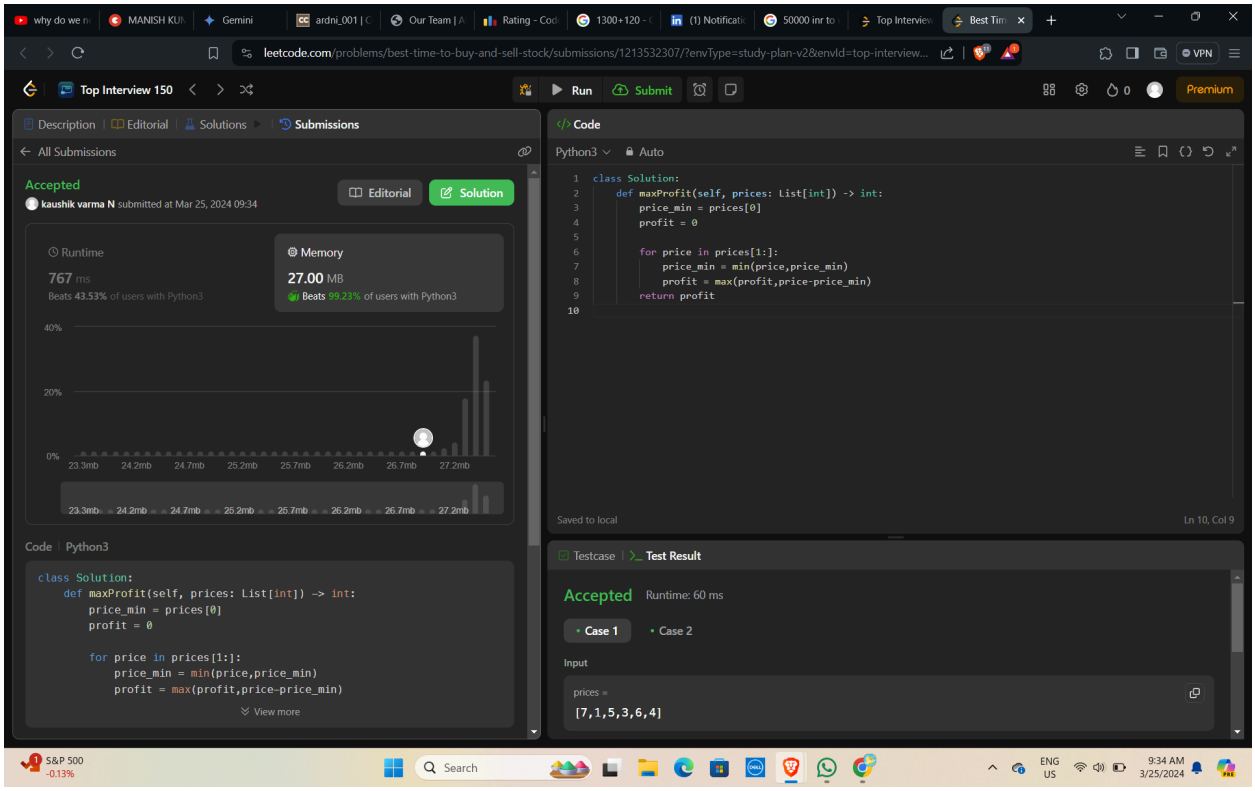
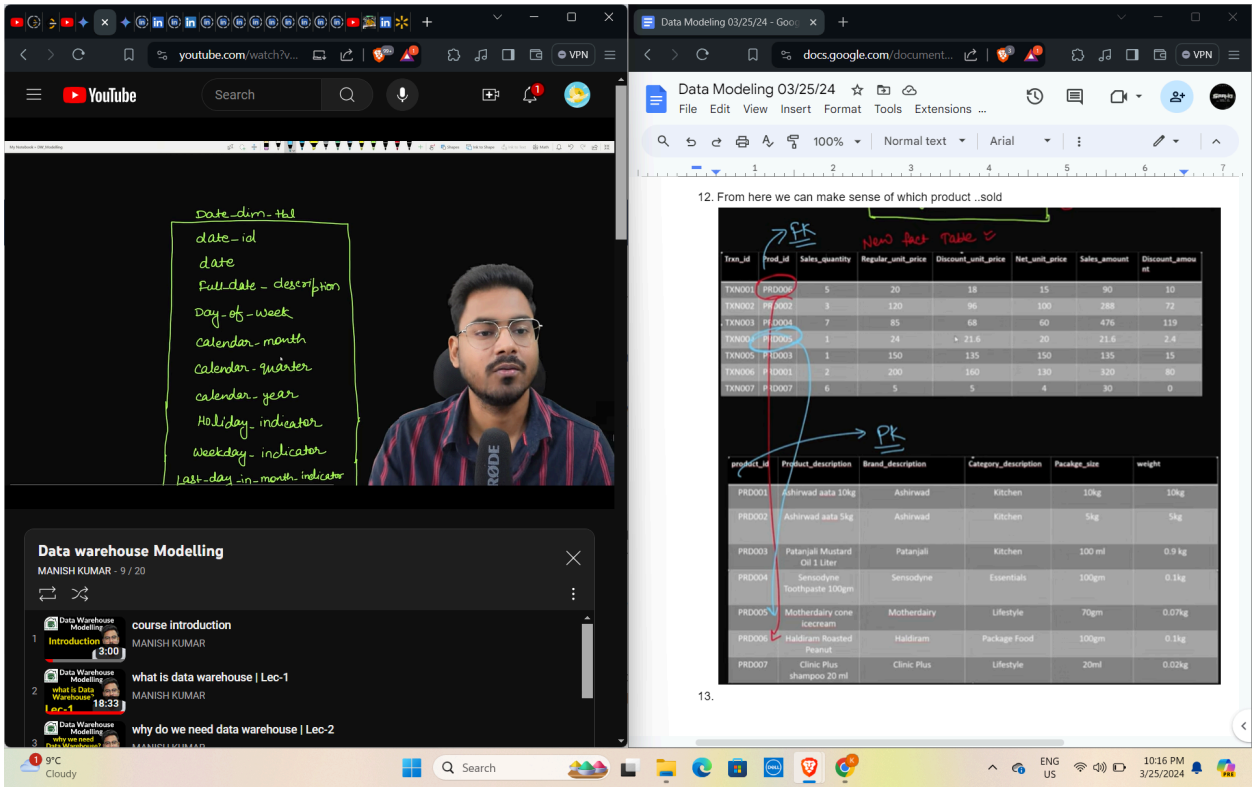
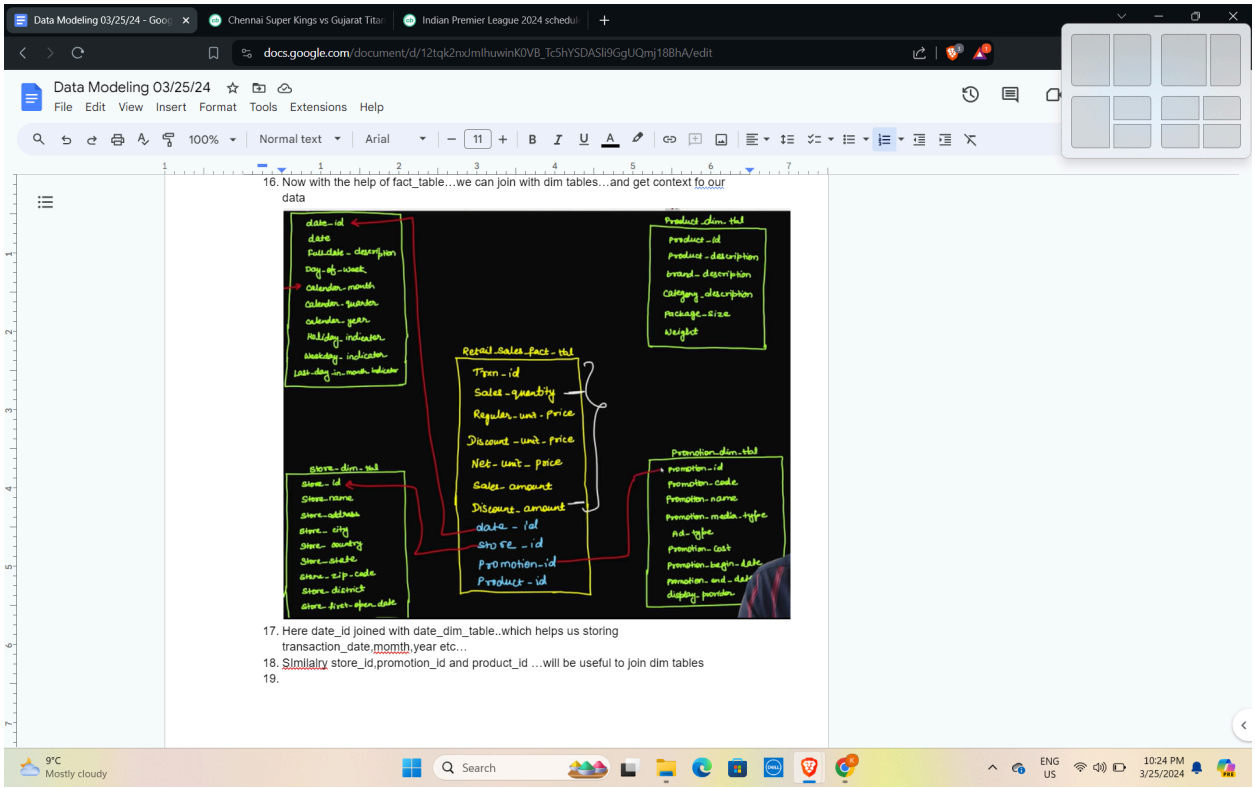
Day49 - March 25th 2024

1. Started my day as usual
2. Solved one leetcode problem

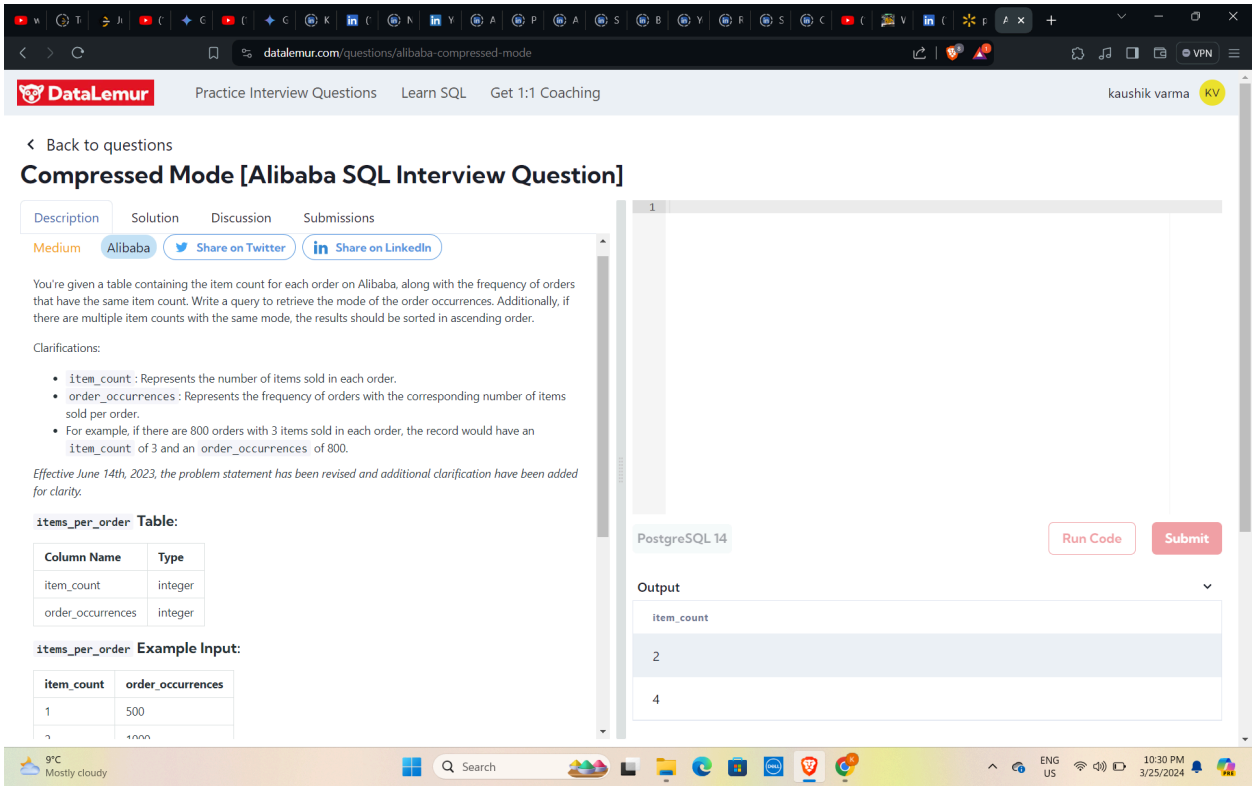


3. Currently learning data modeling from manish kumar





4. More about the doc : Data Modeling 03/25/24
