

Problem 571: Find Median Given Frequency of Numbers

Problem Information

Difficulty: Hard

Acceptance Rate: 42.34%

Paid Only: Yes

Tags: Database

Problem Description

Table: `Numbers`

+-----+-----+ | Column Name | Type | +-----+-----+ | num | int | | frequency | int |
+-----+-----+ num is the primary key (column with unique values) for this table. Each row
of this table shows the frequency of a number in the database.

The [**median**](https://en.wikipedia.org/wiki/Median)(<https://en.wikipedia.org/wiki/Median>) is the value separating the higher half from the lower half of a data sample.

Write a solution to report the ****median**** of all the numbers in the database after decompressing the `Numbers` table. Round the median to ****one decimal point****.

The result format is in the following example.

****Example 1:****

****Input:**** Numbers table: +-----+-----+ | num | frequency | +-----+-----+ | 0 | 7 | | 1 | 1 | |
2 | 3 | | 3 | 1 | +-----+-----+ ****Output:**** +-----+ | median | +-----+ | 0.0 | +-----+
****Explanation:**** If we decompress the Numbers table, we will get [0, 0, 0, 0, 0, 0, 1, 2, 2, 2,
3], so the median is $(0 + 0) / 2 = 0$.

Code Snippets

MySQL:

```
# Write your MySQL query statement below
```

MS SQL Server:

```
/* Write your T-SQL query statement below */
```

PostgreSQL:

```
-- Write your PostgreSQL query statement below
```