A. A hypothetical Seasons of Code

Many of you who are attempting this question might have heard about **Seasons of Code**.

However, here we talk about a hypothetical Seasons of Code where every mentee is also a mentor and all the projects are mentored by everyone in a collaborative manner. Sounds confusing, right? Don't worry we are here to explain to you……

Suppose, we have given you a list of **N participants** who are described by their roll numbers. Each of these participants have some skill sets completed at a particular level.

Example:-

1. Aman (**2102378**) has 2 skills, **Python** at **level 2** as well as **Data Structures** at **level 3**.
2. Kirti (**2102134**) has two skills, **HTML** at **level 5** and **Data Structures** at **level 1**.

(**Note:-** Not having a particular skill also means having that skill at level 0, for example we can say Kirti has HTML at level 5, Python at level 0 and Data Structures at level 0.)

Also there are **M projects**, each project is described by its name and the number of roles it has and also the required skill set (along with level) for each role.

Example:-

1. The **Web Development** project has **3 roles** which require the skill-set of **HTML** at **level 3**, **DSA** at **level 2** and **Python** at **level 1**, respectively.
2. The **Data Science** project has **2 roles** which require the skill-set of **Python** at **level 3** as well as **Data Structures** at **level 4**.

Now a participant can apply for a new project if one of the two criterias are met:-

1. If the applicant already has the required skill-set at the required level (or even above).
2. If the applicant's skill level is one level lower than the required level for the role, they may still apply if another participant applying for a different role in the same project has a skill level higher than the required level, so that this participant can co-mentor the applicant.

Example:-

1. Let's say **Aman** applies for a role in **DSA** for the **Web Development** project, so his application would be accepted as he already knows **DSA** at **level 3** whereas the requirement is only for **level 2**, same can be said when **Aman** applies for the **Python** role.
2. Now let's say **Kirti** wants to for **DSA** role in **Web Development** project, she can only do so if **Aman** has applied for **Python** in this project and is mentoring **Kirti (**as **Aman** has **one level** higher skill-set for **DSA** than the required level and Kirti has only **one level** less skill-set for **DSA** than the required level**).**

Note:-

- One participant can only mentor one maximum of one co-participant given that they are in the same project.
- It is not necessary for a participant to be a mentor also.
- If all the roles of a project are filled you can assume it to be completed.

Your objective is to design a program which takes the input in the way given below and gives the output of the number of projects which could be completed.

Input:
An integer N, which determines the number of participants, then followed by details of N participants,

roll_number1 skill_level1 skill_level2 skill_level3

We are having a maximum of **five** skills, **HTML, Python, DSA, Java, SQL**. In the same order their levels are given as input.

For example a person with roll number **2102345** knows **Python** at **level 2** and **SQL** at **level 3**, his input would be given as follows:

2102345 0 2 0 0 3

Note that roll number and each of the skills are separated by one space.

Followed by an integer **M**, which determines the number of projects, then followed by the details of **M projects**,

project_name skill_level1 skill_level2 skill_level3 skill_level4 skill_level5

For example, if **web development** project requires, **HTML** at **level 3**, **python** at **level 3** and **SQL** at **level 1** then input will be given as follows:

Web Development 3 3 0 0 1

Note:- A role with skill-set zero means there is no such need for a person there.

Output:
Output should be a single integer determining the number of projects that would be completed.

BONUS: We are keeping this as an open-ended problem, also we do not expect you to come to the exact optimal solution. Means, you are free to come up with any of your approaches to solve this particular question. Also if you are not able to code your algorithm then you are free to just jot down your algorithm in a pseudo code format and submit the same however obviously writing a code would be a plus point.