

# Problem 1677: Product's Worth Over Invoices

## Problem Information

**Difficulty:** Easy

**Acceptance Rate:** 0.00%

**Paid Only:** No

## Problem Description

Table:

Product

+-----+-----+ | Column Name | Type | +-----+-----+ | product\_id | int | | name |  
varchar | +-----+-----+ product\_id is the column with unique values for this table. This  
table contains the ID and the name of the product. The name consists of only lowercase  
English letters. No two products have the same name.

Table:

Invoice

+-----+-----+ | Column Name | Type | +-----+-----+ | invoice\_id | int | | product\_id |  
int | | rest | int | | paid | int | | canceled | int | | refunded | int | +-----+-----+ invoice\_id is the  
column with unique values for this table and the id of this invoice. product\_id is the id of the  
product for this invoice. rest is the amount left to pay for this invoice. paid is the amount paid  
for this invoice. canceled is the amount canceled for this invoice. refunded is the amount  
refunded for this invoice.

Write a solution that will, for all products, return each product name with the total amount due,  
paid, canceled, and refunded across all invoices.

Return the result table ordered by

product\_name

The result format is in the following example.

Example 1:

Input:

Product table: +-----+-----+ | product\_id | name | +-----+-----+ | 0 | ham || 1 | bacon | +-----+-----+  
Invoice table: +-----+-----+-----+-----+ | invoice\_id | product\_id | rest | paid | canceled | refunded |  
+-----+-----+-----+-----+ | 23 | 0 | 2 | 0 | 5 | 0 || 12 | 0 | 0 | 4 | 0 | 3 |  
| 1 | 1 | 1 | 1 | 0 | 1 | 2 | 1 | 1 | 0 | 1 | 1 | 3 | 1 | 0 | 1 | 1 | 1 | 4 | 1 | 1 | 1 | 1 | 0 |  
+-----+-----+-----+-----+

Output:

+-----+-----+-----+-----+ | name | rest | paid | canceled | refunded |  
+-----+-----+-----+-----+ | bacon | 3 | 3 | 3 | 3 | ham | 2 | 4 | 5 | 3 |  
+-----+-----+-----+-----+

Explanation:

- The amount of money left to pay for bacon is  $1 + 1 + 0 + 1 = 3$  - The amount of money paid for bacon is  $1 + 0 + 1 + 1 = 3$  - The amount of money canceled for bacon is  $0 + 1 + 1 + 1 = 3$  - The amount of money refunded for bacon is  $1 + 1 + 1 + 0 = 3$  - The amount of money left to pay for ham is  $2 + 0 = 2$  - The amount of money paid for ham is  $0 + 4 = 4$  - The amount of money canceled for ham is  $5 + 0 = 5$  - The amount of money refunded for ham is  $0 + 3 = 3$

## 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 analyze_products(product: pd.DataFrame, invoice: pd.DataFrame) ->
    pd.DataFrame:
```

## **Solutions**

### **MySQL Solution:**

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