



SQL OF THE DAY

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PROBLEMS

Users by Average Session Time

https://platform.stratascratch.com/coding/10352-users-by-avg-session-time?code_type=1

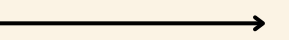
Problem:

Calculate each user's average session time.

A session is defined as the time between page_load and page_exit on the same day.

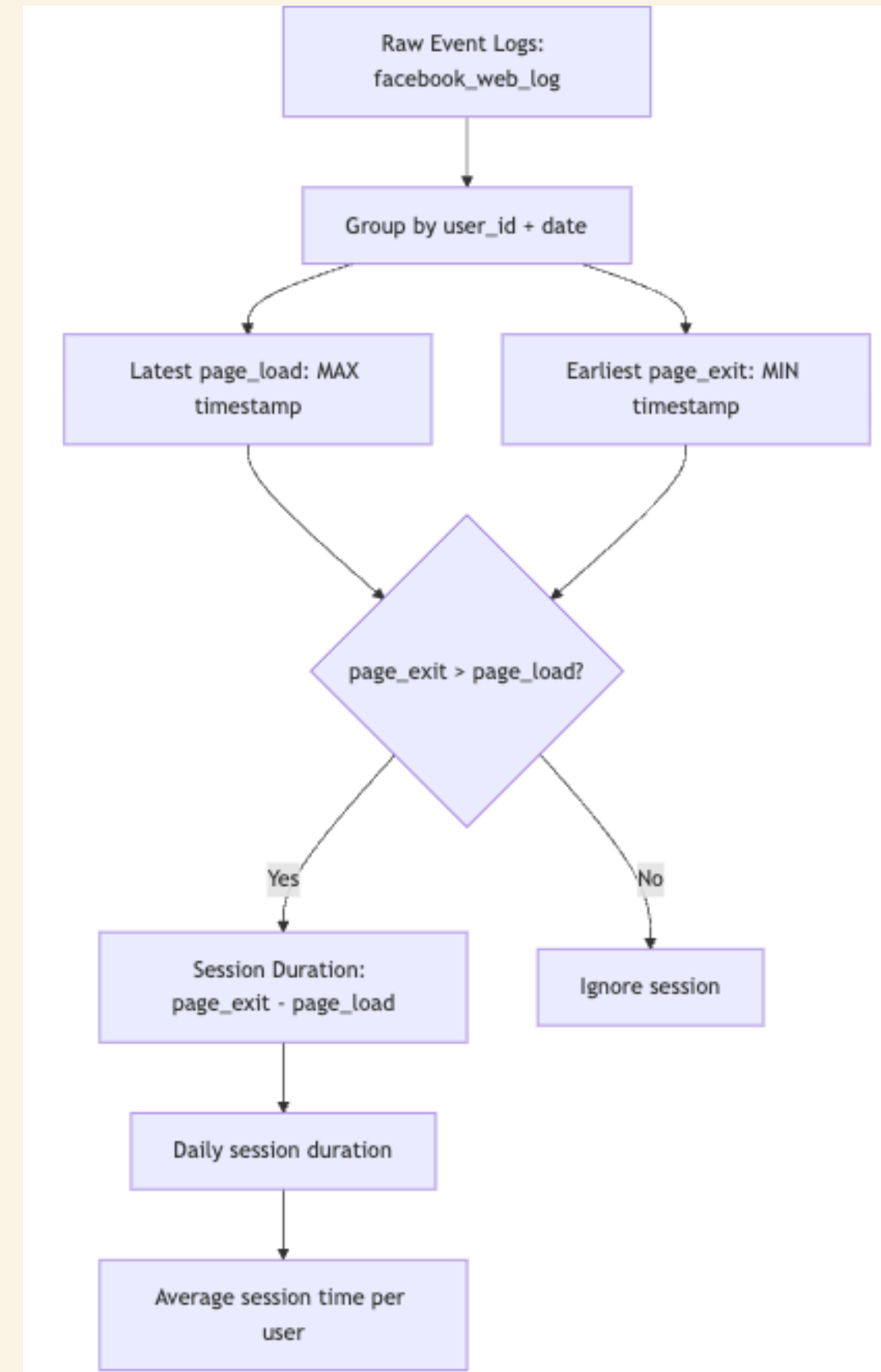
Rules:

- Each user has only one session per day
- If there are multiple events, use:
 - latest page_load
 - earliest page_exit
- Only count sessions where page_load happens before page_exit



SOLUTION

```
with sessions as (  
  select  
    user_id,  
    date(timestamp) as session_date,  
    max(case when action = 'page_load' then timestamp end) as  
page_load,  
    min(case when action = 'page_exit' then timestamp end) as page_exit  
  from facebook_web_log  
  group by user_id, date(timestamp)  
)  
,  
daily_session as (  
  select  
    user_id,  
    session_date,  
    case  
      when page_exit > page_load  
      then extract(epoch from (page_exit - page_load))  
      else 0  
    end as session_duration_seconds  
  from sessions  
)  
select  
  user_id,  
  avg(session_duration_seconds) as average_session  
from daily_session  
group by user_id  
having avg(session_duration_seconds) > 0;
```



KEY TAKEAWAYS

- Custom business logic and definitions are often used in real-world analytics. In this case, clearly understanding what a “session” means is critical before writing any query.
- Time-based analysis like this is common in product, marketing, and growth analytics.
- Session analysis helps us understand user engagement. Short sessions can signal user confusion, low relevance, or poor web UX. Monitoring this metric over time can also act as an early indicator that something might be wrong.



Let's
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