**Задание 2**

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**Задание 2.1**

Для федерального округа Поволжье выведите динамику суммарных платежей по дням.

\*/

-- *Выделим id\_city которые характерны для Поволжья*

WITH id\_city\_Volga\_region AS (SELECT id\_city

FROM client\_geo

WHERE name\_region = 'Volga Federal District'),

*-- Выделим id\_client которые из Поволжья*

id\_client\_Volga\_region AS (SELECT id\_client

FROM client\_info

WHERE id\_city in (SELECT id\_city FROM id\_city\_Volga\_region))

*-- выведите динамику суммарных платежей по дням*

SELECT date\_trunc('day', to\_Timestamp(time\_payment, 'DD.MM.YY HH24:MI')) AS time\_payment

, SUM(amt\_payment)

FROM payments

WHERE id\_client in (SELECT id\_client FROM id\_client\_Volga\_region)

GROUP BY time\_payment

/\*

**Задание 2.2**

Для каждого города найдите долю мужчин (процент мужчин среди всех клиентов в данном городе).

Ограничьтесь только клиентами, которым от 20 до 40 лет. В выводе используйте названия городов, а не идентификаторы.

\*/

SELECT geo.name\_city

, ROUND(SUM(case WHEN inf.gender = 'm' THEN 1.0 ELSE 0.0 END)

/ count(inf.gender), 2) AS share\_men

FROM client\_info as inf

JOIN client\_geo as geo

ON inf.id\_city = geo.id\_city

AND inf.age BETWEEN 20 AND 40

GROUP BY geo.name\_city

/\*

**Задание 2.3**

Определите средний возраст по тем клиентам, которые ни разу ничего не заплатили.

\*/

SELECT AVG(inf.age)

FROM payments as pay

RIGHT JOIN client\_info as inf

ON pay.id\_client = inf.id\_client

WHERE pay.amt\_payment ISNULL

/\*

**Задание 2.4**

Для каждого федерального округа выделите первые три платежа.

\*/

SELECT name\_region

, id\_client

, time\_payment

, amt\_payment

FROM

(SELECT geo.name\_region

, ROW\_NUMBER()

OVER (PARTITION BY geo.name\_region

ORDER By pay.time\_payment) as num\_payment

, pay.id\_client

, pay.time\_payment

, pay.amt\_payment

FROM payments as pay

JOIN client\_info as inf

ON pay.id\_client = inf.id\_client

JOIN client\_geo as geo

ON inf.id\_city = geo.id\_city

) as t1

WHERE num\_payment <= 3

/\*

**Задание 2.5**

Ограничьтесь клиентами из федеральных округов Южный и Северный.

Для каждого города рассчитайте, сколько в среднем времени проходит между платежами одного клиента.

\*/

WITH t1 as (SELECT pay.id\_client

, geo.name\_city

, geo.name\_region

, to\_Timestamp(pay.time\_payment, 'DD.MM.YY HH24:MI:SS') as time\_pay1

FROM payments as pay

JOIN client\_info as inf

ON pay.id\_client = inf.id\_client

JOIN client\_geo as geo

ON inf.id\_city = geo.id\_city),

t2 as (SELECT \*

, LEAD(time\_pay1)

OVER (PARTITION BY id\_client

ORDER BY time\_pay1) AS time\_pay2

FROM t1

ORDER BY id\_client, time\_pay1)

SELECT DISTINCT name\_city

, AVG(time\_pay2 - time\_pay1)

OVER (PARTITION BY name\_city) as AVG\_delta

FROM t2

WHERE time\_pay2 IS NOT NULL

AND name\_region in ('Southern Federal District', 'Northwestern Federal District')