5. Ended my day by solving complex SQL questions from DataLemur


datalemur.com/questions/alibaba-compressed-mode
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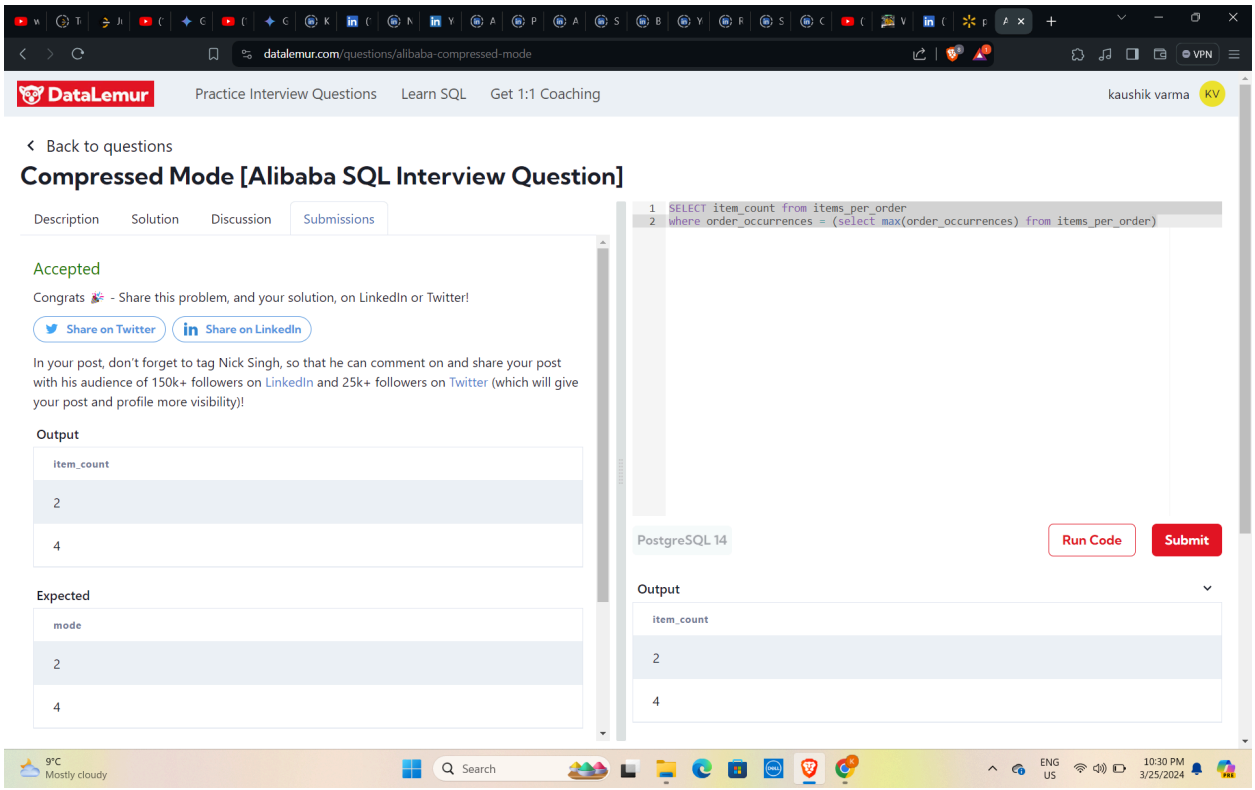
Compressed Mode [Alibaba SQL Interview Question]
Description
Solution
Discussion
Submissions
Medium
Alibaba
Share on Twitter
Share on LinkedIn
You're given a table containing the item count for each order on Alibaba, along with the frequency of orders that have the same item count. Write a query to retrieve the mode of the order occurrences. Additionally, if there are multiple item counts with the same mode, the results should be sorted in ascending order.
