

## BACK SLASH / ESCAPE SEQUENCE CHARACTERS

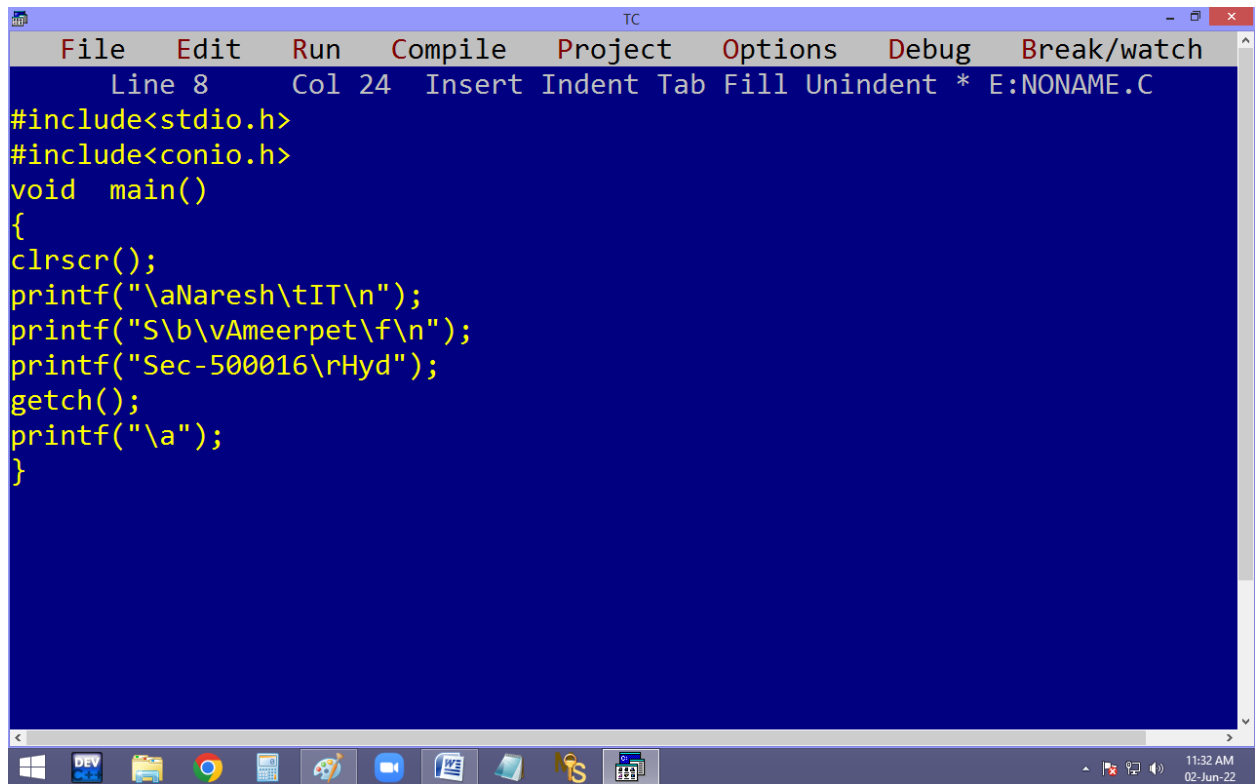
They started with back slash [ \ ].

They used to format the outputs.

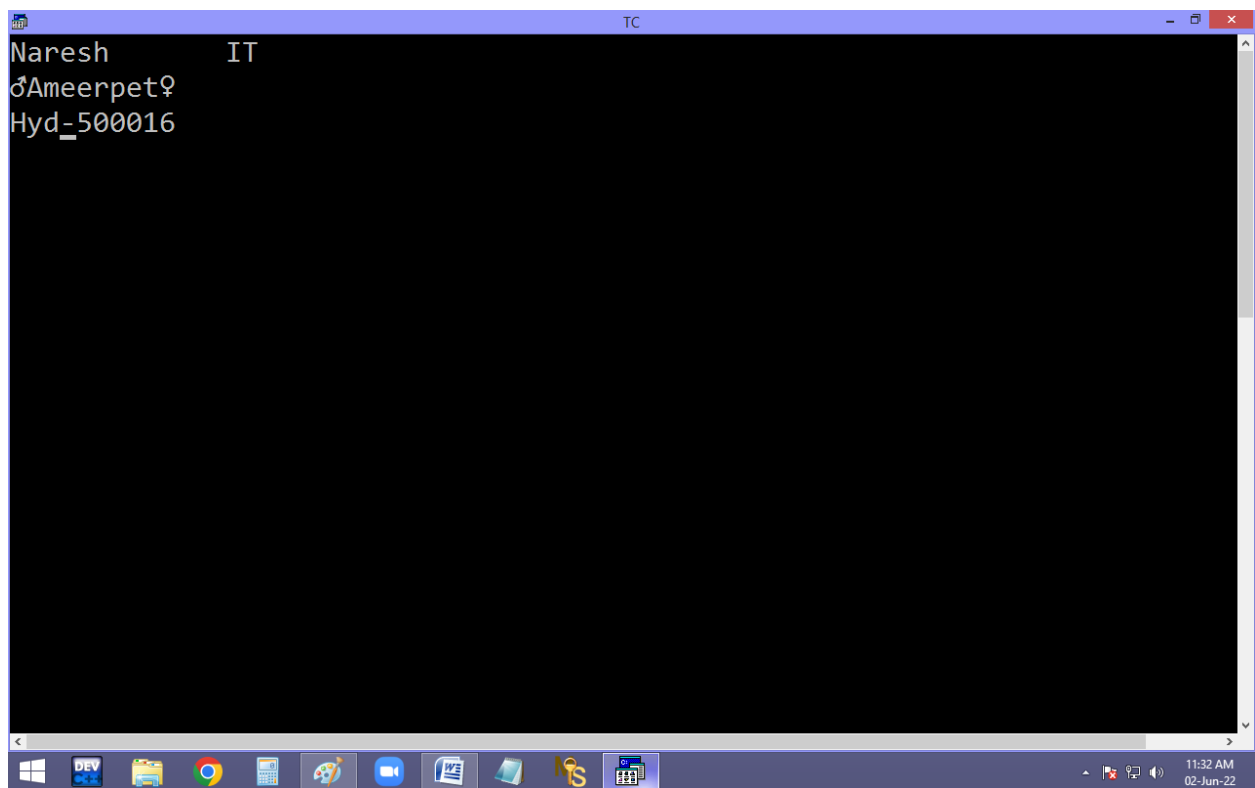
They participated in program execution but not displayed in output. Hence they are also called **escape sequence characters**.

Each back slash character=**1 byte i.e. one character**.

BACK SLASH CHARACTER	DESCRIPTION
\a	Alert [ beep sound ]
\b	Back space
\n	New line character
\t	Tab space
\r	Carriage return[beginning of line]
\f	Form feed ♀
\v	Vertical tab ♂
\0	Null char
\\	\ [ invalid ]
\k	k [ invalid ]

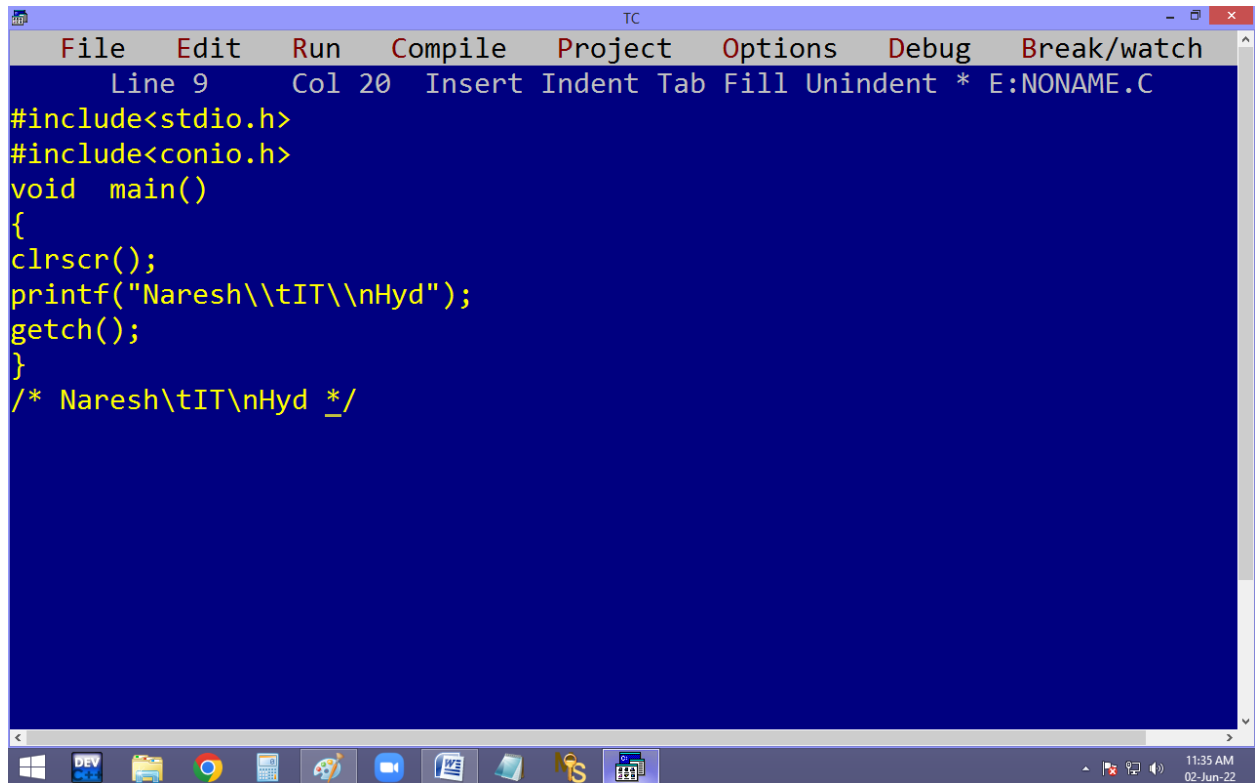


```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 24 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("\aNaresh\tIT\n");
printf("S\b\vAmeerpet\f\n");
printf("Sec-500016\rHyd");
getch();
printf("\a");
}
```



```
TC
Naresh      IT
♂Ameerpet♀
Hyd_500016
```

Eg. write a program to print back slash characters.




