

A guide and practice questions for calculating common fitness centre metrics in SQL, such as churn rate and at-risk members.

Definitions

Churn Rate:

The percentage of members at the start of a period who cancelled during that period. Divide by the count at the start of the period, not the end, or you'll understate churn.

Formula: $\text{cancelled_in_period} / \text{members_at_start} \times 100$

At-Risk Member:

An active member who hasn't visited in 30 or more days, or has never visited. They're still paying but not using the gym, which often comes just before a cancellation.

Formula: $\text{MAX}(\text{visit_date}) < \text{CURRENT_DATE} - 30 \text{ days}$ OR $\text{MAX}(\text{visit_date}) \text{ IS NULL}$

MRR (Monthly Recurring Revenue):

The total monthly revenue from all active memberships. It shows what the gym is earning right now.

Formula: $\text{SUM}(\text{monthly_amount}) \text{ WHERE ended_at IS NULL}$

Practice Questions

Here are some practice questions you can try to answer on the data set:

1. MRR by plan: What is the current MRR for each plan (\$45, \$65 and \$95)? Which plan brings in the most revenue?
2. Members per plan: How many active members are on each plan?
3. Never visited: Which active members have never visited the gym at all?
4. Churn rate for June 2024: What was the churn rate for June 2024?
5. Average membership length: For cancelled memberships, what was the average number of days between `started_at` and `ended_at`?
6. Returning members: Which members cancelled and later rejoined? (Look for members with more than one membership row.)
7. Session length by plan: What is the average visit `duration_minutes` for members on each plan? Do Premium members stay longer?
8. Busiest day of the week: Which day of the week gets the most visits?
9. Visits per month: How many visits were there each month? Use `DATE_TRUNC` to see the trend over time.
10. Rank your most engaged members: List active members ranked by number of visits in the last 90 days, using a window function such as `RANK()`.