

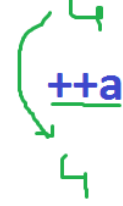
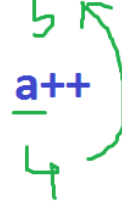
The image shows a screenshot of the Turbo C++ (TC) IDE. The top window, titled 'Edit', displays a C program in a blue editor. The code includes `<stdio.h>` and `<conio.h>`, defines `main()`, initializes `int a=3`, clears the screen with `clrscr()`, and uses `printf` to print two lines of numbers. A comment explains the execution order of `printf`. The bottom window, titled 'TC', shows the output of the program on a black background. The output consists of two lines: '6,4,5,4,4' and '11,50,10,7,7'. Both windows have a yellow title bar and a menu bar with 'File', 'Edit', 'Run', 'Compile', 'Project', 'Options', 'Debug', and 'Break/watch'. The Windows taskbar at the bottom shows the time as 9:37 AM on 14-Sep-23.

```
Line 12 Col 26 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=3;
clrscr();
printf("%d,%d,%d,%d,%d\n",++a, ++, a--, ++,++a);
printf("%d,%d,%d,%d,%d",++a,a*5,a=10,a++,++a);
getch();
}

/*In printf execution order is right to left and printing is left to right*/
```

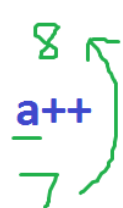
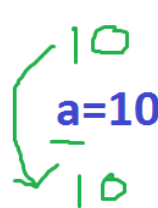
6,4,5,4,4
11,50,10,7,7

