

# Problem 2688: Find Active Users

## Problem Information

**Difficulty:** Medium

**Acceptance Rate:** 0.00%

**Paid Only:** No

## Problem Description

Table:

Users

+-----+-----+ | Column Name | Type | +-----+-----+ | user\_id | int | | item |  
varchar | | created\_at | datetime | | amount | int | +-----+-----+ This table may contain  
duplicate records. Each row includes the user ID, the purchased item, the date of purchase,  
and the purchase amount.

Write a solution to identify active users. An active user is a user that has made a second  
purchase

within 7 days

of any other of their purchases.

For example, if the ending date is May 31, 2023. So any date between May 31, 2023, and  
June 7, 2023 (inclusive) would be considered "within 7 days" of May 31, 2023.

Return a list of

user\_id

which denotes the list of active users in

any order

The result format is in the following example.

Example 1:

Input:

Users table: +-----+-----+-----+-----+ | user\_id | item | created\_at | amount |  
+-----+-----+-----+-----+ | 5 | Smart Crock Pot | 2021-09-18 | 698882 || 6 |  
Smart Lock | 2021-09-14 | 11487 || 6 | Smart Thermostat | 2021-09-10 | 674762 || 8 | Smart  
Light Strip | 2021-09-29 | 630773 || 4 | Smart Cat Feeder | 2021-09-02 | 693545 || 4 | Smart  
Bed | 2021-09-13 | 170249 | +-----+-----+-----+

Output:

+-----+ | user\_id | +-----+ | 6 | +-----+

Explanation:

- User with user\_id 5 has only one transaction, so he is not an active user.
- User with user\_id 6 has two transaction his first transaction was on 2021-09-10 and second transaction was on 2021-09-14. The distance between the first and second transactions date is  $\leq$  7 days. So he is an active user.
- User with user\_id 8 has only one transaction, so he is not an active user.
- User with user\_id 4 has two transaction his first transaction was on 2021-09-02 and second transaction was on 2021-09-13. The distance between the first and second transactions date is  $>$  7 days. So he is not an active user.

## 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 find_active_users(users: 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 find_active_users(users: pd.DataFrame) -> pd.DataFrame:
```