Question 1:

Table: public.session

Column Type

Device\_id character verying

Session\_start timestamp without time zone

Duration integar

Table: public.users

User\_id character varying

Device\_id character varying

Signup\_country character varying

**Using the schema above, Query top 5 device\_id’s by duration in September 2019. Exclude device\_ids with duration less than 20, and assume each device\_id has only one session\_start per month.**

Answer:

-- Seeion\_start Sep 2019

-- Device\_id

-- Expected OUT device\_id

-- order by duration

SELECT device.id

FROM public.session

WHERE MONTH(session\_start) = ‘9’

AND YEAR(session\_start) = ‘2019’

AND duration >= 20

ORDER BY duration

LIMIT 5

Question 2:

**Using the schema above, Query average duration for each month in 2019 in the United States**

Answer:

-- Expect output: Month, avg(duration)

-- device in the US

SELECT MONTH(s.session\_start) AS ‘month’,

AVG(s.duration) AS avg\_dur

FROM public.session AS s

JOIN public-users AS u

ON u.device\_id = s.device\_id

WHERE u.signup\_country = ‘United States’

AND YEAR(s.session\_start) = ‘2019’

GROUP BY MONTH(s.session\_start)

Question 3

**Using the schema above, Query top 5 users by duration for each month in 2020. Assume that each user can have multiple session\_starts per month.**

Answer:

-- OUTPUT: user\_id,

-- JOIN user - device - session - duration

SELECT u.user\_id,MONTH(s.session\_start)

, AVG(s.duration) OVER(

FROM public.user AS u

JOIN public.session AS s

ON u.device\_id = s.device\_id