a=3



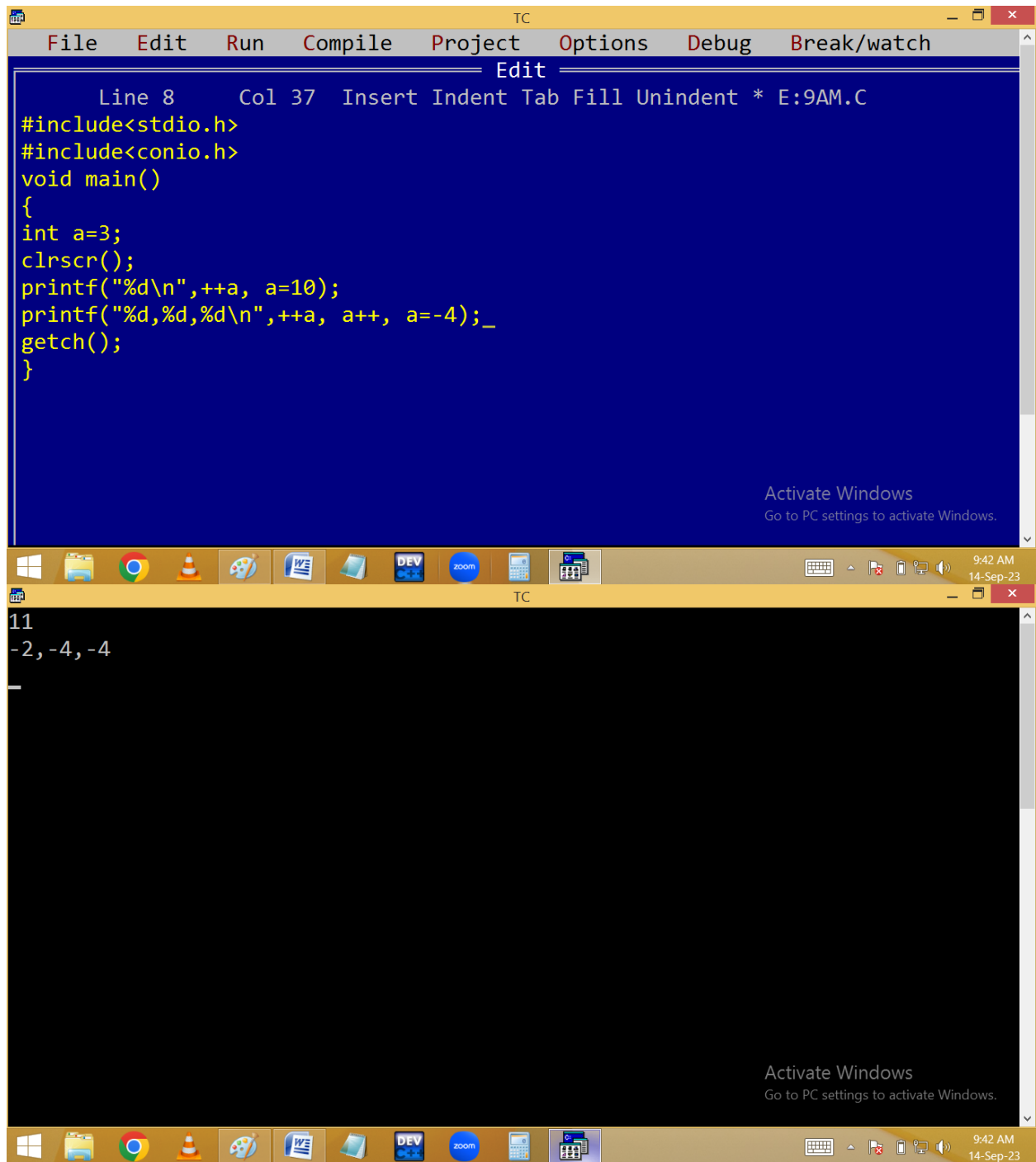
a value

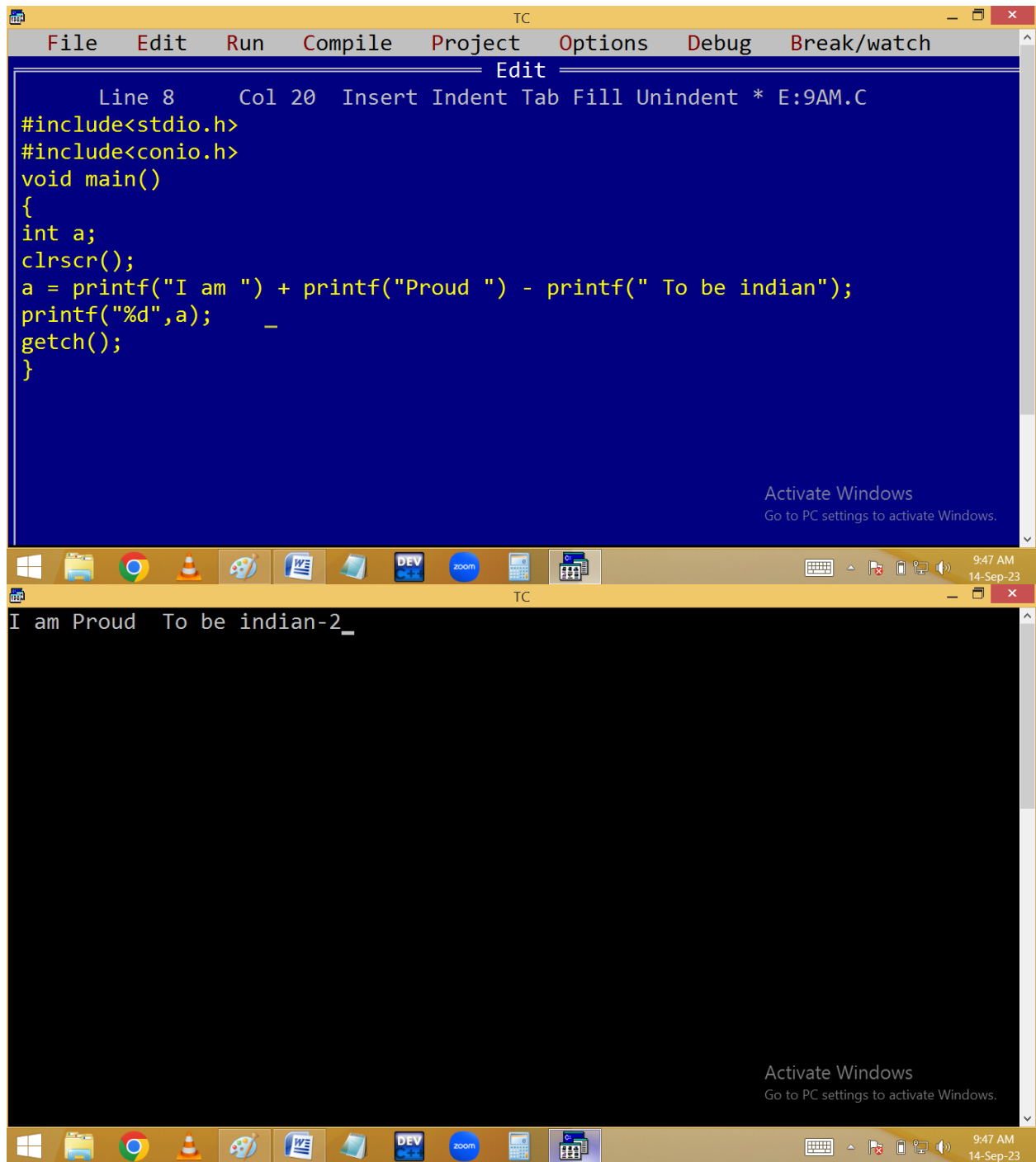
output

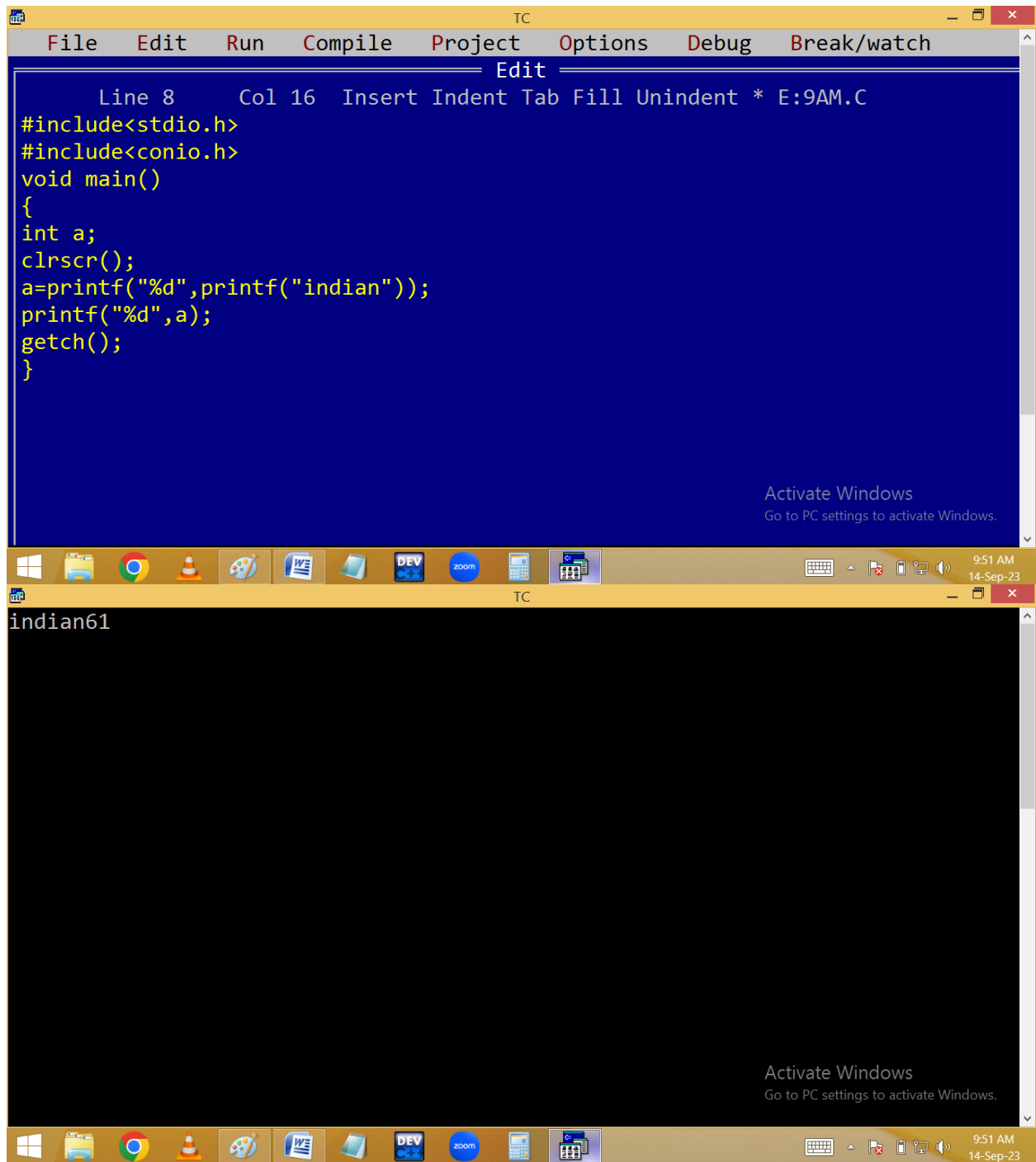


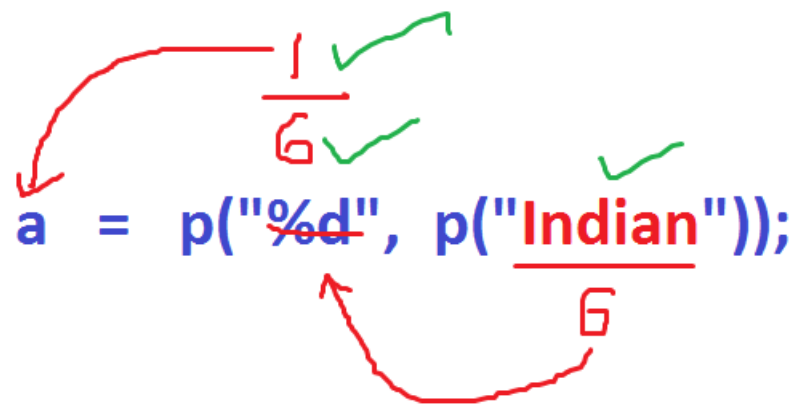
a value

output

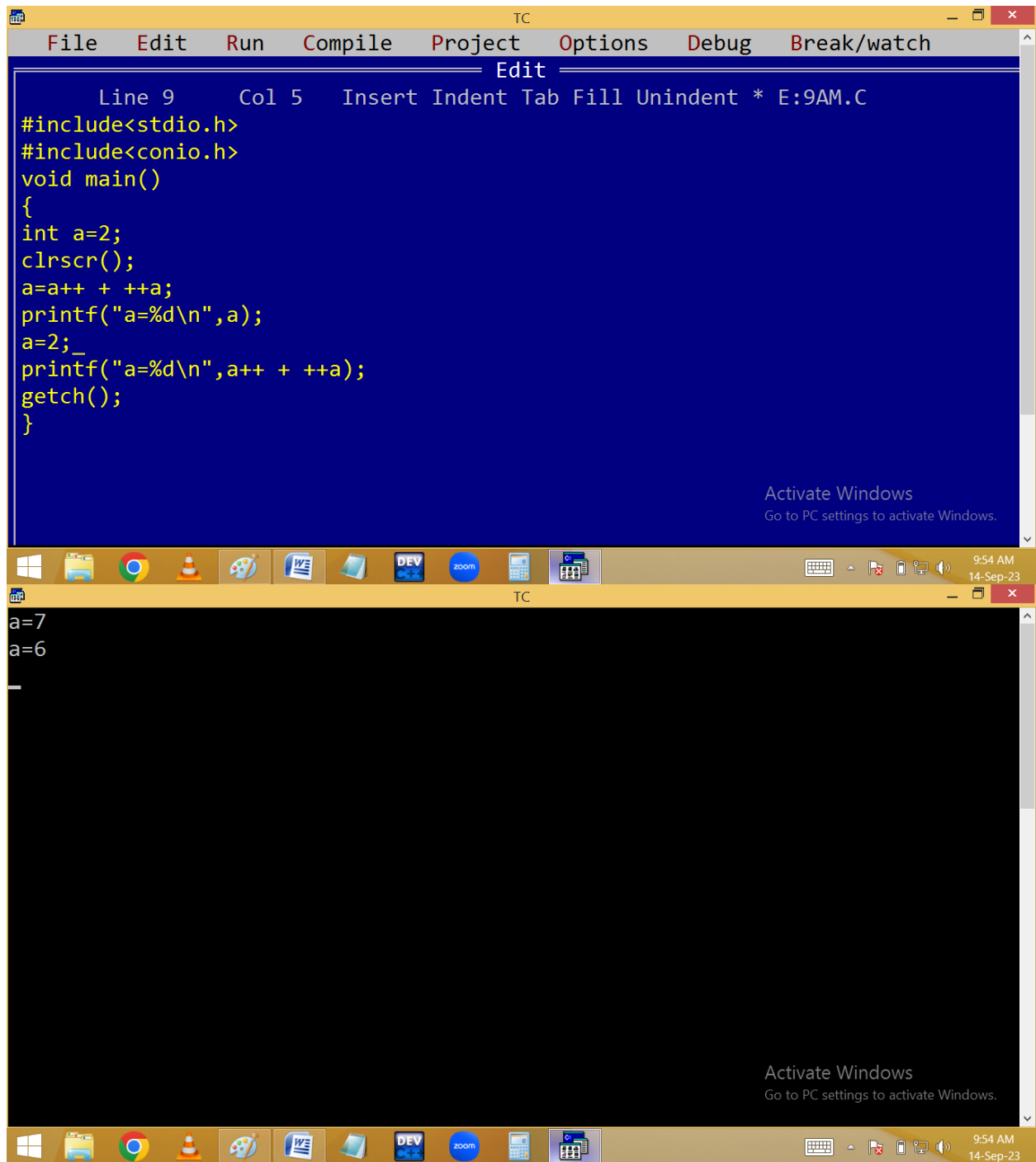






The image shows the code snippet `a = p("%d", p("Indian"));` with several handwritten annotations. A red arrow points from the first `p` to the variable `a`. A red box with a checkmark is placed above the first `p`. A red box with a checkmark is placed below the first `p`. A red box with a checkmark is placed below the second `p`. A red box with a checkmark is placed below the string `"Indian"`. A red arrow points from the second `p` to the string `"Indian"`.

```
a = p("%d", p("Indian"));
```



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the 'Edit' window, displaying a C program. The bottom window is the 'Output' window, showing the execution results. The Windows taskbar at the bottom indicates the date and time as 10:02 AM on 14-Sep-23.

TC

File Edit Run Compile Project Options Debug Break/watch

Line 13 Col 18 Insert Indent Tab Fill Unindent * E:9AM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int a=2;
    clrscr();
    a=a++ + ++a;
    printf("a=%d\n",a);
    a=2;
    printf("a=%d\n",a++ + ++a);
    a=2;
    printf("%d, %d\n", a++ + ++a , ++a + a++ );
    printf("a=%d",a);_
    getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

TC

```
a=7
a=6
10, 6
a=6_
```

Activate Windows
Go to PC settings to activate Windows.

a=2

a = a++ + ++a;

