

if: It is a decision making statement.

It is used to check the given condition / expression is true or false.

If condition true then only if allows to execute the statements in if block { }.

Note: In C other than 0 anything is 1 i.e. true.

We are using 4 types of if conditions.

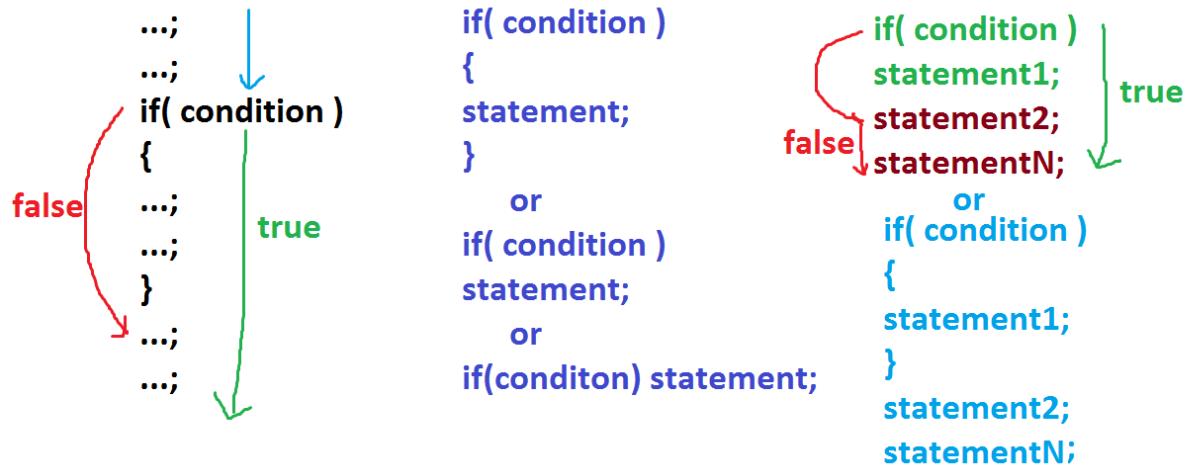
1. Simple if
2. If..else
3. If..else if ladder
4. Nested if.

simple if: when the program is having one condition or option then go for simple if.

If condition true statements in if block { } are executed and later outside statements executed.

If condition false, only the outside statements executed.

Syntax:



```

File Edit Run Compile Project Options Debug Break/watch
Error: Expression syntax in function main
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* Error */

```

The screenshot shows a terminal window titled "TC" running on a Windows operating system. The window displays an error message: "Error: Expression syntax in function main". The code shown is a C program with a syntax error in the if condition. The code includes #include directives for stdio.h and conio.h, a main function, and a block of code that prints "a", "b", and "c" and waits for input. The error message points to the opening parenthesis of the if block.

TC

File Edit Run Compile Project Options Debug Break/watch

Error: Expression syntax in function main

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( if(5>1) )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* Error */
```

Activate Windows
Go to PC settings to activate Windows.

Page: 2 of 2 | Words: 109 |

130% 2:35 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch

Error: Illegal use of floating point in function main

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 5%1.0 )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* Error */
```

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Page: 3 of 3 | Words: 109 |

130% 2:36 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch

Error: Division by zero in function main

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 5/0 )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* Error */
```

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Page: 3 of 3 | Words: 109 |



130% 2:37 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch

Line 14 Col 7 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 'a' )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* abc_ */
```

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Page: 3 of 3 | Words: 109 |



2:39 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 4 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 'a'/'b' )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* c */
```

Activate Windows
Go to PC settings to activate Windows.



2:40 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 6 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( -1.1 )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* abcc */
```

Activate Windows
Go to PC settings to activate Windows.



2:42 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 6 Col 9 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( '0' _)
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* abc */
```

Activate Windows
Go to PC settings to activate Windows.



2:43 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 11 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( printf("kishore")==sizeof("kishore")  )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* kishorec */
```

Activate Windows
Go to PC settings to activate Windows.



2:45 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 4 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( printf("")&&printf("kishore") )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* c */
```

Activate Windows
Go to PC settings to activate Windows.



2:47 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 12 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( printf("Kishore") || printf("Naidu") )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* Kishoreabc */
```

Activate Windows
Go to PC settings to activate Windows.



