

1. Write the c++ program for sum of two numbers using class and object and use getdata and putdata as member function?

PROGRAM:

The screenshot shows a C++ IDE with two windows. The left window, titled 'sum in class and object.cpp', contains the following code:

```

1 using namespace std;
2 #include<iostream>
3 class sum
4 {
5     int x,y,c;
6     public:
7     void getdata();
8     void putdata();
9 };
10 void sum::getdata()
11 {
12     cout<<"enter the values of x and y: ";
13     cin>>x>>y;
14 }
15 void sum::putdata()
16 {
17     cout<<"sum=";
18     c=x+y;
19     cout<<c;
20 }
21 main()
22 {
23     sum z;
24     z.getdata();
25     z.putdata();
26 }

```

The right window, titled 'C:\Users\Devi\Documents\sum in class and object.exe', shows the program's output:

```

enter the values of x and y: 4
5
sum=9
-----
Process exited after 2.812 seconds with return value 0
Press any key to continue . . .

```

The bottom status bar of the IDE shows 'Compilation results...' with 0 errors and 0 warnings. The output filename is 'C:\Users\Devi\Documents\sum in class and object.exe', the output size is '2.98865604400635 MiB', and the compilation time is '2.39s'.

2. Write the c++ program to find the biggest of three numbers using class and object?

PROGRAM:

The screenshot shows a C++ IDE with two windows. The left window, titled 'greatest in class and object.cpp', contains the following code:

```

1 using namespace std;
2 #include<iostream>
3 class greatest
4 {
5     int x,y,z;
6     public:
7     void getdata();
8     void putdata();
9 };
10 void greatest::getdata()
11 {
12     cout<<"enter the values of x,y and z: ";
13     cin>>x>>y>>z;
14 }
15 void greatest::putdata()
16 {
17     if(x>y && x>z)
18     {
19         cout<<"x is greatest";
20     }
21     else if(y>z && y>x)
22     {
23         cout<<"y is greatest";
24     }
25     else if(z>x && z>y)
26     {
27         cout<<"z is greatest";
28     }
29     else
30     {
31         cout<<"enter the correct values";
32     }
33 }
34 main()
35 {
36     greatest a;
37     a.getdata();
38     a.putdata();
39 }

```

The right window, titled 'C:\Users\Devi\Documents\greatest in class and object.exe', shows the program's output:

```

enter the values of x,y and z: 4
5
6
z is greatest
-----
Process exited after 2.654 seconds with return value 0
Press any key to continue . . .

```

The bottom status bar of the IDE shows 'Compilation results...' with 0 errors and 0 warnings. The output filename is 'C:\Users\Devi\Documents\greatest in class and object.exe', the output size is '2.98865604400635 MiB', and the compilation time is '2.39s'.

3. Write the c++ program to print the student report using class and object?

PROGRAM:

```

1 using namespace std;
2 #include <iostream>
3 class student
4 {
5     int m1, m2, m3, regno, tot, avg;
6     public:
7         void getData();
8         void putData();
9     };
10 void student::getData()
11 {
12     cout << "enter the regno: ";
13     cin >> regno;
14     cout << "enter the marks: ";
15     cin >> m1 >> m2 >> m3;
16 }
17 void student::putData()
18 {
19     tot = m1 + m2 + m3;
20     avg = tot / 3;
21     if (m1 >= 0 && m2 >= 0 && m3 >= 0 && avg >= 0 && avg <= 100)
22     {
23         if (avg >= 90)
24             cout << "Grade A+";
25         else if (avg >= 80 && avg < 90)
26             cout << "Grade B+";
27         else if (avg >= 70 && avg < 80)
28             cout << "Grade B-";
29         else if (avg >= 60 && avg < 70)
30             cout << "Grade C+";
31         else if (avg >= 50 && avg < 60)
32             cout << "Grade C-";
33         else if (avg >= 40 && avg < 50)
34             cout << "Grade D+";
35         else if (avg >= 30 && avg < 40)
36             cout << "Grade D-";
37         else if (avg >= 20 && avg < 30)
38             cout << "Fail";
39         else
40             cout << "enter the correct values";
41     }
42 }
43
44 int main()
45 {
46     student s;
47     s.getData();
48     s.putData();
49     return 0;
50 }

```

Output:

```

C:\Users\Devi\Documents\student marks in c and o.exe
enter the regno: 45
enter the marks: 78
67
89
grade C
-----
Process exited after 9.303 seconds with return value 0
Press any key to continue . . .

