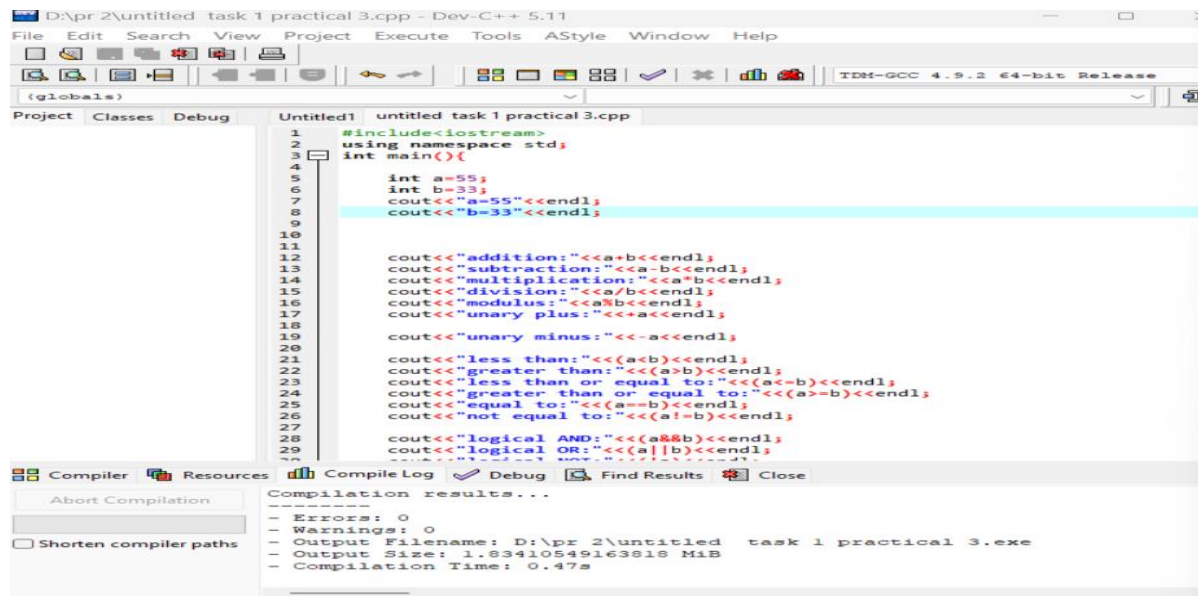


Name: Mahnoor  
Roll No: k24SW-042

Task No 1: Create a program in C or C++ that uses all the operators discussed in the manual.

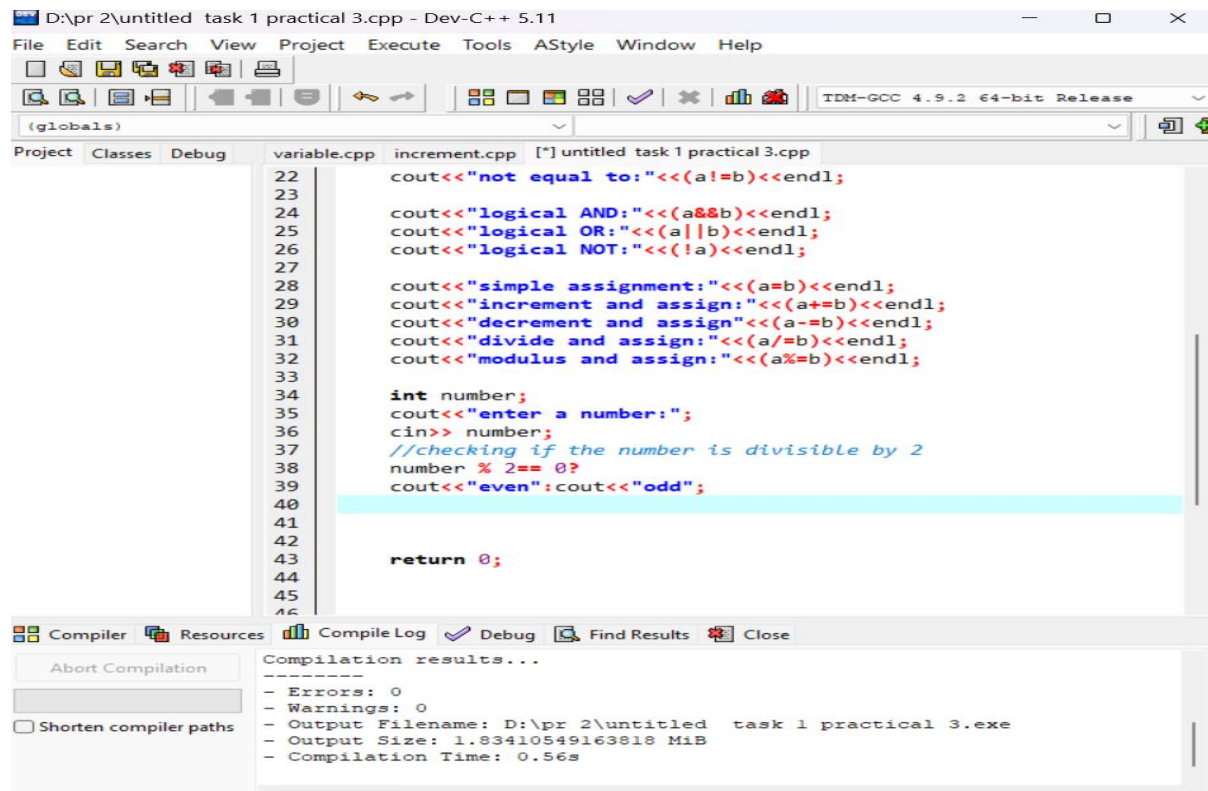
## C++: input



```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int a=55;
6     int b=33;
7     cout<<"a=55"<<endl;
8     cout<<"b=33"<<endl;
9
10
11     cout<<"addition:"<<a+b<<endl;
12     cout<<"subtraction:"<<a-b<<endl;
13     cout<<"multiplication:"<<a*b<<endl;
14     cout<<"division:"<<a/b<<endl;
15     cout<<"modulus:"<<a%b<<endl;
16     cout<<"unary plus:"<<+a<<endl;
17     cout<<"unary minus:"<<-a<<endl;
18
19     cout<<"less than:"<<(a<b)<<endl;
20     cout<<"greater than:"<<(a>b)<<endl;
21     cout<<"less than or equal to:"<<(a<=b)<<endl;
22     cout<<"greater than or equal to:"<<(a>=b)<<endl;
23     cout<<"equal to:"<<(a==b)<<endl;
24     cout<<"not equal to:"<<(a!=b)<<endl;
25
26     cout<<"logical AND:"<<(a&&b)<<endl;
27     cout<<"logical OR:"<<(a||b)<<endl;
28
29 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\pr 2\untitled task 1 practical 3.exe
- Output Size: 1.83410549163818 MiB
- Compilation Time: 0.47s



```
22 cout<<"not equal to:"<<(a!=b)<<endl;
23
24 cout<<"logical AND:"<<(a&&b)<<endl;
25 cout<<"logical OR:"<<(a||b)<<endl;
26 cout<<"logical NOT:"<<(!a)<<endl;
27
28 cout<<"simple assignment:"<<(a=b)<<endl;
29 cout<<"increment and assign:"<<(a+=b)<<endl;
30 cout<<"decrement and assign:"<<(a-=b)<<endl;
31 cout<<"divide and assign:"<<(a/=b)<<endl;
32 cout<<"modulus and assign:"<<(a%=b)<<endl;
33
34 int number;
35 cout<<"enter a number:";
36 cin>> number;
37 //checking if the number is divisible by 2
38 number % 2 == 0?
39 cout<<"even":cout<<"odd";
40
41
42
43 return 0;
44
45
46 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\pr 2\untitled task 1 practical 3.exe
- Output Size: 1.83410549163818 MiB
- Compilation Time: 0.56s

# C++ output

```
D:\pr 2\untitled task 1 p
a=55
b=33
addition:88
subtraction:22
multiplication:1815
division:1
modulus:22
unary plus:55
unary minus:-55
less than:0
greater than:1
less than or equal to:0
greater than or equal to:1
equal to:0
not equal to:1
logical AND:1
logical OR:1
logical NOT:0
simple assignment:33
increment and assign:66
decrement and assign:33
divide and assign:1
modulus and assign:1
enter a number:|
```

# C++: input

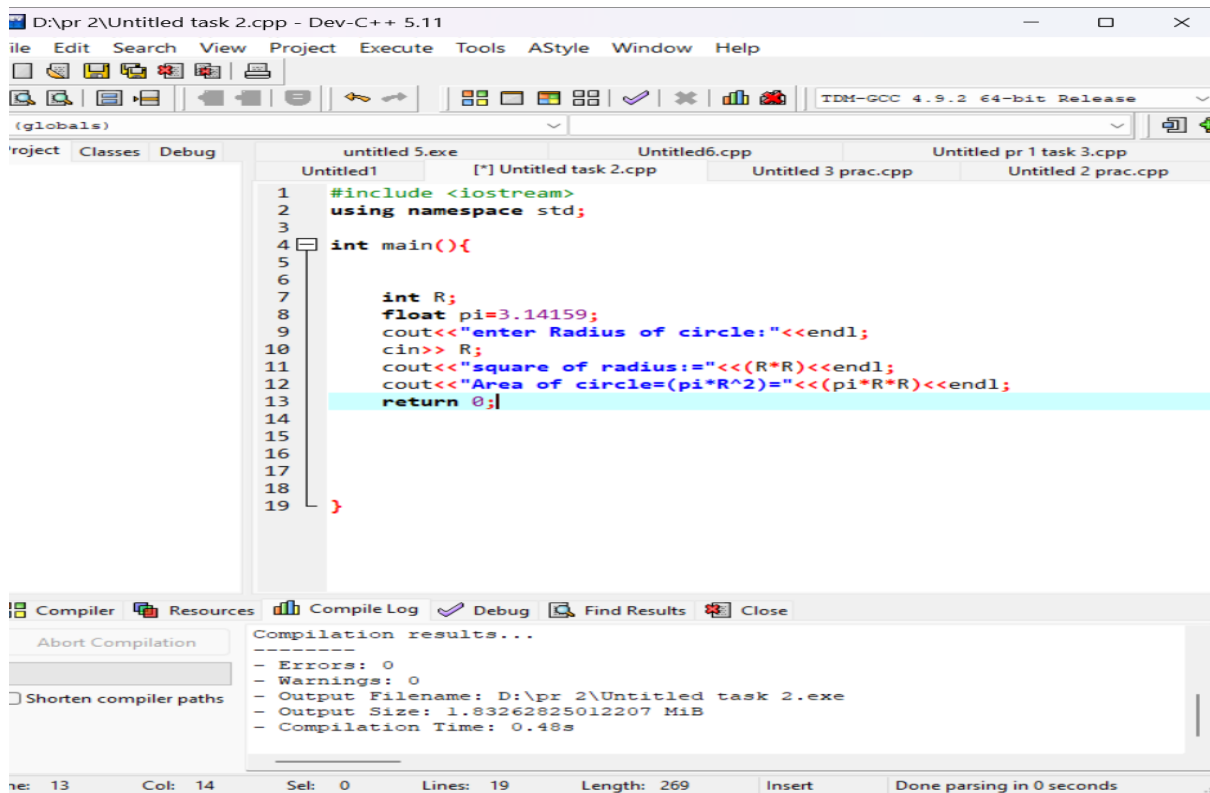
```
D:\pr 2\increment.cpp - [Executing] - Dev-C++ 5.11
File Edit Search View Project Execute Tools AStyle Window Help
(globals)
Project Classes Debug variable.cpp increment.cpp untitled task 1 practical 3.cpp
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int w;
5     cout<<"enter a number";
6     cin>> w;
7
8     cout<<"post increment:"<<w++ <<endl;
9     cout<<"printing w:"<<w <<endl;
10    cout<<"pre increment:"<<w++ <<endl;
11    cout<<"printing w:"<<w <<endl;
12    cout<<"post decrement:"<<w-- <<endl;
13    cout<<"pre decrement:"<<w-- <<endl;
14    cout<<"printing w:"<<w;
15
16    return 0;
17
18
19
20
21
22 }
23
24
25
Compiler Resources Compile Log Debug Find Results Close
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: D:\pr 2\untitled task 1 practical 3.exe
- Output Size: 1.83361721038818 MiB
- Compilation Time: 0.45s
```

# C++ output

```
D:\pr 2\increment.exe  ×  +  ∨
enter a number 44
post increment:44
printing w:45
pre increment:46
printing w:46
post decrement:46
pre decrement:-45
printing w:45
-----
Process exited after 5.207 seconds with return value 0
Press any key to continue . . . |
```

Task No 2: Write a C++ program to calculate the area of a circle. The radius of circle must be taken from user.

## C++: input



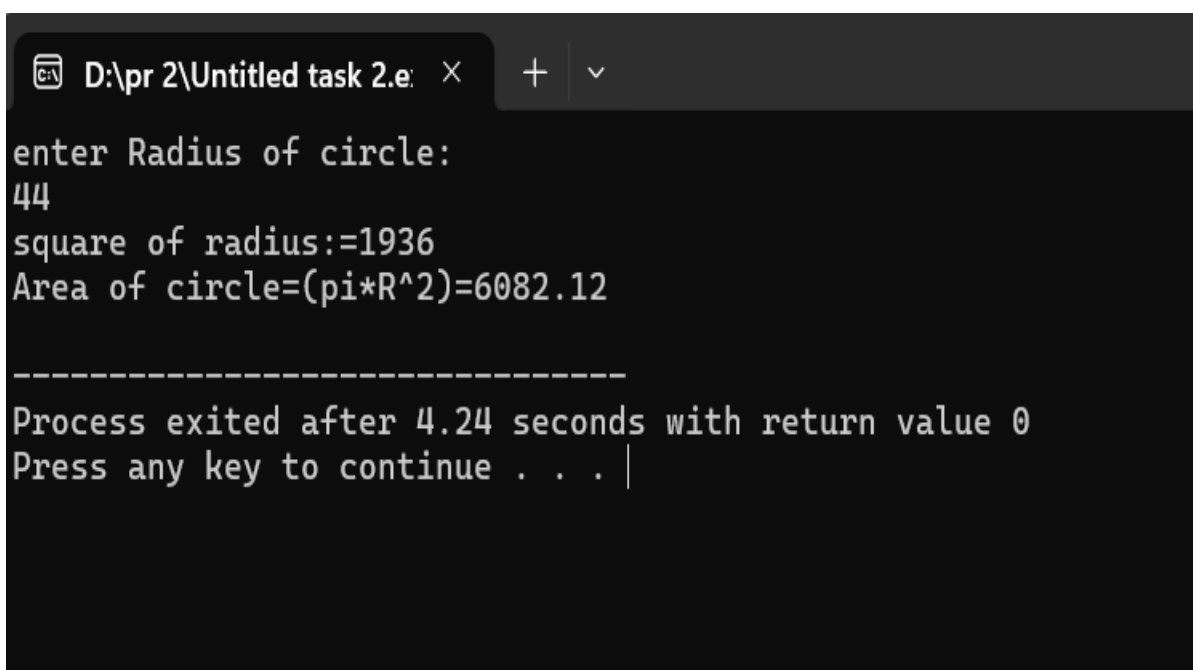
The screenshot shows the Dev-C++ IDE with a C++ program open. The program includes `<iostream>` and uses the `std` namespace. The `main` function declares an integer `R` and a float `pi` with a value of 3.14159. It prompts the user to enter the radius, reads the input, calculates the square of the radius, and then calculates the area of the circle using the formula  $\pi R^2$ . The program is compiled successfully, as shown in the 'Compilation results...' window at the bottom.

```
1 #include <iostream>
2 using namespace std;
3
4 int main(){
5
6
7     int R;
8     float pi=3.14159;
9     cout<<"enter Radius of circle:"<<endl;
10    cin>> R;
11    cout<<"square of radius:="<<(R*R)<<endl;
12    cout<<"Area of circle=(pi*R^2)="<<(pi*R*R)<<endl;
13    return 0;
14
15
16
17
18
19 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\pr 2\Untitled task 2.exe
- Output Size: 1.83262825012207 MiB
- Compilation Time: 0.48s

## C++: output



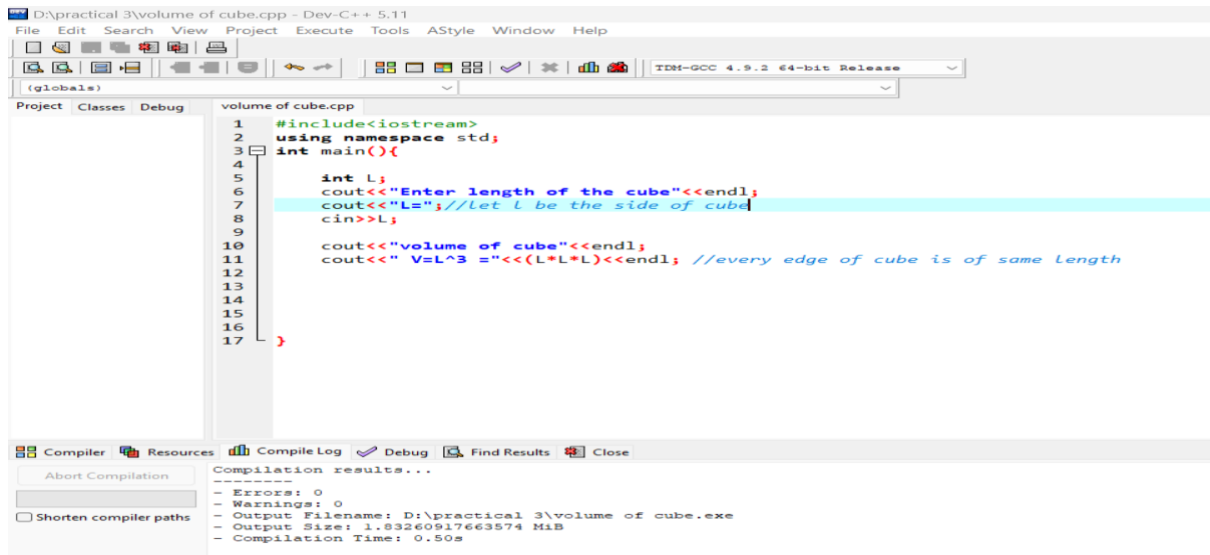
The screenshot shows the output of the C++ program in a terminal window. The user enters the radius 44. The program outputs the square of the radius (1936) and the area of the circle (6082.12). The program then exits after 4.24 seconds with a return value of 0.