2:48 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 16 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( printf("Kishore") && printf("Naidu") )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* KishoreNaiduabc */
```

Activate Windows
Go to PC settings to activate Windows.



2:49 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 4 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( "Kishore">>"Naidu" )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* c */
```

Activate Windows
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2:59 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 6 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
a=0,1;
if( a )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* c */
```

Activate Windows
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3:01 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 7 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if(0,1)
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* abc_ */
```

Activate Windows
Go to PC settings to activate Windows.



3:02 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 15 Col 4 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
if(a==0)
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* c */
```

Activate Windows
Go to PC settings to activate Windows.



3:03 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 7 Col 16 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
if(a=(a=0,a++))_
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* c */
```

Activate Windows
Go to PC settings to activate Windows.



3:06 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 15 Col 6 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
if(a=(a=0,++a))
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* abc */
```

Activate Windows
Go to PC settings to activate Windows.



TC

File Edit Run Compile Project Options Debug Break/watch
Line 8 Col 7 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=0, b=1,c=2;
clrscr();
if(a)b=10;c=20; a=c+b;
printf("a=%d, b=%d, c=%d",a,b,c);
getch();
}
/* a=21, b=1, c=20 */
```

Activate Windows
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TC

File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 6 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=0, b=1,c=2;
clrscr();
if(a=5, printf("Hi"), printf(""))b=10;c=20; a=c+b;
printf("a=%d, b=%d, c=%d",a,b,c);
getch();
}
/* Hia=21, b=1, c=20 */
```

Activate Windows
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3:13 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 17 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=0, b=1,c=2;
clrscr();
if( sizeof("%d",printf("")) )b=10;c=20; a=c+b;
printf("a=%d, b=%d, c=%d",a,b,c);
getch();
}
/* a=30, b=10, c=20 */
```

Activate Windows
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3:16 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch

Error: Undefined symbol 'a' in function main

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( a==b )
{
printf("a");
printf("b");
}
printf("c");
getch();
}
/* Error */
```

Activate Windows
Go to PC settings to activate Windows.



TC

File Edit Run Compile Project Options Debug Break/watch

Line 14 Col 16 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 'a'>='b' )
{
printf("a");
printf("b");
printf("c");
}
getch();
}
/* Blank screen */
```

Activate Windows
Go to PC settings to activate Windows.



TC

File Edit Run Compile Project Options Debug Break/watch
Line 12 Col 6 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 'a'>='b' )
printf("a");
printf("b");
printf("c");
getch();
}
/* bc */
```

Activate Windows
Go to PC settings to activate Windows.



3:18 PM 31-Aug-23

TC

File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 2 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 'a'>='b' )
{
printf("a");
}_
printf("b");
printf("c");
getch();
}
/* bc */
```

Activate Windows
Go to PC settings to activate Windows.



3:19 PM 31-Aug-23

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 5 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if( 'A'>='b' );
{
printf("a");
printf("b");
printf("c");
}
getch();
}
/* abc */
```

Activate Windows
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Print ur name without using semicolon.

TC

File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 9 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
if_printf("kishore")
{
}
getch();_}
```

Activate Windows
Go to PC settings to activate Windows.

Windows Start button, File Explorer, Google Chrome, VLC Media Player, Notepad, Paint, Calculator, DEV, Z, Task View, Taskbar icons, Keyboard, Mouse, Network, Battery, 3:23 PM, 31-Aug-23

TC

kishore_-

Activate Windows
Go to PC settings to activate Windows.

Windows Start button, File Explorer, Google Chrome, VLC Media Player, Notepad, Paint, Calculator, DEV, Z, Task View, Taskbar icons, Keyboard, Mouse, Network, Battery, 3:23 PM, 31-Aug-23

