

1596. The Most Frequently Ordered Products for Each Customer

Description

Table: Customers

Column Name	Type	
customer_id	int	
name	varchar	

customer_id is the column with unique values for this table.
This table contains information about the customers.

Table: Orders

Column Name	Type	
order_id	int	
order_date	date	
customer_id	int	
product_id	int	

order_id is the column with unique values for this table.
This table contains information about the orders made by customer_id.
No customer will order the same product **more than once** in a single day.

Table: Products

Column Name	Type	
product_id	int	
product_name	varchar	
price	int	

product_id is the column with unique values for this table.
This table contains information about the products.

Write a solution to find the most frequently ordered product(s) for each customer.

The result table should have the `product_id` and `product_name` for each `customer_id` who ordered at least one order.

Return the result table in **any order**.

The result format is in the following example.

Example 1:

Input:

Customers table:

customer_id	name
1	Alice
2	Bob
3	Tom
4	Jerry
5	John

Orders table:

order_id	order_date	customer_id	product_id
1	2020-07-31	1	1
2	2020-07-30	2	2
3	2020-08-29	3	3
4	2020-07-29	4	1
5	2020-06-10	1	2
6	2020-08-01	2	1
7	2020-08-01	3	3
8	2020-08-03	1	2
9	2020-08-07	2	3
10	2020-07-15	1	2

Products table:

product_id	product_name	price
1	keyboard	120
2	mouse	80
3	screen	600
4	hard disk	450

Output:

customer_id	product_id	product_name
1	2	mouse
2	1	keyboard
2	2	mouse
2	3	screen
3	3	screen
4	1	keyboard

Explanation:

Alice (customer 1) ordered the mouse three times and the keyboard one time, so the mouse is the most frequently ordered product for them.
Bob (customer 2) ordered the keyboard, the mouse, and the screen one time, so those are the most frequently ordered products for them.
Tom (customer 3) only ordered the screen (two times), so that is the most frequently ordered product for them.
Jerry (customer 4) only ordered the keyboard (one time), so that is the most frequently ordered product for them.
John (customer 5) did not order anything, so we do not include them in the result table.

