



SQL OF THE DAY

NIVAN R. SUGIANTORO



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.

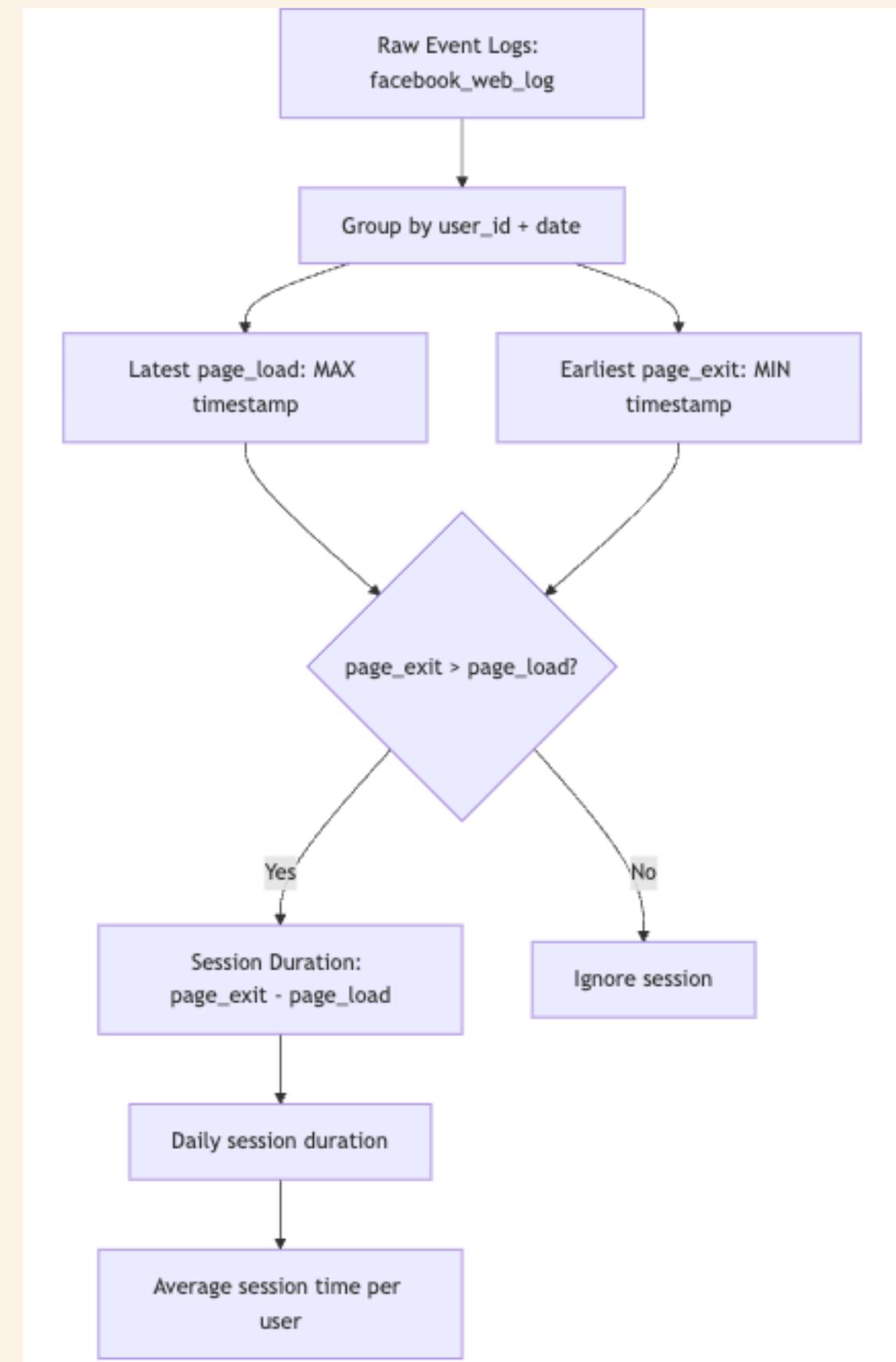
Rules:

- 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
Connect

nivanrs@gmail.com