

Seekho Assignment

Q1. WITH first_activity AS (

SELECT user_id, MIN(activity_date) AS first_date

FROM user_activity

GROUP BY user_id

),

next_day_return AS (

SELECT DISTINCT ua.user_id, fa.first_date, ua.activity_date AS return_date

FROM first_activity fa

JOIN user_activity ua

ON fa.user_id = ua.user_id

AND ua.activity_date = DATE_ADD(fa.first_date, INTERVAL 1 DAY)

)

SELECT

fa.first_date AS activity_date,

COUNT(fa.user_id) AS new_users,

COUNT(ندر.user_id) AS returned_users,

ROUND(COUNT(ندر.user_id) / NULLIF(COUNT(fa.user_id), 0), 2) AS day_1_retention_rate

FROM first_activity fa

LEFT JOIN next_day_return ndr

ON fa.user_id = ndr.user_id

GROUP BY fa.first_date

ORDER BY fa.first_date;

Q 2. WITH prev_event AS (

SELECT

user_id,

event_time,

LAG(event_time) OVER (PARTITION BY user_id ORDER BY event_time) AS

prev_event_time

FROM user_events

),

session_flag AS (

SELECT

user_id,

event_time,

CASE

WHEN prev_event_time IS NULL OR TIMESTAMPDIFF(MINUTE, prev_event_time,
event_time) > 30

THEN 1

ELSE 0

END AS new_session_flag

FROM prev_event

),

session_assignment AS (

SELECT

user_id,

event_time,

SUM(new_session_flag) OVER (PARTITION BY user_id ORDER BY event_time) AS
session_id

FROM session_flag

)

SELECT

```
user_id,  
session_id,  
MIN(event_time) AS session_start_time,  
MAX(event_time) AS session_end_time,  
SEC_TO_TIME(TIMESTAMPDIFF(SECOND, MIN(event_time), MAX(event_time))) AS  
session_duration,  
COUNT(*) AS event_count  
FROM session_assignment  
GROUP BY user_id, session_id  
ORDER BY user_id, session_start_time;
```

Q3. You are tasked with increasing the Day-on-Day (DoD) retention of users on the Seekho app. Currently, many users sign up and engage with content initially, but their activity drops off after the first day. What changes would you suggest to improve Day-on-Day retention? Consider both product features and data-driven strategies in your response.

Ans: In order to improve Day-on-Day (DoD) retention on the Seekho app, we need to focus on enhancing user experience and leveraging data-driven insights.

- **Personalize the onboarding process** by asking users about their interests and recommending content accordingly.
- **Provide interactive tutorials** that guide users through key features of the app.
- **Enable a download feature** so users can save content and watch it anytime, even offline.
- **Send notifications based on user activity**, such as reminding them to continue an unfinished course.
- **Offer mentor lectures** explaining how the course skillset can be valuable for career growth.
- **Encourage first-day engagement** by setting small milestones, like completing a quiz or watching a lesson.
- **Email updates** to share learning progress, trending topics, or upcoming live sessions.