DESCRIPTION

Table: Activity

```
+---------------+---------+
| Column Name   | Type    |
+---------------+---------+
| user_id       | int     |
| session_id    | int     |
| activity_date | date    |
| activity_type | enum    |
+---------------+---------+
```

This table may have duplicate rows.

The activity_type column is an ENUM (category) of type ('open_session', 'end_session', 'scroll_down', 'send_message').

The table shows the user activities for a social media website.

Note that each session belongs to exactly one user.

Write a solution to find the daily active user count for a period of 30 days ending 2019-07-27 inclusively. A user was active on someday if they made at least one activity on that day.

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

The result format is in the following example.

Example 1:

Input:

Activity table:

```
+---------+------------+---------------+---------------+
| user_id | session_id | activity_date | activity_type |
+---------+------------+---------------+---------------+
| 1       | 1          | 2019-07-20    | open_session  |
| 1       | 1          | 2019-07-20    | scroll_down   |
| 1       | 1          | 2019-07-20    | end_session   |
| 2       | 4          | 2019-07-20    | open_session  |
| 2       | 4          | 2019-07-21    | send_message  |
| 2       | 4          | 2019-07-21    | end_session   |
| 3       | 2          | 2019-07-21    | open_session  |
| 3       | 2          | 2019-07-21    | send_message  |
| 3       | 2          | 2019-07-21    | end_session   |
| 4       | 3          | 2019-06-25    | open_session  |
| 4       | 3          | 2019-06-25    | end_session   |
+---------+------------+---------------+---------------+
```

Output:

```
+------------+--------------+
| day        | active_users |
+------------+--------------+
| 2019-07-20 | 2            |
| 2019-07-21 | 2            |
+------------+--------------+
```

Explanation: Note that we do not care about days with zero active users.

SOLUTION

MySQL:

- Select activity_date as day, and active_users using COUNT DISTINCT
- Define the condition of the dates by using WHERE and BETWEEN
- GROUP BY activity_date

```
SELECT activity_date day, COUNT(DISTINCT user_id) active_users
FROM Activity
WHERE activity_date BETWEEN "2019-06-28" AND "2019-07-27"
GROUP BY activity_date;
```

PostgreSQL:

- Same approach as above

```
SELECT activity_date AS day, COUNT(DISTINCT user_id) active_users
FROM Activity
WHERE '2019-07-27'-activity_date BETWEEN 0 AND 29
GROUP BY 1;
```