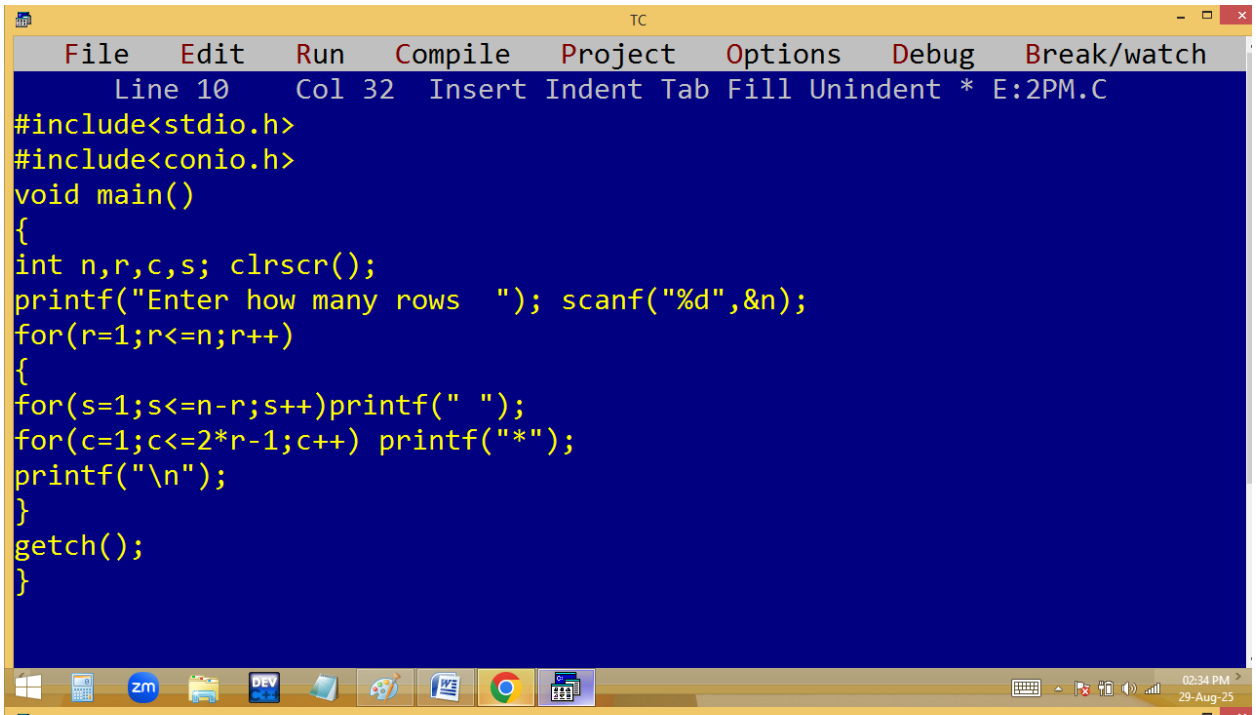
2*r-1

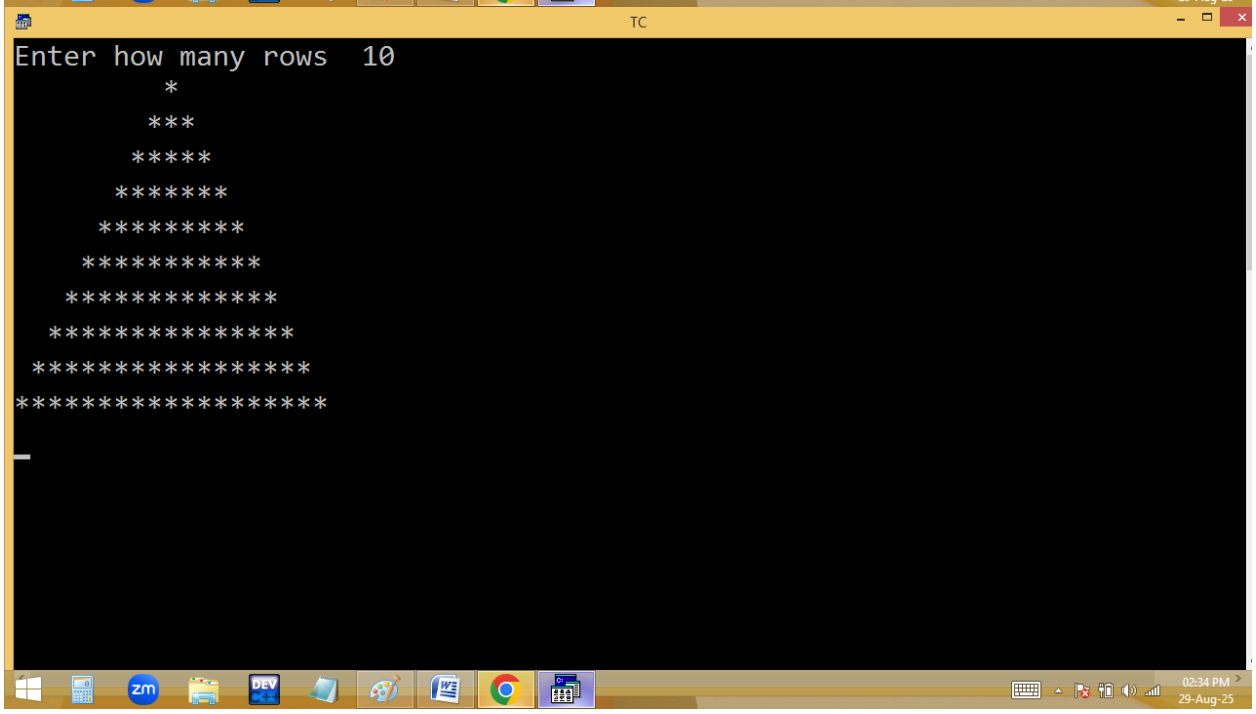
2*1-1 = 1

2*2-1 = 3

2*3-1 = 5

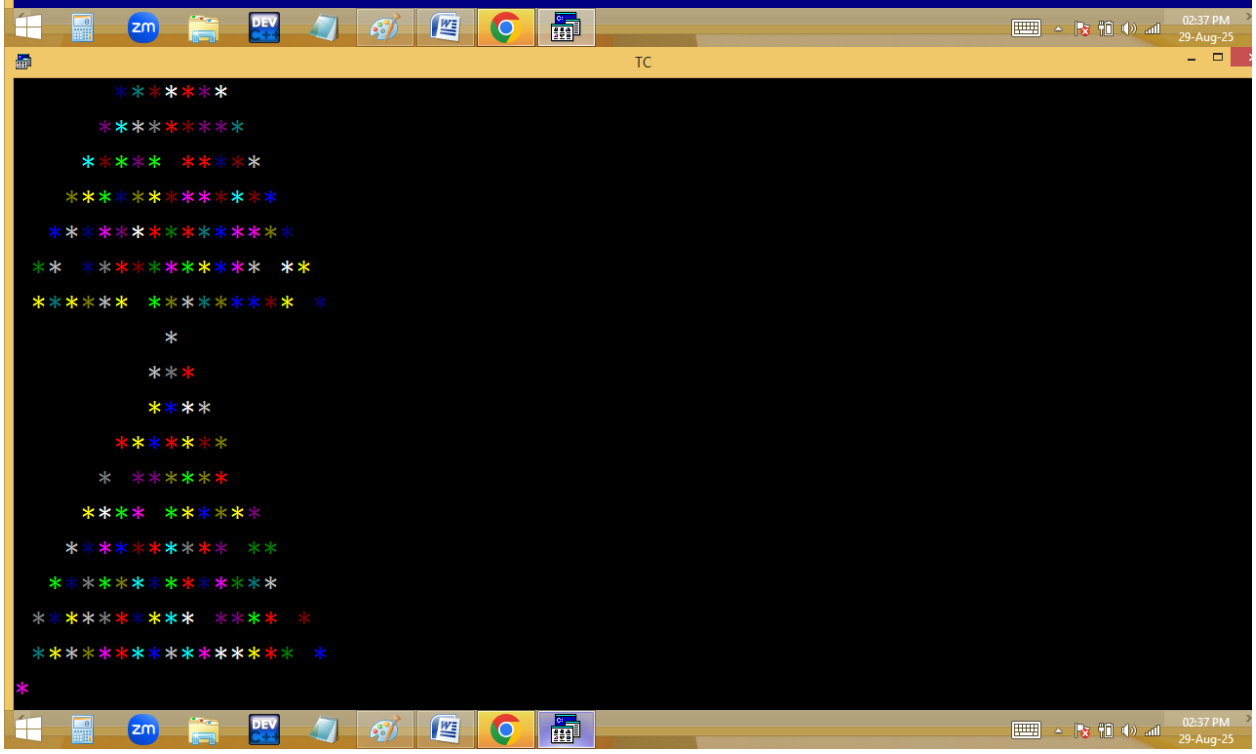
