printf():

It is the major output function in c language.

It is a predefined function available in standard input output header file <stdio.h>

Printf always refers standard output device i.e. monitor.

In printf, f means formatted.

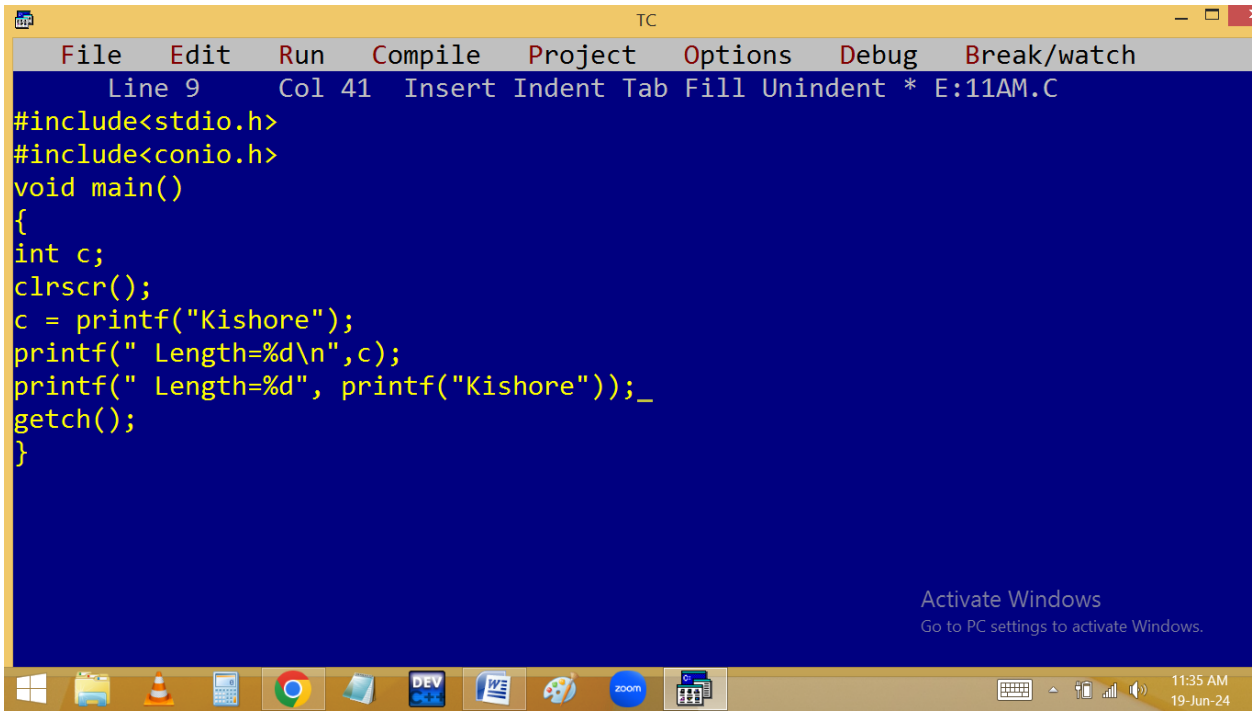
Syntax:

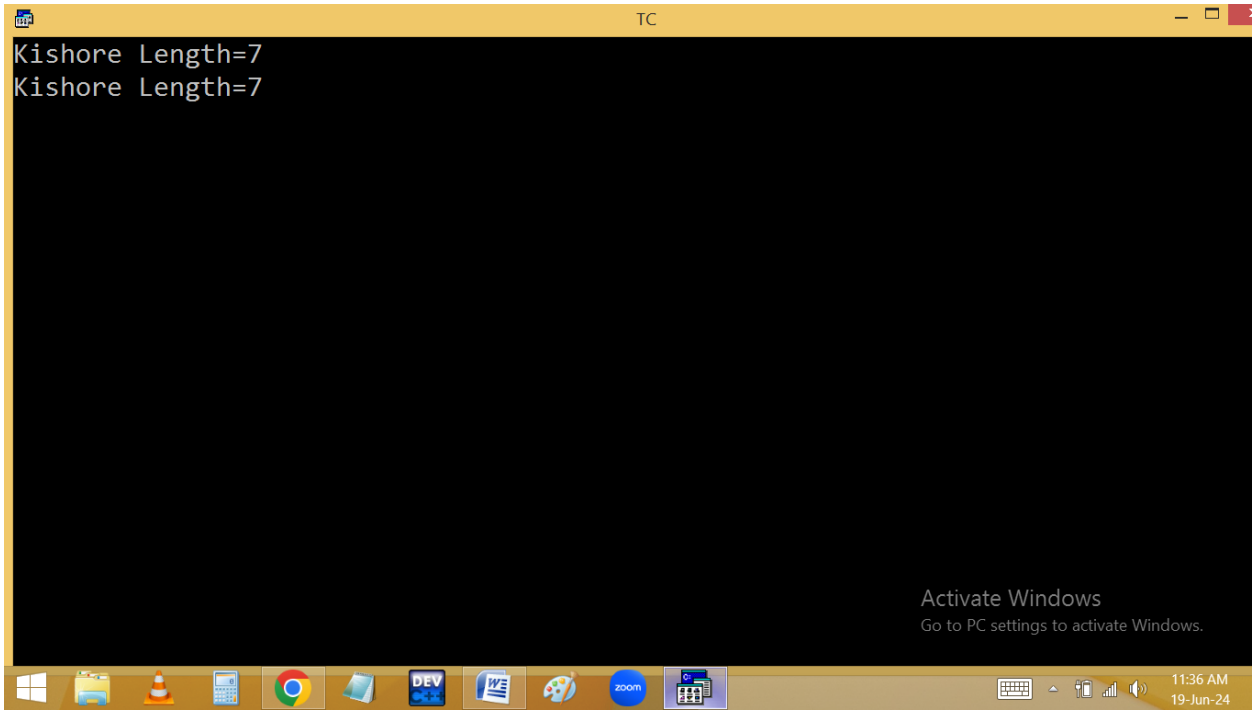
int printf("[text] [conversion characters / format specifiers / format strings] " [, variables] [, expressions]);

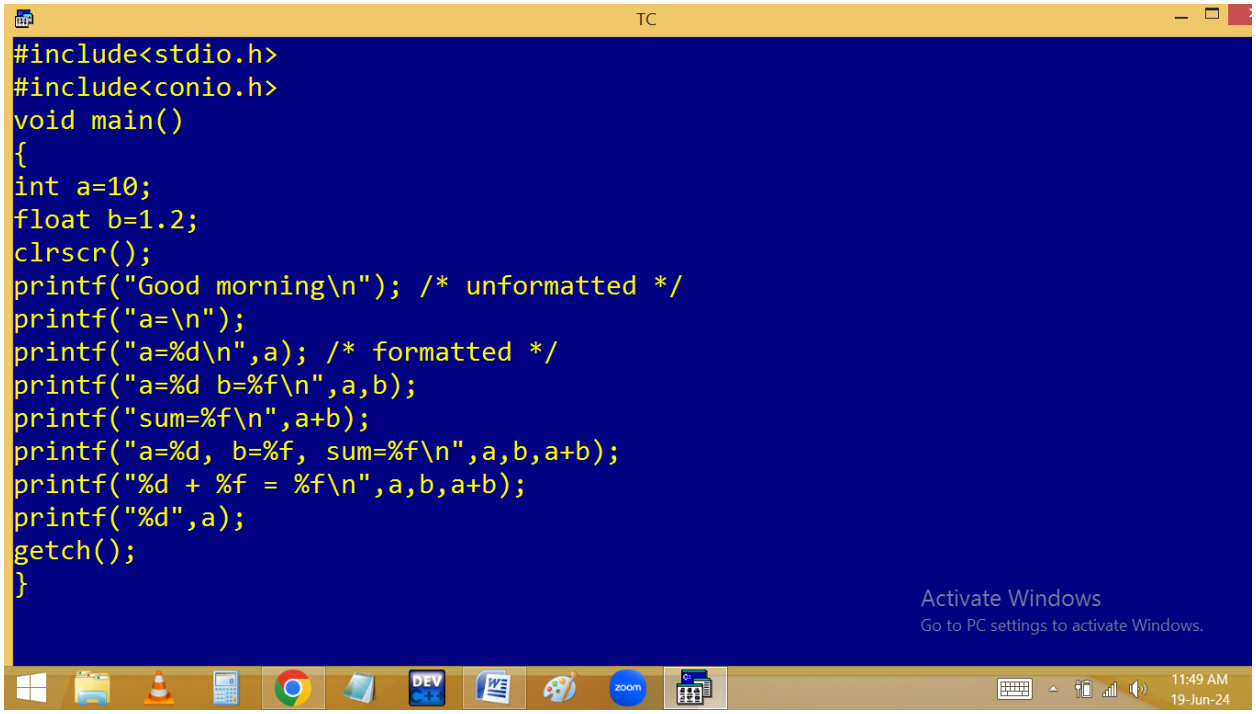
Note:

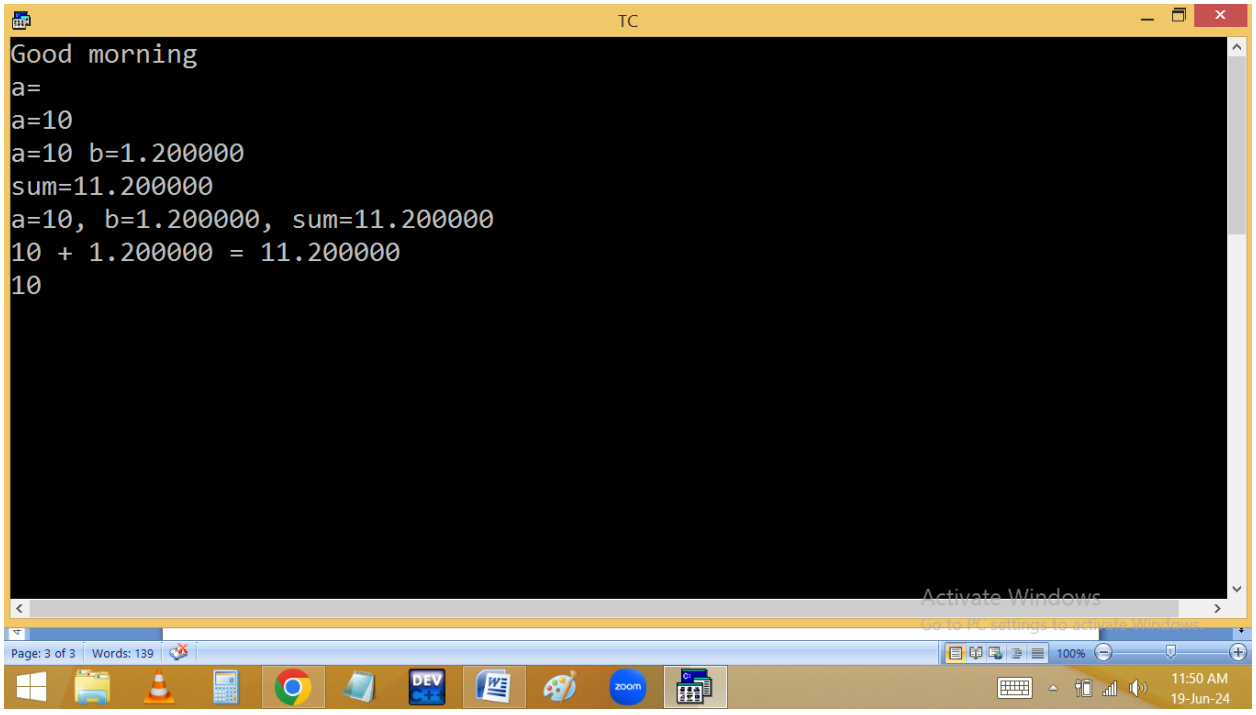
1. **In printf, the first value [argument] should be within " ".**
2. **Printf always return int which indicates the no of visible characters.**
3. **In printf execution order is right to left but printing is left to right.**
4. **Printf can perform both formatted and unformatted outputs.**
5. **In printf everything printed as it is except conversion characters and format specifiers.**

