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 asc

),

all\_dates as

(

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

from skyeng\_db.classes

where class\_start\_datetime between '2016-01-01 00:00:00' and '2016-12-31 23:59:59'

group by dt

),

all\_dates\_by\_user as

(

select user\_id

, dt

from all\_dates c

join first\_payments d

on c.dt >= d.first\_payment\_date

order by 1,2

),

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 asc

),

payments\_by\_dates\_cumsum as

(

select i.user\_id

, dt

, transaction\_balance\_change

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

from all\_dates\_by\_user i

left join payments\_by\_dates f

on i.user\_id = f.user\_id

and i.dt = f.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 = 'success' or class\_status = 'failed\_by\_student')

and class\_type <>'trial'

group by 1, 2

),

classes\_by\_dates\_dates\_cumsum as

(

select t.user\_id

, dt

, classes

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

from all\_dates\_by\_user t

left join classes\_by\_dates g

on t.user\_id = g.user\_id

and t.dt = g.class\_date

),

balances as

(

select h.user\_id

, h.dt

, transaction\_balance\_change

, transaction\_balance\_change\_cs

, classes

, classes\_cs

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

from payments\_by\_dates\_cumsum h

left join classes\_by\_dates\_dates\_cumsum j

on h.user\_id=j.user\_id

and h.dt=j.dt

)

-- select \*

-- from balances

-- order by user\_id, dt

-- 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