-- 1. список клиентов с непрерывной историей за год

SELECT

c.Id\_client,

COUNT(t.Id\_check) AS Total\_transactions,

AVG(t.Sum\_payment) AS Average\_check,

AVG(t.Sum\_payment) \* 12 AS Estimated\_Annual\_Spending,

MIN(t.date\_new) AS First\_transaction\_date,

MAX(t.date\_new) AS Last\_transaction\_date

FROM

customer\_info AS c

INNER JOIN

transactions\_info AS t ON c.Id\_client = t.ID\_client

WHERE

t.date\_new >= '2015-06-01' AND t.date\_new <= '2016-06-01'

GROUP BY

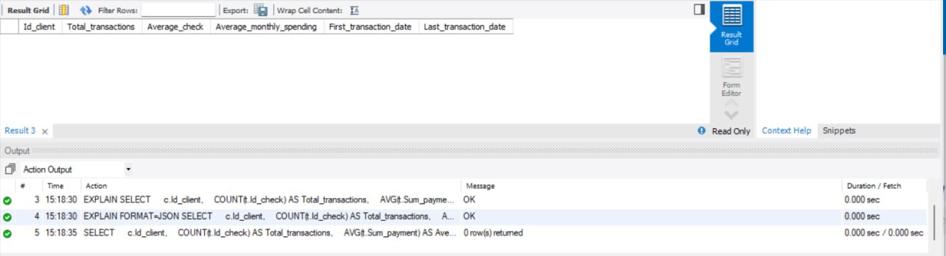
c.Id\_client

HAVING

COUNT(DISTINCT DATE\_FORMAT(t.date\_new, '%Y-%m')) = 12

ORDER BY

c.Id\_client;



2. информацию в разрезе месяцев:

a) Средняя сумма чека в месяц

SELECT

c.Id\_client,

DATE\_FORMAT(t.date\_new, '%Y-%m') AS Month,

AVG(t.Sum\_payment) AS Average\_check

FROM

customer\_info c

INNER JOIN

transactions\_info t ON c.Id\_client = t.ID\_client

WHERE

t.date\_new BETWEEN '2015-06-01' AND '2016-06-01'

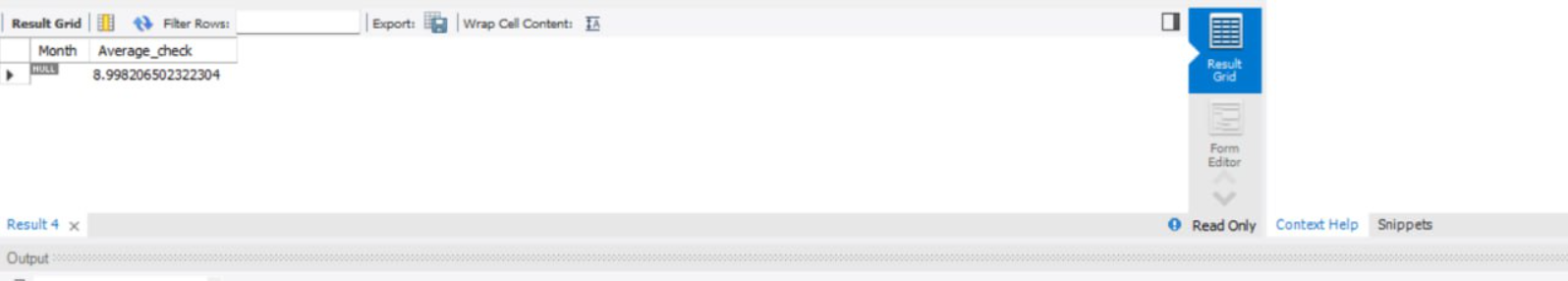
GROUP BY

c.Id\_client, Month

HAVING

COUNT(DISTINCT DATE\_FORMAT(t.date\_new, '%Y-%m')) = 12

ORDER BY

c.Id\_client, Month;  
  


-- b) Среднее количество операций в месяц

SELECT

DATE\_FORMAT(t.date\_new, '%Y-%m') AS Month,

COUNT(t.Id\_check) / COUNT(DISTINCT DATE\_FORMAT(t.date\_new, '%Y-%m')) AS Average\_transactions\_per\_month

