Моделирование изменения балансов студентов онлайн-школы и визуализация результатов в SQL.

Итог 1.

with first\_payments as

(select

user\_id, min(transaction\_datetime::date) as first\_payment\_date

from skyeng\_db.payments

where status\_name = 'success'

group by user\_id

order by user\_id),

all\_dates as

(select distinct class\_start\_datetime::date as dt

from skyeng\_db.classes

where class\_start\_datetime::date between '2016-01-01' and '2016-12-31'),

all\_dates\_by\_user as

(select

user\_id, dt

from all\_dates

left join first\_payments

on all\_dates.dt >= first\_payments.first\_payment\_date),

payments\_by\_dates as

(select

user\_id, transaction\_datetime::date as payment\_date, sum (classes) as transaction\_balance\_change

from skyeng\_db.payments

where status\_name = 'success'

group by user\_id, payment\_date

order by user\_id),

payments\_by\_dates\_cumsum as

(select

all\_dates\_by\_user.user\_id, all\_dates\_by\_user.dt, payments\_by\_dates.transaction\_balance\_change,

sum (coalesce (transaction\_balance\_change,0)) over (partition by all\_dates\_by\_user.user\_id order by all\_dates\_by\_user.dt rows between unbounded preceding and current row) as transaction\_balance\_change\_cs

from all\_dates\_by\_user

left join payments\_by\_dates

on all\_dates\_by\_user.user\_id = payments\_by\_dates.user\_id

and all\_dates\_by\_user.dt = payments\_by\_dates.payment\_date),

classes\_by\_dates as (select

user\_id,

class\_start\_datetime::date as class\_date,

count(id\_class)\*-1 as classes

from skyeng\_db.classes

where class\_status in ('success', 'failed\_by\_student') and class\_type !='trial'

group by user\_id, class\_date),

classes\_by\_dates\_cumsum as

(select all\_dates\_by\_user.user\_id, dt, classes\_by\_dates.classes,

sum (coalesce (classes,0)) over (partition by all\_dates\_by\_user.user\_id order by all\_dates\_by\_user.dt rows between unbounded preceding and current row) as classes\_cs

from all\_dates\_by\_user

left join classes\_by\_dates

on all\_dates\_by\_user.user\_id = classes\_by\_dates.user\_id

and all\_dates\_by\_user.dt = classes\_by\_dates.class\_date),

balances as (select payments\_by\_dates\_cumsum.user\_id,

payments\_by\_dates\_cumsum.dt,

payments\_by\_dates\_cumsum.transaction\_balance\_change,

payments\_by\_dates\_cumsum.transaction\_balance\_change\_cs,

classes\_by\_dates\_cumsum.classes,

classes\_by\_dates\_cumsum.classes\_cs,

(classes\_by\_dates\_cumsum.classes\_cs + payments\_by\_dates\_cumsum.transaction\_balance\_change\_cs) as balance

from payments\_by\_dates\_cumsum

join classes\_by\_dates\_cumsum

on payments\_by\_dates\_cumsum.user\_id = classes\_by\_dates\_cumsum.user\_id

and payments\_by\_dates\_cumsum.dt = classes\_by\_dates\_cumsum.dt)

select balances.dt,

sum(balances.transaction\_balance\_change) as sum\_transaction\_balance\_change,

sum(balances.transaction\_balance\_change\_cs) as sum\_transaction\_balance\_change\_cs,

sum(balances.classes) as sum\_classes,

sum(balances.classes\_cs) as sum\_classes\_cs,

sum(balances.balance) as sum\_balance

from balances

group by balances.dt

order by balances.dt

Итог 2.

