with first\_payments as (

select user\_id,

date\_trunc('day', min(transaction\_datetime)) first\_payment\_date

from SKYENG\_DB.payments

where status\_name = 'success'

group by user\_id

) ,

all\_dates as (

select distinct date\_trunc('day', class\_start\_datetime) dt

-- , user\_id -- это поле не нужно мы его удаляем

from skyeng\_db.classes

where class\_start\_datetime between '2015-12-31' and '2017-01-01'

order by dt

),

all\_dates\_by\_user as (

select p.user\_id,

d.dt

from first\_payments p

join all\_dates d

on dt >= first\_payment\_date

order by user\_id, dt

),

payments\_by\_dates as (

select user\_id,

date\_trunc('day',transaction\_datetime) 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

) ,

classes\_by\_dates as (

select date\_trunc('day', class\_start\_datetime) class\_date,

user\_id,

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

),

payments\_by\_dates\_cumsum as (

select a.user\_id,

a.dt,

coalesce(b.transaction\_balance\_change, 0) as transaction\_balance\_change,

sum(coalesce(b.transaction\_balance\_change,0)) over (partition by a.user\_id order by a.dt) as transaction\_balance\_change\_cs

from all\_dates\_by\_user a

left join payments\_by\_dates b

on (a.user\_id=b.user\_id and a.dt=b.payment\_date)

order by a.user\_id

),

classes\_by\_dates\_dates\_cumsum as (

select a.user\_id,

a.dt,

coalesce(b.classes,0) as classes,

sum(coalesce(b.classes,0)) over (partition by a.user\_id order by a.dt) as classes\_cs

from all\_dates\_by\_user a

left join classes\_by\_dates b

on (a.user\_id=b.user\_id and a.dt=b.class\_date)

),

balances as (

select a.user\_id,

a.dt,

a.transaction\_balance\_change,

a.transaction\_balance\_change\_cs,

b.classes,

b.classes\_cs,

classes\_cs + transaction\_balance\_change\_cs as balance

from payments\_by\_dates\_cumsum a

join classes\_by\_dates\_dates\_cumsum b using (user\_id, dt)

)

-- select \*

-- from balances

-- order by balance

-- limit 1000

select dt

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

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

, sum(classes) as sum\_classes

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

, sum(balance) as sum\_balance

from balances

group by dt

order by dt