

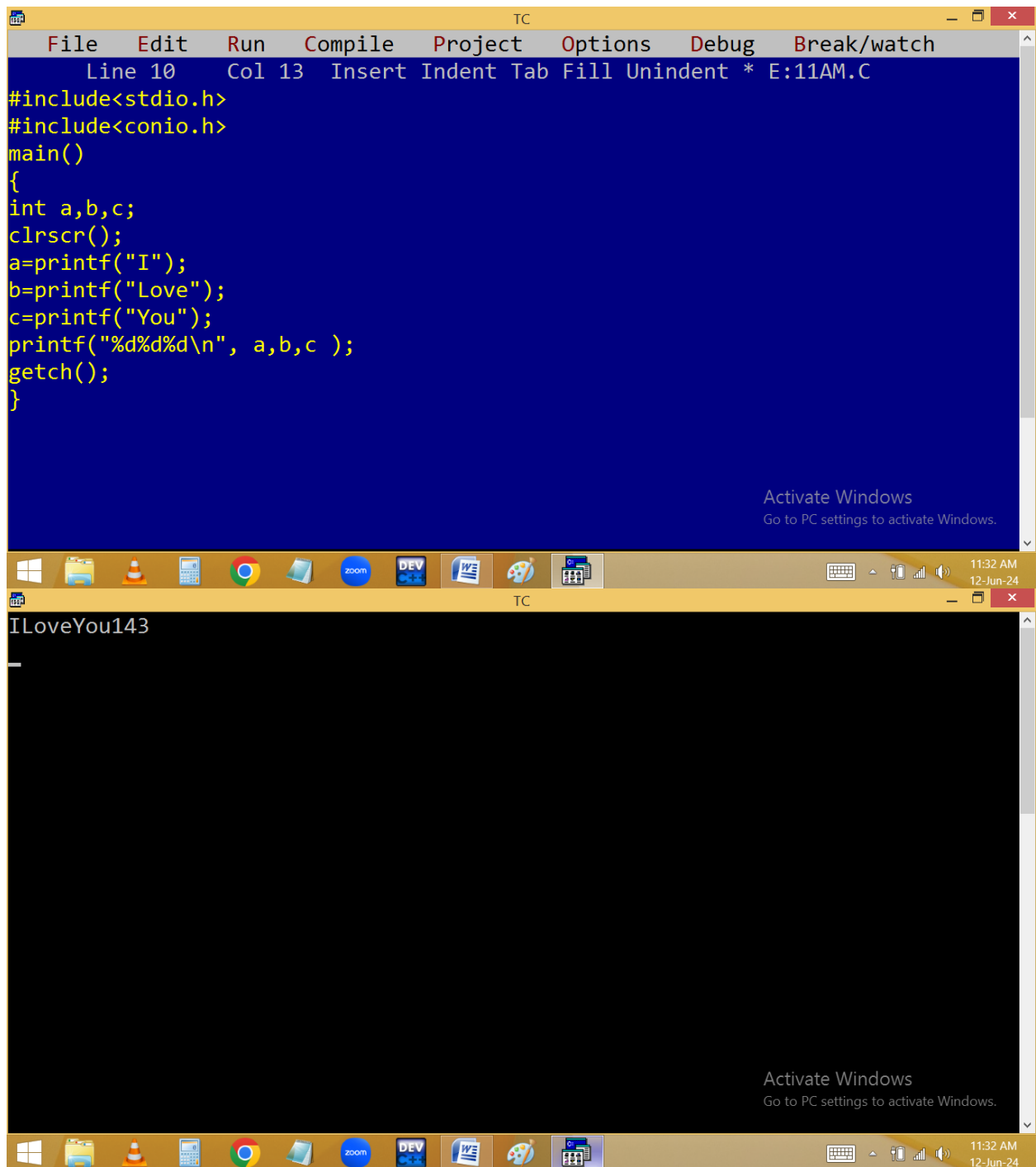
The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the source code editor, which has a blue background and displays the following C code:

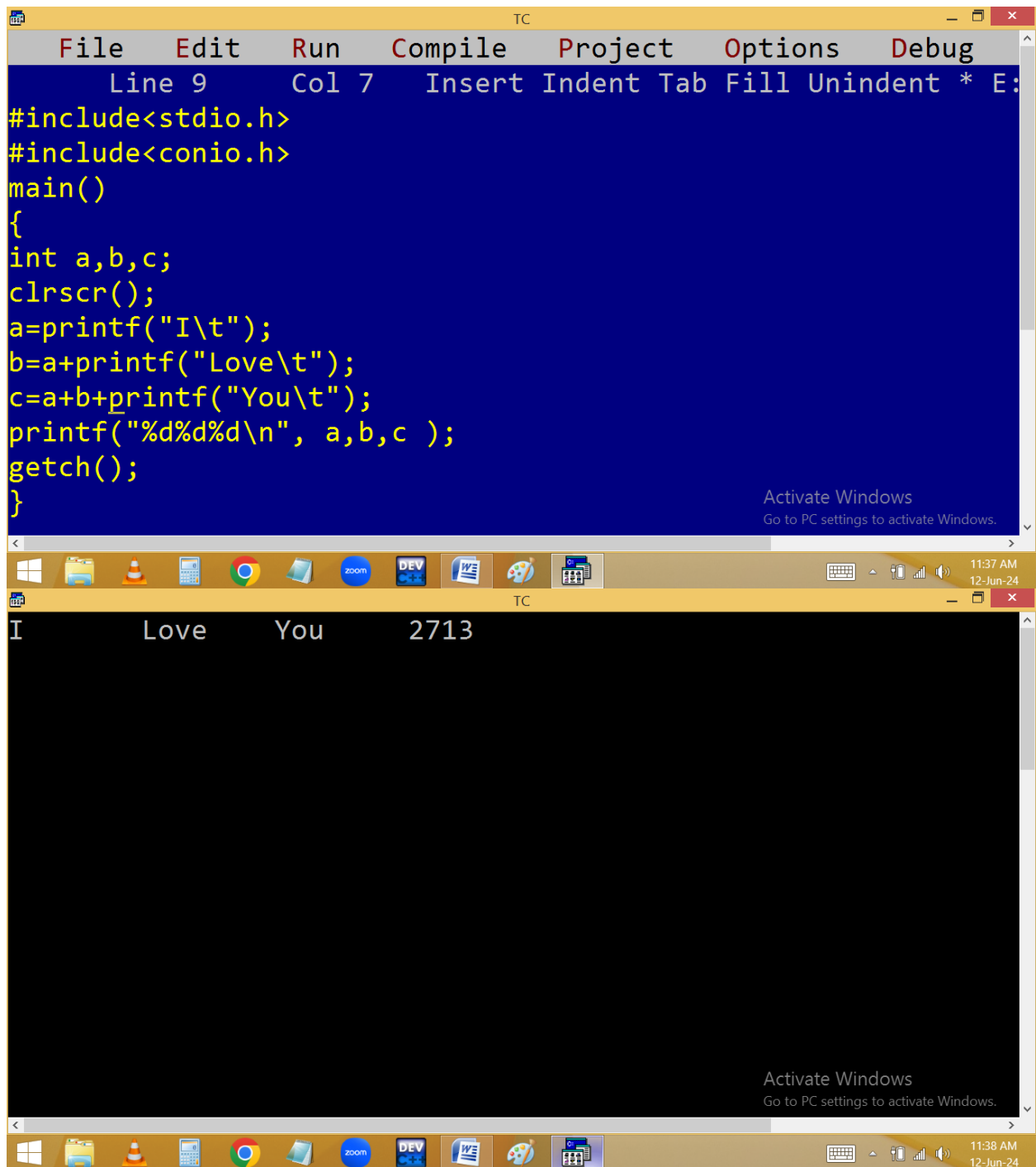
```
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 1 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
main()
{
int a=10,b,c;
clrscr();
a=!a;
b=!!a;
c=!!!b;
printf("a=%d, b=%d, c=%d\n", a,b,c );
getch();
}
```