2*4-1 = 7

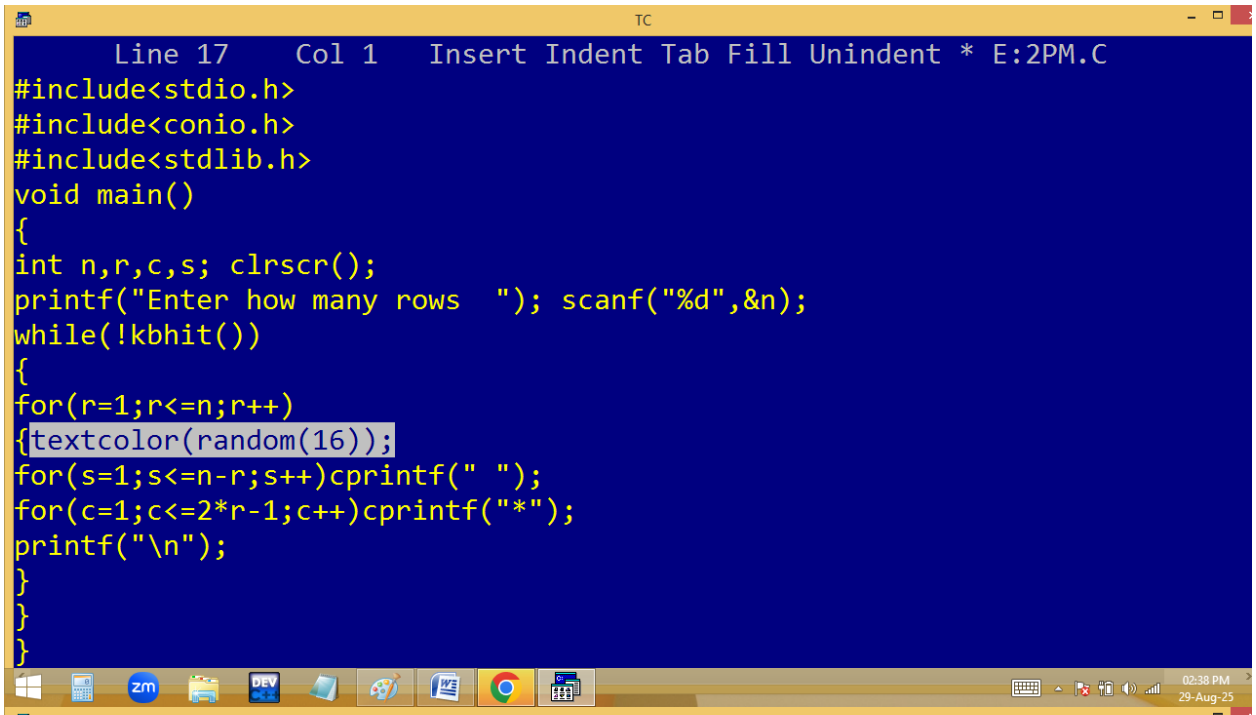

TC
File Edit Run Compile Project Options Debug Break/watch
Line 10 Col 32 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows "); scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)printf(" ");
for(c=1;c<=2*r-1;c++) printf("*");
printf("\n");
}
getch();
}

