

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the 'Edit' window, displaying a C program. The code is as follows:

```
Line 12 Col 1 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Bharathi addr = %u\n","Bharathi");
printf("Bharathi\n"+1);
printf(1+"Bharathi\n"+1);
printf("Bharathi\n"-1); /* GrBharathi or Blank */
printf("%d\n"+1,9999);
printf("%d\n"+1);
getch();
}
```

The bottom window is the 'Output' window, showing the execution results:

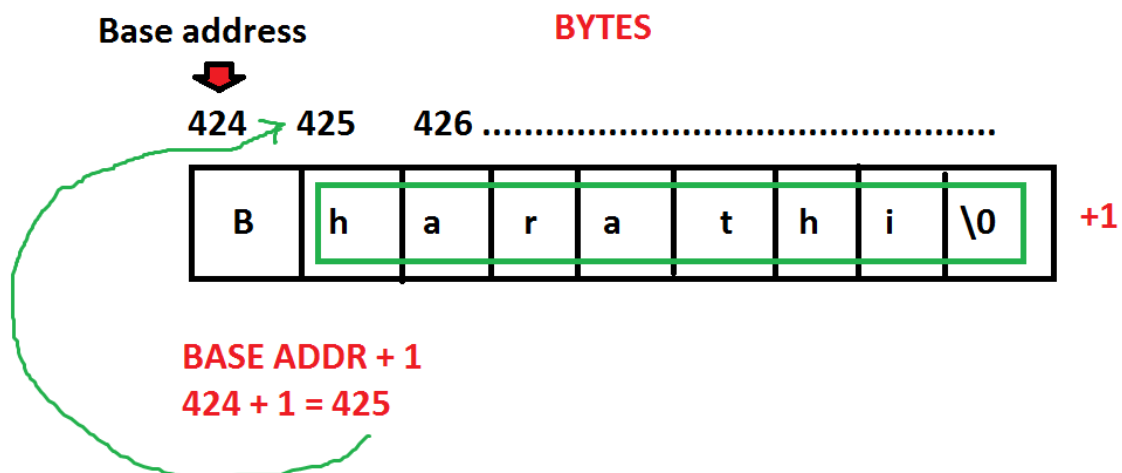
```
Bharathi addr = 424
harathi
arathi
d
d
```

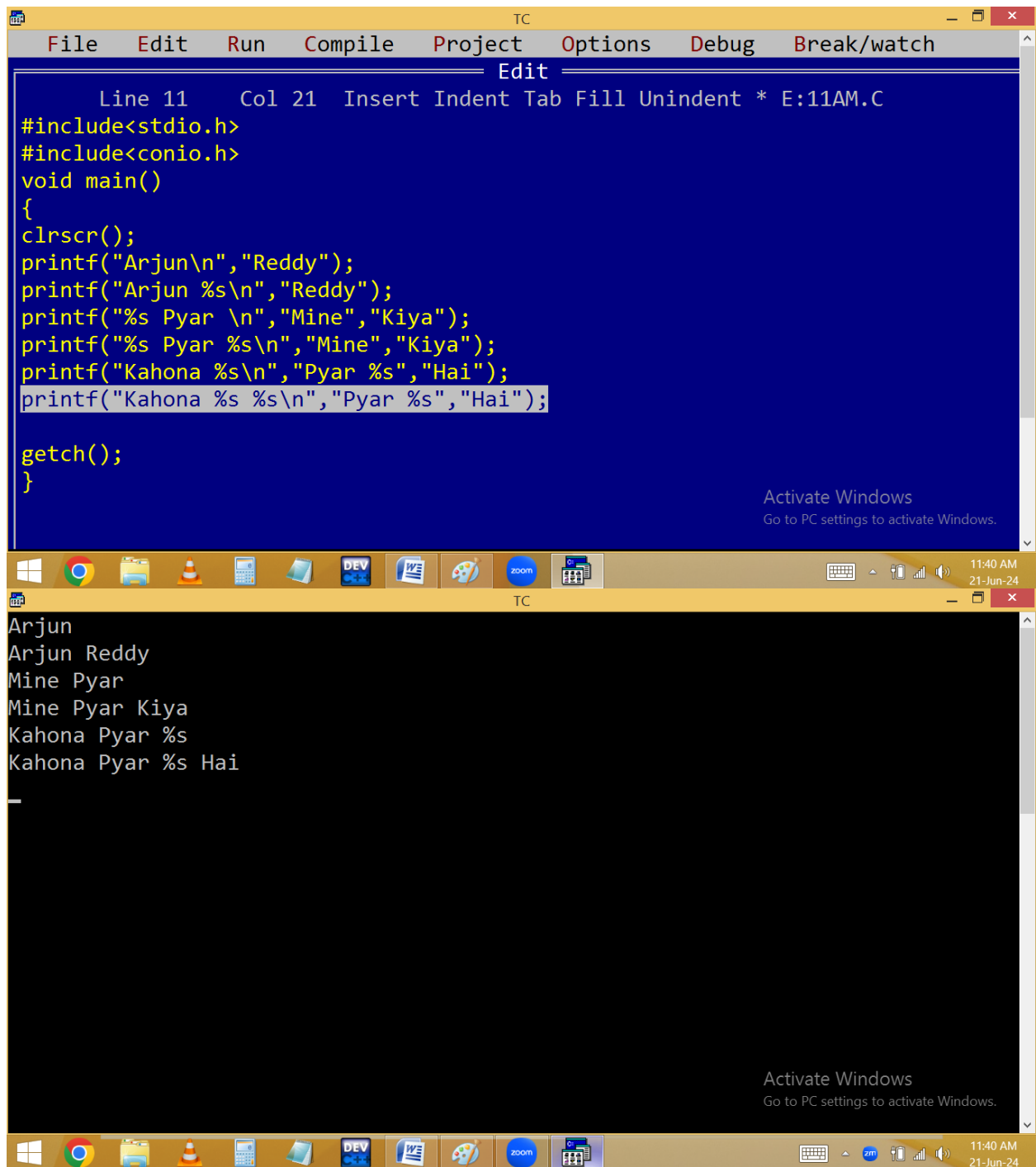
The Windows taskbar at the bottom shows the time as 11:32 AM on 21-Jun-24. An 'Activate Windows' watermark is visible in the bottom right corner of both windows.

```
TC
Bharathi addr = 424
harathi
arathi
d
d
```

