Week 9 Programming Assignment 2

Due on 2020-04-01, 23:59 IST

Write a class Cricketer with following member variables:

```cpp
char name[100];
int matches;
int innings;
int notOut;
int runs;
double average;
```

Write member function avg() to calculate average of the cricketer with following rules

1) If the data provided is a mismatch, returned value would be -1
   a) number of matches is less than number of innings
   b) number of notOut is more than number of innings
2) if innings is equal to notOut then avg is the number of runs
3) avg is runs scored divided by the number of innings when the cricketer got out (innings - notOut)

Write another operator (>) which takes one more Cricketer object as parameter and compares the avg of the two Cricketers. It returns true(1) when the first cricketer's average is more than the Cricketer whose object is passed as parameter, else false(0).
### Sample Test Cases

<table>
<thead>
<tr>
<th>Test Case</th>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test Case 1</td>
<td>Sharayu 99 177 27 15421&lt;br&gt;Silpa 23 83 43 4320</td>
<td>-1 -1 0</td>
</tr>
<tr>
<td>Test Case 2</td>
<td>Sharayu 99 177 27 15421&lt;br&gt;Silpa 23 13 41 4320</td>
<td>-1 -1 0</td>
</tr>
<tr>
<td>Test Case 3</td>
<td>Puru 70 13 13 4320&lt;br&gt;Amit 50 17 17 5421</td>
<td>4320 5421 0</td>
</tr>
<tr>
<td>Test Case 4</td>
<td>Puru 70 33 13 4320&lt;br&gt;Amit 50 37 27 5421</td>
<td>216 542.1 0</td>
</tr>
<tr>
<td>Test Case 5</td>
<td>Amit 50 37 27 5421&lt;br&gt;Puru 70 33 13 4320</td>
<td>542.1 216 1</td>
</tr>
<tr>
<td>Test Case 6</td>
<td>Pravin 100 83 13 4320&lt;br&gt;Amar 150 137 27 5421</td>
<td>61.7143 49.2818 1</td>
</tr>
<tr>
<td>Test Case 7</td>
<td>Manali 150 137 27 5421&lt;br&gt;Shefali 100 83 13 4320</td>
<td>49.2818 61.7143 0</td>
</tr>
<tr>
<td>Test Case 8</td>
<td>Ranjit 75 37 47 5421&lt;br&gt;Praneel 123 125 13 4320</td>
<td>-1 -1 0</td>
</tr>
<tr>
<td>Test Case 9</td>
<td>Amin 50 39 39 5421&lt;br&gt;Sameer 47 43 13 4320</td>
<td>5421 144 1</td>
</tr>
<tr>
<td>Test Case 10</td>
<td>Sharayu 199 177 27 15421&lt;br&gt;Silpa 123 83 43 4320</td>
<td>102.807 108 0</td>
</tr>
</tbody>
</table>

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Sample solutions (Provided by instructor)

```cpp
#include <iostream>
define repeat(x) for(int iterator_i = 0, iterator_limit = x; iterator_i < iterator_limit; iterator_i++)
#define main_program int main()
#include <cmath>
using namespace std;

class Cricketer{
private:
    char name[100];
    int matches;
    int innings;
    int notOut;
    int runs;
    double average;
public:
    Cricketer();
    Cricketer(char *str, int mat, int inns, int nt, int r);
    int i=0;
    while(str[i] != 0){
        this->name[i] = str[i];
        i++;
    }
};
```
```cpp
this->matches = mat;
this->innings = inns;
this->notOut = nt;
this->runs = r;
}

void read(){
cin >> name >> matches >> innings >> notOut >>

double avg(){
if(matches < innings)
    average = -1;
else if(innings-notOut < 0)
    average = -1;
else if(0 == (innings-notOut))
    average = runs;
else
    average = 1.0 * runs/(innings-notOut);
}

bool operator>(Cricketer c1){
c1.avg();
    this->avg();
    return average > c1.average ;
}

int main(){

    Cricketer c1;
    c1.read();
    cout << c1.avg() << " ";

    Cricketer c2;
    c2.read();
    cout << c2.avg() << " ";
    cout << (c1 > c2) ;
}
```