

```

Line 18   Col 19   Insert  Indent  Tab  Fill  Unindent  *  E:9AM.C
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int  n, r,c,s;
clrscr();
printf("Enter no of rows "); scanf("%d",&n);
while(!kbhit())
{
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)printf(" ");
for(c=1;c<=2*r-1;c++){textcolor(random(16));cprintf("*");}
printf("\n");
}
}
}

```



```
TC
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int  n, r,c,s;
clrscr();
printf("Enter no of rows "); scanf("%d",&n);
while(!kbhit())
{
textcolor(random(16));
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++)cprintf("*");
printf("\n");
}
}
}
```

```
TC
*****
*****
*****
*****
*****
*****
*****
*
***
*****
*****
*****
*****
*****
*****
*****
*****
*****
*****
*****
*
```

```
TC
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int  n, r,c,s;
clrscr();
printf("Enter no of rows "); scanf("%d",&n);
while(!kbhit())
{
textcolor(LIGHTRED);
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++)cprintf("*");
printf("\n");
}
}
}
```

```
TC
*****
*****
*****
 *
 ***
 *****
*****
*****
 *
 ***
 *****
*****
*****
 *
 ***
 *****
*****
*****
 *
*****
*****
*****
*
```

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
    int n, r,c,s;
    clrscr();
    printf("Enter no of rows "); scanf("%d",&n);
    while(!kbhit())
    {
        textcolor(LIGHTRED);
        for(r=n;r>=1;r--)
        {
            for(s=1;s<=n-r;s++)cprintf(" ");
            for(c=1;c<=2*r-1;c++)cprintf("*");
            printf("\n");
        }
    }
}
```


 *

 *

 *

 *

#include<stdio.h>

#include<conio.h>

#include<stdlib.h>

```
void main()

{

int n, r,c,s;

clrscr();

printf("Enter no of rows "); scanf("%d",&n);

textcolor(LIGHTRED);

for(r=1;r<=n;r++)

{

for(s=1;s<=n-r;s++)cprintf(" ");

for(c=1;c<=2*r-1;c++)cprintf("*");

printf("\n");

}

for(r=n-1;r>=1;r--)

{

for(s=1;s<=n-r;s++)cprintf(" ");

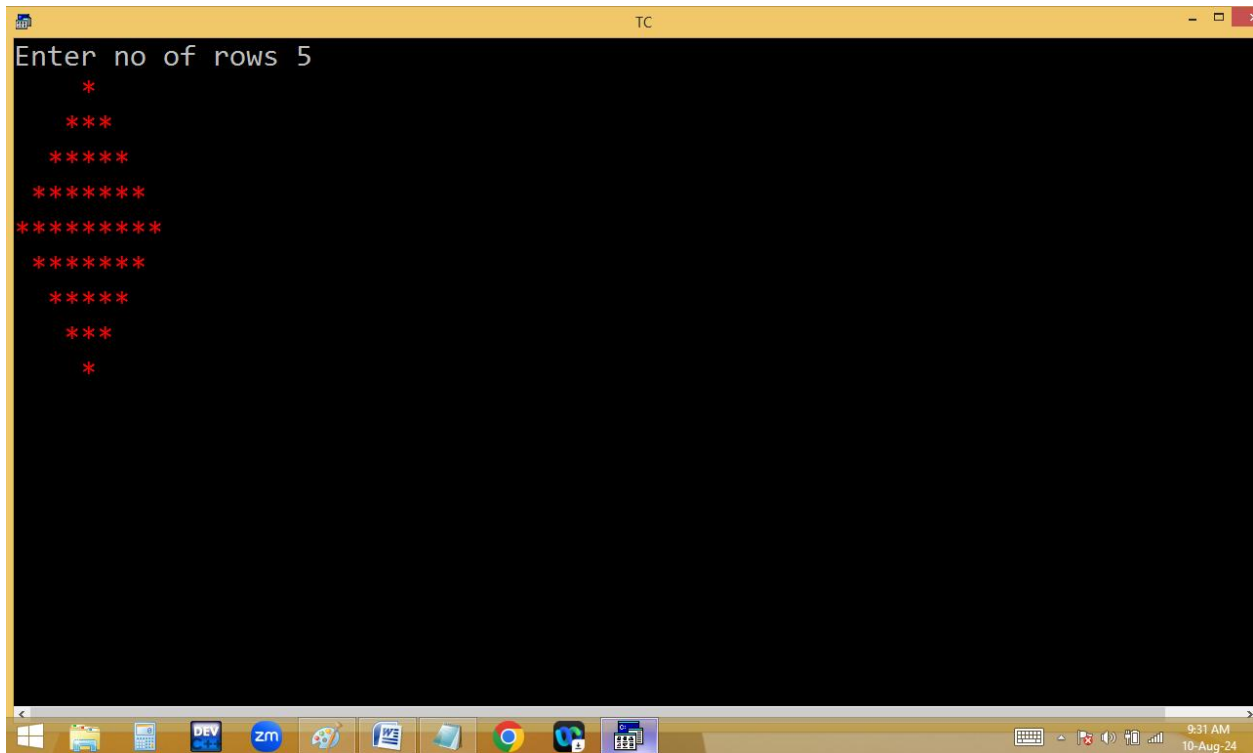
for(c=1;c<=2*r-1;c++)cprintf("*");

printf("\n");

}

getch();

}
```



```
Enter no of rows 5
  *
 ***
*****
*****
*****
 *****
  ***
   *
```

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

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

