Object Oriented Programming

Lab task #8

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Submitted to

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Question #1

Code:

```cpp
#include<iostream>                   //Including header files
#include<cstring>
using namespace std;
class student                        // Class with sudent name
{
    private:                         // Class members which are private.
    int admno;
    char sname[20];
    float eng, math , science , total;
    float ctotal( float eng , float math , float science);

    public:                          // Function prototypes and are public.
    void takedata(int a , char n[], float e , float m , float s );      // function to get data
    void showdata();                                                    // function to display data

};
// using a function outside the class with the help of scope resolution operator
void student::takedata(int a , char n[] , float e , float m , float s )
{
    int i;
    // Assigning values to the class members
    admno = a;

    for (i = 0; i < strlen(n); i++)
    {
        sname[i] = n[i];
    }

    sname[i] = '\0';
    eng = e;
    math = m;
    science = s;
}
```

```cpp
34
35    float student::ctotal(float eng , float math , float science )
36    {
37        total = eng + math + science;              // calculating the total
38
39        return total;
40    }
41    // displaying the values
42    void student::showdata()
43    {
44        cout<<"Admission no is: "<<admno<<endl;
45        cout<<"Student name is: "<<sname<<endl;
46        cout<<"English marks: "<<eng<<endl;
47        cout<<"Math marks: "<<math<<endl;
48        cout<<"Science marks: "<<science<<endl;
49
50        cout<<"Total marks are: "<<ctotal( eng , math , science )<<endl;
51    }
52
53    int main()
54    {
55        student s;              // creating object
56
57        s.takedata(12 , "Saad Ahmad", 12.1 , 12 , 34); // passing values
58        s.showdata();
59    }
60
```

Output:

```
TERMINAL    OUTPUT    PROBLEMS    DEBUG CONSOLE

Windows PowerShell
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PS C:\Users\saada\Desktop\done\LabTask> cd "c:\Users\saada\Desktop\done\LabTask\Task 8"
PS C:\Users\saada\Desktop\done\LabTask\Task 8> & .\"Q1.exe"
Admission no is: 12
Student name is: Saad Ahmad
English marks: 12.1
Math marks: 12
Science marks: 34
Total marks are: 58.1
PS C:\Users\saada\Desktop\done\LabTask\Task 8>
```

Question #2

Code:

```cpp
#include<iostream>            //Including header files
using namespace std;
class batsman                 // Class with batsman name
{
    private:                  // Class members which are private.
    int bcode;
    char bname[20];
    int inings, notout, runs;
    int batavg ;
    int calcavg(int inings , int notout , int runs);

    public:                   // Function prototypes and are public.
    void readdata(int b , char n[] , int i , int no , int r );          // function to get data
    void displaydata();                                                 // function to display data

};
// using a function outside the class with the help of scope resolution operator
void batsman::readdata(int b , char n[] , int i , int no , int r )
{
    int x;
    // Assigning values to the class members
    bcode = b;
    for (x = 0; x < sizeof(n); x++)
    {
        bname[x] = n[x];
    }

    bname[x] = '\0';
    inings = i;
    notout = no;
    runs = r;
}
```

```cpp
33
34    int batsman::calcavg(int inings , int notout , int runs)
35    {
36        batavg = runs / (inings - notout);      // calculating batavg
37
38
39        return batavg;
40    }
41    // displaying the values
42    void batsman::displaydata()
43    {
44        cout<<"Batsman code is: "<<bcode<<endl;
45        cout<<"Batsman name is: "<<bname<<endl;
46        cout<<"Inings: "<<inings<<endl;
47        cout<<"Not out: "<<notout<<endl;
48        cout<<"Runs: "<<runs<<endl;
49
50        cout<<"Batting average: "<<calcavg(inings ,notout ,runs)<<endl;
51    }
52
53    int main()
54    {
55        batsman s;              // creating object
56
57        s.readdata(12 , "Saad", 1134 , 145 , 34);            // passing values
58        s.displaydata();
59    }
60
```

Output:

```
TERMINAL    OUTPUT    PROBLEMS    DEBUG CONSOLE

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PS C:\Users\saada\Desktop\done\LabTask> cd "c:\Users\saada\Desktop\done\LabTask\Task 8"
PS C:\Users\saada\Desktop\done\LabTask\Task 8> & .\"Q2.exe"
Batsman code is: 12
Batsman name is: Saad
Inings: 1134
Not out: 145
Runs: 34
Batting average: 0
PS C:\Users\saada\Desktop\done\LabTask\Task 8>
```