Clarifications:
item_count : Represents the number of items sold in each order.
order_occurrences : Represents the frequency of orders with the corresponding number of items sold per order.
For example, if there are 800 orders with 3 items sold in each order, the record would have an item_count of 3 and an order_occurrences of 800.
Effective June 14th, 2023, the problem statement has been revised and additional clarification have been added for clarity.
items_per_order Table:
Column Name
Type
item_count
integer
order_occurrences
integer
items_per_order Example Input:
item_count
order_occurrences
1
500
PostgreSQL 14
Run Code
Submit
Output
item_count
2
4
9°C
Mostly cloudy
Search
ENG
US
10:30 PM
3/25/2024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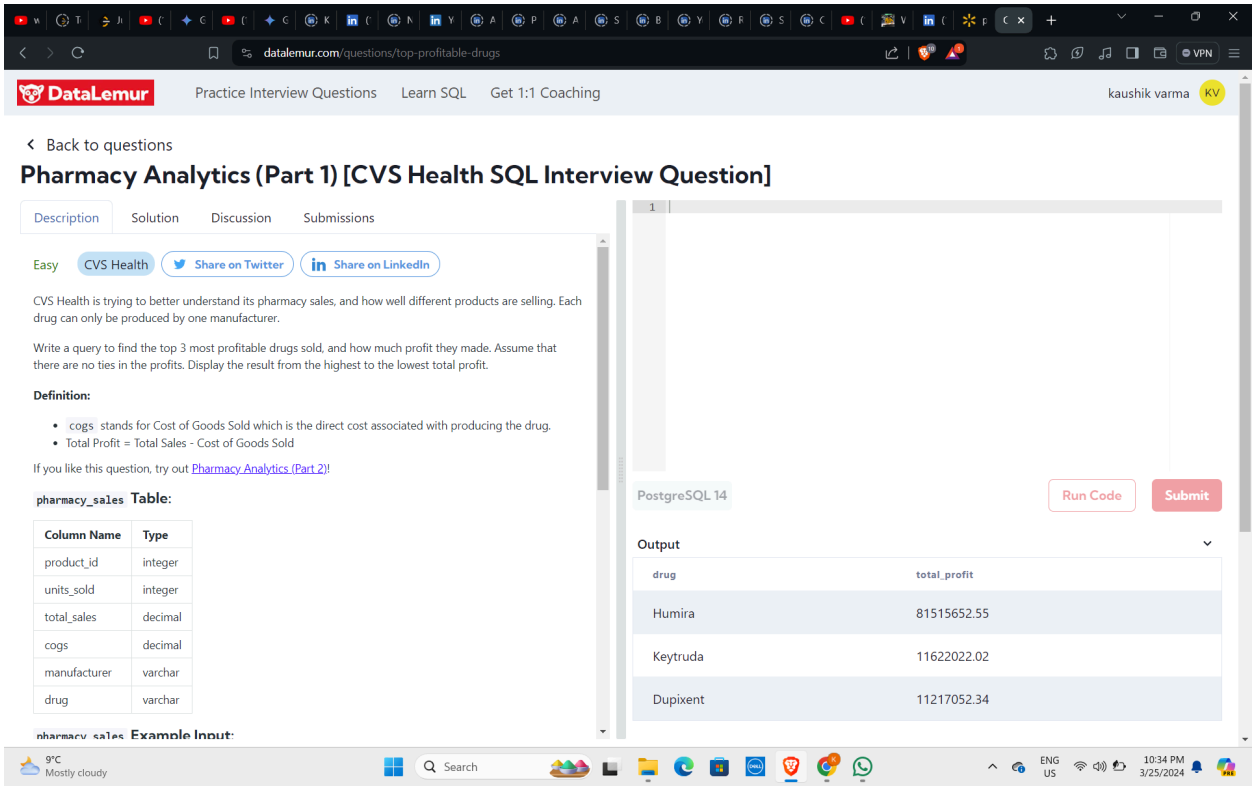
Compressed Mode [Alibaba SQL Interview Question]
Description
Solution
Discussion
Submissions
Accepted
Congrats - Share this problem, and your solution, on LinkedIn or Twitter!
Share on Twitter
Share on LinkedIn
In your post, don't forget to tag Nick Singh, so that he can comment on and share your post with his audience of 150k+ followers on LinkedIn and 25k+ followers on Twitter (which will give your post and profile more visibility)!