The screenshot shows a Turbo C++ IDE window titled 'TC'. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates 'Line 9 Col 20 Insert Indent Tab Fill Unindent \* E:NONAME.C'. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Naresh\\tIT\\nHyd");
getch();
}
/* Naresh\tIT\nHyd */
```

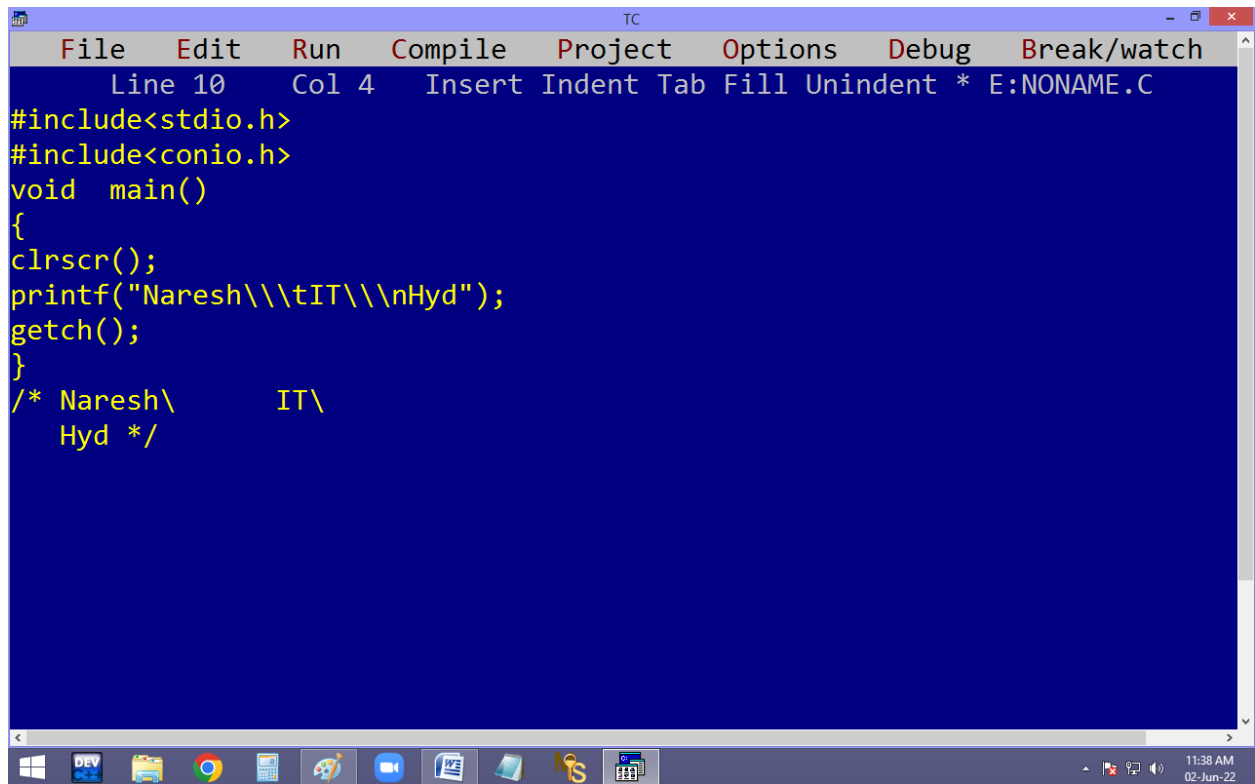
The Windows taskbar at the bottom shows various icons including Windows, DEV, File Explorer, Chrome, Calculator, Paint, and others. The system clock in the bottom right corner shows '11:35 AM 02-Jun-22'.

p("Naresh\\tIT\\nHyd");



Naresh\tIT\nHyd");

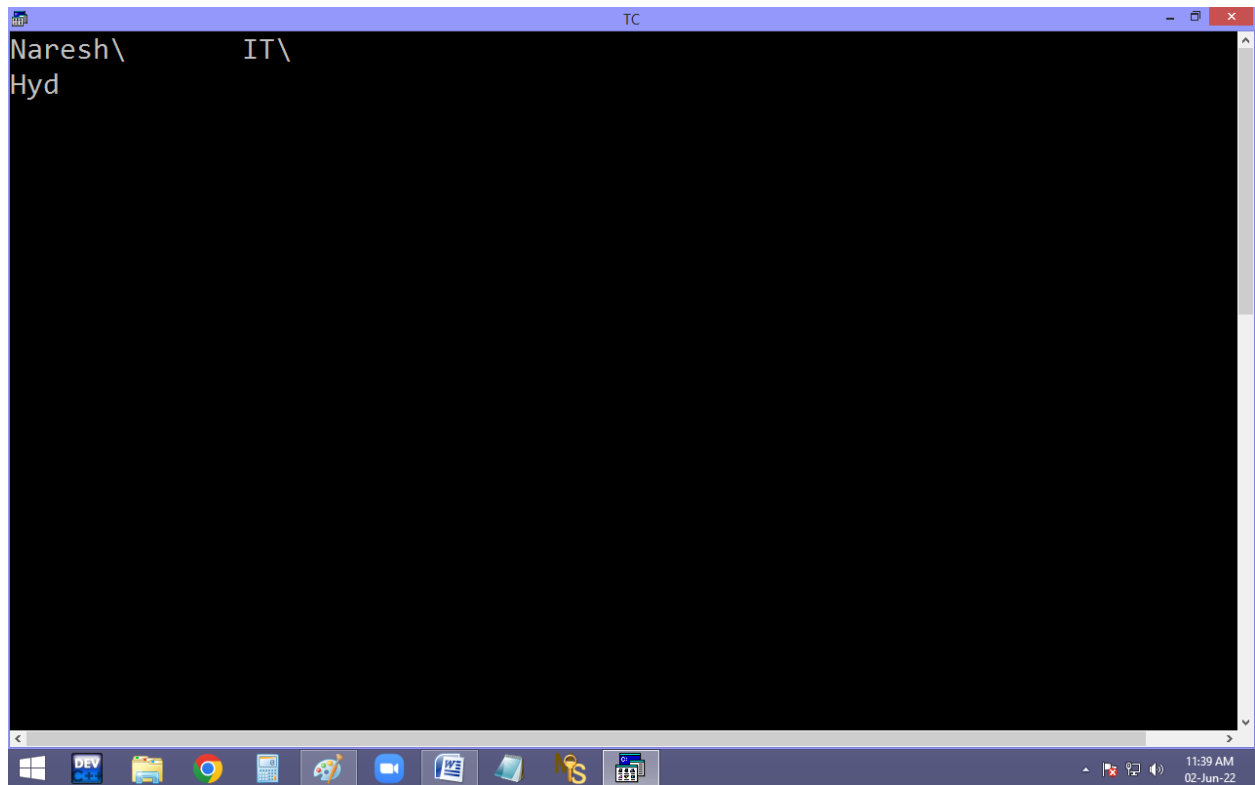
The diagram illustrates the escape sequence conversion. In the first line, the string "Naresh\\tIT\\nHyd" is shown with blue double backslashes. Two blue arrows point from these double backslashes to the single backslashes in the second line, "Naresh\tIT\nHyd".



The screenshot shows the Turbo C++ IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 10, Col 4, Insert, Indent, Tab, Fill, Unindent, \* E:NONAME.C). The main window has a blue background and contains the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Naresh\\tIT\\nHyd");
getch();
}
/* Naresh\      IT\
   Hyd */
```

The Windows taskbar at the bottom shows various application icons and the system clock indicating 11:38 AM on 02-Jun-22.



The screenshot shows the Turbo C++ IDE with the same menu bar and status bar as the first image. The main window now has a black background and displays the output of the program:

```
Naresh\      IT\
Hyd
```

The Windows taskbar at the bottom shows the same application icons and system clock indicating 11:39 AM on 02-Jun-22.

Naresh\\tIT\\nHyd

Naresh\ IT\  
Hyd

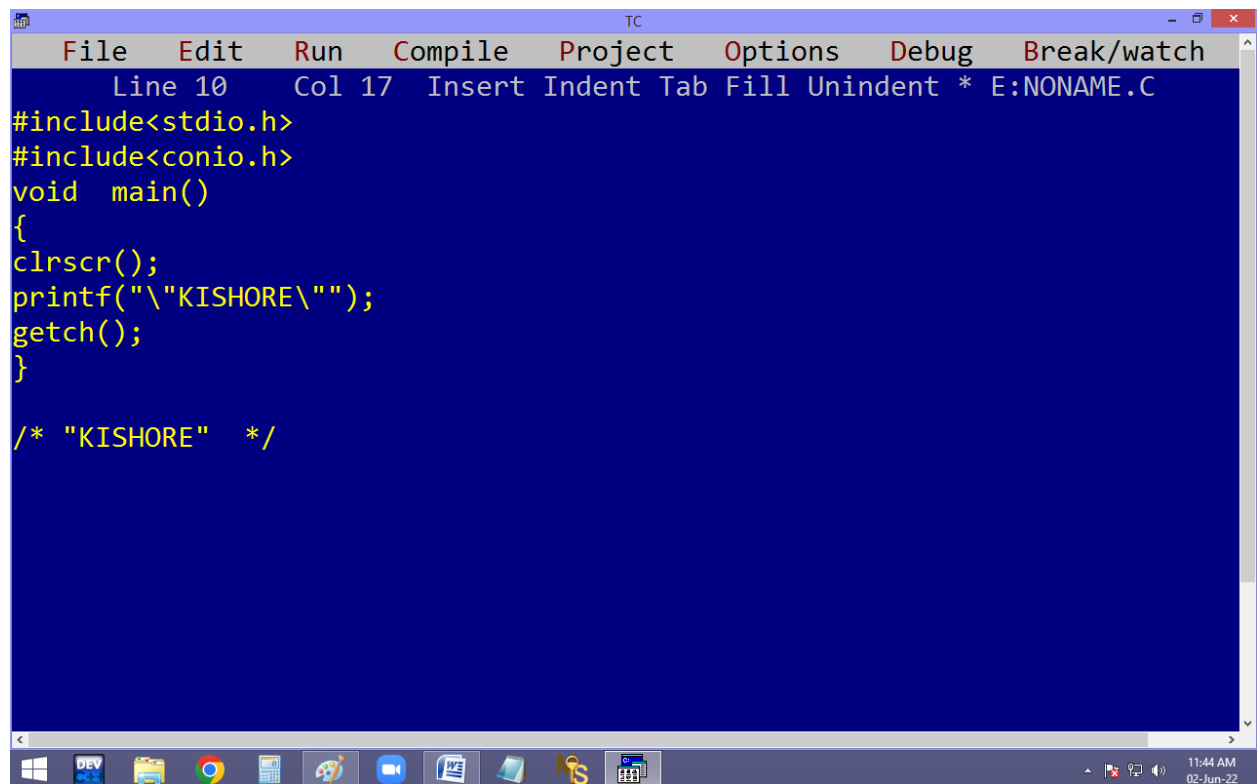
The diagram illustrates the mapping of escape sequences from a C-style string to its components. The top string is 'Naresh\\tIT\\nHyd'. Red arrows show the following mappings: the first backslash maps to the space in 'Naresh\'; the second backslash maps to the space in 'IT\'; the third backslash maps to the space in 'Hyd'; the 't' escape sequence maps to the tab character between 'Naresh\' and 'IT\'; and the 'n' escape sequence maps to the newline character between 'IT\' and 'Hyd'.

