

## Problem

An educational center offers certain number of courses. A course can have one or more sections. A section can have one or more students (assume that a student cannot enroll in multiple sections of the same course). A student has to do a certain number of assignments in the course. In order to pass the course, the average score of the assignment has to be  $\geq 70$ . You will write a program that will read data about the courses, sections, students, and scores of the students and will produce some summarized results from the data.

Input Specification (read data from a file assignment1input.txt. Do not use any other file name in your code.):

The first line of the file contains a single positive integer,  $t$  ( $t \leq 25$ ), that represents the number of test cases to process.

The first line of each test case contains a single positive integer,  $c$  ( $c \leq 500$ ), that represents the number of courses.

After that the file contains data for  $c$  number of courses.

For each course:

The first line of a course contains a string,  $cn$  (all lower case, single word, max length  $\leq 20$ ), that represents the course name.

The next line contains a single positive integer,  $s$  ( $s \leq 10$ ), that represents the number of sections in the course

$cn$ . After that the file contains data for  $s$  number of sections for the course as follows.

For each section:

The first line contains two positive integers,  $st$  ( $st \leq 500$ ) and  $m$  ( $m \leq 20$ ), where  $st$  represents the number of students in the section and  $m$  represents the number of assignments in the section.

The following  $st$  number of lines represents data for the  $st$  number of students (each line for each student).

A student data line contains a positive integer,  $id$  ( $id \leq 50,0000$ ), a string  $lname$  (all lower case, single word, max length  $\leq 20$ ), and  $m$  positive float numbers (each float number is  $\leq 100$ ) separated by spaces, where  $id$  represents the id number of the student,  $lname$  represents the last name of the student, and  $m$  positive float numbers

represent the score of the students in m assignments for the course. Assume that the id numbers are unique for each student.

Similarly, the file contains data for s number sections for the course cn. Similarly, the file contains data for all the courses for each test case.

Output (output should be in console. No need to write the output to a file):

For each course, display course name (in the same order they appear in the file), total number of students passed, average scores for each section of the course (in the same order they appear in the file), id, last name and average score of the student who achieved highest average score in the assignments of the entire course regardless of section (print the first student only if multiple students achieved the highest score). Display the result in one line per line in the following format:

course\_name pass\_count list\_of\_averages\_section(separated by space up to two decimal places)  
id lname  
avg\_score (up to two decimal places)

Where course\_name is the name of the course, pass\_count is the total number of students passed the course, list\_of\_averages\_section is the list of average scores per section of the course, id, lname and avg\_score is the id, last name, and average score of the student who achieved the highest score in the course