Problem 3328: Find Cities in Each State II

Problem Information

Difficulty: Medium
Acceptance Rate: 68.39%
Paid Only: Yes
Tags: Database

Problem Description

Table: `cities`

+-------------+---------+ | Column Name | Type | +-------------+---------+ | state | varchar | | city | varchar | +-------------+---------+ (state, city) is the combination of columns with unique values for this table. Each row of this table contains the state name and the city name within that state.

Write a solution to find **all the cities** in **each state** and analyze them based on the following requirements:

* Combine all cities into a **comma-separated** string for each state. * Only include states that have **at least** `3` cities. * Only include states where **at least one city** starts with the **same letter as the state name**.

Return _the result table ordered by_ _the count of matching-letter cities in**descending** order_ _and then by state name in**ascending** order_.

The result format is in the following example.

Example:

Input:

cities table:

+--------------+---------------+ | state | city | +--------------+---------------+ | New York | New York City | | New York | Newark | | New York | Buffalo | | New York | Rochester | | California | San Francisco | | California | Sacramento | | California | San Diego | | California | Los Angeles | | Texas | Tyler | | Texas | Temple | | Texas | Taylor | | Texas | Dallas | | Pennsylvania | Philadelphia | | Pennsylvania | Pittsburgh | | Pennsylvania | Pottstown | +--------------+---------------+

Output:

+-------------+---+----------------------+ | state | cities | matching_letter_count | +-------------+---+----------------------+ | Pennsylvania| Philadelphia, Pittsburgh, Pottstown | 3 | | Texas | Dallas, Taylor, Temple, Tyler | 3 | | New York | Buffalo, Newark, New York City, Rochester | 2 | +-------------+---+----------------------+

Explanation:

* **Pennsylvania** : * Has 3 cities (meets minimum requirement) * All 3 cities start with 'P' (same as state) * matching_letter_count = 3 * **Texas** : * Has 4 cities (meets minimum requirement) * 3 cities (Taylor, Temple, Tyler) start with 'T' (same as state) * matching_letter_count = 3 * **New York** : * Has 4 cities (meets minimum requirement) * 2 cities (Newark, New York City) start with 'N' (same as state) * matching_letter_count = 2 * **California** is not included in the output because: * Although it has 4 cities (meets minimum requirement) * No cities start with 'C' (doesn't meet the matching letter requirement)

Note:

* Results are ordered by matching_letter_count in descending order * When matching_letter_count is the same (Texas and New York both have 2), they are ordered by state name alphabetically * Cities in each row are ordered alphabetically

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
```