



SZABIST

ASSIGNMENT NO # 3

Name: ASIM

Subject: Fundamental Of Programming

Applicant ID: BSCSGHR-22-0034

Date: 06-November-2022

Title: Attempt three questions.

```
1 #include<iostream>
2 #include<math.h>
3 using namespace std;
4 int main(void){
5     int a, b;
6     int sum, sub, mul, mod;
7     float div;
8
9     cout << "Enter any two numbers:\n";
10    cin >> a >> b;
11
12    // It will perform all arithmetic operations
13    sum = a + b;
14    sub = a - b;
15    mul = a * b;
16    div = (float)a / b;
17    mod = a % b;
18
19    // It will print the final output of all arithmetic operations
20    cout << endl;
21    cout << "SUM: " << a << " + " << b << " = " << sum << "\n";
22    cout << "DIFFERENCE: " << a << " - " << b << " = " << sub << "\n";
23    cout << "PRODUCT: " << a << " * " << b << " = " << mul << "\n";
24    cout << "QUOTIENT: " << a << " / " << b << " = " << div << "\n";
25    cout << "MODULUS: " << a << " % " << b << " = " << mod << "\n";
26    return 0;
27 }
```

E:\Summiya\program 1.cpp - [Executing] - Embarcadero Dev-C++ 6.3

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(globals)

program 1.cpp

```
1 #include<iostream>
2 #include<math.h>
3
4 Enter any two numbers:
5 6
6 9
7
8 SUM: 6 + 9 = 15
9 DIFFERENCE: 6 - 9 = -3
10 PRODUCT: 6 * 9 = 54
11 QUOTIENT: 6 / 9 = 0.666667
12 MODULUS: 6 % 9 = 6
13
14 -----
15 Process exited after 4.877 seconds with return value 0
16 Press any key to continue . . .
```

Compiler (4) Resources Compile Log Debug Find Results Console Close

Line: 25 Col: 22 Sel: 0 Lines: 27 Length: 815 Insert Done parsing in 0.016 seconds

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E:\Summiya\program 2.cpp - Embarcadero Dev-C++ 6.3

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(globals)

