SQL OF THE DAY

💻 PREMIUM VS FREEMIUM

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NIVAN R. SUGIANTORO

PROBLEMS

Problem:

Find the total number of downloads for paying and non-paying users by date. Include only records where non-paying customers have more downloads than paying customers. The output should be sorted by earliest date first and contain 3 columns date, non-paying downloads, paying downloads. Hint: In Oracle you should use "date" when referring to date column (reserved keyword).

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SOLUTION

✳️ Logic breakdown

- Combine all tables

Join fact and dimension tables to get downloads and payment status in one dataset.

- Separate paying vs non-paying users

Use case when to identify each group.

- Aggregate by date

Use sum() because we are grouping daily downloads.

- Filter with having

Keep only dates where non-paying downloads exceed paying downloads. Having is used when filtering after aggregation, not before.

```sql
with raw as (
    select
        df.date,
        df.downloads,
        ad.paying_customer
    from ms_download_facts df
    join ms_user_dimension ud
        on df.user_id = ud.user_id
    join ms_acc_dimension ad
        on ad.acc_id = ud.acc_id
)
select
    date,
    sum(case when paying_customer = 'no' then downloads end) as
non_paying,e when paying_customer = 'yes' then downloads end) as paying
from raw
group by date
having
    sum(case when paying_customer = 'no' then downloads end) >
    sum(case when paying_customer = 'yes' then downloads end)
order by date;
```
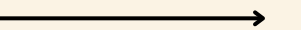
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THIS PATTERN TELLS YOU:

- Your free tier has strong engagement
- But you might be leaving conversion opportunities on the table
- Your pricing could be misaligned with user behavior
- Consider what's stopping free users from converting (price point? perceived value? timing?)

KEY TAKEAWAYS

- Understanding the table structure and relationships is critical before writing joins.
- This analysis helps monitor customer behavior, especially freemium usage patterns.
- Daily comparisons like this are useful for conversion analysis, product strategy, and pricing decisions.

Let's
Connect

nivanrs@gmail.com