Activate Windows
Go to PC settings to activate Windows.

11:32 AM
21-Jun-24





The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the 'Edit' window, displaying a C program. The code is as follows:

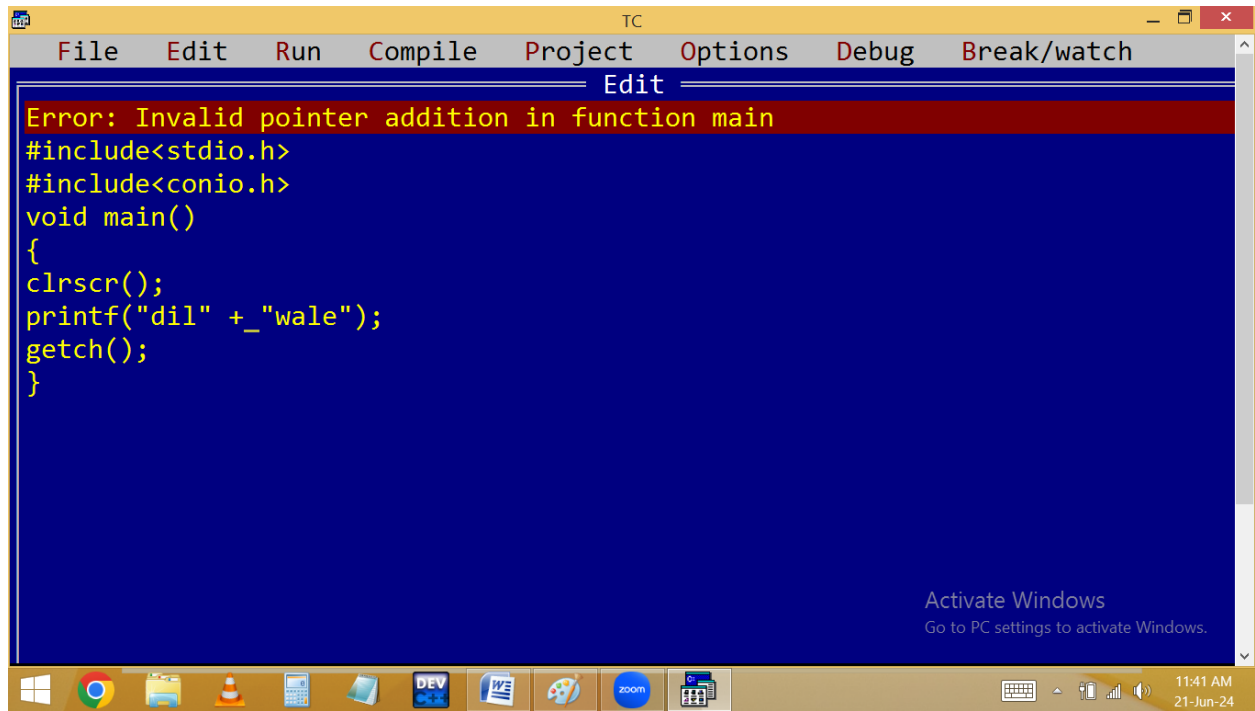
```