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 18 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Naresh\\tIT\\nHyd");
getch();
}
/* Naresh\\tIT\\nHyd */
```

Naresh\\tIT\\nHyd

Naresh\\tIT\\nHyd

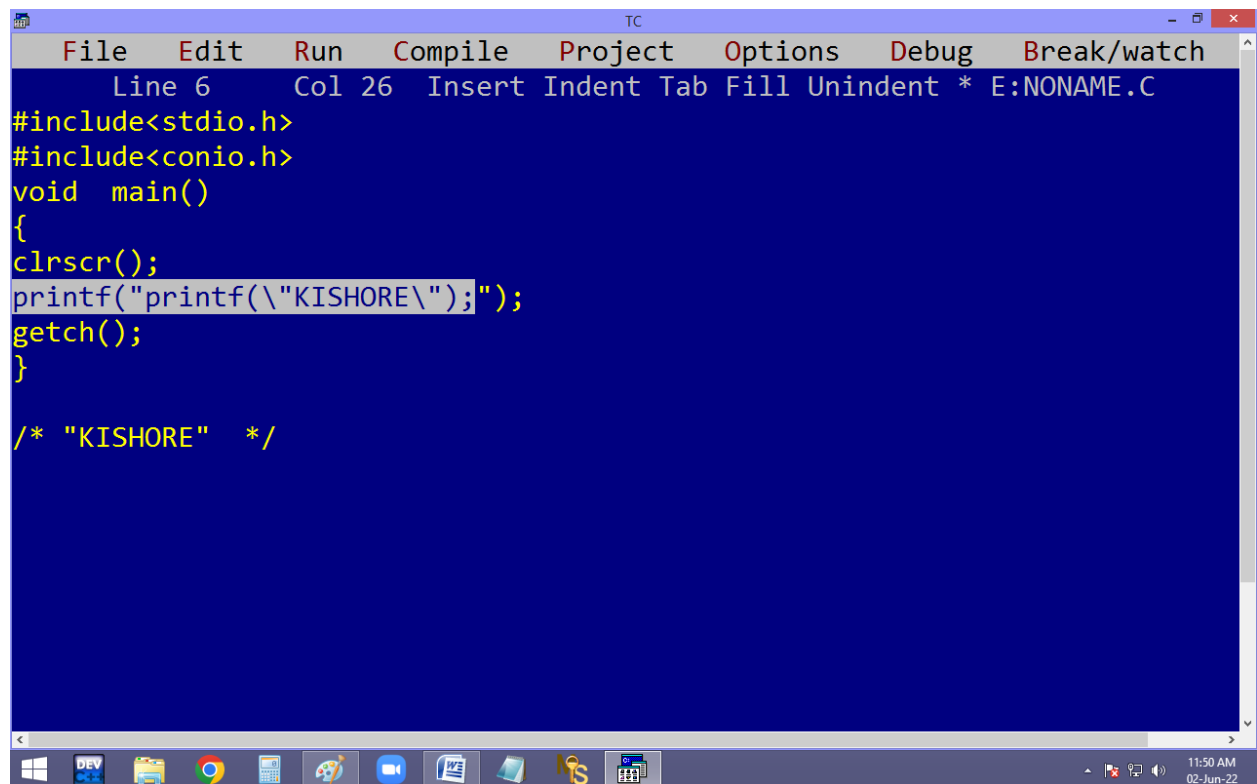
Eg. Write a program to print kishore like **"kishore"**



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 17 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("\\\"KISHORE\\\"\\\"\\");
getch();
}

/* \"KISHORE\" */
```

p("\\\"kishore\\\"\\\"\\");



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 26 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("printf(\"KISHORE\");");
getch();
}

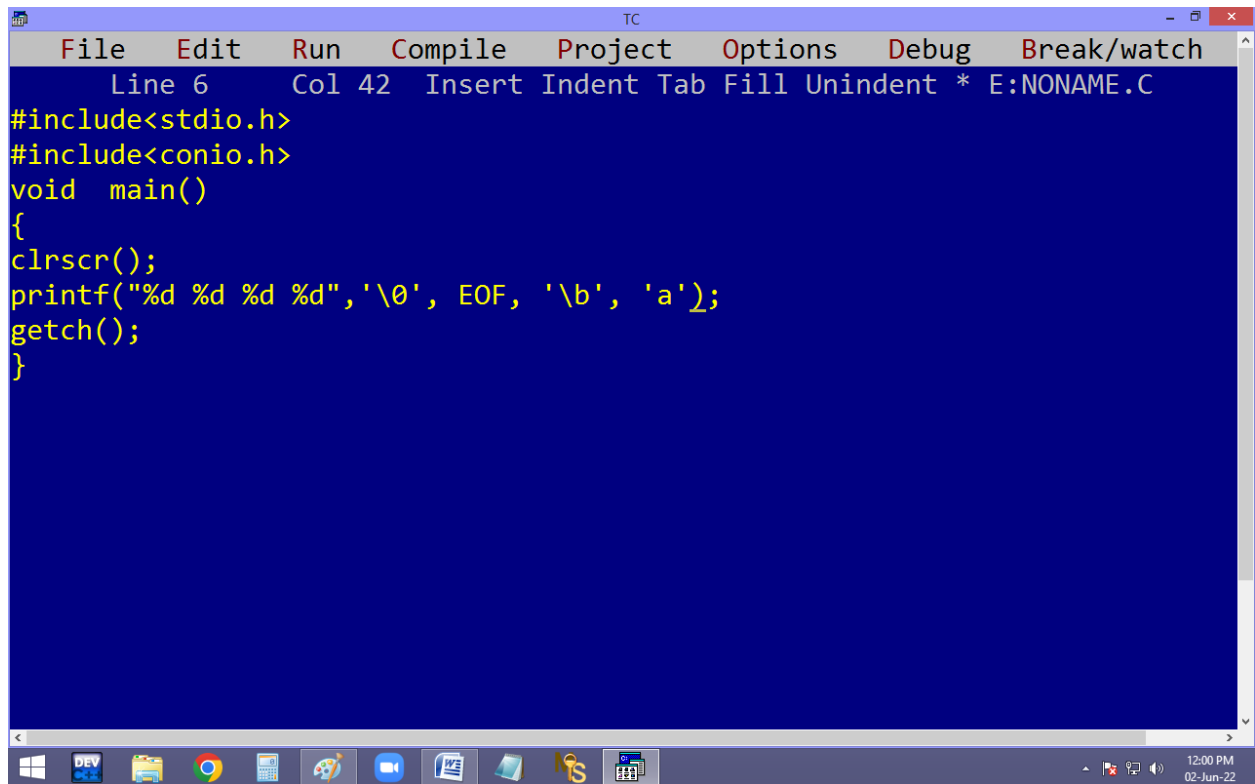
/* "KISHORE" */
```

p("p(\"kishore\");");



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 12 Col 27 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Ram%cTeri%cGanga%cMeri",9,10,9);
getch();
}
/* Ram      Teri
   Ganga    Meri
   9 is ascii value of \t
   10 is ascii value of \n_
*/
```