```
D:\pr 2\Untitled task 2.e
enter Radius of circle:
44
square of radius:=1936
Area of circle=(pi*R^2)=6082.12

-----
Process exited after 4.24 seconds with return value 0
Press any key to continue . . .
```

**Task No 3:** Write a C program to calculate the volume of cube. The parameters must be taken by user.

## C++: input

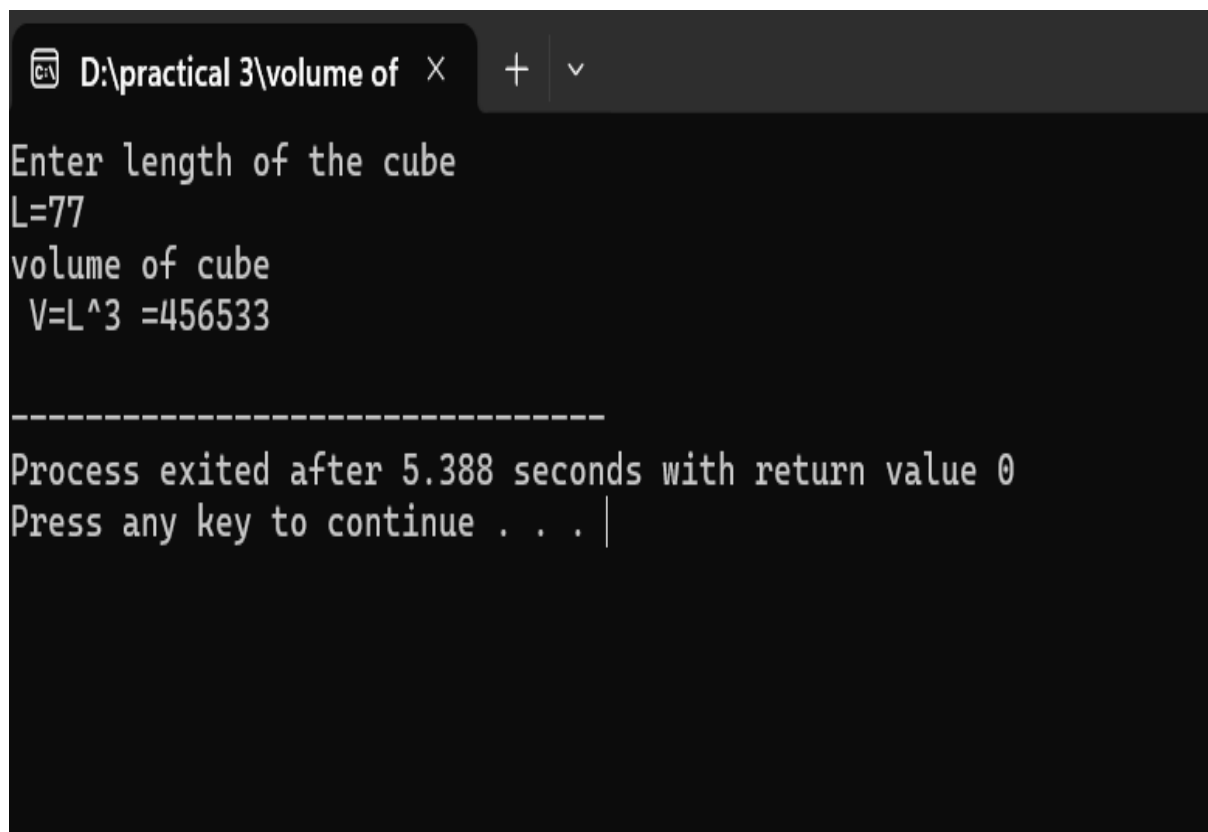


```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int L;
6     cout<<"Enter length of the cube"<<endl;
7     cout<<"L="; //let L be the side of cube
8     cin>>L;
9
10    cout<<"volume of cube"<<endl;
11    cout<<" V=L^3 ="<<(L*L*L)<<endl; //every edge of cube is of same length
12
13
14
15
16
17 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\practical 3\volume of cube.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.50s

## C++: output

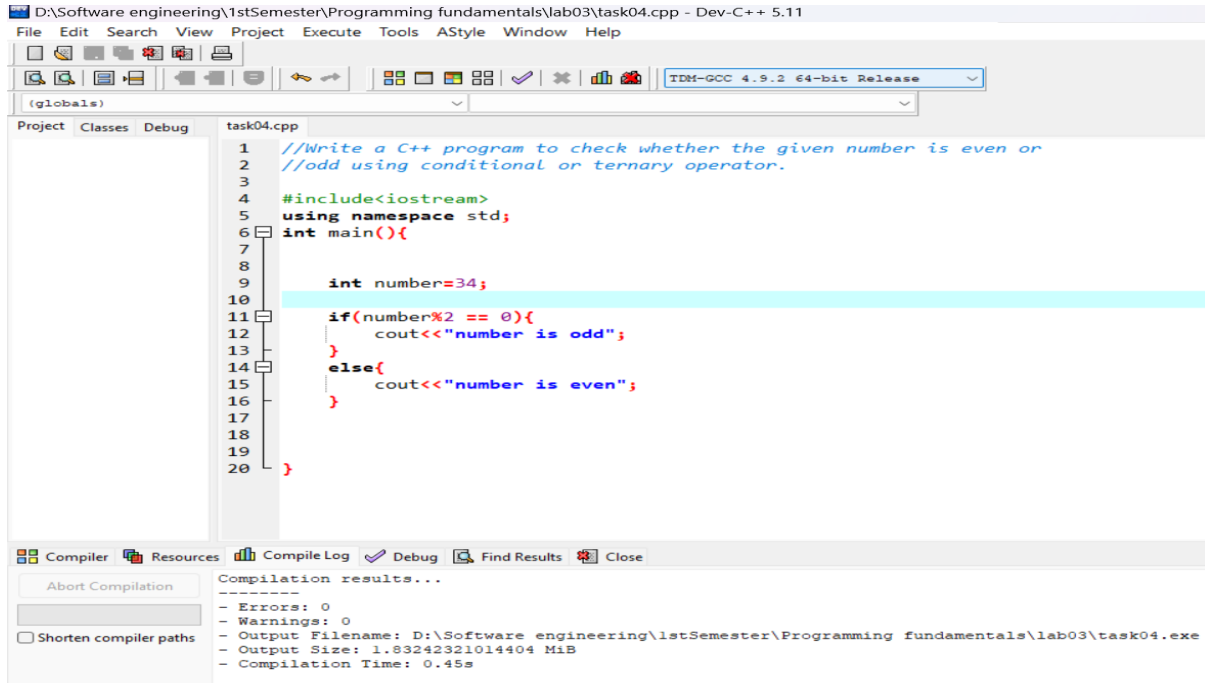


```
D:\practical 3\volume of
Enter length of the cube
L=77
volume of cube
V=L^3 =456533

-----
Process exited after 5.388 seconds with return value 0
Press any key to continue . . . |
```

**Task No 4:** Write a C++ program to check whether the given number is even or odd using conditional or ternary operator.

## C++: input

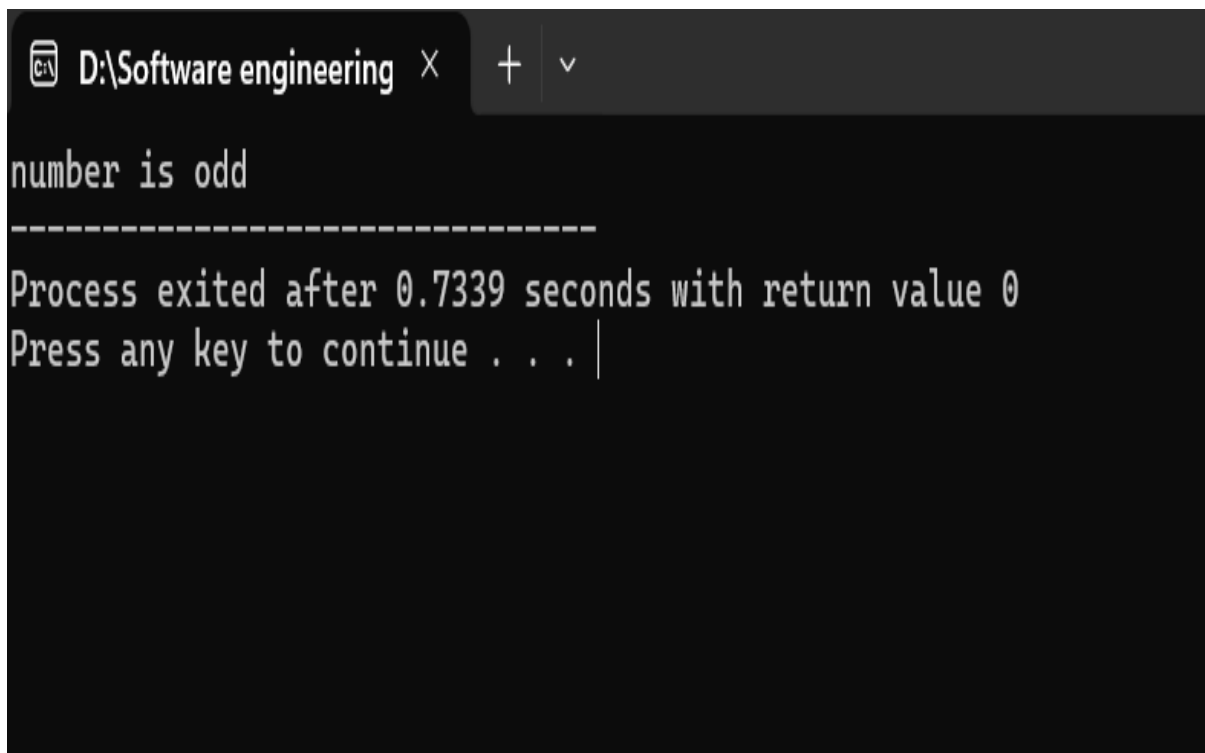


```
1 //Write a C++ program to check whether the given number is even or
2 //odd using conditional or ternary operator.
3
4 #include<iostream>
5 using namespace std;
6 int main(){
7
8     int number=34;
9
10    if(number%2 == 0){
11        cout<<"number is odd";
12    }
13    else{
14        cout<<"number is even";
15    }
16
17
18
19
20 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamentals\lab03\task04.exe
- Output Size: 1.83242321014404 MiB
- Compilation Time: 0.45s

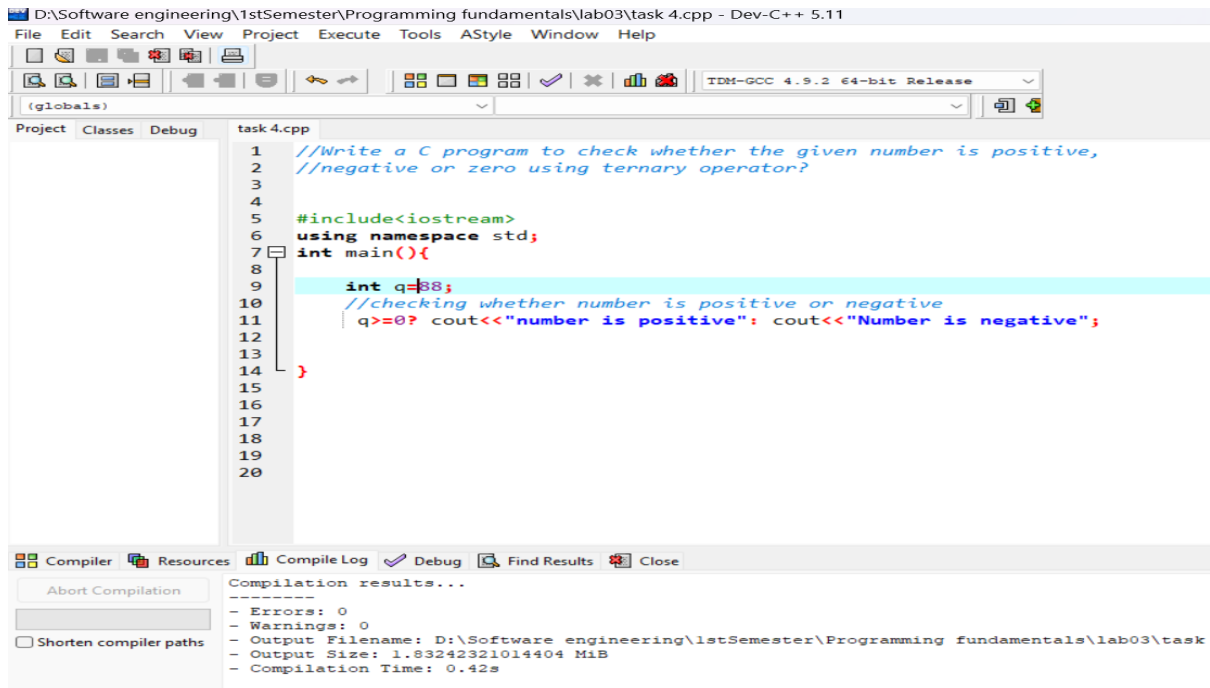
## C++: output



```
D:\Software engineering X + v
number is odd
-----
Process exited after 0.7339 seconds with return value 0
Press any key to continue . . . |
```

Task No 5: Write a C program to check whether the given number is positive, negative or zero using ternary operator?

## C++: input

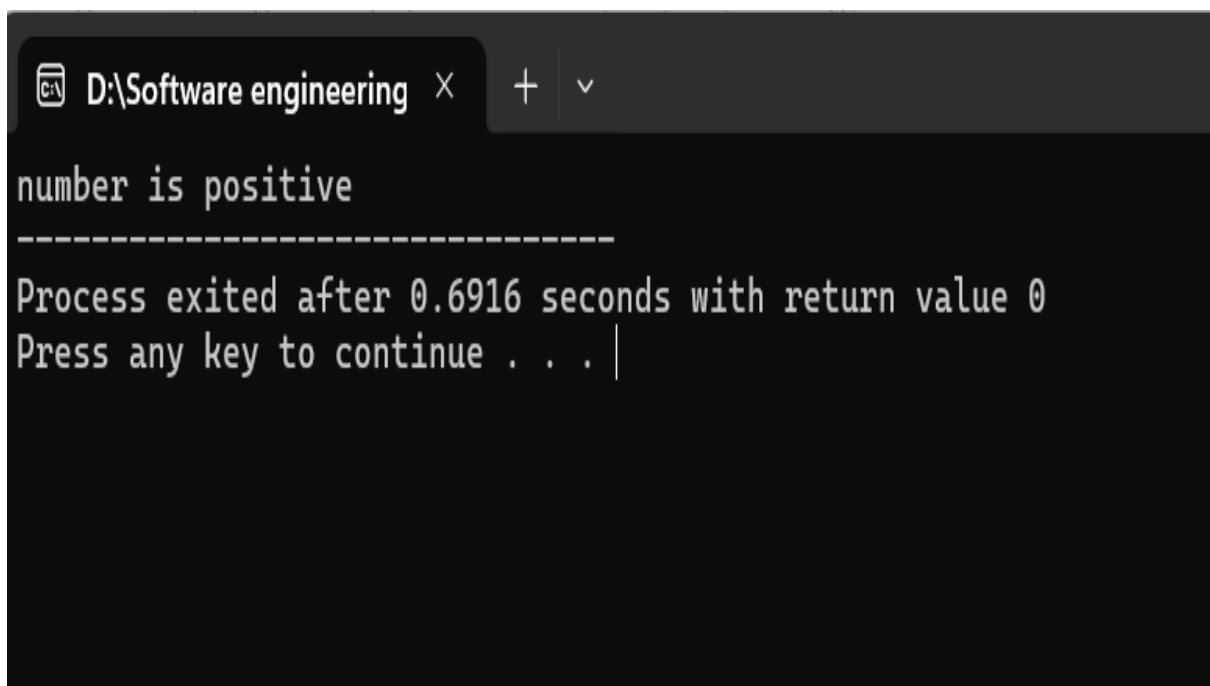


