Users By Average Session Time

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Interview Question Date: July 2021

Meta facebook Medium Interview Questions ID 10352

Calculate each user's average session time. A session is defined as the time difference between a page_load and page_exit. For simplicity, assume a user has only 1 session per day and if there are multiple of the same events on that day, consider only the latest page_load and earliest page_exit. Output the user_id and their average session time.

Table: facebook_web_log

facebook_web_log

user_id:	int
timestamp:	datetime
action:	varchar

Your Solution:

user_id	avg(lag_)
0	1883.5
1	35

Query 1 -
Initially reached for solution

Query 2 -
Otimizing it to make it short and more efficient

Check both Query --->

```sql
with case_ as
(
  select
    *,
    day(timestamp) as day_
  from
    facebook_web_log
  where
    action in ('page_load', 'page_exit')
  order by
    1 desc,2 desc
)
select user_id, avg(lag_)
from
  (
    select  sub1.*,
      timestampdiff(second, timestamp, LAG(sub1.timestamp) OVER(partition by user_id, day_)) as lag_
    from
      (
        select sub.*
        from
          (
            select *, dense_rank() over(partition by action, user_id,  day_  order by timestamp desc ) as rank_
            from
              case_
          ) sub
        where
          rank_ = 1
      ) sub1
  ) sub2
where
  lag_ is not null
group by
  user_id
```

```sql
SELECT user_id, AVG(TIMESTAMPDIFF(SECOND, load_time, exit_time)) AS session_time
FROM (
    SELECT
        DATE(timestamp),
        user_id,
        MAX(IF(action = 'page_load', timestamp, NULL)) as load_time,
        MIN(IF(action = 'page_exit', timestamp, NULL)) as exit_time
    FROM facebook_web_log
    GROUP BY 1, 2
) t
GROUP BY user_id
HAVING session_time IS NOT NULL;
```