Problem 3293: Calculate Product Final Price

Problem Information

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

Problem Description

Table:

Products

+------------+---------+ | Column Name| Type | +------------+---------+ | product_id | int | | category | varchar | | price | decimal | +------------+---------+ product_id is the unique key for this table. Each row includes the product's ID, its category, and its price.

Table:

Discounts

+------------+---------+ | Column Name| Type | +------------+---------+ | category | varchar | | discount | int | +------------+---------+ category is the primary key for this table. Each row contains a product category and the percentage discount applied to that category (values range from 0 to 100).

Write a solution to find the

final price

of each product after applying the

category discount

. If a product's category has

no

associated

discount

, its price remains

unchanged

.

Return

the result table ordered by

product_id

in

ascending

order.

The result format is in the following example.

Example:

Input:

Products

table:

+------------+-------------+-------+ | product_id | category | price | +------------+-------------+-------+ | 1 | Electronics | 1000 | | 2 | Clothing | 50 | | 3 | Electronics | 1200 | | 4 | Home | 500 | +------------+-------------+-------+

Discounts

table:

+------------+----------+ | category | discount | +------------+----------+ | Electronics| 10 | | Clothing | 20 | +------------+----------+

Output:

+------------+------------+-------------+ | product_id | final_price| category | +------------+------------+-------------+ | 1 | 900 | Electronics | | 2 | 40 | Clothing | | 3 | 1080 | Electronics | | 4 | 500 | Home | +------------+------------+-------------+

Explanation:

For product 1, it belongs to the Electronics category which has a 10% discount, so the final price is 1000 - (10% of 1000) = 900.

For product 2, it belongs to the Clothing category which has a 20% discount, so the final price is 50 - (20% of 50) = 40.

For product 3, it belongs to the Electronics category and receives a 10% discount, so the final price is 1200 - (10% of 1200) = 1080.

For product 4, no discount is available for the Home category, so the final price remains 500.

Result table is ordered by product_id in ascending 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 calculate_final_prices(products: pd.DataFrame, discounts: pd.DataFrame)
-> pd.DataFrame:
```

Solutions

MySQL Solution:

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

MS SQL Server Solution:

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

PostgreSQL Solution:

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

Oracle Solution:

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

Pandas Solution:

```
import pandas as pd

def calculate_final_prices(products: pd.DataFrame, discounts: pd.DataFrame)
-> pd.DataFrame:
```