Line 11 Col 21 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Arjun\n","Reddy");
printf("Arjun %s\n","Reddy");
printf("%s Pyar \n","Mine","Kiya");
printf("%s Pyar %s\n","Mine","Kiya");
printf("Kahona %s\n","Pyar %s","Hai");
printf("Kahona %s %s\n","Pyar %s","Hai");

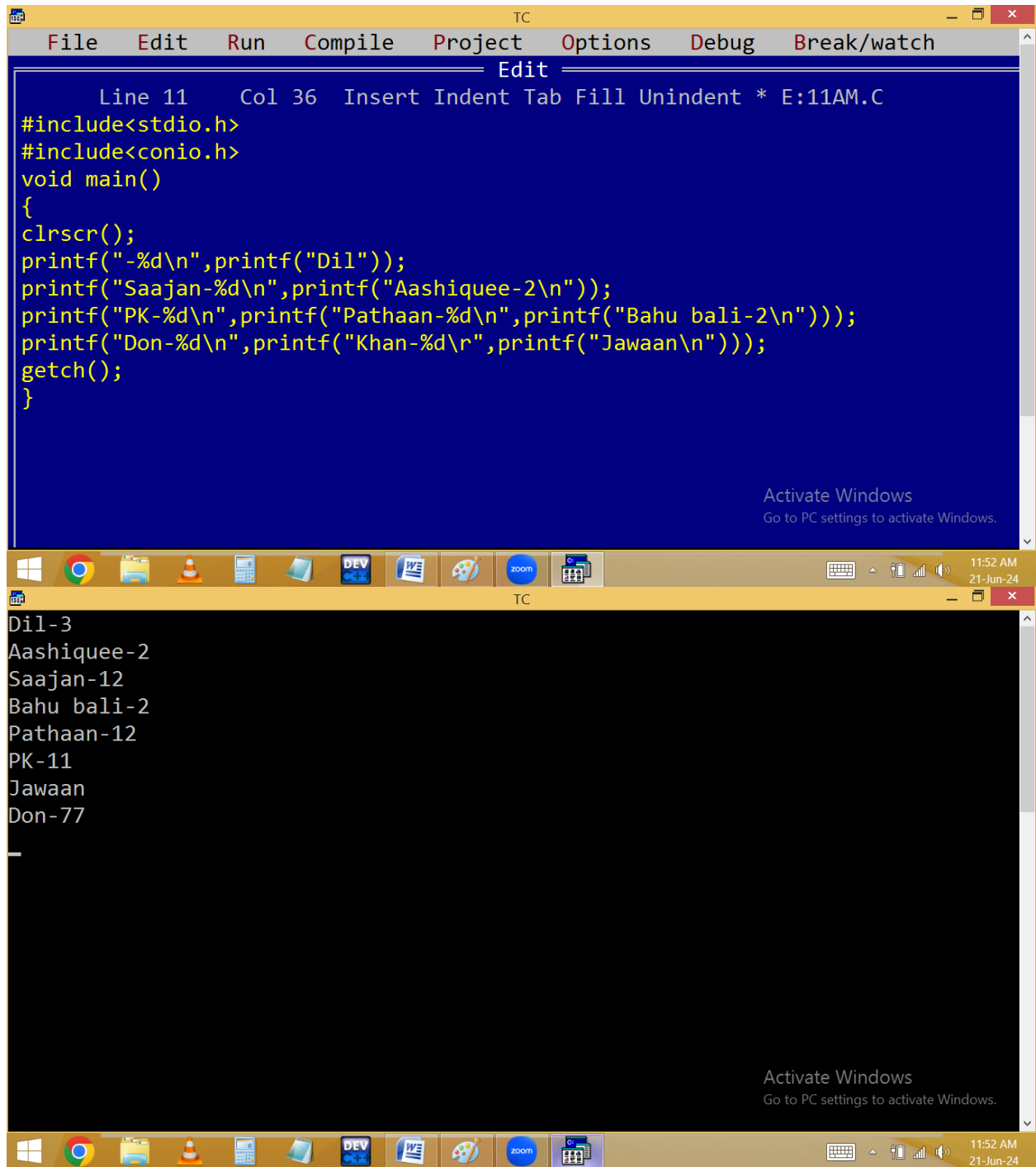
getch();
}
```

