

The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays the source code of a C program. The bottom screenshot shows the output of the program after compilation and execution.

Top Screenshot: Source Code

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 37 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Jodha\n", "Akbar");
printf("Jodha %s\n", "Akbar");
printf("%s Kiya %s\n", "pyar", "Mine");
printf("Kahona %s\n", "Pyar %s", "Hai");
printf("Kahona %s %s\n", "Pyar %s", "Hai");
printf("Taare " " Zameen " " Per ");_
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

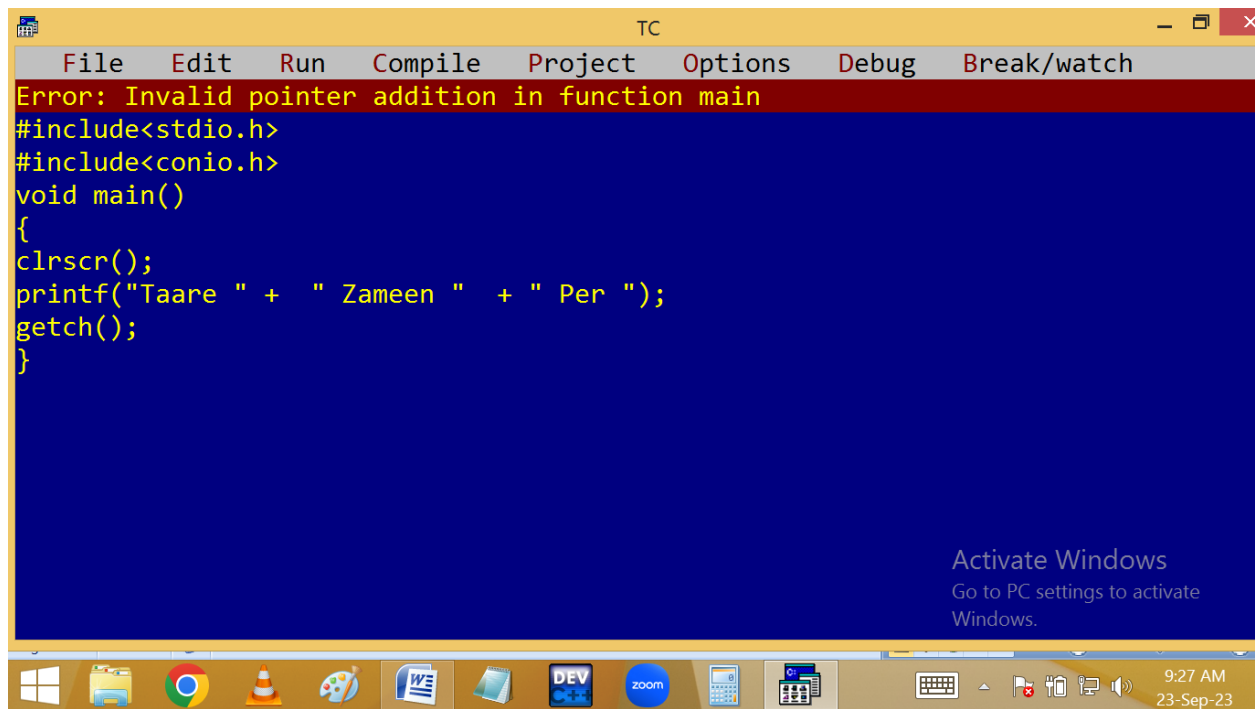
Windows taskbar: 9:25 AM, 23-Sep-23

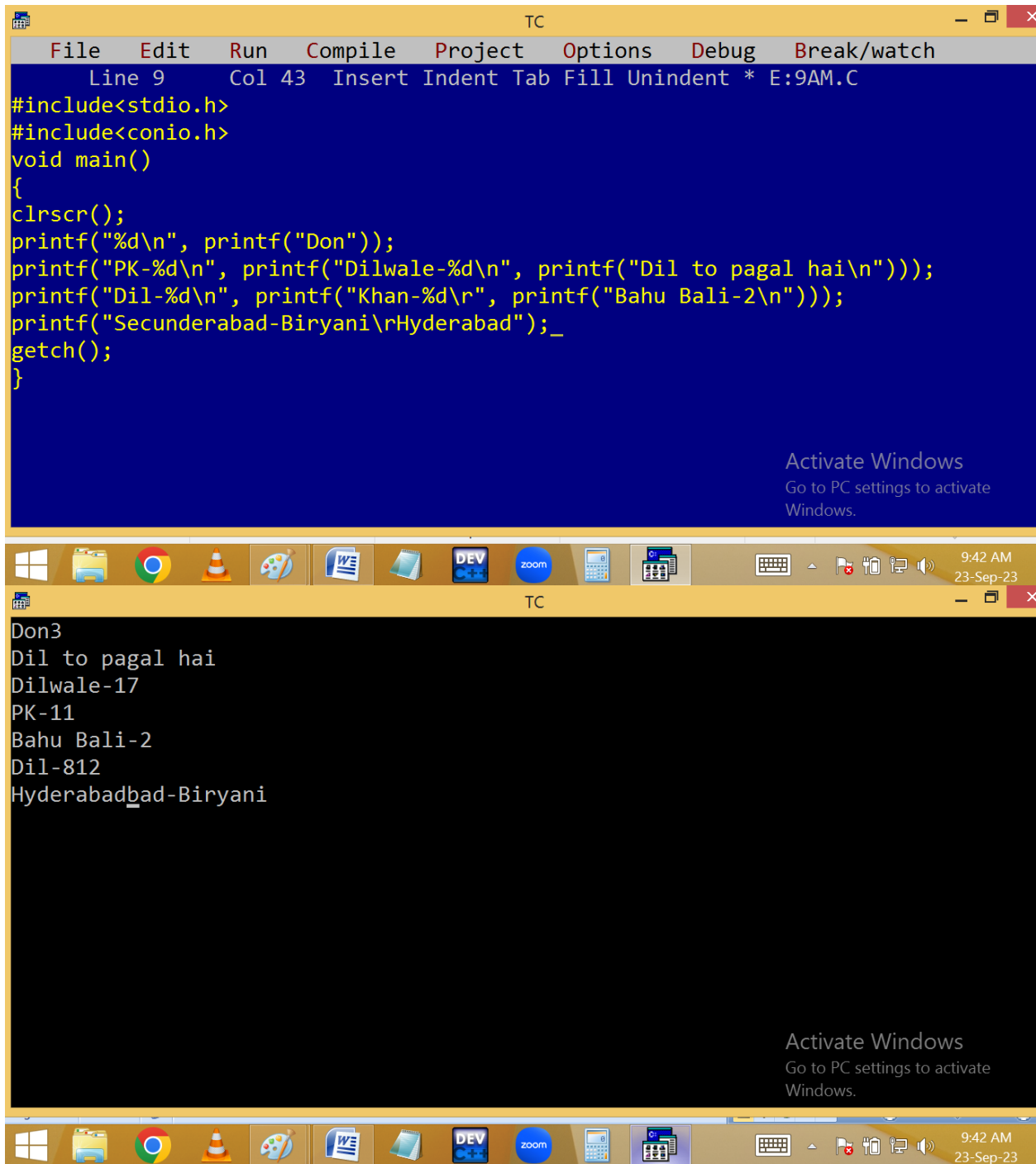
Bottom Screenshot: Program Output

```
TC
Jodha
Jodha Akbar
pyar Kiya Mine
Kahona Pyar %s
Kahona Pyar %s Hai
Taare Zameen Per _
```

Activate Windows
Go to PC settings to activate Windows.