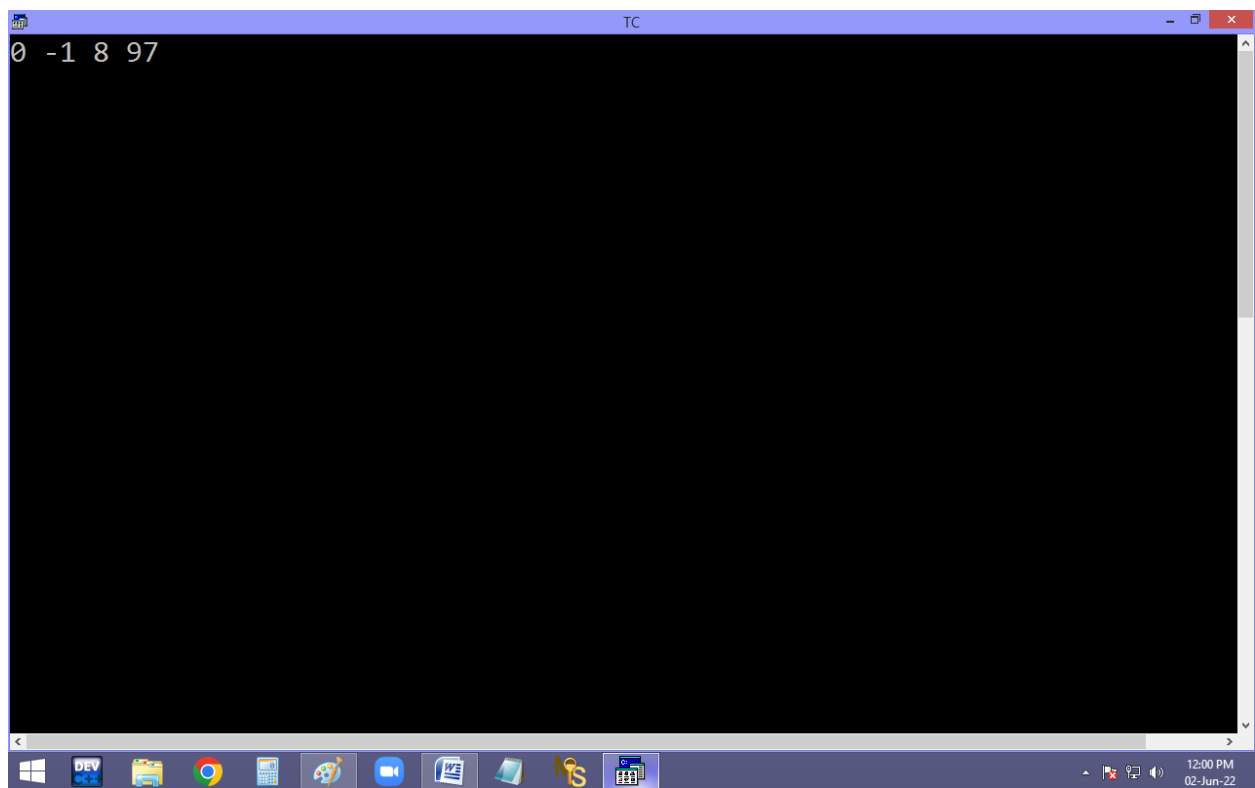




The screenshot shows the Turbo C++ (TC) IDE with a blue background. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates 'Line 6 Col 42 Insert Indent Tab Fill Unindent \* E:NONAME.C'. The code editor contains the following C program:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d %d %d %d", '\0', EOF, '\b', 'a');
getch();
}
```

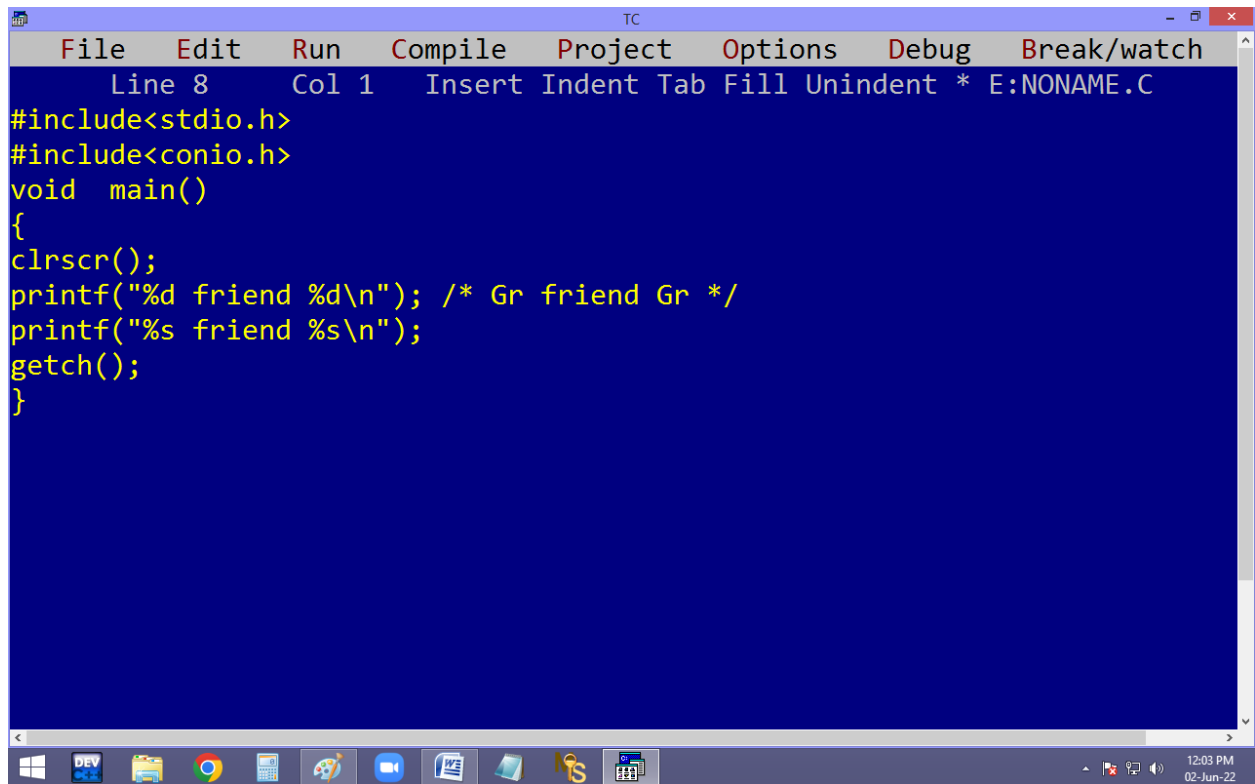
The Windows taskbar at the bottom shows various application icons and the system clock displaying 12:00 PM on 02-Jun-22.



The screenshot shows the Turbo C++ (TC) IDE with a black background, displaying the output of the program. The output text is:

```
0 -1 8 97
```

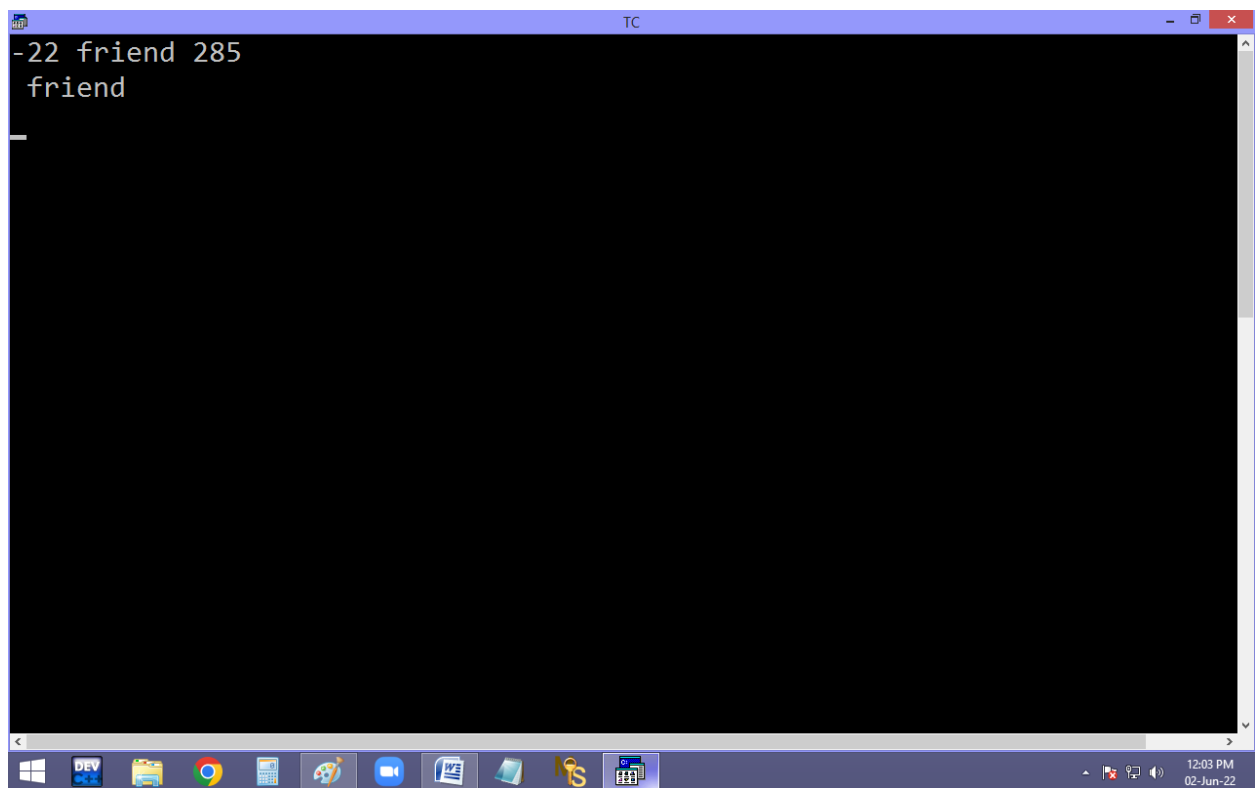
The Windows taskbar at the bottom is identical to the first screenshot, showing the same application icons and system clock.



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 8, Col 1, Insert, Indent, Tab, Fill, Unindent, \* E:NONAME.C). The main editing area has a blue background and contains the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d friend %d\n"); /* Gr friend Gr */
printf("%s friend %s\n");
getch();
}
```

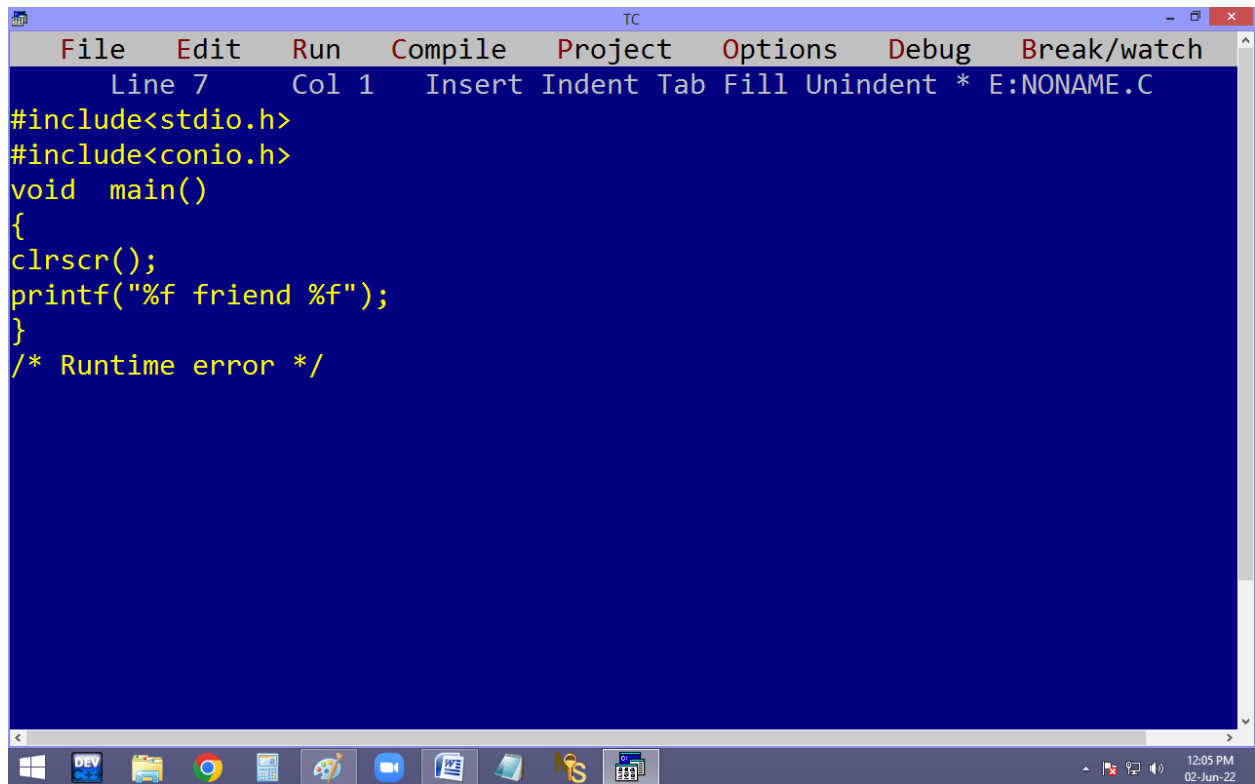
The Windows taskbar at the bottom shows various application icons and the system clock indicating 12:03 PM on 02-Jun-22.



The screenshot shows the Turbo C++ (TC) IDE with the same menu bar and status bar as the first image. The main editing area now has a black background and displays the output of the program:

```
-22 friend 285
friend
```

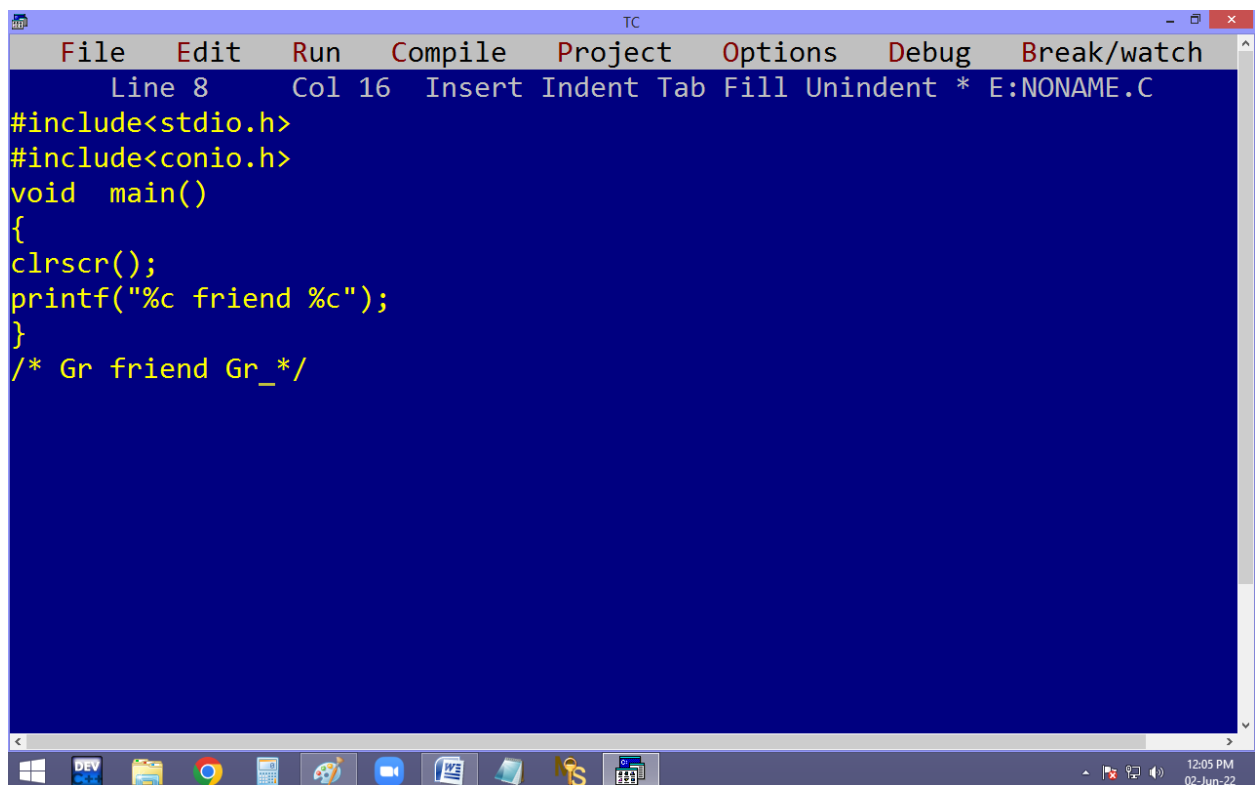
The Windows taskbar at the bottom remains the same, showing the system clock at 12:03 PM on 02-Jun-22.