The bottom window is the output console, which has a black background and displays the output of the program:

```
a=0, b=0, c=1
```

Both windows have a yellow title bar with the text "TC". The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock indicating 11:28 AM on 12-Jun-24. An "Activate Windows" watermark is present in the bottom right corner of both the code and output windows.



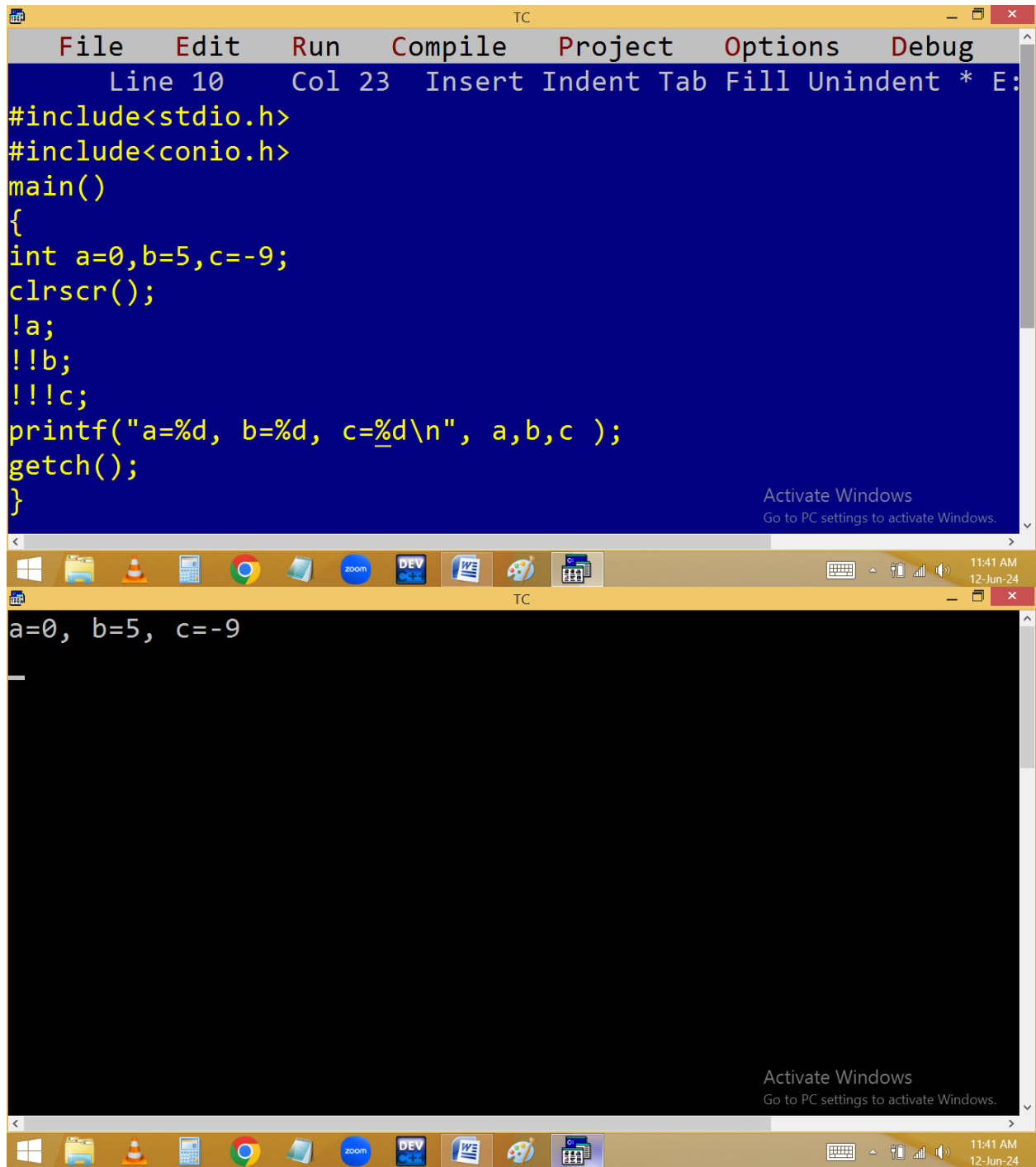


The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the source code editor, which has a blue background and yellow text. It contains a C program that calculates the sum of the ASCII values of the characters 'I', 'Love', and 'You'. The code is as follows:

```
File Edit Run Compile Project Options Debug
Line 9 Col 7 Insert Indent Tab Fill Unindent * E:
#include<stdio.h>
#include<conio.h>
main()
{
int a,b,c;
clrscr();
a=printf("I\t");
b=a+printf("Love\t");
c=a+b+printf("You\t");
printf("%d%d%d\n", a,b,c );
getch();
}
```

The bottom window is the output window, which has a black background and white text. It displays the output of the program: "I Love You 2713".