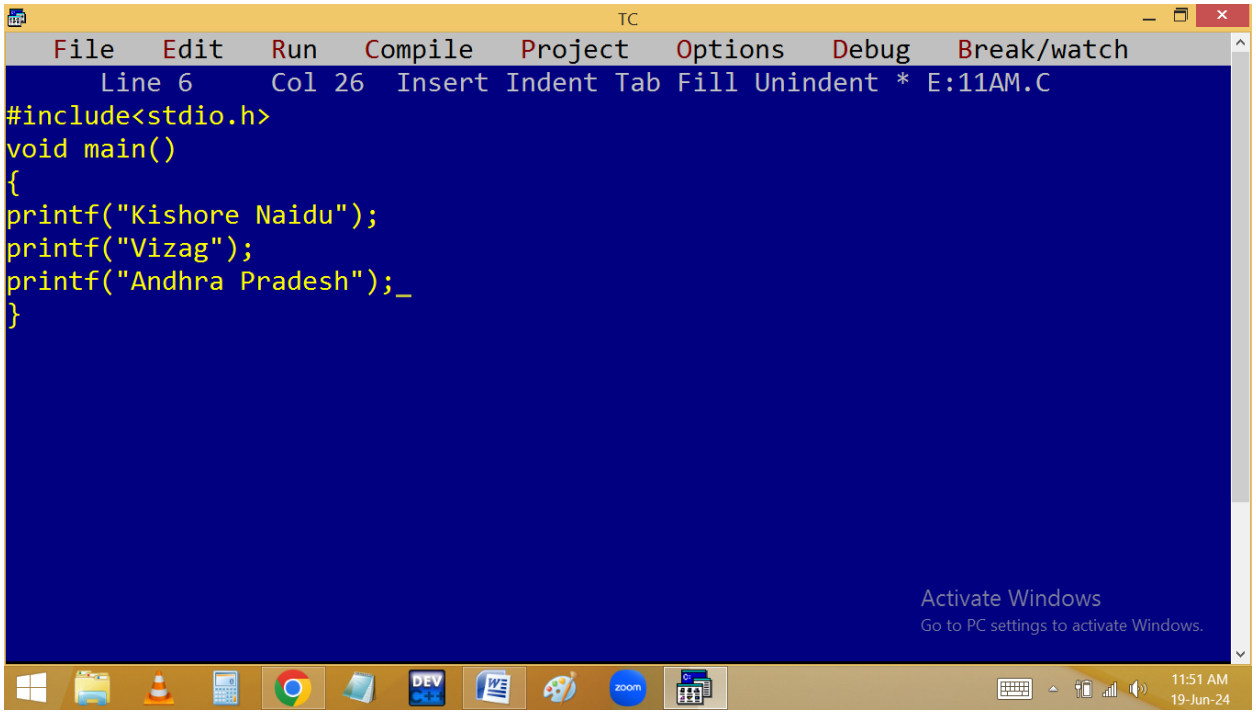
Eg: Write a c program to find the string length without using strlen() or a loop.

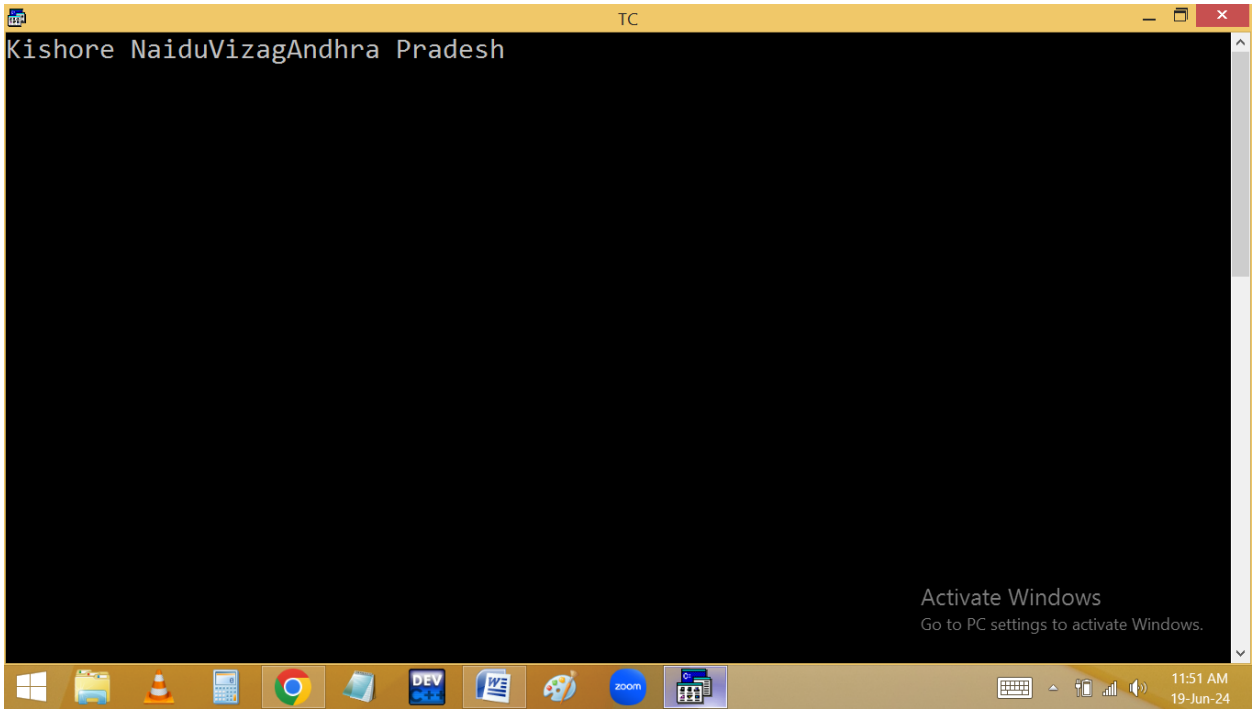


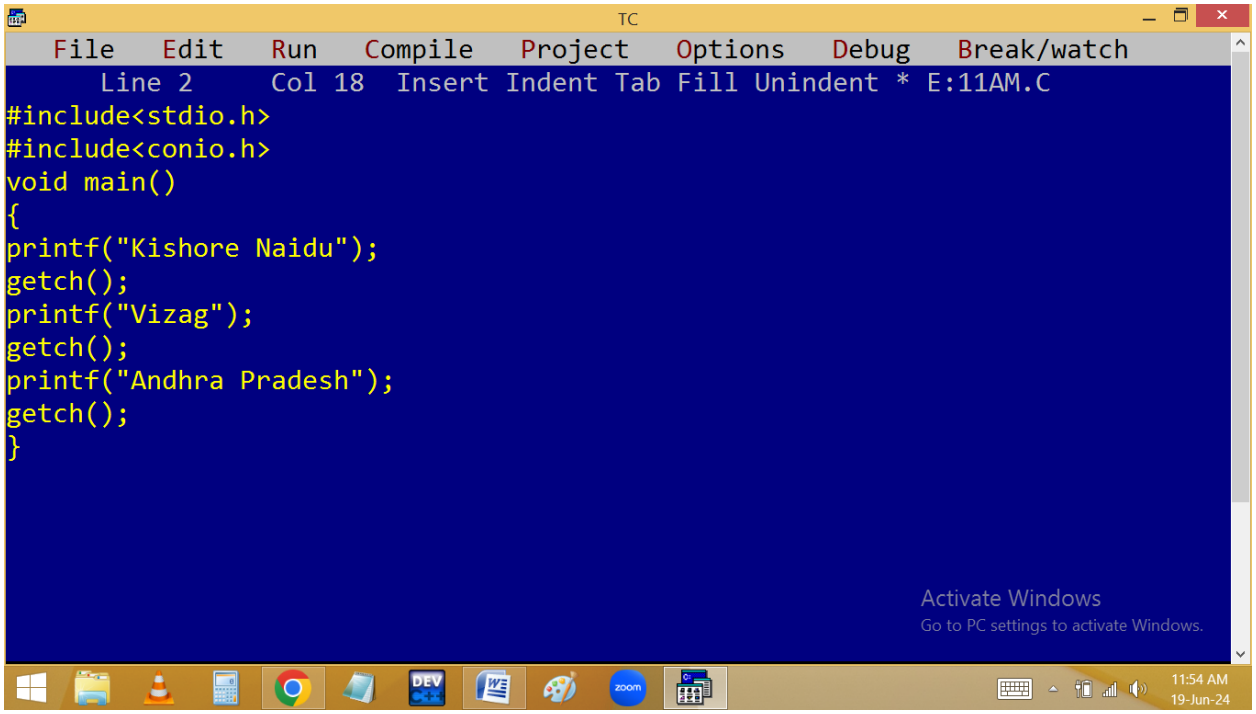


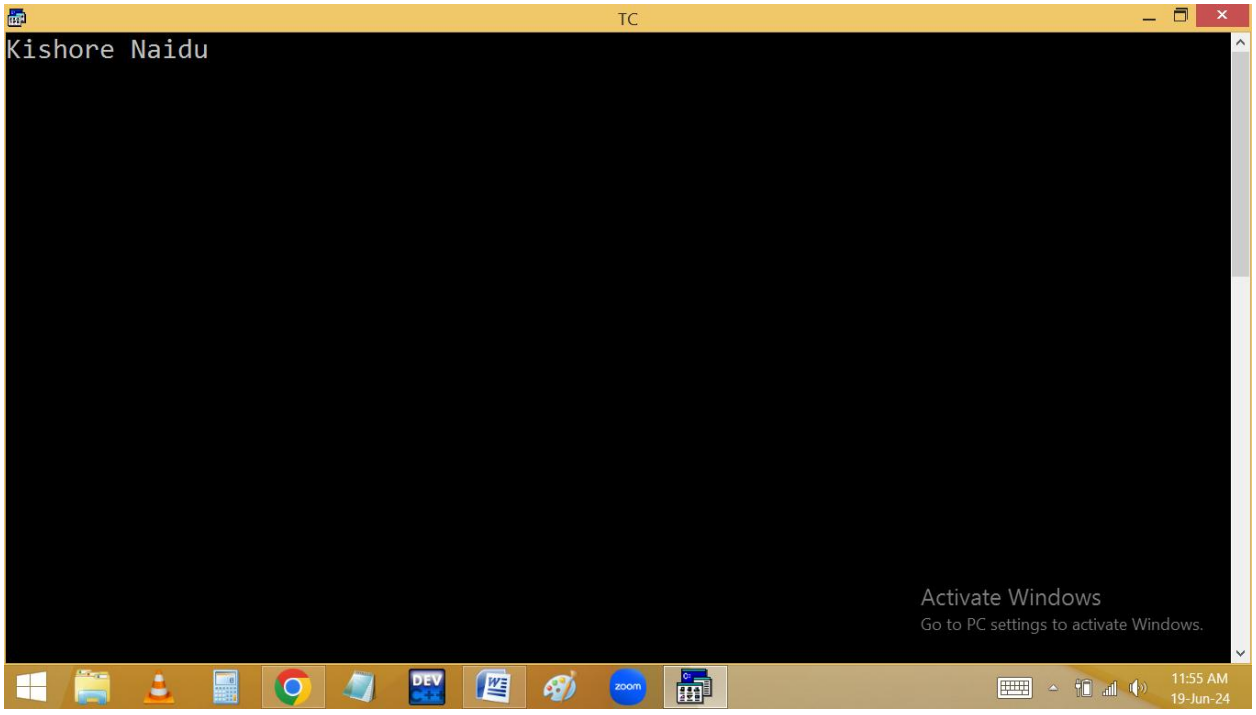

TC
#include<stdio.h>
#include<conio.h>
void main()
{
int a=10;
float b=1.2;
clrscr();
printf("Good morning\n"); /* unformatted */
printf("a=\n");
printf("a=%d\n",a); /* formatted */
printf("a=%d b=%f\n",a,b);
printf("sum=%f\n",a+b);
printf("a=%d, b=%f, sum=%f\n",a,b,a+b);
printf("%d + %f = %f\n",a,b,a+b);
printf("%d",a);
getch();
}
Activate Windows
Go to PC settings to activate Windows.
11:49 AM
19-Jun-24