```

4. Write the c++ program for arithmetic operations using switch case statement?

PROGRAM:

```

1 using namespace std;
2 #include <iostream>
3 class arithmetic
4 {
5     float a, b;
6     int exp;
7     public:
8         void getData();
9         void putData();
10    };
11 void arithmetic::getData()
12 {
13     cout << "enter the values of a and b: ";
14     cin >> a >> b;
15     cout << "enter the choice: ";
16     cin >> exp;
17 }
18 void arithmetic::putData()
19 {
20     switch (exp)
21     {
22         case 1:
23             cout << "Addition";
24             break;
25         case 2:
26             cout << "Subtraction";
27             break;
28         case 3:
29             cout << "Multiplication";
30             break;
31         case 4:
32             cout << "Division";
33             break;
34         default:
35             cout << "enter the correct choice";
36     }
37 }
38
39 int main()
40 {
41     arithmetic a;
42     a.getData();
43     a.putData();
44     return 0;
45 }

```

Output:

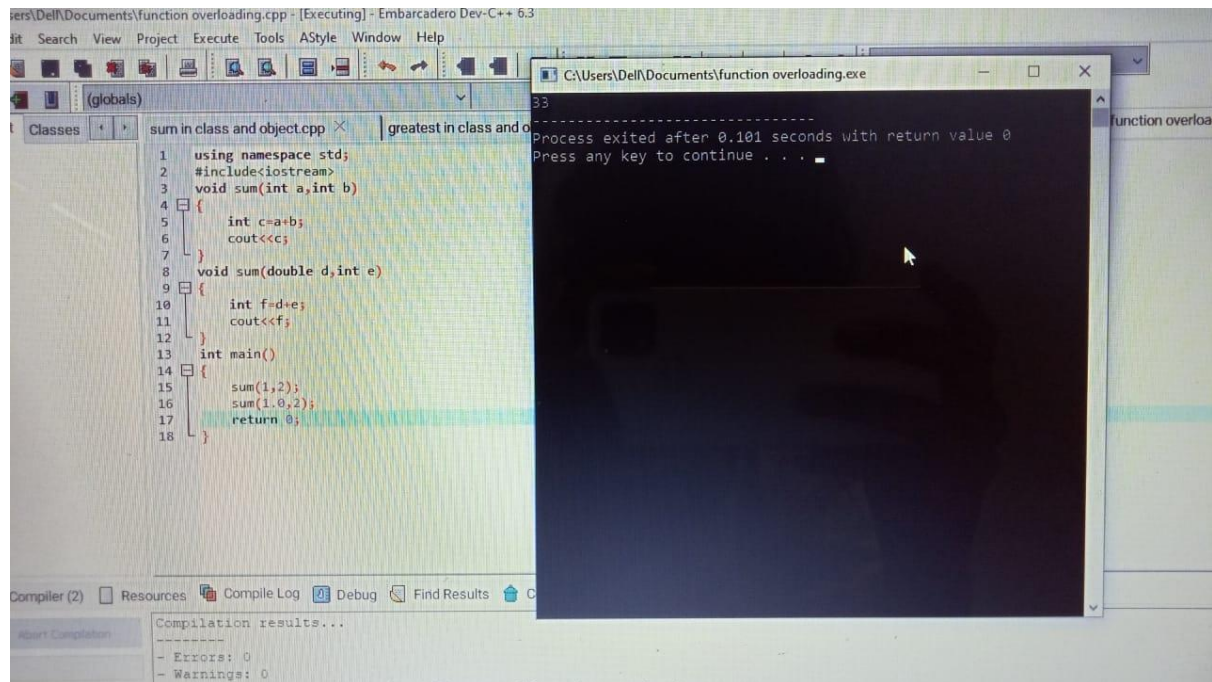
```

C:\Users\Devi\Documents\arithmetic in c and o.exe
enter the values of a and b: 5
enter the choice: 3
0
-----
Process exited after 5.889 seconds with return value 0
Press any key to continue . . .

