

# Javelin Throws (40%)

## Problem ID: finalp2

In this project, you implement a program which reads the names of Javelin competitors and their distances (in meters) thrown in some competition. The information is read from a file and printed out in a specific manner (see below).

You are **not** allowed to use any import statement in your solution, except `import typing`.

### Input

The input is one line containing the name of an input file, ending in `.txt`. A typical input file, `throws1.txt`, looks like this:

```
Sonia Bisset 68.79
Lillian Copeland 72.28
Babe Didrikson 69.34
Tiina Lillak 65.46
```

Another example of an input file, `throws2.txt`, looks like this:

```
Leryn Franco 58.12
Ruth Fuchs 66.23
Trine Hattestad 61.35
Tiina Lillak 69.96
Kirsten Hellier 59.37
Haruka Kitaguchi 70.23
Tiina Lillak 71.69
Mirela Manjani 58.34
Kirsten Hellier 66.45
Tiina Lillak 63.44
Ruth Fuchs 71.68
Haruka Kitaguchi 62.27
```

Those two files are provided for your convenience. You can download them for testing locally.

The input file always contains three columns: the first name of a competitor, the last name of the competitor, and the distance thrown by that competitor in a particular round of a competition. The following can be assumed about the input file:

- It contains at least one line.
- The number of lines for any given competitor is four at the maximum.
- The length of the name of a competitor is less than 20 characters.
- The throw  $t$  is always a valid real number, where  $50 \leq t \leq 75$ , with at most two decimal digits after the period.
- The number of rounds (lines in the file) are not necessarily the same for all competitors.

**Note:** Your program is not supposed to validate this input, or refuse other input. This is just for your information about the input in the test cases. You do not need to expect input that does not meet these restrictions.

## Output

If the input file cannot be opened, no output is generated. Otherwise, the output consists of one line for each competitor. Each line is composed of the following (in this order):

- The name of a competitor, left-justified in a field of width 20.
- The string "Throws: ".
- The lengths of the individual throws for the competitor, separated by one space.

The information is printed in the same order as the data appears in the input file.

If any competitor has more than one throw, the output contains one more line: It contains the name and the average throw length of the competitor who has more than one throw and the highest average. In other words, let  $C$  be the competitor who has the highest average, out of all those that have more than one throw (ignore those that have only one throw - one lucky throw is not a reliable measure of their talent). This last line should contain the name of the competitor  $C$ , followed by a colon, one space, and then that competitor's average throw length. The average throw should be rounded to two decimal digits. If two or more players are tied for the highest average, the name that appears first in the input file is displayed.

### Sample Input 1

throws1.txt

### Sample Output 1

Sonia Bisset	Throws: 68.79
Lillian Copeland	Throws: 72.28
Babe Didrikson	Throws: 69.34
Tiina Lillak	Throws: 65.46

### Sample Input 2

throws2.txt

### Sample Output 2

Leryn Franco	Throws: 58.12
Ruth Fuchs	Throws: 66.23 71.68
Trine Hattestad	Throws: 61.35
Tiina Lillak	Throws: 69.96 71.69 63.44
Kirsten Hellier	Throws: 59.37 66.45
Haruka Kitaguchi	Throws: 70.23 62.27
Mirela Manjani	Throws: 58.34
Ruth Fuchs:	68.96