Both windows have a status bar at the bottom that says "Activate Windows Go to PC settings to activate Windows." The taskbar at the bottom of the screen shows various application icons, including the Windows Start button, File Explorer, VLC media player, a calculator, Google Chrome, a folder icon, Zoom, DEV C++, Word, Paint, and the Turbo C++ icon. The system clock in the bottom right corner shows the time as 11:37 AM on 12-Jun-24.

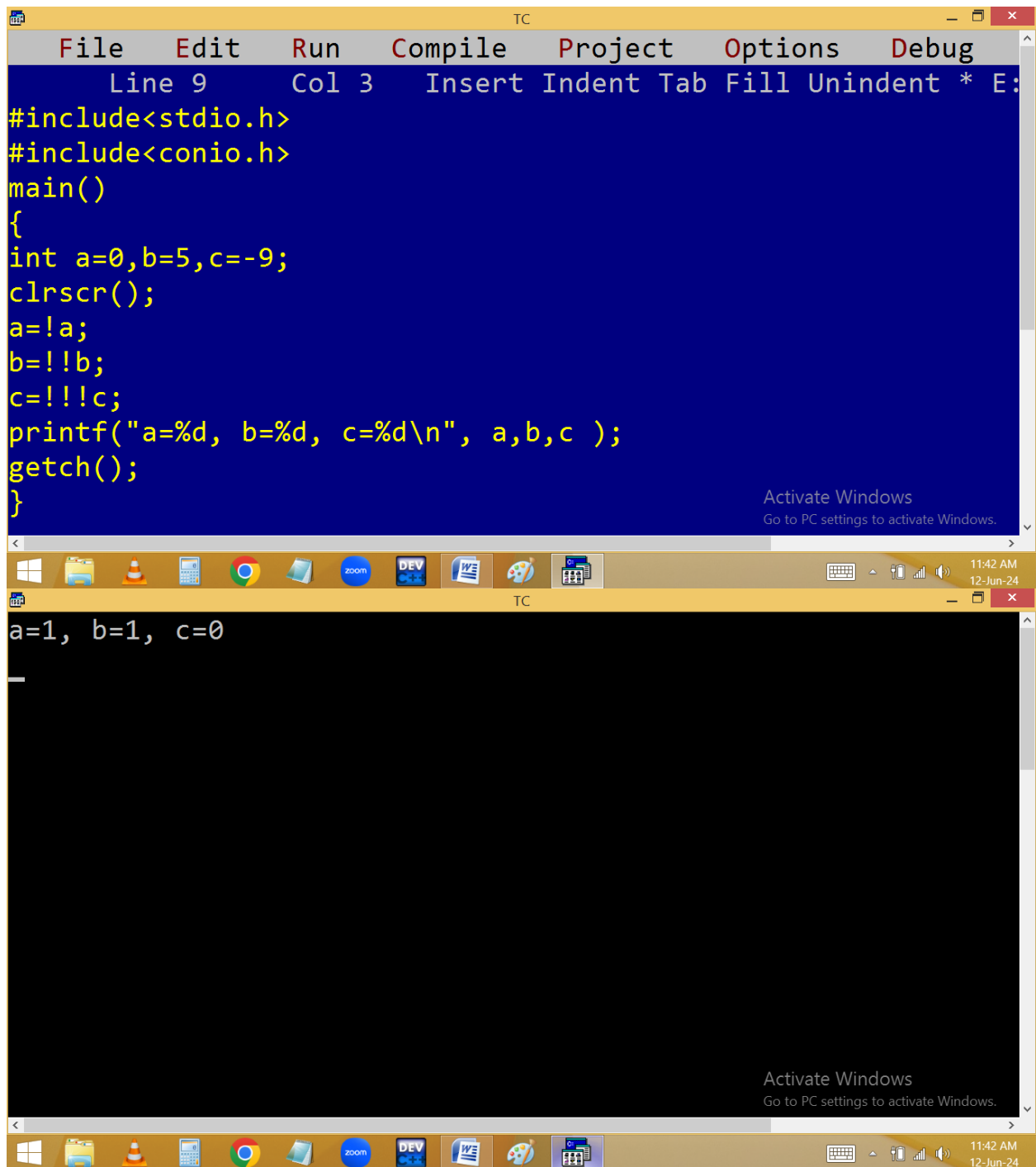


The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the source code editor, which has a blue background and yellow text. It contains a C program that includes `<stdio.h>` and `<conio.h>`, defines a `main()` function, and declares three integer variables: `a=0`, `b=5`, and `c=-9`. The program uses `clrscr()` to clear the screen, prints the values of `a`, `b`, and `c` using `printf`, and then waits for a key press with `getch()`. The status bar at the top of the editor shows "Line 10 Col 23".

```
File Edit Run Compile Project Options Debug
Line 10 Col 23 Insert Indent Tab Fill Unindent * E:
#include<stdio.h>
#include<conio.h>
main()
{
int a=0,b=5,c=-9;
clrscr();
!a;
!!b;
!!!c;
printf("a=%d, b=%d, c=%d\n", a,b,c );
getch();
}
```

The bottom window is the output console, which has a black background and white text. It displays the output of the program: `a=0, b=5, c=-9`. The status bar at the bottom of the console also shows "Activate Windows" and "Go to PC settings to activate Windows."