```


5. Write the c++ program for sum of two numbers using function overloading?

PROGRAM:



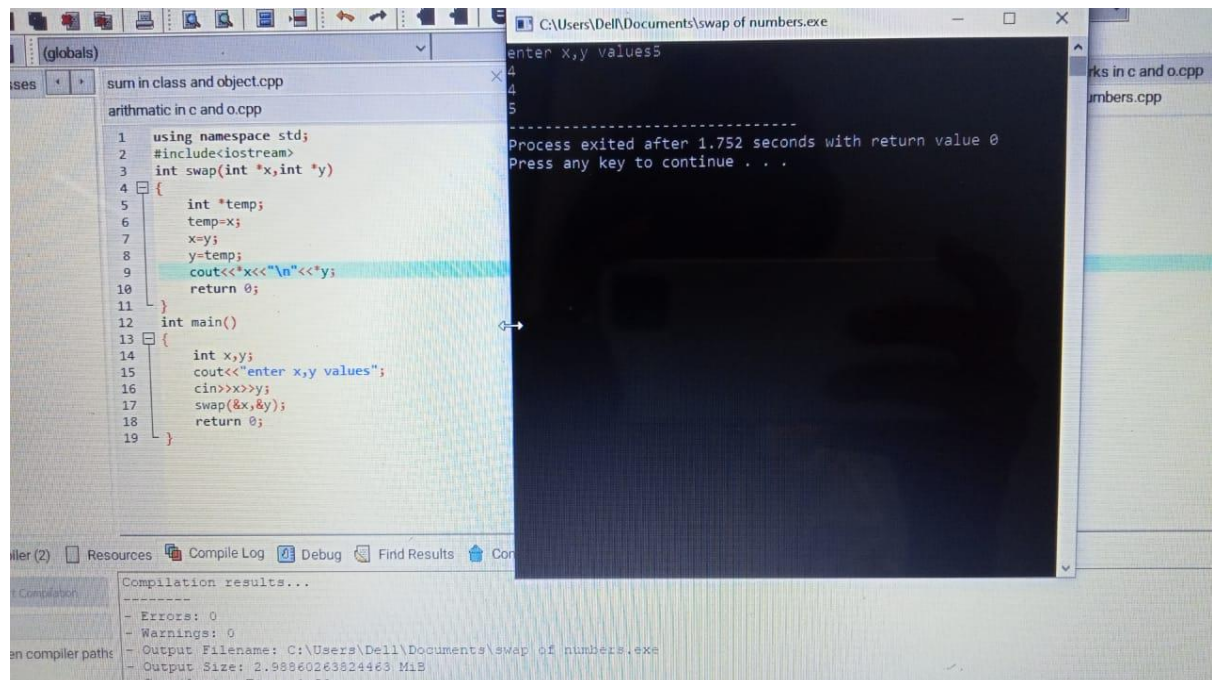
The screenshot shows an IDE with a C++ program for function overloading. The program defines two overloaded functions: `sum(int a, int b)` and `sum(double d, int e)`. The `main` function calls `sum(1, 2)` and `sum(1.0, 2)`. The output window shows the program executed successfully, exiting after 0.101 seconds.

```
1 using namespace std;
2 #include<iostream>
3 void sum(int a,int b)
4 {
5     int c=a+b;
6     cout<<c;
7 }
8 void sum(double d,int e)
9 {
10    int f=d+e;
11    cout<<f;
12 }
13 int main()
14 {
15     sum(1,2);
16     sum(1.0,2);
17     return 0;
18 }
```

Process exited after 0.101 seconds with return value 0
Press any key to continue . . .

6. Write the c++ program for swapping of two numbers using call by value and call by reference?

PROGRAM:



The screenshot shows an IDE with a C++ program for swapping two numbers using call by reference. The program defines a `swap` function that takes two integer pointers and swaps their values. The `main` function prompts the user to enter values for `x` and `y`, calls `swap(&x, &y)`, and prints the values. The output window shows the program executed successfully, exiting after 1.752 seconds.

```
1 using namespace std;
2 #include<iostream>
3 int swap(int *x,int *y)
4 {
5     int *temp;
6     temp=x;
7     x=y;
8     y=temp;
9     cout<<"x<<"<<y;
10    return 0;
11 }
12 int main()
13 {
14     int x,y;
15     cout<<"enter x,y values";
16     cin>>x>>y;
17     swap(&x,&y);
18     return 0;
19 }
```

enter x,y values
4
5

Process exited after 1.752 seconds with return value 0
Press any key to continue . . .