FROM

transactions\_info t

GROUP BY

Month

ORDER BY

Month;

-- c) Среднее количество клиентов, которые совершали операции

SELECT

DATE\_FORMAT(t.date\_new, '%Y-%m') AS Month,

COUNT(DISTINCT t.ID\_client) AS Average\_clients

FROM

transactions\_info t

GROUP BY

Month

ORDER BY

Month;

SELECT

DATE\_FORMAT(t.date\_new, '%Y-%m') AS Month,

COUNT(DISTINCT t.ID\_client) AS Active\_clients

FROM

transactions\_info t

WHERE

t.date\_new BETWEEN '2015-06-01' AND '2016-06-01'

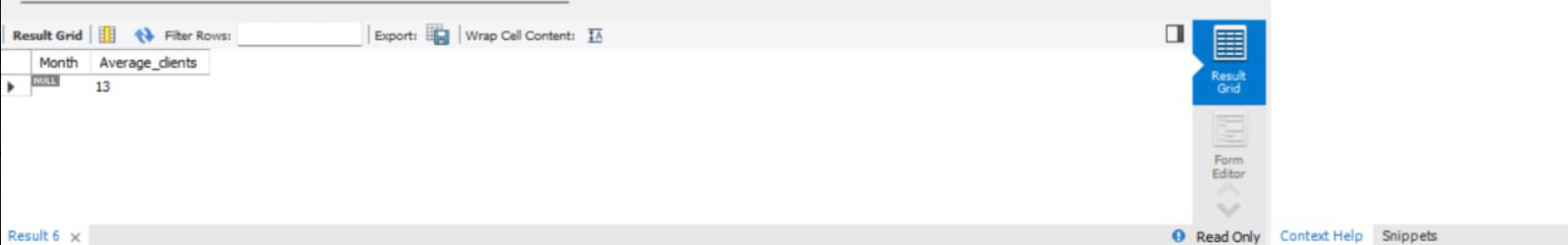
GROUP BY

Month

HAVING

COUNT(DISTINCT DATE\_FORMAT(t.date\_new, '%Y-%m')) = 12

ORDER BY

Month;  
  


-- d) Доля от общего количества операций за год и доля в месяц от общей суммы операций

WITH Client\_Monthly\_Stats AS (

SELECT

t.ID\_client,

DATE\_FORMAT(t.date\_new, '%Y-%m') AS Month,

COUNT(t.Id\_check) AS Monthly\_transactions,

SUM(t.Sum\_payment) AS Monthly\_total

FROM

transactions\_info t

WHERE

t.date\_new BETWEEN '2015-06-01' AND '2016-06-01'

GROUP BY

t.ID\_client, Month

HAVING

COUNT(DISTINCT DATE\_FORMAT(t.date\_new, '%Y-%m')) = 12

),

Monthly\_Stats AS (

SELECT

Month,

SUM(Monthly\_transactions) AS Total\_transactions,

SUM(Monthly\_total) AS Total\_amount

FROM

Client\_Monthly\_Stats

GROUP BY

Month

)

SELECT

Month,

Total\_transactions,

Total\_amount,

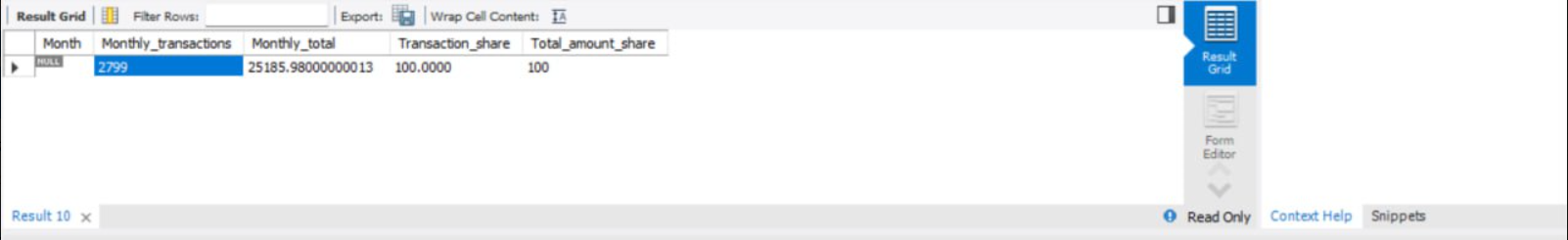
(Total\_transactions / SUM(Total\_transactions) OVER ()) \* 100 AS Transaction\_share,

