Q1. How many users does Wave have?

Should return total number of users you have in your database

SELECT COUNT(u\_id)

FROM users

Count should be performed on the u\_id column

Q2. How many transfers have been sent in the currency CFA?

SELECT COUNT(transfer\_id)

FROM transfers

WHERE send\_amount\_currency = 'CFA'

Count could also be done on the send\_amount\_currency column

Q3. How many different users have sent a transfer in CFA?

SELECT COUNT(DISTINCT(u\_id))

FROM transfers

WHERE send\_amount\_currency = 'CFA'

\*DISTINCT is required to get different users

Q4. How many agent\_transactions did we have in the months of 2018 (broken down by month)?

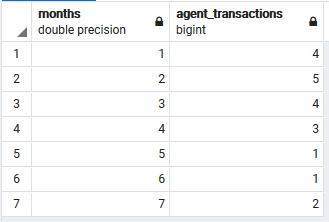
SELECT DATE\_PART('month', when\_created) months, COUNT(agent\_transactions) agent\_transactions

FROM agent\_transactions

WHERE DATE\_PART('year', when\_created)=2018

GROUP BY 1

Sample expected output



Q5. Over the course of last week, how many Wave agents were “net depositors” vs “net withdrawers”?

SELECT AgentType, COUNT(DISTINCT agent\_id)

FROM

(SELECT (agent\_id), SUM(amount) AS net,

CASE WHEN SUM(amount) < 0 THEN 'Net withdrawer'

     WHEN SUM(amount) > 0 THEN 'Net depositor'

END AS AgentType

FROM agent\_transactions

WHERE when\_created > now()-interval '1 week'

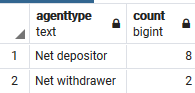
GROUP BY agent\_id) sub

GROUP BY 1

;

Where clause should have a 7-day interval, could be written differently from what is here

Sample expected output



Some students may use subqueries as above or multiple queries to arrive at the result, try them out.

Q6. Build an “atx volume city summary” table: find the volume of agent transactions created in the last week, grouped by city

SELECT agents.city, SUM(ABS(atx.amount)) as transaction\_volume

FROM agent\_transactions atx

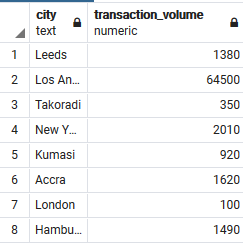
JOIN agents ON atx.agent\_id = agents.agent\_id

WHERE atx.when\_created >= now()-interval '1 week'

GROUP BY agents.city;

\*some consider volume as total amount and others consider it as total number of transactions. Consider both scenarios if a student uses any of them.

Sample expected output

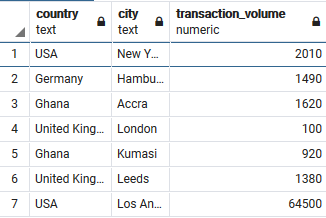


Q7. Now separate the atx volume by country as well (so your columns should be country, city, volume)

now()-interval '1 week'

GROUP BY 1, 2;

Sample expected output



Q8. Build a “send volume by country and kind” table: find the total volume of transfers (by send\_amount\_scalar) sent in the past week, grouped by country and transfer kind.

SELECT SUM(transfers.send\_amount\_scalar) as send\_volume,

       wallets.ledger\_location as country, transfers.kind

FROM transfers

JOIN wallets ON transfers.source\_wallet\_id = wallets.wallet\_id

WHERE transfers.when\_created >= now()-interval '1 week'

GROUP BY 2, 3

SELECT agents.country, agents.city, SUM(ABS(atx.amount)) as transaction\_volume

FROM agent\_transactions atx

JOIN agents ON atx.agent\_id = agents.agent\_id

WHERE atx.when\_created >=

Sample expected output



Q9. Then add columns for transaction count and number of unique senders (still broken down by country and transfer kind)

SELECT SUM(transfers.send\_amount\_scalar) as send\_volume,

       wallets.ledger\_location as country, transfers.kind,

       COUNT(transfers.transfer\_id) as total\_transfers,

       COUNT(DISTINCT transfers.u\_id ) as unique\_senders

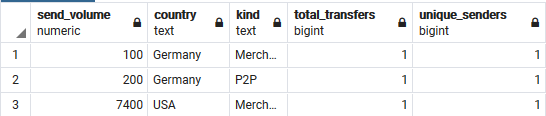
FROM transfers

JOIN wallets ON transfers.source\_wallet\_id = wallets.wallet\_id

WHERE transfers.when\_created >= now()-interval '1 week'

GROUP BY 2, 3

Sample expected output



Q10. Which wallets have sent more than 10,000,000 CFA in transfers in the last month, and how much did they send?

SELECT source\_wallet\_id,

       SUM(send\_amount\_scalar) as volume\_sent,

       send\_amount\_currency, when\_created

FROM transfers

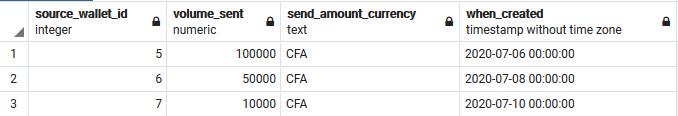
WHERE send\_amount\_scalar > 10000000

      AND send\_amount\_currency = 'CFA'

      AND when\_created >= now()-interval '1 month'

GROUP BY 1,3,4

Sample expected output



\* smaller figure was used in this table. Required columns are wallet id and volume sent