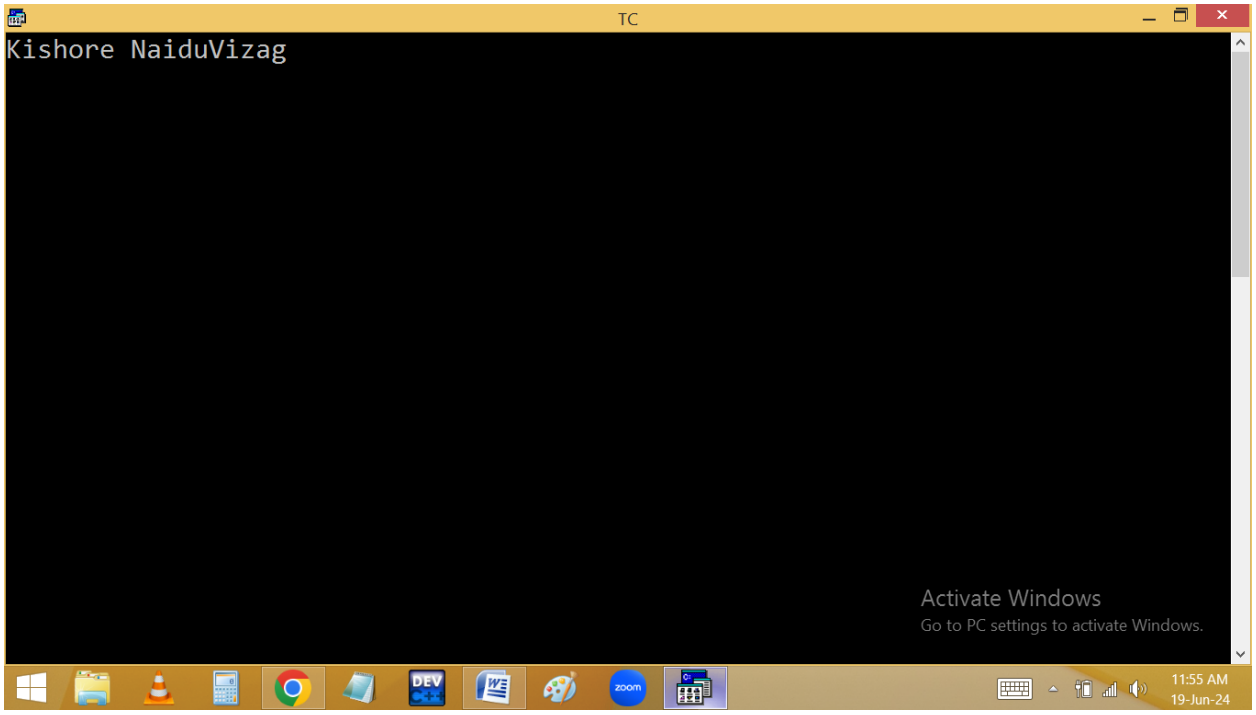

TC
Good morning
a=
a=10
a=10 b=1.200000
sum=11.200000
a=10, b=1.200000, sum=11.200000
10 + 1.200000 = 11.200000
10
Page: 3 of 3
Words: 139
100%
11:50 AM
19-Jun-24

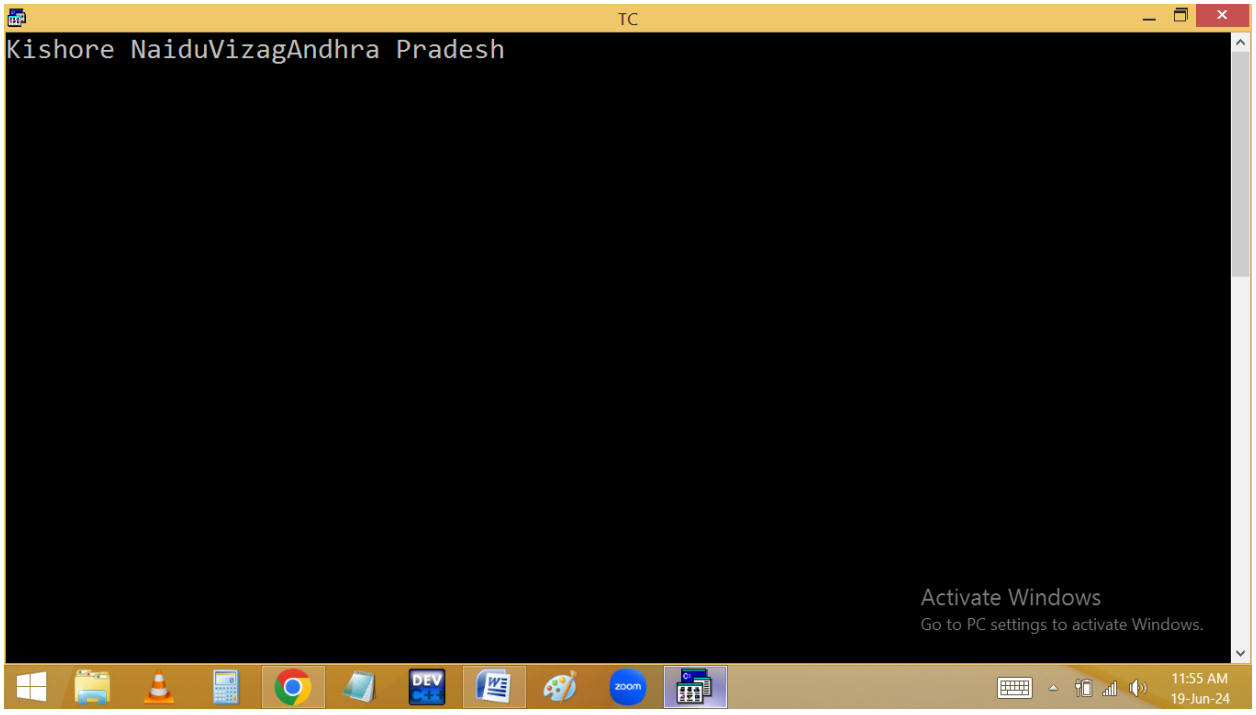

TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 26 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
void main()
{
printf("Kishore Naidu");
printf("Vizag");
printf("Andhra Pradesh");_
}
Activate Windows
Go to PC settings to activate Windows.
11:51 AM
19-Jun-24

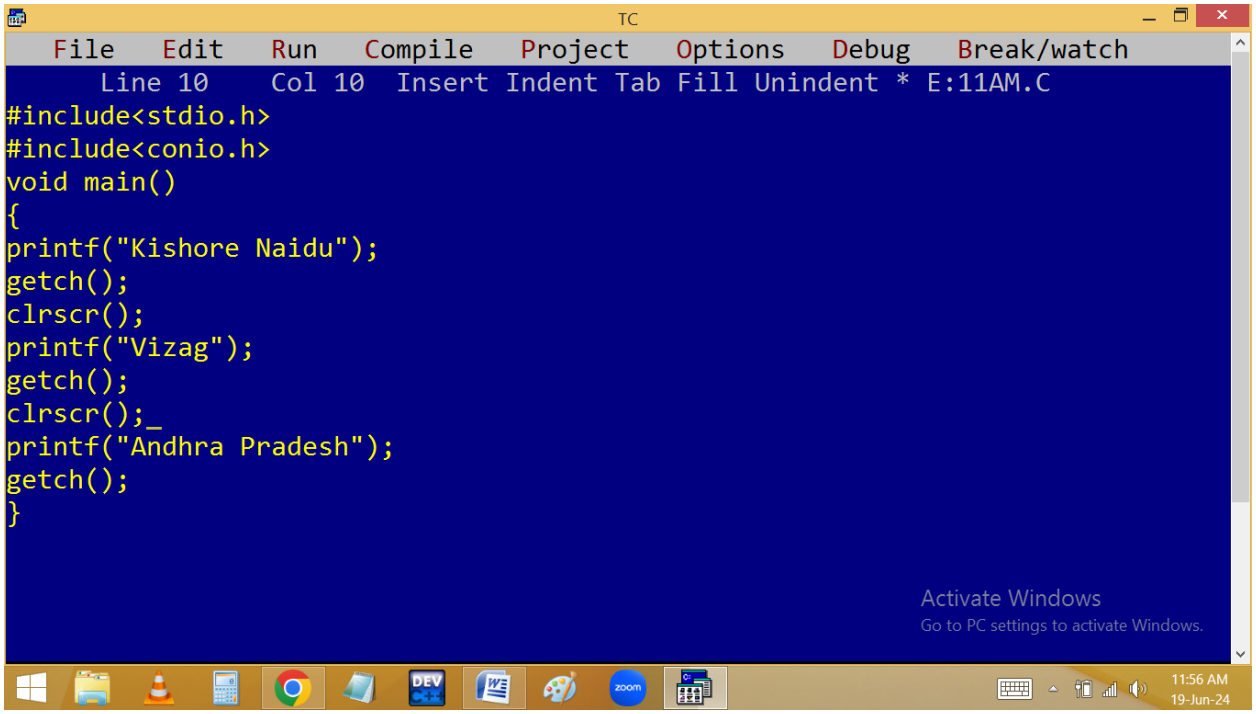

TC
Kishore NaiduVizagAndhra Pradesh
Activate Windows
Go to PC settings to activate Windows.
11:51 AM
19-Jun-24

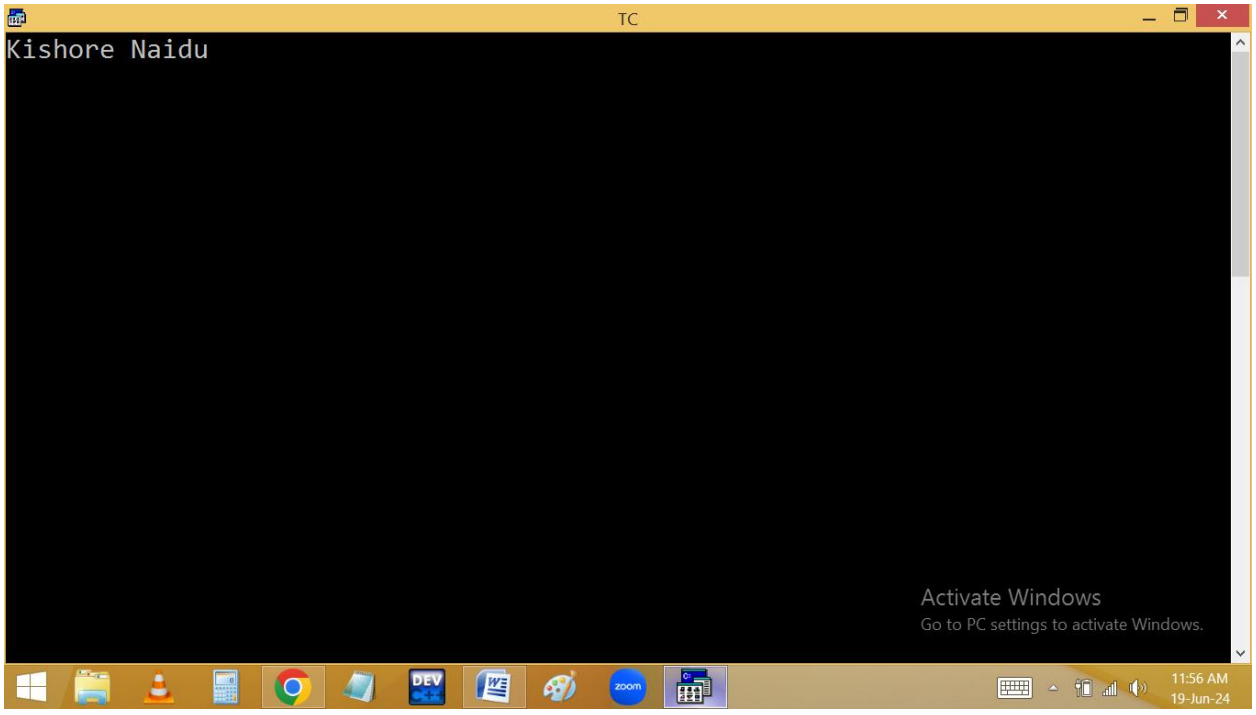

TC
File Edit Run Compile Project Options Debug Break/watch
Line 2 Col 18 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
printf("Kishore Naidu");
getch();
printf("Vizag");
getch();
printf("Andhra Pradesh");
getch();
}
Activate Windows
Go to PC settings to activate Windows.
11:54 AM
19-Jun-24