(Total\_amount / SUM(Total\_amount) OVER ()) \* 100 AS Total\_amount\_share

FROM

Monthly\_Stats

ORDER BY

Month;  
  


-- e) % соотношение M/F/NA в каждом месяце с их долей затрат

WITH Client\_Transactions AS (

SELECT

t.ID\_client,

DATE\_FORMAT(t.date\_new, '%Y-%m') AS Month,

t.Sum\_payment,

c.Gender

FROM

transactions\_info t

JOIN

customer\_info c ON t.ID\_client = c.Id\_client

WHERE

t.date\_new BETWEEN '2015-06-01' AND '2016-06-01'

),

Qualified\_Clients AS (

SELECT

ID\_client

FROM

Client\_Transactions

GROUP BY

ID\_client

HAVING

COUNT(DISTINCT Month) = 12

),

Filtered\_Transactions AS (

SELECT

ct.Month,

ct.Sum\_payment,

ct.Gender

FROM

Client\_Transactions ct

JOIN

Qualified\_Clients qc ON ct.ID\_client = qc.ID\_client

)

SELECT

Month,

SUM(CASE WHEN Gender = 'M' THEN Sum\_payment ELSE 0 END) AS Male\_spending,

SUM(CASE WHEN Gender = 'F' THEN Sum\_payment ELSE 0 END) AS Female\_spending,

SUM(CASE WHEN Gender IS NULL THEN Sum\_payment ELSE 0 END) AS NA\_spending,

COUNT(CASE WHEN Gender = 'M' THEN 1 END) AS Male\_count,

COUNT(CASE WHEN Gender = 'F' THEN 1 END) AS Female\_count,

COUNT(CASE WHEN Gender IS NULL THEN 1 END) AS NA\_count

FROM

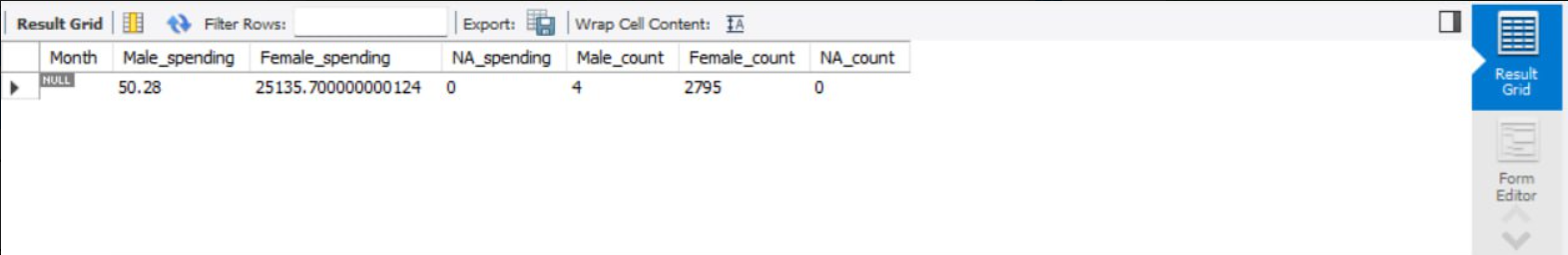
Filtered\_Transactions

GROUP BY

Month

ORDER BY

Month;



-- 3. возрастные группы клиентов

-- a. Сумма и количество операций за весь период для возрастных групп

SELECT

CASE

WHEN c.Age IS NULL THEN 'Unknown'

WHEN c.Age BETWEEN 0 AND 9 THEN '0-9'

WHEN c.Age BETWEEN 10 AND 19 THEN '10-19'