Output
item_count
2
4
Expected
mode
2
4
SELECT item_count from items_per_order
where order_occurrences = (select max(order_occurrences) from items_per_order)
PostgreSQL 14
Run Code
Submit
Output
item_count
2
4
9°C
Mostly cloudy
Search
ENG
US
10:30 PM
3/25/2024


datalemur.com/questions/top-profitable-drugs
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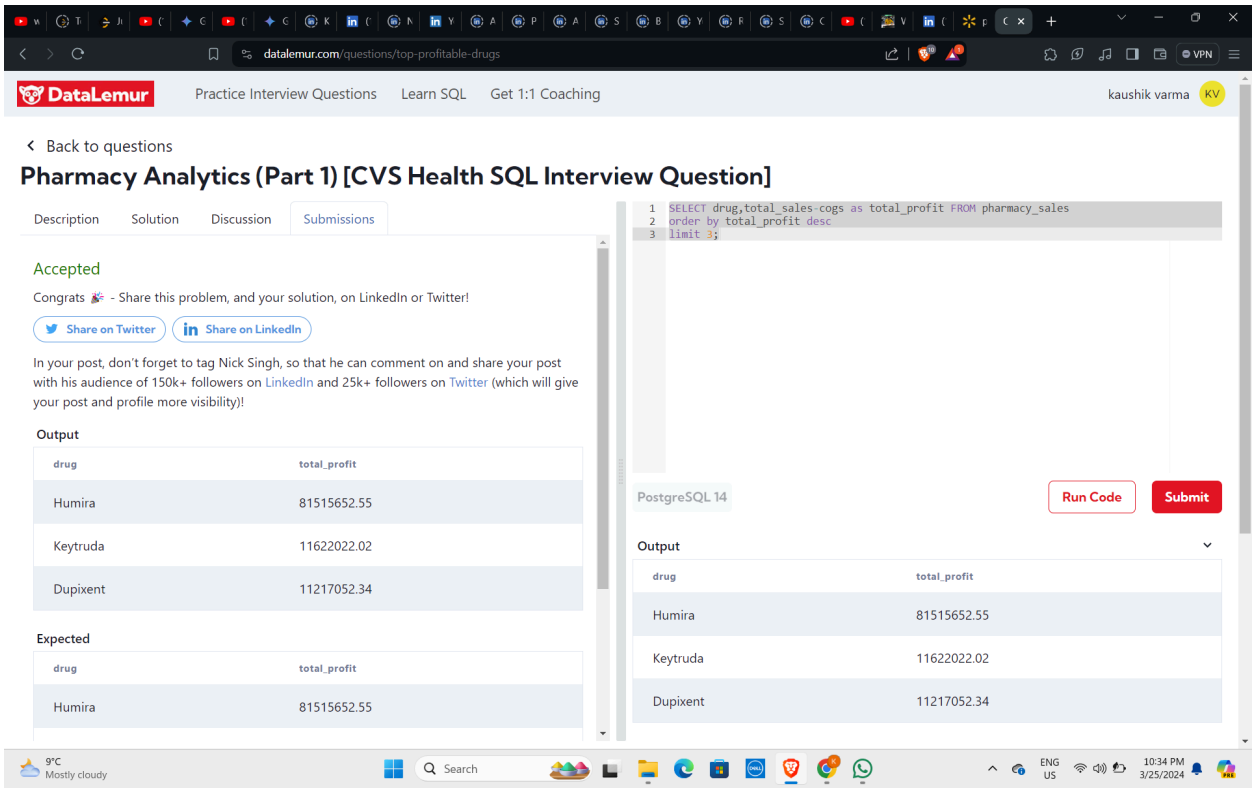
Pharmacy Analytics (Part 1) [CVS Health SQL Interview Question]
Description
Solution
Discussion
Submissions
Easy
CVS Health
Share on Twitter
Share on LinkedIn
CVS Health is trying to better understand its pharmacy sales, and how well different products are selling. Each drug can only be produced by one manufacturer.
Write a query to find the top 3 most profitable drugs sold, and how much profit they made. Assume that there are no ties in the profits. Display the result from the highest to the lowest total profit.
Definition:
cogs stands for Cost of Goods Sold which is the direct cost associated with producing the drug.
Total Profit = Total Sales - Cost of Goods Sold
If you like this question, try out Pharmacy Analytics (Part 2)!
pharmacy_sales Table:
Column Name
Type
product_id
integer
units_sold
integer
total_sales
decimal
cogs
decimal
manufacturer
varchar
drug
varchar
pharmacy_sales Example Input:
PostgreSQL 14
Run Code
Submit
Output
drug
total_profit
Humira
81515652.55
Keytruda
11622022.02
