LeetCode

50 Days 50 SQL Questions
Work In Progress

Day 19/50

19. Queries Quality & percentage
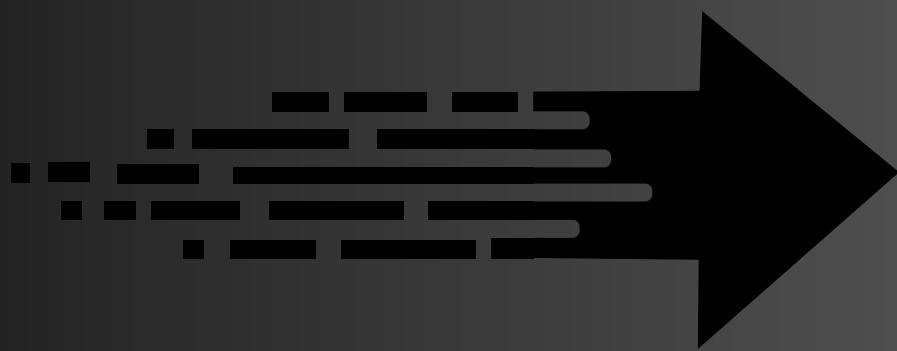
Question

We define query `quality` as:

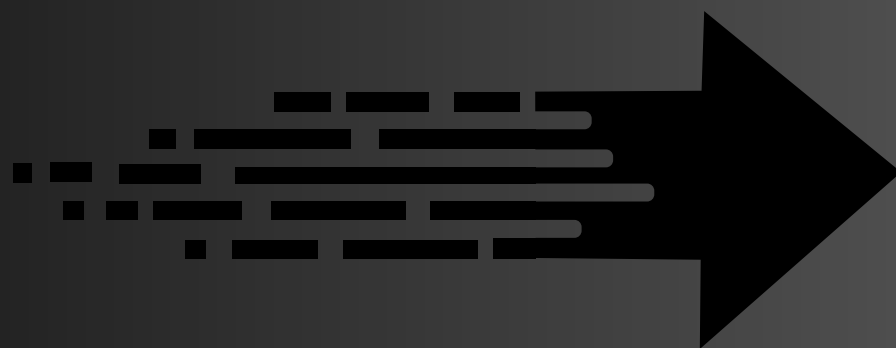> The average of the ratio between query rating and its position.

We also define `poor query percentage` as:

> The percentage of all queries with rating less than 3.

Write a solution to find each `query_name`, the `quality` and `poor_query_percentage`.

Both `quality` and `poor_query_percentage` should be **rounded to 2 decimal places**.

Return the result table in **any order**.

Table

Input:
Queries table:

```
+------------+------------------+----------+--------+
| query_name | result           | position | rating |
+------------+------------------+----------+--------+
| Dog        | Golden Retriever | 1        | 5      |
| Dog        | German Shepherd  | 2        | 5      |
| Dog        | Mule             | 200      | 1      |
| Cat        | Shirazi          | 5        | 2      |
| Cat        | Siamese          | 3        | 3      |
| Cat        | Sphynx           | 7        | 4      |
+------------+------------------+----------+--------+
```

Approach

The query uses two CTEs: one for total ratings and another for poor ratings per query_name. It calculates quality as a weighted average of rating by position and poor_query_percentage as the percentage of poor ratings, using joins and grouping by query_name.

50 Days 50 SQL Questions
Work In Progress

Query

MySQL ∨   🔒 Auto   🔖

```
1   WITH a AS (
2       SELECT query_name, COUNT(rating) AS total_ratings
3       FROM queries
4       GROUP BY query_name
5   ),
6   b AS (
7       SELECT query_name, COUNT(rating) AS poor_ratings
8       FROM queries
9       WHERE rating < 3
10      GROUP BY query_name
11  )
12  SELECT q.query_name,
13      ROUND(SUM(q.rating/q.position)/a.total_ratings, 2) AS quality,
14      ROUND(COALESCE(b.poor_ratings, 0)*100/a.total_ratings, 2) AS poor_query_percentage
15  FROM queries q INNER JOIN a
16      ON q.query_name = a.query_name
17  LEFT JOIN b ON q.query_name = b.query_name
18  GROUP BY q.query_name;
```

Output

```
Output:
+--------------+----------+------------------------+
| query_name   | quality  | poor_query_percentage  |
+--------------+----------+------------------------+
| Dog          | 2.50     | 33.33                  |
| Cat          | 0.66     | 33.33                  |
+--------------+----------+------------------------+
```

Share your thoughts in the comment section

Follow For More

Thank You :)