

[CS 11 25.1] HOPE 1 A4 – Strategic Planning 2

Cheatsheet is available here: <https://oj.dcs.upd.edu.ph/cs11cheatsheet/>

Problem Statement

(See [Problem A3](#) for context.)

Now that you're familiar with synergies, let's apply that to a boss battle!

You have a list of students you're planning to use for a battle. Each student has an attack type and an armor type, while the boss also has its own attack type and armor type.

You want to figure out three things:

- Which students would make for good *attackers* for this boss battle? For a student to be a good attacker, their attack type's multiplier against the boss" armor type should be `Weak` or `Effective`.
- Which students would make for good *defenders* for this boss battle? For a student to be a good defender, the boss" attack type's multiplier against the student's armor type should be `Resist`.
- Which students would make for both good *attackers* and good *defenders*?

Task Details

Your task is to implement a function named `students_to_use`. This function has two parameters:

- The first parameter is a tuple of triples. Each triple consists of three strings, denoting a student's name, attack type, and armor type, respectively.
- The second parameter is a pair of strings indicating the boss" attack type and armor type.

The function must return three tuples of strings:

- The first tuple must contain the names of all students who would make for good attackers.
- The second tuple must contain the names of all students who would make for good defenders.
- The third tuple must contain the names of all students who would make for *both* good attackers and good defenders.

In each tuple, the names must be ordered in the same way as they appear in the input.

Restrictions

- Your source code must have at most 2200 bytes.

Examples

Example 1 Function Call

```
students_to_use((
    ("Nozomi", "Sonic", "Light"),
    ("Mika", "Piercing", "Light"),
    ("SMika", "Sonic", "Special"),
    ("Hikari", "Sonic", "Light"),
), ("Piercing", "Elastic"))
```

Example 1 Return Value



```
(
    ("Nozomi", "SMika", "Hikari"),
    ("Nozomi", "Mika", "Hikari"),
    ("Nozomi", "Hikari"),
)
```

Constraints

- The function `students_to_use` will be called at most 200 times.
- Each student's name consists of at most 11 uppercase or lowercase English letters.
- Each attack type is one of `Normal`, `Explosive`, `Piercing`, `Mystic`, and `Sonic`.
- Each armor type is one of `Normal`, `Light`, `Heavy`, `Special`, and `Elastic`.
- No student appears more than once.
- You have at most 200 students.

Scoring

Note: New tests may be added and all submissions may be rejudged at a later time. (All future tests will satisfy the constraints.)

- You get 25  points if you solve all test cases where:
 - No attack type is `Sonic`.
 - No armor type is `Elastic`.
- You get 100  points if you solve all test cases.

Clarifications

No clarifications have been made at this time.

Report an issue

Submit solution

[CS 11 25.1]

HOPE 1

My submissions

✓ Points: 125 (partial)

🕒 Time limit: 12.0s

📄 Memory limit: 2G

➤ Problem type

▼ Allowed languages
py3