Logical operators [&& - and, || - or, ! – not]:

&&, || used to combine two or more expressions. ! operator used for negation. i.e. true becomes false and false become true.
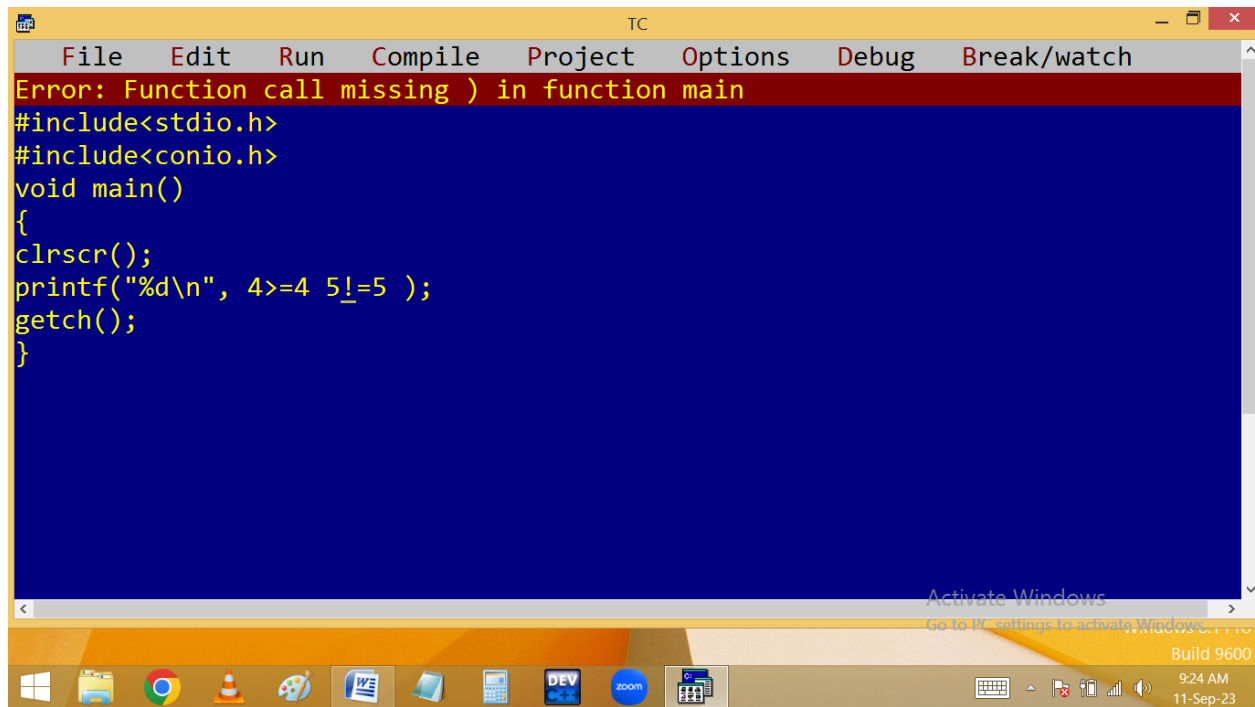
Note: In c other than 0 anything is 1 i.e. true.

Truth tables:

Operator	Expression1	Expressions2	result
&&	1	1	1
	1	0	0
	0	1	0
	0	0	0
			1	1	1
	1	0	1
	0	1	1
	0	0	0

!true = false

!false = true

File   Edit   Run   Compile   Project   Options   Debug   Break/watch

Error: Function call missing) in function main
```c
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n", 4>=4 5!=5 );
getch();
}
```

Build 9600

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```
     Line 11    Col 26   Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n", 4>=4, 5!=5 );
printf("%d, %d\n", 4>=4, 5!=5 );
printf("%d\n", 4>=4 && 5!=5 );
printf("%d\n", 4>=4 || 5!=5 );
printf("%d\n", 4>4 || 5!=5 );
printf("%d\n", !('a'>'b') );
getch();
}
```

Activate Windows
Go to PC settings to activate Windows.