The bottom window is the 'Output' window, showing the execution results of the program:

```
Arjun
Arjun Reddy
Mine Pyar
Mine Pyar Kiya
Kahona Pyar %s
Kahona Pyar %s Hai
```

The Windows taskbar at the bottom shows the time as 11:40 AM on 21-Jun-24. An 'Activate Windows' watermark is visible in the bottom right corner of both windows.





The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the 'Edit' window, displaying a C program. The code is as follows:

```
Line 11 Col 36 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("-%d\n",printf("Dil"));
printf("Saajan-%d\n",printf("Aashiquee-2\n"));
printf("PK-%d\n",printf("Pathaan-%d\n",printf("Bahu bali-2\n")));
printf("Don-%d\n",printf("Khan-%d\n",printf("Jawaan\n")));
getch();
}
```

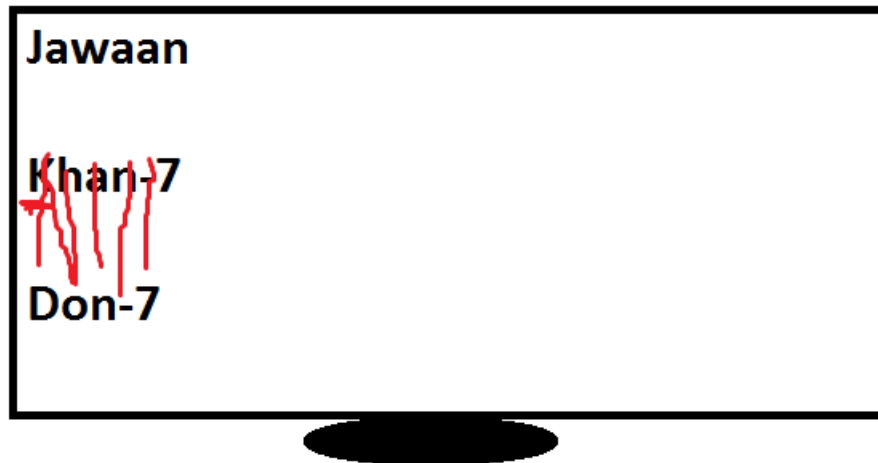
The bottom window is the 'Output' window, showing the execution results:

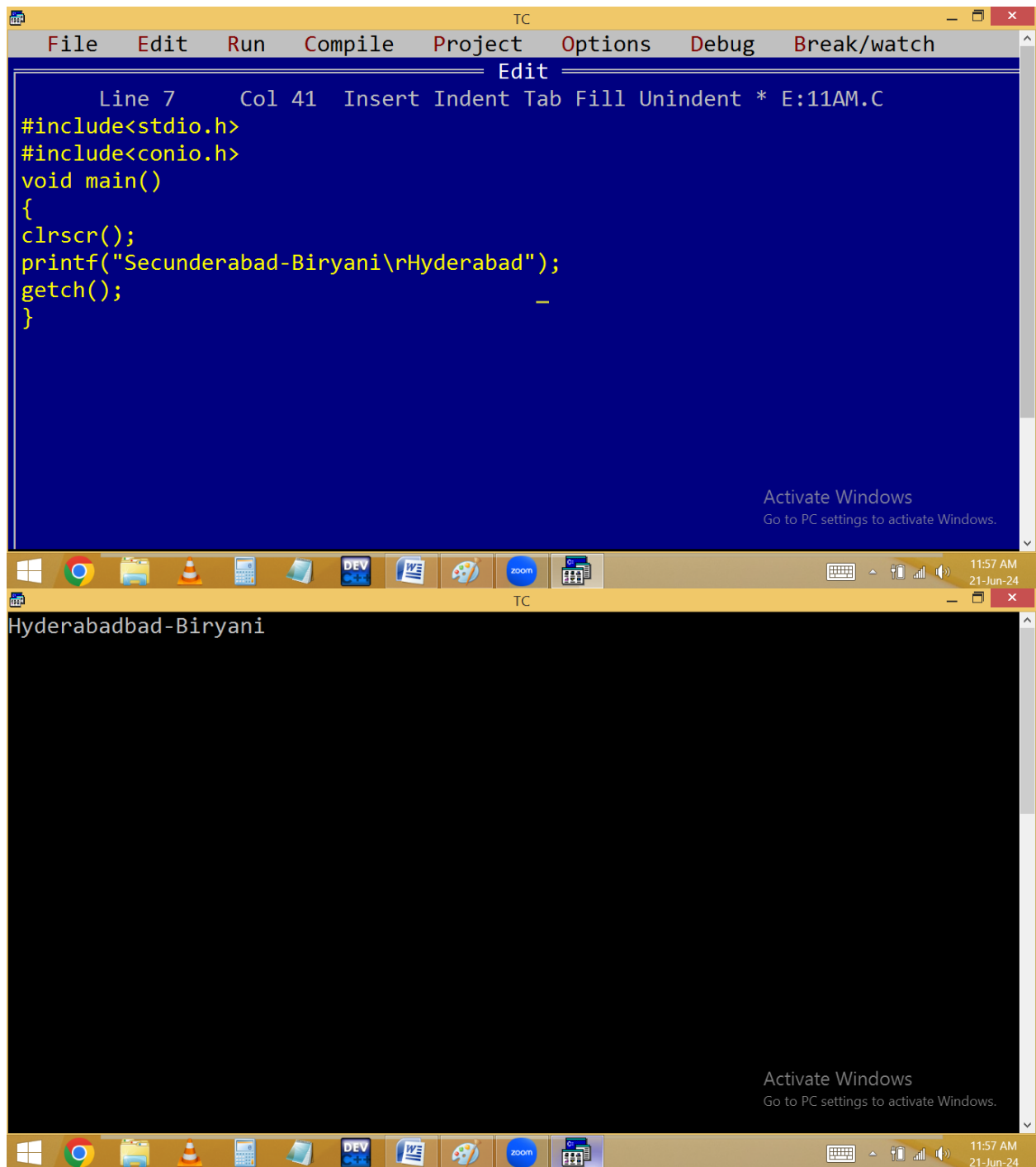
```
Dil-3
Aashiquee-2
Saajan-12
Bahu bali-2
Pathaan-12
PK-11
Jawaan
Don-77
```

Both windows include a status bar at the bottom with the text 'Activate Windows Go to PC settings to activate Windows.' and a system tray on the right showing the time as 11:52 AM on 21-Jun-24.

```
p("Don-%d\n", p("Khan-%c\r", p("Jawaan\n"))));
```

The diagram illustrates the recursive calls for the printf statement. It shows three nested calls: p("Don-%d\n", ...), p("Khan-%c\r", ...), and p("Jawaan\n"). Arrows indicate the flow of execution: from the outermost call to the middle call, then to the innermost call, and finally back up the chain as each call returns.





~~Secunderabad-Biryani~~



Hyderabad

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the 'Edit' window, which contains the following C code:

```
Line 9      Col 18  Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n",1.5);
printf("%d\n",1.2);
printf("%d\n",1.0);
printf("%d",1.1);
getch();
}
```

The bottom window is the output window, which displays the results of the program's execution:

```
0
13107
0
-26214_
```

Both windows include a status bar at the bottom with the text 'Activate Windows Go to PC settings to activate Windows.' and a taskbar at the very bottom showing various application icons and the system clock (12:04 PM, 21-Jun-24).

TC

File Edit Run Compile Project Options Debug Break/watch

Edit

Line 6 Col 39 Insert Indent Tab Fill Unindent * E:11AM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%f\n",15); /* runtime error */_
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