Dupixent
11217052.34
9°C
Mostly cloudy
Search
ENG
US
10:34 PM
3/25/2024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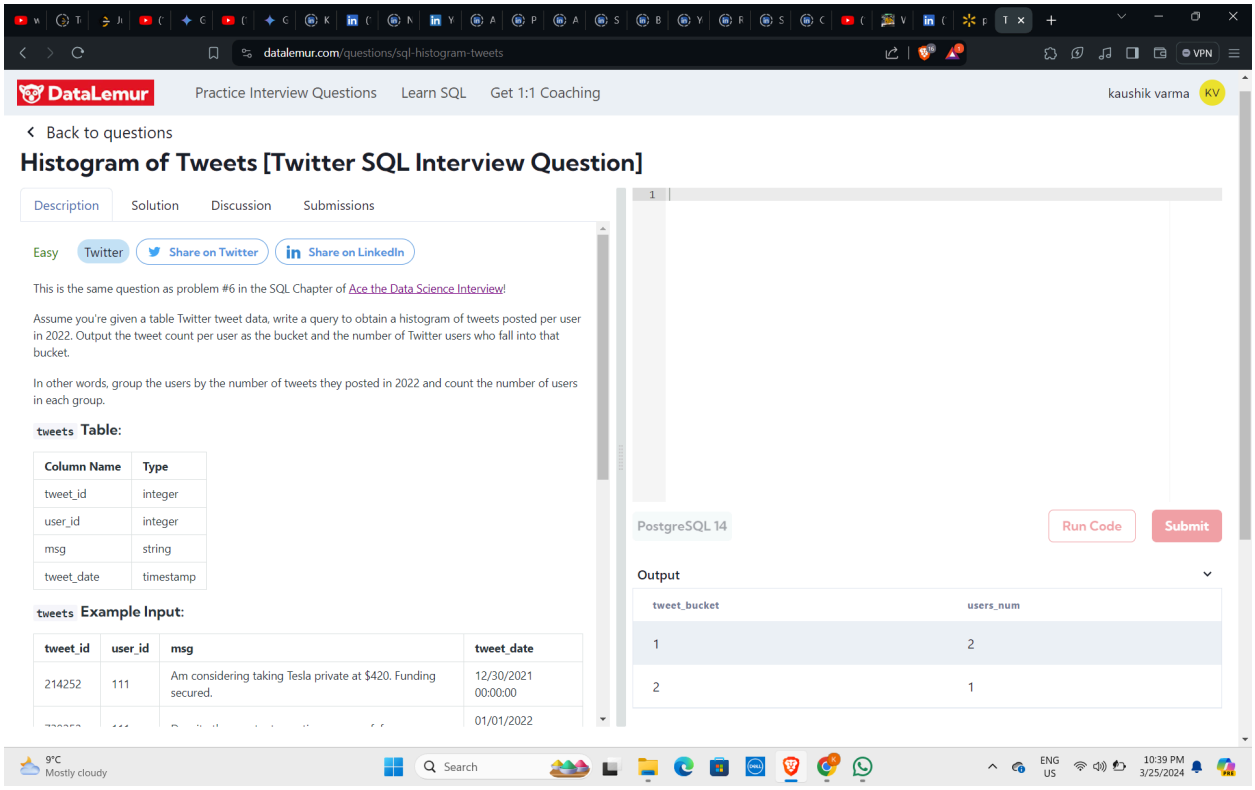
Pharmacy Analytics (Part 1) [CVS Health SQL Interview Question]
Description
Solution
Discussion
Submissions
SELECT drug,total_sales-cogs as total_profit FROM pharmacy_sales
order by total_profit desc
limit 3;
Accepted
Congrats - Share this problem, and your solution, on LinkedIn or Twitter!
Share on Twitter
Share on LinkedIn
In your post, don't forget to tag Nick Singh, so that he can comment on and share your post with his audience of 150k+ followers on LinkedIn and 25k+ followers on Twitter (which will give your post and profile more visibility)!
Output
drug
total_profit
Humira
81515652.55
Keytruda
11622022.02
Dupixent
11217052.34
Expected
drug
total_profit
Humira
81515652.55
PostgreSQL 14
Run Code
Submit
Output
drug
total_profit
Humira
81515652.55
Keytruda
11622022.02
Dupixent
11217052.34
9°C
Mostly cloudy
Search
ENG
US
10:34 PM
3/25/2024


datalemur.com/questions/sql-histogram-tweets
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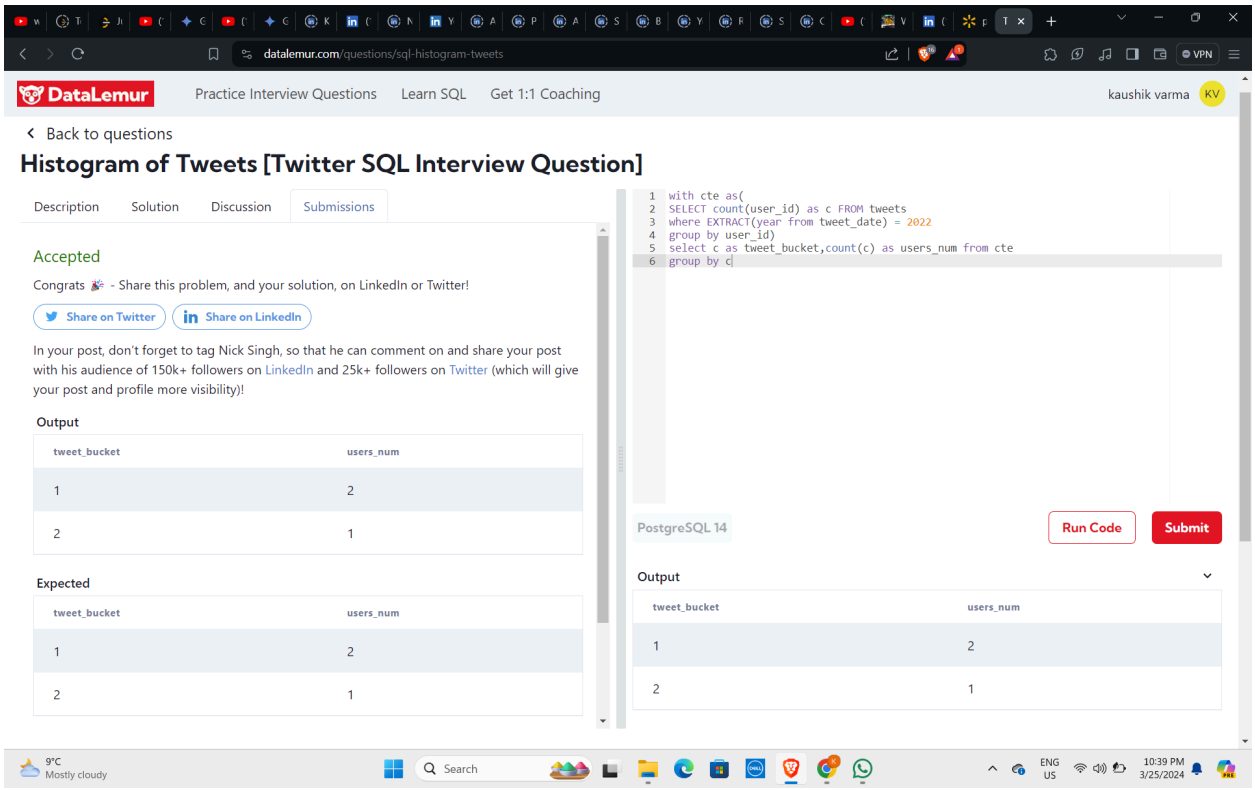
Histogram of Tweets [Twitter SQL Interview Question]
Description
Solution
Discussion
Submissions
Easy
Twitter
Share on Twitter
Share on LinkedIn
This is the same question as problem #6 in the SQL Chapter of Ace the Data Science Interview!
