AIR UNIVERSITY

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DEPARTMENT OF ELECTRICAL AND COMPUTER ENGINEERING

EXPERIMENT NO 5

Lab Title: Operator Overloa	lullig				
Student Name:		Reg. No:			
Objective:					
LAB ASSESSMENT:					
Attributes	Excellent (5)	Good (4)	Average (3)	Satisfactory (2)	Unsatisfactory (1)
Ability to Conduct Experiment					
Ability to assimilate the results					
Effective use of lab equipment and follows the lab safety rules					
Total Marks:			Obtain	ed Marks:	
Total Marks:			Obtain	ed Marks:	
			Obtain	ed Marks:	
Total Marks:	MENT:				
		Good (4)	Obtain Average (3)	ed Marks: Satisfactory (2)	
LAB REPORT ASSESSI Attributes	MENT: Excellent		Average	Satisfactory	Unsatisfactory
Attributes Data presentation	MENT: Excellent		Average	Satisfactory	Unsatisfactory
Attributes Data presentation Experimental results	MENT: Excellent		Average	Satisfactory	Unsatisfactory
Attributes Data presentation Experimental results	MENT: Excellent		Average	Satisfactory	Unsatisfactory
Attributes Data presentation Experimental results Conclusion	MENT: Excellent (5)		Average	Satisfactory	Unsatisfactory
Attributes Data presentation Experimental results Conclusion	MENT: Excellent (5)		Average (3)	Satisfactory (2)	Unsatisfactory
Attributes Data presentation Experimental results Conclusion	MENT: Excellent (5)		Average (3)	Satisfactory (2)	Unsatisfactory (1)
LAB REPORT ASSESSI	Excellent (5)		Average (3)	Satisfactory (2)	Unsatisfactory (1)

```
LAB TASK#3
#include <iostream>
using namespace std;

class Book

{
   int Days Bases;
}
6
7
8
9 +
          int Days, Pages;
          public:
Book()
               Days=32;
Pages=12;
10
11
12
13
          Book(int d,int p)
14 ÷
15
               Davs=d:
16
17
18
19 ~
                Pages=p;
           void display()
               cout<<"\n\nDays: "<<Days;
cout<<"\nPages: "<<Pages;</pre>
20
21
22
23
24 ~
25
26
27
          Book operator + (Book b)
               Book temp;
temp.Pages = Pages + b.Pages;
return temp;
28
29
          }
void operator == (Book b)
30 ÷
31
                if (Pages==b.Pages)
32 ~
33
34
35
               {
                     cout<<"\nPages of both books are equal"<<endl;</pre>
               }
else
36 ÷
37
                {
                     cout<<"\nThe pages of both book are not equal"<<endl;</pre>
38
39
               }
          void operator > (Book b)
40
41 ~
42
43 ~
44
45
46
47 ~
                if (Pages>b.Pages)
                {
                     cout << "\nThe pages of Book # 1 are greater than the pages of Book # 2" << endl;
               }
               else
48
49
                     cout<<"\nThe pages of Book # 1 are less than the pages of Book # 2"<<endl;</pre>
   50
               friend void total(Book b);
   51
         };
   53
         void total(Book temp)
   54 - {
               cout<<"\n\nThe total pages of both books: "<<temp.Pages<<endl;</pre>
   55
        }
   56
   57
        int main()
   58
   59 - {
   60
               Book b1,b2(44,66),total_pages;
               b1.display();
   61
   62
               b2.display();
               total_pages = b1+b2;
total(total_pages);
cout<<"\n\n";</pre>
   63
   64
   65
   66
               b1 > b2;
               cout<<"\n";
   67
               b1==b2;
cout<<"\n\n\n";
   68
   69
   70
```

OUTPUT

```
Days: 32
Pages: 12

Days: 44
Pages: 66

The total pages of both books: 78

The pages of Book # 1 are less than the pages of Book # 2

The pages of both book are not equal
```

LAB TASK # 4

```
1 #include <iostream>
2 using namespace std;
3
4 class word
5 + {
6
        string random_string;
7
        public:
        word()
9 -
10
             random_string = "Muhammad Suhaib Salman";
11
12
13 ~
        word (string name)
14
             random_string = name;
15
         void display()
16
17 -
             cout<<"\n\nThe string is: "<<random_string<<endl;</pre>
18
19
20
        word operator + (word x)
21 -
22
             word temp;
             temp.random_string = random_string + x.random_string;
24
25
26
27 <del>-</del>
28
             return temp;
        void operator == (word x)
             if (random_string.length()==x.random_string.length())
29 -
30
                 cout<<"\n\nLength is equal"<<endl;</pre>
31
             }
32
             else
33 -
             {
34
                 cout<<"\n\nNot equal"<<endl;</pre>
35
36
37
        void operator = (word x)
38
39 -
40
             random_string = x.random_string;
41
42 };
43
```

```
43
44
   int main()
45 - {
        word 01,02(" Ali"),03;
03 = 01+02;
46
47
        O1.display();
48
        O2.display();
49
                        //Sum of 01 and 02
50
        03.display();
51
        01==02;
        01=02;
52
        O1.display();
53
54
        return 0;
55
```

OUTPUT

```
The string is: Muhammad Suhaib Salman

The string is: Ali

The string is: Muhammad Suhaib Salman Ali

Not equal

The string is: Ali
```

Conclusion:

I learned how to perform operator overloading in classes. I also learned how to perform different arithmetic operations using operator overloading.