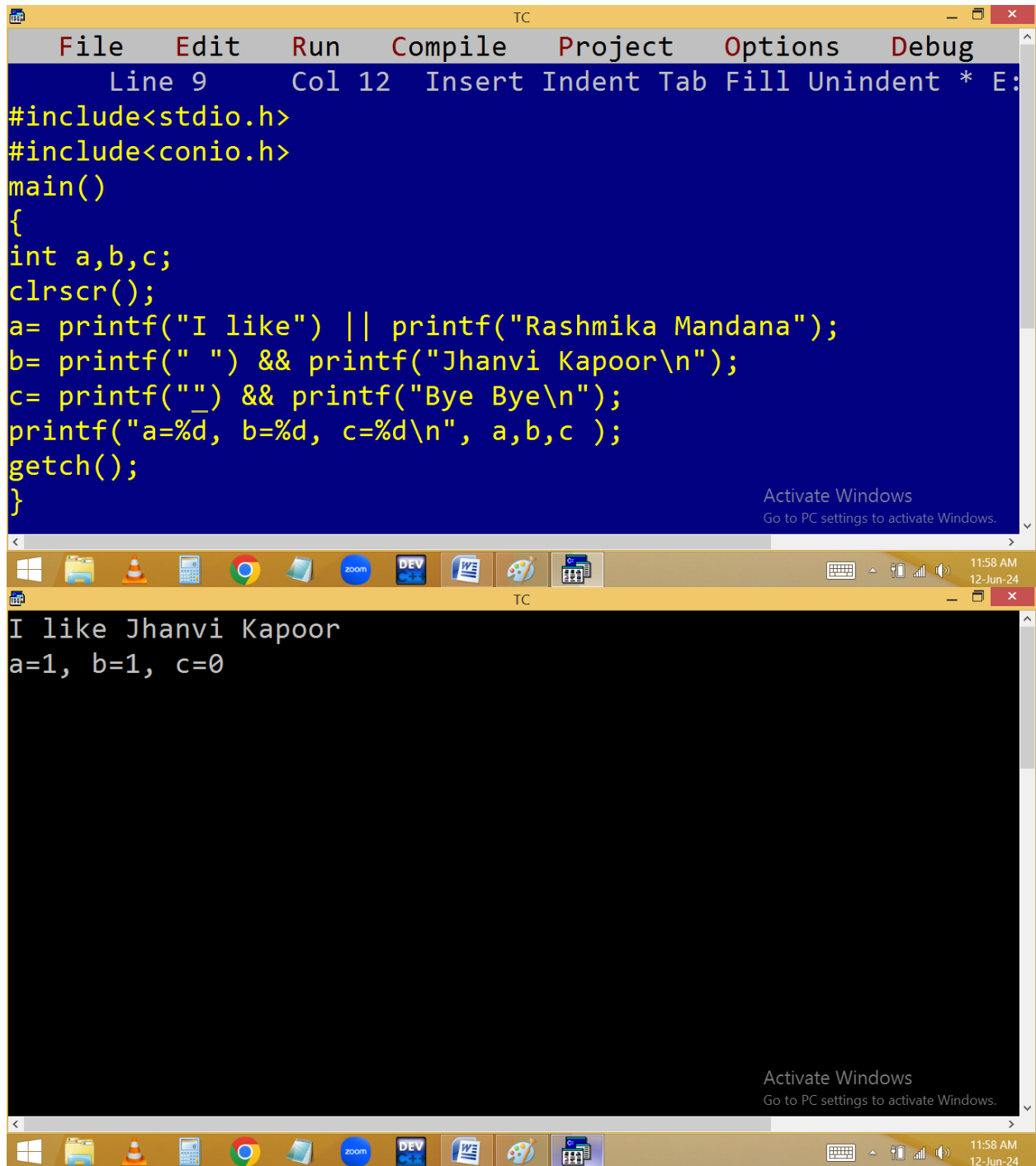
a=0, b=5, c=-9



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the source code editor with a blue background. It contains a C program that includes `<stdio.h>` and `<conio.h>`, defines a `main()` function, declares variables `a=0, b=5, c=-9`, calls `clrscr()`, and uses `printf` to print the values of `a, b, c`. The status bar at the top indicates 'Line 9 Col 3'. The bottom window is the output console with a black background, displaying the output 'a=1, b=1, c=0'. The Windows taskbar at the bottom shows various application icons and the system clock indicating 11:42 AM on 12-Jun-24. An 'Activate Windows' watermark is visible in the bottom right of both windows.

```
File Edit Run Compile Project Options Debug
Line 9 Col 3 Insert Indent Tab Fill Unindent * E:
#include<stdio.h>
#include<conio.h>
main()
{
int a=0,b=5,c=-9;
clrscr();
a=!a;
b=!b;
c=!c;
printf("a=%d, b=%d, c=%d\n", a,b,c );
getch();
}
```

