
 DataLemur Practice Interview Questions Learn SQL Get 1:1 Coaching

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Problems Solved

☆ 13

Easy 9 / 89 Medium 4 / 110 Hard 0 / 52


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Histogram of Tweets

Twitter SQL Interview Question

Question Solution Discussion Submissions

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

Sourced from Twitter Difficulty Easy


Input PostgreSQL 14

```
1 SELECT
2   tweet_count AS tweet_bucket,
3   COUNT(*) AS users_num
4 FROM (
5   SELECT
6     user_id,
7     COUNT(*) AS tweet_count
8   FROM tweets
9   WHERE EXTRACT(YEAR FROM tweet_date) = 2022
10  GROUP BY user_id
11 ) AS user_tweet_counts
12 GROUP BY tweet_count
13 ORDER BY tweet_bucket;
14
```

Output

Run Code to view output!

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Data Science Skills

LinkedIn SQL Interview Question

Question Solution Discussion Submissions

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:

Sourced from LinkedIn Difficulty Easy


Input PostgreSQL 14

```
1 SELECT candidate_id
2 FROM candidates
3 WHERE skill IN ('Python', 'Tableau', 'PostgreSQL')
4 GROUP BY candidate_id
5 HAVING COUNT(DISTINCT skill) = 3
6 ORDER BY candidate_id;
7
```

Output

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Page With No Likes

Facebook SQL Interview Question

[Question](#) [Solution](#) [Discussion](#) [Submissions](#)

Assume you're given two tables containing data about Facebook Pages and their respective likes (as in "Like a Facebook Page").

Write a query to return the IDs of the Facebook pages that have zero likes. The output should be sorted in ascending order based on the page IDs.

pages Table:

Column Name	Type
page_id	integer
page_name	varchar

pages Example Input:

page_id	page_name
20001	SQL Solutions
20045	Brain Exercises


Sourced from **Facebook** Difficulty **Easy**

Input PostgreSQL 14

```
1 SELECT p.page_id
2 FROM pages p
3 LEFT JOIN page_likes pl
4 ON p.page_id = pl.page_id
5 WHERE pl.page_id IS NULL
6 ORDER BY p.page_id;
7
```

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Unfinished Parts

Tesla SQL Interview Question

[Question](#) [Solution](#) [Discussion](#) [Submissions](#)

Tesla is investigating production bottlenecks and they need your help to extract the relevant data. Write a query to determine which parts have begun the assembly process but are not yet finished.

Assumptions:

- parts_assembly** table contains all parts currently in production, each at varying stages of the assembly process.
- An unfinished part is one that lacks a **finish_date**.

This question is straightforward, so let's approach it with simplicity in both thinking and solution.

Effective April 11th 2023, the problem statement and assumptions were updated to enhance clarity.

parts_assembly Table

Column Name	Type
-------------	------


Sourced from **Tesla** Difficulty **Easy**

Input PostgreSQL 14

```
1 SELECT part, assembly_step
2 FROM parts_assembly
3 WHERE finish_date IS NULL
4 ORDER BY part, assembly_step;
5
```

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Laptop vs. Mobile Viewership

NY Times SQL Interview Question

[Question](#) [Solution](#) [Discussion](#) [Submissions](#)

This is the same question as problem #3 in the SQL Chapter of [Ace the Data Science Interview!](#)

Assume you're given the table on user viewership categorised by device type where the three types are laptop, tablet, and phone.

Write a query that calculates the total viewership for laptops and mobile devices where mobile is defined as the sum of tablet and phone viewership. Output the total viewership for laptops as **laptop_reviews** and the total viewership for mobile devices as **mobile_views**.

Effective 15 April 2023, the solution has been updated with a more concise and easy-to-understand approach.

viewership Table

Column Name	Type
user_id	integer


Sourced from **NY Times** Difficulty **Easy**

Input PostgreSQL 14

```
1 SELECT
2 SUM(CASE WHEN device_type = 'laptop' THEN 1 ELSE 0 END) AS laptop_views,
3 SUM(CASE WHEN device_type IN ('tablet', 'phone') THEN 1 ELSE 0 END) AS mobile_views
4 FROM viewership;
5
```

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Teams Power Users

Microsoft SQL Interview Question

QuestionSolutionDiscussionSubmissions

Write a query to identify the top 2 Power Users who sent the highest number of messages on Microsoft Teams in August 2022. Display the IDs of these 2 users along with the total number of messages they sent. Output the results in descending order based on the count of the messages.

Assumption:

- No two users have sent the same number of messages in August 2022.

messages Table:

Column Name	Type
message_id	integer
sender_id	integer
receiver_id	integer
content	varchar
sent_date	datetime

Sourced fromDifficultyMicrosoftEasy


InputPostgreSQL 14

```
1 SELECT
2   sender_id,
3   COUNT(*) AS message_count
4 FROM messages
5 WHERE sent_date >= '2022-08-01' AND sent_date < '2022-09-01'
6 GROUP BY sender_id
7 ORDER BY message_count DESC
8 LIMIT 2;
```

Output

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Duplicate Job Listings

LinkedIn SQL Interview Question

QuestionSolutionDiscussionSubmissions

This is the same question as problem #8 in the SQL Chapter of [Ace the Data Science Interview!](#)

Assume you're given a table containing job postings from various companies on the LinkedIn platform. Write a query to retrieve the count of companies that have posted duplicate job listings.

Definition:

- Duplicate job listings are defined as two job listings within the same company that share identical titles and descriptions.

job_listings Table:

Column Name	Type
job_id	integer
company_id	integer
title	string

Sourced fromDifficultyLinkedInEasy


InputPostgreSQL 14

```
1 SELECT COUNT(DISTINCT company_id) AS duplicate_companies
2 FROM (
3   SELECT company_id
4   FROM job_listings
5   GROUP BY company_id, title, description
6   HAVING COUNT(*) > 1
7 ) AS duplicates;
```

Output

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Cities With Completed Trades

Robinhood SQL Interview Question

QuestionSolutionDiscussionSubmissions

This is the same question as problem #2 in the SQL Chapter of [Ace the Data Science Interview!](#)

Assume you're given the tables containing completed trade orders and user details in a Robinhood trading system.

Write a query to retrieve the top three cities that have the highest number of completed trade orders listed in descending order. Output the city name and the corresponding number of completed trade orders.

trades Table:

Column Name	Type
order_id	integer
user_id	integer
quantity	integer
status	string ('Completed', 'Cancelled')

Sourced fromDifficultyRobinhoodEasy

InputPostgreSQL 14

```
1 SELECT
2   u.city,
3   COUNT(*) AS total_orders
4 FROM trades t
5 JOIN users u ON t.user_id = u.user_id
6 WHERE t.status = 'Completed'
7 GROUP BY u.city
8 ORDER BY total_orders DESC
9 LIMIT 3;
```

Output

Run Code to view output!

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