Problem 3050: Pizza Toppings Cost Analysis

Problem Information

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

Problem Description

Table:

Toppings

+--------------+---------+ | Column Name | Type | +--------------+---------+ | topping_name | varchar | | cost | decimal | +--------------+---------+ topping_name is the primary key for this table. Each row of this table contains topping name and the cost of the topping.

Write a solution to calculate the

total cost

of

all possible

3

-topping

pizza combinations from a given list of toppings. The total cost of toppings must be

rounded

to

2

decimal

places.

Note:

Do not

include the pizzas where a topping is

repeated

. For example, ‘Pepperoni, Pepperoni, Onion Pizza’.

Toppings

must be

listed in

alphabetical order

. For example, 'Chicken, Onions, Sausage'. 'Onion, Sausage, Chicken' is not acceptable.

Return

the result table ordered by total cost in

descending

order and combination of toppings in

ascending

order.

The result format is in the following example.

Example 1:

Input:

Toppings table: +--------------+------+ | topping_name | cost | +--------------+------+ | Pepperoni | 0.50 | | Sausage | 0.70 | | Chicken | 0.55 | | Extra Cheese | 0.40 | +--------------+------+

Output:

+-------------------------------+------------+ | pizza | total_cost | +-------------------------------+------------+ | Chicken,Pepperoni,Sausage | 1.75 | | Chicken,Extra Cheese,Sausage | 1.65 | | Extra Cheese,Pepperoni,Sausage | 1.60 | | Chicken,Extra Cheese,Pepperoni | 1.45 | +-------------------------------+------------+

Explanation:

There are only four different combinations possible with the three topings: - Chicken, Pepperoni, Sausage: Total cost is $1.75 (Chicken $0.55, Pepperoni $0.50, Sausage $0.70). - Chicken, Extra Cheese, Sausage: Total cost is $1.65 (Chicken $0.55, Extra Cheese $0.40, Sausage $0.70). - Extra Cheese, Pepperoni, Sausage: Total cost is $1.60 (Extra Cheese $0.40, Pepperoni $0.50, Sausage $0.70). - Chicken, Extra Cheese, Pepperoni: Total cost is $1.45 (Chicken $0.55, Extra Cheese $0.40, Pepperoni $0.50). Output table is ordered by the total cost in descending order.

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 cost_analysis(toppings: pd.DataFrame) -> pd.DataFrame:
```

Solutions

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