

Problem 2346: Compute the Rank as a Percentage

Problem Information

Difficulty: **Medium**

Acceptance Rate: 33.89%

Paid Only: Yes

Tags: Database

Problem Description

Table: `Students`

+-----+-----+ | Column Name | Type | +-----+-----+ | student_id | int | | department_id | int | | mark | int | +-----+-----+ student_id contains unique values. Each row of this table indicates a student's ID, the ID of the department in which the student enrolled, and their mark in the exam.

Write a solution to report the rank of each student in their department as a percentage, where the rank as a percentage is computed using the following formula:

$$\frac{(\text{student_rank_in_the_department} - 1) * 100}{(\text{the_number_of_students_in_the_department} - 1)}$$
. The `percentage` should be **rounded to 2 decimal places**.

`student_rank_in_the_department` is determined by **descending** `mark`, such that the student with the highest `mark` is `rank 1`. If two students get the same mark, they also get the same rank.

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

The result format is in the following example.

Example 1:

Input: Students table: +-----+-----+-----+ | student_id | department_id | mark | +-----+-----+-----+ | 2 | 2 | 650 | | 8 | 2 | 650 | | 7 | 1 | 920 | | 1 | 1 | 610 | | 3 | 1 | 530 | +-----+-----+-----+ **Output:** +-----+-----+-----+ | student_id | department_id | percentage | +-----+-----+-----+ | 7 | 1 | 0.0 | | 1 | 1 | 50.0 | | 3 |

1	100.0	2	2	0.0	8	2	0.0	+-----+-----+-----+ **Explanation:** For Department 1: - Student 7: percentage = $(1 - 1) * 100 / (3 - 1) = 0.0$ - Student 1: percentage = $(2 - 1) * 100 / (3 - 1) = 50.0$ - Student 3: percentage = $(3 - 1) * 100 / (3 - 1) = 100.0$ For Department 2: - Student 2: percentage = $(1 - 1) * 100 / (2 - 1) = 0.0$ - Student 8: percentage = $(1 - 1) * 100 / (2 - 1) = 0.0$
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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
```