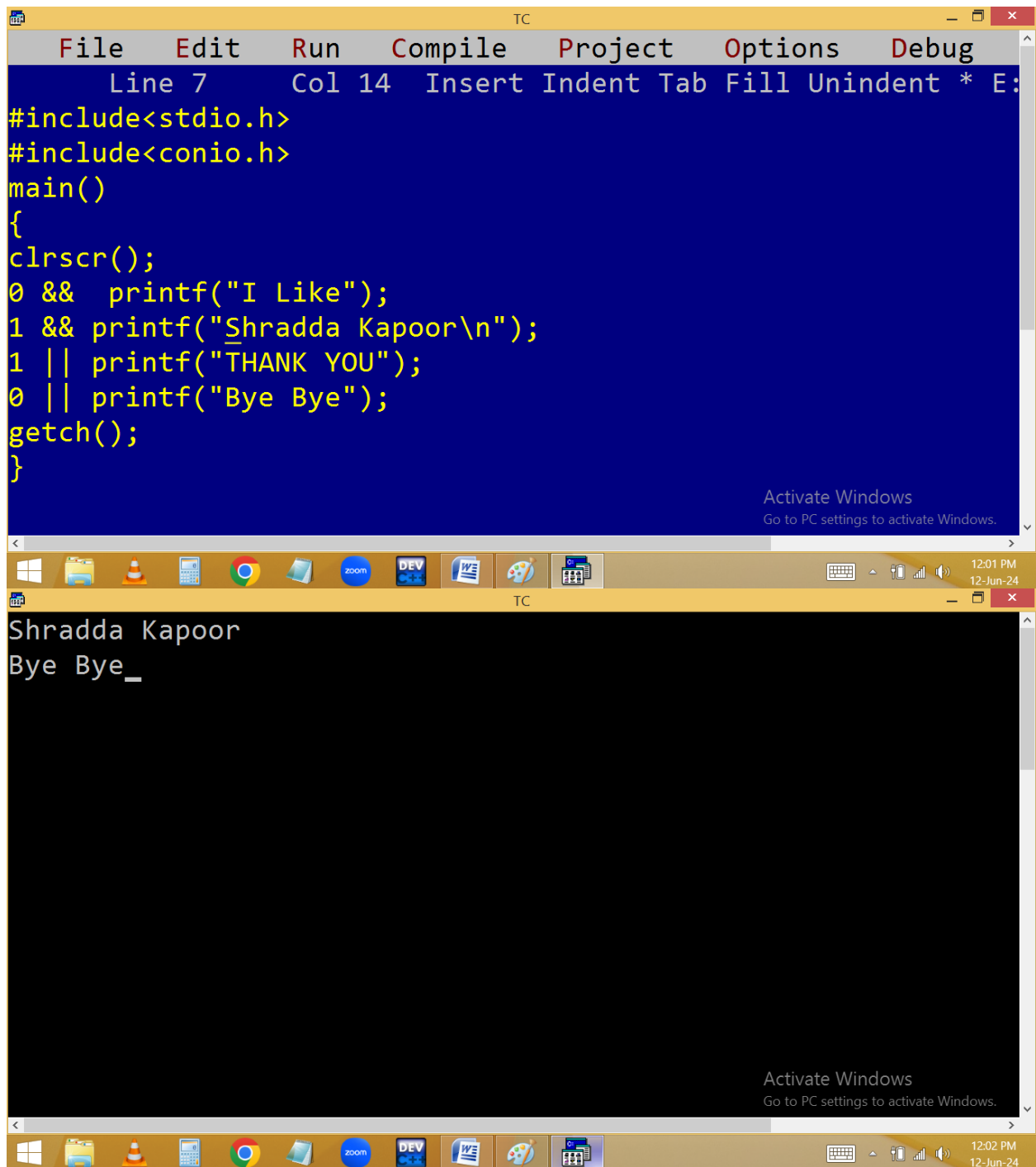
a=1, b=1, c=0



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the source code editor, which has a blue background and yellow text. It contains a C program that includes `<stdio.h>` and `<conio.h>`, defines a `main()` function, declares three integer variables `a`, `b`, and `c`, clears the screen with `clrscr()`, and then prints three lines of text using `printf`: "I like", "Rashmika Mandana", and "Jhanvi Kapoor\n". It also prints the values of `a`, `b`, and `c` using `printf("a=%d, b=%d, c=%d\n", a,b,c);` and waits for a key press with `getch()`. The bottom window is the output console, which has a black background and white text. It displays the output of the program: "I like Jhanvi Kapoor" on the first line and "a=1, b=1, c=0" on the second line. The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock indicating 11:58 AM on 12-Jun-24.

```
File Edit Run Compile Project Options Debug
Line 9 Col 12 Insert Indent Tab Fill Unindent * E:
#include<stdio.h>
#include<conio.h>
main()
{
int a,b,c;
clrscr();
a= printf("I like") || printf("Rashmika Mandana");
b= printf(" ") && printf("Jhanvi Kapoor\n");
c= printf("_") && printf("Bye Bye\n");
printf("a=%d, b=%d, c=%d\n", a,b,c );
getch();
}
```

I like Jhanvi Kapoor
a=1, b=1, c=0



The screenshot displays the Turbo C++ (TC) IDE interface. The top window shows a C program with the following code:

```
Line 7 Col 14 Insert Indent Tab Fill Unindent * E:  
#include<stdio.h>  
#include<conio.h>  
main()  
{  
clrscr();  
0 && printf("I Like");  
1 && printf("_Shradda Kapoor\n");  
1 || printf("THANK YOU");  
0 || printf("Bye Bye");  
getch();  
}
```

The bottom window shows the program's output:

