Problem 1604: Alert Using Same Key-Card Three or More Times in a One Hour Period

Problem Information

Difficulty: Medium
Acceptance Rate: 46.03%
Paid Only: No
Tags: Array, Hash Table, String, Sorting

Problem Description

LeetCode company workers use key-cards to unlock office doors. Each time a worker uses their key-card, the security system saves the worker's name and the time when it was used. The system emits an **alert** if any worker uses the key-card **three or more times** in a one-hour period.

You are given a list of strings `keyName` and `keyTime` where `[keyName[i], keyTime[i]]` corresponds to a person's name and the time when their key-card was used **in a** **single day**.

Access times are given in the **24-hour time format "HH:MM"**, such as `"23:51"` and `"09:49"`.

Return a _list of unique worker names who received an alert for frequent keycard use_. Sort the names in **ascending order alphabetically**.

Notice that `"10:00"` \- `"11:00"` is considered to be within a one-hour period, while `"22:51"` \- `"23:52"` is not considered to be within a one-hour period.

Example 1:

Input: keyName = ["daniel","daniel","daniel","luis","luis","luis","luis"], keyTime = ["10:00","10:40","11:00","09:00","11:00","13:00","15:00"] **Output:** ["daniel"] **Explanation:** "daniel" used the keycard 3 times in a one-hour period ("10:00","10:40", "11:00").

Example 2:

Input: keyName = ["alice","alice","alice","bob","bob","bob","bob"], keyTime = ["12:01","12:00","18:00","21:00","21:20","21:30","23:00"] **Output:** ["bob"] **Explanation:** "bob" used the keycard 3 times in a one-hour period ("21:00","21:20", "21:30").

Constraints:

* `1 <= keyName.length, keyTime.length <= 105` * `keyName.length == keyTime.length` * `keyTime[i]` is in the format **" HH:MM"**. * `[keyName[i], keyTime[i]]` is **unique**. * `1 <= keyName[i].length <= 10` * `keyName[i] contains only lowercase English letters.`

Code Snippets

C++:

```
class Solution {
public:
vector<string> alertNames(vector<string>& keyName, vector<string>& keyTime) {

}
};
```

Java:

```
class Solution {
public List<String> alertNames(String[] keyName, String[] keyTime) {

}
}
```

Python3:

```
class Solution:
def alertNames(self, keyName: List[str], keyTime: List[str]) -> List[str]:
```