with first\_payments as

(select user\_id

, min(transaction\_datetime)::date as fpd

from skyeng\_db.payments

where status\_name = 'success'

group by user\_id

)

, all\_dates as

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

from skyeng\_db.classes

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

order by dt

)

, all\_dates\_by\_user as

(select user\_id

, dt

from first\_payments

join all\_dates

on all\_dates.dt >= first\_payments.fpd

order by 1, 2

)

, payments\_by\_dates as

(select user\_id

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

, sum(classes) as transaction\_balance\_change

from skyeng\_db.payments

where status\_name = 'success'

group by 1, 2

)

, payments\_by\_dates\_cumsum as

(select adb.user\_id

, adb.dt

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

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

from all\_dates\_by\_user as adb

left join payments\_by\_dates as pbd

on adb.dt = pbd.payment\_date

and adb.user\_id = pbd.user\_id

)

, classes\_by\_dates as

(select user\_id

, date\_trunc('day', 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 1, 2

)

, classes\_by\_dates\_dates\_cumsum as

( select adb.user\_id

, adb.dt

, coalesce(cbd.classes, 0) as classes

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

from all\_dates\_by\_user as adb

left join classes\_by\_dates as cbd

on adb.dt = cbd.class\_date

and adb.user\_id = cbd.user\_id

)

, balances as

(select pbdcs.user\_id

, pbdcs.dt

, transaction\_balance\_change

, transaction\_balance\_change\_cs

, classes

, classes\_cs

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

from payments\_by\_dates\_cumsum as pbdcs

join classes\_by\_dates\_dates\_cumsum as cbdcs

on pbdcs.user\_id = cbdcs.user\_id and pbdcs.dt = cbdcs.dt

order by 1, 2)

-- , balances as

-- (select pbdcs.dt

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

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

-- , sum(classes) as s\_classes

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

-- , sum(classes\_cs + transaction\_balance\_change\_cs) as s\_balance

-- from payments\_by\_dates\_cumsum as pbdcs

-- join classes\_by\_dates\_dates\_cumsum as cbdcs

-- on pbdcs.dt = cbdcs.dt

-- group by 1

-- order by 1)

select \* from balances

--limit 330

limit 1000