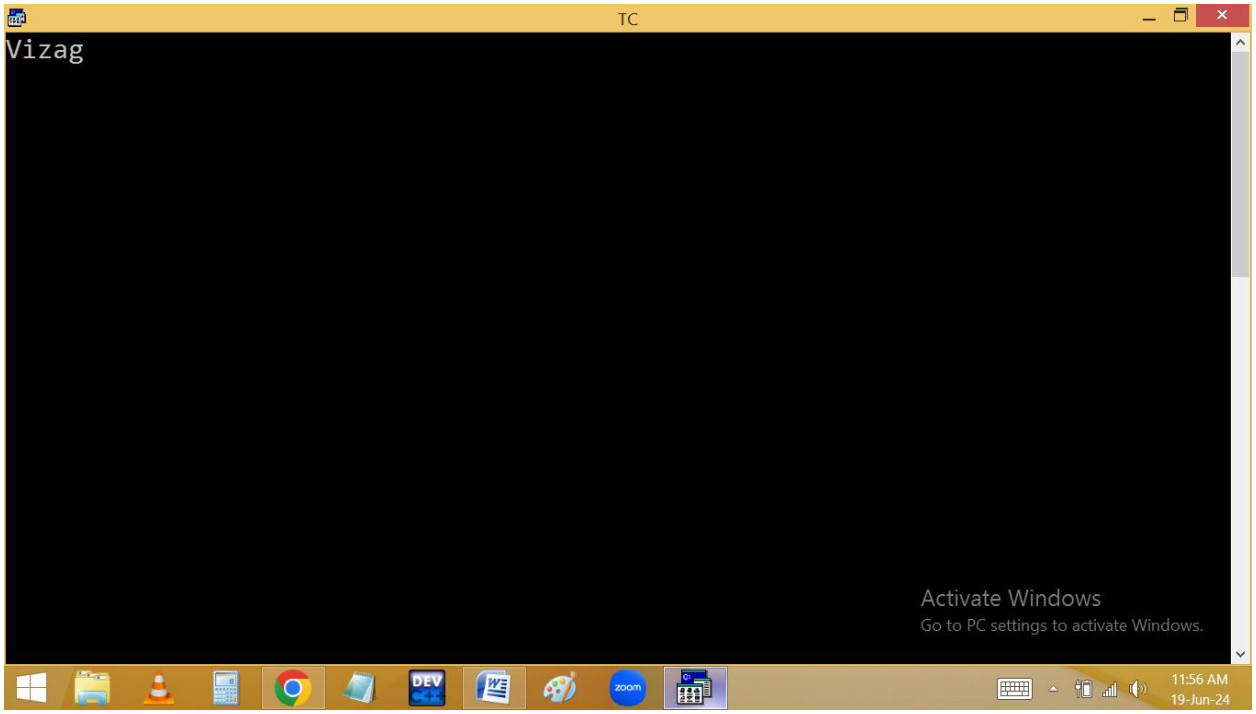

TC
Kishore Naidu
Activate Windows
Go to PC settings to activate Windows.
11:55 AM
19-Jun-24

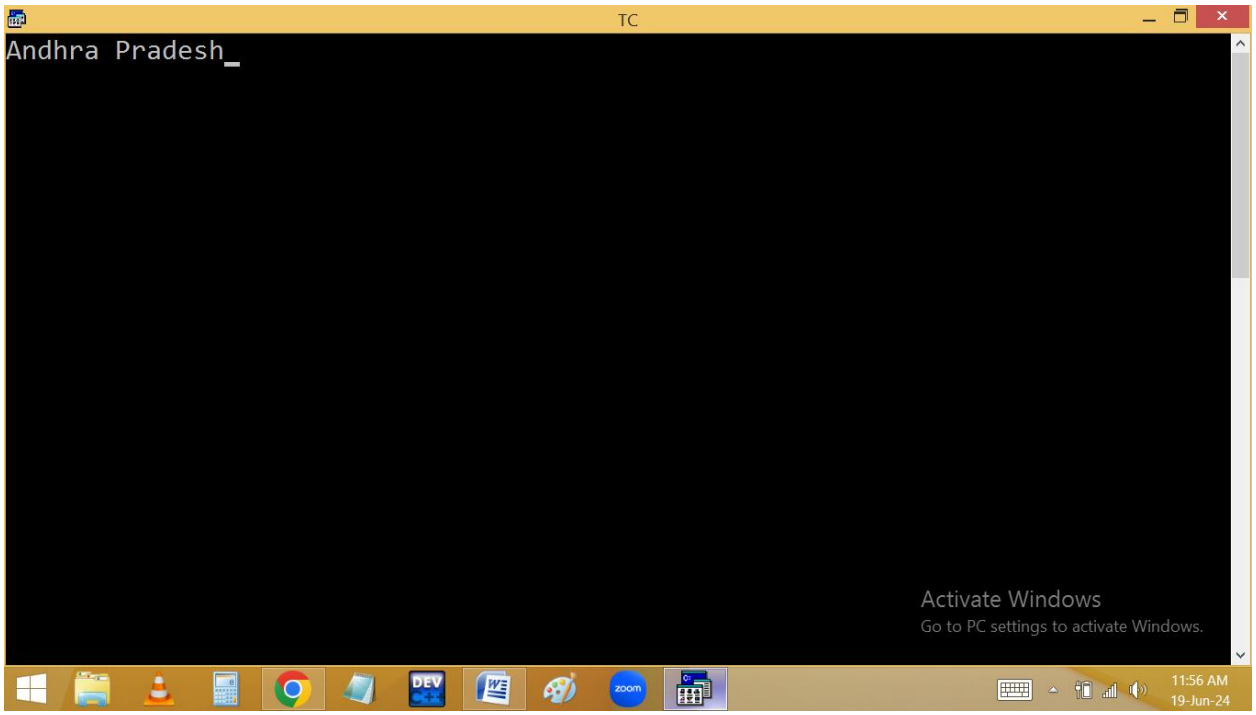

TC
Kishore NaiduVizag
Activate Windows
Go to PC settings to activate Windows.
11:55 AM
19-Jun-24

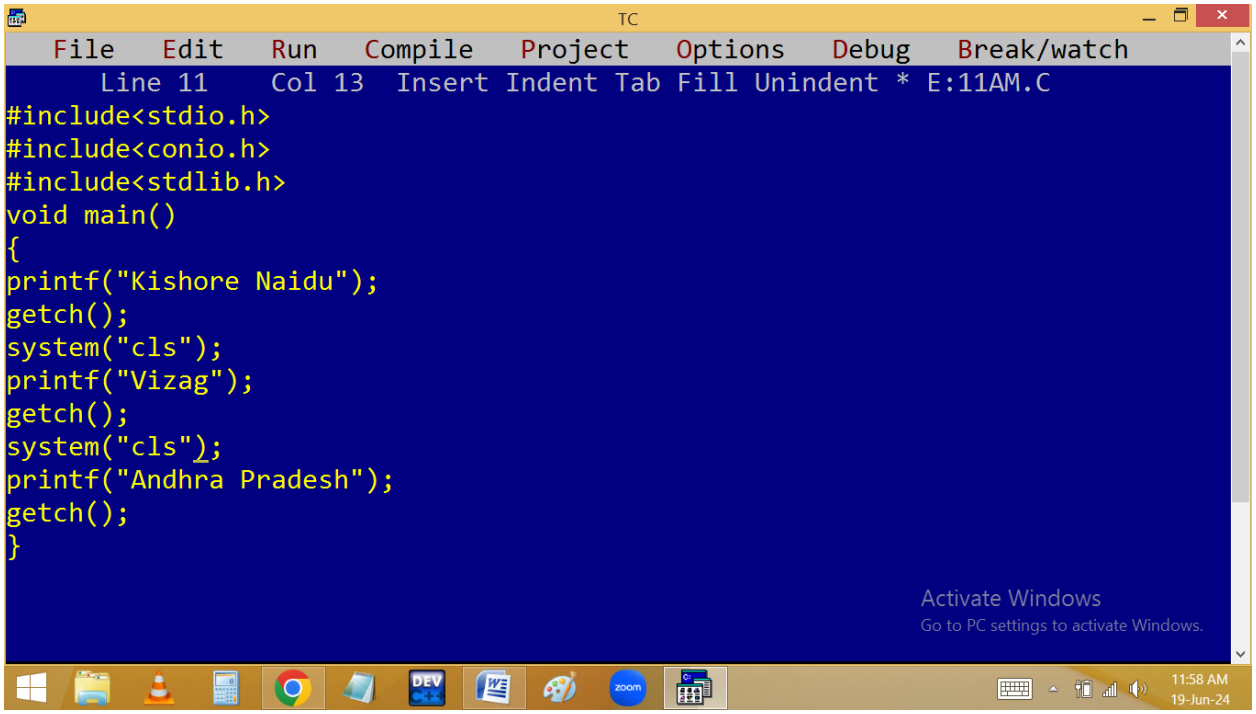

TC
Kishore NaiduVizagAndhra Pradesh
Activate Windows
Go to PC settings to activate Windows.
11:55 AM
19-Jun-24

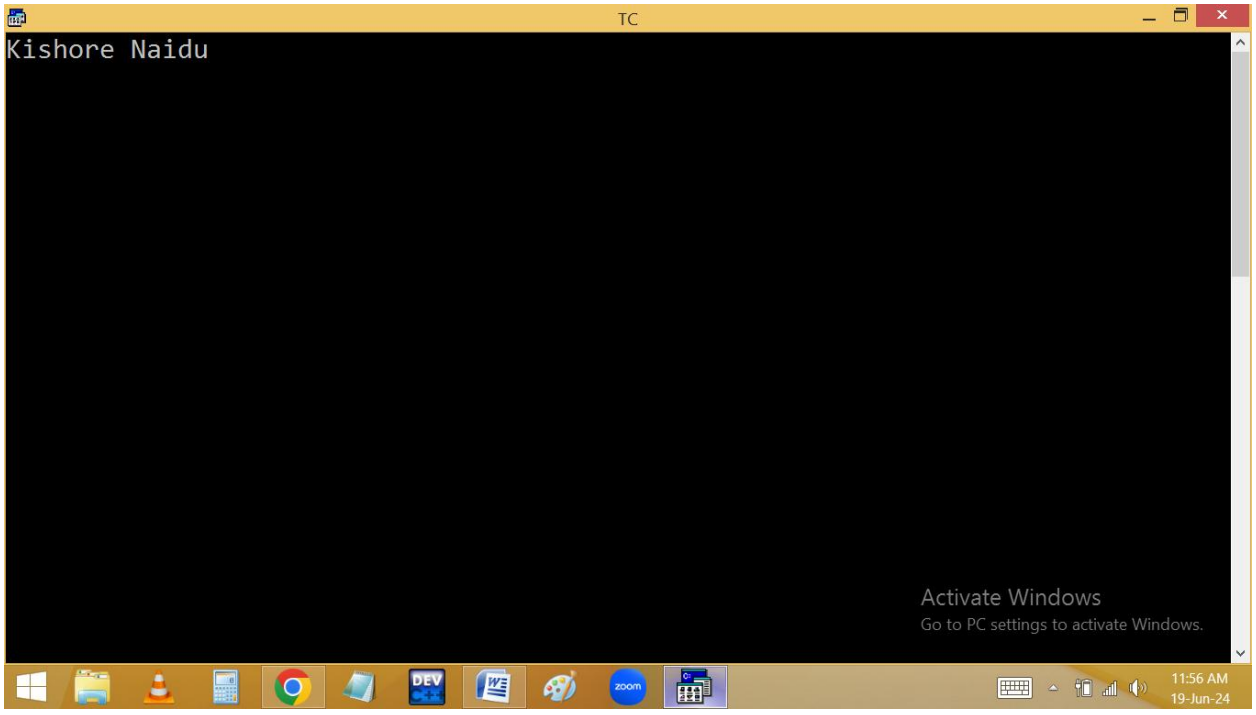

TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 10 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
printf("Kishore Naidu");
getch();
clrscr();
printf("Vizag");
getch();
clrscr();
printf("Andhra Pradesh");
getch();
}
Activate Windows
Go to PC settings to activate Windows.
11:56 AM
19-Jun-24