```
1 //Write a C program to check whether the given number is positive,  
2 //negative or zero using ternary operator?  
3  
4  
5 #include<iostream>  
6 using namespace std;  
7 int main(){  
8  
9     int q=88;  
10    //checking whether number is positive or negative  
11    q>=0? cout<<"number is positive": cout<<"Number is negative";  
12  
13 }  
14  
15  
16  
17  
18  
19  
20
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamentals\lab03\task
- Output Size: 1.83242321014404 MiB
- Compilation Time: 0.42s

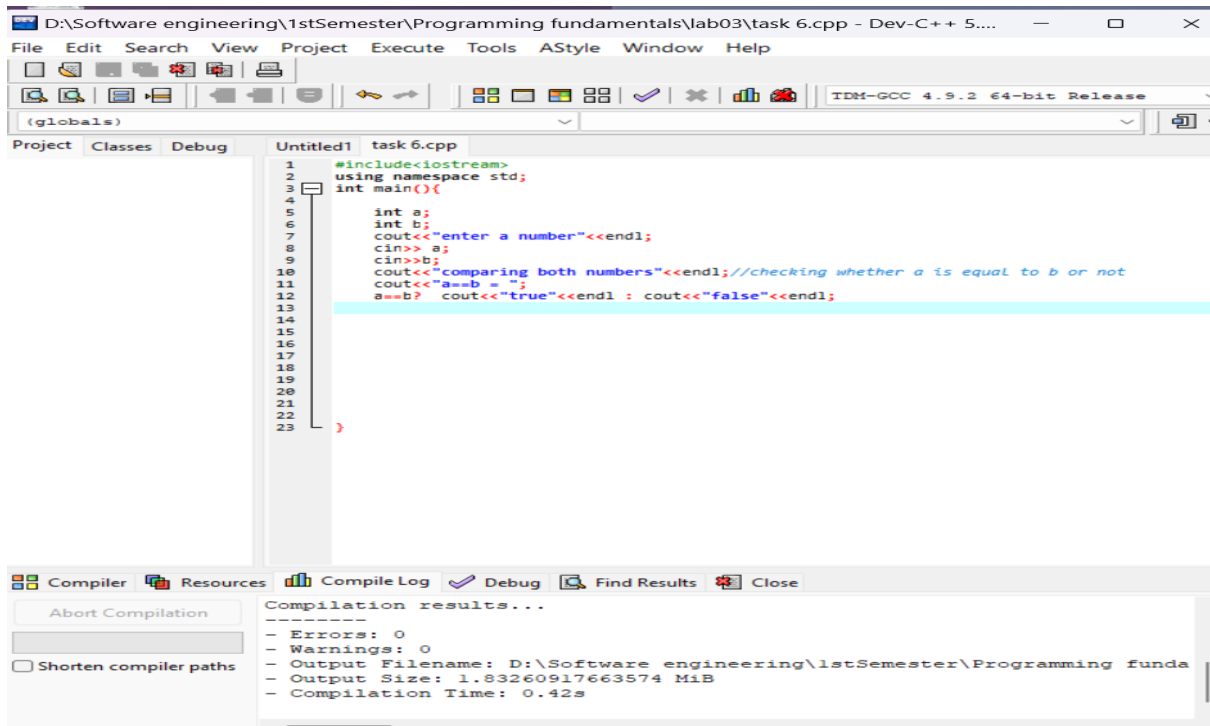
## C++: output



```
D:\Software engineering x + v  
number is positive  
-----  
Process exited after 0.6916 seconds with return value 0  
Press any key to continue . . . |
```

Task No 6: Write a program that takes two integers as input from the user. Compare the two numbers using the following relational operators: ==, !=, <, >, <=, >= and display the result of each comparison.

## C++: input



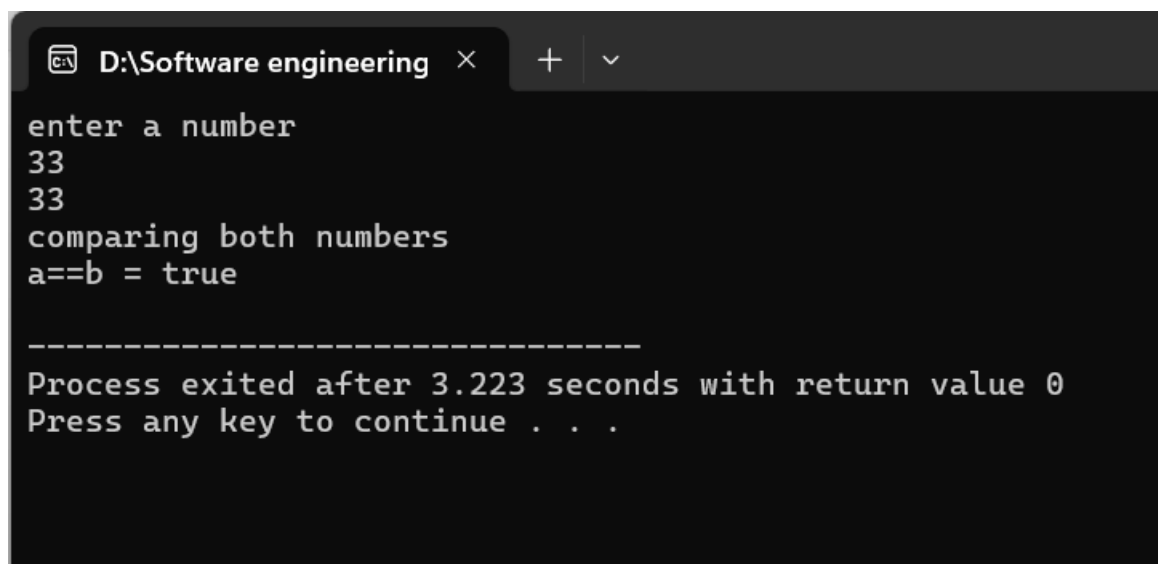
The screenshot shows a C++ IDE with the following components:

- Source Code (task 6.cpp):**

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int a;
6     int b;
7     cout<<"enter a number"<<endl;
8     cin>> a;
9     cin>> b;
10    cout<<"comparing both numbers"<<endl; //checking whether a is equal to b or not
11    cout<<"a==b = ";
12    a==b? cout<<"true"<<endl : cout<<"false"<<endl;
13
14
15
16
17
18
19
20
21
22
23 }
```
- Compilation Results:**

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming funda
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.42s
```

## C++: output



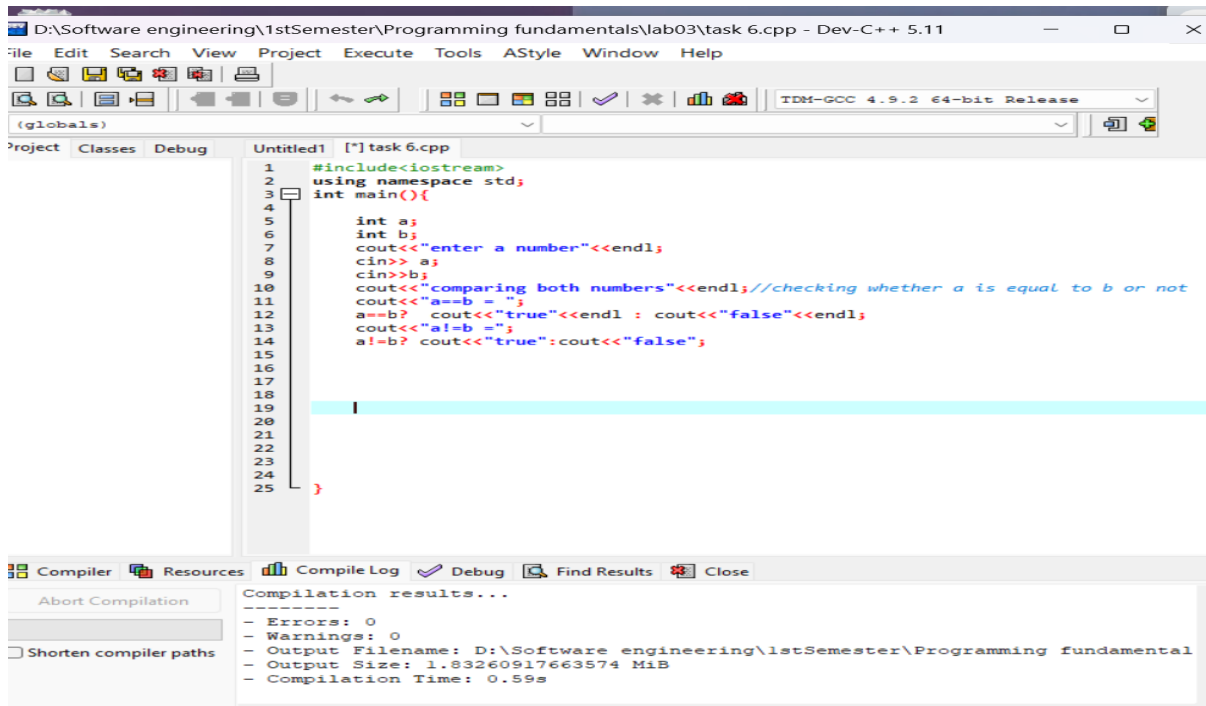
The screenshot shows a terminal window with the following output:

```
D:\Software engineering x + v
enter a number
33
33
comparing both numbers
a==b = true

-----
Process exited after 3.223 seconds with return value 0
Press any key to continue . . .
```



# C++: input



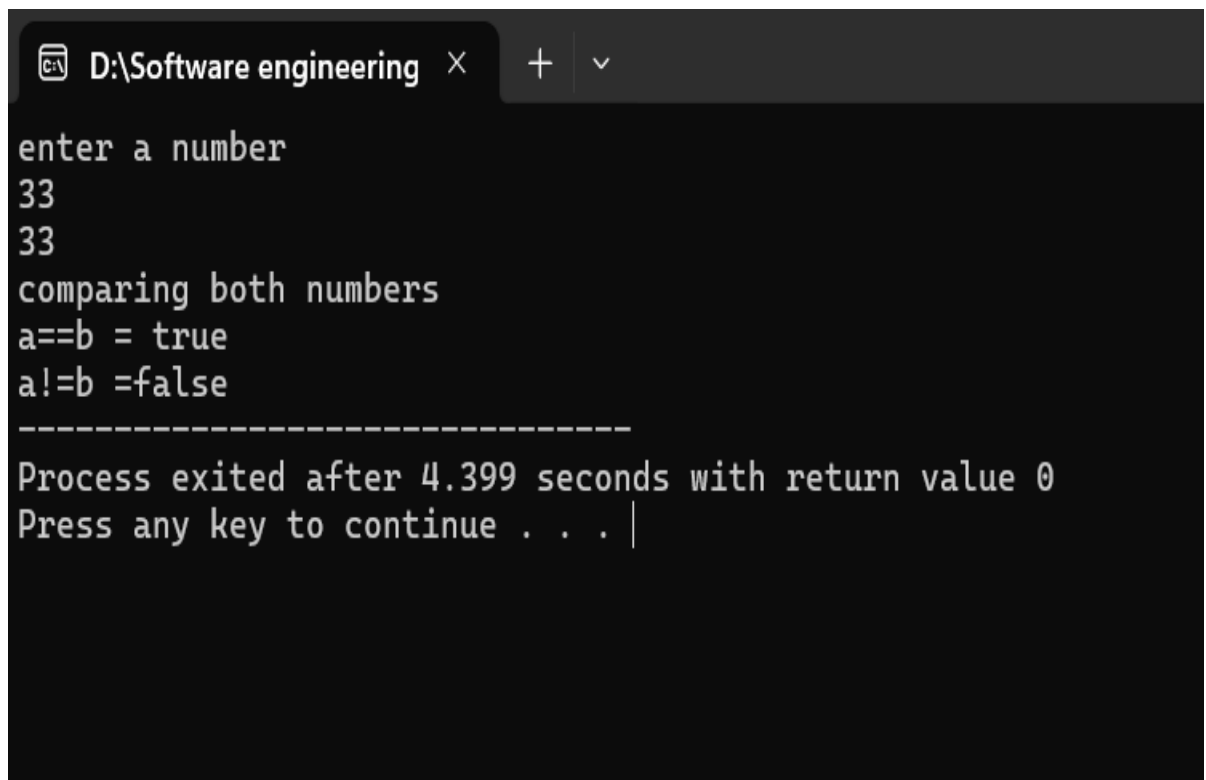
The screenshot shows the Dev-C++ IDE with a C++ program in 'task 6.cpp'. The code includes `<iostream>` and uses the `std` namespace. It defines a `main` function that declares two integers, `a` and `b`. It prompts the user to 'enter a number' and reads the input into `a`. Then, it prompts for another number and reads it into `b`. It then compares `a` and `b` using `a==b` and `a!=b` and prints the results. The compilation results at the bottom show 0 errors and 0 warnings.

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int a;
6     int b;
7     cout<<"enter a number"<<endl;
8     cin>> a;
9     cin>>b;
10    cout<<"comparing both numbers"<<endl; //checking whether a is equal to b or not
11    cout<<"a==b = ";
12    a==b? cout<<"true"<<endl : cout<<"false"<<endl;
13    cout<<"a!=b = ";
14    a!=b? cout<<"true":cout<<"false";
15
16
17
18
19
20
21
22
23
24
25 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamental
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.59s

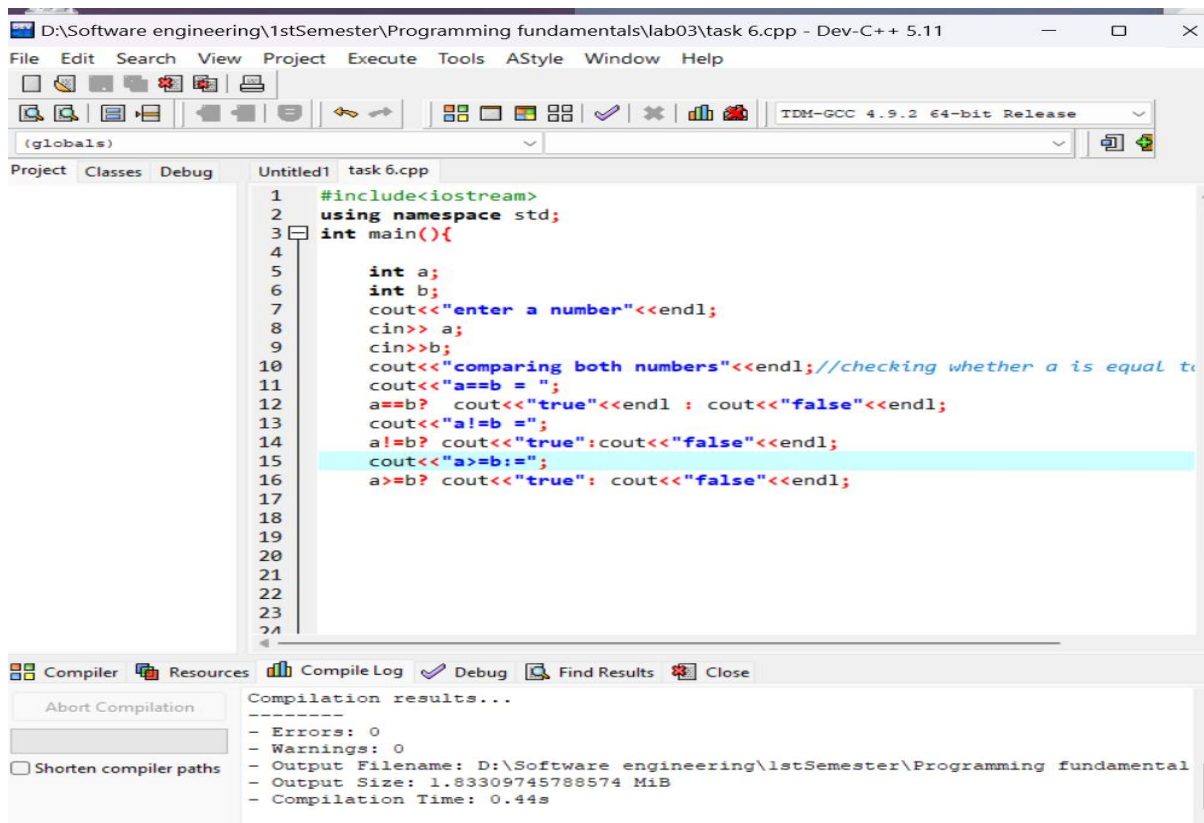
# C++: output



The screenshot shows a terminal window with the output of the C++ program. It displays the prompts and user input from the previous image. The output shows that both inputs were 33, and the comparison results are 'a==b = true' and 'a!=b =false'. The terminal also shows the process exit message and a prompt to press any key to continue.

```
enter a number
33
33
comparing both numbers
a==b = true
a!=b =false
-----
Process exited after 4.399 seconds with return value 0
Press any key to continue . . . |
```

# C++: input



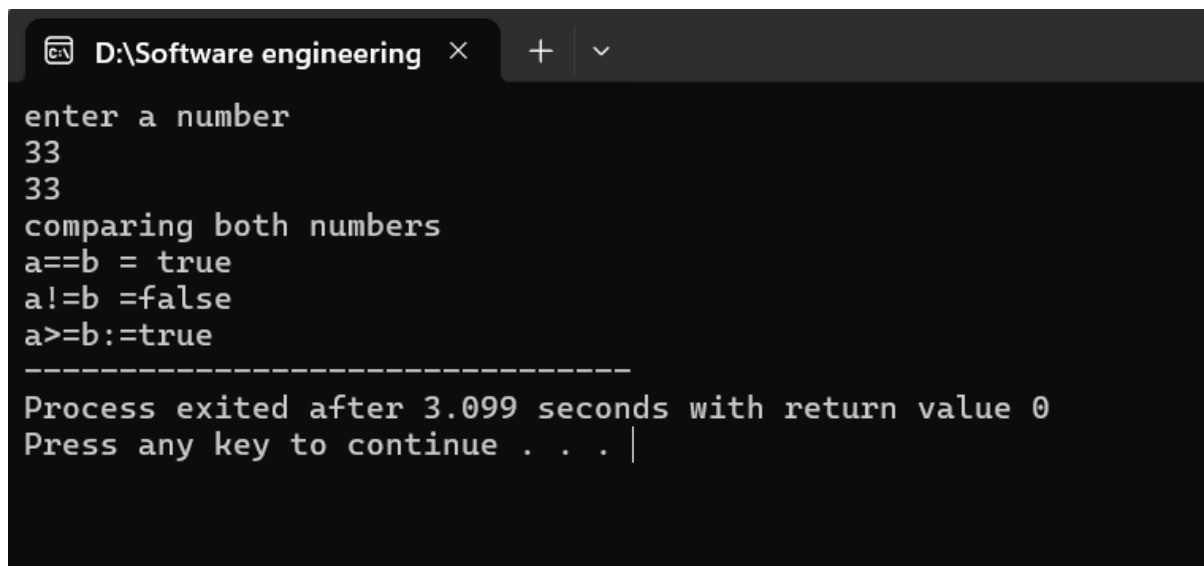
The screenshot shows the Dev-C++ IDE with a C++ program in task 6.cpp. The code includes iostream, uses namespace std, and defines a main function. It prompts the user to enter a number, reads it into variable 'a', and then compares 'a' with itself using ==, !=, and > operators. The output window shows the compilation results, indicating 0 errors and 0 warnings.

