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Batch : SB3

Assignment 1 : Class and Object

Define a class batsman with the following specifications:

Private members:

bcode

4 digits code number

bname

20 characters

innings, notout, runs integer type

batavg

it is calculated according to the formula –

$$\text{batavg} = \text{runs} / (\text{innings} - \text{notout})$$

calcavg()

Function to compute batavg

Public members:

readdata()

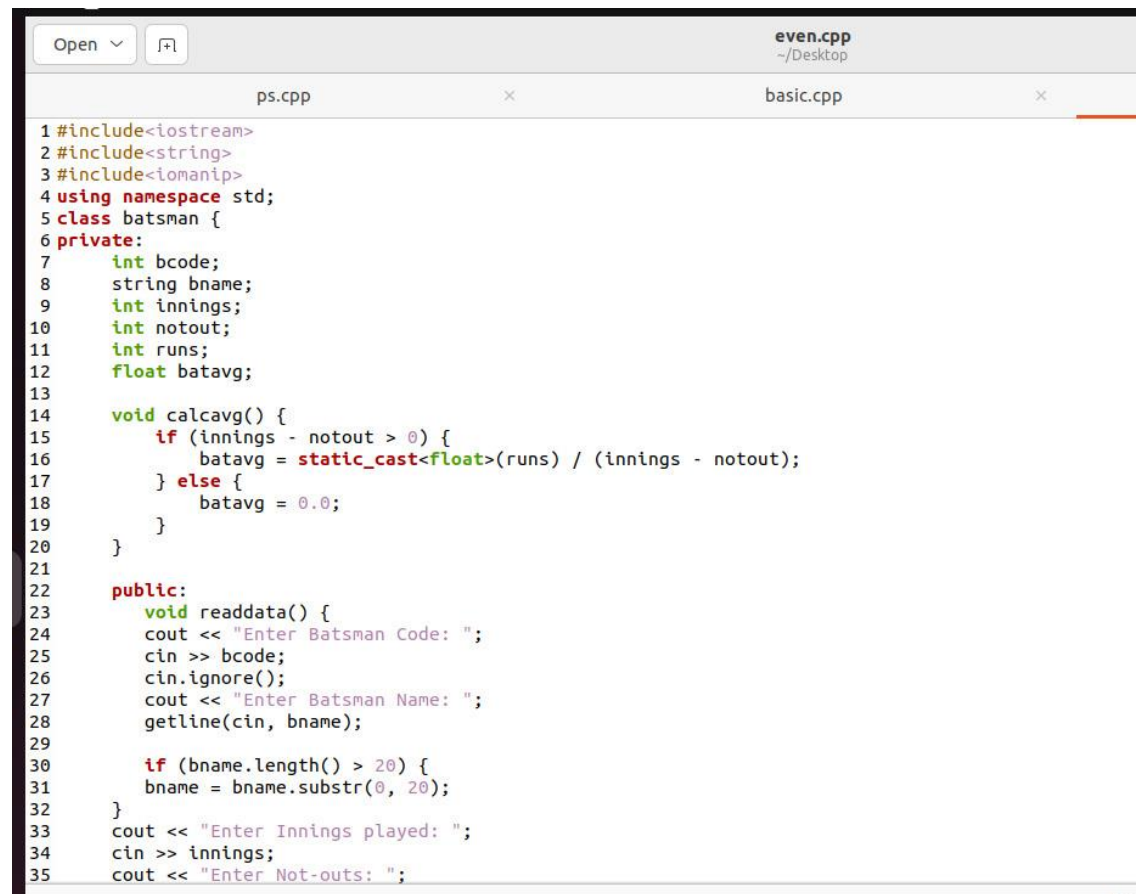
Function to accept value from bcode, name, innings, notout and

invoke the function calcavg()

displaydata()

Function to display the data members on the screen.

Program :



The screenshot shows a C++ IDE with two tabs: 'ps.cpp' and 'basic.cpp'. The 'basic.cpp' tab is active and displays the following code:

```
1 #include<iostream>
2 #include<string>
3 #include<iomanip>
4 using namespace std;
5 class batsman {
6 private:
7     int bcode;
8     string bname;
9     int innings;
10    int notout;
11    int runs;
12    float batavg;
13
14    void calcavg() {
15        if (innings - notout > 0) {
16            batavg = static_cast<float>(runs) / (innings - notout);
17        } else {
18            batavg = 0.0;
19        }
20    }
21
22 public:
23    void readdata() {
24        cout << "Enter Batsman Code: ";
25        cin >> bcode;
26        cin.ignore();
27        cout << "Enter Batsman Name: ";
28        getline(cin, bname);
29
30        if (bname.length() > 20) {
31            bname = bname.substr(0, 20);
32        }
33        cout << "Enter Innings played: ";
34        cin >> innings;
35        cout << "Enter Not-outs: ";
```

```
Open  even.cpp ~/Desktop
ps.cpp basic.cpp
29
30     if (bname.length() > 20) {
31         bname = bname.substr(0, 20);
32     }
33     cout << "Enter Innings played: ";
34     cin >> innings;
35     cout << "Enter Not-outs: ";
36     cin >> notout;
37     cout << "Enter Runs scored: ";
38     cin >> runs;
39
40     calcavg();
41 }
42 void displaydata() {
43     cout << "\n--- Batsman Data ---" << endl;
44     cout << "Code: " << bcode << endl;
45     cout << "Name: " << bname << endl;
46     cout << "Innings: " << innings << endl;
47     cout << "Not-outs: " << notout << endl;
48     cout << "Runs: " << runs << endl;
49     cout << fixed << setprecision(2);
50     cout << "Batting Average: " << batavg << endl;
51 }
52 };
53 int main() {
54     batsman player1;
55     player1.readdata();
56     player1.displaydata();
57     return 0;
58 }
59
60
61
62
63
```

Output :

```
it@it-OptiPlex-3046: ~/Desktop
it@it-OptiPlex-3046:~/Desktop$ g++ even.cpp
it@it-OptiPlex-3046:~/Desktop$ ./a.out
Enter Batsman Code: 7
Enter Batsman Name: Mahendra Singh Dhoni
Enter Innings played: 200
Enter Not-outs: 100
Enter Runs scored: 10793

--- Batsman Data ---
Code: 7
Name: Mahendra Singh Dhoni
Innings: 200
Not-outs: 100
Runs: 10793
Batting Average: 107.93
it@it-OptiPlex-3046:~/Desktop$
```