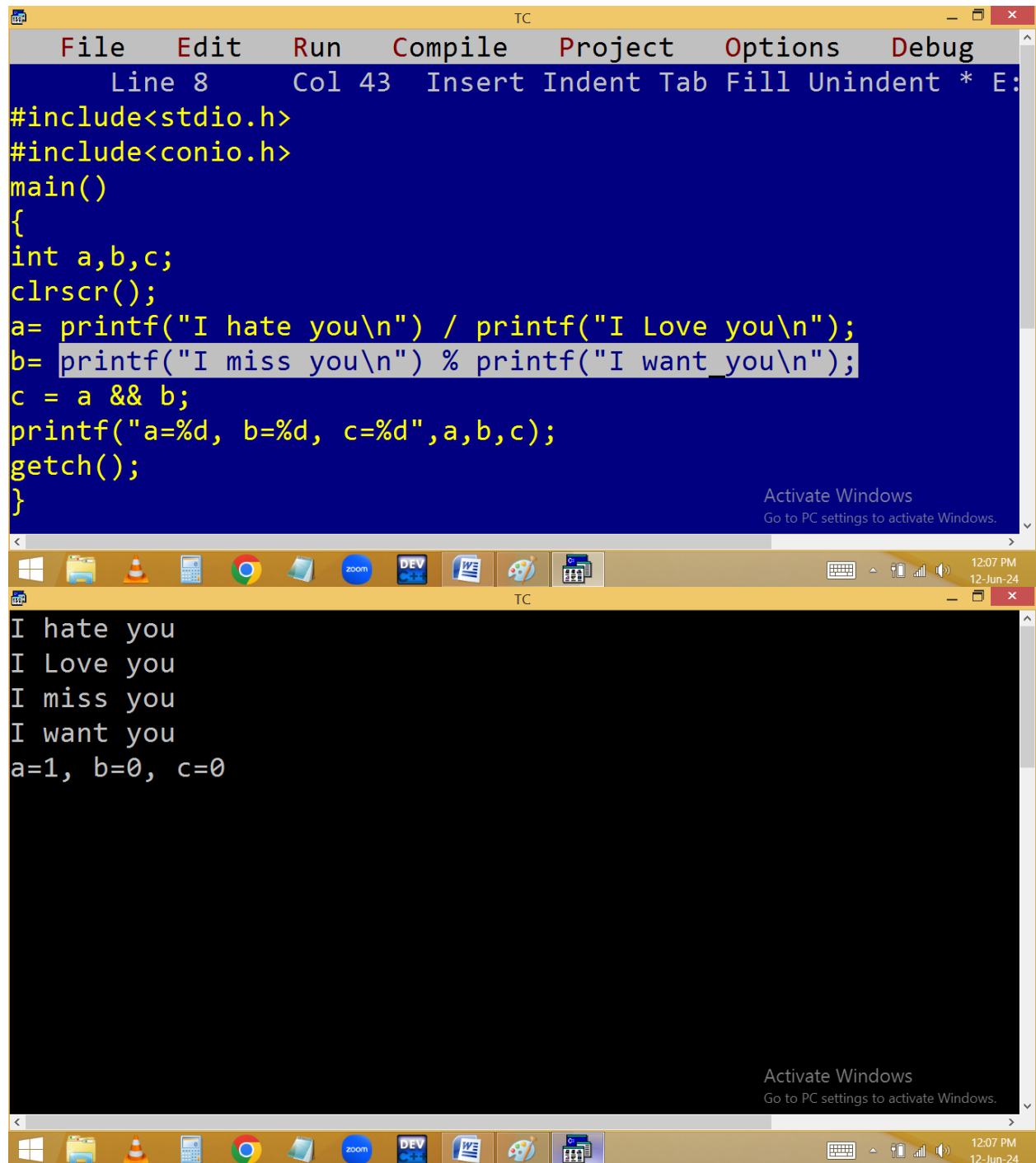
```
Shradda Kapoor  
Bye Bye_
```

The Windows taskbar at the bottom includes icons for File Explorer, VLC, Calculator, Chrome, File Zilla, Zoom, DEV C++, Word, Paint, and Task Manager. The system clock shows 12:01 PM and 12:02 PM on 12-Jun-24. An "Activate Windows" watermark is visible in the bottom right corner of both windows.

Note:

In && operator when left expression is false then right exp not checked.

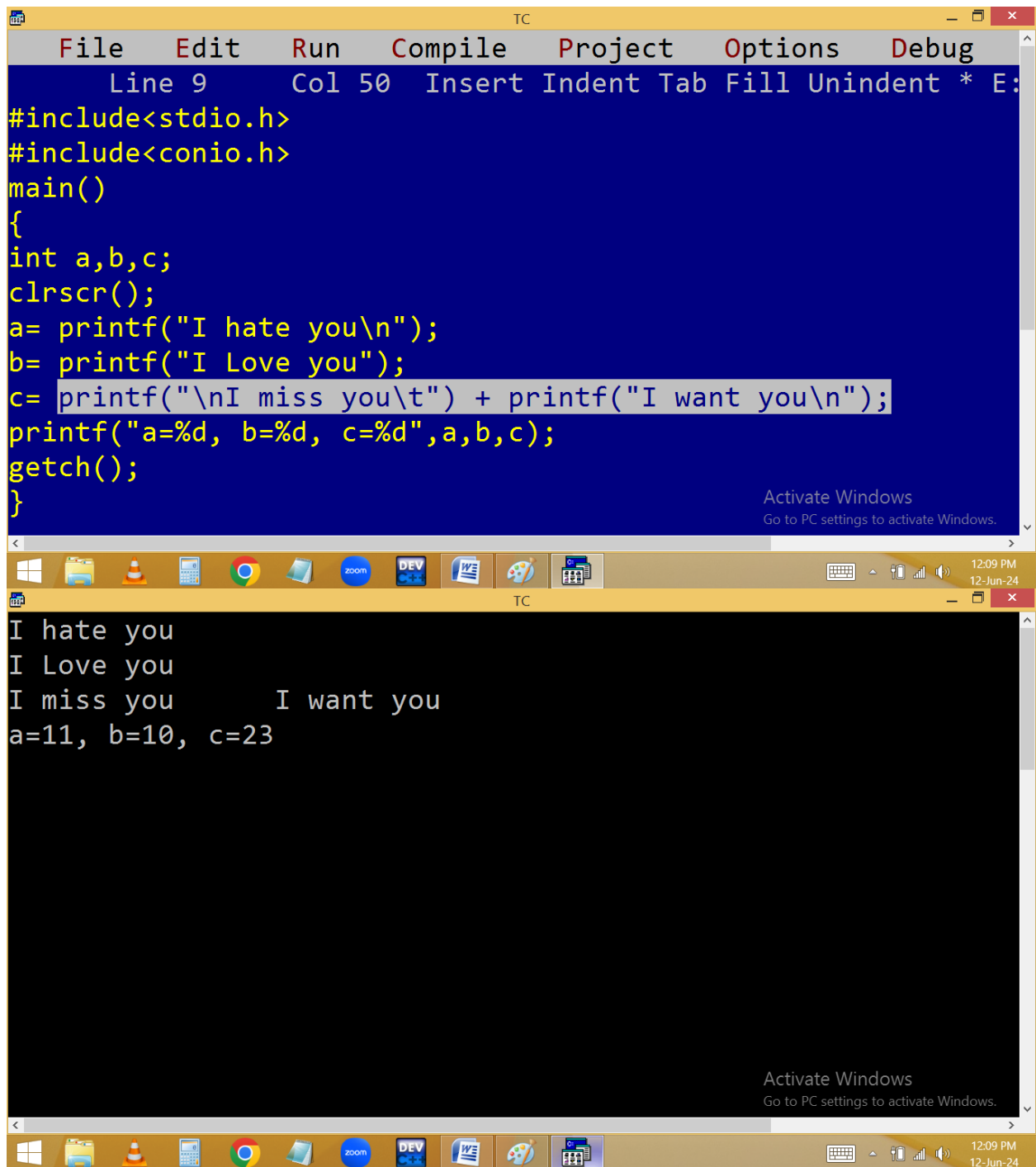
In || operator when left expression is true then right exp not checked



The screenshot shows the Turbo C++ (TC) IDE with a C program that demonstrates the short-circuit evaluation of the || operator. The program's logic is as follows: it prints "I hate you", then "I Love you", then "I miss you", and finally "I want you". After these four lines, it prints the values of variables a, b, and c. The variable 'a' is assigned the value of the first printf statement, which is 1. The variable 'b' is assigned the value of the second printf statement, which is 0. The variable 'c' is assigned the value of the logical OR expression 'a || b'. Since 'a' is 1 (true), the short-circuit evaluation stops at 'a' and does not evaluate 'b', resulting in 'c' being 1.

```
File Edit Run Compile Project Options Debug
Line 8 Col 43 Insert Indent Tab Fill Unindent * E:
#include<stdio.h>
#include<conio.h>
main()
{
int a,b,c;
clrscr();
a= printf("I hate you\n") / printf("I Love you\n");
b= printf("I miss you\n") % printf("I want you\n");
c = a || b;
printf("a=%d, b=%d, c=%d",a,b,c);
getch();
}
```

