Assignment 2018.1.7 - Student Scholarships

The University's secretary must determine the number of students who earned the merit scholarship next academic year and to identify the student who earned performance scholarship (there is only one performance scholarship). She has provided a list of all students and the marks obtained by them at various disciplines. The performance scholarship is granted to the student who passed all exams and has the highest average grade. Merit scholarships are awarded in descending order of average grade, to students who passed all exams, whose average grades are over 8.00, but to a specified maximum number of scholarships.

Requirement

Determine which student has earned the performance scholarship and how many students will get scholarships of merit in the next academic year.

Input data

The following data is available via keyboard (stdin stream):

- Three positive integers **m**, **n**, **p** separated by spaces, representing:
  - ***m*** - number of students,
  - ***n*** - number of disciplines,
  - ***p*** - the number of merit scholarships available;
- 2 * **m** lines that are read in sequence in the format:
  - <NS>, a string representing the name of the student;
  - <N1> <N2> ... <Nn> **n** integers in the range 1-10 separated by spaces, representing the grades of the student;

All lines containing inputs end with the newline character (Enter key).

Output data

The program will display on the screen (standard output stream)

- One the first line: the number of students who earned the merit scholarship;
- On the second line: the name of the student who earned the performance scholarship and his average grade (fractional number with two decimal places) separated by space.

ATTENTION to the compliance to the problem requirements: the display of results must be done EXACTLY as required! In other words, on the standard output stream there will be nothing displayed in addition to the problem requirements; following the automatic evaluation, any supplemental character displayed, or any display different than the requirements, will produce an eroneous result and will lead to the „Reject" of the solution.

Restrictions and remarks

1. 0 <**m, n, p** <100
2. We guarantee that there will be no students with equal average grades.
3. **Warning**: According to the chosen programming language, the file containing the code must have one of the extensions .c, .cpp, .java, or .m. The web editor does not add automatically these extensions and the lack of the extensions leads to the impossibility of program compilation!
4. **Warning:** The source file must be named by the candidate as: <name>.<ext> where name is the family name (last name) of the candidate and the extension is the one chosen according to

the previous warning. Attention to the restrictions imposed by the Java language regarding the class name and the file name!

Example

Input	Output
6 3 2 George Popescu 9 9 9 Dan Pop 10 4 10 Ionela Cristescu 6 8 8 Ilie David 10 10 10 Georgiana Fus 9 10 10 Cristian Oprescu 8 9 9	2 Ilie David 10.00
Explanation:	
Ilie David is the student with the highest average and no failed exams, so he earned the performance scholarship. Dan Pop cannot receive a scholarship because he has a failed exam. Ionela Cristescu cannot receive a scholarship because her average grade is below 8. Georgiana Fus, George Popescu and Cristian Oprescu qualify to receive the merit scholarship, but only **two** of them receive it because the maximum number of merit scholarships is **2**.	
Input	**Output**
6 3 **5** George Popescu 9 9 9 Dan Pop 10 4 10 Ionela Cristescu 6 8 8 Ilie David 10 10 10 Georgiana Fus 9 10 10 Cristian Oprescu 8 9 9	**3** Ilie David 10.00
Explanation:	
Ilie David is the student with the highest average and no failed exams, so he earned the performance scholarship. Dan Pop cannot receive a scholarship because he has a failed exam. Ionela Cristescu cannot receive a scholarship because her average grade is below 8. Georgiana Fus, George Popescu and Cristian Oprescu qualify to receive the merit scholarship, and since the maximum number of scholarships is 5, all **3** of them receive it.	

Available time: 120 minutes