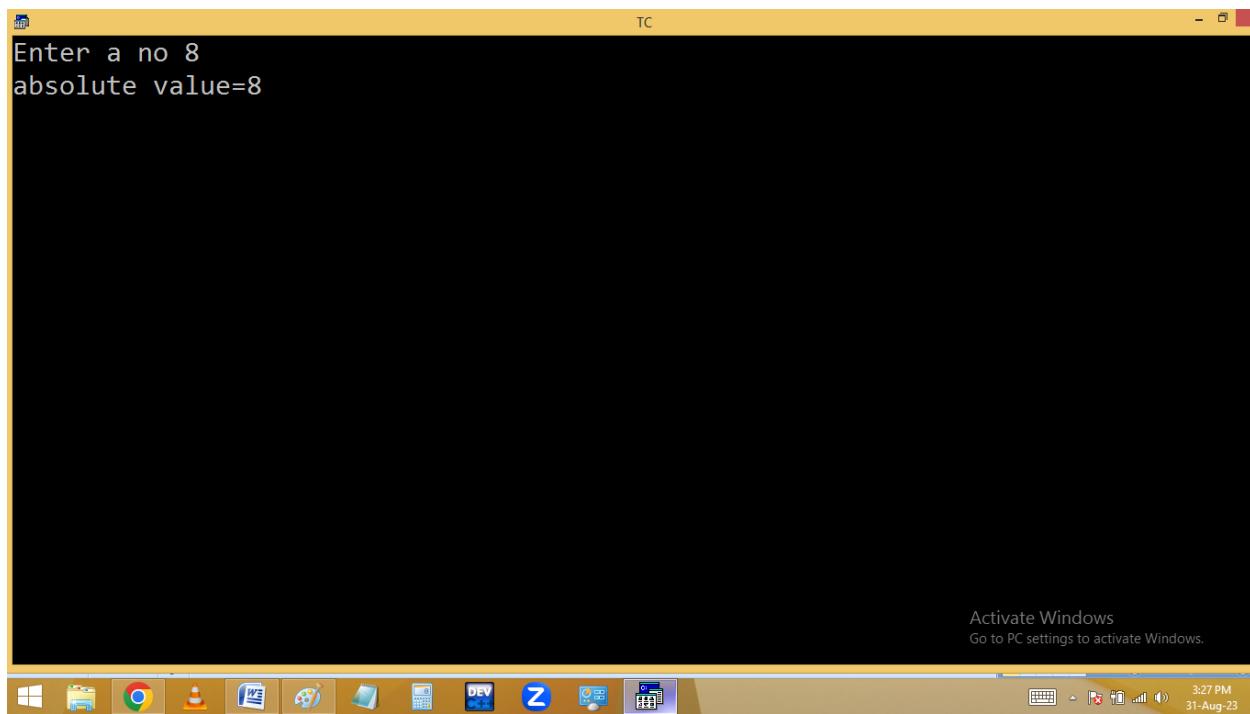
Finding absolute value [always +Ve]:

A screenshot of a Windows desktop environment. At the top is a taskbar with various icons. Below it is a code editor window titled "TC". The menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", "Debug", and "Break/watch". The status bar at the bottom of the code editor shows "Line 9 Col 31 Insert Indent Tab Fill Unindent * E:2PM.C". The main code area contains the following C program:

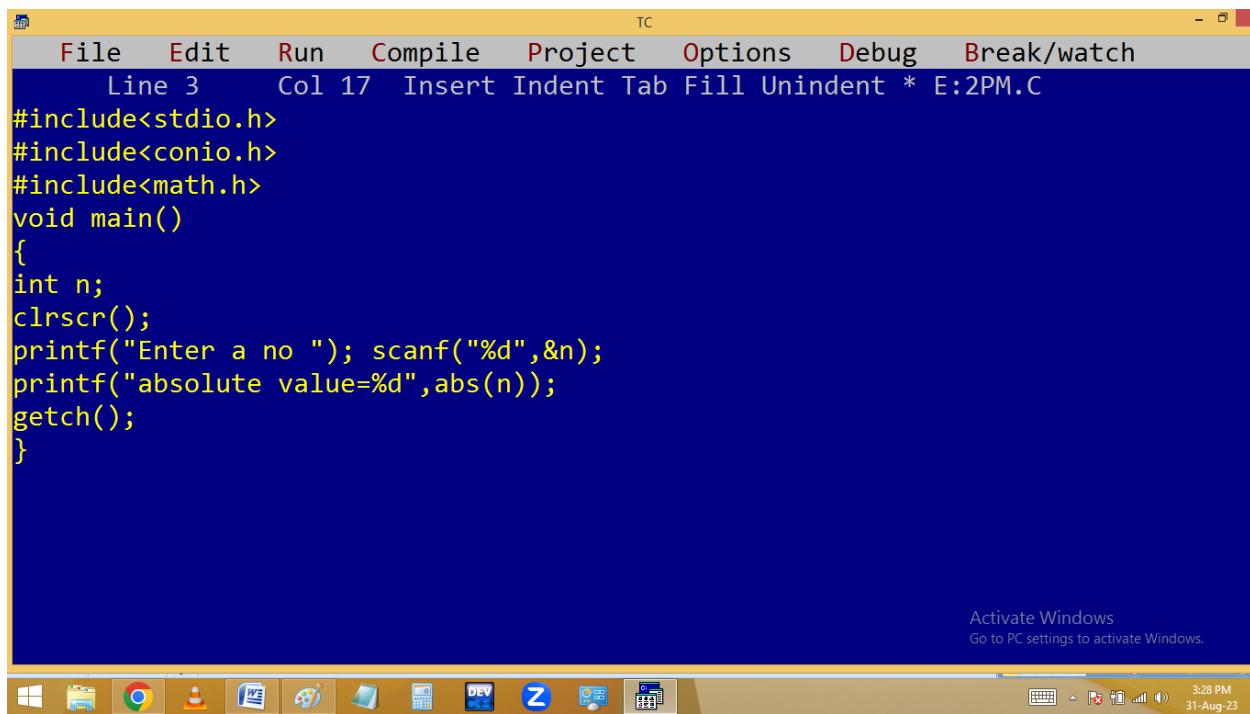
```
#include<stdio.h>
#include<conio.h>
void main()
{
int n;
clrscr();
printf("Enter a no "); scanf("%d",&n);
if(n<0)n=-n;
printf("absolute value=%d",n);
getch();
}
```

The system tray at the bottom right shows the date as 31-Aug-23 and the time as 3:27 PM.

A screenshot of the same Windows desktop environment, focusing on a terminal window. The terminal window is titled "TC" and displays the output of the previously shown C program. The user has entered "Enter a no -9" and the program has printed "absolute value=9_". The system tray at the bottom right shows the date as 31-Aug-23 and the time as 3:27 PM.



Using abs():



```
TC
Enter a no -4
absolute value=4

Activate Windows
Go to PC settings to activate Windows.

Windows Taskbar icons: File Explorer, File Manager, Google Chrome, VLC Media Player, Notepad, Paint, WordPad, Calculator, DEV, Z, Task View, Taskbar search, Taskbar settings, Network icon, Battery icon, Volume icon, Date/Time (3:28 PM, 31-Aug-23)
```

```
TC
Enter a no 4
absolute value=4

Activate Windows
Go to PC settings to activate Windows.

Windows Taskbar icons: File Explorer, File Manager, Google Chrome, VLC Media Player, Notepad, Paint, WordPad, Calculator, DEV, Z, Task View, Taskbar search, Taskbar settings, Network icon, Battery icon, Volume icon, Date/Time (3:29 PM, 31-Aug-23)

printing 1..10 numbers:
```

TC

File Edit Run Compile Project Options Debug Break/watch
Line 13 Col 2 Insert Indent Tab Fill Unindent * E:2PM.C