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

1. ++a ==> a=3

2. a = a + a ==> 3 + 3

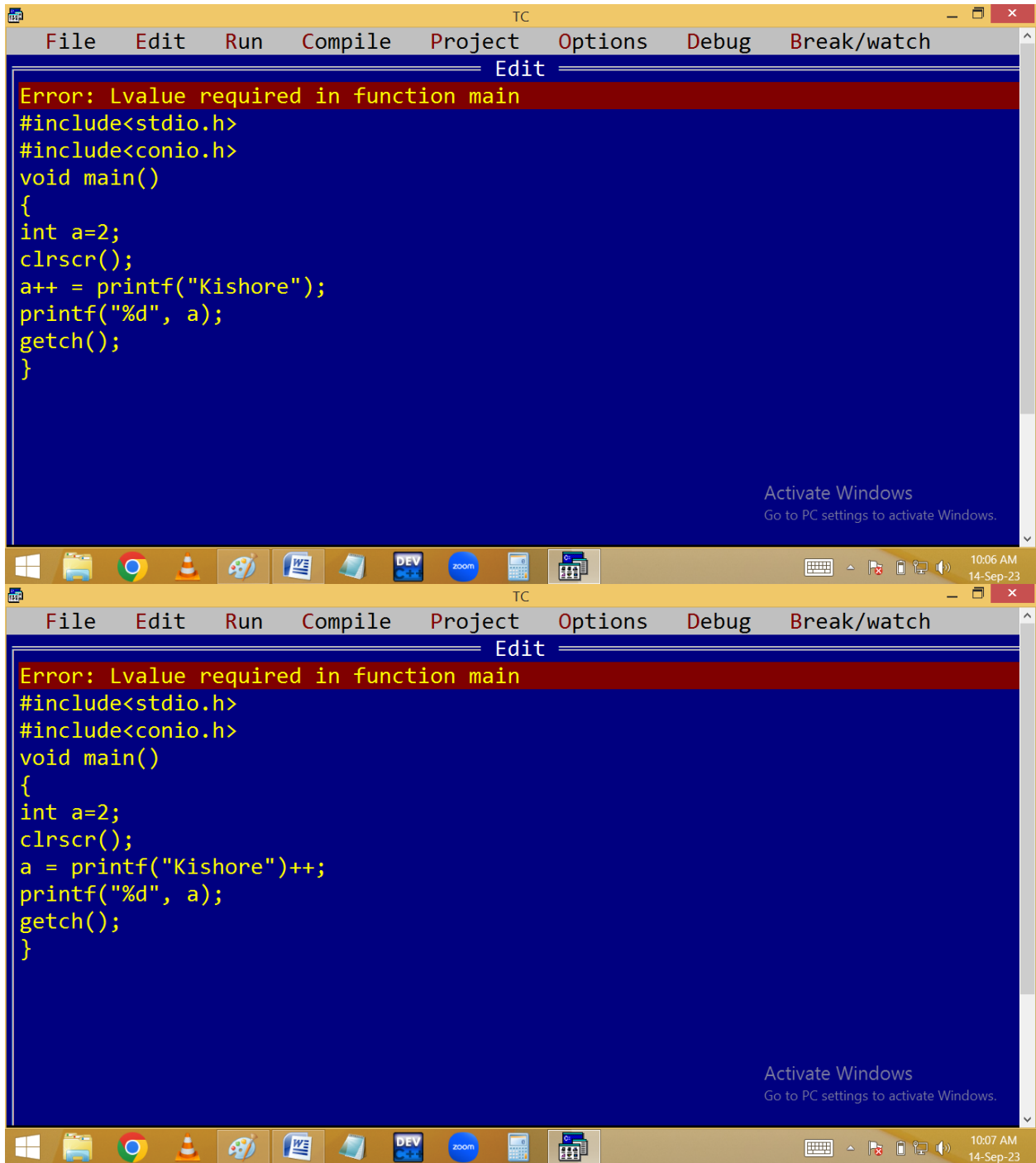
3. a = 6

4. a++ ==> a=7

a=2

p("a=%d\n", $\overbrace{a++}^3 + \overbrace{++a}^4$);

~~a = 2~~ ~~3~~ ~~4~~ ~~5~~ ~~6~~
10, 6, 7, 5, 6 ✓
p("%d,%d", $\overbrace{a++}^4 + \overbrace{++a}^6$, $\overbrace{++a}^3 + \overbrace{a++}^3$);



Compound assignment / short hand operator:

Here we are using assignment operator with the combination of other operators as follows.

