**PA2-4-2016**

Almost all the students in a school want to be above the average of their class in their exams. Develop a python program to output the percentage of students who have scored above the average.

1. The input is text file in the same folder. You get the text file name as input from the terminal to your program.
2. Have a function named **getText** to read input from file. Handle invalid input properly. And output the string “**INVALID**” to file and display a meaningful message on screen.
3. Have a function named **showResult** to display the output on the screen and to write it into a file named **result.txt** in the same folder. You mat define additional functions in your code.
4. The main program should call the functions appropriate to achieve the task.

**Format**

**Input** (via terminal): Name of the input file in a single line

**Input file**:The first line contains integer N, the number of test cases. The next N lines contains the N number of data sets where each data set begins with an integer M(1<=N<=100) the number of students in the class.

M is followed by M number of final grades (an integer between 0 and 100) separated by spaces.

**Output:** For each test data set output a line string the percentage of students whose grade is above the average, rounded to 1 decimal places.

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| --- | --- | --- |
| Input file name | Input file | Output |
| Input\_1.txt | 1  5 30 50 70 80 100 | 60.0 |
| Input\_2.txt | 2  3 70 90 80  9 100 99 48 47 46 45 94 93 91 | 33.3  55.5 |