TC

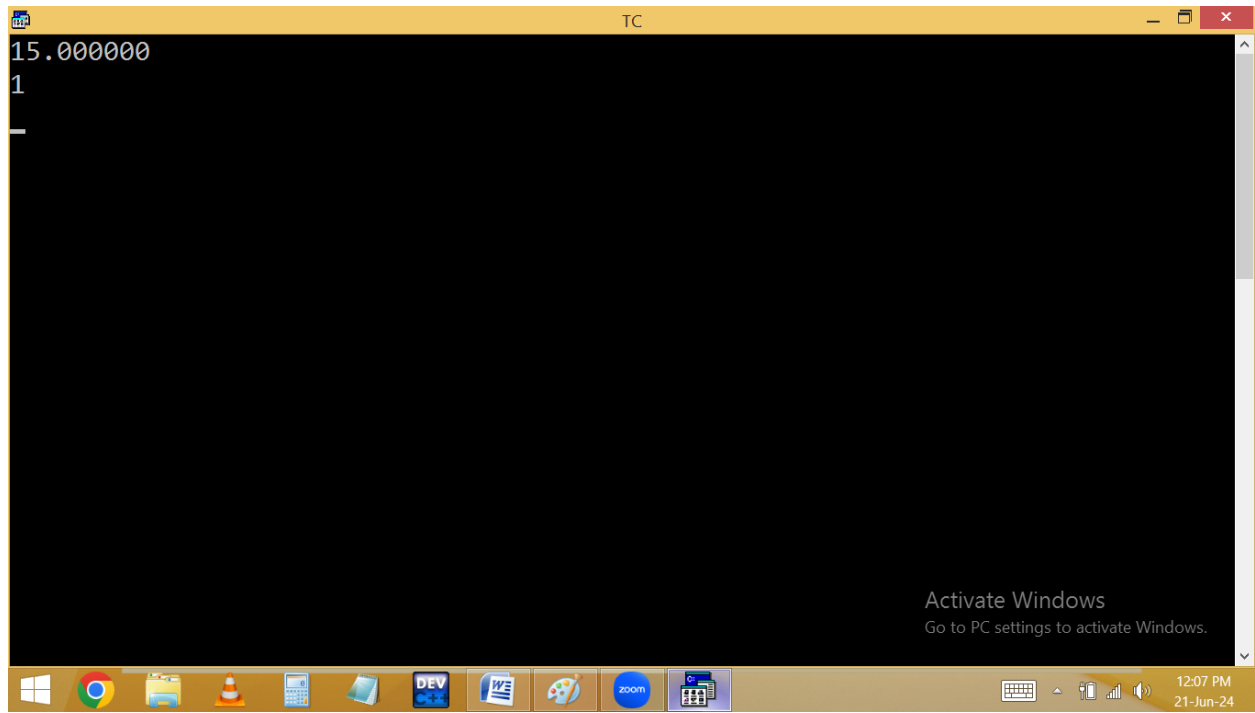
File Edit Run Compile Project Options Debug Break/watch