`+=, -=, *=, %/, <<=, >>=, ~=, ...`

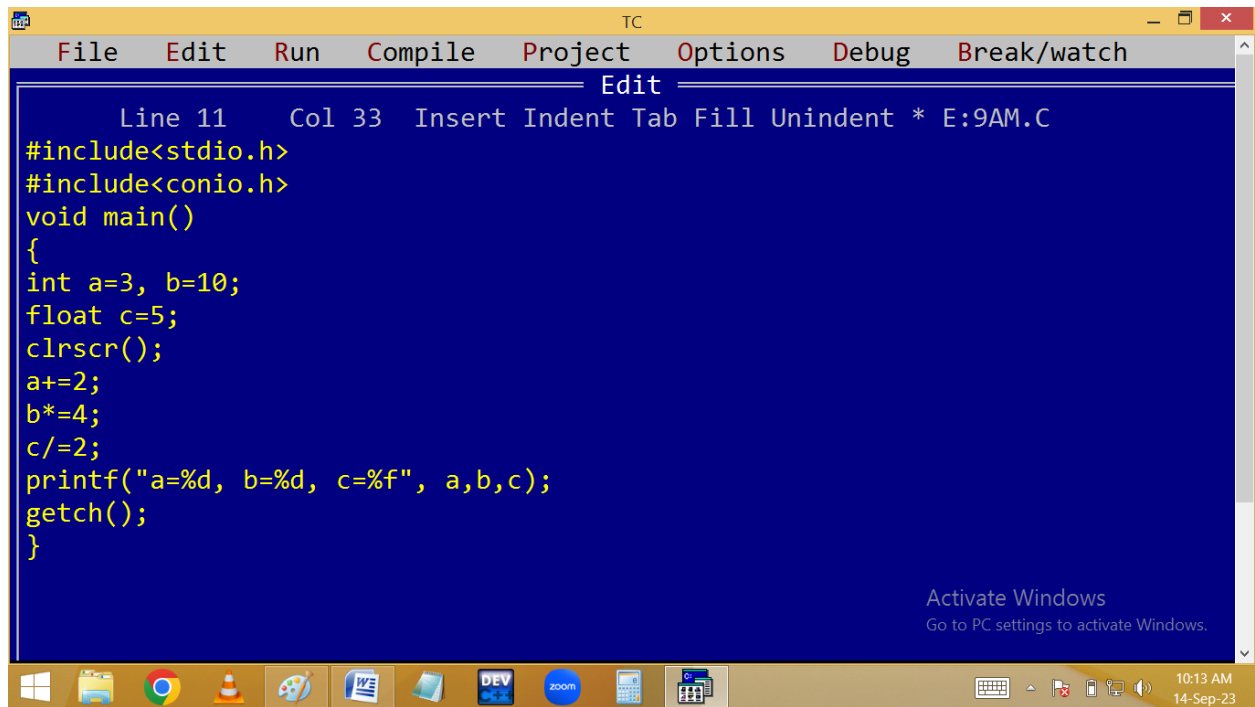
Eg: `int a=3, b=10;`

`float c=5;`

`a+=2; i.e. $a=a+2 \rightarrow a=3+2 \rightarrow a=5$`

`b*=4; i.e. $b=b*4 \rightarrow b=10*4 \rightarrow b=40$`

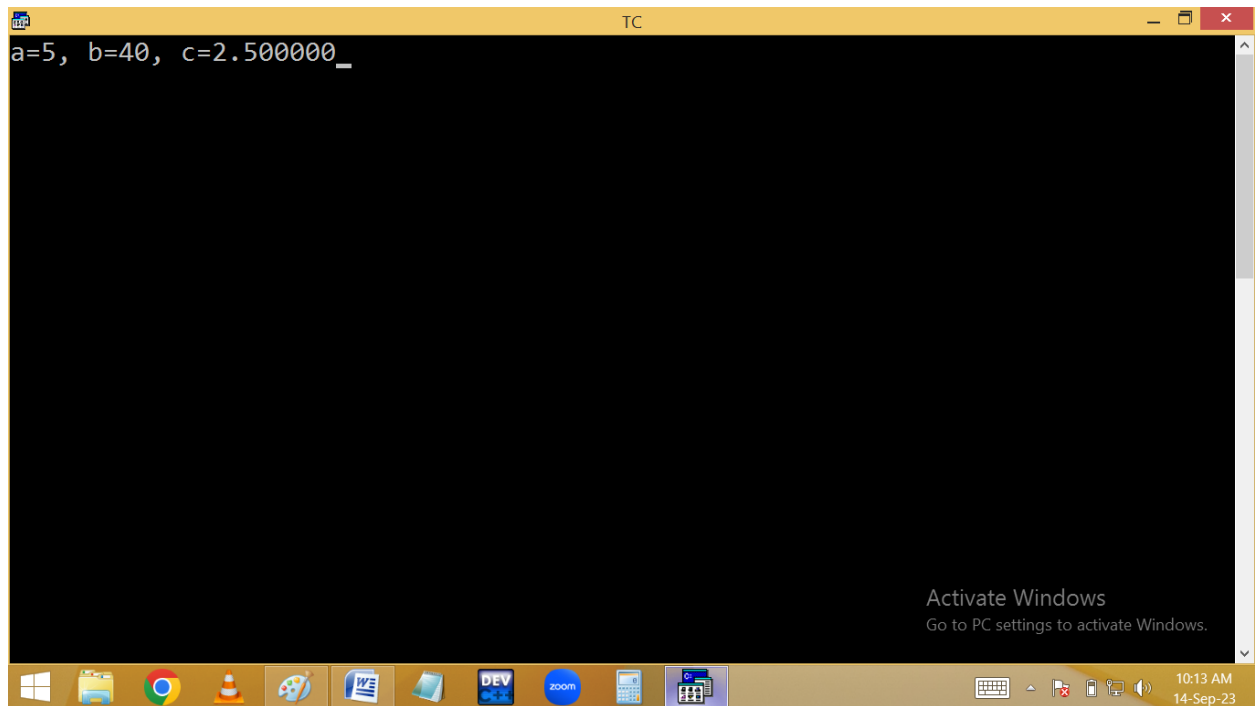
`c/=2; i.e. $c=c/2 \rightarrow c=5/2 \rightarrow c=2.500000$`



The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar and a menu bar containing File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The 'Edit' menu is open, showing options: Line 11, Col 33, Insert, Indent, Tab, Fill, Unindent, and * E:9AM.C. The main editor area has a blue background and contains the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=3, b=10;
float c=5;
clrscr();
a+=2;
b*=4;
c/=2;
printf("a=%d, b=%d, c=%f", a,b,c);
getch();
}
```

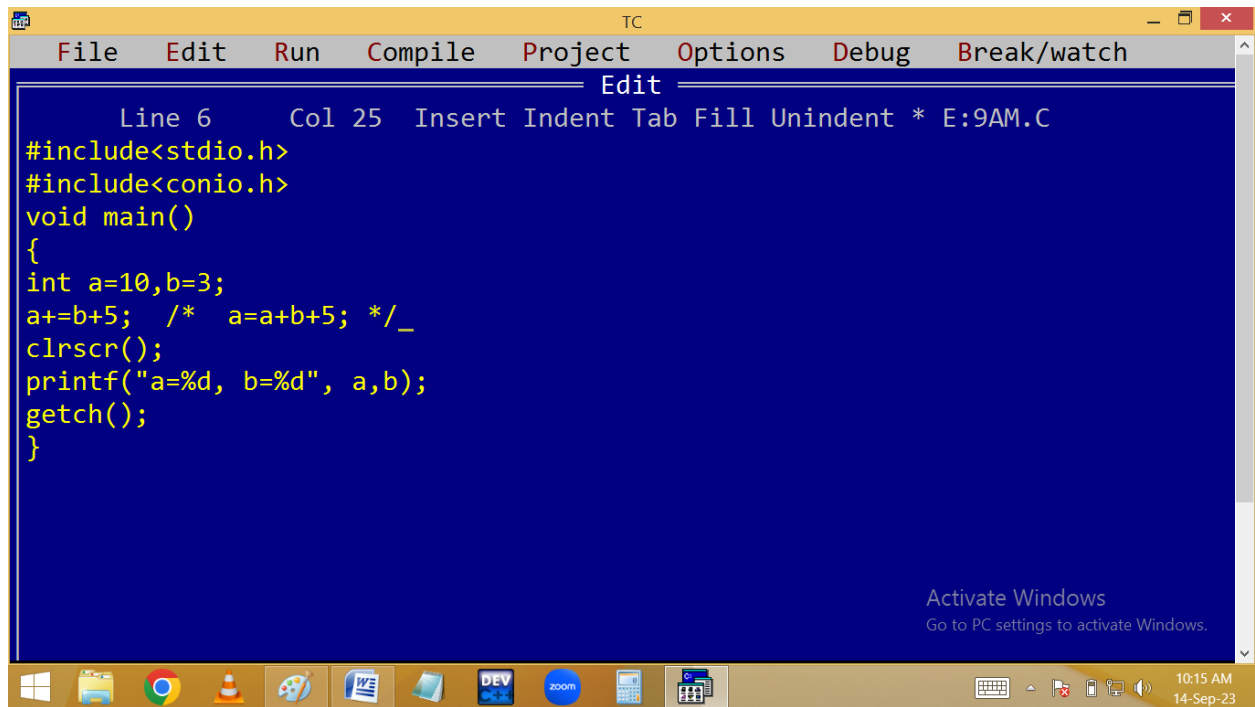
An 'Activate Windows' watermark is visible in the bottom right corner of the editor area. The Windows taskbar at the bottom shows various application icons and the system clock indicating 10:13 AM on 14-Sep-23.



The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar. The main editor area has a black background and displays the output of the program:

```
a=5, b=40, c=2.500000_
```

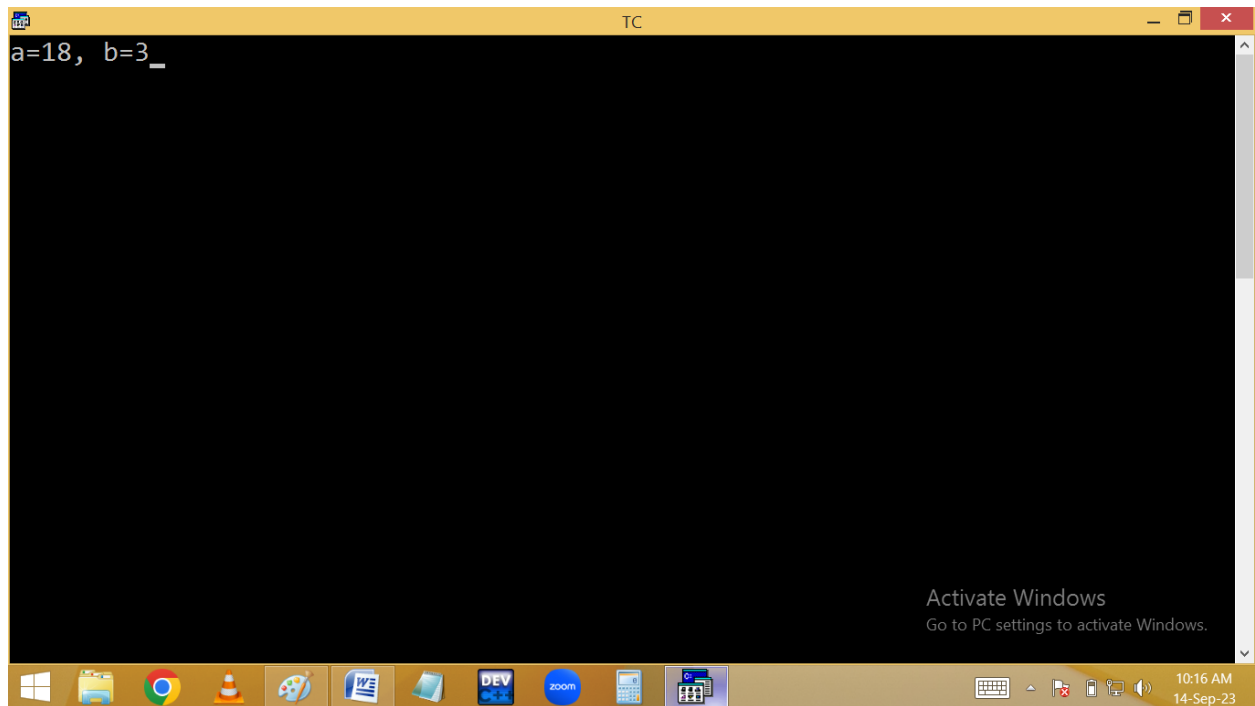
An 'Activate Windows' watermark is visible in the bottom right corner of the editor area. The Windows taskbar at the bottom shows various application icons and the system clock indicating 10:13 AM on 14-Sep-23.



The screenshot shows the Turbo C++ (TC) IDE. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The 'Edit' menu is open, showing options: Line 6, Col 25, Insert, Indent, Tab, Fill, Unindent, and * E:9AM.C. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=10,b=3;
a+=b+5; /* a=a+b+5; */_
clrscr();
printf("a=%d, b=%d", a,b);
getch();
}
```

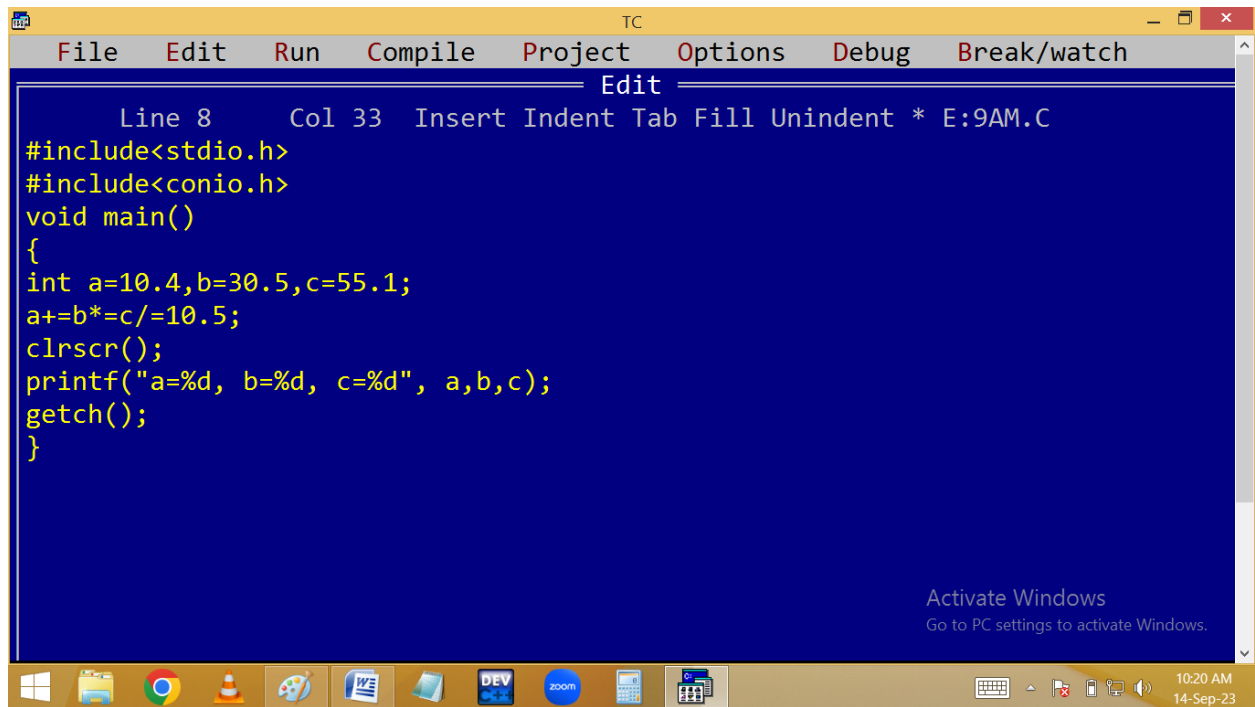
An 'Activate Windows' watermark is visible in the bottom right corner of the editor window. The Windows taskbar at the bottom shows the time as 10:15 AM on 14-Sep-23.