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 7, Col 1, Insert, Indent, Tab, Fill, Unindent, \* E:NONAME.C). The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%f friend %f");
}
/* Runtime error */
```

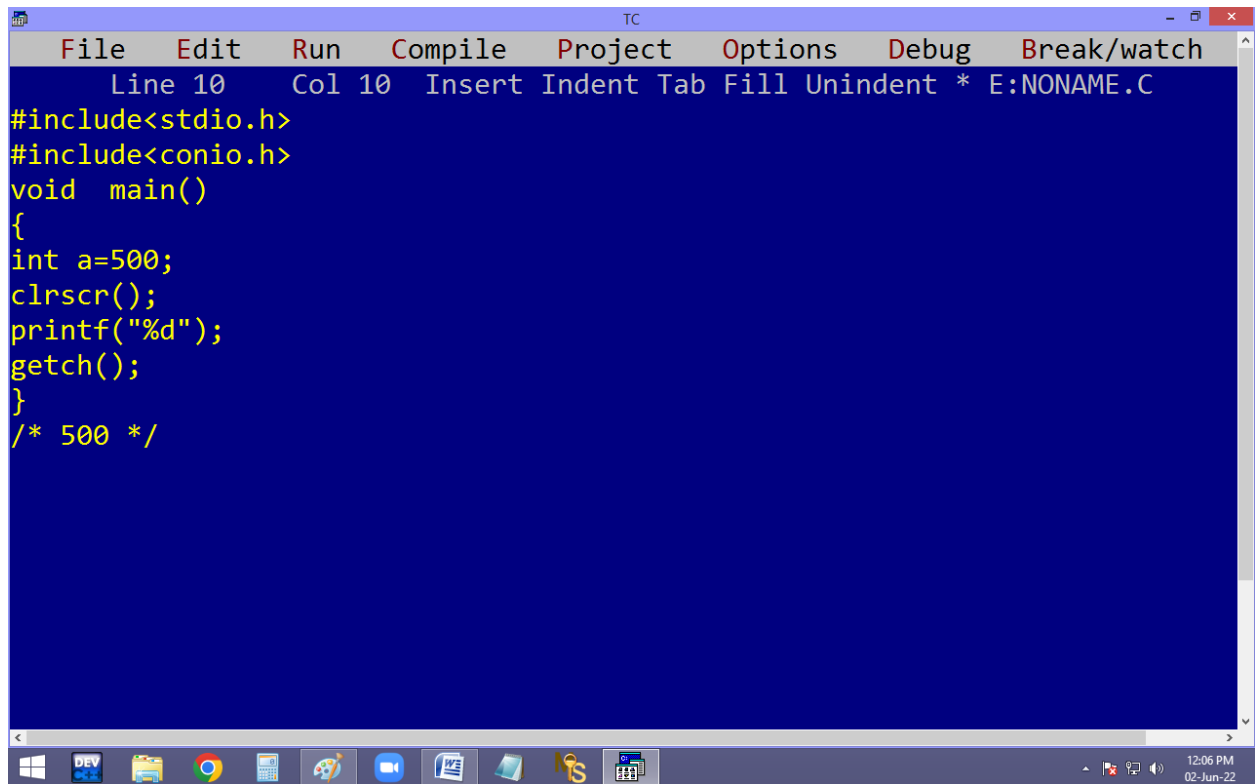
The Windows taskbar at the bottom shows the time as 12:05 PM on 02-Jun-22.



The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 8, Col 16, Insert, Indent, Tab, Fill, Unindent, \* E:NONAME.C). The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%c friend %c");
}
/* Gr friend Gr_*/
```

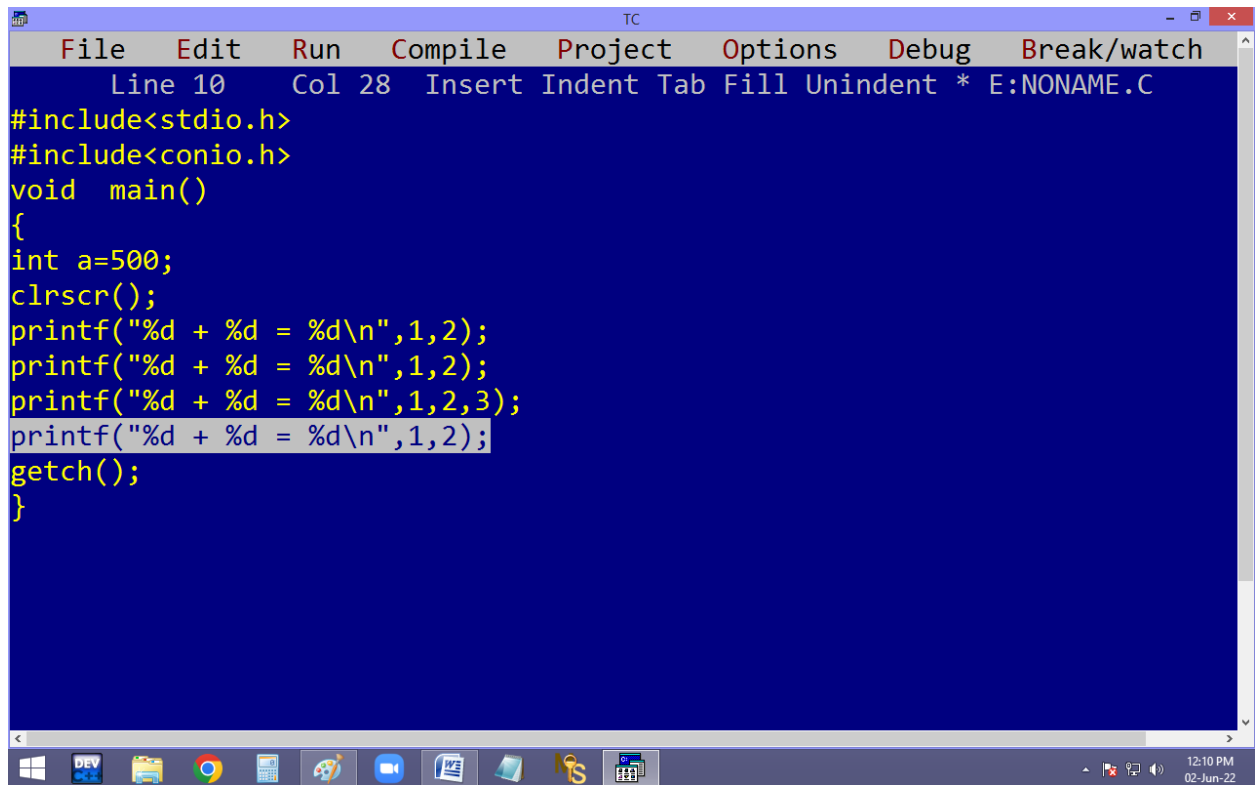
The Windows taskbar at the bottom shows the time as 12:05 PM on 02-Jun-22.