Windows taskbar: 9:25 AM, 23-Sep-23





The image shows two screenshots of the Turbo C++ (TC) IDE. The top screenshot displays the source code of a C program in a blue editor window. The code includes `<stdio.h>` and `<conio.h>`, and uses `printf` to output several lines of text, including names and numbers. The bottom screenshot shows the same IDE with the program's output displayed in a black window. The output consists of seven lines: "Don3", "Dil to pagal hai", "Dilwale-17", "PK-11", "Bahu Bali-2", "Dil-812", and "Hyderabadbad-Biryani". Both screenshots show the standard Windows taskbar at the bottom with various application icons and a system clock indicating 9:42 AM on 23-Sep-23. An "Activate Windows" watermark is visible in the bottom right of both windows.

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 43 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n", printf("Don"));
printf("PK-%d\n", printf("Dilwale-%d\n", printf("Dil to pagal hai\n")));
printf("Dil-%d\n", printf("Khan-%d\r", printf("Bahu Bali-2\n")));
printf("Secunderabad-Biryani\rHyderabad");_
getch();
}
```

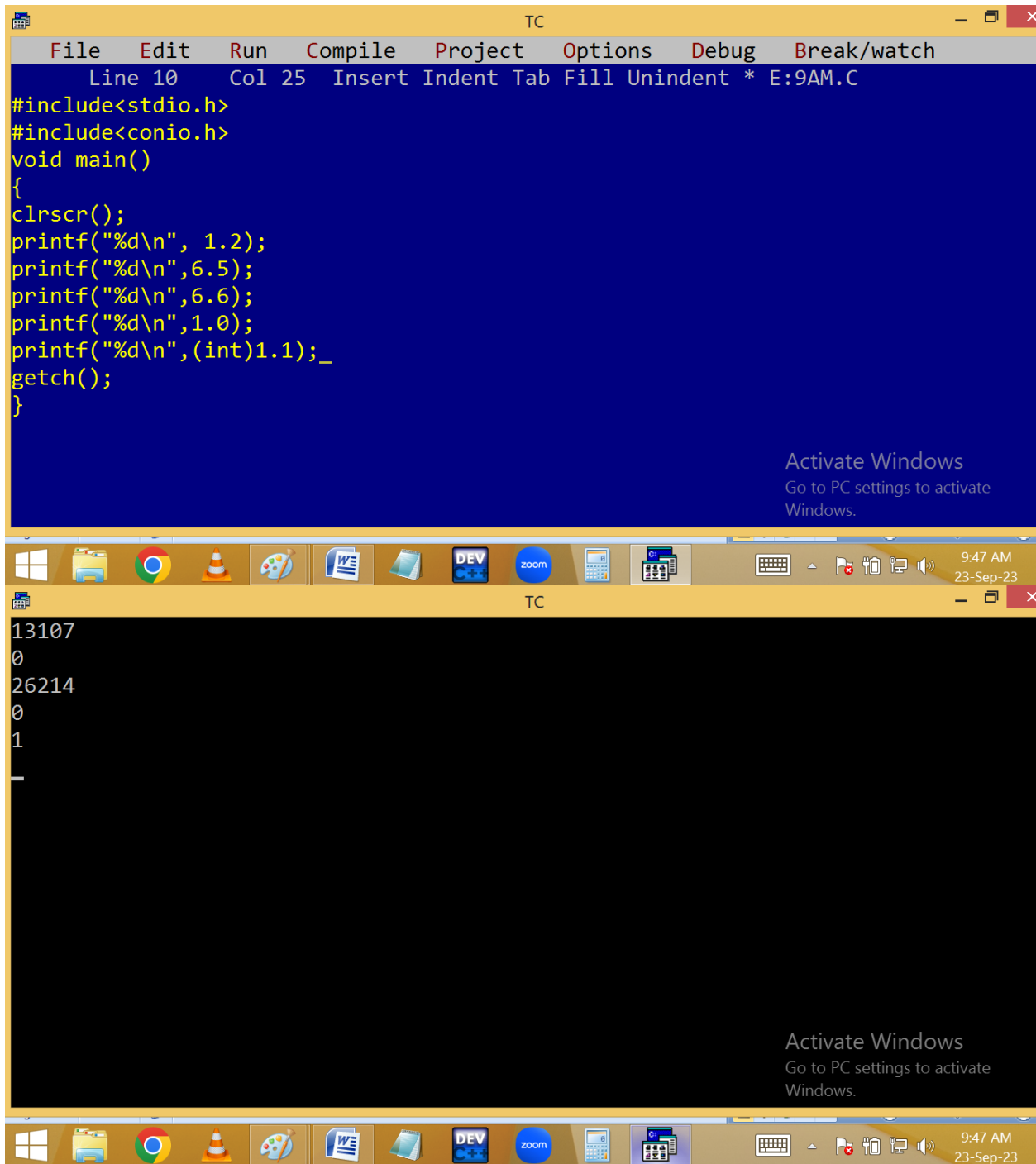
Don3
Dil to pagal hai
Dilwale-17
PK-11
Bahu Bali-2
Dil-812
Hyderabadbad-Biryani

p("Pk-%d\n", p("Dilwale-%d\n", p("Dil To Pagal Hai\n"))));

p("Dil-%d\n", p("Khan-%d\r", p("Bahu Bali-2 \n ")));

Bahu Bali-2
Khan-12
Dil-8

Secunderabad-Biryani\r
Hyderabad



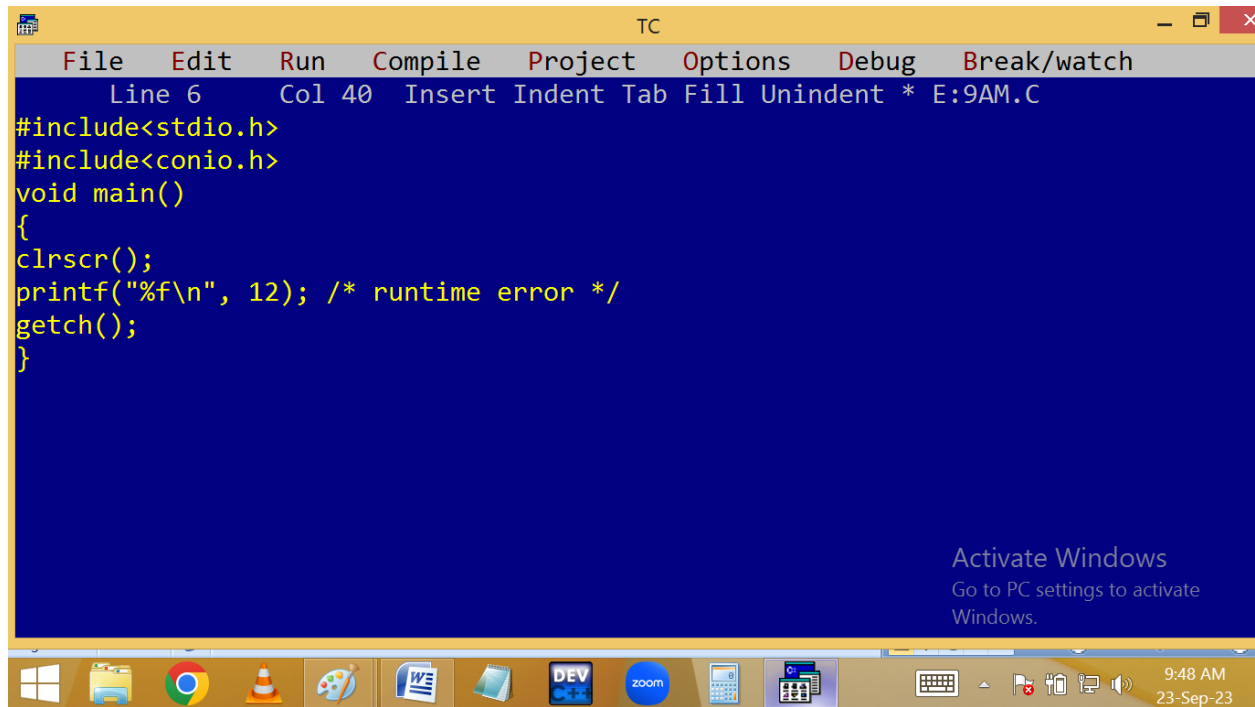
The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays a C program with the following code:

```
Line 10 Col 25 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n", 1.2);
printf("%d\n",6.5);
printf("%d\n",6.6);
printf("%d\n",1.0);
printf("%d\n",(int)1.1);_
getch();
}
```

The bottom window shows the output of the program:

```
13107
0
26214
0
1
_
```

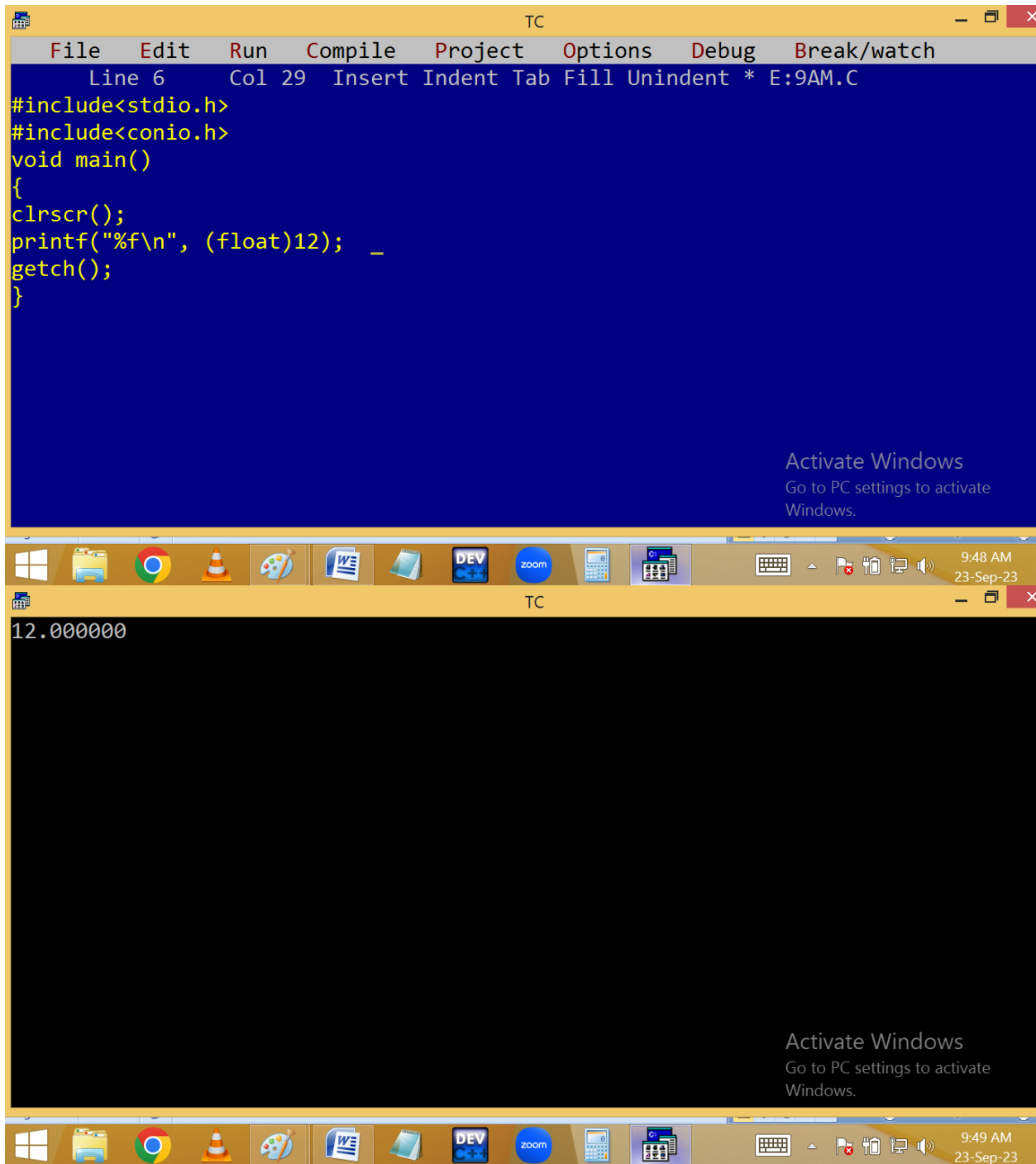
Both windows include a taskbar at the bottom with icons for Windows, File Explorer, Chrome, VLC, Paint, Word, DEV, Zoom, and Calculator. The system clock in the bottom right corner indicates 9:47 AM on 23-Sep-23. An "Activate Windows" watermark is visible in the bottom right of both windows.



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 40 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%f\n", 12); /* runtime error */
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

9:48 AM
23-Sep-23



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 11 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%o\n", 10); /* dec to octal */
printf("%x\n", 22); /* dec to hexadecimal */
printf("%d\n", 012); /* oct to dec */
printf("%d\n", 0x20); /* hexa to dec */
printf("%x\n", 45); /* dec to hex */
printf("%X\n", 95); /* dec to hex */
printf("%o\n", 0x25); /* hex to oct */
printf("%x\n", 040); /* oct to hex */
printf("%x_", -2<<2);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

10:09 AM
23-Sep-23

