with first\_payments as

(

select user\_id

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

from skyeng\_db.payments a

where status\_name = 'success'

group by user\_id

),

all\_dates as

(

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

from skyeng\_db.classes a

where date\_trunc ('year', class\_start\_datetime) = '2016-01-01'

),

all\_dates\_by\_user as

(

select user\_id

, dt

from first\_payments a

join all\_dates b

on a.first\_payment\_date <= b.dt

),

payments\_by\_dates as

(

select user\_id

, date\_trunc ('day', transaction\_datetime) as payment\_date

, sum (classes) as transaction\_balance\_change

from skyeng\_db.payments

group by user\_id,date\_trunc ('day', transaction\_datetime)

order by user\_id

),

payments\_by\_dates\_cumsum as

(

select c.user\_id

, dt

, COALESCE (transaction\_balance\_change, 0) as transaction\_balance\_change

, sum(COALESCE(transaction\_balance\_change, 0)) over (partition by c.user\_id order by dt) as transaction\_balance\_change\_cs

-- , transaction\_balance\_change-sum (transaction\_balance\_change) over (partition by c.user\_id order by dt)

from all\_dates\_by\_user c

left join payments\_by\_dates d

on c.user\_id=d.user\_id and c.dt=d.payment\_date

),

classes\_by\_dates as

(

select user\_id

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

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

from skyeng\_db.classes

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

group by user\_id, date\_trunc ('day', class\_start\_datetime)

),

classes\_by\_dates\_dates\_cumsum as

(

select c.user\_id

, dt

, COALESCE( classes,0) as classes

, sum (COALESCE(classes,0)) over (partition by c.user\_id order by dt) as classes\_cs

-- , classes-sum (classes ) over (partition by c.user\_id order by dt)

from all\_dates\_by\_user c

left join classes\_by\_dates d

on c.user\_id=d.user\_id and c.dt=d.class\_date

),

balances as

(

select c.user\_id

, c.dt

, c.transaction\_balance\_change

, transaction\_balance\_change\_cs

, d.classes

, classes\_cs

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

from payments\_by\_dates\_cumsum c

join classes\_by\_dates\_dates\_cumsum d

on c.user\_id=d.user\_id and c.dt=d.dt

order by dt

)

select dt

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

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

, sum (classes) as classes

, sum (classes\_cs) as classes\_cs

, sum (balance) as balance

from balances

group by dt

order by dt

limit 1000