```
#include<stdlib.h>
```

```
void main()
```

```
{
```

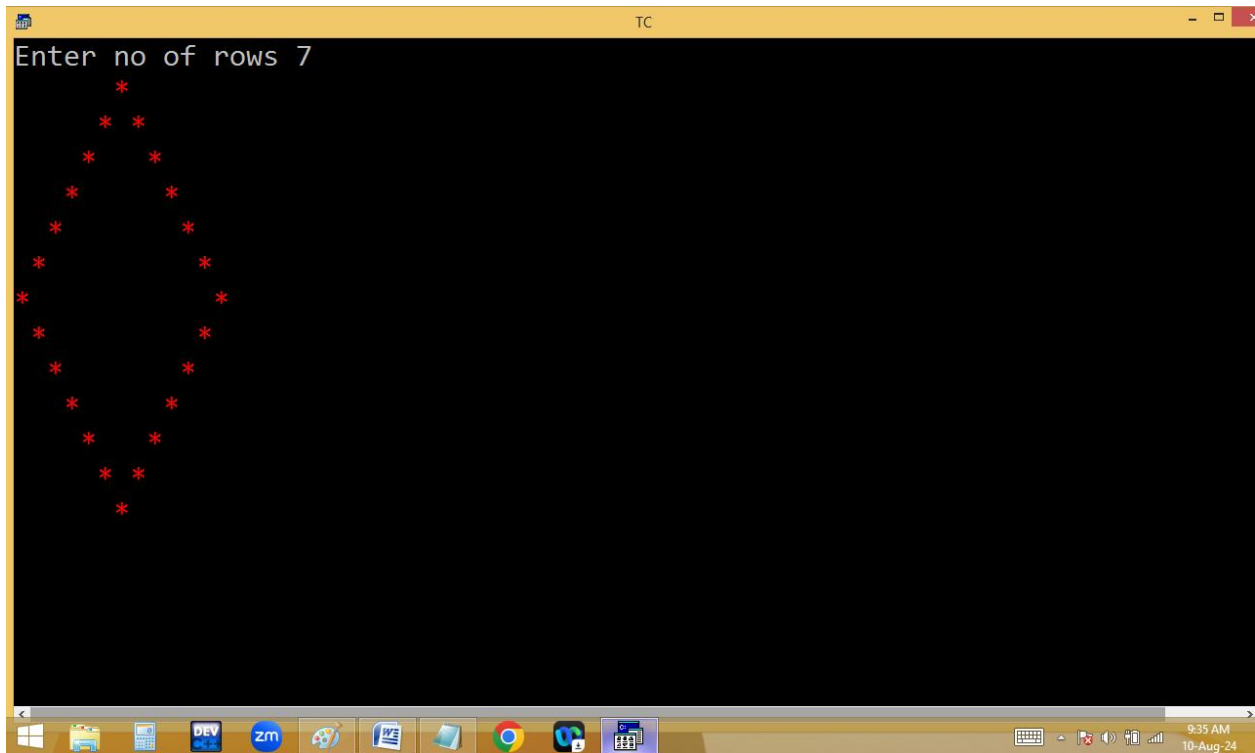
```
int n, r,c,s;
```

```
clrscr();
```

```
printf("Enter no of rows "); scanf("%d",&n);
```

```
textcolor(LIGHTRED);
```

```
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++)if(c==1 || c==r)cprintf("* ");else
printf(" ");
printf("\n");
}
for(r=n-1;r>=1;r--)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++)if(c==1 || c==r)cprintf("* ");else
printf(" ");
printf("\n");
}
getch();
}
```

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int  n, r,c,s;
clrscr();
printf("Enter no of rows "); scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)printf("  ");
for(c=1;c<=r;c++)printf("%3d",c);
for(c=r-1;c>=1;c--)printf("%3d",c);
printf("\n");
}
getch();
}
```

```
Enter no of rows 12

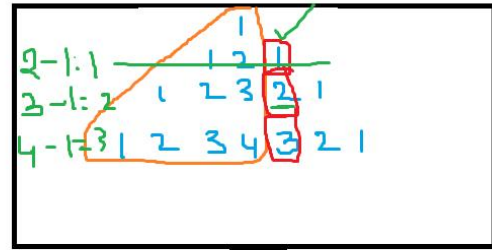
          1
        1 2 1
      1 2 3 2 1
    1 2 3 4 3 2 1
  1 2 3 4 5 4 3 2 1
1 2 3 4 5 6 5 4 3 2 1
  1 2 3 4 5 6 7 6 5 4 3 2 1
    1 2 3 4 5 6 7 8 7 6 5 4 3 2 1
      1 2 3 4 5 6 7 8 9 8 7 6 5 4 3 2 1
        1 2 3 4 5 6 7 8 9 10 9 8 7 6 5 4 3 2 1
          1 2 3 4 5 6 7 8 9 10 11 10 9 8 7 6 5 4 3 2 1
            1 2 3 4 5 6 7 8 9 10 11 12 11 10 9 8 7 6 5 4 3 2 1
```

```

for( r=1; r<=4;r++ )
{
for(s=1;s<=n-r;s++)p(" ");
for(c=1;c<=r;c++)p(c);

for( c=r-1;c>=1;c--)p(c);
p("\n");
}

```



$\frac{n}{4}$

c = 1 to $\frac{n}{4}$

1 - 1
1 - 2
1 - 3
1 - 4

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 43 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int n, r,c,s,a;
clrscr();
printf("Enter no of rows "); scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(a=r, s=1;s<=n-r;s++)printf(" ");
for(c=1;c<=r;c++)printf("%3d",a++);
for(a=a-2, c=r-1;c>=1;c--)printf("%3d",a--);
printf("\n");
}
getch();
}
```

Enter no of rows 5

```

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

```

for( r=1; r<=4;r++ )
{ a=r;
  for(s=1;s<=n-r;s++)p(" ");
  for(c=1;c<=r;c++)p( a++ );
  a=a-2;
  for( c=r-1;c>=1;c--)p( a-- );
  p("\n");
}

```

<u>r</u>	<u>a</u>
1	1
2	2 3 4
3	3 4 5 6
4	4 5 6 7 8

```

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

n
4

c = 1 to n

1	-	1
1	-	2
1	-	3
1	-	4

```
TC
#include<stdio.h>
#include<conio.h>
void main()
{
int  n, r,c,s,a;
clrscr();
printf("Enter no of rows "); scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(a=n, s=1;s<=n-r;s++)printf("  ");
for(c=1;c<=r;c++)printf("%3d",a++);
for(a=a-2, c=r-1;c>=1;c--)printf("%3d",a--);
printf("\n");
}
getch();
}
```

```
TC
Enter no of rows 5

      5
     5 6 5
    5 6 7 6 5
   5 6 7 8 7 6 5
  5 6 7 8 9 8 7 6 5
```

```
TC
#include<stdio.h>
#include<conio.h>
void main()
{
int n, r,c,s,a;
clrscr();
printf("Enter no of rows "); scanf("%d",&n);
for(r=0;r<n;r++)
{
for(s=1;s<n-r;s++)printf(" ");
for(c=0;c<=r;c++)
{
if(c==0||c==r)a=1; else a=a*(r-c+1)/c;
printf("%4d",a);
}
printf("\n");
}
getch();
}
```

Enter no of rows 12

```

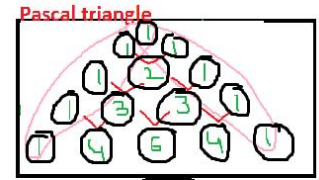
      1
     1 1
    1 2 1
   1 3 3 1
  1 4 6 4 1
 1 5 10 10 5 1
1 6 15 20 15 6 1
1 7 21 35 35 21 7 1
1 8 28 56 70 56 28 8 1
1 9 36 84 126 126 84 36 9 1
1 10 45 120 210 252 210 120 45 10 1
1 11 55 165 330 462 330 165 55 11 1
```

```

for(r=0;r<n;r++)
{
for(s=1;s<n-r;s++)p(" ");
for(c=0;c<=r;c++)
{
if( c==0 | c==r ) a=1; else a=a*(r-c+1)/c;
p(a);
}
p("\n");
}