$$\begin{array}{r} 8 \overline{) 10} \\ 1-2 \checkmark \end{array}$$

$$\begin{array}{r} 0 \times 20 \\ 16 \times 2 + 16 \times 0 \\ \hline 32 + 0 = 32 \end{array}$$

$$\begin{array}{r} 16 \overline{) 22} \\ 1-6 \checkmark \end{array}$$

$$\begin{array}{r} 012 \\ 8 \times 1 + 8 \times 2 \\ \hline 8 + 2 = 10 \end{array}$$

$$10 \mid 45$$

$$2 - 13$$

d

$$16 \mid 95$$

$$5 - 15$$

F

0-9 10-a, 11-b, 12-c, 13-d, 14-e, 15-f

$$\begin{array}{r} 0 \times 25 \\ \hline 16 \times 2 + 16 \times 5 \\ \hline 32 + 80 = 112 \end{array}$$

$$8 \mid 37$$

$$4 - 5 \checkmark$$

$$\begin{array}{r} 040 \\ \hline 8 \times 4 \quad 8 \times 0 \\ \hline 32 + 0 = 32 \end{array}$$

$$16 \mid 32$$

$$2 - 0 \checkmark$$

$$-2 \ll 2 = -8$$

$$8 = 0000 \ 0000 \ 0000 \ 1000$$

$$\sim = 1111 \ 1111 \ 1111 \ 0111$$

$$2\sim = 0000 \ 0000 \ 0000 \ 0001$$

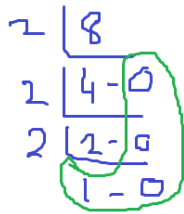
$$1111 \ 1111 \ 1111 \ 1000$$

$$\begin{array}{r} 421 \\ \hline \end{array}$$

$$15 \div 15 \div 15 \div 8$$

$$\begin{array}{r} 2 \mid 8 \\ \hline 2 \mid 4 - 0 \\ \hline 2 \mid 2 - 0 \\ \hline 1 - 0 \end{array}$$

$-2 \ll 2 \implies 4 \implies -8$

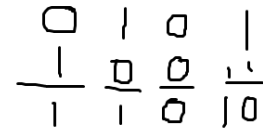


$8 = 0000\ 0000\ 0000\ 1000$

$1 \sim = 1111\ 1111\ 1111\ 0111$

$2 \sim = 0000\ 0000\ 0000\ 0001$

$$\begin{array}{r} 1111\ 1111\ 1111\ 1000 \\ \hline 15\ 15\ 15\ 8 \\ \hline f\ f\ f\ 8 \end{array}$$