The screenshot shows the Turbo C++ (TC) IDE window. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates 'Line 10 Col 10 Insert Indent Tab Fill Unindent \* E:NONAME.C'. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=500;
clrscr();
printf("%d");
getch();
}
/* 500 */
```

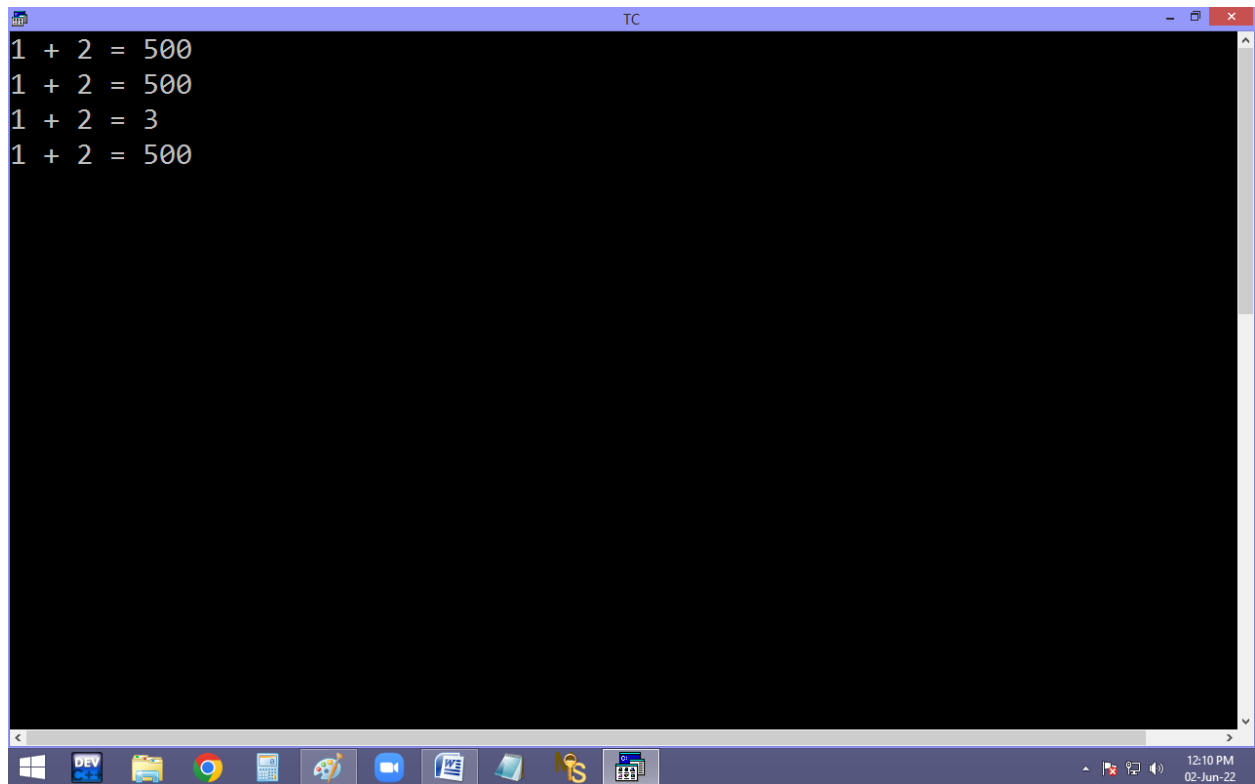
The Windows taskbar at the bottom shows various icons including Windows, DEV C++, File Explorer, Google Chrome, Calculator, Paint, and others. The system clock in the bottom right corner displays '12:06 PM 02-Jun-22'.



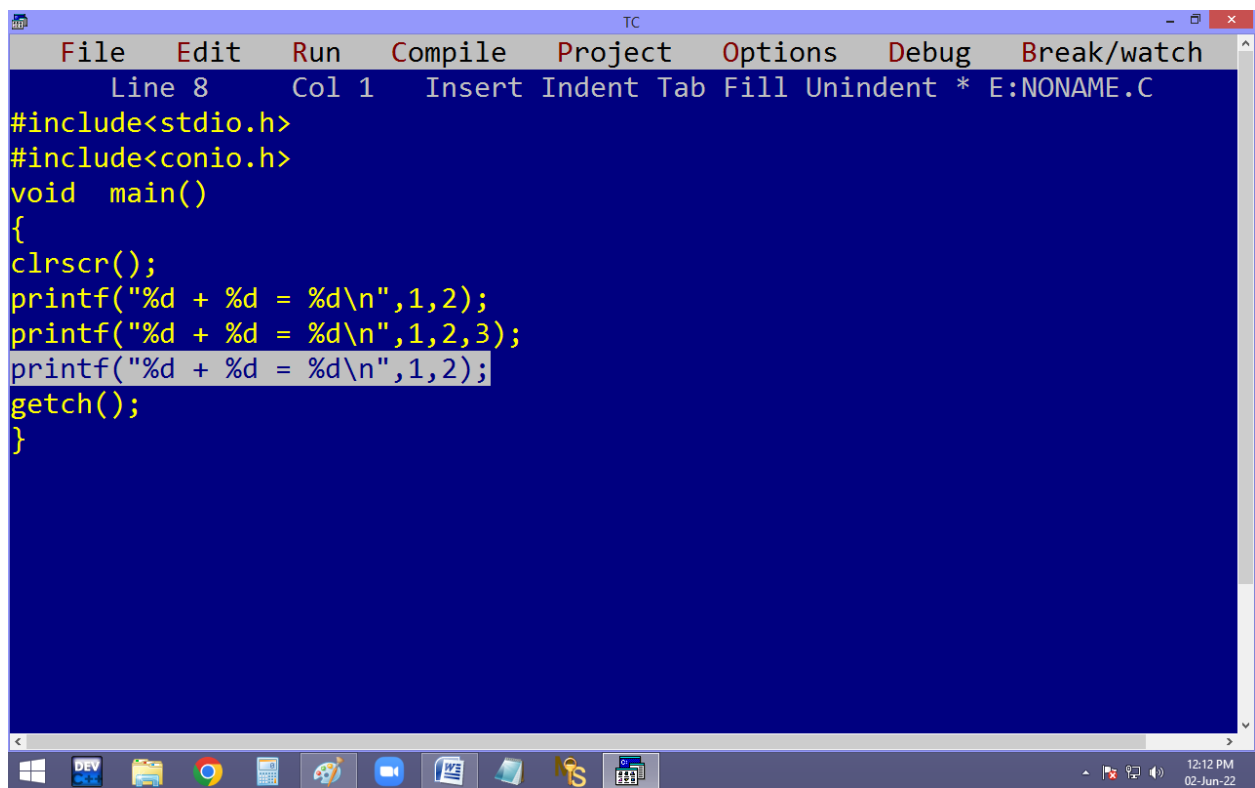
The screenshot shows the Turbo C++ (TC) IDE window with the same menu bar and status bar as the first image. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=500;
clrscr();
printf("%d + %d = %d\n",1,2);
printf("%d + %d = %d\n",1,2);
printf("%d + %d = %d\n",1,2,3);
printf("%d + %d = %d\n",1,2);
getch();
}
```

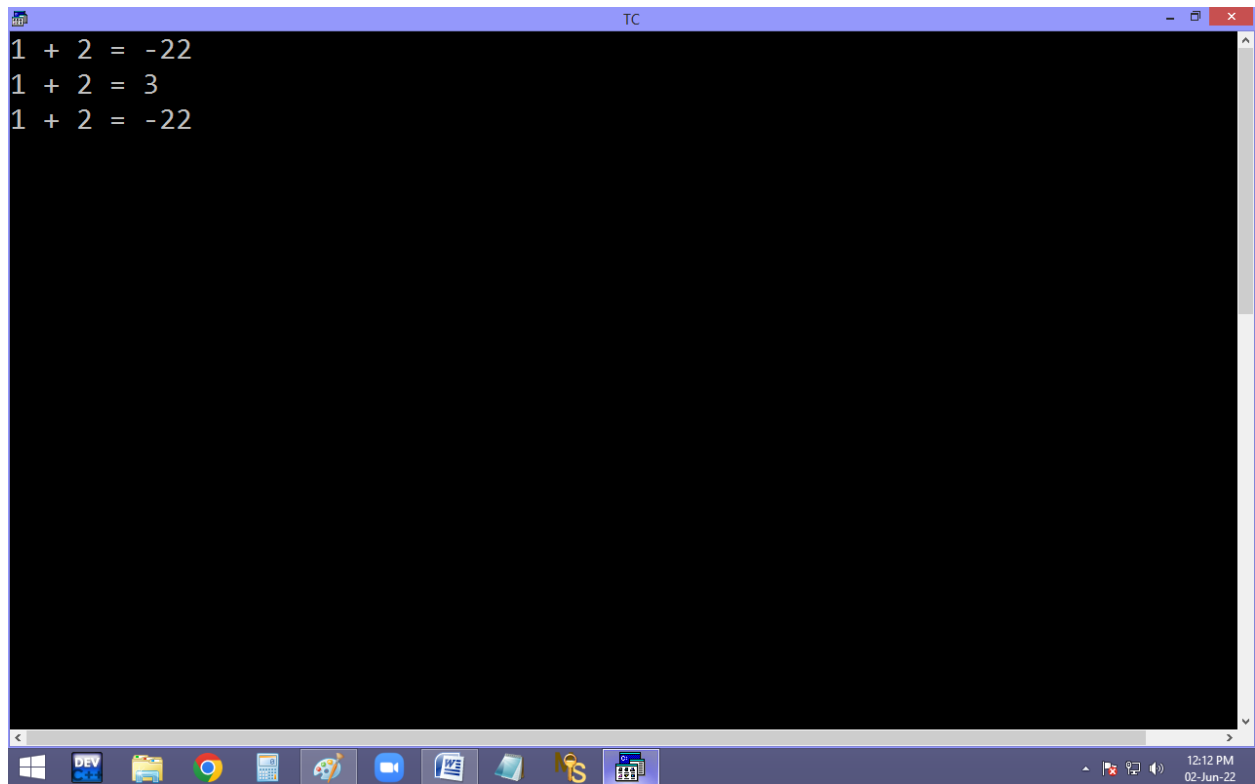
The Windows taskbar at the bottom is identical to the first image, showing the same set of icons and the system clock displaying '12:10 PM 02-Jun-22'.



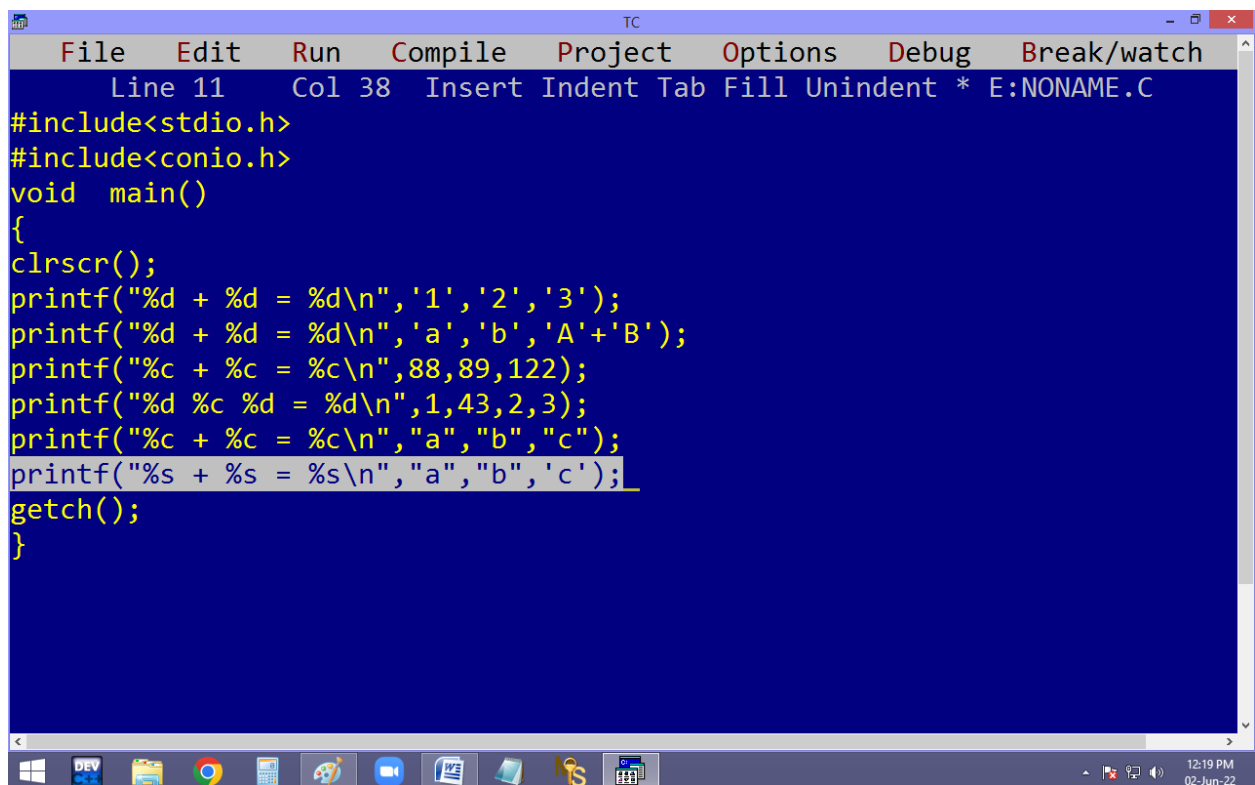
```
1 + 2 = 500
1 + 2 = 500
1 + 2 = 3
1 + 2 = 500
```