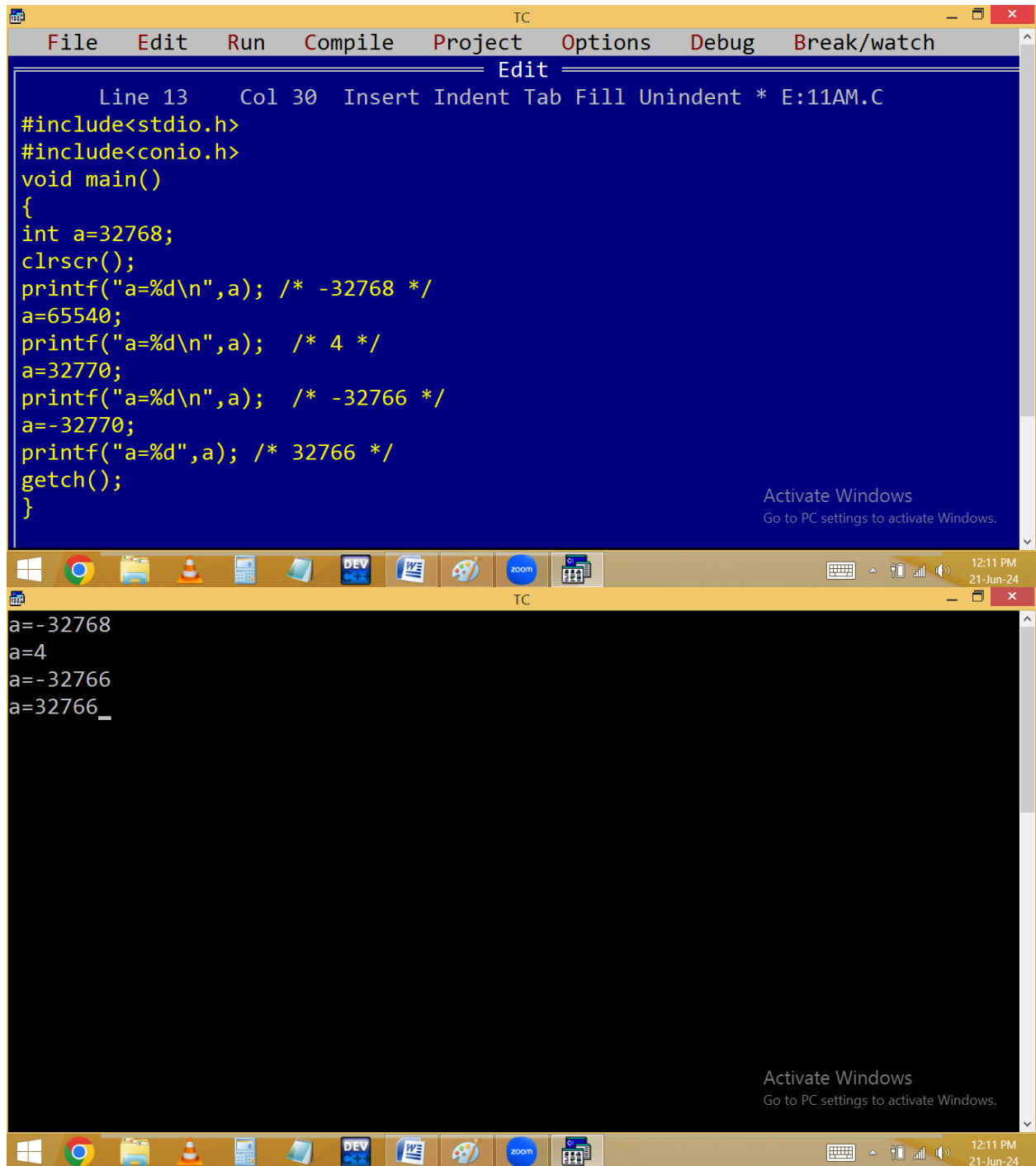
Edit

Line 6 Col 54 Insert Indent Tab Fill Unindent * E:11AM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%f\n",(float)15); /* explicit type casting */
printf("%d\n",(int)1.1);
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.





The image shows a screenshot of the Turbo C++ (TC) IDE. The top window, titled 'Edit', displays a C program. The code is as follows:

```
Line 13   Col 30   Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int a=32768;
clrscr();
printf("a=%d\n",a); /* -32768 */
a=65540;
printf("a=%d\n",a); /* 4 */
a=32770;
printf("a=%d\n",a); /* -32766 */
a=-32770;
printf("a=%d",a); /* 32766 */
getch();
}
```


The bottom window shows the output of the program:

```
a=-32768
a=4
a=-32766
a=32766_
```

The Windows taskbar at the bottom shows the time as 12:11 PM on 21-Jun-24. An 'Activate Windows' watermark is visible in the bottom right corner of both windows.


int cycle:

c / c++ - 16 bit compilers $\rightarrow 2^{16} \rightarrow 65536$

65536 / 2  **signed int \Rightarrow -32768 to +32767**
unsigned int \Rightarrow 0 to 65535

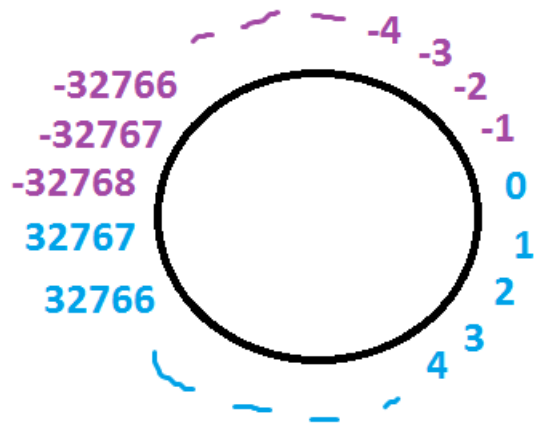
java / py / .net – 32 $\rightarrow 2^{32} \rightarrow 4294967296$

code hs/java/ vscode /.net \Rightarrow 32 bit $\Rightarrow 2^{32} \Rightarrow 4294967296$