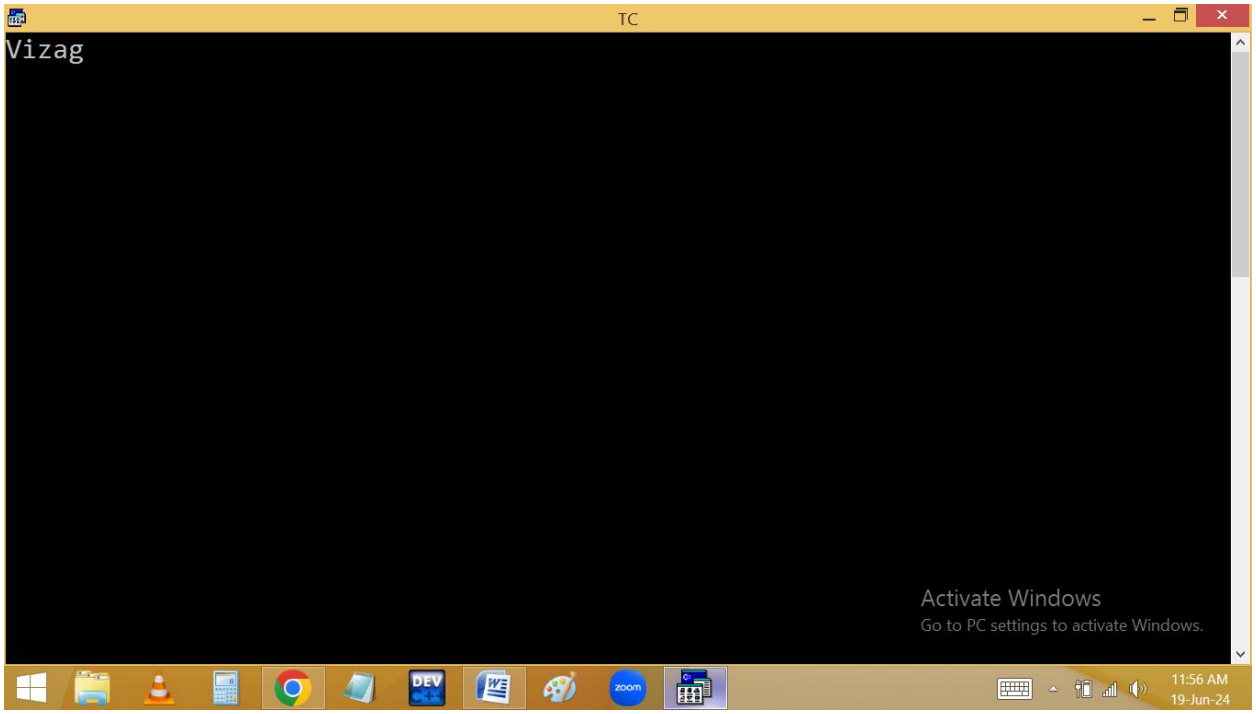

TC
Kishore Naidu
Activate Windows
Go to PC settings to activate Windows.
11:56 AM
19-Jun-24

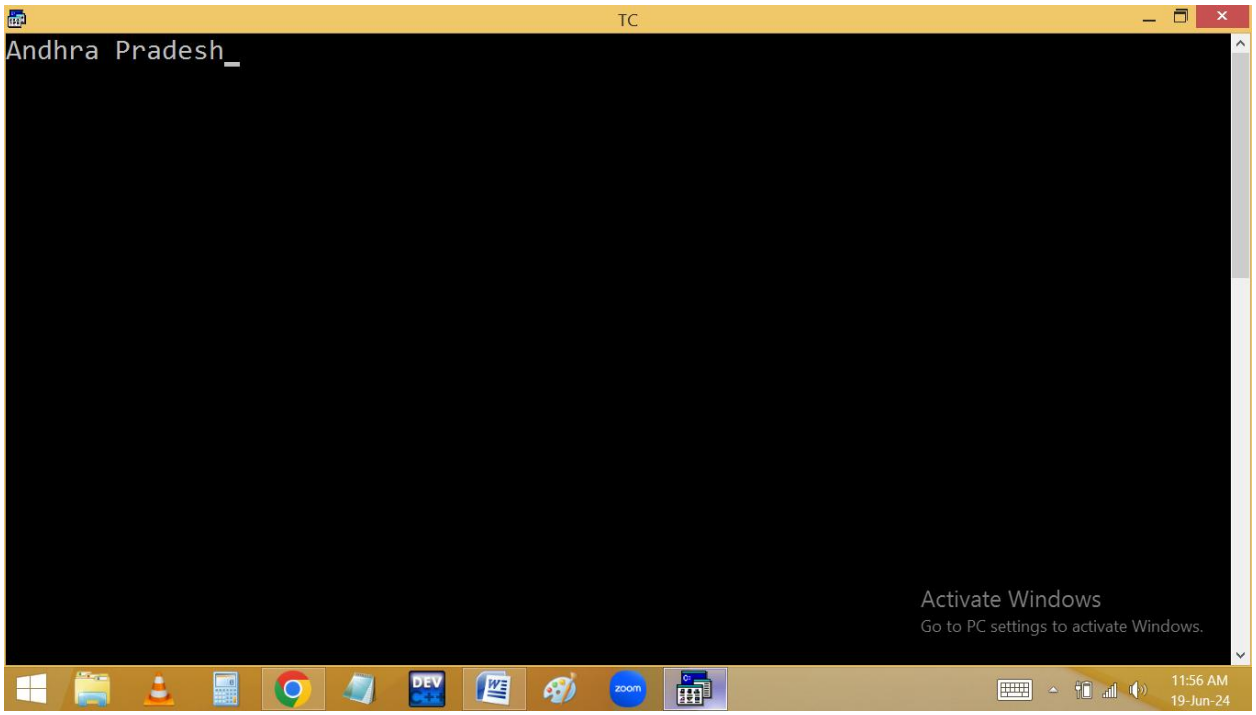

TC
Vizag
Activate Windows
Go to PC settings to activate Windows.
11:56 AM
19-Jun-24


TC
Andhra Pradesh
Activate Windows
Go to PC settings to activate Windows.
11:56 AM
19-Jun-24


TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 13 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
printf("Kishore Naidu");
getch();
system("cls");
printf("Vizag");
getch();
system("cls");
printf("Andhra Pradesh");
getch();
}
Activate Windows
Go to PC settings to activate Windows.
11:58 AM
19-Jun-24


TC
Kishore Naidu
Activate Windows
Go to PC settings to activate Windows.
11:56 AM
19-Jun-24





In DevC++:

```
#include<conio.h>
```

```
#include<stdlib.h>
main()
{
	system("cls");
	printf("Kishore naidu");
	getch();
	system("cls");
	printf("ap");
	getch();
}
// f9 - compile
// f10 - run
// f11 - compile + run
```

BACK SLASH / ESCAPE SEQUENCE CHARACTERS

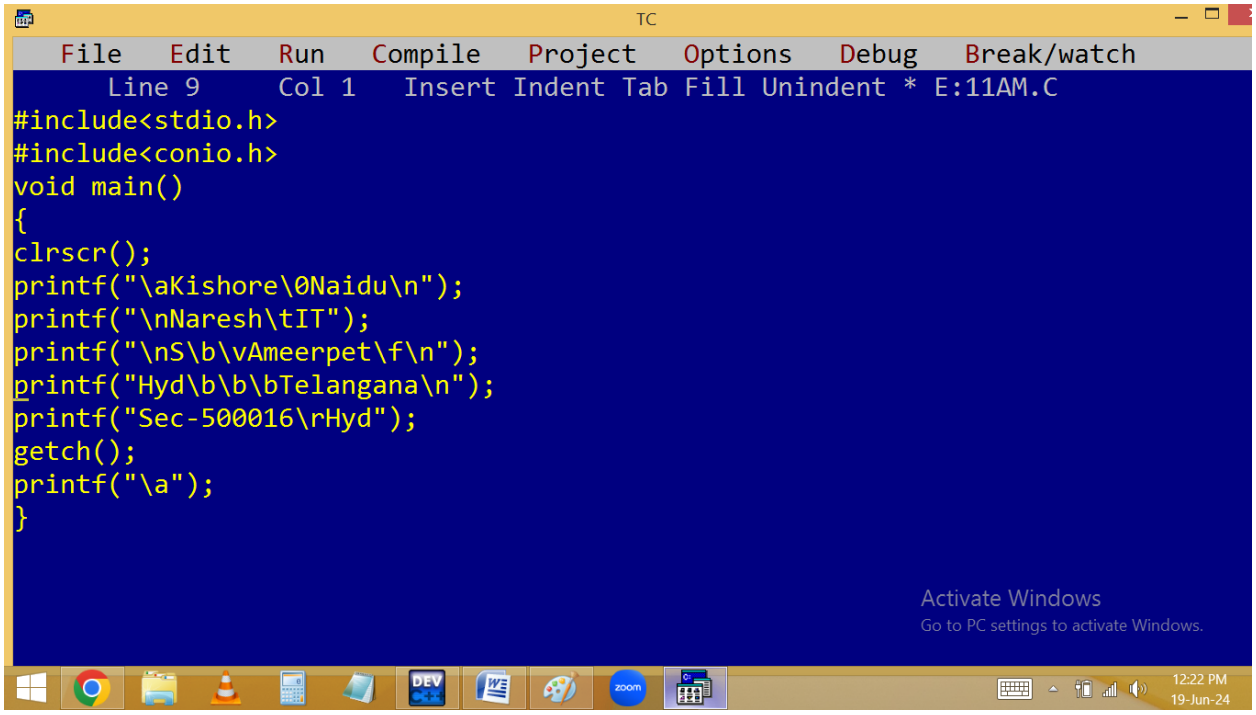
They started with back slash [\ ].

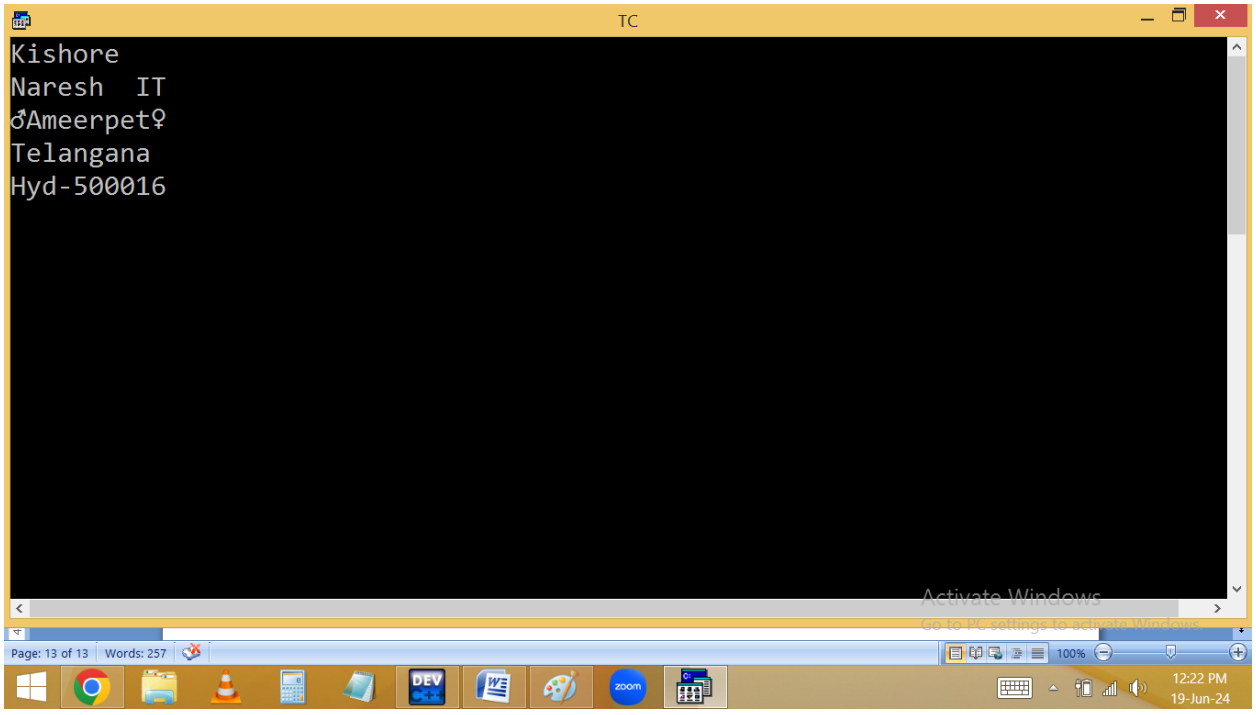
They used to format the outputs.