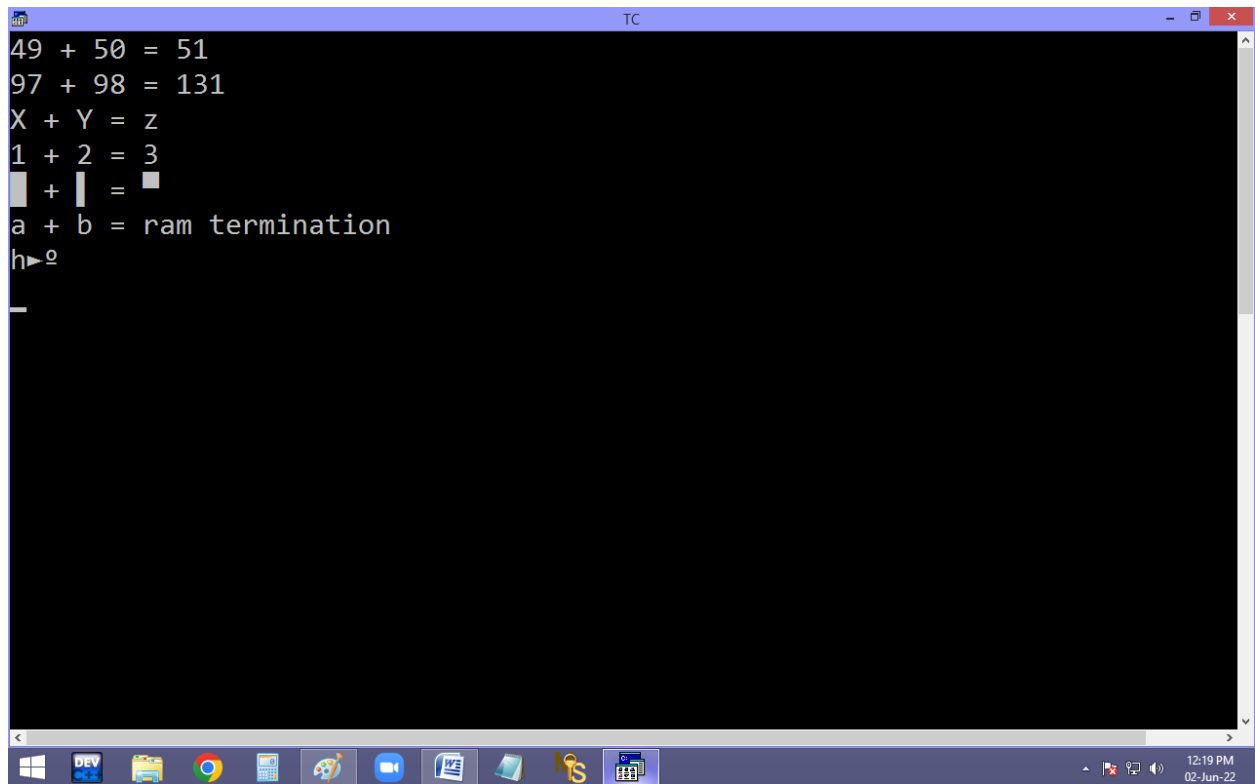
```
File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 1 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d + %d = %d\n",1,2);
printf("%d + %d = %d\n",1,2,3);
printf("%d + %d = %d\n",1,2);
getch();
}
```



```
1 + 2 = -22
1 + 2 = 3
1 + 2 = -22
```



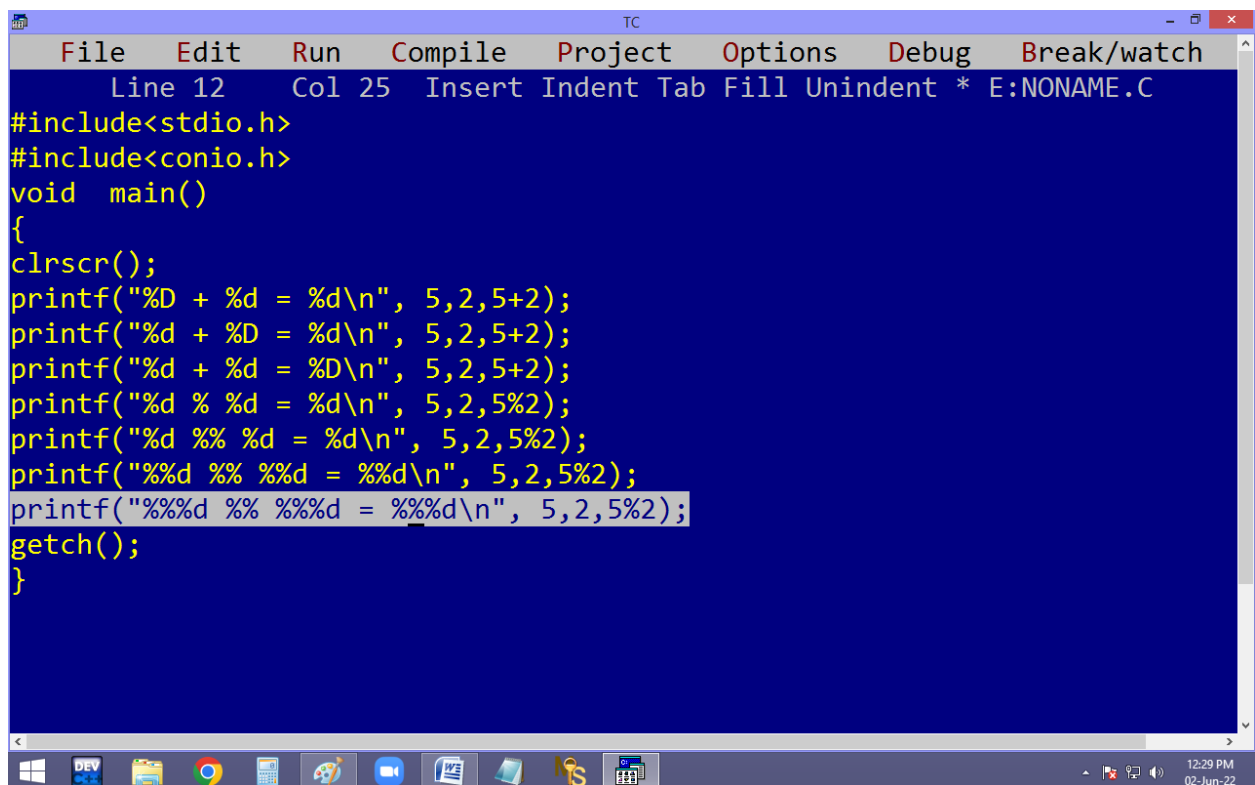
```
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 38 Insert Indent Tab Fill Unindent * E:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d + %d = %d\n", '1', '2', '3');
printf("%d + %d = %d\n", 'a', 'b', 'A'+ 'B');
printf("%c + %c = %c\n", 88, 89, 122);
printf("%d %c %d = %d\n", 1, 43, 2, 3);
printf("%c + %c = %c\n", "a", "b", "c");
printf("%s + %s = %s\n", "a", "b", 'c');
getch();
}
```



A screenshot of a Turbo C++ (TC) console window. The window has a blue title bar with the text "TC" and standard window controls. The main area is black with white text. The text displayed is as follows:

```
49 + 50 = 51
97 + 98 = 131
X + Y = z
1 + 2 = 3
+ = 
a + b = ram termination
h>
```

The Windows taskbar is visible at the bottom, showing icons for Windows, DEV, File Explorer, Chrome, Calculator, Paint, and others. The system clock in the bottom right corner shows "12:19 PM 02-Jun-22".