Assume you're given a table Twitter tweet data, write a query to obtain a histogram of tweets posted per user in 2022. Output the tweet count per user as the bucket and the number of Twitter users who fall into that bucket.
In other words, group the users by the number of tweets they posted in 2022 and count the number of users in each group.
tweets Table:
Column Name
Type
tweet_id
integer
user_id
integer
msg
string
tweet_date
timestamp
tweets Example Input:
tweet_id
user_id
msg
tweet_date
214252
111
Am considering taking Tesla private at $420. Funding secured.
12/30/2021 00:00:00
01/01/2022
PostgreSQL 14
Run Code
Submit
Output
tweet_bucket
users_num
1
2
2
1
9°C
Mostly cloudy
Search
ENG
US
10:39 PM
3/25/2024


datalemur.com/questions/sql-histogram-tweets
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Description
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Discussion
Submissions
Accepted
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Share on Twitter
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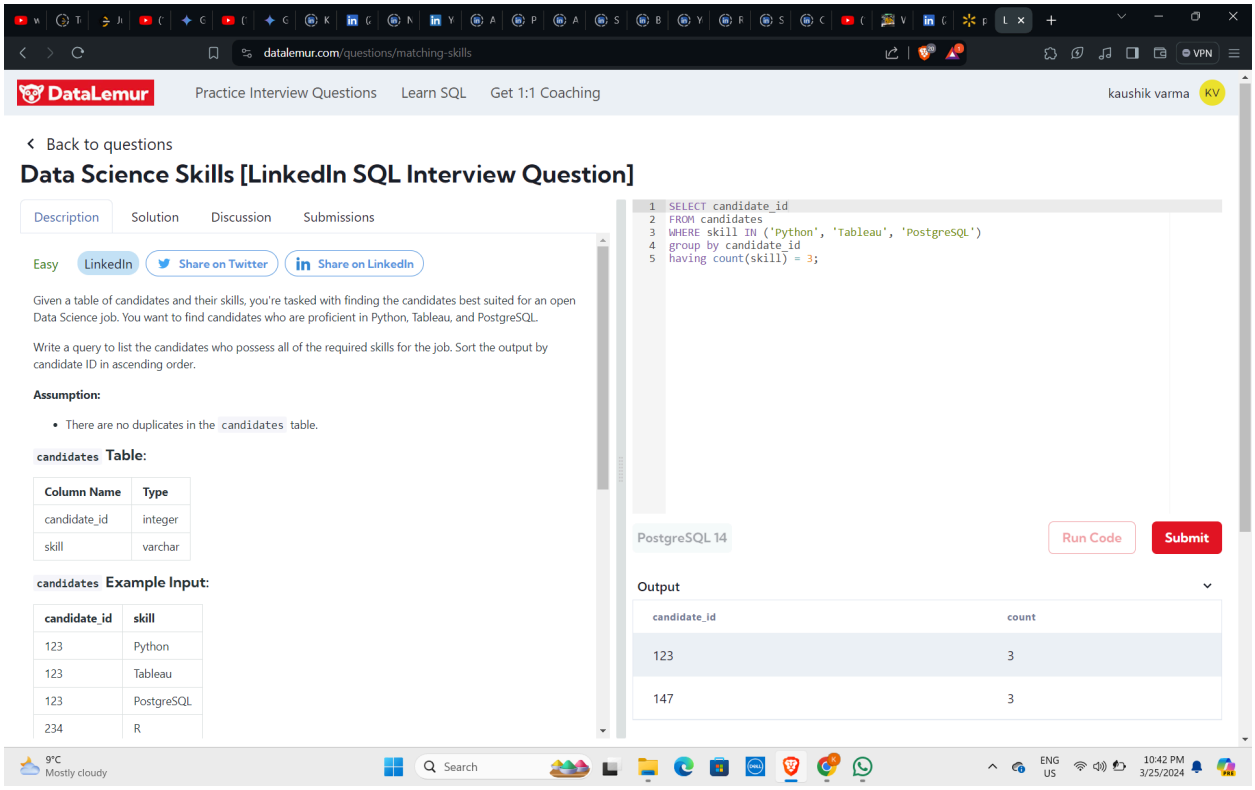
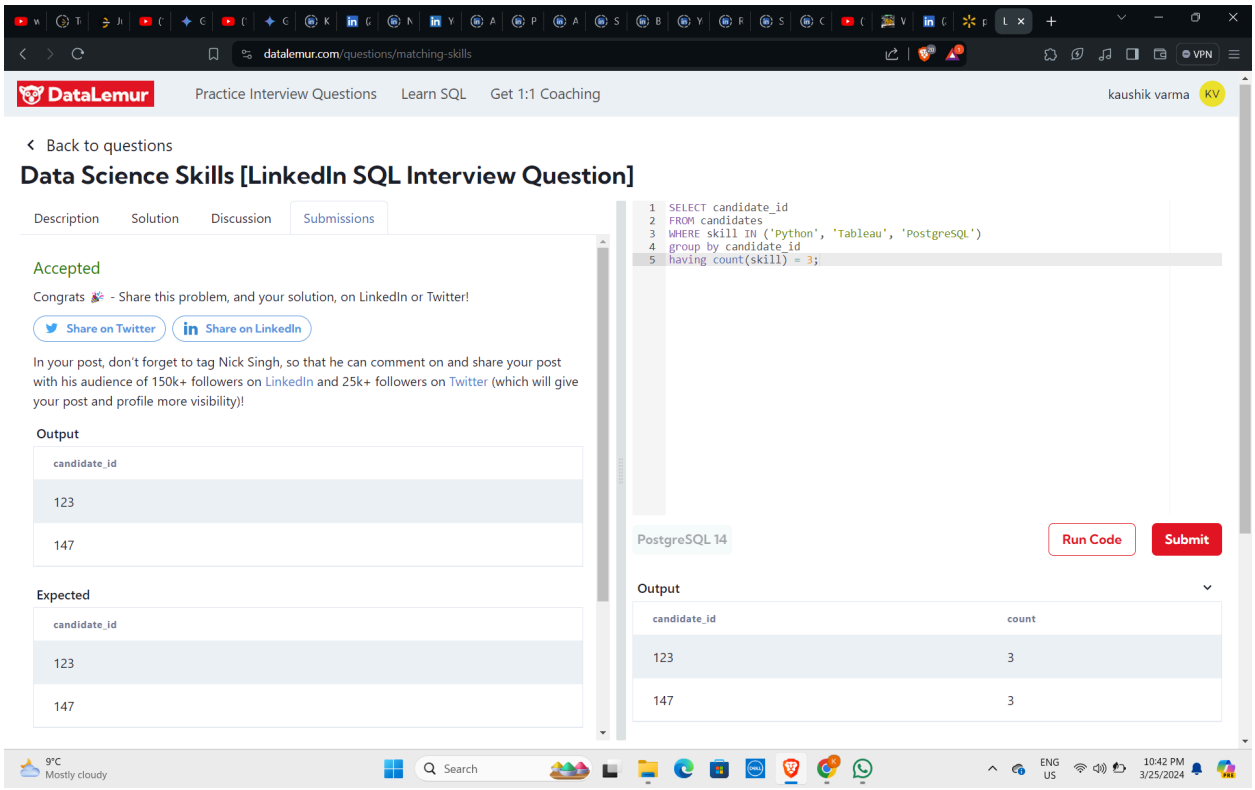
Output
tweet_bucket
users_num
1
2
2
1
Expected
tweet_bucket
users_num
1
2
2
1
with cte as(
SELECT count(user_id) as c FROM tweets
where EXTRACT(year from tweet_date) = 2022
group by user_id)
select c as tweet_bucket,count(c) as users_num from cte
group by c
PostgreSQL 14
Run Code
Submit
Output
tweet_bucket
users_num
1
2
2
1
9°C
Mostly cloudy
Search
ENG
US
10:39 PM
3/25/2024


datalemur.com/questions/matching-skills
DataLemur
Practice Interview Questions
Learn SQL
Get 1:1 Coaching
kaushik varma
Back to questions