program 1.cpp program 2.cpp

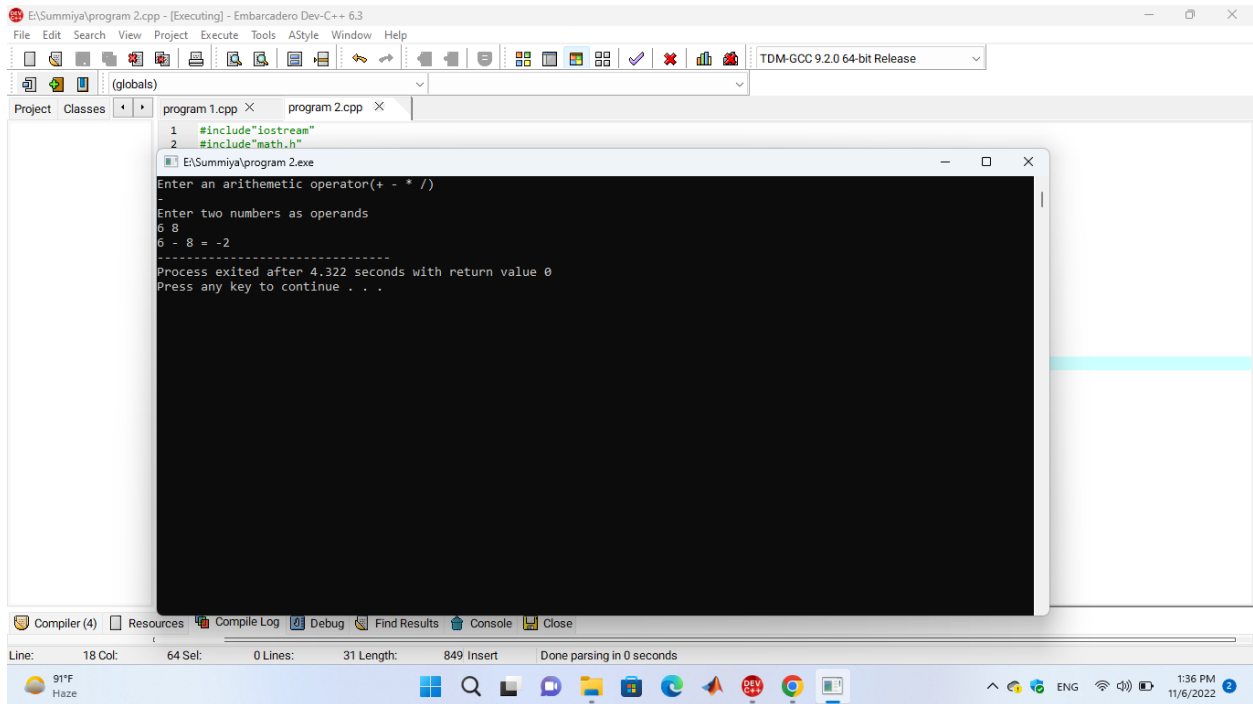
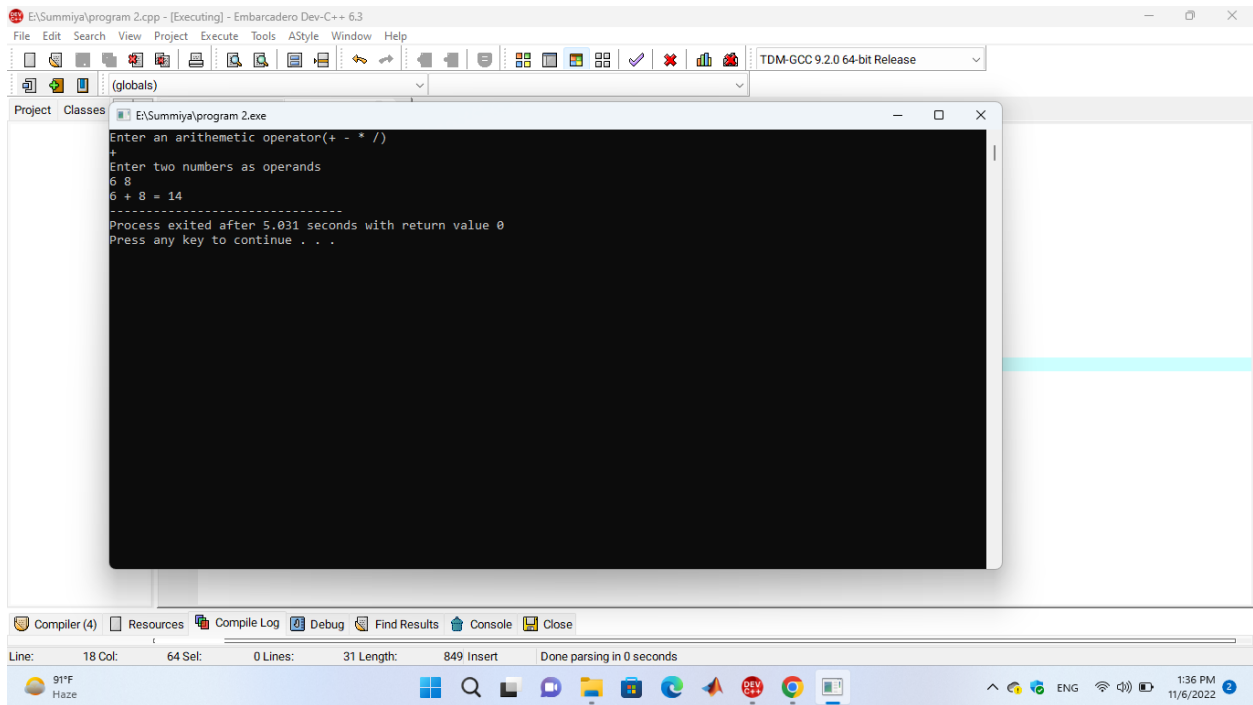
```
1 #include<iostream>
2 #include<math.h>
3 using namespace std;
4 int main(void){
5     char op;
6     int num1, num2;
7
8     cout << "Enter an arithmetic operator(+ - * /)\n";
9     cin >> op;
10    cout << "Enter two numbers as operands\n";
11    cin >> num1 >> num2;
12
13    switch(op) {
14        case '+':
15            cout << num1 << " + " << num2 << " = " << num1+num2;
16            break;
17        case '-':
18            cout << num1 << " - " << num2 << " = " << num1-num2;
19            break;
20        case '*':
21            cout << num1 << " * " << num2 << " = " << num1*num2;
22            break;
23        case '/':
24            cout << num1 << " / " << num2 << " = " << num1/num2;
25            break;
26        default:
27            printf("ERROR: Unsupported Operation");
28    }
29
30    return 0;
31 }
```