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int a;
6     int b;
7     cout<<"enter a number"<<endl;
8     cin>> a;
9     cin>>b;
10    cout<<"comparing both numbers"<<endl; //checking whether a is equal to
11    cout<<"a==b = ";
12    a==b? cout<<"true"<<endl : cout<<"false"<<endl;
13    cout<<"a!=b = ";
14    a!=b? cout<<"true":cout<<"false"<<endl;
15    cout<<"a>b=";
16    a>b? cout<<"true": cout<<"false"<<endl;
17
18
19
20
21
22
23
24
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamental
- Output Size: 1.83309745788574 MiB
- Compilation Time: 0.44s

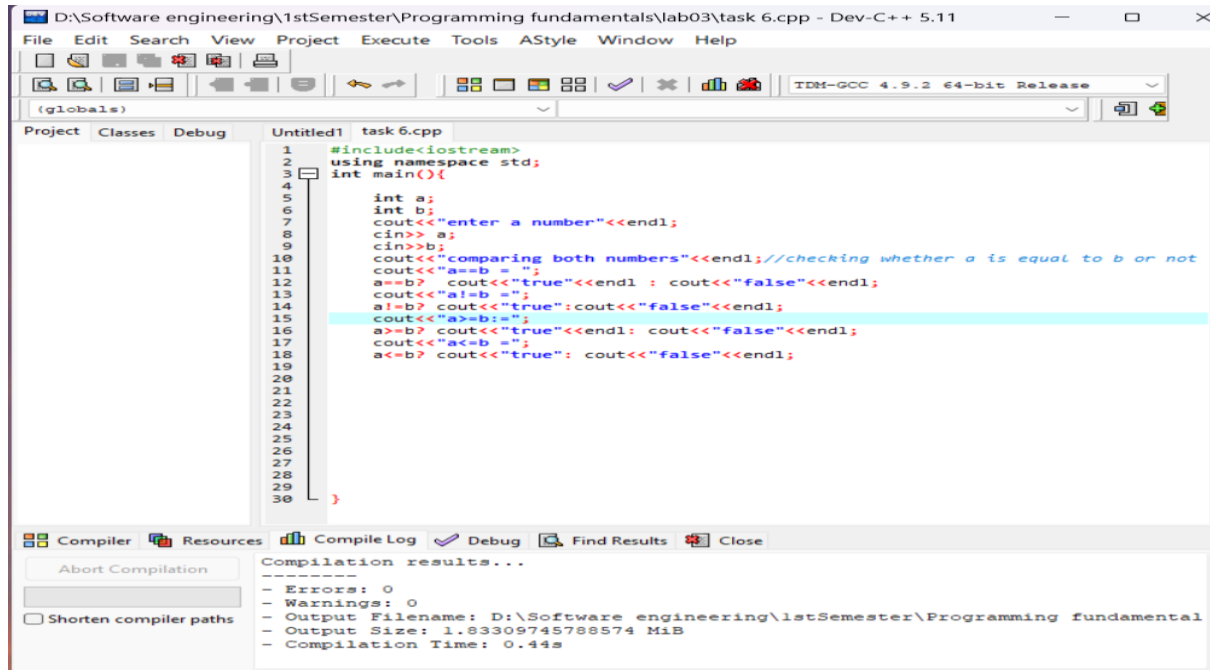
# C++: output



The screenshot shows a terminal window with the output of the C++ program. It displays the prompts and the user's input '33'. The output shows the results of the comparisons: a==b is true, a!=b is false, and a>b is true. The program then exits after 3.099 seconds.

```
enter a number
33
33
comparing both numbers
a==b = true
a!=b =false
a>b:=true
-----
Process exited after 3.099 seconds with return value 0
Press any key to continue . . . |
```

# C++: input



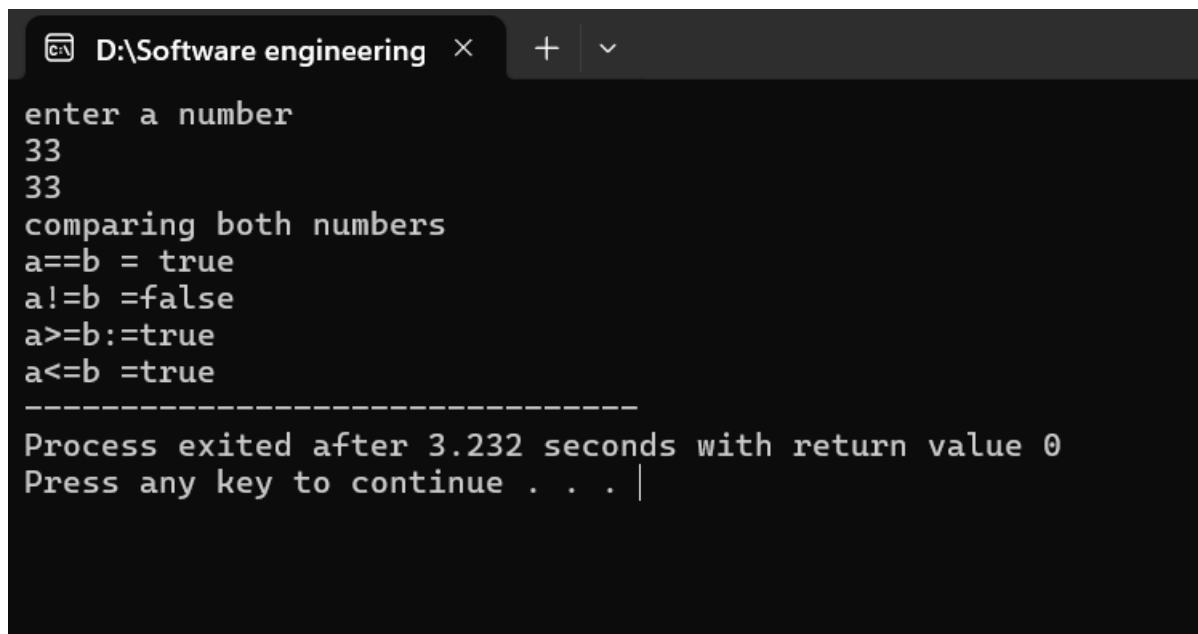
The screenshot shows the Dev-C++ IDE with a C++ program named 'task 6.cpp'. The code includes `<iostream>` and uses the `std` namespace. It defines a `main` function that declares two integers, `a` and `b`. It prompts the user to 'enter a number' and reads two inputs. Then, it performs several comparisons: `a==b`, `a!=b`, `a>b`, and `a<b`, each followed by a `cout` statement to display the result as 'true' or 'false'. The IDE's status bar at the bottom shows 'Compilation results...' with 0 errors and 0 warnings. The output filename is 'D:\Software engineering\1stSemester\Programming fundamentals\lab03\task 6.cpp'.

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int a;
5     int b;
6     cout<<"enter a number"<<endl;
7     cin>>a;
8     cin>>b;
9     cout<<"comparing both numbers"<<endl; //checking whether a is equal to b or not
10    cout<<"a==b = ";
11    a==b? cout<<"true"<<endl : cout<<"false"<<endl;
12    cout<<"a!=b = ";
13    a!=b? cout<<"true":cout<<"false"<<endl;
14    cout<<"a>b = ";
15    a>b? cout<<"true"<<endl : cout<<"false"<<endl;
16    cout<<"a<b = ";
17    a<b? cout<<"true": cout<<"false"<<endl;
18    }
19
20
21
22
23
24
25
26
27
28
29
30
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamentals\lab03\task 6.cpp
- Output Size: 1.83309745788574 MiB
- Compilation Time: 0.44s

# C++: output

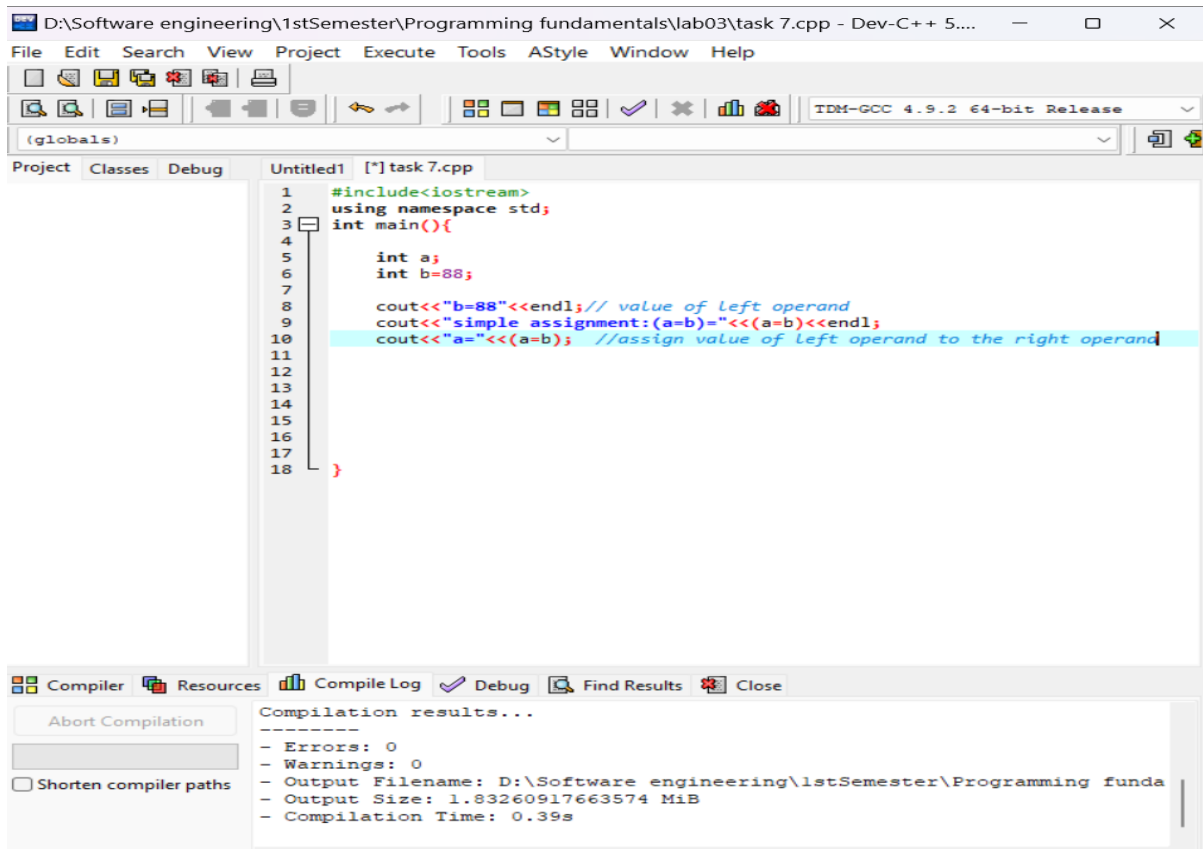


The screenshot shows a terminal window with the output of the C++ program. The output matches the `cout` statements in the code: 'enter a number', two '33' inputs, 'comparing both numbers', and the four comparison results: 'a==b = true', 'a!=b =false', 'a>=b:=true', and 'a<=b =true'. The terminal also shows a separator line, the message 'Process exited after 3.232 seconds with return value 0', and a prompt 'Press any key to continue . . . |'.

```
enter a number
33
33
comparing both numbers
a==b = true
a!=b =false
a>=b:=true
a<=b =true
-----
Process exited after 3.232 seconds with return value 0
Press any key to continue . . . |
```

**Task No 7:** Write a program to input a number and use assignment operators to modify the value of the number, Display the results after each operation.

## C++: input



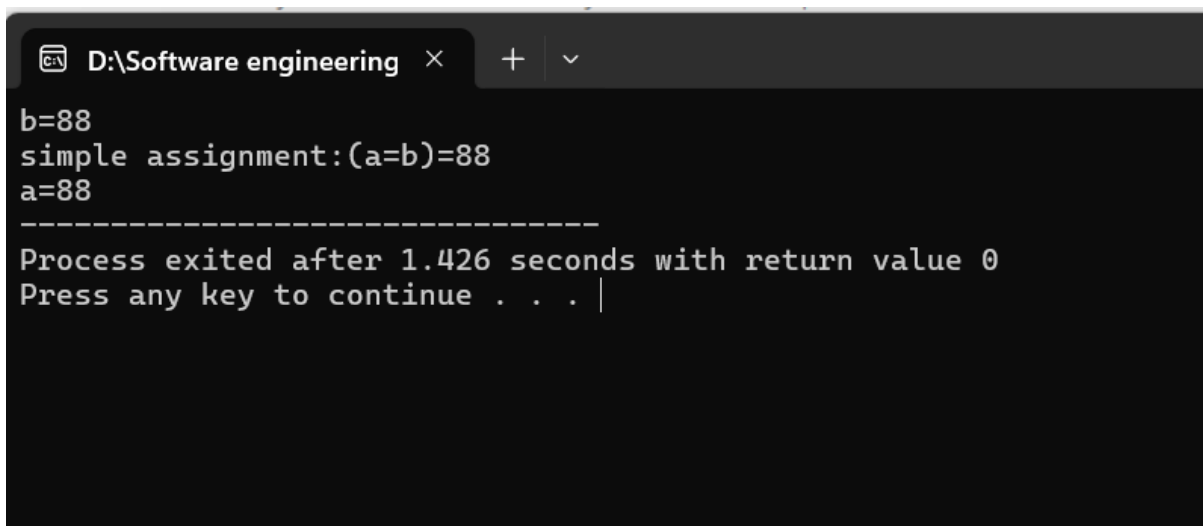
The screenshot shows the Dev-C++ IDE with a project named "task 7.cpp". The code in the editor is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int a;
6     int b=88;
7
8     cout<<"b=88"<<endl; // value of left operand
9     cout<<"simple assignment:(a=b)="<<(a=b)<<endl;
10    cout<<"a="<<(a=b); //assign value of left operand to the right operand
11
12
13
14
15
16
17
18 }
```

The compilation results at the bottom show:

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming funda
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.39s
```