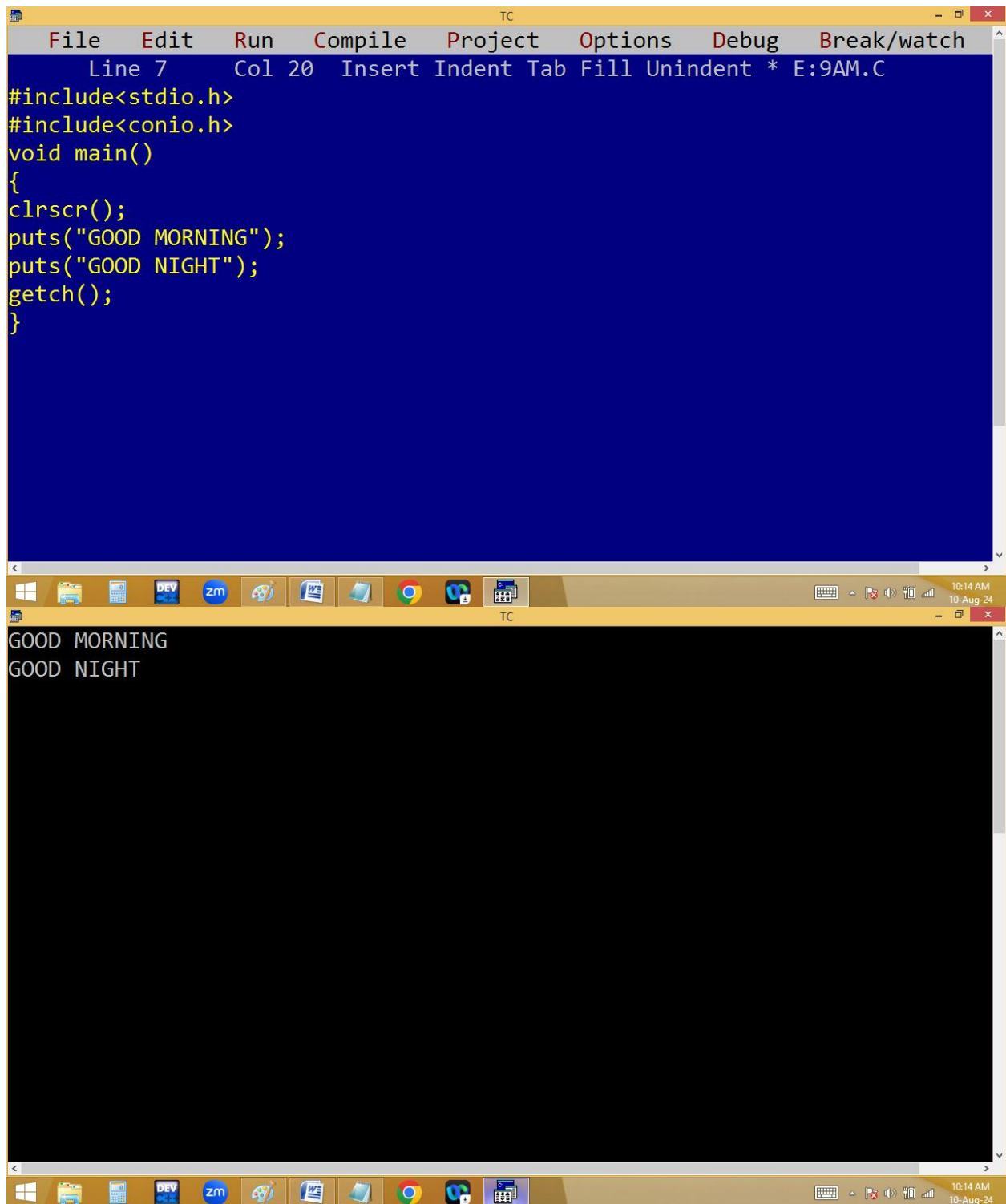
```

$\frac{n}{5}$	$\frac{r}{0}$	$\frac{c}{0}$
1	0	1
2	0	1 2
3	0	1 2 3
4	0	1 2 3 4



$\frac{a}{1}$
 $1 \ 1$
 $1*(2-1+1)/1=2$
 $1*(3-1+1)/1=3$
 $3*(3-2+1)/2=3$
 $1*(4-1+1)/1=4$
 $4*(4-2+1)/2=6$
 $6*(4-3+1)/3=4$

break: It is a keyword used to stop the switch / loop. When break occurred, the program execution jumped to the first line after the switch or loop.



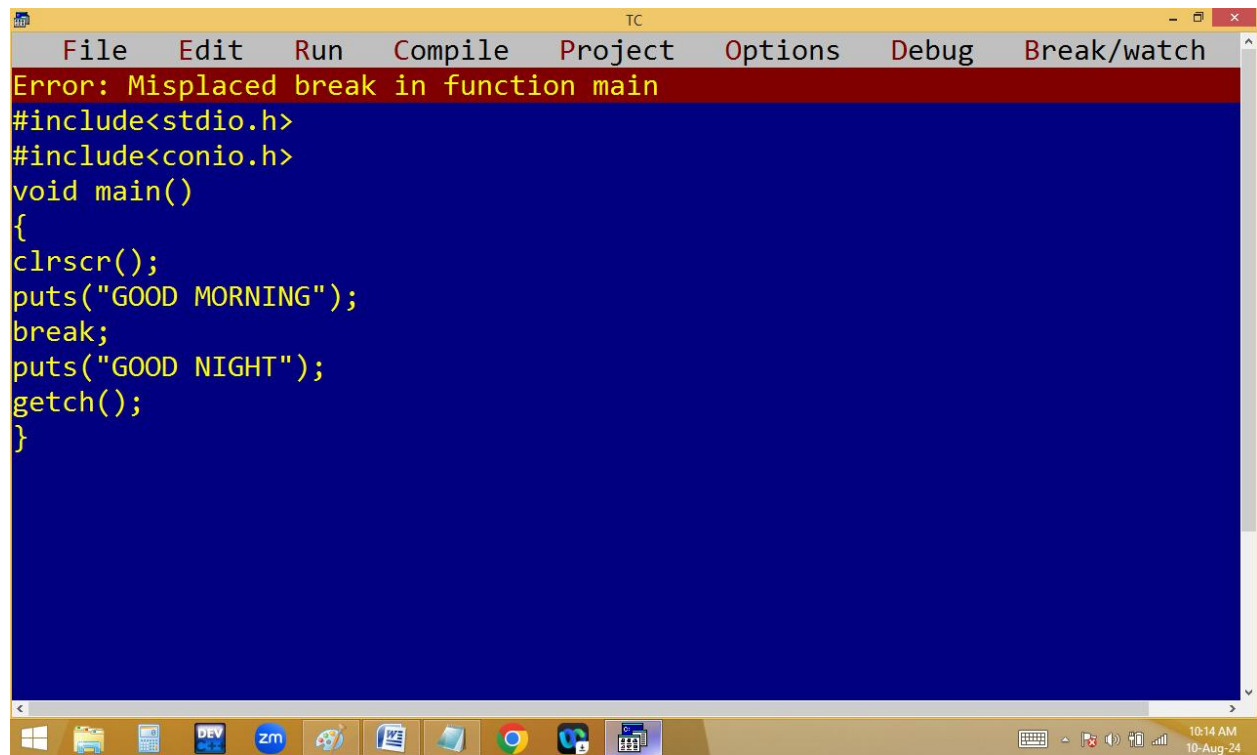
The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the source code editor, which has a blue background and displays the following C code:

```
File Edit Run Compile Project Options Debug Break/watch
Line 7 Col 20 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
puts("GOOD MORNING");
puts("GOOD NIGHT");
getch();
}
```

The bottom window is the output console, which has a black background and displays the output of the program:

```
GOOD MORNING
GOOD NIGHT
```

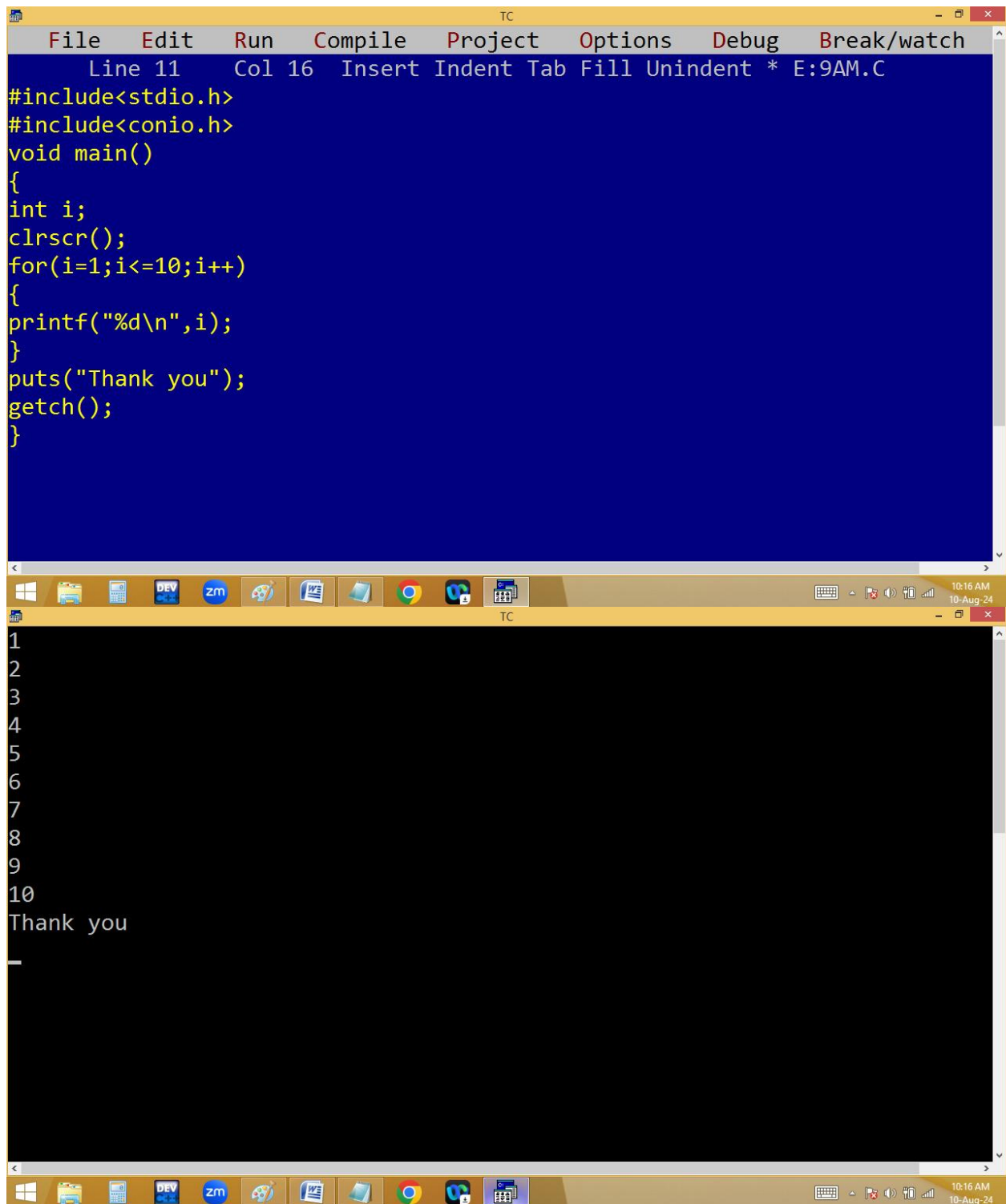
The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock indicating 10:14 AM on 10-Aug-24.



The image shows a screenshot of the Turbo C++ (TC) IDE. The window title is "TC". The menu bar includes "File", "Edit", "Run", "Compile", "Project", "Options", "Debug", and "Break/watch". A red error message banner at the top reads "Error: Misplaced break in function main". The main editing area has a blue background and contains the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
clrscr();
puts("GOOD MORNING");
break;
puts("GOOD NIGHT");
getch();
}
```

The Windows taskbar is visible at the bottom, showing icons for Windows, File Explorer, Calculator, DEV C++, Zoom, and other applications. The system clock in the bottom right corner indicates the time is 10:14 AM on 10-Aug-24.



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays a C program with the following code:

```
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 16 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
printf("%d\n",i);
}
puts("Thank you");
getch();
}
```

The bottom window shows the output of the program, which is a list of numbers from 1 to 10, followed by the text "Thank you".

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

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays a C program with the following code:

```
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 15 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
if(i==6)break;_
printf("%d\n",i);
}
puts("Thank you");
getch();
}
```

The bottom window shows the output of the program, which is a list of numbers from 1 to 5, followed by the text "Thank you".

```
1
2
3
4
5
Thank you
_
```

The taskbar at the bottom of the screen shows various icons, including the Windows logo, a folder, a calculator, a terminal, a ZOOM icon, a paint application, a file explorer, a web browser, and a calendar. The system clock in the bottom right corner indicates the time is 10:17 AM on 10-Aug-24.

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the code editor, which has a blue background and displays the following C program:

```
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 15 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
if(i==6)return;
printf("%d\n",i);
}
puts("Thank you");
getch();
}
```

The bottom window is the output console, which has a black background and shows the first five lines of the program's output:

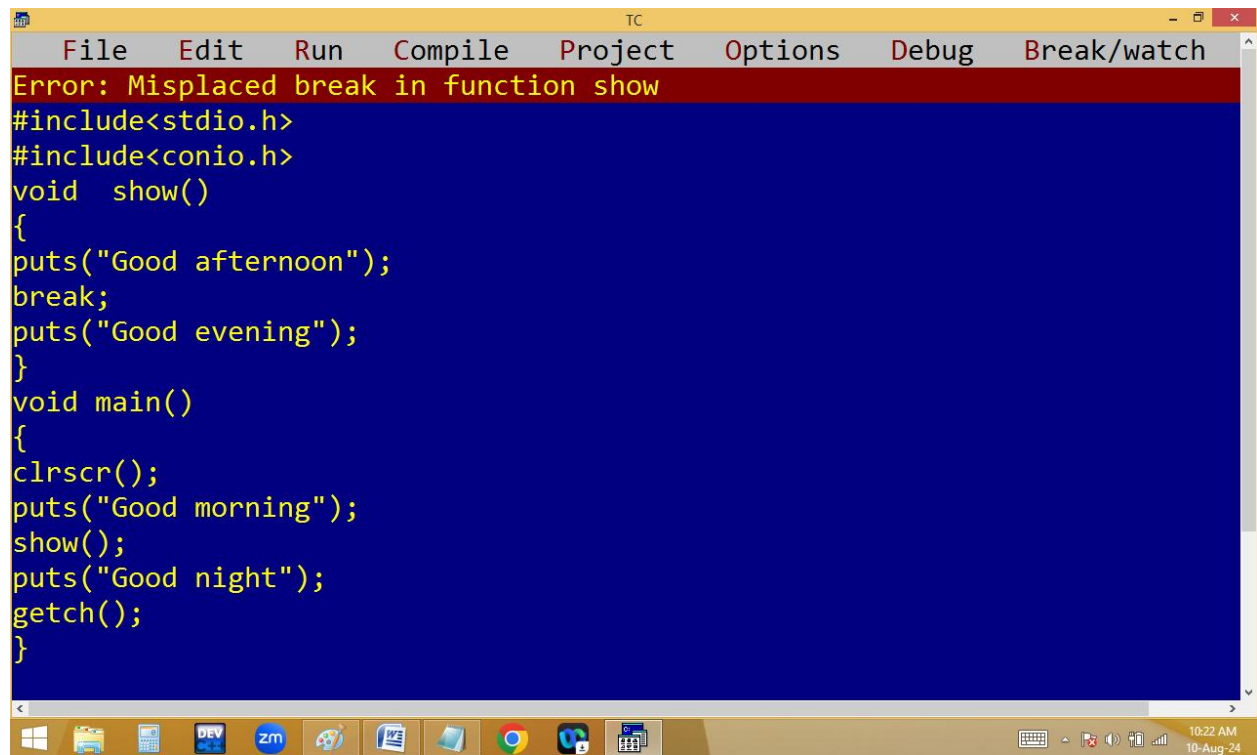
```
1
2
3
4
5
```

The Windows taskbar at the bottom of the screen shows the time as 10:18 AM on 10-Aug-24. The taskbar includes icons for the Start menu, File Explorer, Command Prompt, DEV C++, Zoom, and several other applications.

The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the editor, displaying a C program. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the bottom of the editor shows 'Line 3 Col 19 Insert Indent Tab Fill Unindent * E:9AM.C'. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>_
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
if(i==6)exit(0);
printf("%d\n",i);
}
puts("Thank you");
getch();
}
```

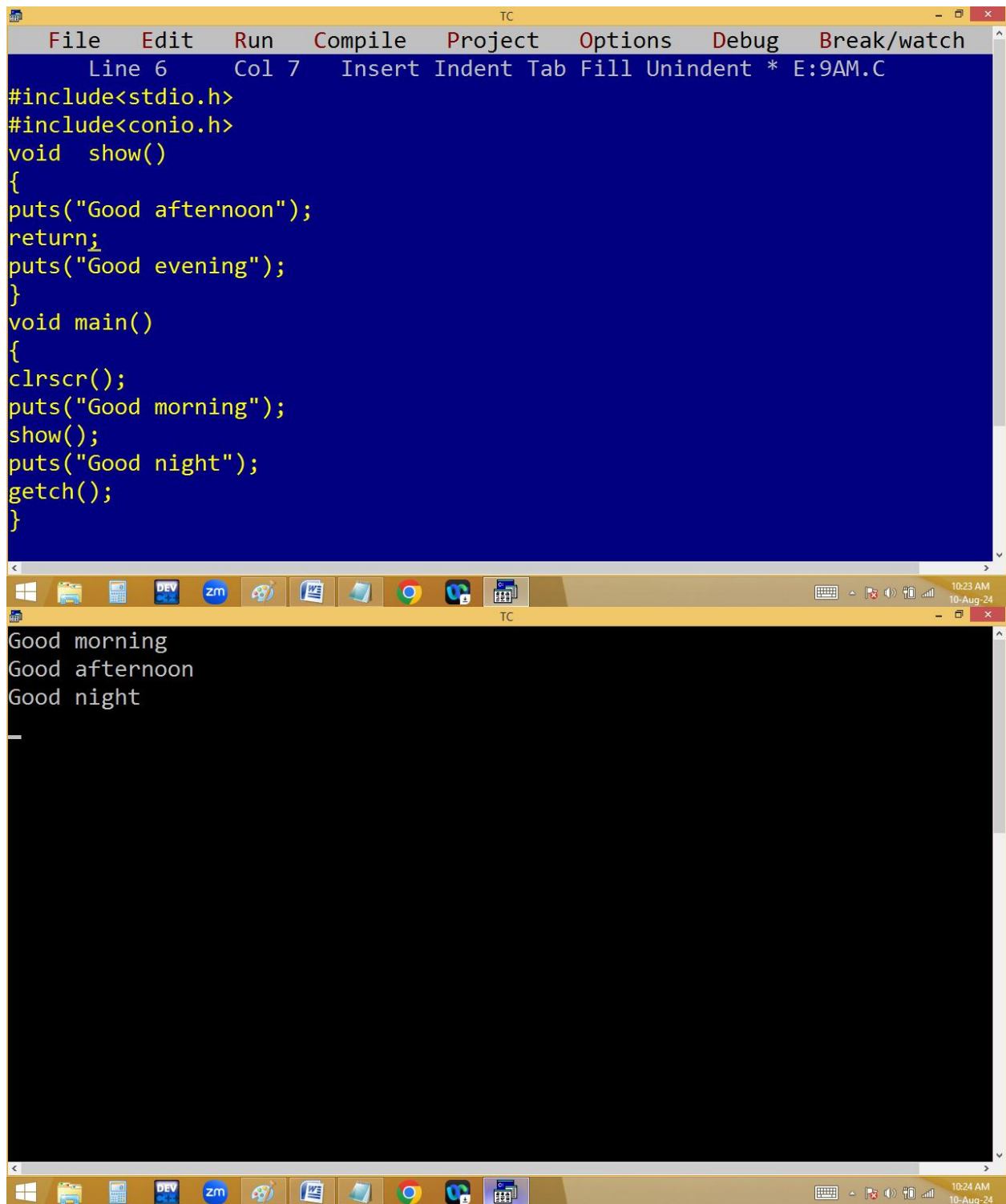
The bottom window is the output console, which is currently empty except for line numbers 1 through 5 on the left margin. The Windows taskbar at the bottom of the screen shows the time as 10:20 AM on 10-Aug-24, along with various system icons and application icons like DEV, zm, and a calendar.



The image shows a screenshot of a Turbo C++ (TC) IDE window. The title bar at the top reads "TC". Below the title bar is a menu bar with the following options: File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. A red error message banner at the top of the code editor area states: "Error: Misplaced break in function show". The code editor has a dark blue background with yellow text. The code is as follows:

```
#include<stdio.h>
#include<conio.h>
void show()
{
puts("Good afternoon");
break;
puts("Good evening");
}
void main()
{
clrscr();
puts("Good morning");
show();
puts("Good night");
getch();
}
```

At the bottom of the window is a Windows taskbar. It contains several icons: the Windows Start button, a folder icon, a document icon, a "DEV" icon, a "zm" icon, a network icon, a printer icon, a file explorer icon, a Google Chrome icon, a Microsoft Edge icon, and a task manager icon. On the right side of the taskbar, the system clock shows "10:22 AM" and the date "10-Aug-24".



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window is the code editor, which has a blue background and displays a C program. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the bottom of the editor shows 'Line 6 Col 7 Insert Indent Tab Fill Unindent * E:9AM.C'. The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void show()
{
    puts("Good afternoon");
    return;
    puts("Good evening");
}
void main()
{
    clrscr();
    puts("Good morning");
    show();
    puts("Good night");
    getch();
}
```

The bottom window is the output console, which has a black background and shows the program's execution results. It displays the following text:

```
Good morning
Good afternoon
Good night
```

The Windows taskbar is visible at the bottom of the screen, showing various application icons and the system clock indicating 10:23 AM and 10:24 AM on 10-Aug-24.

