Problem 2324: Product Sales Analysis IV

Problem Information

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

Problem Description

Table:

Sales

+-------------+-------+ | Column Name | Type | +-------------+-------+ | sale_id | int | | product_id | int | | user_id | int | | quantity | int | +-------------+-------+ sale_id contains unique values. product_id is a foreign key (reference column) to

Product

table. Each row of this table shows the ID of the product and the quantity purchased by a user.

Table:

Product

+-------------+------+ | Column Name | Type | +-------------+------+ | product_id | int | | price | int | +-------------+------+ product_id contains unique values. Each row of this table indicates the price of each product.

Write a solution that reports for each user the product id on which the user spent the most money. In case the same user spent the most money on two or more products, report all of them.

Return the resulting table in

any order

.

The result format is in the following example.

Example 1:

Input:

Sales table: +---------+------------+---------+----------+ | sale_id | product_id | user_id | quantity | +---------+------------+---------+----------+ | 1 | 1 | 101 | 10 | | 2 | 3 | 101 | 7 | | 3 | 1 | 102 | 9 | | 4 | 2 | 102 | 6 | | 5 | 3 | 102 | 10 | | 6 | 1 | 102 | 6 | +---------+------------+---------+----------+ Product table: +------------+-------+ | product_id | price | +------------+-------+ | 1 | 10 | | 2 | 25 | | 3 | 15 | +------------+-------+

Output:

+---------+------------+ | user_id | product_id | +---------+------------+ | 101 | 3 | | 102 | 1 | | 102 | 2 | | 102 | 3 | +---------+------------+

Explanation:

User 101: - Spent 10 * 10 = 100 on product 1. - Spent 7 * 15 = 105 on product 3. User 101 spent the most money on product 3. User 102: - Spent (9 + 6) * 10 = 150 on product 1. - Spent 6 * 25 = 150 on product 2. - Spent 10 * 15 = 150 on product 3. User 102 spent the most money on products 1, 2, and 3.

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 product_sales_analysis(sales: pd.DataFrame, product: 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 product_sales_analysis(sales: pd.DataFrame, product: pd.DataFrame) ->
pd.DataFrame:
```