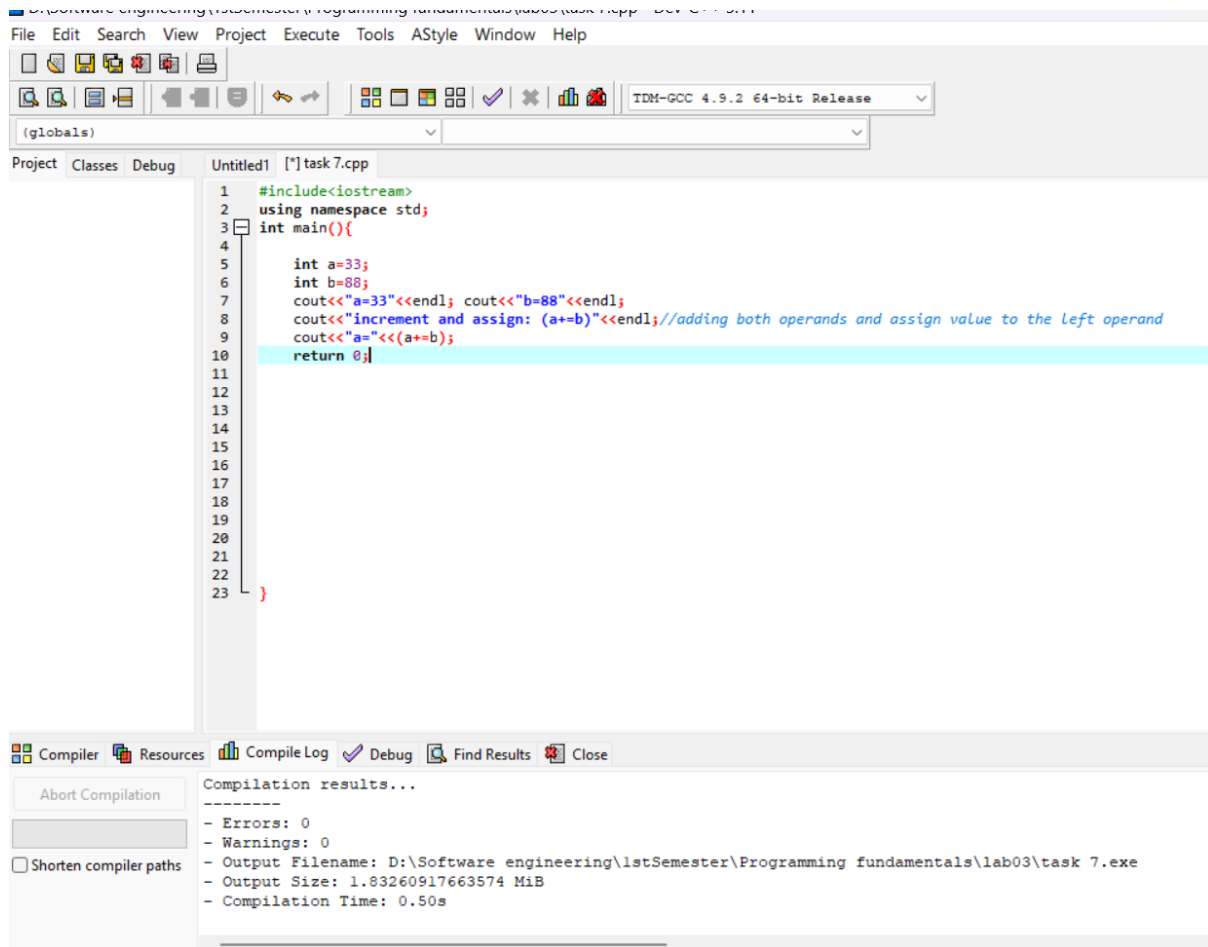
## C++: output



The screenshot shows a terminal window with the following output:

```
b=88
simple assignment:(a=b)=88
a=88
-----
Process exited after 1.426 seconds with return value 0
Press any key to continue . . . |
```

# C++: input



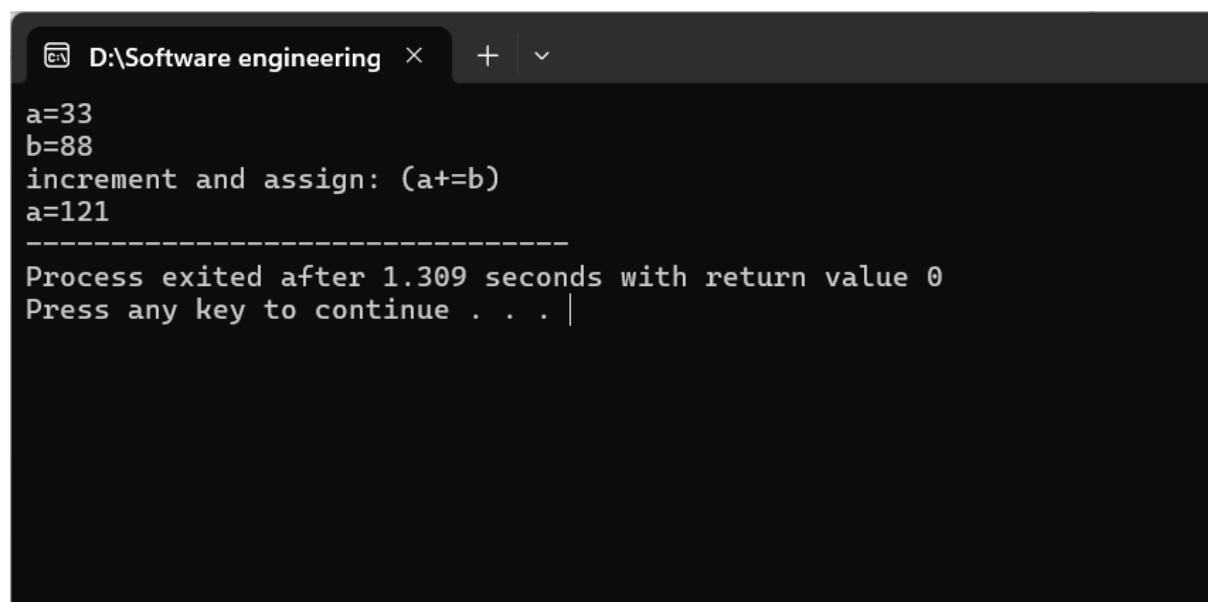
The screenshot shows a C++ IDE with the following components:

- Menu Bar:** File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, Help.
- Toolbar:** Includes icons for file operations (open, save, print), editing (undo, redo), and execution (run, debug).
- Compiler:** TDM-GCC 4.9.2 64-bit Release.
- Project Explorer:** Shows a project named "globals" and a file named "task 7.cpp".
- Source Code (task 7.cpp):**

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int a=33;
6     int b=88;
7     cout<<"a=33"<<endl; cout<<"b=88"<<endl;
8     cout<<"increment and assign: (a+=b)"<<endl; //adding both operands and assign value to the left operand
9     cout<<"a="<<(a+=b);
10    return 0;
11
12
13
14
15
16
17
18
19
20
21
22
23 }
```
- Compiler Output:**

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamentals\lab03\task 7.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.50s
```

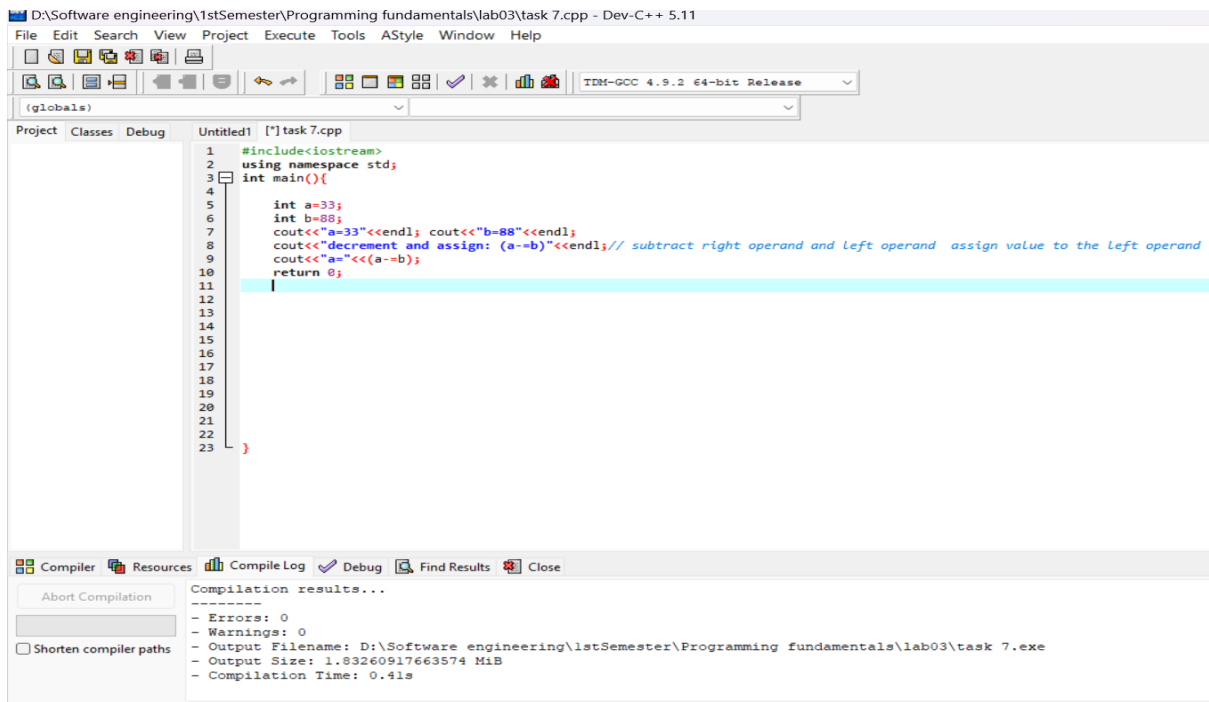
# C++: output



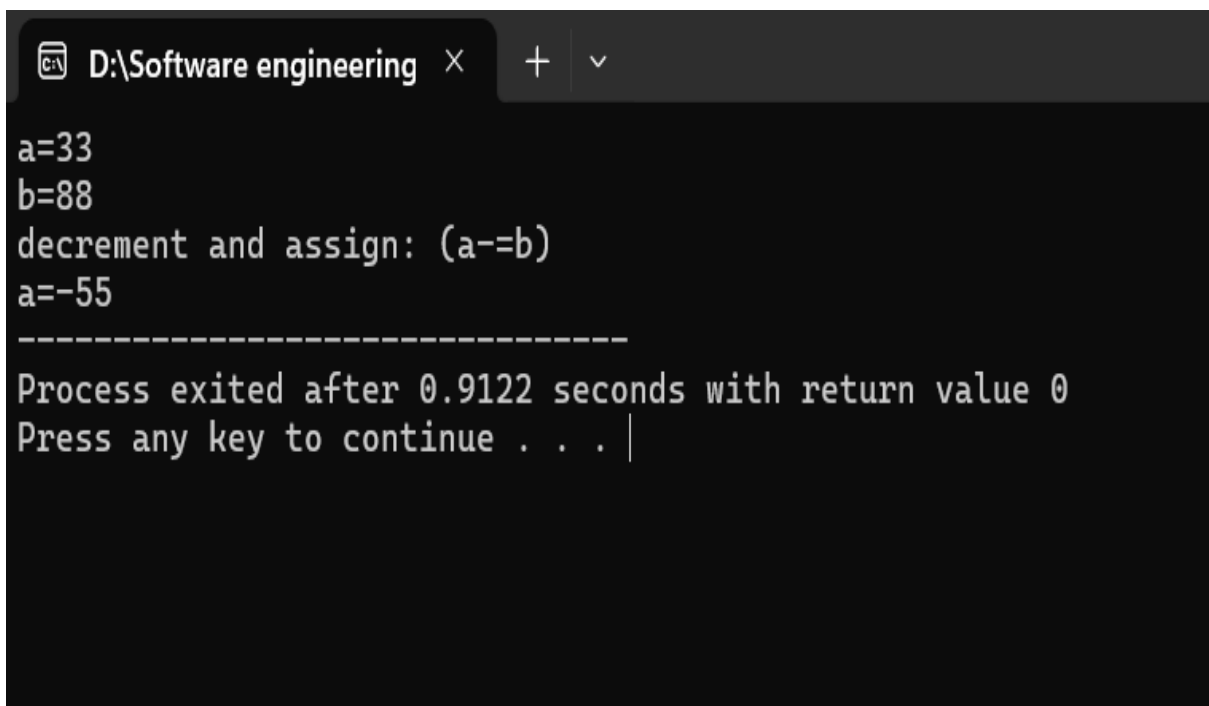
The screenshot shows a Windows command prompt window with the following output:

```
D:\Software engineering x + v
a=33
b=88
increment and assign: (a+=b)
a=121
-----
Process exited after 1.309 seconds with return value 0
Press any key to continue . . . |
```