I hate you
I Love you
I miss you
I want you
a=1, b=0, c=1



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays a C program with the following code:

```
File Edit Run Compile Project Options Debug
Line 9 Col 50 Insert Indent Tab Fill Unindent * E:
#include<stdio.h>
#include<conio.h>
main()
{
int a,b,c;
clrscr();
a= printf("I hate you\n");
b= printf("I Love you");
c= printf("\nI miss you\t") + printf("I want you\n");
printf("a=%d, b=%d, c=%d",a,b,c);
getch();
}
```

The bottom window shows the output of the program:

```
I hate you
I Love you
I miss you      I want you
a=11, b=10, c=23
```

Both windows include a taskbar at the bottom with various application icons and a system tray on the right showing the time as 12:09 PM on 12-Jun-24. An "Activate Windows" watermark is visible in the bottom right corner of both windows.

Increment & Decrement operators [++ / --]:

They are used to increment / decrement a variable value by 1.

Eg:

Int a=3, b=9;

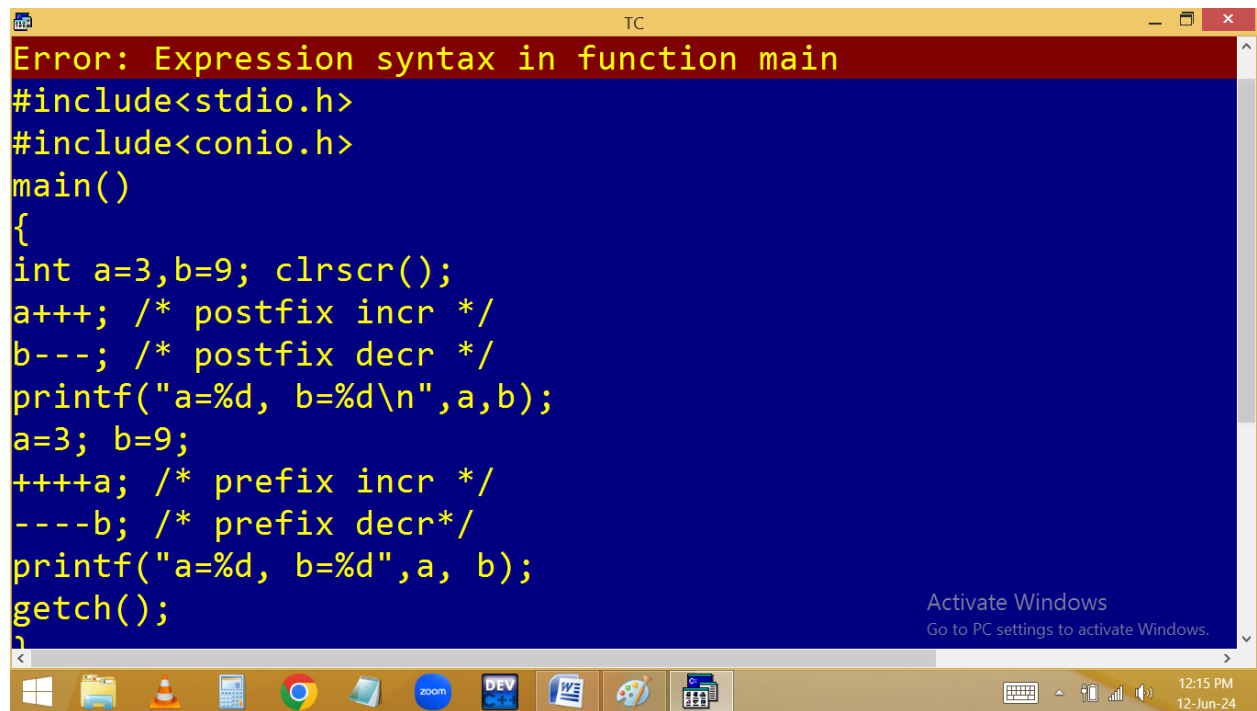
a++ → i.e. a=a+1 → a=4

b-- → i.e. b=b-1 → b=8

```
TC
#include<stdio.h>
#include<conio.h>
main()
{
int a=3,b=9; clrscr();
a++; /* postfix incr */
b--; /* postfix decr */
printf("a=%d, b=%d\n",a,b);
a=3; b=9;
++a; /* prefix incr */
--b; /* prefix decr*/
printf("a=%d, b=%d",a, b);
getch();
}

a=4, b=8
a=4, b=8_

TC
Activate Windows
Go to PC settings to activate Windows.
12:14 PM
12-Jun-24
```



The image shows a screenshot of a Turbo C++ (TC) IDE window. The title bar at the top reads "TC". A red error banner at the top of the editor area displays the message "Error: Expression syntax in function main". The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
main()
{
int a=3,b=9; clrscr();
a++; /* postfix incr */
b--; /* postfix decr */
printf("a=%d, b=%d\n",a,b);
a=3; b=9;
++++a; /* prefix incr */
----b; /* prefix decr*/
printf("a=%d, b=%d",a, b);
getch();
}
```

The error is caused by the use of "++++a" and "----b", which are not valid C++ expressions. The IDE also features a Windows taskbar at the bottom with various application icons and a system tray on the right showing the time as 12:15 PM on 12-Jun-24.

