BUBT | BANGLADESH UNIVERSITY OF BUSINESS AND TECHNOLOGY

LAB FINAL

Course NO	:	122
Course Name	:	Object Oriented Programming Language Lab
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Problem 1

Manchester United is a class with two private integer member variables coach and player, and a public void member function getData (). Create an object named 'ronaldo' in the main function. Overload the operator '++' in this class to perform the increment of both member variables through the following instruction ronaldo++ from the main function. After that create another instance of the Manchester United class named 'fernandes'. Now, you set the values of coach and player for ronaldo to 4 and 5, and for fernandes, it is 5 and 6. Overloading only one relational operator, compare the result of ronaldo with fernandes before and after incrementing ronaldo by one. Which operator will be appropriate for both cases? Support your explanation by implementing that operator.

```cpp
1    #include<iostream>
2    using namespace std;
3
4    class ManchesterUnited
5    {
6    private:
7        int coach = 0;
8        int player = 0;
9
10   public:
11       void getData()
12       {
13           cout<< "Number of coach   = " << coach<<endl;
14           cout<< "                                Number of Player = " << player << endl;
15       }
16
17       void operator++(int)
18       {
19           coach++;
20           player++;
21       }
22
23       bool operator==(ManchesterUnited &obj)
24       {
25           return (coach + player == obj.coach + obj.player);
26       }
27
28
29       void setData(int Coach, int Player)
30       {
31           coach = Coach;
32           player= Player;
33       }
34
35   };
36
37   int main()
38   {
39       ManchesterUnited ronaldo,fernandes;
40
41       ronaldo.setData(4,5);
42       fernandes.setData(5,6);
43
44       cout<<"Total member for Ronaldo   : ";
45       ronaldo.getData();
46       cout<<"Total member for Fernandes: ";
47       fernandes.getData();
48
49
```

```cpp
50          cout<<"Ans: ";
51          if (ronaldo == fernandes)
52          {
53              cout << "Total Member is Equal\n\n"<<endl;
54          }
55          else
56          {
57              cout << "Total Member is not Equal\n\n"<<endl;
58          }
59
60
61          ronaldo++; // Incrementing Ronaldo
62
63
64          cout<<"Total member for Ronaldo   : ";
65          ronaldo.getData();
66          cout<<"Total member for Fernandes: ";
67          fernandes.getData();
68
69
70          cout<<"Ans: ";
71          if (ronaldo == fernandes)
72          {
73              cout << "Total Member is Equal"<<endl;
74          }
75          else
76          {
77              cout << "Total Member is not Equal"<<endl;
78          }
79
80
81          return 0;
82      }
83
```

```
C:\Users\atalh\Desktop\fdef.exe                                          —   □   ×

Total member for Ronaldo   : Number of coach  = 4
                             Number of Player = 5
Total member for Fernandes: Number of coach  = 5
                             Number of Player = 6
Ans: Total Member is not Equal


Total member for Ronaldo   : Number of coach  = 5
                             Number of Player = 6
Total member for Fernandes: Number of coach  = 5
                             Number of Player = 6
Ans: Total Member is Equal

Process returned 0 (0x0)   execution time : 0.608 s
Press any key to continue.
```