The screenshot shows the Turbo C++ (TC) IDE. The top window is the code editor, which has a blue background and contains the following C code:

```
File Edit Run Compile Project Options Debug Break/watch
Line 3 Col 19 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void show()
{
puts("Good afternoon");
exit(0);
puts("Good evening");
}
void main()
{
clrscr();
puts("Good morning");
show();
puts("Good night");
getch();
}
```

The bottom window is the output console, which has a black background and shows the following text:

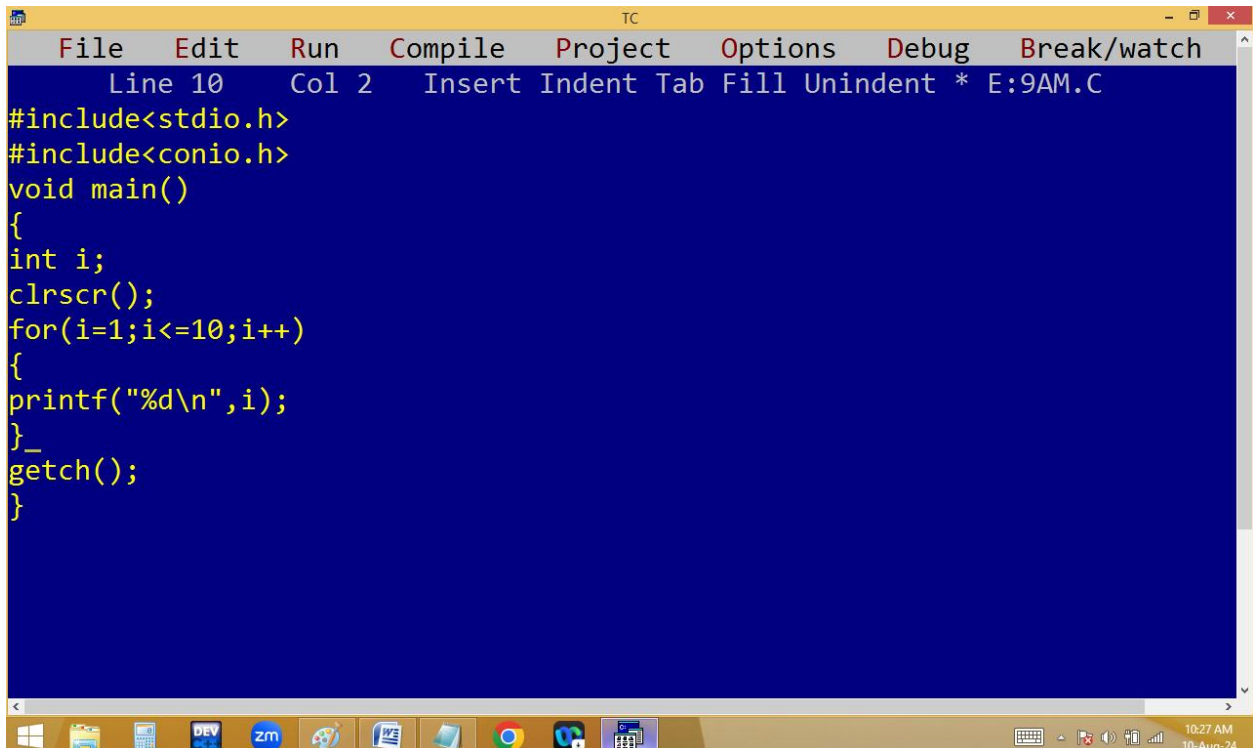
```
Good morning
Good afternoon
```

The Windows taskbar at the bottom shows the time as 10:24 AM on 10-Aug-24.

break	exit()	Return
Keyword	Function	Keyword
Header file not required	stdlib.h / process.h required	Header file not required

Terminates switch / loop	Terminates total program	Closes that function only
Should be used within switch/loop	Used any where	Used any where

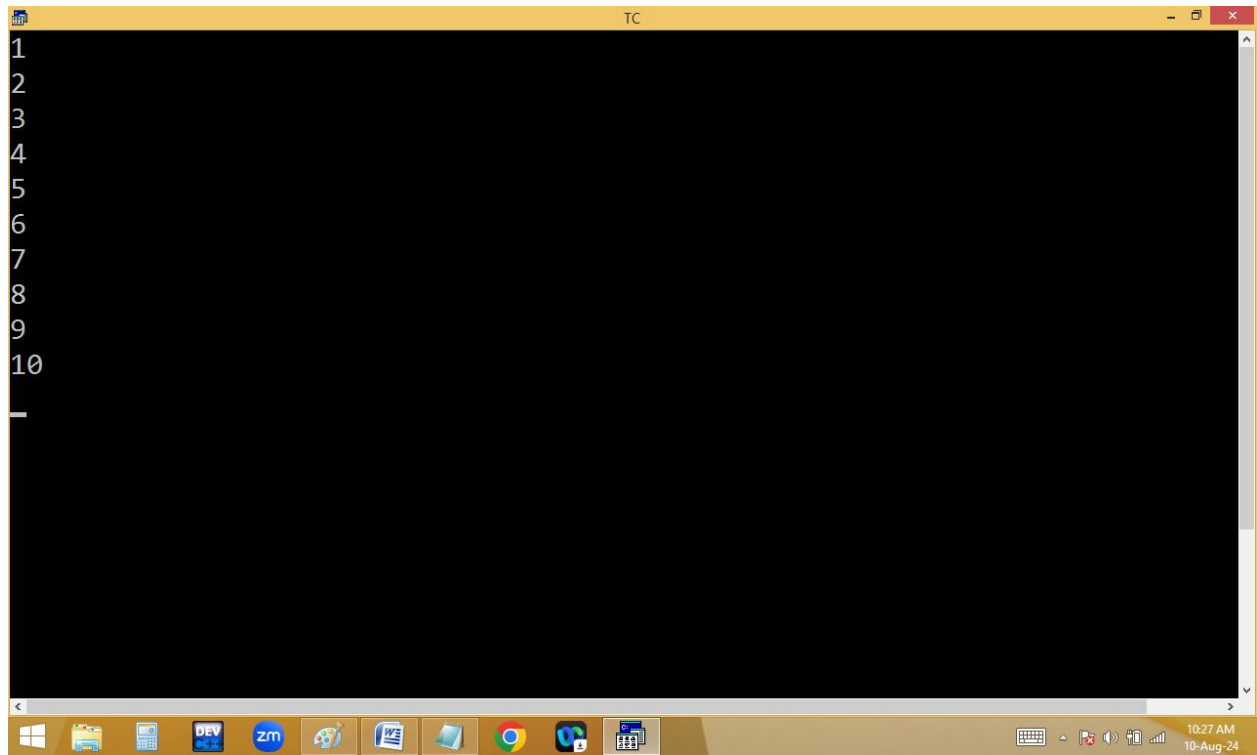
continue: It is a keyword is used within loop to skip some of the iterations. When continue occurred, the program execution jumped to loop ending and later to beginning.