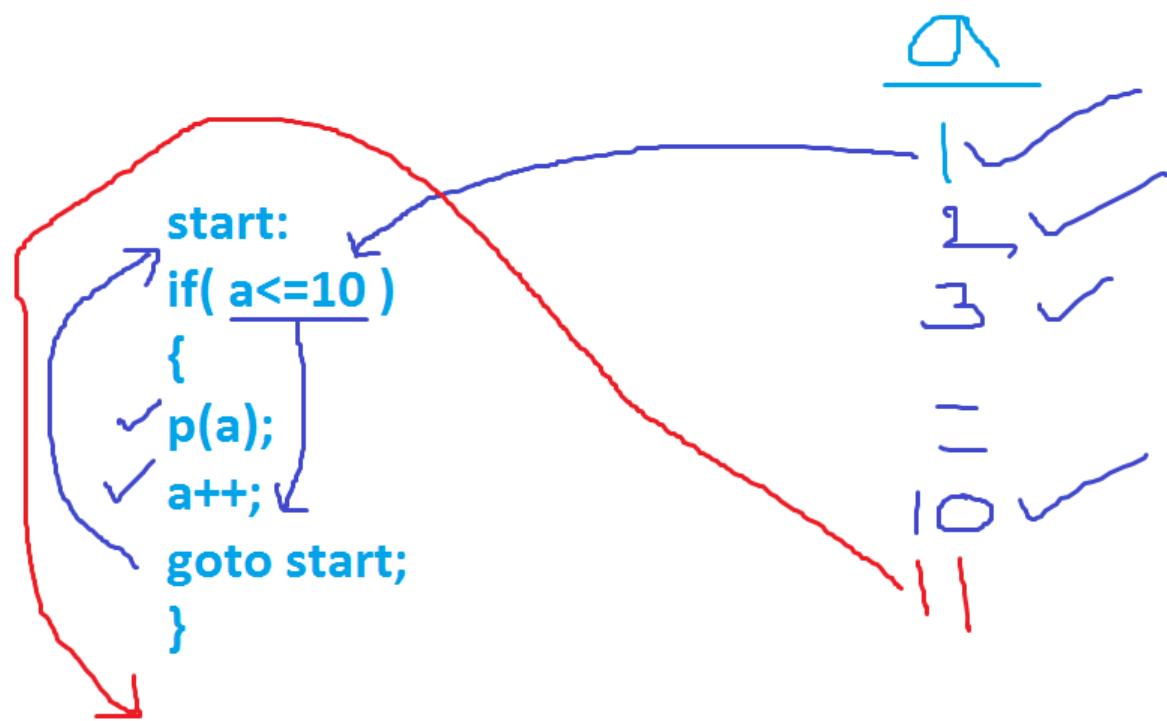
```
#include<stdio.h>
#include<conio.h>
void main()
{
int a=1;
clrscr();
start:
if(a<=10)
{
printf("%d\n",a);
a++;
goto start;
}
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.



```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

Activate Windows
Go to PC settings to activate Windows.