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

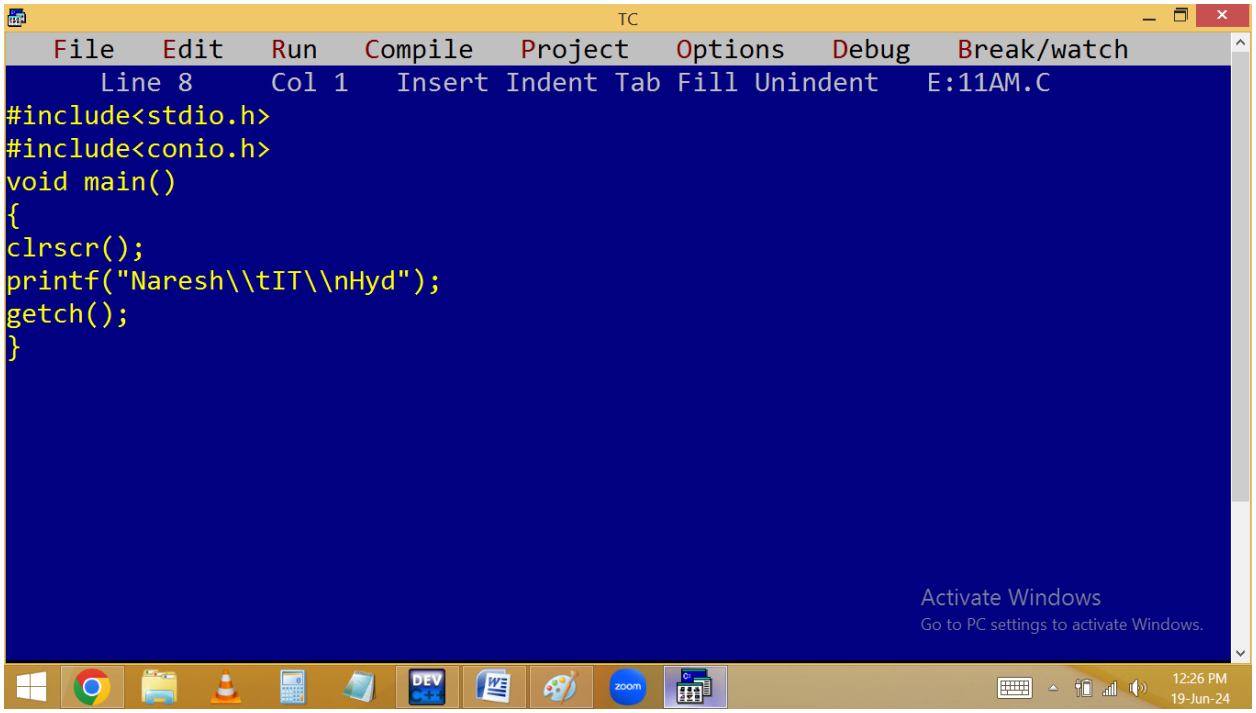
Each back slash character=**1 byte i.e. one character.**

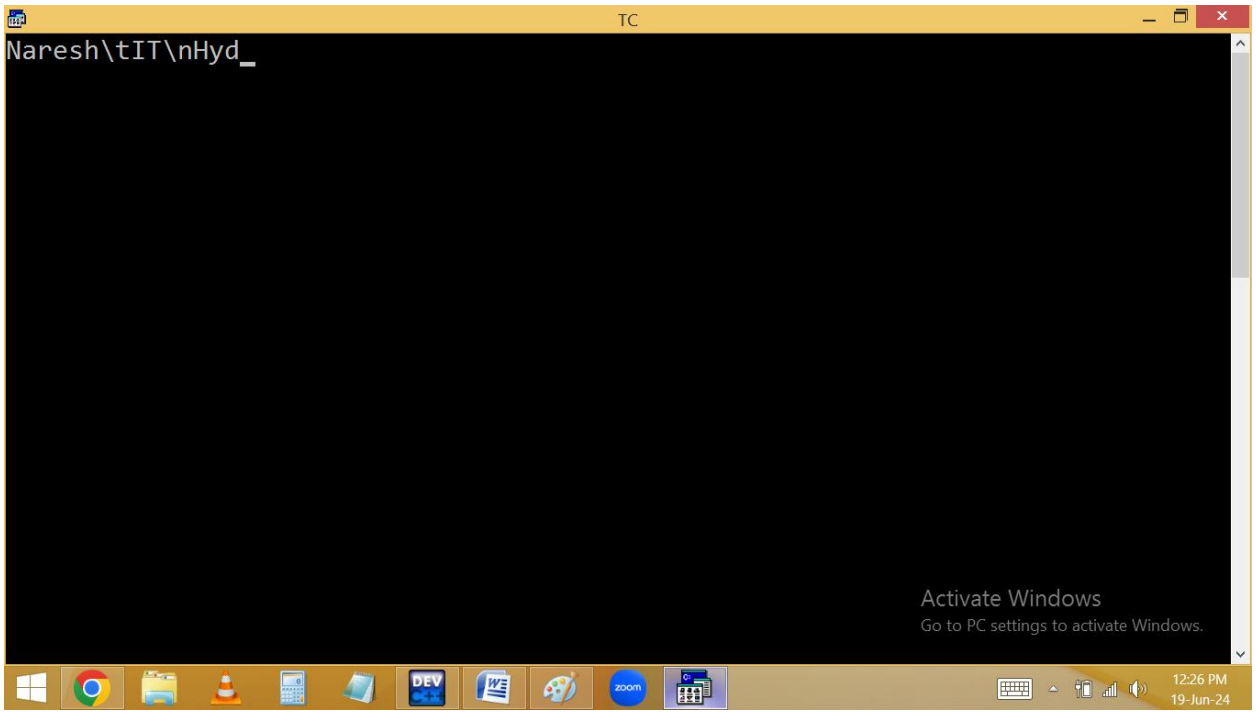
BACK SLASH CHARACTER	DESCRIPTION
\a	Alert [beep sound]
\b	Back space
\n	New line character
\t	Tab space
\r	Carriage return[beginning of line]
\f	Form feed ♀
\v	Vertical tab ♂
\0	Null char
\\	\ [invalid]
\k	k [invalid]

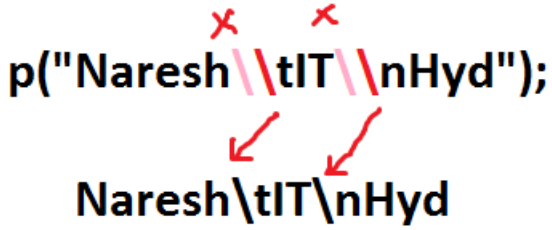

TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 1 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("\aKishore\0Naidu\n");
printf("\nNaresh\tIT");
printf("\nS\b\vAmeerpet\f\n");
printf("Hyd\b\b\bTelangana\n");
printf("Sec-500016\rHyd");
getch();
printf("\a");
}
Activate Windows
Go to PC settings to activate Windows.
12:22 PM
19-Jun-24

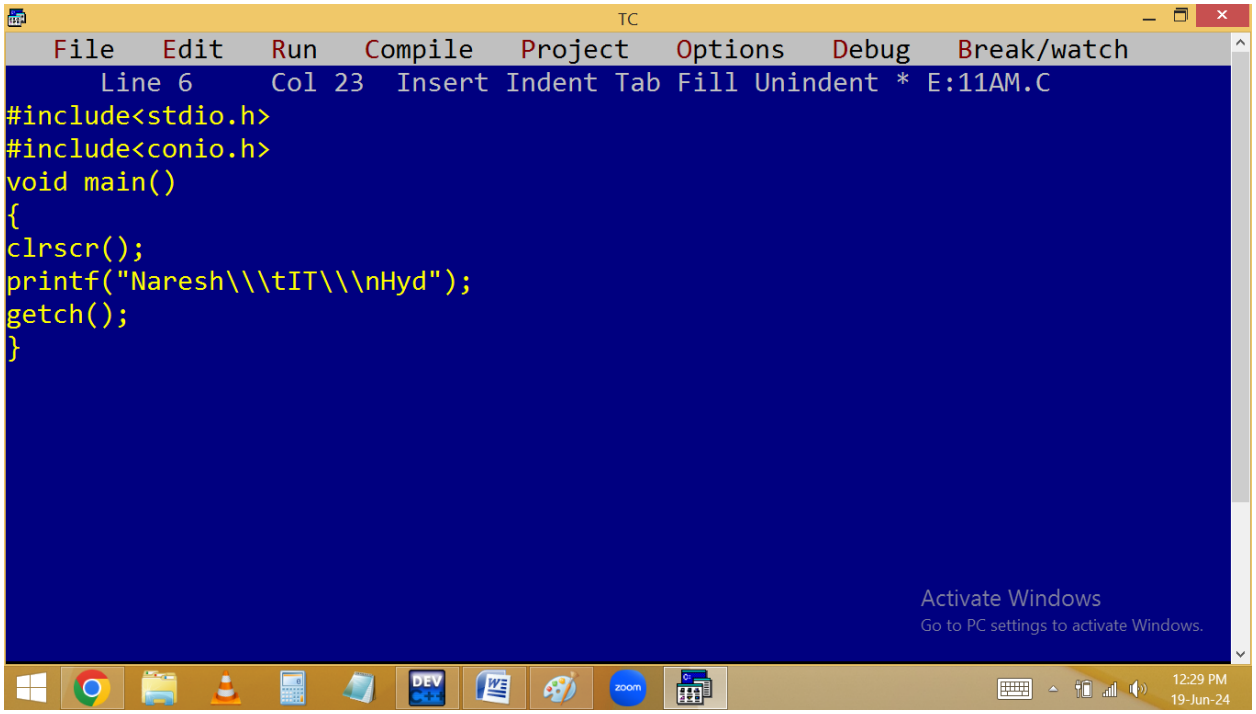

TC
Kishore
Naresh IT
♂Ameerpet♀
Telangana
Hyd-500016
Activate Windows
Page: 13 of 13
Words: 257
100%
12:22 PM
19-Jun-24