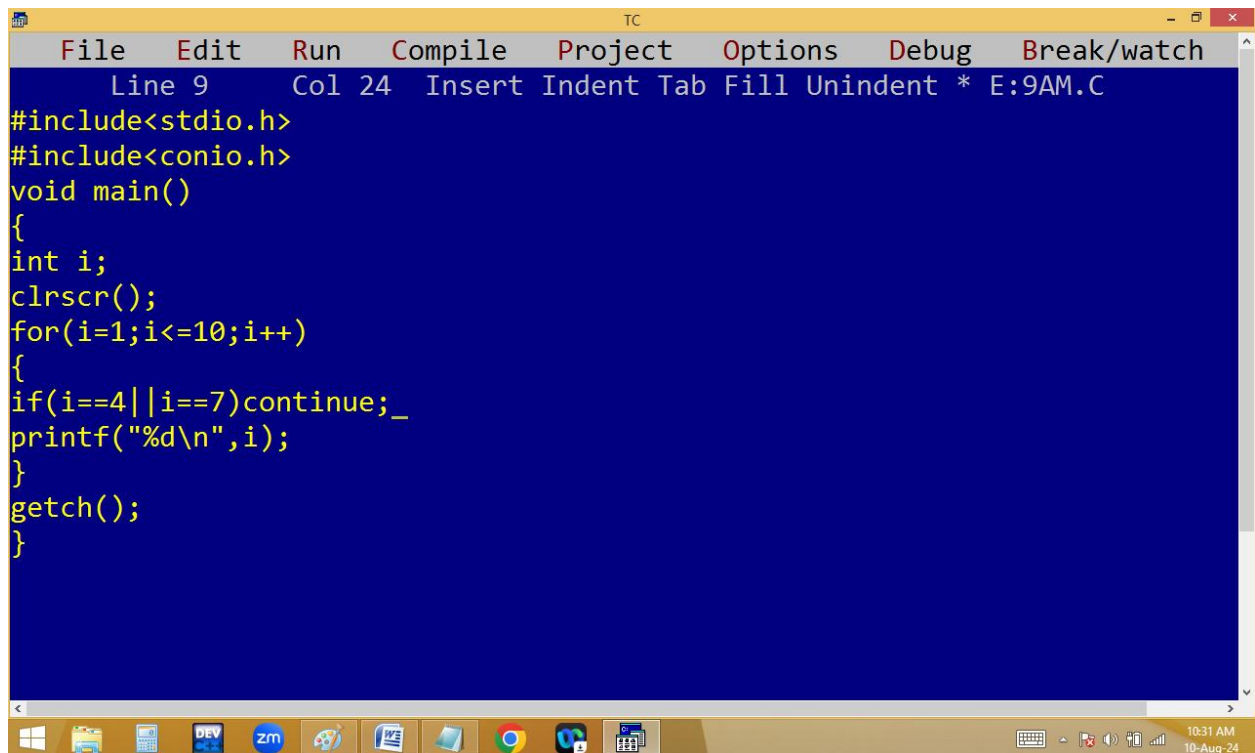


```

TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 2 Insert Indent Tab Fill Unindent * E:9AM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
printf("%d\n",i);
}_
getch();
}