```
TC
Line 14 Col 15 Insert Indent Tab Fill Unindent * E:
#include<stdio.h>
#include<conio.h>
main()
{
int a=3,b; clrscr();
b=a++; /* postfix incr */
printf("a=%d, b=%d\n",a,b);
a=3; b=++a; /* prefix incr */
printf("a=%d, b=%d",a, b);
getch();
}
/* a=4, b=3
   a=4, b=4 */
```

Activate Windows
Go to PC settings to activate Windows.

a=3

b=a++; priority: =, a++

1. b=a ==> b=3

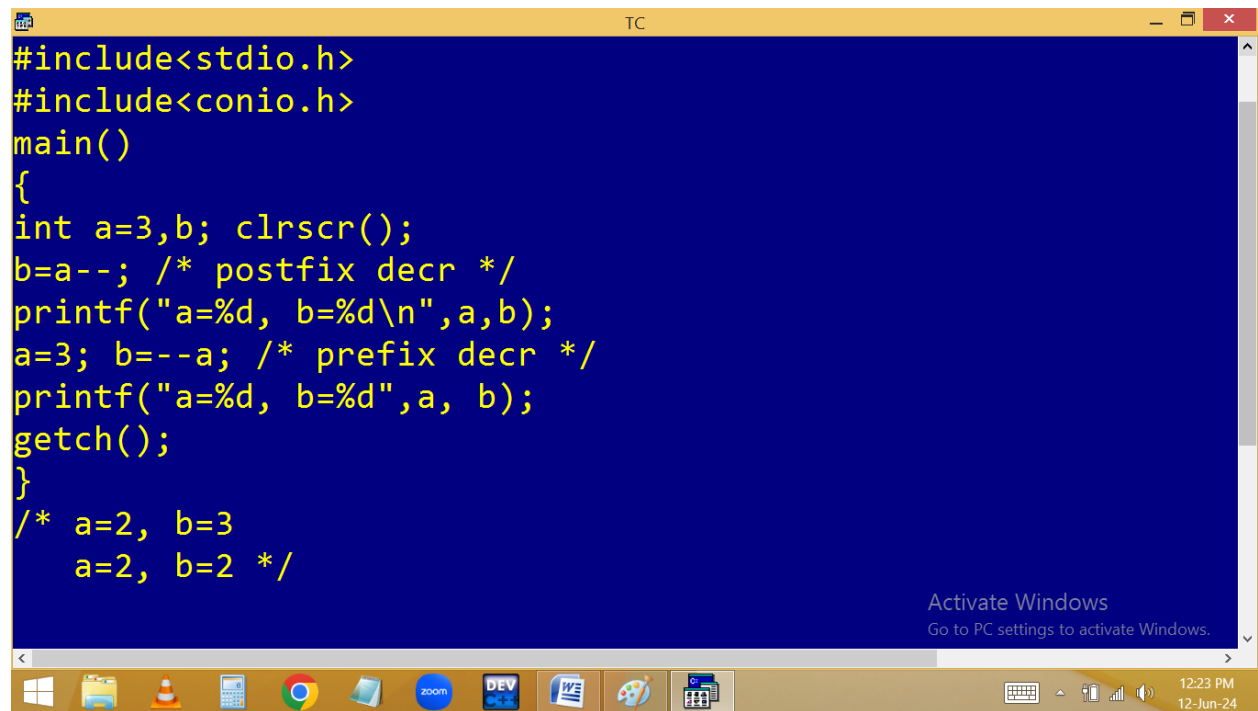
2. a++ ==> a=4

a=3

b=++a; priority: ++a, =

1. ++a ==> a=4

2. b=a ==> b=4



```
#include<stdio.h>
#include<conio.h>
main()
{
int a=3,b; clrscr();
b=a--; /* postfix decre */
printf("a=%d, b=%d\n",a,b);
a=3; b=--a; /* prefix decre */
printf("a=%d, b=%d",a, b);
getch();
}
/* a=2, b=3
   a=2, b=2 */
```

Activate Windows
Go to PC settings to activate Windows.

12:23 PM
12-Jun-24

a=3

b=a--; priority: =, a--

1. b=a ==> b=3

2. a-- ==> a=2

a=3

b=--a; priority: --a, =

1. --a ==> a=2

2. b=a==> b=2

```
#include<stdio.h>
#include<conio.h>
main()
{
int a=3; clrscr();
a=a--; /* postfix decr */
printf("a=%d\n",a);
a=3; a=--a; /* prefix decr */
printf("a=%d",a);
getch();
}
/* a=2
a=2 */
```

Activate Windows
Go to PC settings to activate Windows.

Wednesday, 12 June, 2024 12:26 PM 12-Jun-24

a=3

a=a--; priority: =, a--

1. a=a==>a=3

2. a---=> a=2

a=3

a=--a; priority: --a, =

1. --a ==> a=2

2. a=a ==> a=2

Note: Until Assigning to any other variable, pre and post operations are same.


```
TC
#include<stdio.h>
#include<conio.h>
main()
{
int a=1, b; clrscr();
b=a++ + a++ + a++; /* postfix incr */
printf("a=%d, b=%d\n",a,b);
a=1;
b=++a + ++a + ++a; /* prefix incr */
printf("a=%d, b=%d",a,b);
getch();
}
/* a=4, b=3
   a=4, b=12 */
Activate Windows
Go to PC settings to activate Windows.
```

```
TC
a=4, b=3
a=4, b=12
Activate Windows
Go to PC settings to activate Windows.
```

a=1

b = a++ + a++ + a++;

priority: +, =, a++

1. b = a + a + a ==> 1 + 1 + 1 = 3

2. **b = 3**

3. a++ ==> a=2, a++ ==> a=3, a++ ==> **a=4**

a=1

b= ++a + ++a + ++a;

priority: ++a, +, =

1. ++a==>a=2, ++a==>a=3, ++a==>**a=4**

2. b = a + a + a ==> 4 + 4 + 4 = 12

3. **b = 12**

```
TC
#include<stdio.h>
#include<conio.h>
main()
{
int a=1, b; clrscr();
b=++a + a++ * ++a;
printf("a=%d, b=%d\n",a,b);
a=1;
b=++a + a-- + a++ + --a;
printf("a=%d, b=%d",a,b);
getch();
}
/* a=4, b=12
   a=1, b=4 */
Activate Windows
Go to PC settings to activate Windows.
```

a=1

b=++a + a++ * ++a;

priority: ++a, *, +, =, a++

1. ++a==>a=2, ++a==> a=3

2. b = a + a * a ==> 3 + 3*3 ==> 3 + 9

3. b = 3 + 9 = 12

4. **b = 12** ✓

5. a++ ==> **a=4** ✓

a=1

b= ++a + a-- + a++ + --a;

priority: ++a, --a, +, =, a++, a--

1. ++a==>a=2

2. --a ==> a=1

3. b = a + a + a + a ==> 1 + 1 + 1 + 1

4. **b = 4**

5. a++ ==> a=2

6. a-- ==> **a=1**