Judge (1) P14343_en

Consider the definition

```
struct Submission {
    string idn;
    string exer;
    int time;
    string res;
};
```

for the results of the submissions done in the Judge of P1, where *idn* identifies the student who has done the sending (is a string of 9 digits), *exer* is the identifier of the exercise (a string of 4 or 5 characters), *time* is the moment of the sending (in seconds since the overture of the Judge), and *res* is the result of the sending, which can be "`green`", "`yellow`" or "`red`".

Consider also the definition

```
typedef vector<Submission> History;
```

to store all the submissions done in the Judge of P1. Two submissions never have the same field *time*.

Use these definitions in a program that reads all the submissions done in the Judge, and prints the following information:

- The student with more green submissions. (the student with smallest idn in a event of a tie, "-" if there is not any green submission).
- The student with more green exercises (the student with smallest idn in a event of a tie, "-" if there is not any green exercise).
- The student with more red exercises (the student with smallest idn in a event of a tie, "-" if there is not any red exercise).
- The student who has tried to solve (with or without success) more different exercises (the student with smallest idn in a event of a tie, "-" if there is not any submission).
- The student who has done the last submission "-" if there is not any submission).

Input

Input consists of a natural n, followed by n submissions, each one in a line, with the fields in the same order than in the definition of the type. Suppose that there are, at most, 20 students, 50 exercises and 1000 submissions.

Output

Your program must print the five previously said idn with the corresponding counters following the format of the instance.

Observation

This exercise is quite long. To compensate, it is not necessary that the sent solution is particularly efficient.

Sample input 1

```
15
40123456 TIPIC 1000 red
40123456 TIPIC 2000 yellow
40123456 TIPIC 3000 green
77777777 GABY  5100 yellow
11223344 FOFO  2300 yellow
11223344 FOFO  1500 red
40123456 FOFO  5000 green
40123456 FOFO  4000 green
40123456 FOFO  4400 green
11223344 TIPIC 9600 green
11223344 KITO  9000 yellow
11223344 GABY  8200 red
77777777 KITO  6000 green
77777777 FOFO  7000 green
77777777 TIPIC 8000 green
```

Sample output 1

```
student with more green submissions:       40123456 (4)
student with more green exercises:         77777777 (3)
student with more red exercises:           11223344 (1)
student with more tried exercises:         11223344 (4)
student who has done the last submission:  11223344
```

Sample input 2

```
1
00110011 TIPIC 100 yellow
```

Sample output 2

```
student with more green submissions:       -
student with more green exercises:         -
student with more red exercises:           -
student with more tried exercises:         00110011 (1)
student who has done the last submission:  00110011
```

Problem information

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