The screenshot shows the Turbo C++ (TC) IDE with the output window. The output text is:

```
a=18, b=3_
```

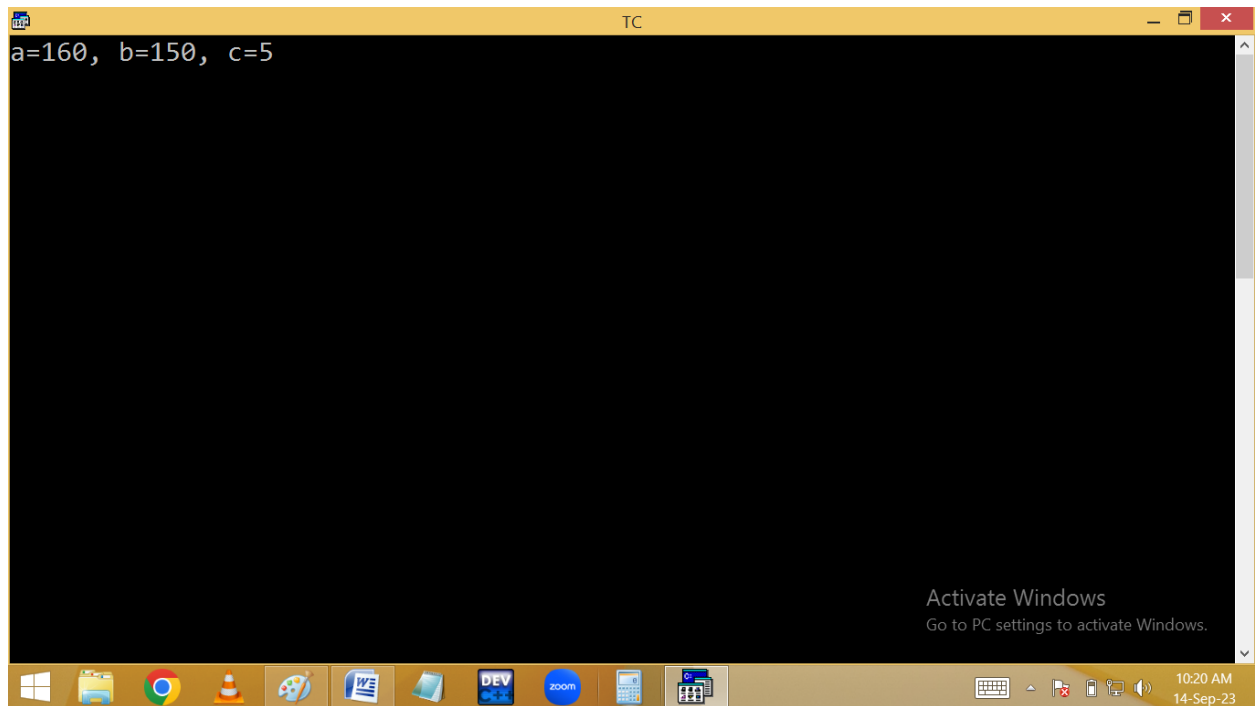
An 'Activate Windows' watermark is visible in the bottom right corner of the output window. The Windows taskbar at the bottom shows the time as 10:16 AM on 14-Sep-23.



The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar and a menu bar containing File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The 'Edit' menu is open, showing options like Line 8, Col 33, Insert, Indent, Tab, Fill, Unindent, and * E:9AM.C. The main editor area has a blue background and contains the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=10.4,b=30.5,c=55.1;
a+=b*=c/=10.5;
clrscr();
printf("a=%d, b=%d, c=%d", a,b,c);
getch();
}
```

The Windows taskbar at the bottom shows various icons including File Explorer, Chrome, VLC, Paint, Word, and several development tools. The system clock in the bottom right corner displays 10:20 AM on 14-Sep-23. An 'Activate Windows' watermark is visible in the bottom right of the IDE window.



The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar. The main editor area has a black background and displays the output of the program:

```
a=160, b=150, c=5
```

The Windows taskbar at the bottom is identical to the first screenshot, showing the same set of icons and system clock (10:20 AM on 14-Sep-23). An 'Activate Windows' watermark is also present in the bottom right of the IDE window.

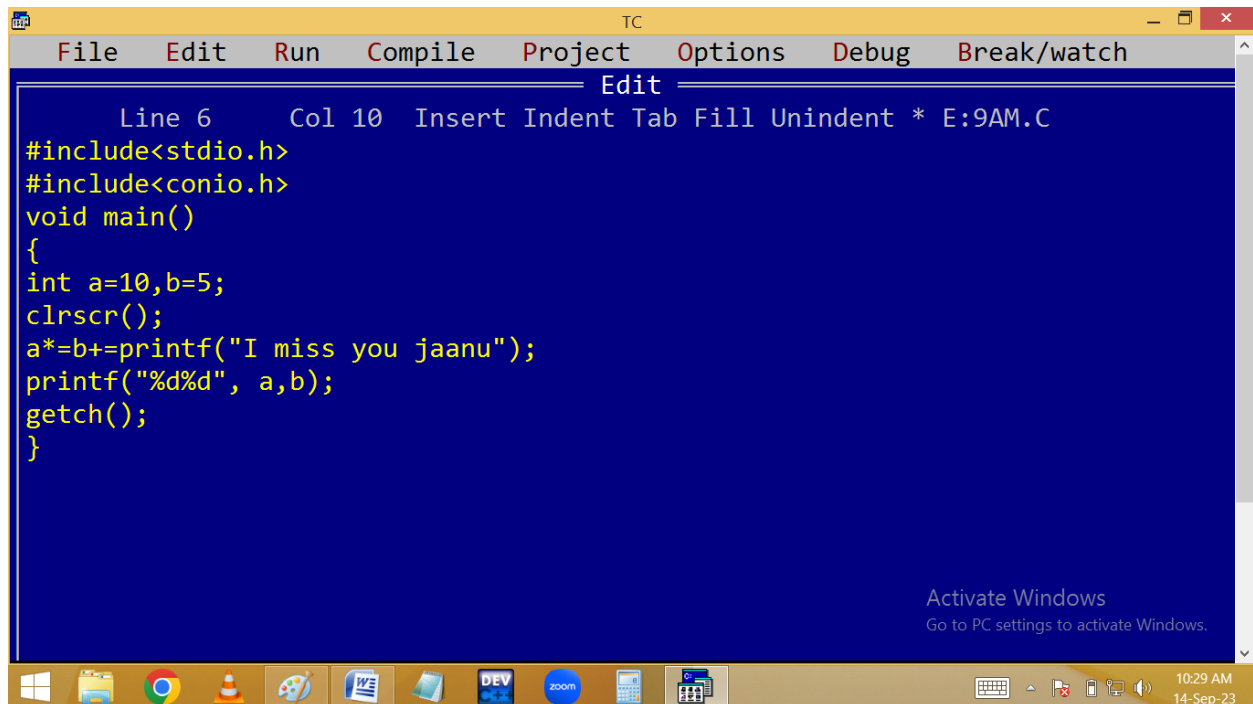
a=10 b=30 c=55

a+= b*= c/=10;

c/=10==>c=c/10==>c=55/10=5

b*=c==> b=b*c==>b=30*5=150

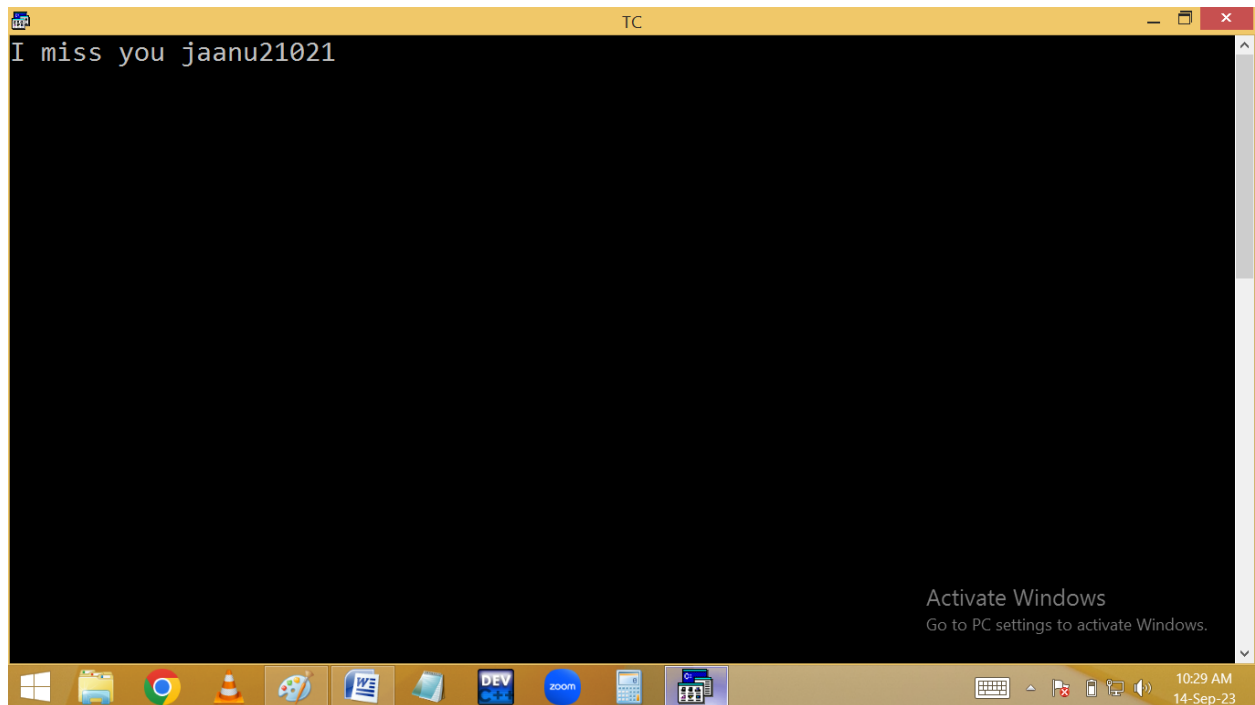
a+=b==>a=a+b==>a=10+150=160