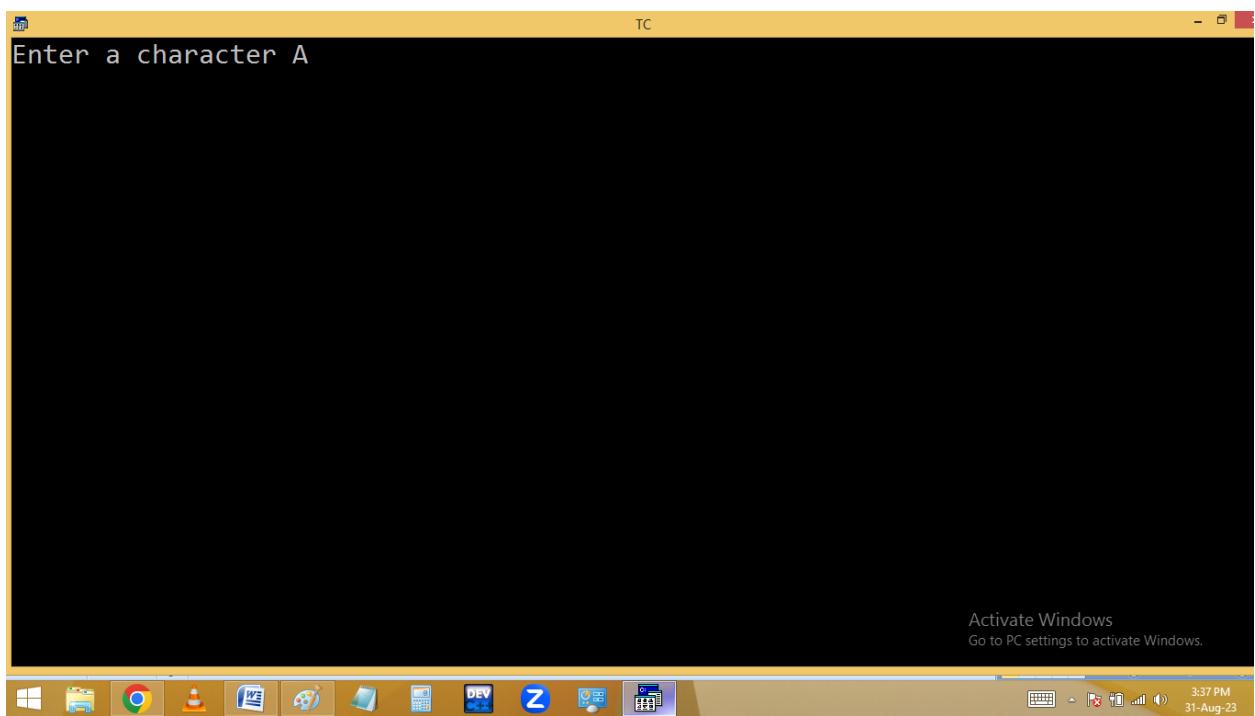
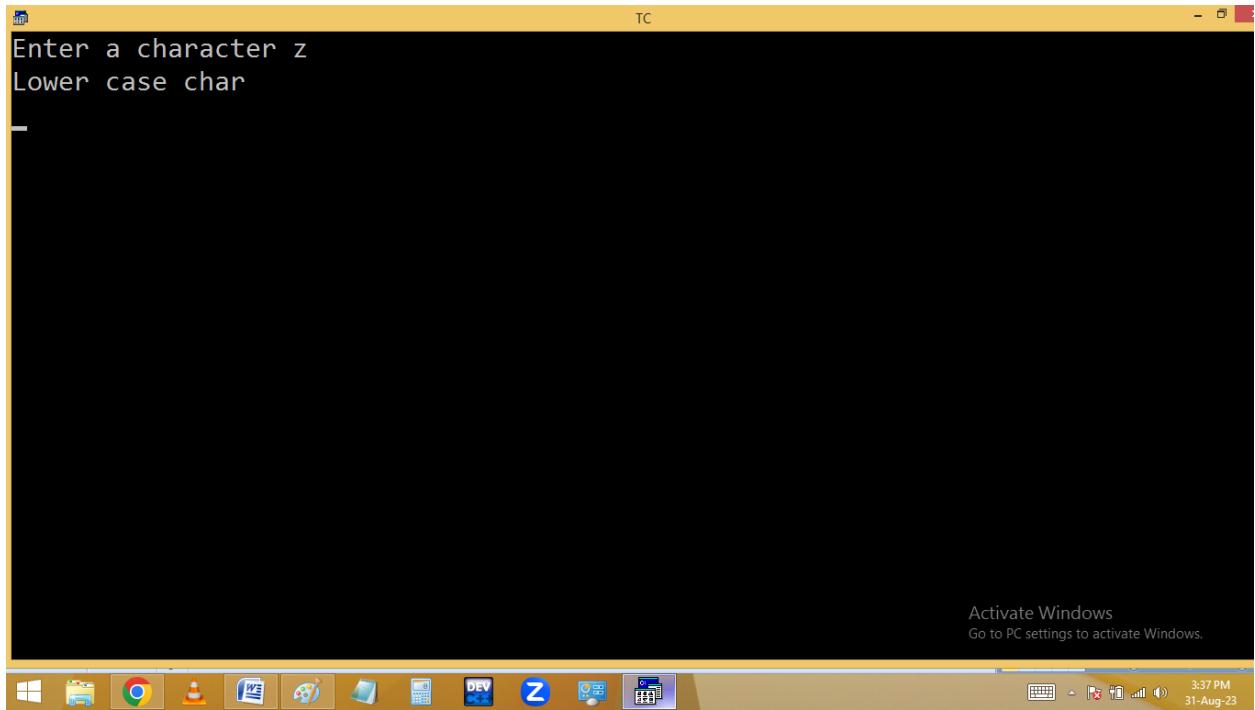
Finding lower case char or not.