4294967296  **signed int \Rightarrow -2147483648 to 2147483647**
unsigned \Rightarrow 0 to 4294967295

signed int cycle

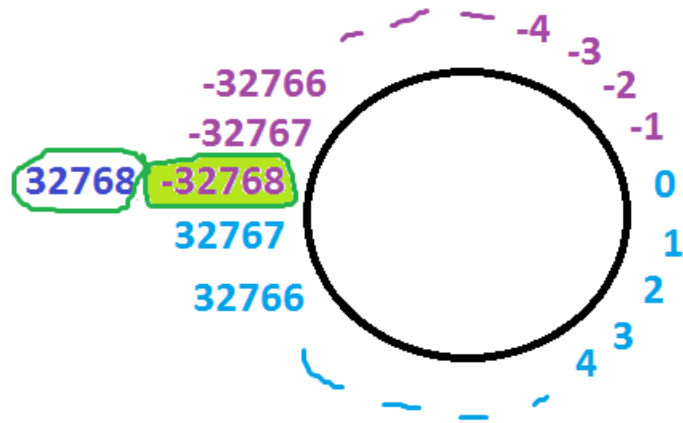
-Ve



+Ve

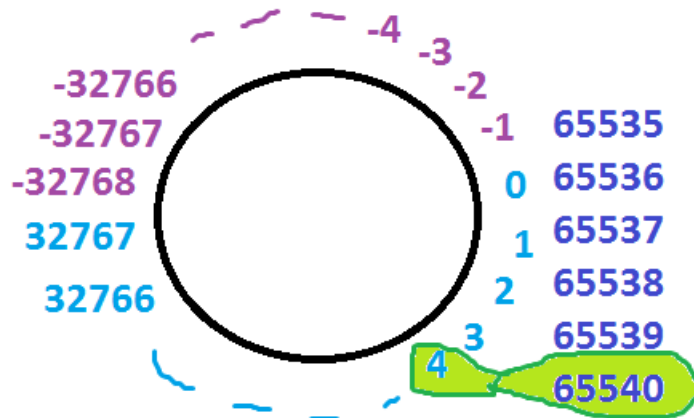
signed int cycle

$$\begin{array}{r} 32768 \\ -32768 \\ \hline 0 \end{array} + 0 = -32768$$

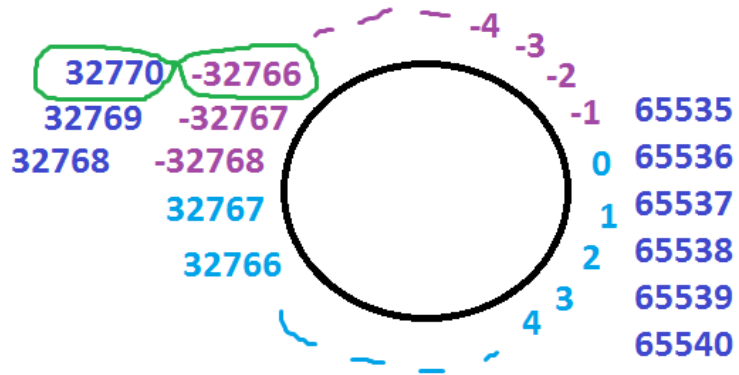


signed int cycle

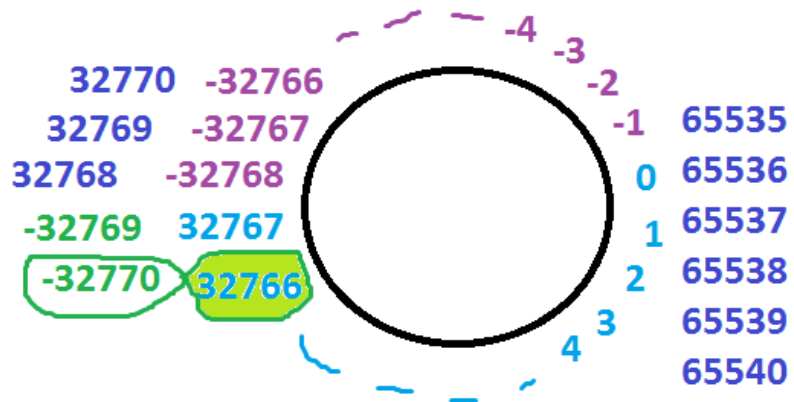
$$\begin{array}{r} a=65540 \\ \underline{65536} \\ 4 \end{array}$$



signed int cycle

$$\frac{32770 - 32768}{2} + 2 = -32766$$


signed int cycle

$$\begin{array}{r} 65536 \\ -32770 \\ \hline 32766 \end{array}$$


In codehs / java / vscode / 32 bit compiler

```
#include<stdio.h>
```

```
main()
```

```
{
```

```
    int a=2147483648;
```

```
    printf("a=%d",a);
```

```
}
```