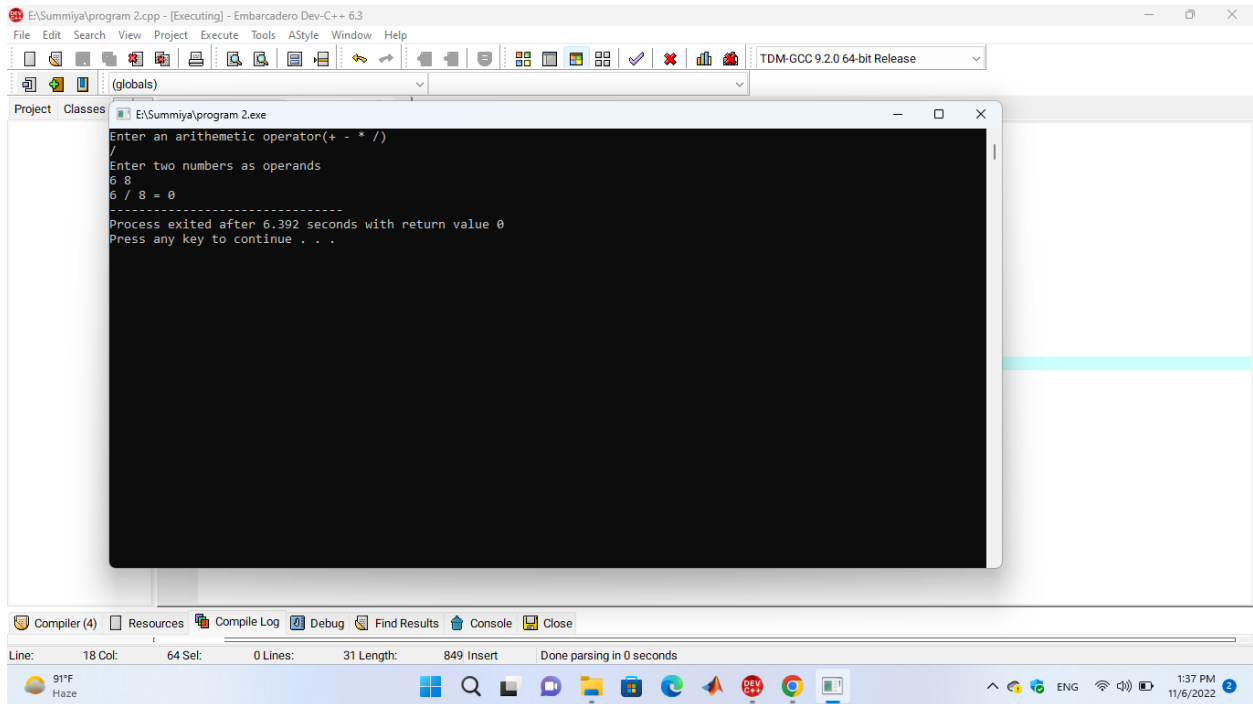
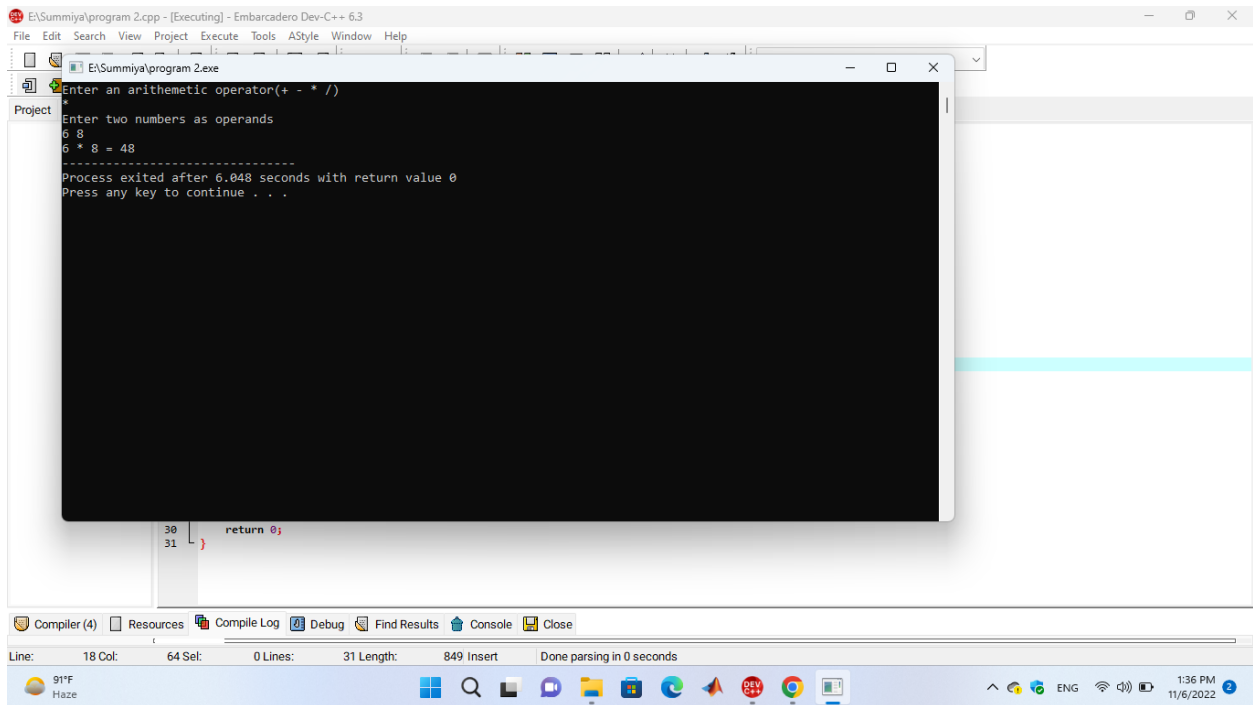
Compiler (4) Resources Compile Log Debug Find Results Console Close