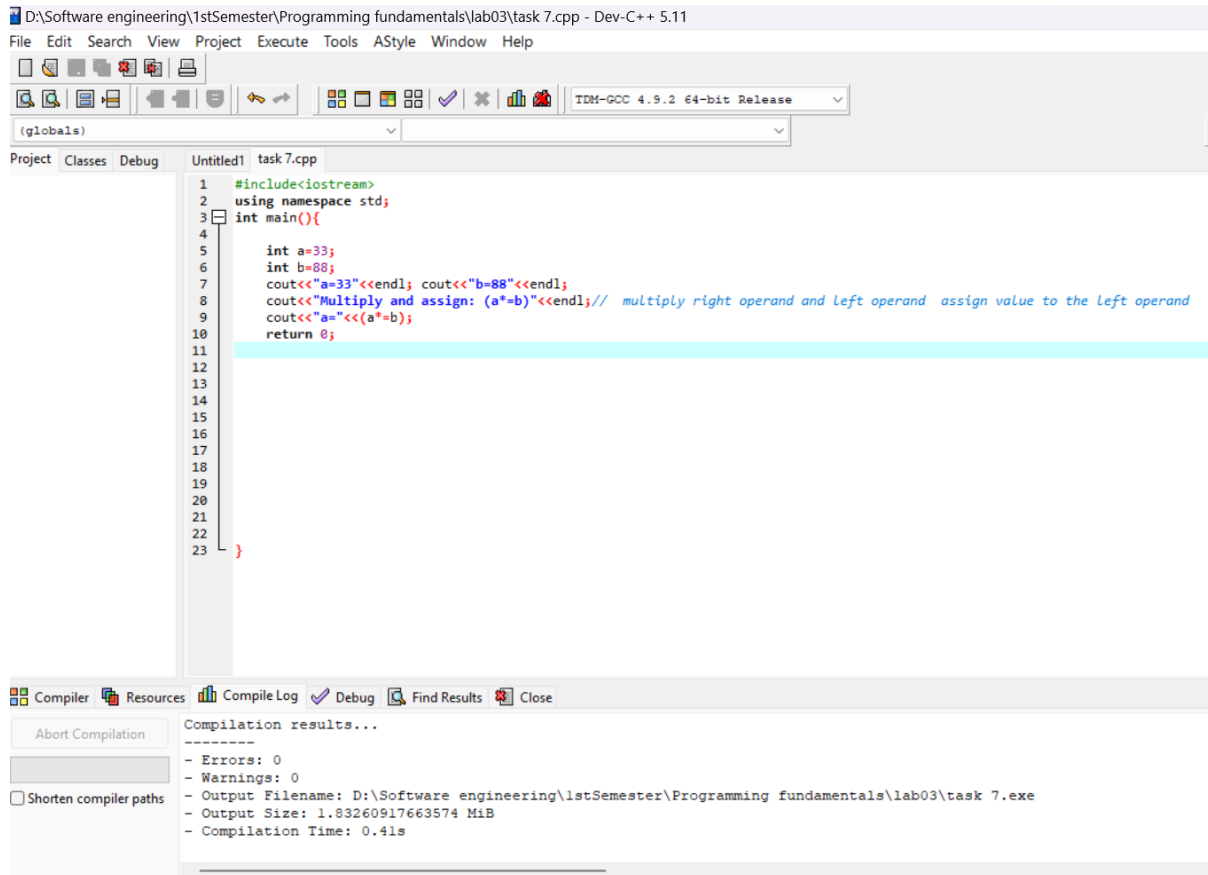
# C++: input



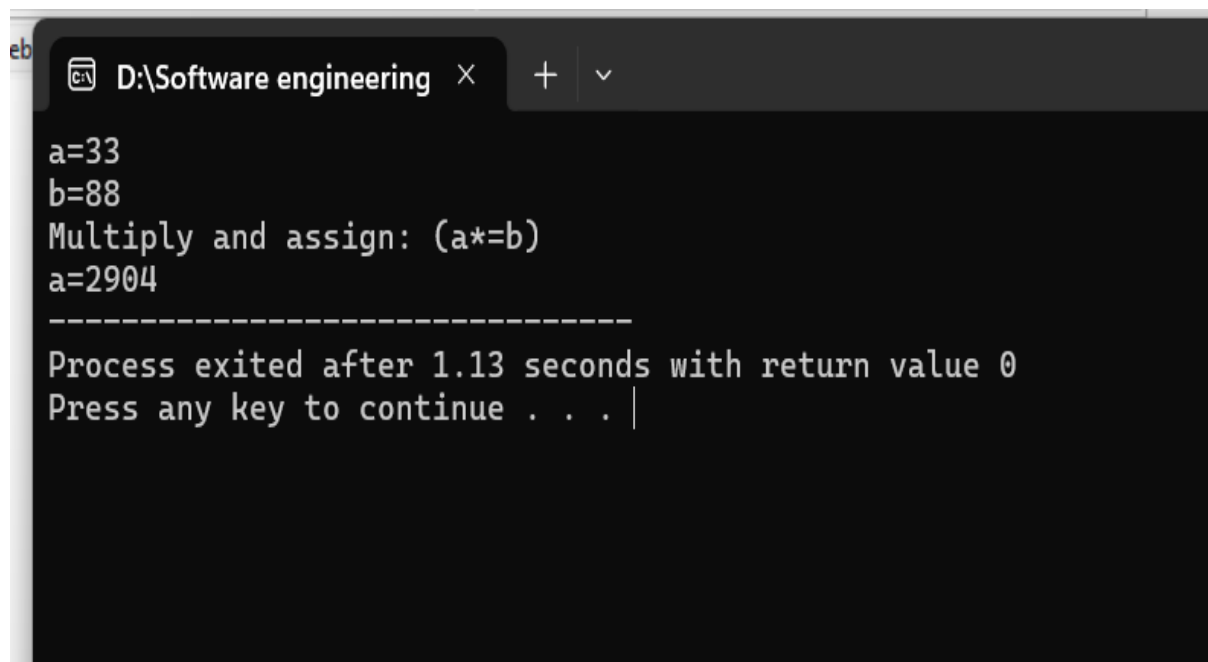
# C++: output



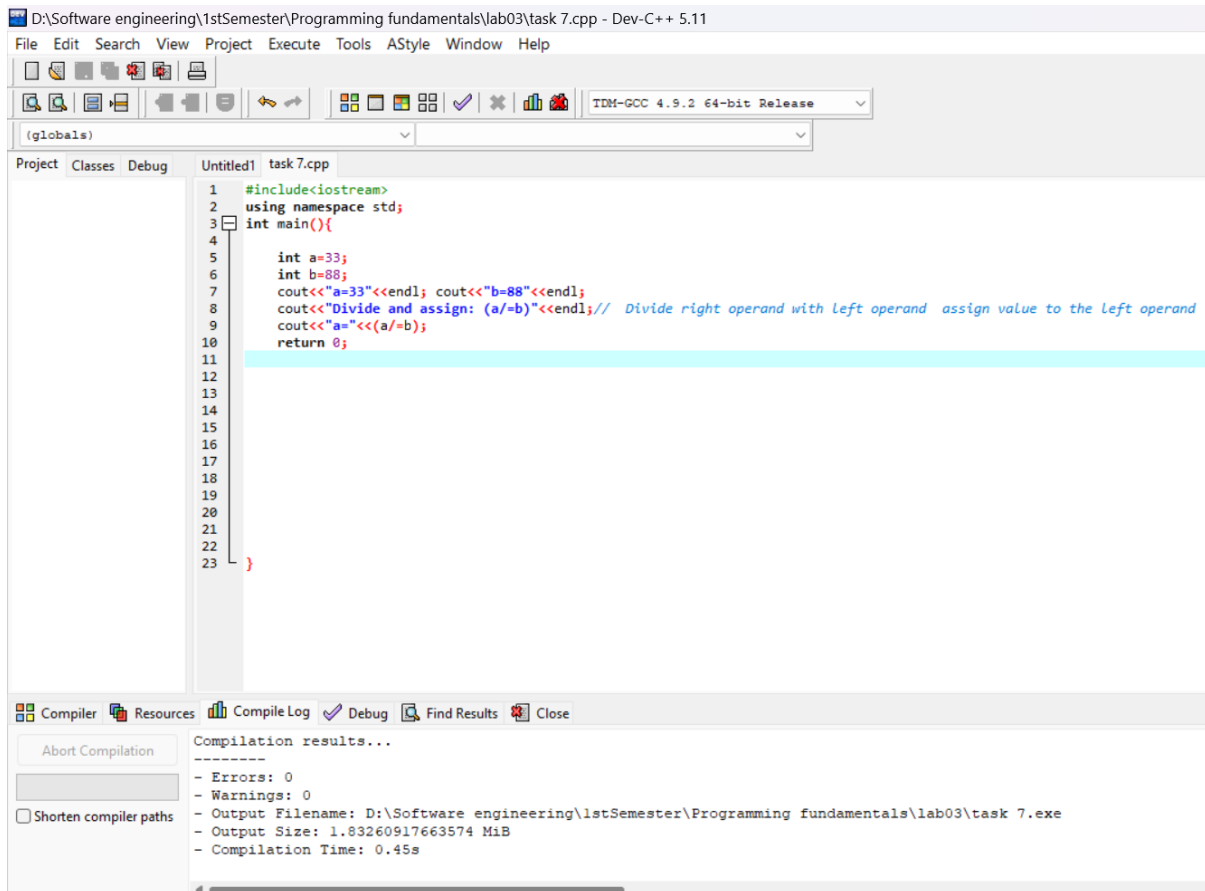
# C++: input



# C++: output



# C++: input



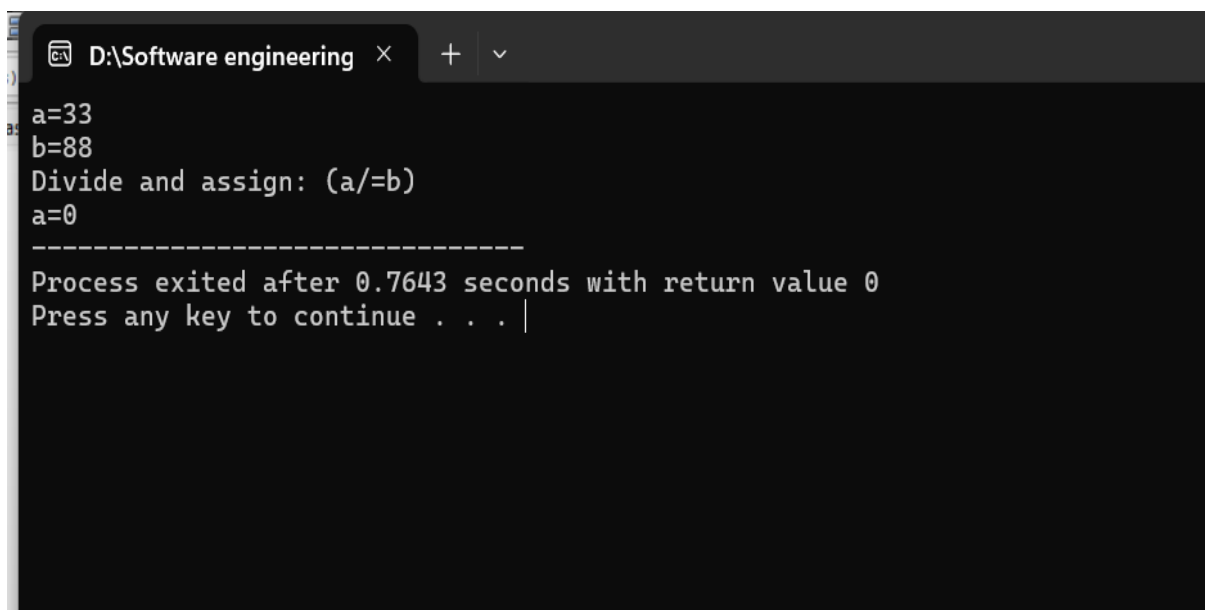
The screenshot shows a C++ IDE with a project named "task 7.cpp". The code in the editor is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4
5     int a=33;
6     int b=88;
7     cout<<"a=33"<<endl; cout<<"b=88"<<endl;
8     cout<<"Divide and assign: (a/=b)"<<endl; // Divide right operand with Left operand assign value to the Left operand
9     cout<<"a="<<(a/=b);
10    return 0;
11
12
13
14
15
16
17
18
19
20
21
22
23 }
```

The compilation results are shown in the bottom panel:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamentals\lab03\task 7.exe
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.45s
```

# C++: output

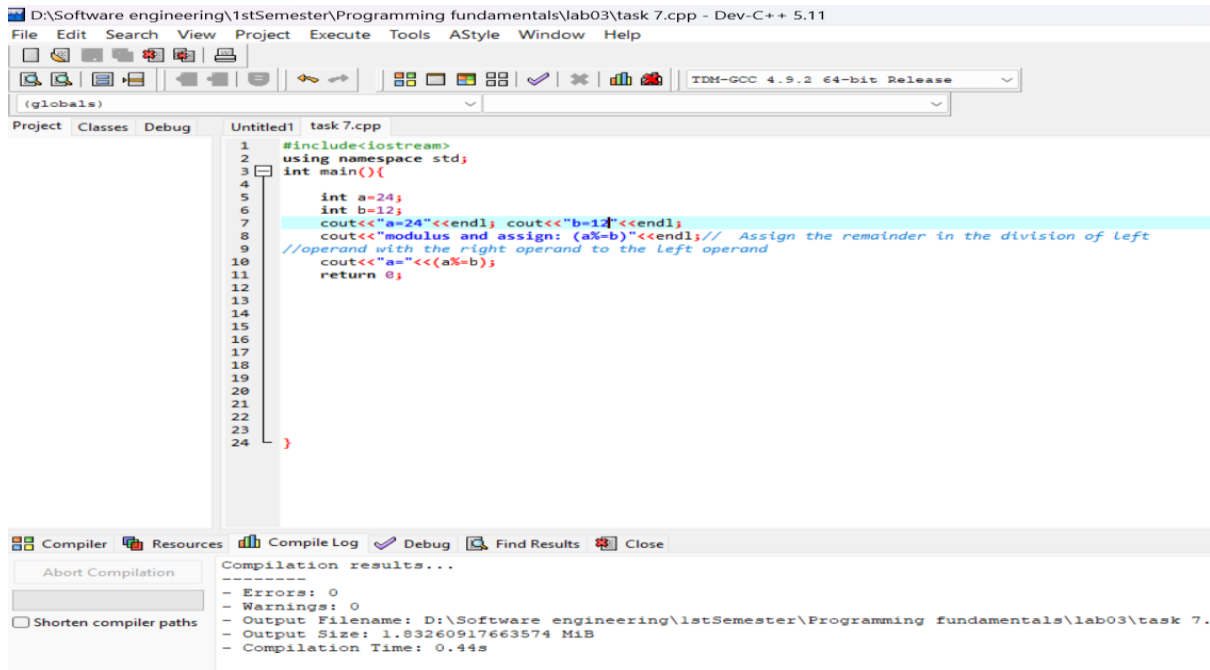


The screenshot shows a terminal window with the following output:

```
a=33
b=88
Divide and assign: (a/=b)
a=0
-----
Process exited after 0.7643 seconds with return value 0
Press any key to continue . . . |
```



# C++: input



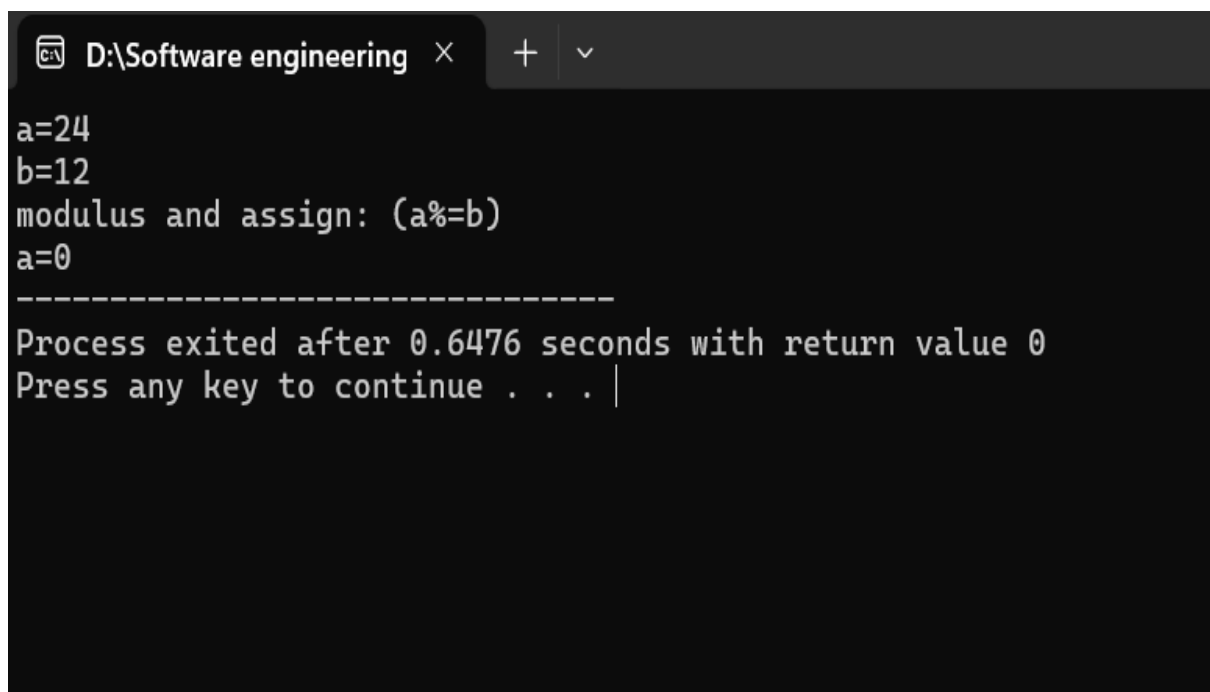
The screenshot shows the Dev-C++ IDE interface. The top menu bar includes File, Edit, Search, View, Project, Execute, Tools, AStyle, Window, and Help. The toolbar contains icons for file operations, compilation, and execution. The compiler is set to TDM-GCC 4.9.2 64-bit Release. The project is named 'task 7.cpp'. The source code is as follows:

```
1 #include<iostream>
2 using namespace std;
3 int main(){
4     int a=24;
5     int b=12;
6     cout<<"a=24"<<endl; cout<<"b=12"<<endl;
7     cout<<"modulus and assign: (a%=b)"<<endl; // Assign the remainder in the division of left
8     //operand with the right operand to the left operand
9     cout<<"a="<<(a%=b);
10    return 0;
11 }
12
13
14
15
16
17
18
19
20
21
22
23
24 }
```

The bottom panel shows the 'Compilation results...' window with the following output:

```
Compilation results...
- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamentals\lab03\task 7.
- Output Size: 1.83260917663574 MiB
- Compilation Time: 0.44s
```

# C++: output

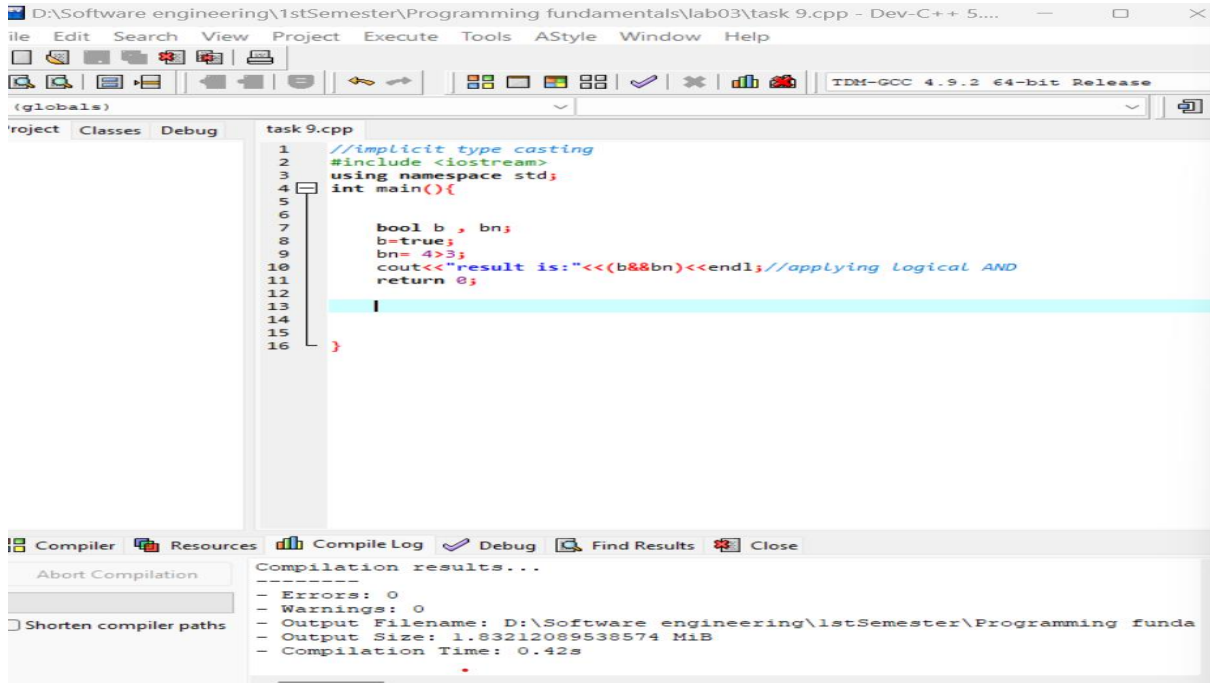


The screenshot shows a terminal window with the following output:

```
a=24
b=12
modulus and assign: (a%=b)
a=0
-----
Process exited after 0.6476 seconds with return value 0
Press any key to continue . . . |
```

Task No 8: Write a program to demonstrate the use of logical operators (&&, ||, !) Input two Boolean values from the user. Apply logical AND, OR, and NOT on the values and display the results.