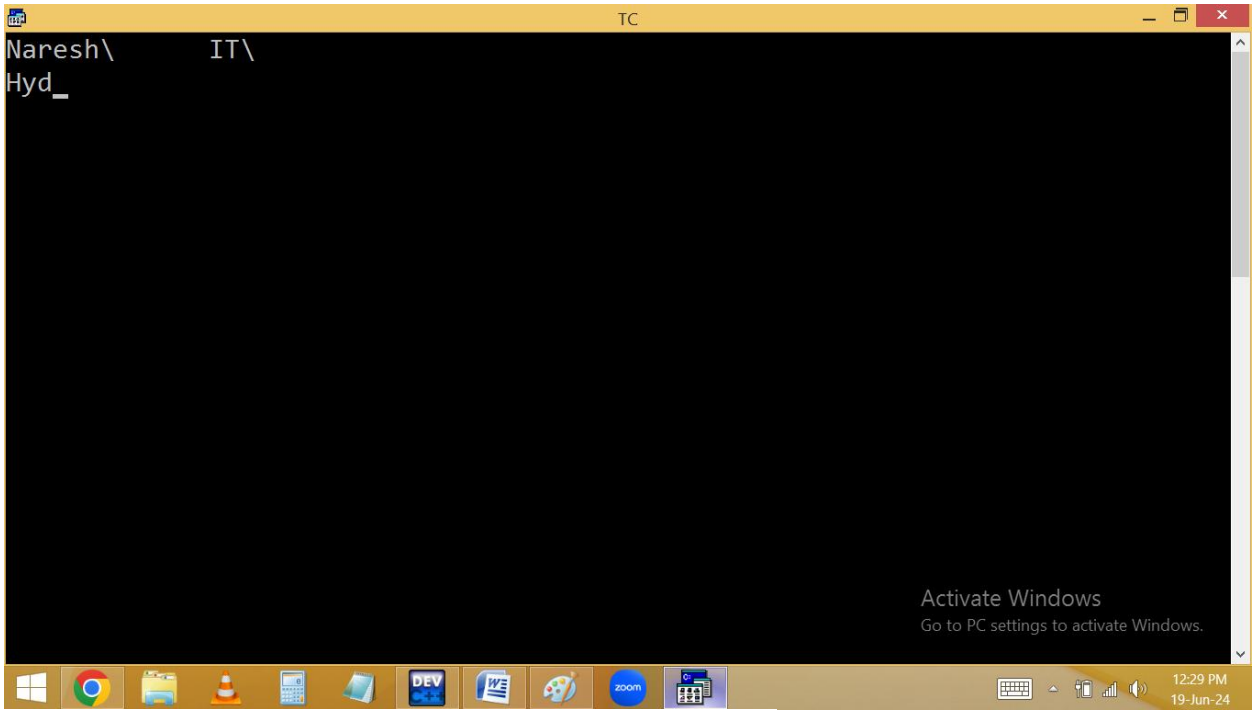
Write a c program to print \t and \n

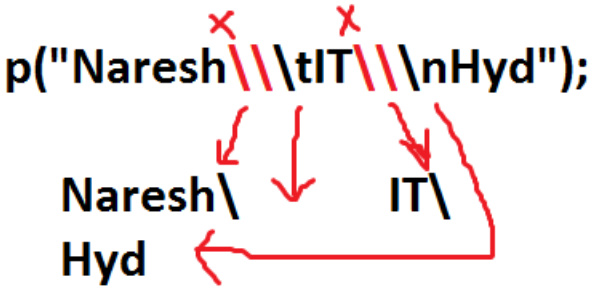


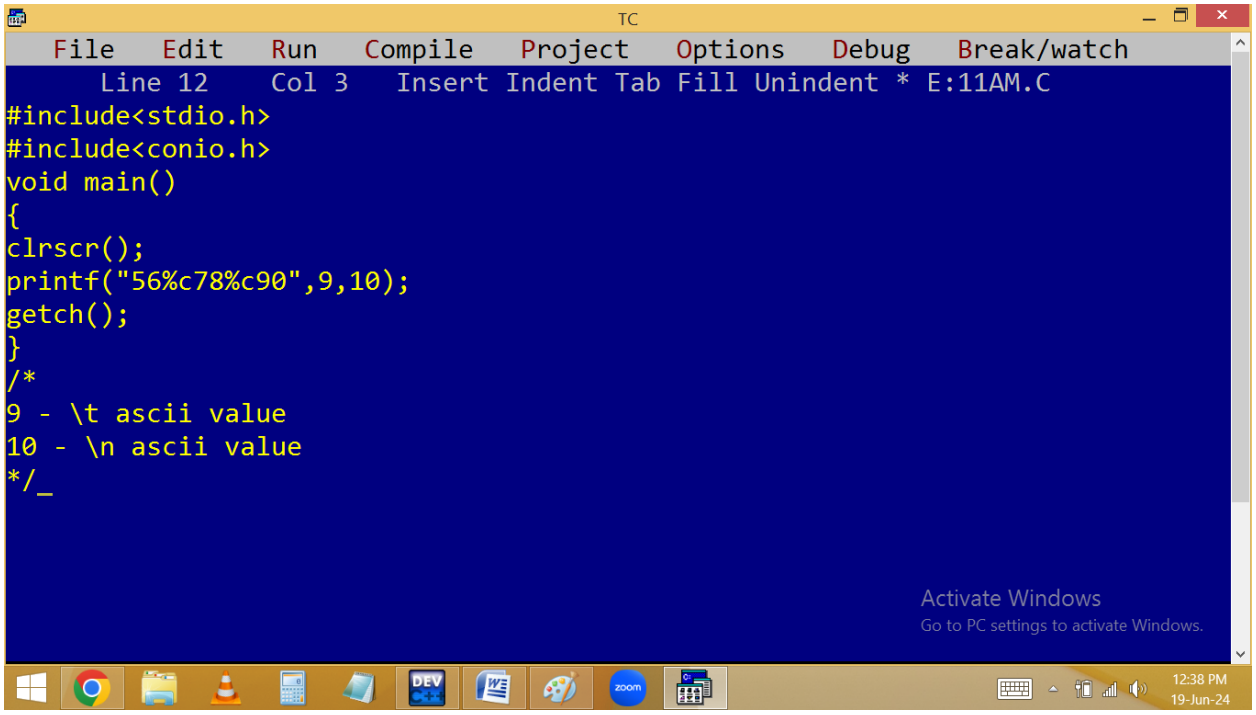


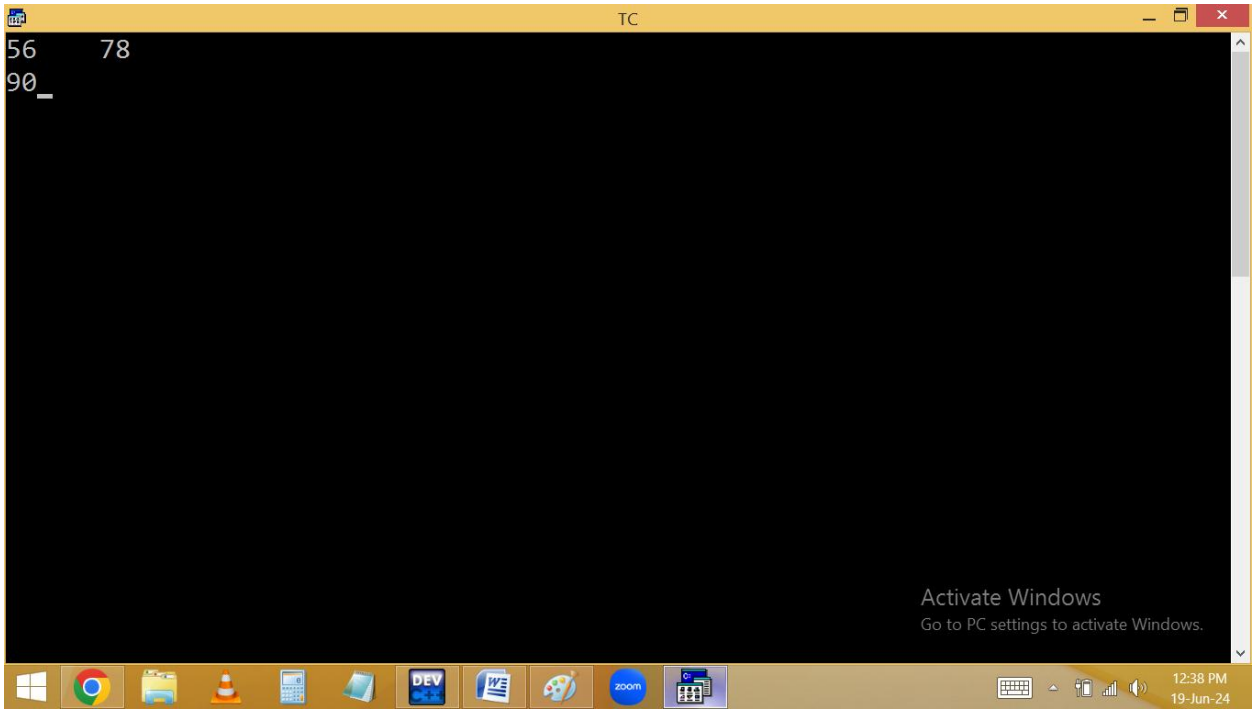

p("Naresh\\tIT\\nHyd");
Naresh\tIT\nHyd

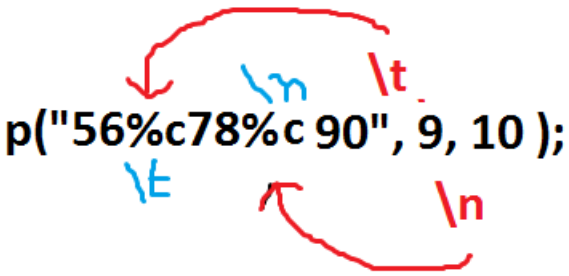

TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 23 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("Naresh\\\tIT\\\nHyd");
getch();
}
Activate Windows
Go to PC settings to activate Windows.
12:29 PM
19-Jun-24

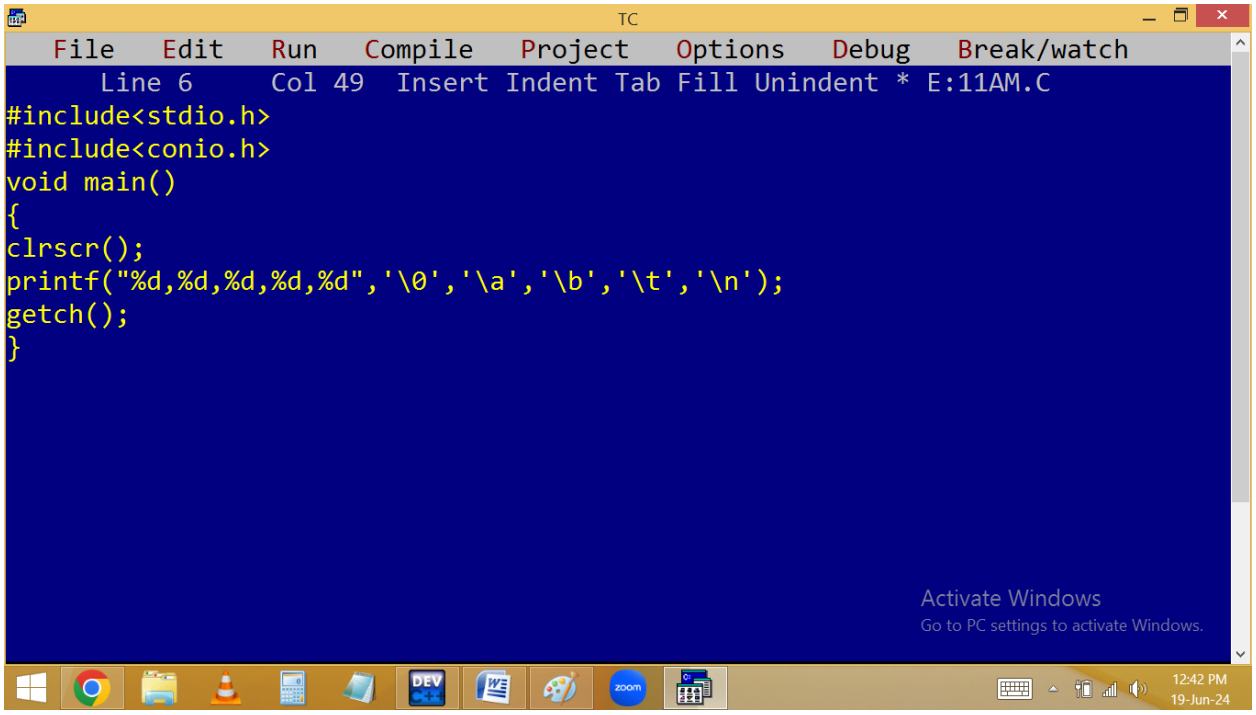

TC
Naresh\ IT\
Hyd
Activate Windows
Go to PC settings to activate Windows.
12:29 PM
19-Jun-24

