY Customer\_ID

HAVING num\_transactions = 1

) subquery;

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自動產生的描述

8.

SELECT

DATE\_FORMAT(t1.Date, '%Y-%m') AS Month,

COUNT(DISTINCT CASE WHEN t2.cnt > 1 THEN t2.Customer\_ID END) / COUNT(DISTINCT t1.Customer\_ID) AS 當月回購率

FROM 2020scanner\_data t1

JOIN (

SELECT

Customer\_ID,

DATE\_FORMAT(Date, '%Y-%m') AS Month,

COUNT(DISTINCT Transaction\_ID) AS cnt

FROM 2020scanner\_data

GROUP BY Customer\_ID, DATE\_FORMAT(Date, '%Y-%m')

) t2

ON t1.Customer\_ID = t2.Customer\_ID AND DATE\_FORMAT(t1.Date, '%Y-%m') = t2.Month

GROUP BY DATE\_FORMAT(t1.Date, '%Y-%m');

SELECT AVG(Repurchase\_Rate) AS 整體平均值

FROM (

SELECT

DATE\_FORMAT(t1.`Date`, '%Y-%m') AS Month,

COUNT(DISTINCT t1.Customer\_ID) AS Total\_Customers,

COUNT(DISTINCT CASE WHEN t2.cnt > 1 THEN t2.Customer\_ID END) AS Repeat\_Customers,

COUNT(DISTINCT CASE WHEN t2.cnt > 1 THEN t2.Customer\_ID END) / COUNT(DISTINCT t1.Customer\_ID) AS Repurchase\_Rate

FROM 2020scanner\_data t1

JOIN (

SELECT

Customer\_ID,

DATE\_FORMAT(`Date`, '%Y-%m') AS Month,

COUNT(DISTINCT Transaction\_ID) AS cnt

FROM 2020scanner\_data

GROUP BY Customer\_ID, DATE\_FORMAT(`Date`, '%Y-%m')

) t2

ON t1.Customer\_ID = t2.Customer\_ID AND DATE\_FORMAT(t1.Date, '%Y-%m') = t2.Month

GROUP BY DATE\_FORMAT(t1.Date, '%Y-%m')

) t;

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自動產生的描述 

9.

SELECT

DATE\_FORMAT(t1.Date, '%Y-%m') AS Month,

COUNT(DISTINCT CASE WHEN t2.cnt > 1 THEN t2.Customer\_ID END) / COUNT(DISTINCT t1.Customer\_ID) AS 當月回購率

FROM 2020scanner\_data t1

JOIN (

SELECT

Customer\_ID,

DATE\_FORMAT(Date, '%Y-%m') AS Month,

COUNT(DISTINCT Transaction\_ID) AS cnt

FROM 2020scanner\_data

GROUP BY Customer\_ID, DATE\_FORMAT(Date, '%Y-%m')

) t2

ON t1.Customer\_ID = t2.Customer\_ID AND DATE\_FORMAT(t1.Date, '%Y-%m') = t2.Month

GROUP BY DATE\_FORMAT(t1.Date, '%Y-%m') limit 11;

SELECT AVG(Repurchase\_Rate) AS 整體平均

FROM (

SELECT

DATE\_FORMAT(t1.`Date`, '%Y-%m') AS Month,

COUNT(DISTINCT t1.Customer\_ID) AS Total\_Customers,

COUNT(DISTINCT CASE WHEN t2.cnt > 1 THEN t2.Customer\_ID END) AS Repeat\_Customers,

COUNT(DISTINCT CASE WHEN t2.cnt > 1 THEN t2.Customer\_ID END) / COUNT(DISTINCT t1.Customer\_ID) AS Repurchase\_Rate

FROM 2020scanner\_data t1

JOIN (

SELECT

Customer\_ID,

DATE\_FORMAT(`Date`, '%Y-%m') AS Month,

COUNT(DISTINCT Transaction\_ID) AS cnt

FROM 2020scanner\_data

GROUP BY Customer\_ID, DATE\_FORMAT(`Date`, '%Y-%m')

) t2

ON t1.Customer\_ID = t2.Customer\_ID AND DATE\_FORMAT(t1.Date, '%Y-%m') = t2.Month

GROUP BY DATE\_FORMAT(t1.Date, '%Y-%m')

limit 11

) t;

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自動產生的描述 一張含有 文字 的圖片

自動產生的描述

10.