```
TC
File Edit Run Compile Project Options Debug Break/watch
Edit
Line 6 Col 10 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=10,b=5;
clrscr();
a*=b+=printf("I miss you jaanu");
printf("%d%d", a,b);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

10:29 AM
14-Sep-23



a=10 b=5

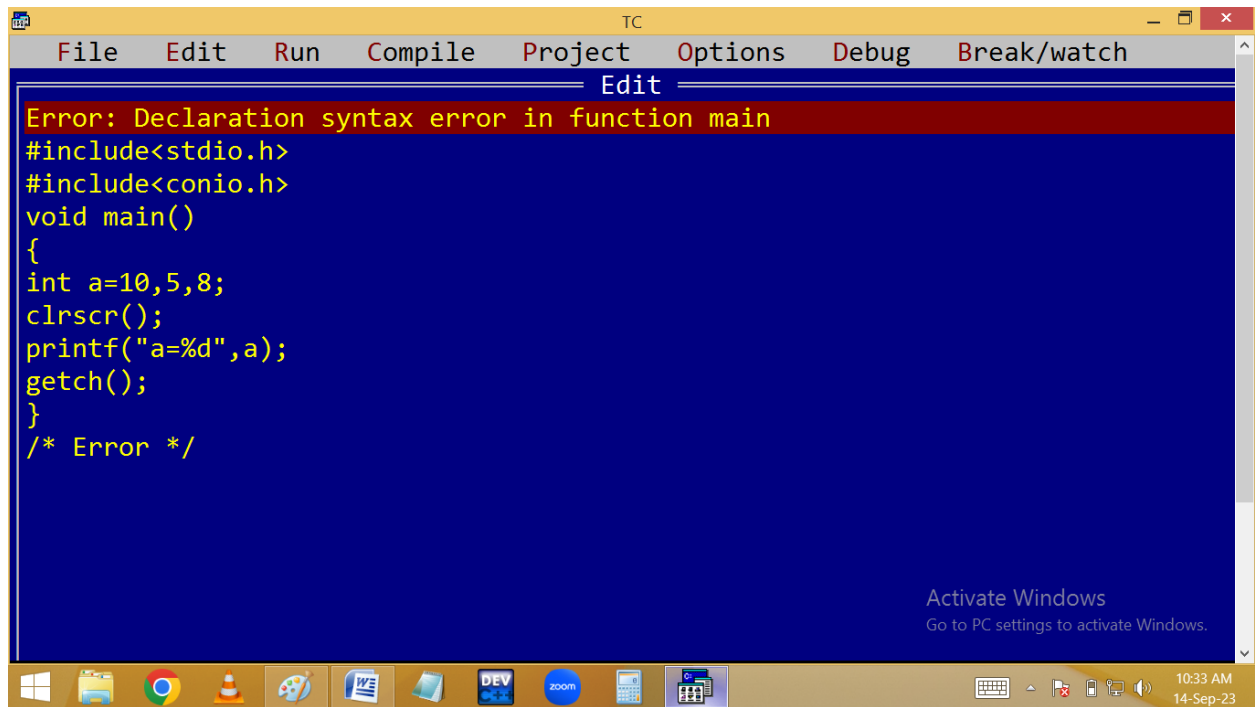
a*= b+= p("I miss you jaanu");
| 6

b+=16 ==> b=b+16 ==> b = 5+16=21

a*=b ==> a=a*b==>a=10*21=210

I miss you jaanu 21021

() and , separators:



```
TC
File Edit Run Compile Project Options Debug Break/watch
Edit
Line 10 Col 7 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=(10,5,8);
clrscr();
printf("a=%d",a);
getch();
}
/* a=8_*/

Activate Windows
Go to PC settings to activate Windows.
```

int a = (10, 5, 8);



a=10

a=5;

a=8

p(a)==>8

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Line 6 Col 33 Insert Indent Tab Fill Unindent * E:9AM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a; /* declaration */
a = 10,5,8; /* initialization */_
clrscr();
printf("a=%d",a);
getch();
}
/* a=10 */
```

Activate Windows
Go to PC settings to activate Windows.

10:50 AM
14-Sep-23

TC

a=10_

Activate Windows
Go to PC settings to activate Windows.

10:50 AM
14-Sep-23