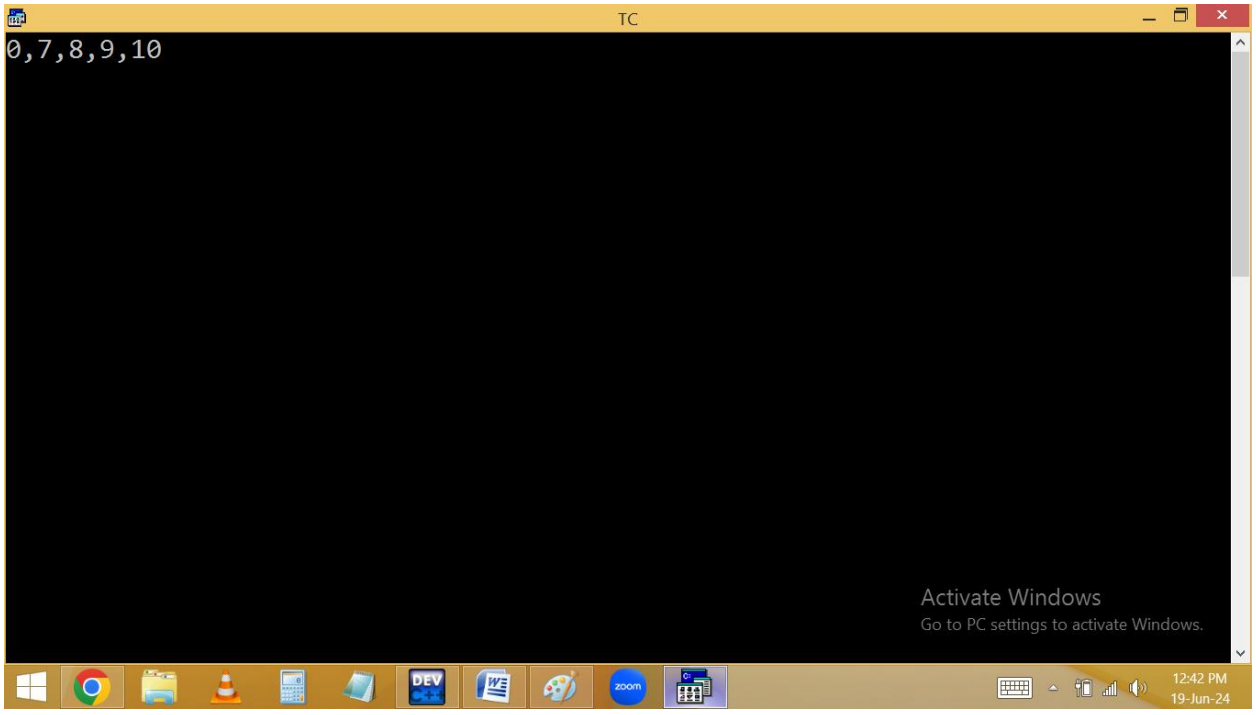

p("Naresh\\\tIT\\\nHyd");
Naresh\
IT\
Hyd

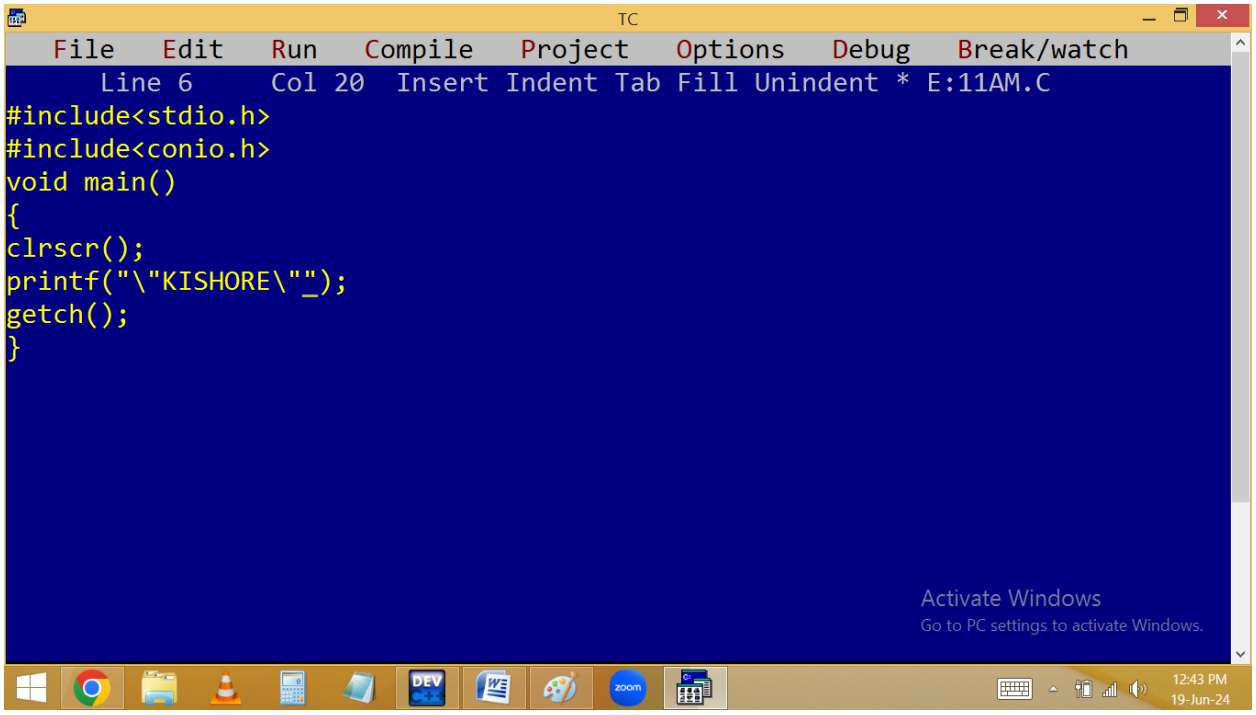

TC
File Edit Run Compile Project Options Debug Break/watch
Line 12 Col 3 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("56%c78%c90",9,10);
getch();
}
/*
9 - \t ascii value
10 - \n ascii value
*/
Activate Windows
Go to PC settings to activate Windows.
12:38 PM
19-Jun-24

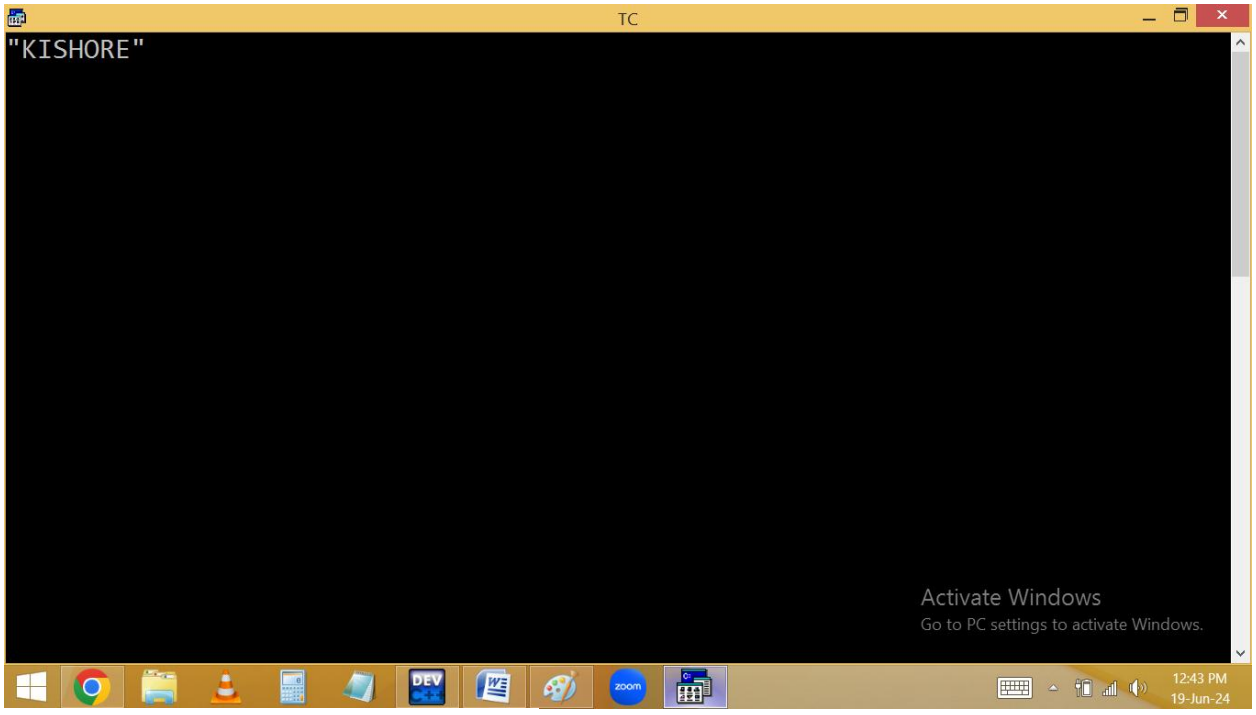

TC
56 78
90
Activate Windows
Go to PC settings to activate Windows.
12:38 PM
19-Jun-24


\n
\t
p("56%c78%c 90", 9, 10);
\t
\n

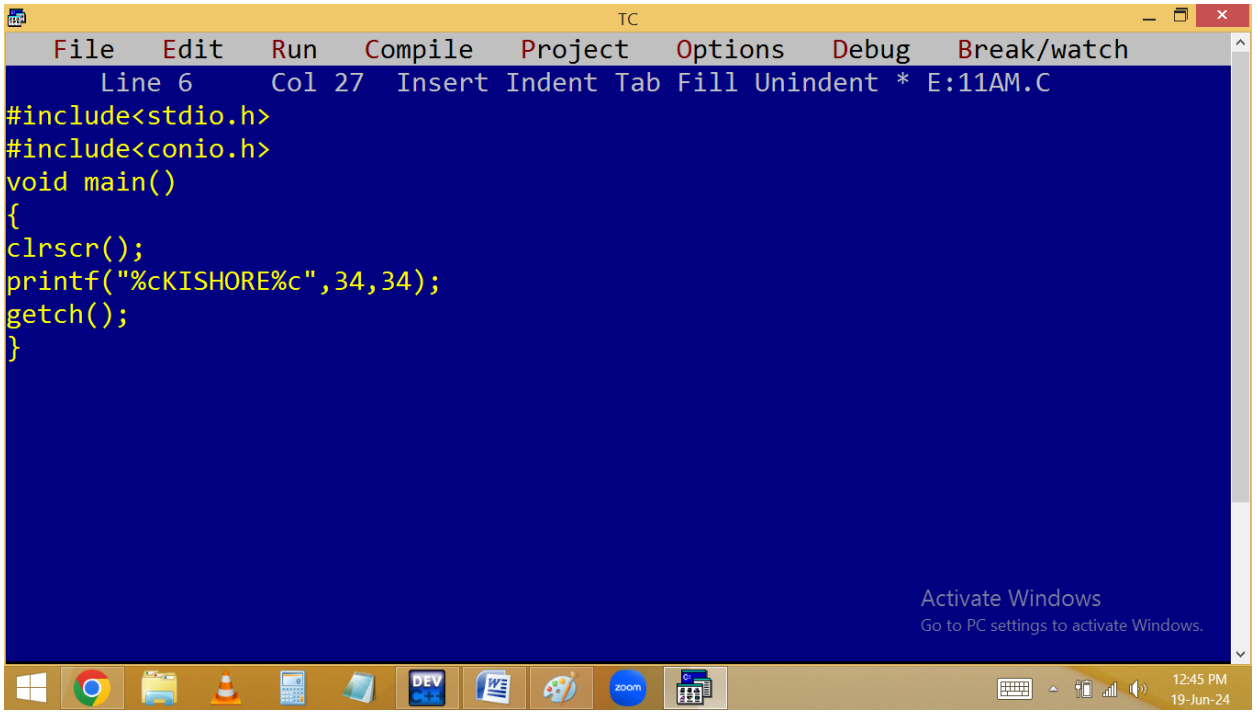

TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 49 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d,%d,%d,%d,%d",'\0','\a','\b','\t','\n');
getch();
}
Activate Windows
Go to PC settings to activate Windows.
12:42 PM
19-Jun-24

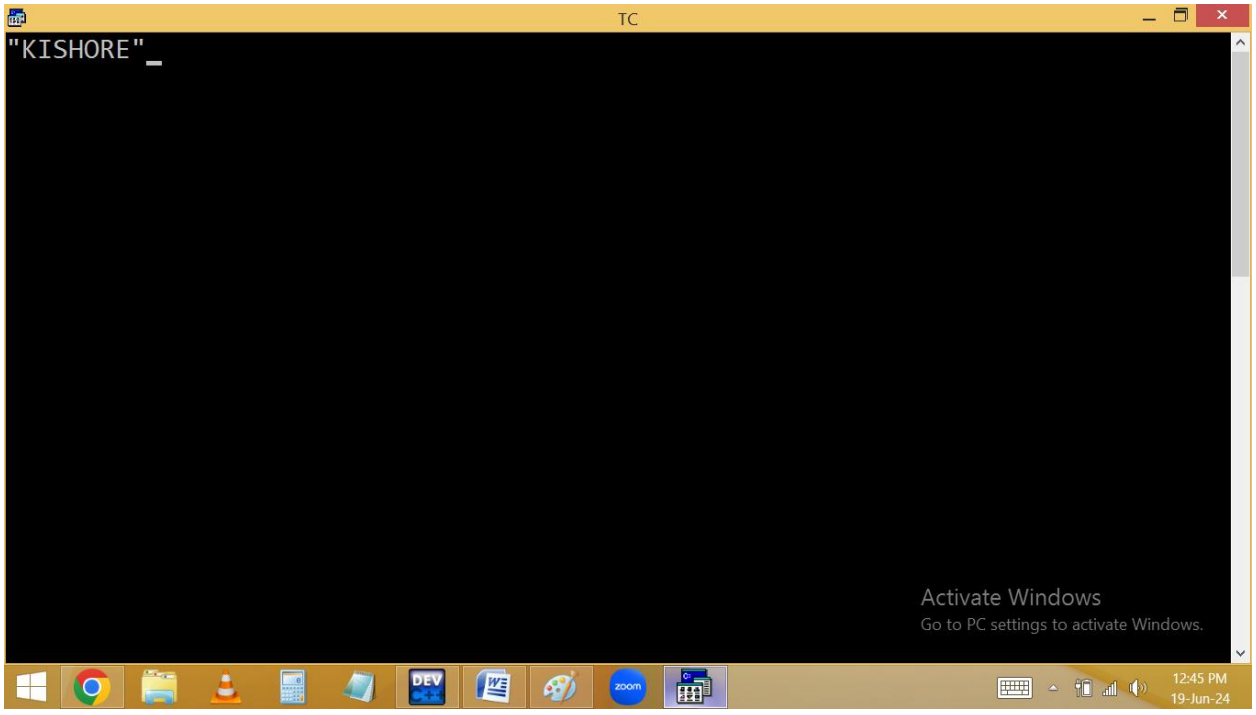

TC
0,7,8,9,10
Activate Windows
Go to PC settings to activate Windows.
12:42 PM
19-Jun-24


TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 20 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("\"KISHORE\"");
getch();
}
Activate Windows
Go to PC settings to activate Windows.
12:43 PM
19-Jun-24


TC
"KISHORE"
Activate Windows
Go to PC settings to activate Windows.
12:43 PM
19-Jun-24

P("\"KISHORE\"");


TC
File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 27 Insert Indent Tab Fill Unindent * E:11AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%cKISHORE%c",34,34);
getch();
}
Activate Windows
Go to PC settings to activate Windows.
12:45 PM
19-Jun-24


TC
"KISHORE"
Activate Windows
Go to PC settings to activate Windows.
12:45 PM
19-Jun-24