```
1
1, 0
0
1
0
1
```

Activate Windows
Go to PC settings to activate Windows.

```
File     Edit     Run     Compile     Project     Options     Debug     Break/watch
        Line 13      Col 22    Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n", 1 >= 1 && 5<=4 );
printf("%d\n", -1 >= 1 || 5!=4 );
printf("%d\n", !( -1 >= -2 ) );
printf("%d\n",  1 >= 1 && 2<=2 && 3>=4 );
printf("%d\n",  5 >= 5 || 2<=2 && 3>=4 );
printf("%d\n",  (5 >= 5 || 2<=2) && 3>=4 );
printf("%d\n",  5>3>1 );
printf("%d\n",  5>3>0_);
getch();
}
```

```
0
1
0
0
1
0
0
1
```

1 >= 1 && 5<=4
  1   &&   0
        0

-1 >= 1 || 5 != 4
  0 || 1
        1

!(-1 >= -2)
      1
    ! 1
      0

1>=1 && 2<=2 && 3>=4
  \ && |
    | && 0
         0

(5>=5 || 2<=2)&& 3>=4
   | || |
        | && 0
             0

5>=5 || 2<=2 && 3>=4
          | && 0
   | || 0
        |

5 > 3 > 1
  1   > 1
      0

```c
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
printf("%d\n", 5 && -5 );
printf("%d\n", 'a' || 0 );
printf("%d\n", '0' && 1.1 );
printf("%d\n",  !3.3 );
printf("%d\n",5%5 && 5/5);
getch();
}
```

```
1
1
1
0
0
```

5 && -5
1 && 1
1

'a' || 0
1

'0' && 1.1
48
1 && 1
1

!3.3
1
0
0

5%5 && 5/5
0
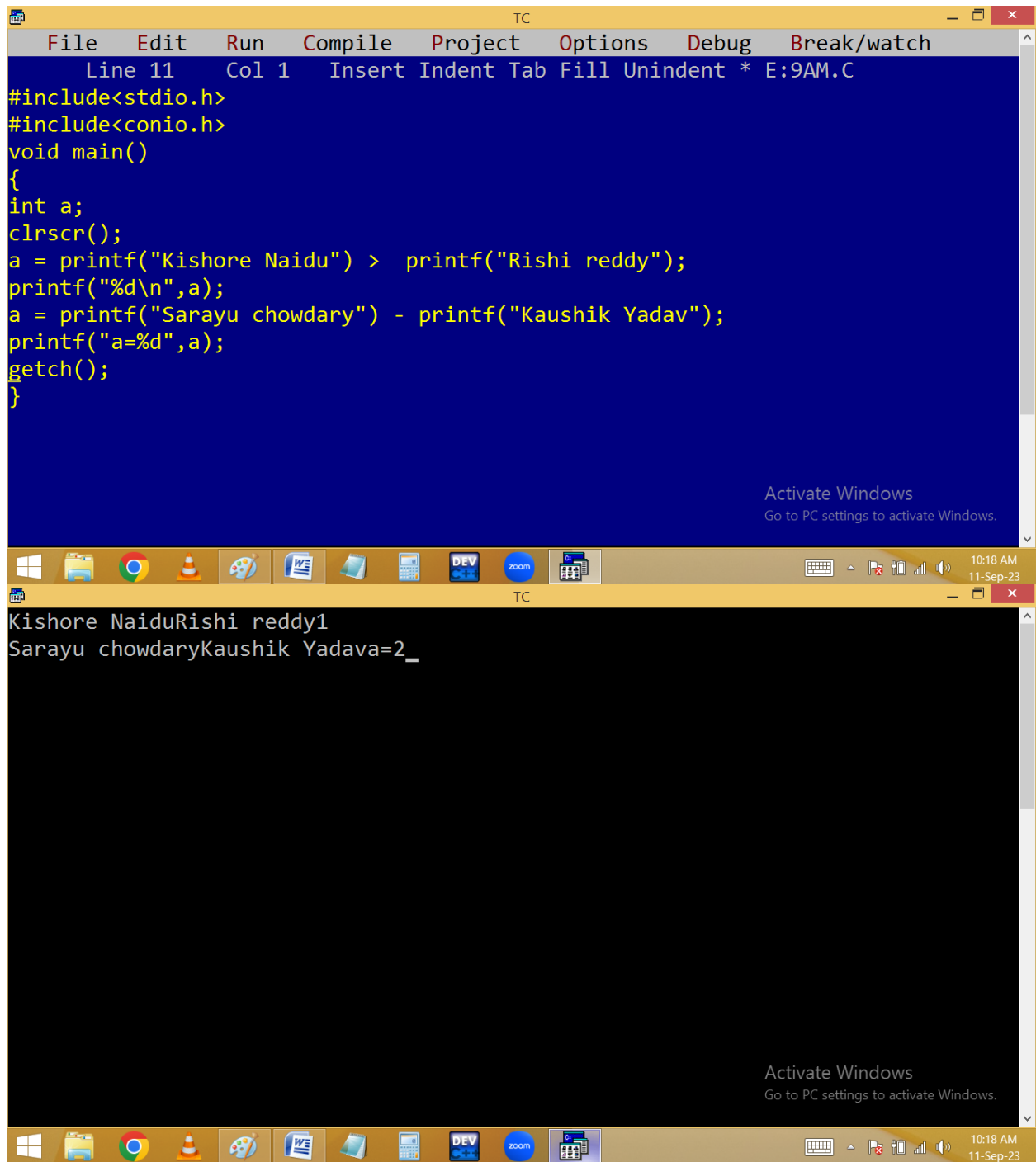
```
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
a = printf("Kishore") && printf("Naresh IT");
printf("a = %d\n",a);
a = printf("") && printf("Jawaan");
printf("a = %d\n",a);
a = printf("Pathaan") || printf("Dungal");
printf("a = %d\n",a);
getch();
}
/* Note: In &&  operation when left exp false, right exp not checked
In || operation when left exp true, right exp not checked */
```