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E:\Summiya\program 3.cpp - Embarcadero Dev-C++ 6.3

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(globals)

program 1.cpp × program 2.cpp × program 3.cpp ×

```
1 #include<iostream>
2 #include<math.h>
3 using namespace std;
4 int main(void)
5 {
6     float a, b, c, x1, x2, discriminant, realPart, imaginaryPart;
7     cout << "Enter coefficients a, b and c: ";
8     cin >> a >> b >> c;
9     discriminant = b*b - 4*a*c;
10
11     if (discriminant > 0) {
12         x1 = (-b + sqrt(discriminant)) / (2*a);
13         x2 = (-b - sqrt(discriminant)) / (2*a);
14         cout << "Roots are real and different." << endl;
15         cout << "x1 = " << x1 << endl;
16         cout << "x2 = " << x2 << endl;
17     }
18
19     else if (discriminant == 0) {
20         cout << "Roots are real and same." << endl;
21         x1 = -b/(2*a);
22         cout << "x1 = x2 = " << x1 << endl;
23     }
24
25     else {
26         realPart = -b/(2*a);
27         imaginaryPart = sqrt(-discriminant)/(2*a);
28         cout << "Roots are complex and different." << endl;
29         cout << "x1 = " << realPart << "+" << imaginaryPart << "i" << endl;
30         cout << "x2 = " << realPart << "-" << imaginaryPart << "i" << endl;
31     }
32
33     return 0;
34 }
```

Compiler (4) Resources Compile Log Debug Find Results Console Close

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E:\Summiya\program 3.cpp - [Executing] - Embarcadero Dev-C++ 6.3

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(globals)

program 1.cpp × program 2.cpp × program 3.cpp ×

E:\Summiya\program 3.exe

```
Enter coefficients a, b and c: 2
4
6
Roots are complex and different.
x1 = -1+1.41421i
x2 = -1-1.41421i

-----
Process exited after 5.955 seconds with return value 0
Press any key to continue . . .
```

Compiler (4) Resources Compile Log Debug Find Results Console Close

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