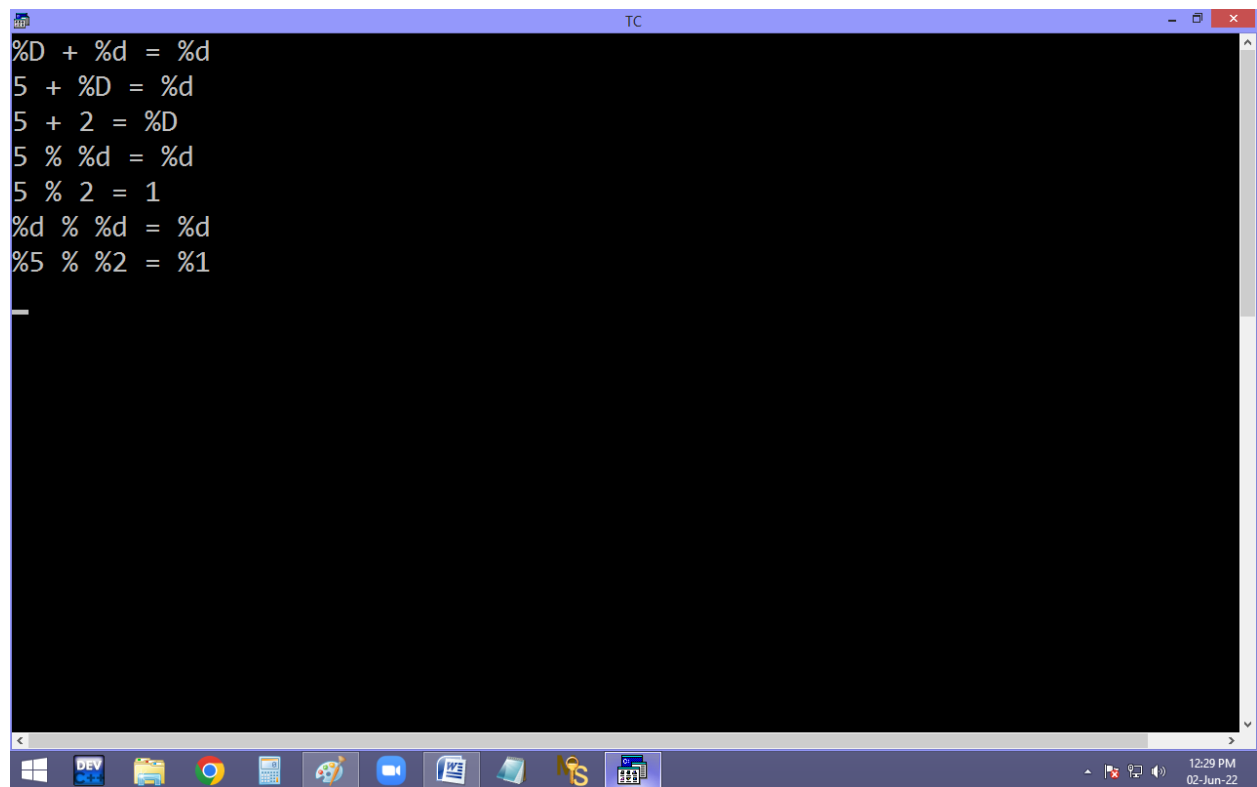


A screenshot of a Turbo C++ (TC) editor window. The window has a blue title bar with the text "TC" and standard window controls. Below the title bar is a menu bar with the following items: File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. Below the menu bar is a status bar that reads "Line 12 Col 25 Insert Indent Tab Fill Unindent \* E:NONAME.C". The main area has a blue background with yellow text. The code displayed is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%D + %d = %d\n", 5,2,5+2);
printf("%d + %D = %d\n", 5,2,5+2);
printf("%d + %d = %D\n", 5,2,5+2);
printf("%d % %d = %d\n", 5,2,5%2);
printf("%d %% %d = %d\n", 5,2,5%2);
printf("%%d %% %%d = %%d\n", 5,2,5%2);
getch();
}
```

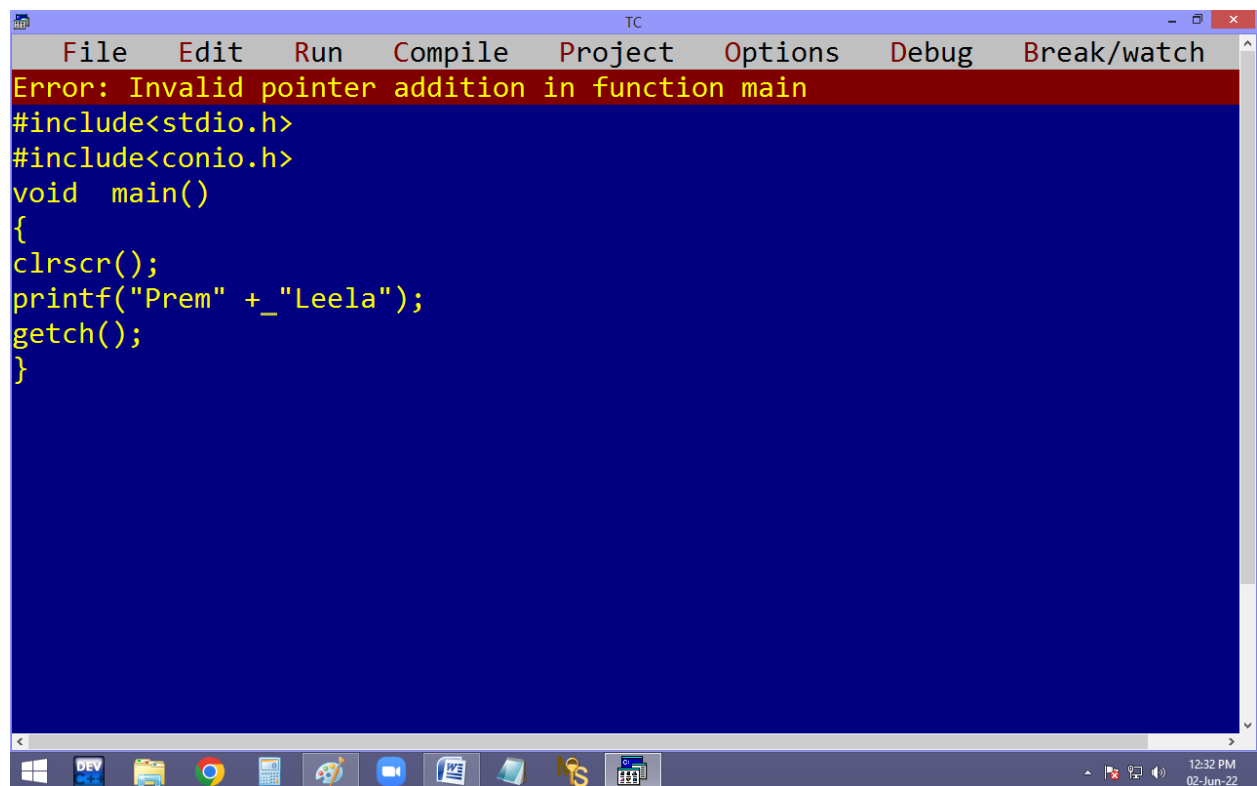
The Windows taskbar is visible at the bottom, showing icons for Windows, DEV, File Explorer, Chrome, Calculator, Paint, and others. The system clock in the bottom right corner shows "12:29 PM 02-Jun-22".





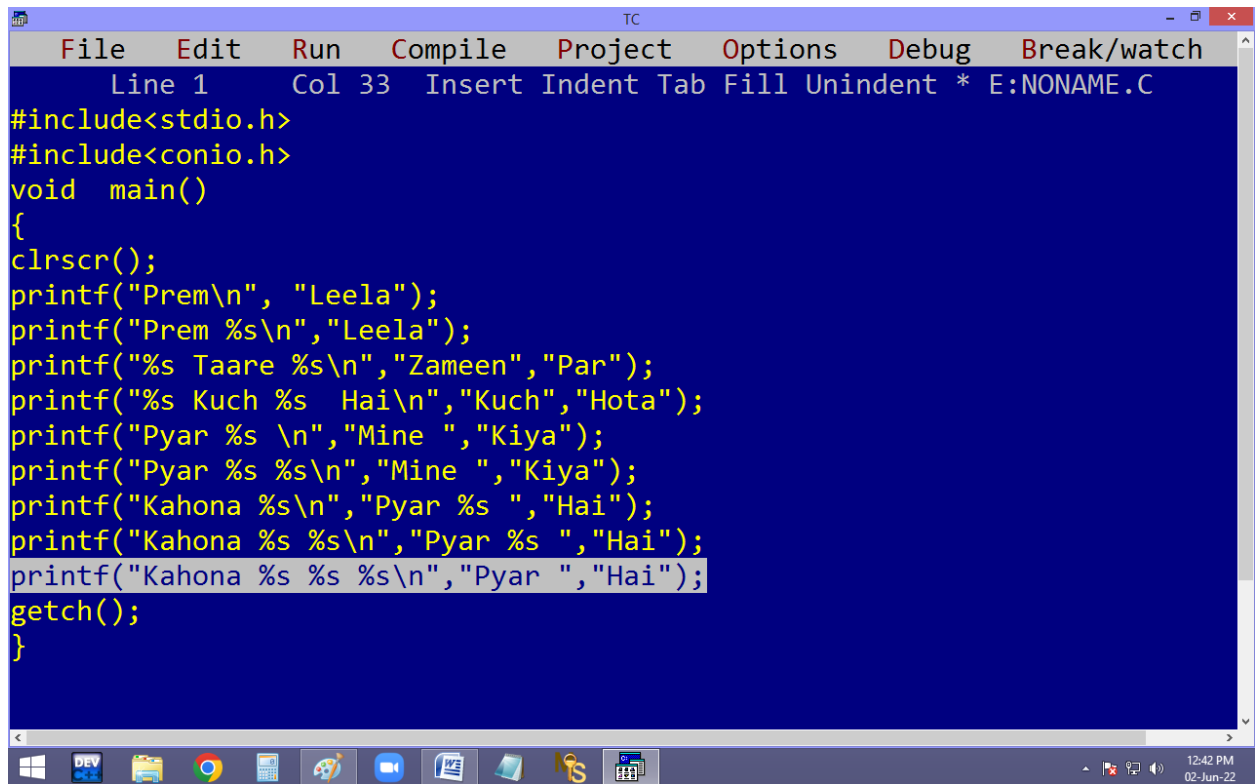
The screenshot shows a Turbo C++ (TC) window with a black background. The code is written in white text. The code consists of seven lines of printf statements using different format specifiers: %D, %d, and %1. The window has a standard Windows taskbar at the bottom with icons for DEV, File Explorer, Chrome, Calculator, Paint, and others. The system clock in the bottom right corner shows 12:29 PM on 02-Jun-22.

```
%D + %d = %d
5 + %D = %d
5 + 2 = %D
5 % %d = %d
5 % 2 = 1
%d % %d = %d
%5 % %2 = %1
```



The screenshot shows a Turbo C++ (TC) window with a blue background. The code is written in yellow text. The code is a simple C program that includes <stdio.h> and <conio.h>, and contains a main function that calls clrscr(), printf("Prem" + "\_Leela"), and getch(). A red error message is displayed at the top: "Error: Invalid pointer addition in function main". The window has a menu bar with File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The system clock in the bottom right corner shows 12:32 PM on 02-Jun-22.

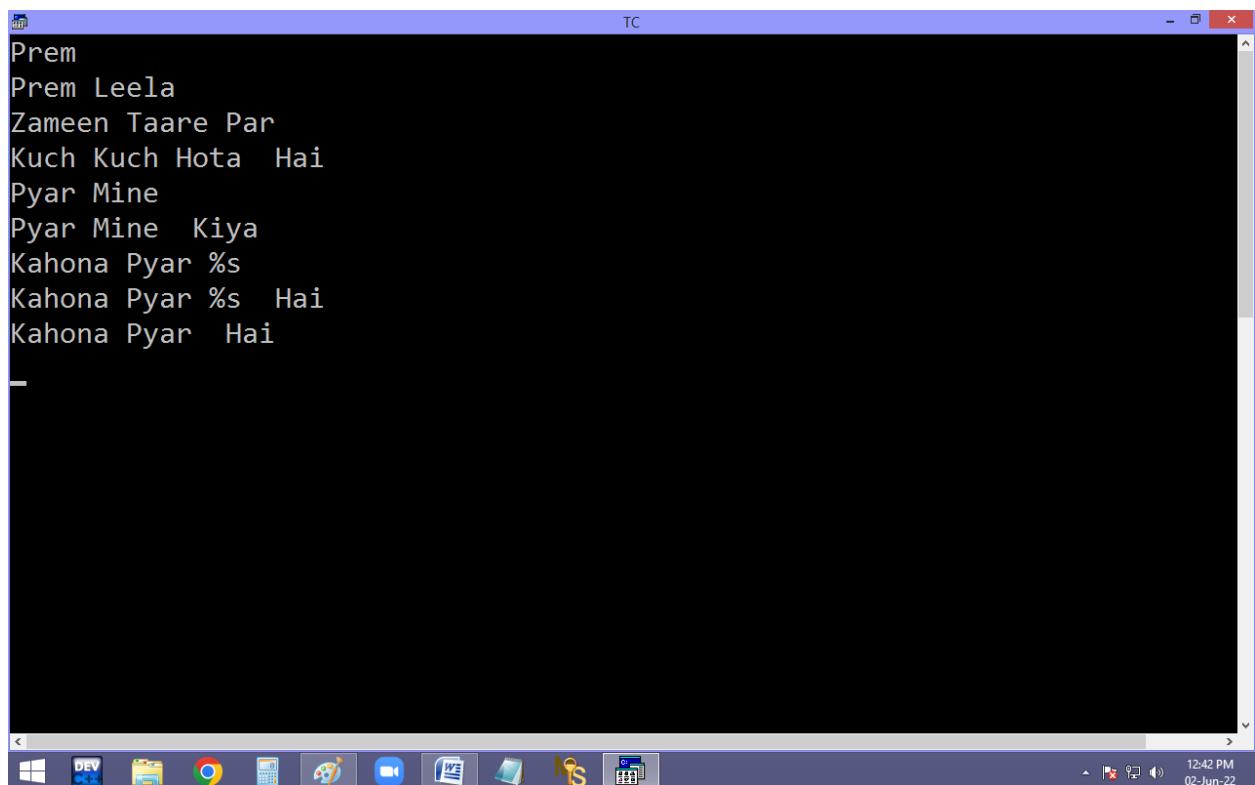
```
File Edit Run Compile Project Options Debug Break/watch
Error: Invalid pointer addition in function main
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Prem" + "_Leela");
getch();
}
```



The screenshot shows the Turbo C++ IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 1, Col 33, Insert, Indent, Tab, Fill, Unindent, \* E:NONAME.C). The code is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Prem\n", "Leela");
printf("Prem %s\n", "Leela");
printf("%s Taare %s\n", "Zameen", "Par");
printf("%s Kuch %s Hai\n", "Kuch", "Hota");
printf("Pyar %s \n", "Mine ", "Kiya");
printf("Pyar %s %s\n", "Mine ", "Kiya");
printf("Kahona %s\n", "Pyar %s ", "Hai");
printf("Kahona %s %s\n", "Pyar %s ", "Hai");
printf("Kahona %s %s %s\n", "Pyar ", "Hai");
getch();
}
```

The taskbar at the bottom shows various application icons and the system clock indicating 12:42 PM on 02-Jun-22.



The screenshot shows the Turbo C++ IDE with the same menu bar and status bar. The output of the program is displayed in the main window:

```
Prem
Prem Leela
Zameen Taare Par
Kuch Kuch Hota Hai
Pyar Mine
Pyar Mine Kiya
Kahona Pyar %s
Kahona Pyar %s Hai
Kahona Pyar Hai
```

The taskbar at the bottom shows various application icons and the system clock indicating 12:42 PM on 02-Jun-22.