## C++: input



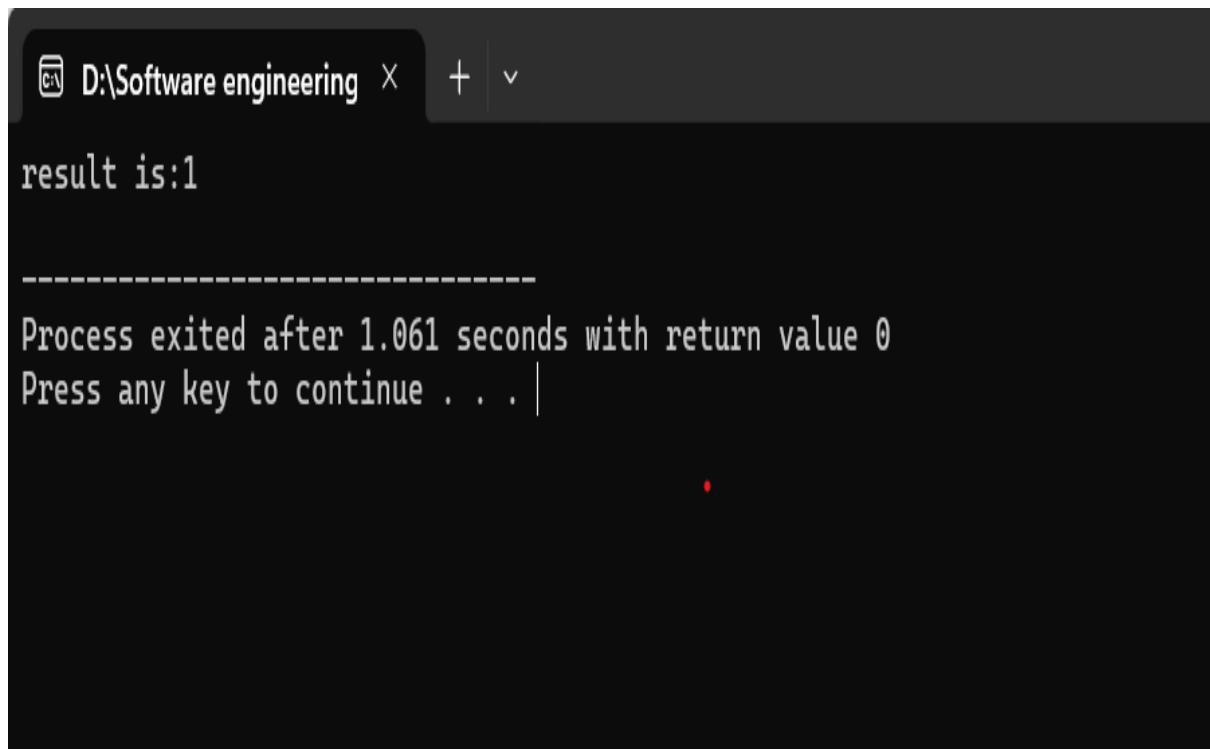
The screenshot shows a C++ IDE with the file `task 9.cpp` open. The code defines a `main` function that declares a boolean variable `b` and initializes it to `true`. It then declares another boolean variable `bn` and assigns it the value `4 > 3`. The program uses `cout` to display the result of the logical AND operation `b & bn`. The compilation results window at the bottom shows that the program compiled successfully with no errors or warnings.

```
1 //implicit type casting
2 #include <iostream>
3 using namespace std;
4 int main(){
5
6     bool b , bn;
7     b=true;
8     bn= 4>3;
9     cout<<"result is:"<<(b&bn)<<endl;//applying Logical AND
10    return 0;
11
12
13
14
15
16 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming funda
- Output Size: 1.83212089538574 MiB
- Compilation Time: 0.42s

## C++: output

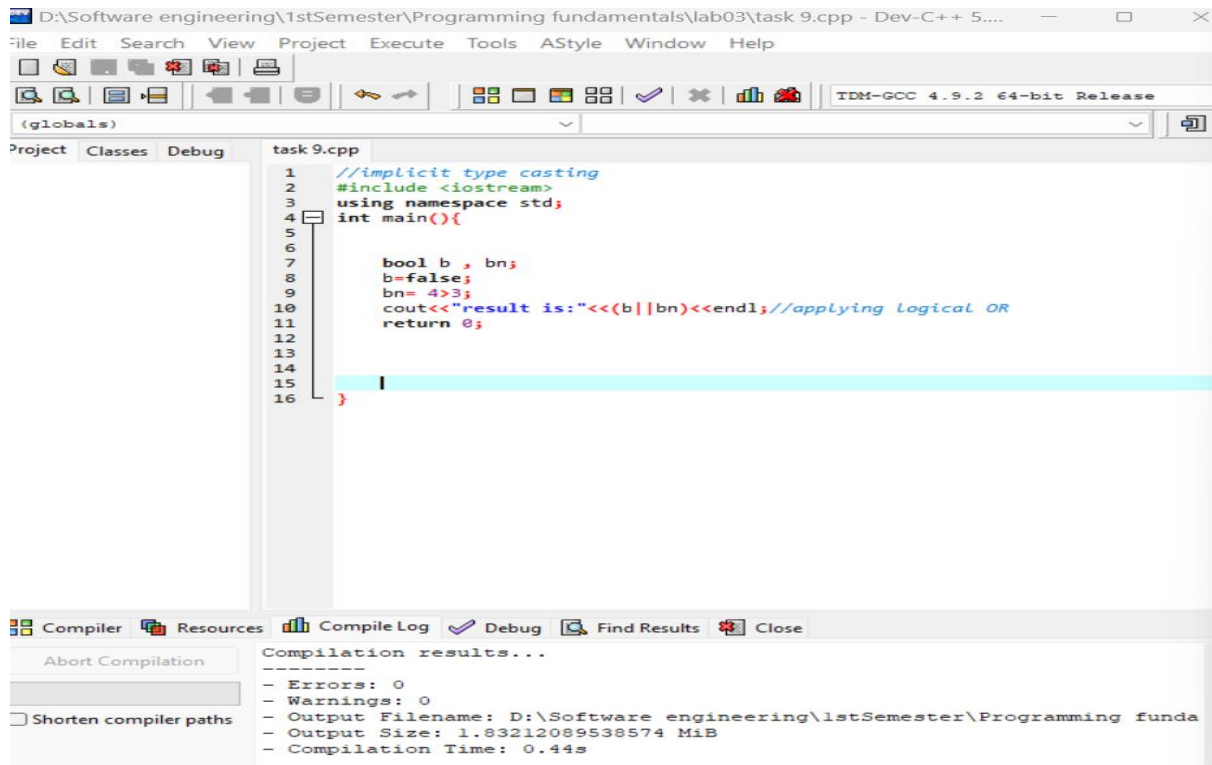


The screenshot shows a terminal window with the output of the C++ program. The first line is `result is:1`. Below this, there is a separator line consisting of dashes. The next line indicates that the process exited after 1.061 seconds with a return value of 0. The final line prompts the user to press any key to continue.

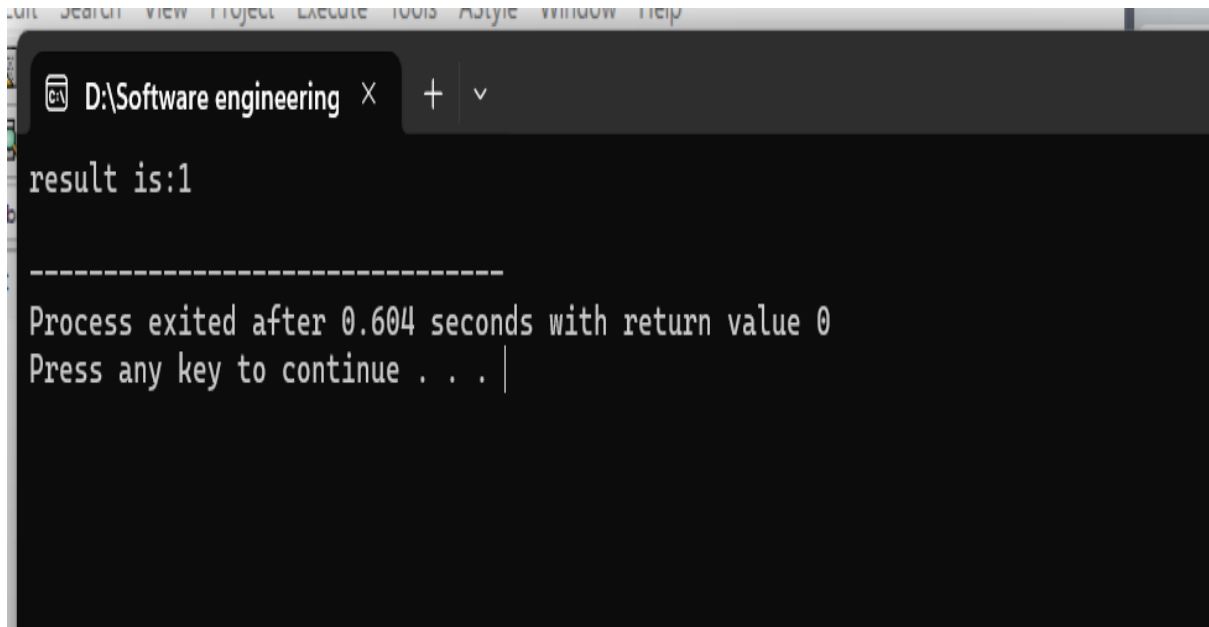
```
result is:1

-----
Process exited after 1.061 seconds with return value 0
Press any key to continue . . . |
```

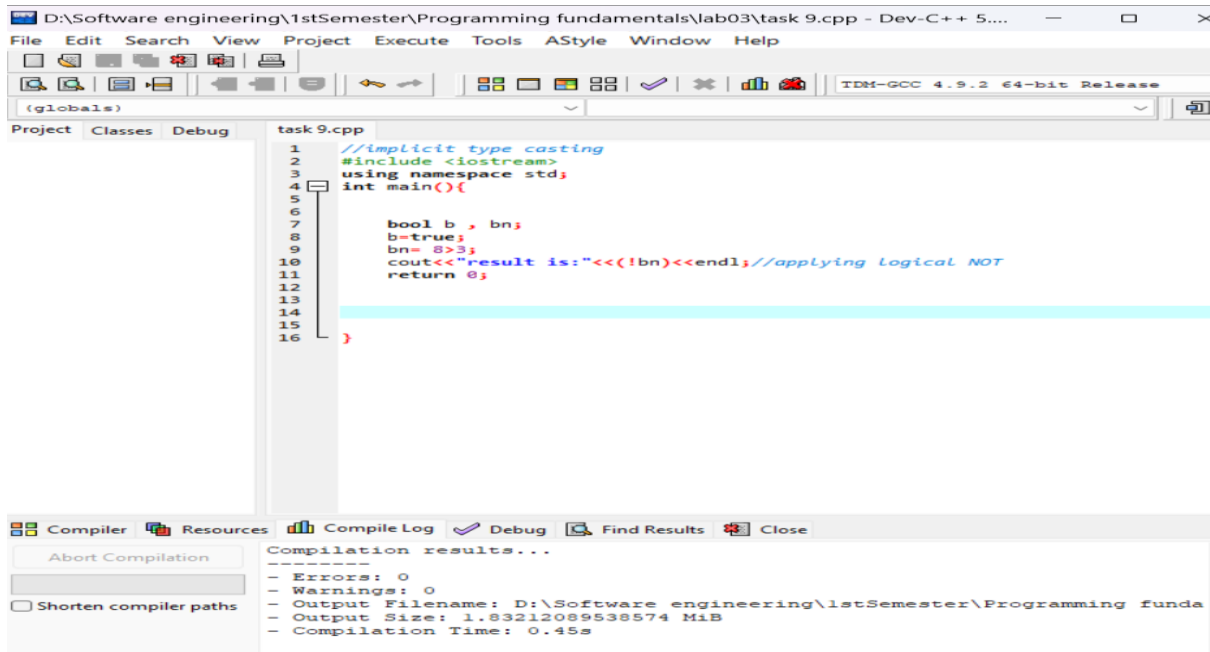
# C++: input



# C++: output



# C++: input



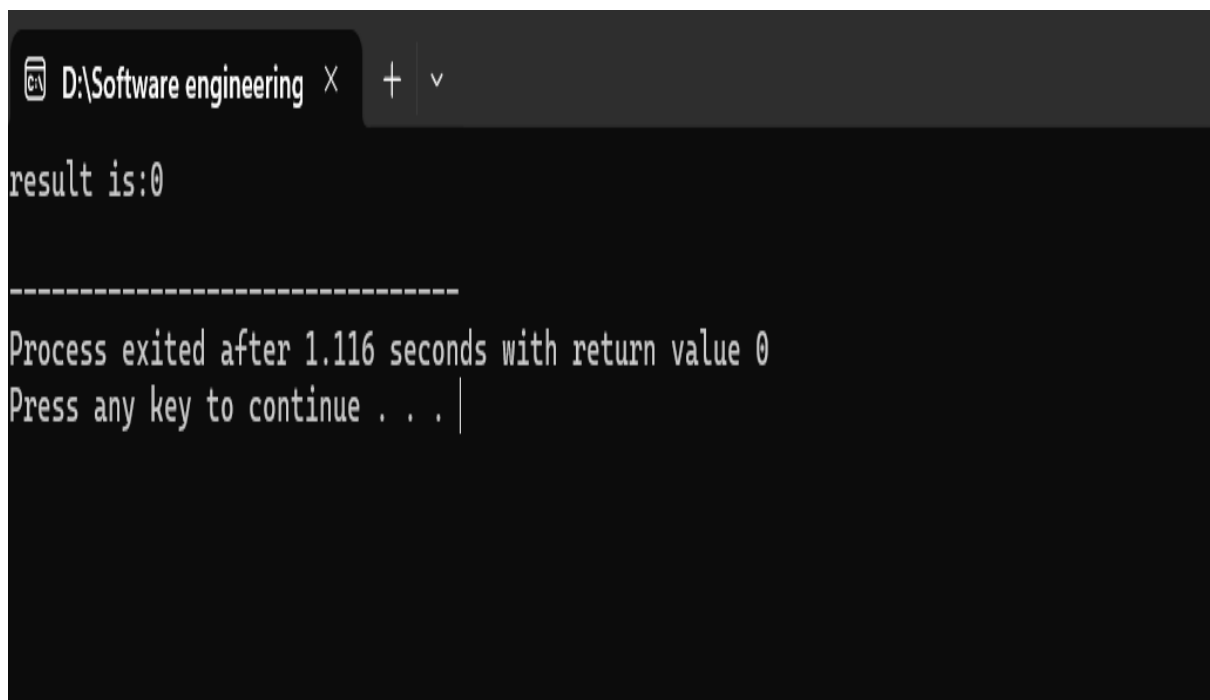
The screenshot shows the Dev-C++ IDE with a C++ program named 'task 9.cpp' open. The program includes `<iostream>` and uses the `std` namespace. It defines a `main` function that declares a `bool` variable `b` and a `bool` variable `bn`. It sets `b` to `true` and `bn` to `8 > 3`. It then outputs the result of the logical NOT operation on `bn` using `cout` and returns 0.

```
1 //implicit type casting
2 #include <iostream>
3 using namespace std;
4 int main(){
5
6
7     bool b , bn;
8     b=true;
9     bn= 8>3;
10    cout<<"result is:"<<(!bn)<<endl;//applying Logical NOT
11    return 0;
12
13
14
15
16 }
```

The bottom panel shows the 'Compilation results...' window with the following output:

```
Compilation results...
-----
- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming funda
- Output Size: 1.83212089538574 MiB
- Compilation Time: 0.45s
```

# C++: output

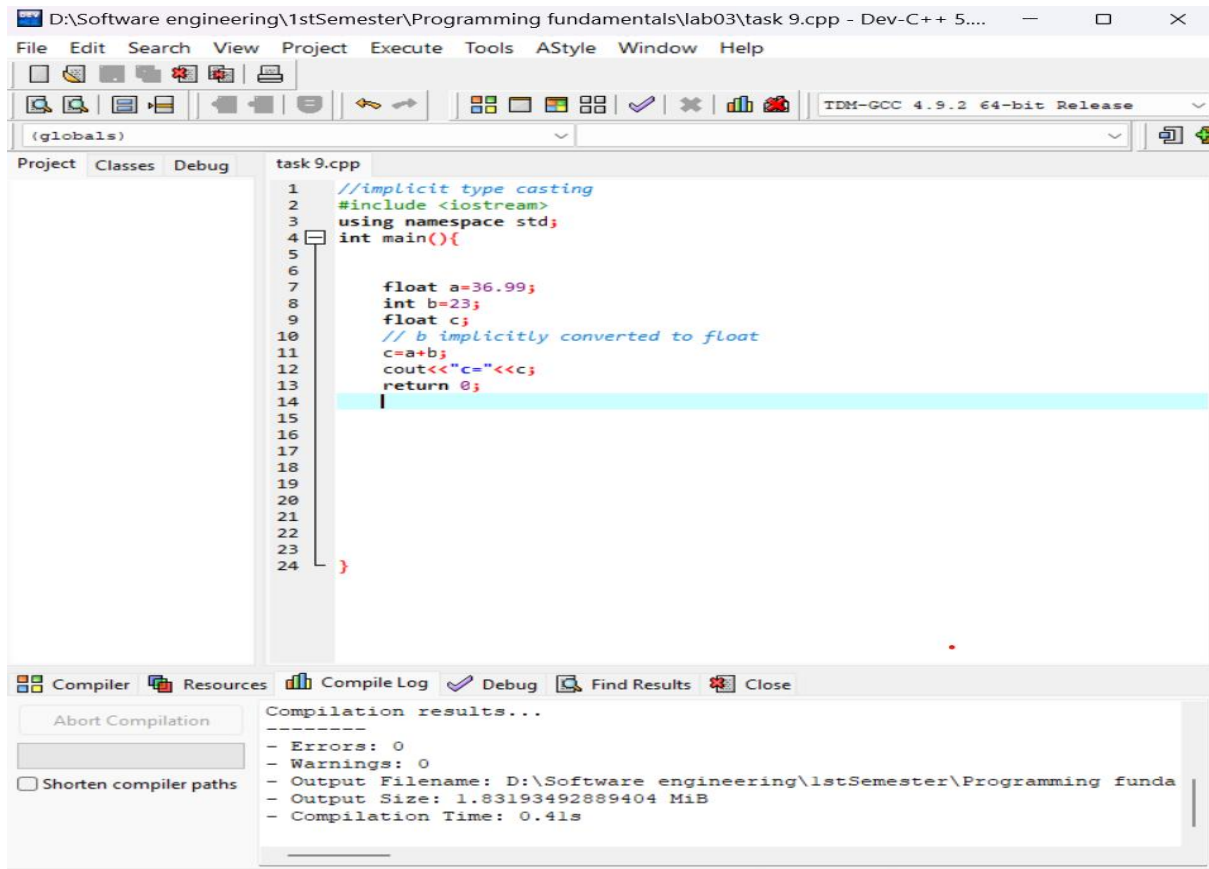


The screenshot shows a terminal window with the output of the C++ program. The output is 'result is:0'. Below this, there is a separator line and a message indicating that the process exited after 1.116 seconds with a return value of 0. The prompt 'Press any key to continue . . . |' is visible at the bottom.