WHEN c.Age BETWEEN 20 AND 29 THEN '20-29'

WHEN c.Age BETWEEN 30 AND 39 THEN '30-39'

WHEN c.Age BETWEEN 40 AND 49 THEN '40-49'

WHEN c.Age BETWEEN 50 AND 59 THEN '50-59'

WHEN c.Age BETWEEN 60 AND 69 THEN '60-69'

WHEN c.Age BETWEEN 70 AND 79 THEN '70-79'

ELSE '80+'

END AS Age\_Group,

COALESCE(SUM(t.Sum\_payment), 0) AS Total\_amount,

COALESCE(COUNT(t.Id\_check), 0) AS Total\_transactions

FROM

customer\_info AS c

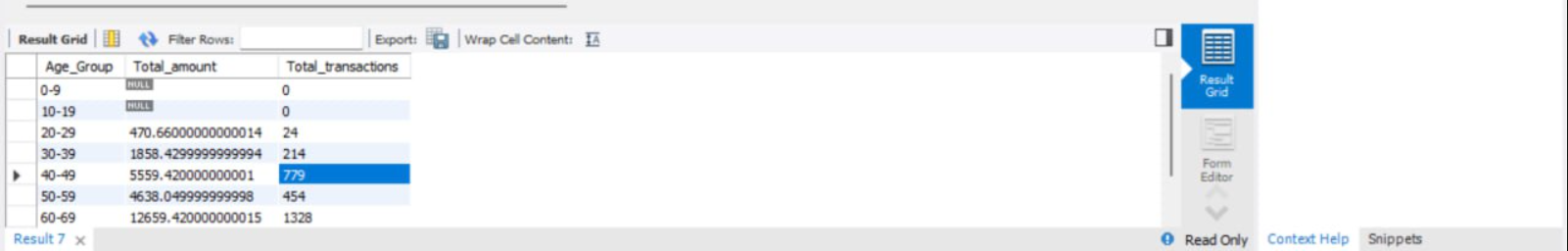
LEFT JOIN

transactions\_info AS t ON c.Id\_client = t.ID\_client

GROUP BY

Age\_Group

ORDER BY

Age\_Group;  
  


-- b. Средние показатели и % поквартально

WITH Monthly\_Age\_Stats AS (

SELECT

DATE\_FORMAT(t.date\_new, '%Y-%m') AS Month,

CASE

WHEN c.Age IS NULL THEN 'Unknown'

WHEN c.Age BETWEEN 0 AND 9 THEN '0-9'

WHEN c.Age BETWEEN 10 AND 19 THEN '10-19'

WHEN c.Age BETWEEN 20 AND 29 THEN '20-29'

WHEN c.Age BETWEEN 30 AND 39 THEN '30-39'

WHEN c.Age BETWEEN 40 AND 49 THEN '40-49'

WHEN c.Age BETWEEN 50 AND 59 THEN '50-59'

WHEN c.Age BETWEEN 60 AND 69 THEN '60-69'

WHEN c.Age BETWEEN 70 AND 79 THEN '70-79'

ELSE '80+'

END AS Age\_Group,

COALESCE(SUM(t.Sum\_payment), 0) AS Total\_amount,

COUNT(t.Id\_check) AS Total\_transactions

FROM

customer\_info AS c

LEFT JOIN

transactions\_info AS t ON c.Id\_client = t.ID\_client

GROUP BY

Month, Age\_Group

)

SELECT

Age\_Group,

SUM(Total\_amount) AS Total\_amount,

SUM(Total\_transactions) AS Total\_transactions,

AVG(Total\_amount) AS Average\_amount\_per\_quarter,

(SUM(Total\_amount) / (SELECT SUM(Total\_amount) FROM Monthly\_Age\_Stats)) \* 100 AS Percentage\_of\_total\_amount,

(SUM(Total\_transactions) / (SELECT SUM(Total\_transactions) FROM Monthly\_Age\_Stats)) \* 100 AS Percentage\_of\_total\_transactions

FROM

Monthly\_Age\_Stats

GROUP BY

Age\_Group

ORDER BY

Age\_Group;  
  
