Problem 2933: High-Access Employees

Problem Information

Difficulty: Medium
Acceptance Rate: 47.00%
Paid Only: No
Tags: Array, Hash Table, String, Sorting

Problem Description

You are given a 2D **0-indexed** array of strings, `access_times`, with size `n`. For each `i` where `0 <= i <= n - 1`, `access_times[i][0]` represents the name of an employee, and `access_times[i][1]` represents the access time of that employee. All entries in `access_times` are within the same day.

The access time is represented as **four digits** using a **24-hour** time format, for example, `"0800"` or `"2250"`.

An employee is said to be **high-access** if he has accessed the system **three or more** times within a **one-hour period**.

Times with exactly one hour of difference are **not** considered part of the same one-hour period. For example, `"0815"` and `"0915"` are not part of the same one-hour period.

Access times at the start and end of the day are **not** counted within the same one-hour period. For example, `"0005"` and `"2350"` are not part of the same one-hour period.

Return _a list that contains the names of**high-access** employees with any order you want._

Example 1:

Input: access_times = [["a","0549"],["b","0457"],["a","0532"],["a","0621"],["b","0540"]] **Output:** ["a"] **Explanation:** "a" has three access times in the one-hour period of [05:32, 06:31] which are 05:32, 05:49, and 06:21. But "b" does not have more than two access times at all. So the answer is ["a"].

Example 2:

Input: access_times = [["d","0002"],["c","0808"],["c","0829"],["e","0215"],["d","1508"],["d","1444"],["d","1410"],["c","0809"]] **Output:** ["c","d"] **Explanation:** "c" has three access times in the one-hour period of [08:08, 09:07] which are 08:08, 08:09, and 08:29. "d" has also three access times in the one-hour period of [14:10, 15:09] which are 14:10, 14:44, and 15:08. However, "e" has just one access time, so it can not be in the answer and the final answer is ["c","d"].

Example 3:

Input: access_times = [["cd","1025"],["ab","1025"],["cd","1046"],["cd","1055"],["ab","1124"],["ab","1120"]] **Output:** ["ab","cd"] **Explanation:** "ab" has three access times in the one-hour period of [10:25, 11:24] which are 10:25, 11:20, and 11:24. "cd" has also three access times in the one-hour period of [10:25, 11:24] which are 10:25, 10:46, and 10:55. So the answer is ["ab","cd"].

Constraints:

* `1 <= access_times.length <= 100` * `access_times[i].length == 2` * `1 <= access_times[i][0].length <= 10` * `access_times[i][0]` consists only of English small letters. * `access_times[i][1].length == 4` * `access_times[i][1]` is in 24-hour time format. * `access_times[i][1]` consists only of `'0'` to `'9'`.

Code Snippets

C++:

```
class Solution {
public:
vector<string> findHighAccessEmployees(vector<vector<string>>& access_times)
{

}
};
```

Java:

```
class Solution {
public List<String> findHighAccessEmployees(List<List<String>> access_times)
```

```
{

}
}
```

Python3:

```
class Solution:
def findHighAccessEmployees(self, access_times: List[List[str]]) ->
List[str]:
```