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Classes and Objects ☆

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Problem

Submissions

Leaderboard

A class defines a blueprint for an object. We use the same syntax to declare objects of a class as we use to declare variables of other basic types. For example:

```
Box box1;           // Declares variable box1 of type Box
Box box2;           // Declare variable box2 of type Box
```

Kristen is a contender for valedictorian of her high school. She wants to know how many students (if any) have scored higher than her in the 5 exams given during this semester.

Create a class named *Student* with the following specifications:

- An instance variable named *scores* to hold a student's 5 exam scores.
- A void input() function that reads 5 integers and saves them to *scores*.
- An int calculateTotalScore() function that returns the sum of the student's scores.

Input Format

Most of the input is handled for you by the locked code in the editor.

In the void `Student::input()` function, you must read 5 scores from stdin and save them to your *scores* instance variable.

Constraints

$$1 \leq n \leq 100$$

$$0 \leq \text{exam score} \leq 50$$

Output Format

In the int `Student::calculateTotalScore()` function, you must return the student's total grade (the sum of the values in *scores*).

The locked code in the editor will determine how many scores are larger than Kristen's and print that number to the console.

Sample Input

The first line contains *n*, the number of students in Kristen's class. The *n* subsequent lines contain each student's 5 exam grades for this semester.



```
3
30 40 45 10 10
40 40 40 10 10
50 20 30 10 10
```

Sample Output

```
1
```

Explanation

Kristen's grades are on the first line of grades. Only **1** student scored higher than her.

C++



```
17         scores = 0;
18         int val;
19         for(int i=0;i<5;i++)
20         {
21             cin >> val;
22             scores += val;
23         }
24     }
25
26     int calculateTotalScore()
27     {
28         return scores;
29     }
30 };
31
32 int main() {
33     int n; // number of students
34     cin >> n;
35     Student *s = new Student[n]; // an array of n students
36
37     for(int i = 0; i < n; i++){
38         s[i].input();
39     }
40
41     // calculate kristen's score
42     int kristen_score = s[0].calculateTotalScore();
43
44     // determine how many students scored higher than kristen
45     int count = 0;
46     for(int i = 1; i < n; i++){
47         int total = s[i].calculateTotalScore();
```

Line: 31 Col: 1

Upload Code as File ☐ Test against custom input

Run Code

Submit Code

You have earned 20.00 points!

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69%

125/150



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Compiler Message

Success

Input (stdin)

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```
3
30 40 45 10 10
40 40 40 10 10
50 20 30 10 10
```

Expected Output

[Download](#)

```
1
```