```

TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 13 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n",32768); /* -32768 */
printf("%d\n",32770); /* -32766 */
printf("%d\n",-32770); /* +32766 */
printf("%d\n",65540); /* 4 */
printf("%u",-5); /* 65531 */
getch();
}

```

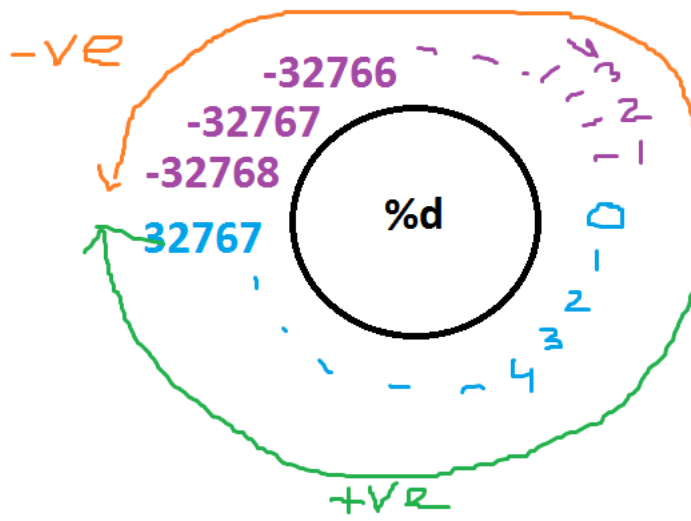
Activate Windows
Go to PC settings to activate Windows.

C & C++ int - 16 bit compilers $\implies 2^{16} \implies 2^0$ to $2^{15} \implies 65536$

java/.ne/py/dev c++ - 32 bit $\implies 2^{32} \implies 4294967296$

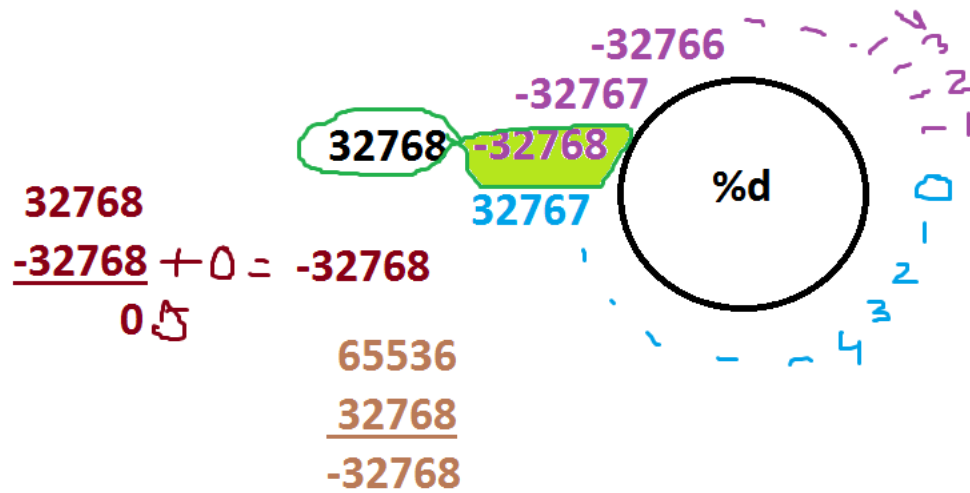
signed int -32768 to +32767
 unsigned int - 0 to 65535
 signed -2147483648 to +2147483647
 unsigned - 0 to 4294967295

signed int cycle



32768

signed int cycle



signed int cycle

