

Day12 - Feb 17th 2024

1. Woke up late as it was weekend
2. Cooked food for myself and friends
3. Solved 6 problems on leetcode

The screenshot shows a LeetCode profile page for user 'PUBG\_Kaushik'. The profile has a rating of 1,605.29 and 62 solved problems. The 'Community Stats' section shows 26 views, 1 solution, 0 discussions, and 0 reputation. The 'Languages' section shows 34 problems solved in MySQL and 28 in Python3. The 'Skills' section lists 'Advanced' (Divide and Conquer x3, Data Stream x1, Quickselect x1) and 'Intermediate'. The 'Recent AC' section lists six problems: 'Product Price at a Given Date' (an hour ago), 'Consecutive Numbers' (3 hours ago), 'Triangle Judgement' (6 hours ago), 'Primary Department for Each Employee' (6 hours ago), 'The Number of Employees Which Report to Each Employee' (13 hours ago), and 'Customers Who Bought All Products' (13 hours ago). The 'Feb LeetCode Challenge' badge is locked. The bottom of the page shows a Windows taskbar with the date 2/17/2024 and time 11:15 PM.

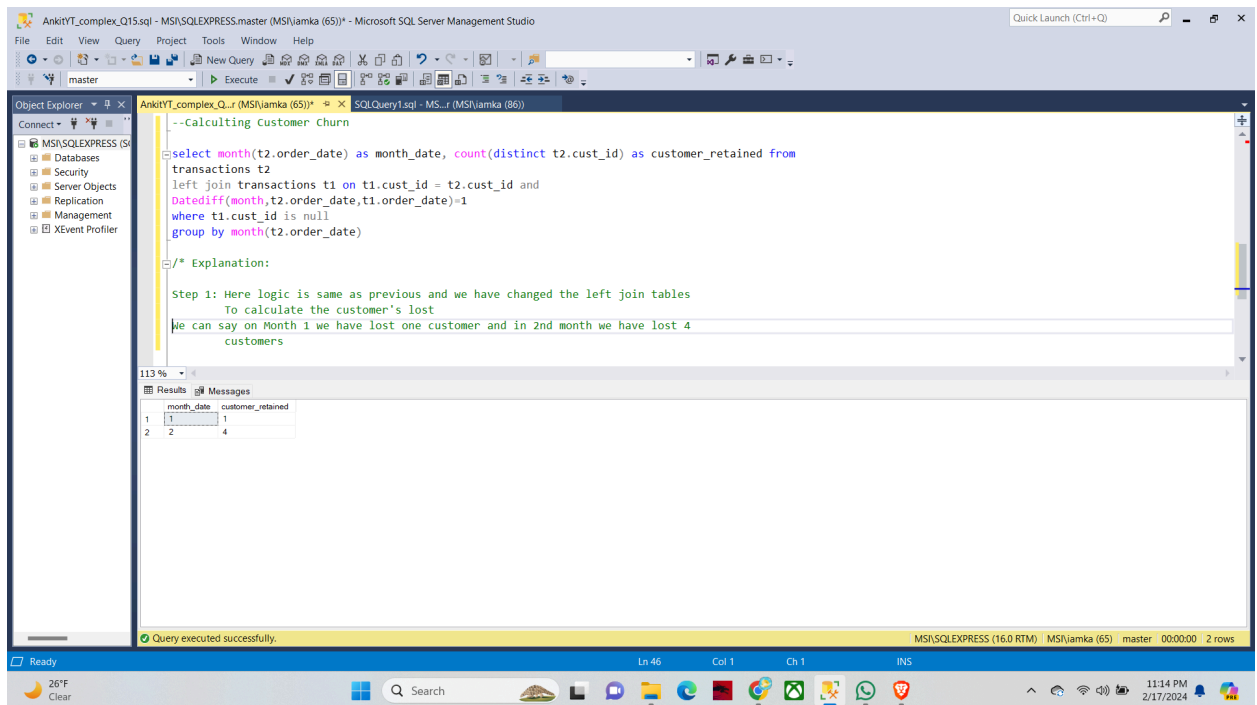
4. Wasted lot of time debugging the error from a leetcode test case

The screenshot shows a LeetCode submission page for the problem 'Product Price at a Given Date'. The submission is for a MySQL query. The query is as follows:

```
29 -- where change_date = '2019-08-16'
30
31
32 -- select product_id from Products
33 -- where change_date = '2019-08-16'
34
35 -- select * from Products
36 -- where product_id = 51
37
38 -- with cte as(
39 -- select product_id,max(change_date),max(price) as change_date
40 -- from Products
41 -- where change_date <='2019-08-16'
42 -- group by product_id)
43 -- select C.product_id,P.new_price as price,C.change_date
44 -- from cte C
45 -- left join Products P on C.change_date = P.change_date
46
47 -- with cte as(
48 -- select product_id,max(change_date) as change_date
49 -- from Products
50 -- where change_date <='2019-08-16'
51 -- group by product_id),
52 -- cte2 as (
53 -- select C.product_id,P.new_price as price,C.change_date
54 -- from cte C
55 -- left join Products P on C.change_date = P.change_date)
56 -- select product_id,max(price) as price
57 -- from cte2
58 -- group by product_id,change_date
59
60 -- union
61
62 -- select distinct(product_id),10 as price from Products
63 -- group by product_id having (min(change_date) > "2019-08-16")
64
65
66 -- select distinct product_id, 10 as price
67 -- from Products
68 -- group by product_id
69 -- having (min(change_date) > "2019-08-16")
70
71
72
73 -- select product_id,new_price,case when change_date <= '2019-08-16' then change_date end as change_date
74 -- from Products
```

The bottom of the page shows a Windows taskbar with the date 2/17/2024 and time 11:15 PM.

## 5. Finally solved one real world SQL problems from Ankit's YT



### Customer Retention:

- **What it measures:** The percentage of customers who **continue doing business with you** during a specific period.
- **It's good:** A high retention rate means you're successfully keeping customers engaged and satisfied, leading to repeat business and higher lifetime value.
- **Example:** If you have 100 customers at the start of the month and 90 remain at the end, your retention rate for that month is 90%.

### Customer Churn:

- **What it measures:** The percentage of customers who **stop doing business with you** during a specific period.
- **It's bad:** A high churn rate indicates you're losing customers, which can harm your revenue and growth.
- **Example:** Using the same scenario as above, if 10 customers churn (leave), your churn rate for that month is 10%.

6.