```

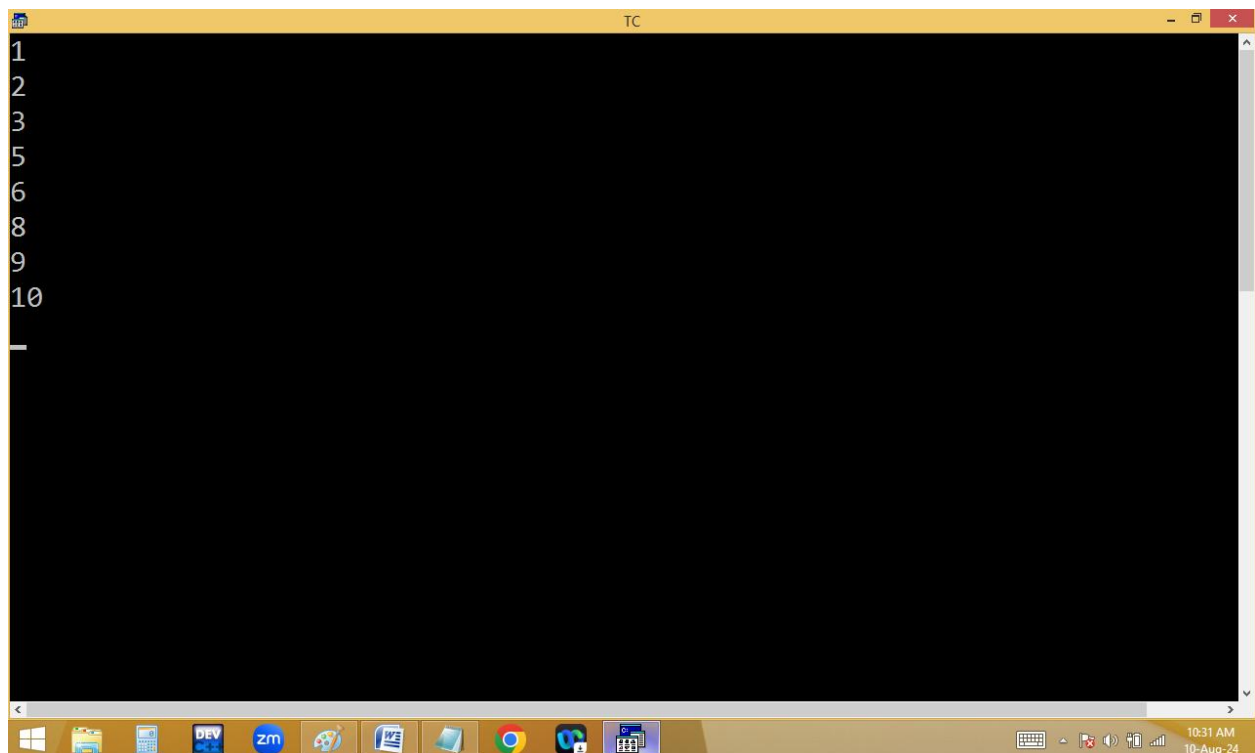




The screenshot shows the Turbo C++ (TC) IDE with a menu bar (File, Edit, Run, Compile, Project, Options, Debug, Break/watch) and a status bar (Line 9, Col 24, Insert, Indent, Tab, Fill, Unindent, * E:9AM.C). The code in the editor is as follows:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int i;
    clrscr();
    for(i=1;i<=10;i++)
    {
        if(i==4||i==7)continue;_
        printf("%d\n",i);
    }
    getch();
}
```

The Windows taskbar at the bottom shows the time as 10:31 AM on 10-Aug-24.

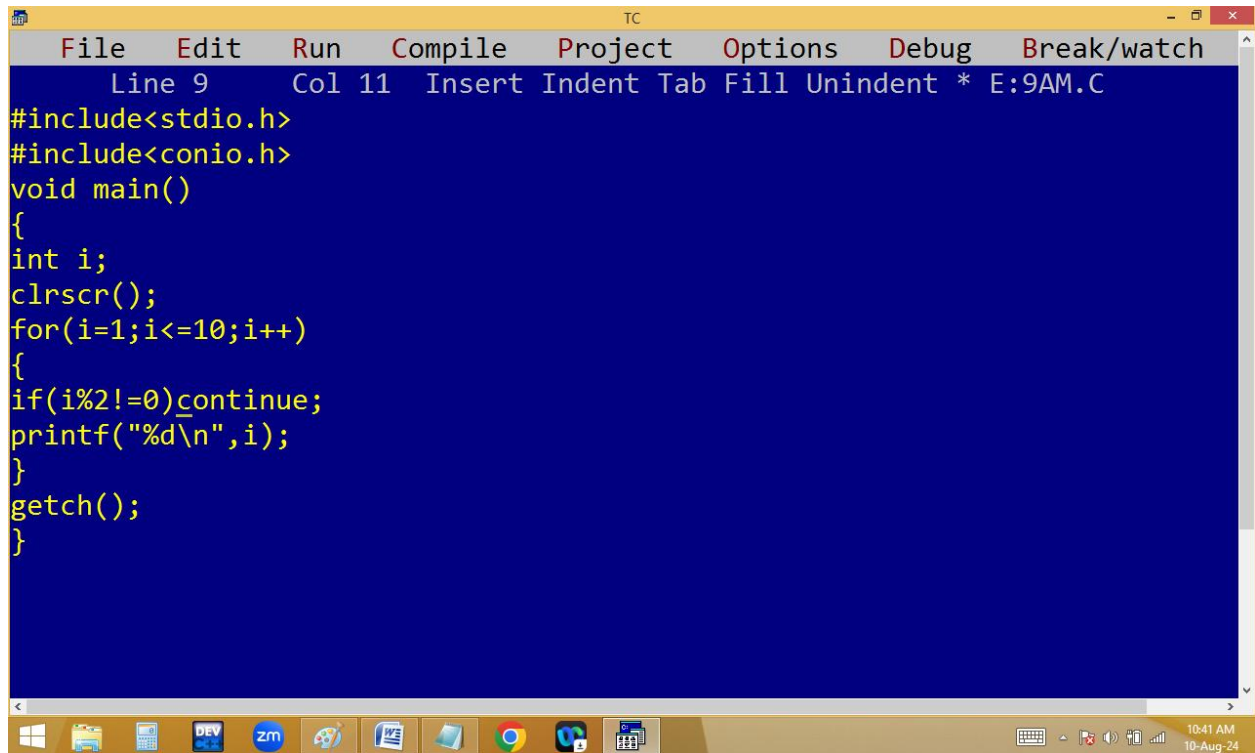


The screenshot shows the Turbo C++ (TC) IDE with the same menu bar and status bar. The output window displays the results of the program execution:

```
1
2
3
5
6
8
9
10
_
```

The Windows taskbar at the bottom shows the time as 10:31 AM on 10-Aug-24.

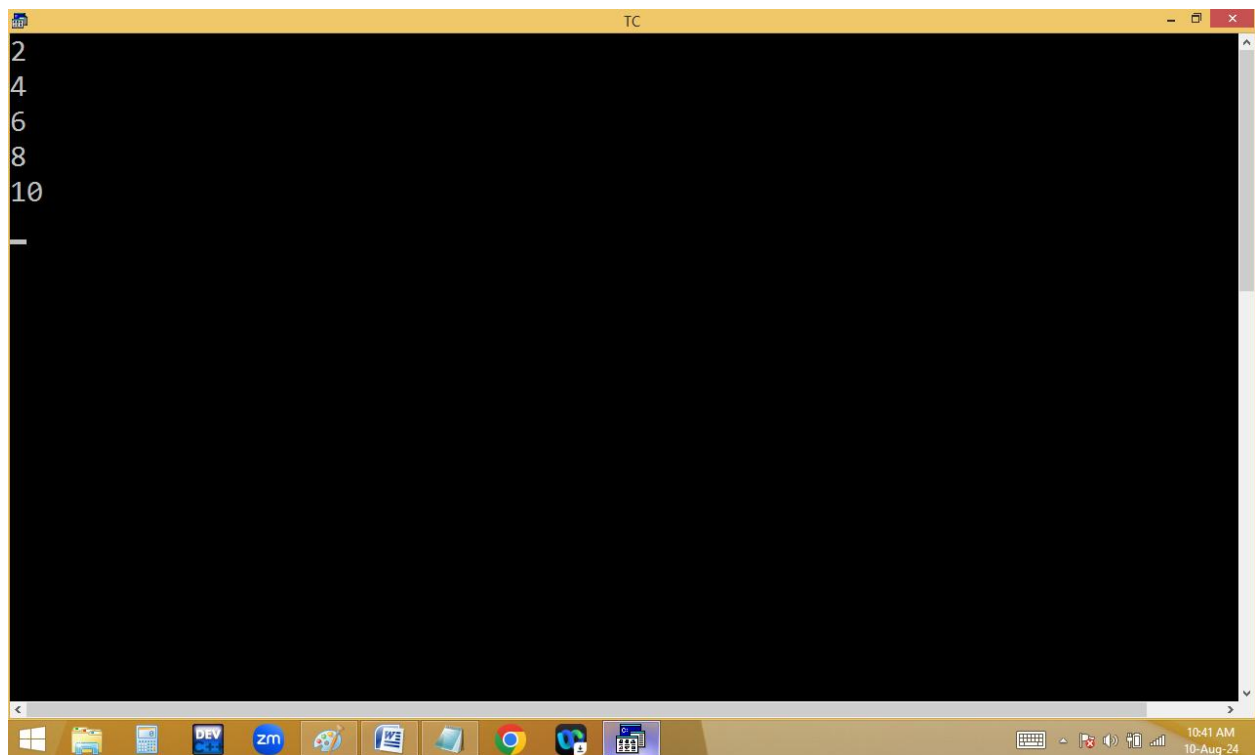
Printf 1..10 even no's using continue:



The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar and menu bar. The menu bar includes File, Edit, Run, Compile, Project, Options, Debug, and Break/watch. The status bar at the top indicates 'Line 9 Col 11 Insert Indent Tab Fill Unindent * E:9AM.C'. The main editing area has a blue background and contains the following C code:

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int i;
    clrscr();
    for(i=1;i<=10;i++)
    {
        if(i%2!=0)continue;
        printf("%d\n",i);
    }
    getch();
}
```

The Windows taskbar at the bottom shows various icons including Windows, File Explorer, Calculator, DEV C++, ZOOM, and others. The system clock in the bottom right corner displays '10:41 AM 10-Aug-24'.



The screenshot shows the Turbo C++ (TC) IDE with a yellow title bar and menu bar. The main editing area has a black background and displays the output of the program as a list of numbers:

```
2
4
6
8
10
```

The Windows taskbar at the bottom is identical to the first screenshot, showing the same icons and system clock ('10:41 AM 10-Aug-24').

