

1220. Smallest Sufficient Team

Difficulty : Hard

<https://leetcode.com/problems/smallest-sufficient-team>

In a project, you have a list of required skills `req_skills`, and a list of people. The i^{th} person `people[i]` contains a list of skills that the person has.

Consider a sufficient team: a set of people such that for every required skill in `req_skills`, there is at least one person in the team who has that skill. We can represent these teams by the index of each person.

- For example, `team = [0, 1, 3]` represents the people with skills `people[0]`, `people[1]`, and `people[3]`.

Return *any sufficient team of the smallest possible size, represented by the index of each person*. You may return the answer in **any order**.

It is **guaranteed** an answer exists.

Example 1:

Input: `req_skills = ["java","nodejs","reactjs"], people = [{"java"}, {"nodejs"}, {"nodejs","reactjs"}]`
Output: `[0,2]`

Example 2:

Input: `req_skills = ["algorithms","math","java","reactjs","csharp","aws"], people = [{"algorithms","math","java"}, {"algorithms","math","reactjs"}, {"java","csharp","aws"}, {"reactjs","csharp"}, {"csharp","math","aws"}]`
Output: `[1,2]`

Constraints:

- $1 \leq req_skills.length \leq 16$
- $1 \leq req_skills[i].length \leq 16$
- `req_skills[i]` consists of lowercase English letters.
- All the strings of `req_skills` are **unique**.
- $1 \leq people.length \leq 60$
- $0 \leq people[i].length \leq 16$
- $1 \leq people[i][j].length \leq 16$
- `people[i][j]` consists of lowercase English letters.
- All the strings of `people[i]` are **unique**.
- Every skill in `people[i]` is a skill in `req_skills`.
- It is guaranteed a sufficient team exists.