SELECT

Customer\_ID,

MAX(Date) AS Recency,

COUNT(DISTINCT Date) AS Frequency,

SUM(Sales\_Amount) AS Monetary,

CASE

WHEN MAX(Date) >= DATE\_SUB(NOW(), INTERVAL 30 DAY) AND COUNT(DISTINCT Date) >= 10 AND SUM(Sales\_Amount) >= 10000 THEN 'High Value Customers'

WHEN MAX(Date) >= DATE\_SUB(NOW(), INTERVAL 60 DAY) AND COUNT(DISTINCT Date) >= 5 AND SUM(Sales\_Amount) >= 5000 THEN 'Recent Active Customers'

WHEN COUNT(DISTINCT Date) >= 10 AND SUM(Sales\_Amount) >= 10000 THEN 'Frequent Customers'

WHEN SUM(Sales\_Amount) >= 10000 THEN 'Big Spenders'

WHEN MAX(Date) >= DATE\_SUB(NOW(), INTERVAL 30 DAY) THEN 'New Customers'

WHEN MAX(Date) < DATE\_SUB(NOW(), INTERVAL 90 DAY) AND COUNT(DISTINCT Date) < 5 AND SUM(Sales\_Amount) < 5000 THEN 'At Risk Customers'

WHEN COUNT(DISTINCT Date) < 5 AND SUM(Sales\_Amount) < 5000 THEN 'Infrequent Customers'

ELSE 'Low Value Customers'

END AS RFM\_Category

FROM 2020scanner\_data

GROUP BY Customer\_ID

ORDER BY RFM\_Category DESC;

https://drive.google.com/file/d/18VlTjjNdqYekrRft9Cfrv-znm1qeebl0/view?usp=sharing

11.

SELECT

user\_type,

COUNT(DISTINCT Customer\_ID) AS user\_count

FROM (

SELECT

Customer\_ID,

CASE

WHEN DATEDIFF(MAX(Date), min(Date)) > 180 AND COUNT(DISTINCT DATE(Date)) > 1 THEN '忠誠用戶'

WHEN DATEDIFF(MAX(Date), min(Date)) > 180 AND COUNT(DISTINCT DATE(Date)) = 1 THEN '一次性用戶'

WHEN DATEDIFF(MAX(Date), min(Date)) <= 180 AND COUNT(DISTINCT DATE(Date)) > 1 THEN '新用戶'

WHEN DATEDIFF(MAX(Date), min(Date)) <= 180 AND COUNT(DISTINCT DATE(Date)) = 1 THEN '流失老用戶'

END AS user\_type

FROM

2020scanner\_data

GROUP BY

Customer\_ID

) AS user\_type\_table

GROUP BY

user\_type;

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自動產生的描述

12.

select SKU as 熱銷商品前十名 , SUM(Quantity) as 賣出數量

from 2020scanner\_data

group by SKU

order by 賣出數量 DESC limit 10;

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自動產生的描述

13.

select SKU as 商品購買人數前十名 , count(distinct Customer\_ID) as 商品購買人數

from 2020scanner\_data

group by SKU

order by 商品購買人數 DESC limit 10;

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自動產生的描述

14.

select

month(`Date`) as 月份,

s.SKU,

sum(s.Quantity) as 銷售量,

count(distinct s.Customer\_ID) AS 購買人數

from 2020scanner\_data s

inner join(

select SKU

from 2020scanner\_data

group by SKU

order by sum(Quantity) DESC ,count(distinct Customer\_ID) DESC

limit 10

)p

on s.SKU = p.SKU

group by 月份, s.SKU

order by 銷售量 DESC, 購買人數 DESC

limit 10;

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自動產生的描述

15.

select SKU\_Category as 商品品類銷售數量前十名 , count(distinct Quantity) as 商品購買人數

from 2020scanner\_data

group by SKU\_Category

order by 商品購買人數 DESC limit 10;

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自動產生的描述

16.

select SKU\_Category as 商品品類購買人數前十名 , count(distinct Customer\_ID) as 商品購買人數

from 2020scanner\_data

group by SKU\_Category

order by 商品購買人數 DESC limit 10;

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自動產生的描述

17.

select

month(`Date`) as 月份,

s.SKU\_Category,

sum(s.Quantity) as 銷售量,

count(distinct s.Customer\_ID) AS 購買人數

from 2020scanner\_data s

inner join(

select SKU\_Category

from 2020scanner\_data

group by SKU\_Category

order by sum(Quantity) DESC ,count(distinct Customer\_ID) DESC

limit 10

)p

on s.SKU\_Category = p.SKU\_Category

group by 月份, s.SKU\_Category

order by 銷售量 DESC, 購買人數 DESC

limit 10;

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自動產生的描述

18:

根據以上分析，我們可以得出結論

月度銷售表現穩定，季度銷售額和消費人數基本相近，但季度平均消費金額略有波動。

老用戶流失佔用戶總數的比例較高，一次性用戶的比例不容忽視。

最暢銷和最暢銷的商品並不完全重疊，但有些商品在兩個圖表中都表現良好。

各品類的銷售額和買家數量排名並不完全相同，但部分品類在兩個排名中均進入前十。

從以上分析可以看出，我們的客戶群基本穩定，但還需要提高客戶忠誠度，促進復購