The screenshot shows a Windows desktop environment. At the top is the taskbar with various icons. In the center is a terminal window titled "TC". The terminal's menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", "Debug", and "Break/watch". Below the menu bar, status information shows "Line 8" and "Col 47". The main text area of the terminal contains the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
char ch;
clrscr();
printf("Enter a character "); scanf("%c",&ch);
if(ch>='a' && ch<='z')puts("Lower case char");
getch();
}
```

At the bottom right of the terminal window, there is a watermark: "Activate Windows Go to PC settings to activate Windows." The system tray at the bottom of the screen shows the date and time as "3:37 PM 31-Aug-23".

The screenshot shows the same terminal window from the previous image, but now it displays the output of the program. The text "Enter a character d" is followed by "Lower case char", indicating that the character 'd' was correctly identified as a lowercase character. The terminal window has a watermark at the bottom right: "Activate Windows Go to PC settings to activate Windows." The system tray at the bottom shows the date and time as "3:37 PM 31-Aug-23".



The screenshot shows a Windows desktop with a terminal window titled "TC". The window has a dark blue background and contains the following code:

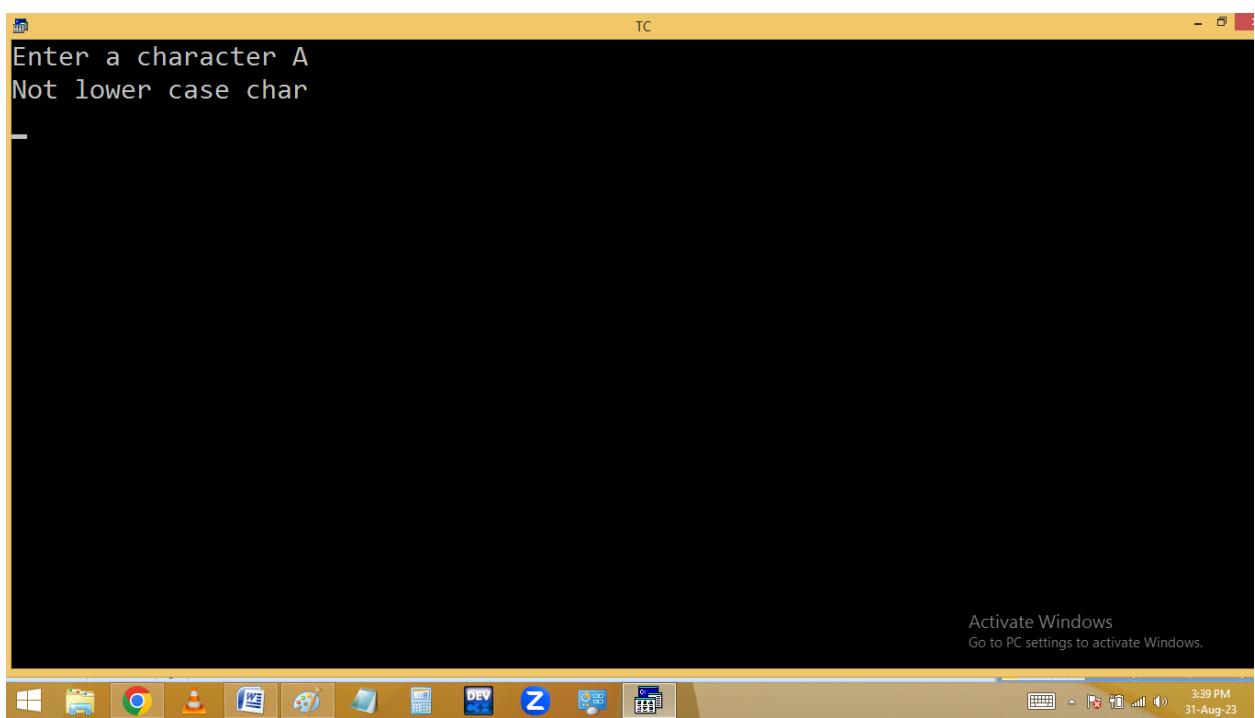
```
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 51 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
char ch;
clrscr();
printf("Enter a character "); scanf("%c",&ch);
if(ch>='a' && ch<='z')puts("Lower case char");
if(ch<'a' || ch>'z' ) puts("Not lower case char");
getch();
}
```

The terminal window also displays the Windows activation message: "Activate Windows Go to PC settings to activate Windows."

The screenshot shows the same Windows desktop environment. The terminal window titled "TC" now displays the output of the program:

```
Enter a character h
Lower case char
```

The terminal window also displays the Windows activation message: "Activate Windows Go to PC settings to activate Windows."



TC

File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 5 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
char ch;
clrscr();
printf("Enter a character "); scanf("%c",&ch);
if(ch>='a' && ch<='z')puts("Lower case char");
else puts("Not lower case char");
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.



TC

```
Enter a character 9
Not lower case char
```

Activate Windows
Go to PC settings to activate Windows.