```
KishoreNaresh ITa = 1
a = 0
Pathaana = 1
```

```c
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
a = printf("Kishore Naidu") >  printf("Rishi reddy");
printf("%d\n",a);
a = printf("Sarayu chowdary") - printf("Kaushik Yadav");
printf("a=%d",a);
getch();
}
```

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TC

```
Kishore NaiduRishi reddy1
Sarayu chowdaryKaushik Yadava=2_
```

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```c
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
a = printf("Kishore Naidu") && -5 >= -4 &&  printf("Rishi reddy");
printf("%d\n",a);
a = printf("Dilse") || printf("Khan") && printf("Don");
printf("%d\n",a);
printf("%d\n", !!5);
printf("%d",   !(!5>=!0 && !0<=!1.1));
getch();
}
```
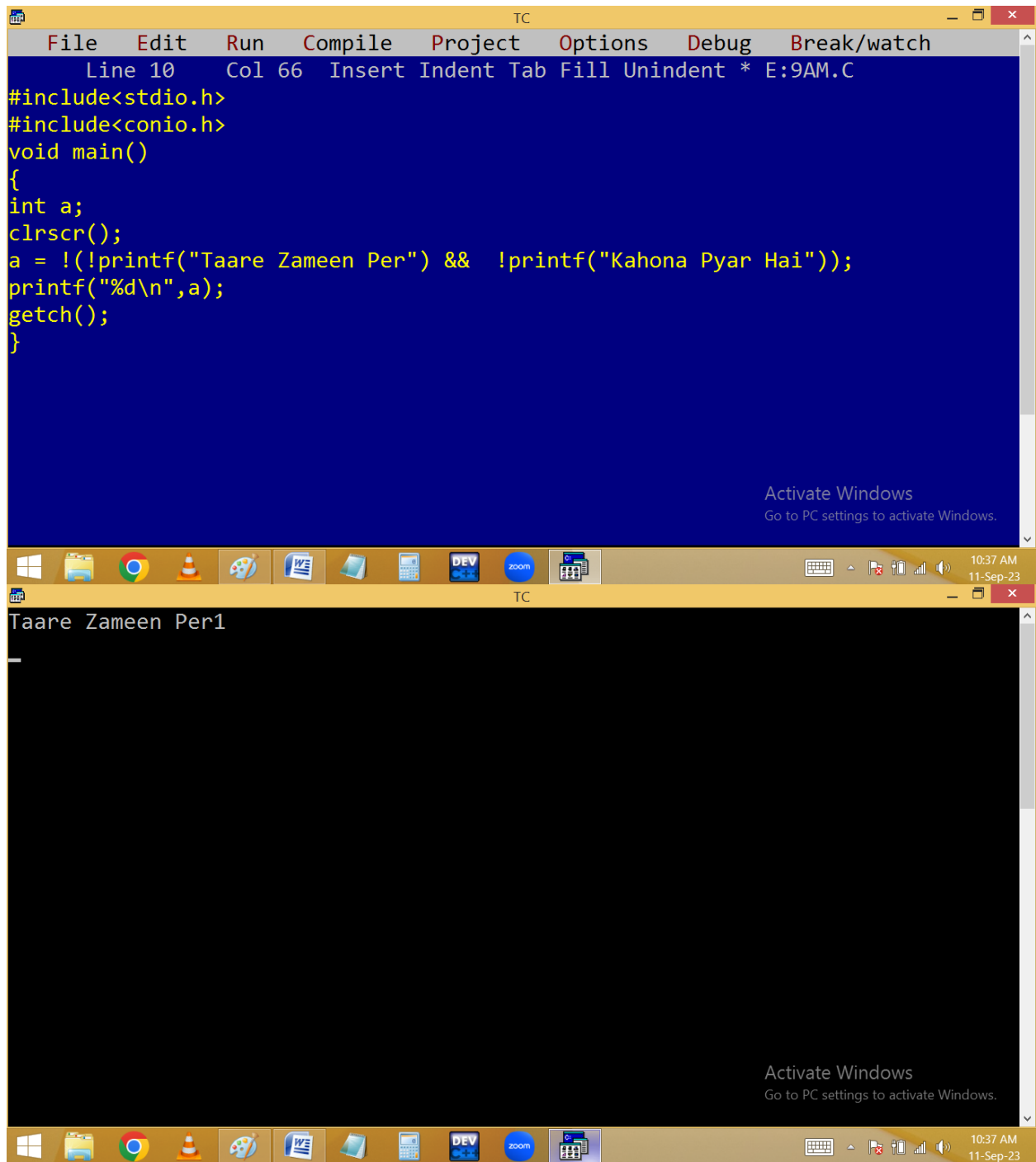
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```
Kishore Naidu0
Dilse1
1
1
```

Zoom

10:31 AM
11-Sep-23

! (!5 >= !0 && !0 <= !1.1)

$\dfrac{!5}{0} >= \dfrac{!0}{1}$

$\dfrac{0}{1}$

!!5
$\dfrac{\backslash}{!1}$
$\dfrac{}{0}$

!0

File   Edit   Run   Compile   Project   Options   Debug   Break/watch
        Line 10   Col 66   Insert Indent Tab Fill Unindent * E:9AM.C

```c
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
a = !(!printf("Taare Zameen Per") &&  !printf("Kahona Pyar Hai"));
printf("%d\n",a);
getch();
}
```

Taare Zameen Per1

```
                              TC
   File    Edit    Run    Compile    Project    Options    Debug    Break/watch
Error: Lvalue required in function main
#include<stdio.h>
#include<conio.h>
void main()
{
int a;
clrscr();
a = printf("Murder") && a=1;
printf("%d\n",a);
getch();
}
```

a = printf("Murder") && a=4;

6   && 10

1   && 1

1 = 4

Here 1 is a constant and constant copy not allowed ← **Error**