# Problem 580: Count Student Number in Departments

## Problem Information

**Difficulty:** Medium
**Acceptance Rate:** 0.00%
**Paid Only:** No

## Problem Description

Table:

Student

+--------------+---------+ | Column Name | Type | +--------------+---------+ | student_id | int | | student_name | varchar | | gender | varchar | | dept_id | int | +--------------+---------+ student_id is the primary key (column with unique values) for this table. dept_id is a foreign key (reference column) to dept_id in the Department tables. Each row of this table indicates the name of a student, their gender, and the id of their department.

Table:

Department

+-------------+---------+ | Column Name | Type | +-------------+---------+ | dept_id | int | | dept_name | varchar | +-------------+---------+ dept_id is the primary key (column with unique values) for this table. Each row of this table contains the id and the name of a department.

Write a solution to report the respective department name and number of students majoring in each department for all departments in the

Department

table (even ones with no current students).

Return the result table

ordered

by

student_number

in descending order

. In case of a tie, order them by

dept_name

alphabetically

.

The result format is in the following example.

Example 1:

Input:

Student table: +------------+--------------+--------+---------+ | student_id | student_name | gender | dept_id | +------------+--------------+--------+---------+ | 1 | Jack | M | 1 | | 2 | Jane | F | 1 | | 3 | Mark | M | 2 | +------------+--------------+--------+---------+ Department table: +---------+-------------+ | dept_id | dept_name | +---------+-------------+ | 1 | Engineering | | 2 | Science | | 3 | Law | +---------+-------------+

Output:

+-------------+----------------+ | dept_name | student_number | +-------------+----------------+ | Engineering | 2 | | Science | 1 | | Law | 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
```

**Oracle:**

```
/* Write your PL/SQL query statement below */
```

**Pandas:**

```
import pandas as pd

def count_students(student: pd.DataFrame, department: pd.DataFrame) ->
pd.DataFrame:
```

## Solutions

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