Data Science Skills [LinkedIn SQL Interview Question]
Description
Solution
Discussion
Submissions
Easy
LinkedIn
Share on Twitter
Share on LinkedIn
Given a table of candidates and their skills, you're tasked with finding the candidates best suited for an open Data Science job. You want to find candidates who are proficient in Python, Tableau, and PostgreSQL.
Write a query to list the candidates who possess all of the required skills for the job. Sort the output by candidate ID in ascending order.
Assumption:
There are no duplicates in the candidates table.
candidates Table:
Column Name
Type
candidate_id
integer
skill
varchar
candidates Example Input:
candidate_id
skill
123
Python
123
Tableau
123
PostgreSQL
234
R
SELECT candidate_id
FROM candidates
WHERE skill IN ('Python', 'Tableau', 'PostgreSQL')
group by candidate_id
having count(skill) = 3;
PostgreSQL 14
Run Code
Submit
Output
candidate_id
count
123
3
147
3
9°C
Mostly cloudy
Search
ENG
US
10:42 PM
3/25/2024


datalemur.com/questions/matching-skills
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Share on Twitter
Share on LinkedIn
In your post, don't forget to tag Nick Singh, so that he can comment on and share your post with his audience of 150k+ followers on LinkedIn and 25k+ followers on Twitter (which will give your post and profile more visibility)!
Output
candidate_id
123
147
Expected
candidate_id
123
147
SELECT candidate_id
FROM candidates
WHERE skill IN ('Python', 'Tableau', 'PostgreSQL')
group by candidate_id
having count(skill) = 3;
PostgreSQL 14
Run Code
Submit
Output
candidate_id
count
123
3
147
3
9°C
Mostly cloudy
Search
ENG
US
10:42 PM
3/25/2024