```
D:\Software engineering x + v
result is:0
-----
Process exited after 1.116 seconds with return value 0
Press any key to continue . . . |
```

Task No 9: Write a program in C++ that shows the example of implicit and explicit type casting

## C++: input



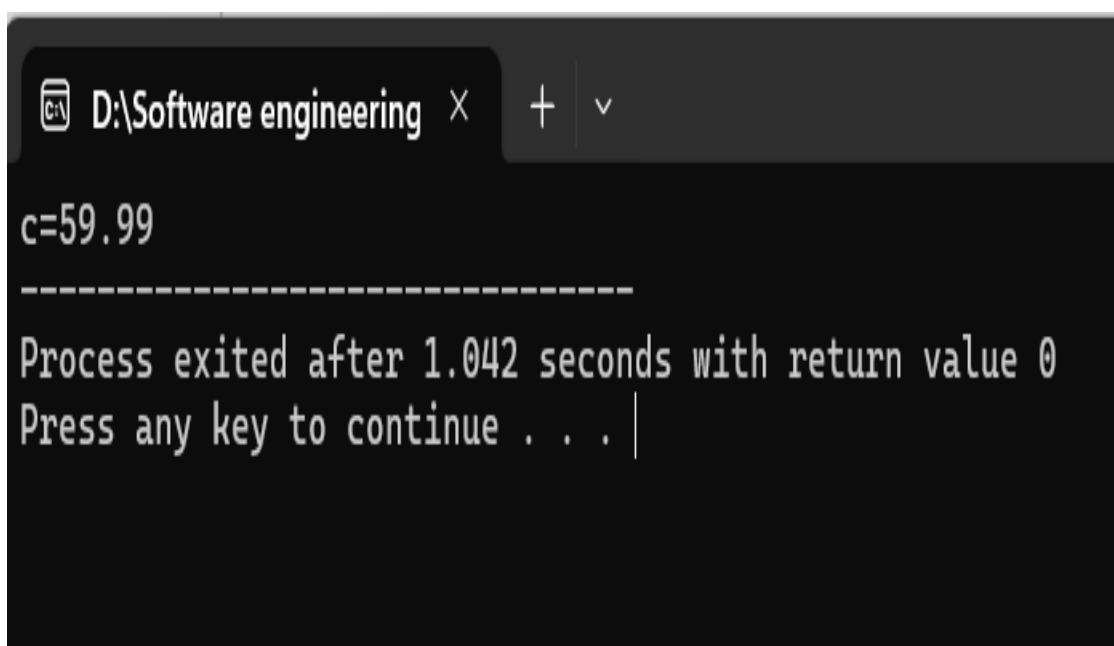
The screenshot shows the Dev-C++ IDE with the file 'task 9.cpp' open. The code defines a main function where a float variable 'a' is assigned the value 36.99, an integer variable 'b' is assigned 23, and a float variable 'c' is assigned the sum of 'a' and 'b'. A comment indicates that 'b' is implicitly converted to a float. The output of the program is shown in the 'Compilation results...' window at the bottom.

```
1 //implicit type casting
2 #include <iostream>
3 using namespace std;
4 int main(){
5
6
7     float a=36.99;
8     int b=23;
9     float c;
10    // b implicitly converted to float
11    c=a+b;
12    cout<<"c="<<c;
13    return 0;
14
15
16
17
18
19
20
21
22
23
24 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming funda
- Output Size: 1.83193492889404 MiB
- Compilation Time: 0.41s

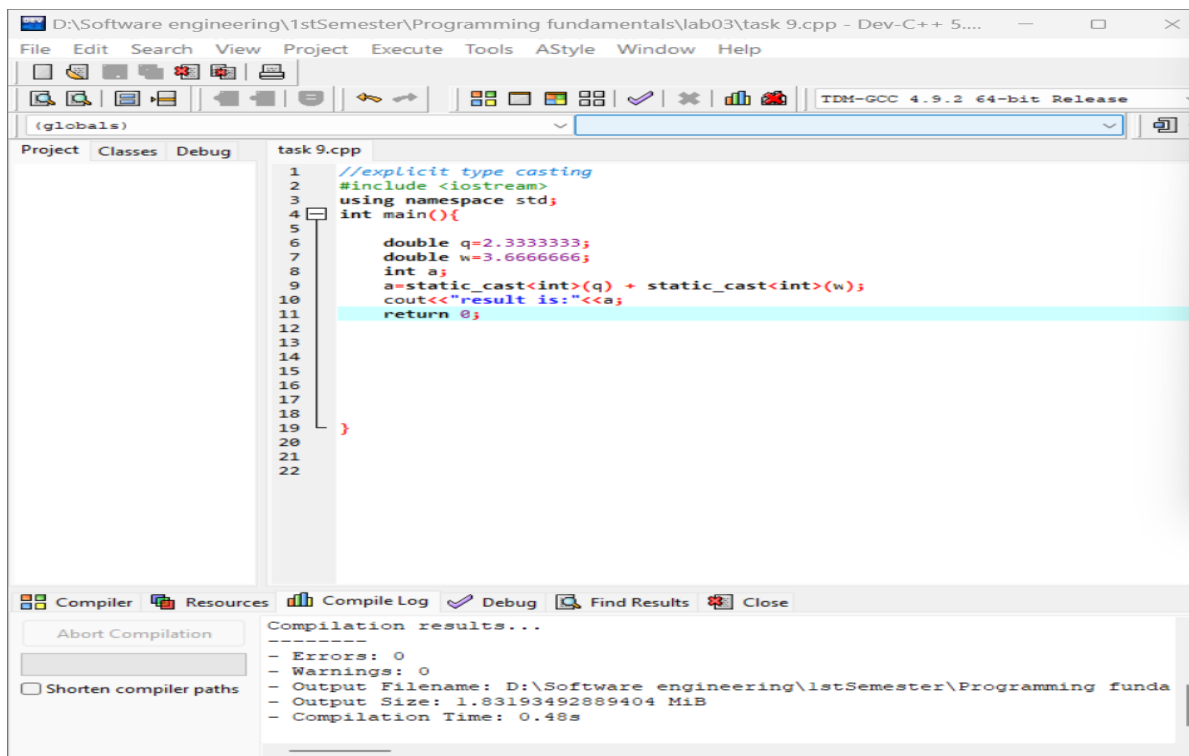
## C++: output



The screenshot shows a terminal window with the output of the program. The output is 'c=59.99', followed by a separator line, and then a message indicating the process exited after 1.042 seconds with a return value of 0. The prompt 'Press any key to continue . . . |' is visible at the bottom.

```
c=59.99
-----
Process exited after 1.042 seconds with return value 0
Press any key to continue . . . |
```

# C++: input

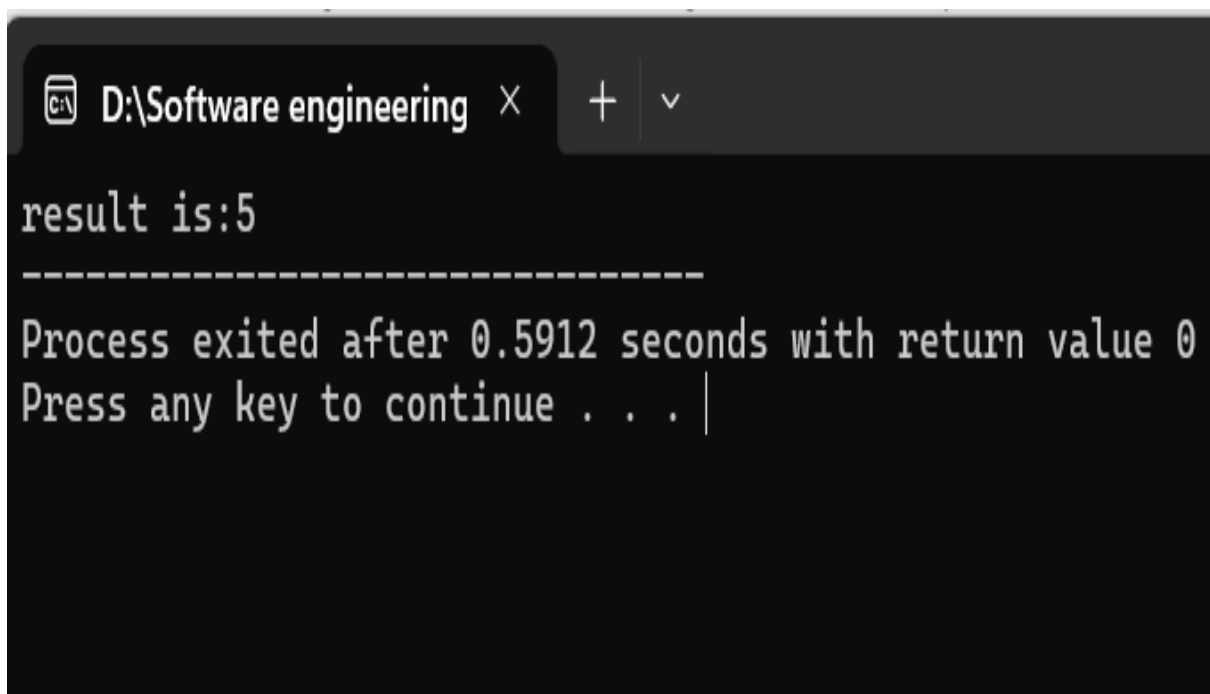


```
1 //explicit type casting
2 #include <iostream>
3 using namespace std;
4 int main(){
5
6     double q=2.3333333;
7     double w=3.6666666;
8     int a;
9     a=static_cast<int>(q) + static_cast<int>(w);
10    cout<<"result is:"<<a;
11    return 0;
12
13
14
15
16
17
18
19 }
20
21
22
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming funda
- Output Size: 1.83193492889404 MiB
- Compilation Time: 0.48s

# C++: output

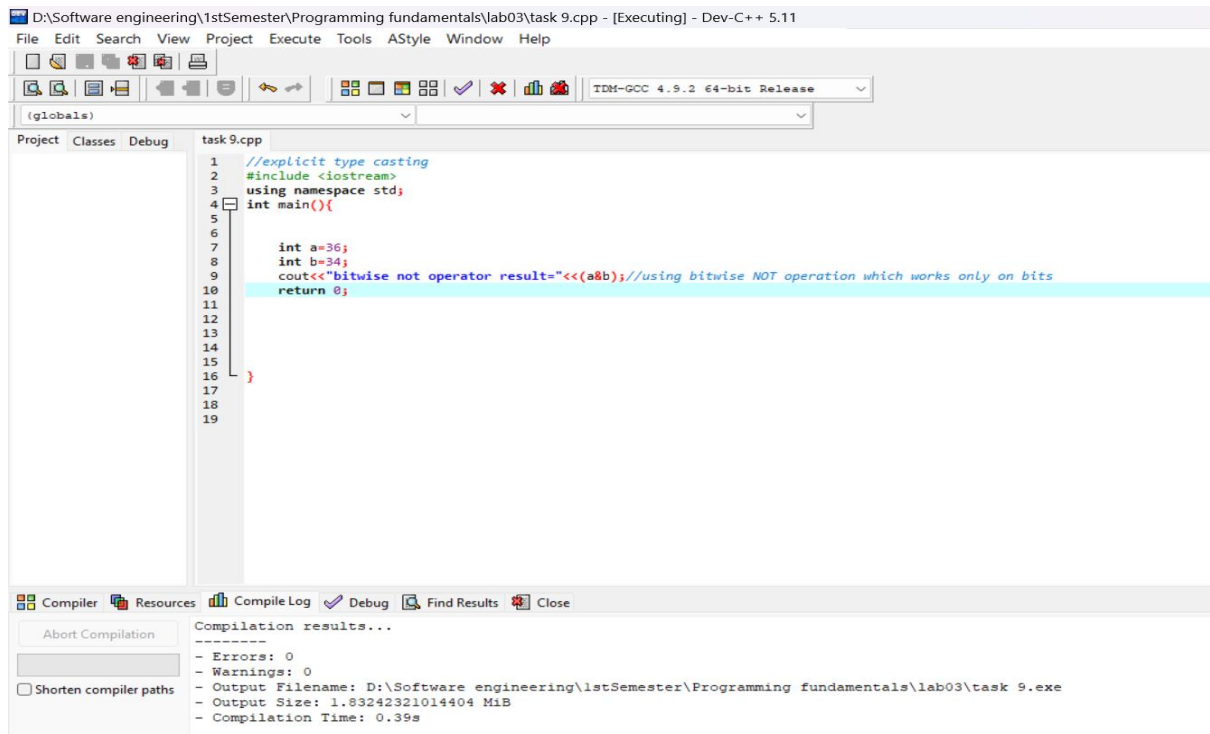


```
D:\Software engineering X + v

result is:5
-----
Process exited after 0.5912 seconds with return value 0
Press any key to continue . . . |
```

Task No 10: Write a program in C++ to show the use of Bitwise Operators

## C++: input



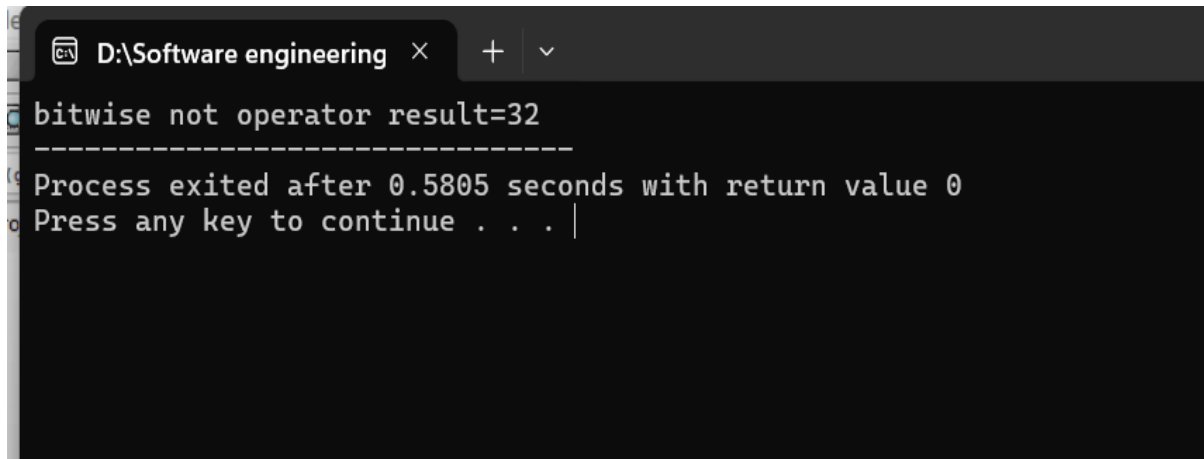
The screenshot shows the Dev-C++ IDE with the file 'task 9.cpp' open. The code defines two integers, a=36 and b=34, and uses the bitwise NOT operator (~) to calculate the result. The output window shows the program executed successfully with no errors or warnings.

```
1 //explicit type casting
2 #include <iostream>
3 using namespace std;
4 int main(){
5
6     int a=36;
7     int b=34;
8     cout<<"bitwise not operator result="<<(a&b);//using bitwise NOT operation which works only on bits
9     return 0;
10
11
12
13
14
15
16
17
18
19 }
```

Compilation results...

- Errors: 0
- Warnings: 0
- Output Filename: D:\Software engineering\1stSemester\Programming fundamentals\lab03\task 9.exe
- Output Size: 1.83242321014404 MiB
- Compilation Time: 0.39s

## C++: output



The screenshot shows a Windows command prompt window with the output of the program. The output displays the result of the bitwise NOT operation on the value 32, followed by a message indicating the process has exited successfully.

```
bitwise not operator result=32
-----
Process exited after 0.5805 seconds with return value 0
Press any key to continue . . . |
```

**THE END**