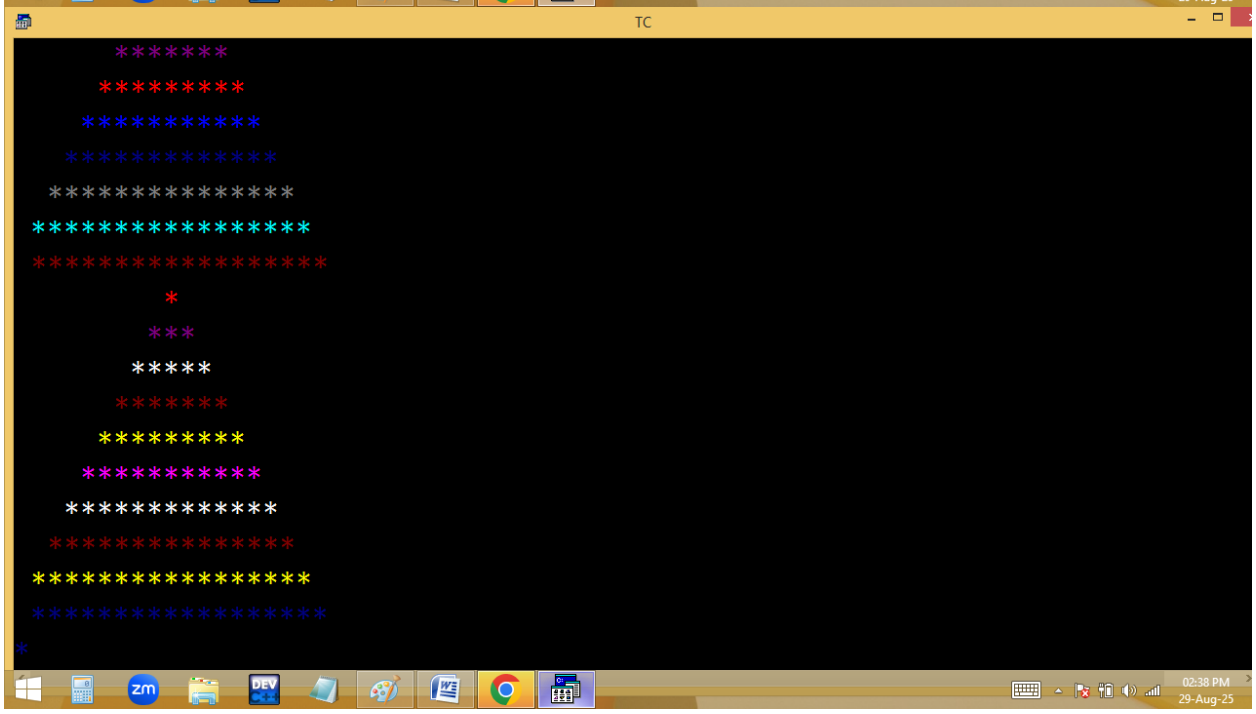

TC
Enter how many rows 10
*
***
*****
****
****
****
****
****
****
****

TC

```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows  "); scanf("%d",&n);
while(!kbhit())
{
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++) {textcolor(random(16));cprintf("*");}
printf("\n");
}
}
}
```




TC
Line 17 Col 1 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows "); scanf("%d",&n);
while(!kbhit())
{
for(r=1;r<=n;r++)
{textcolor(random(16));
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++)cprintf("*");
printf("\n");
}
}
}

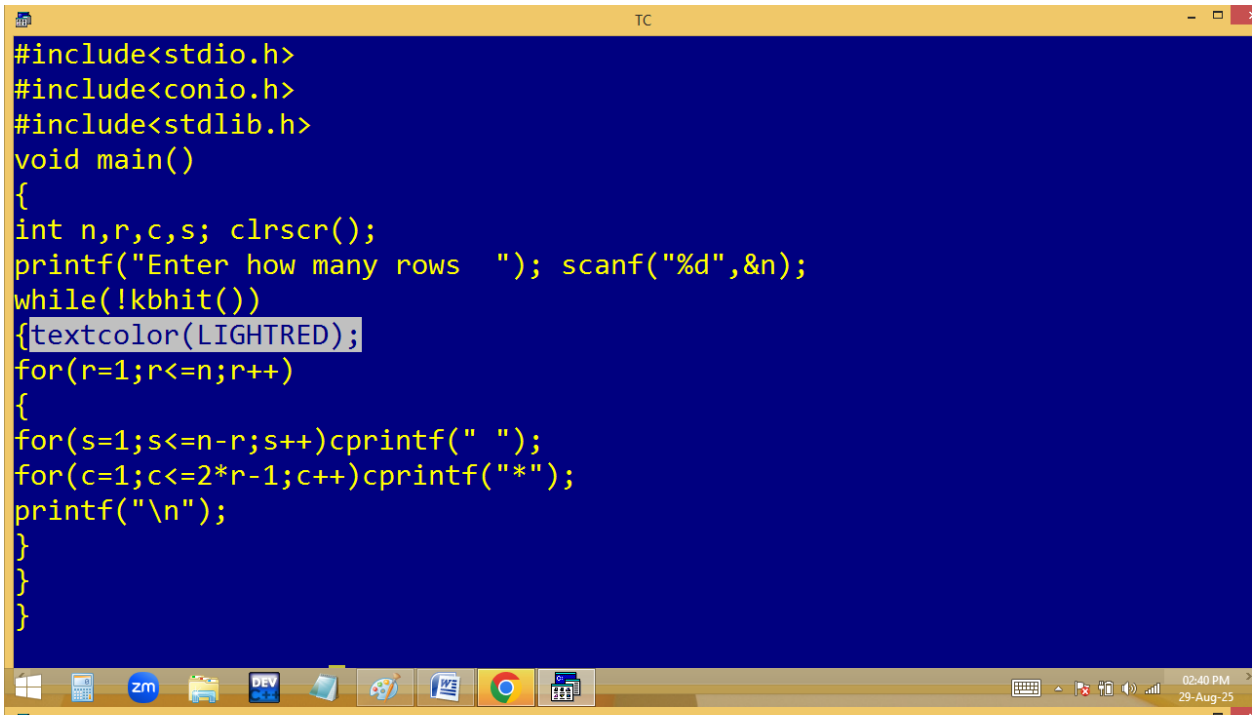

TC

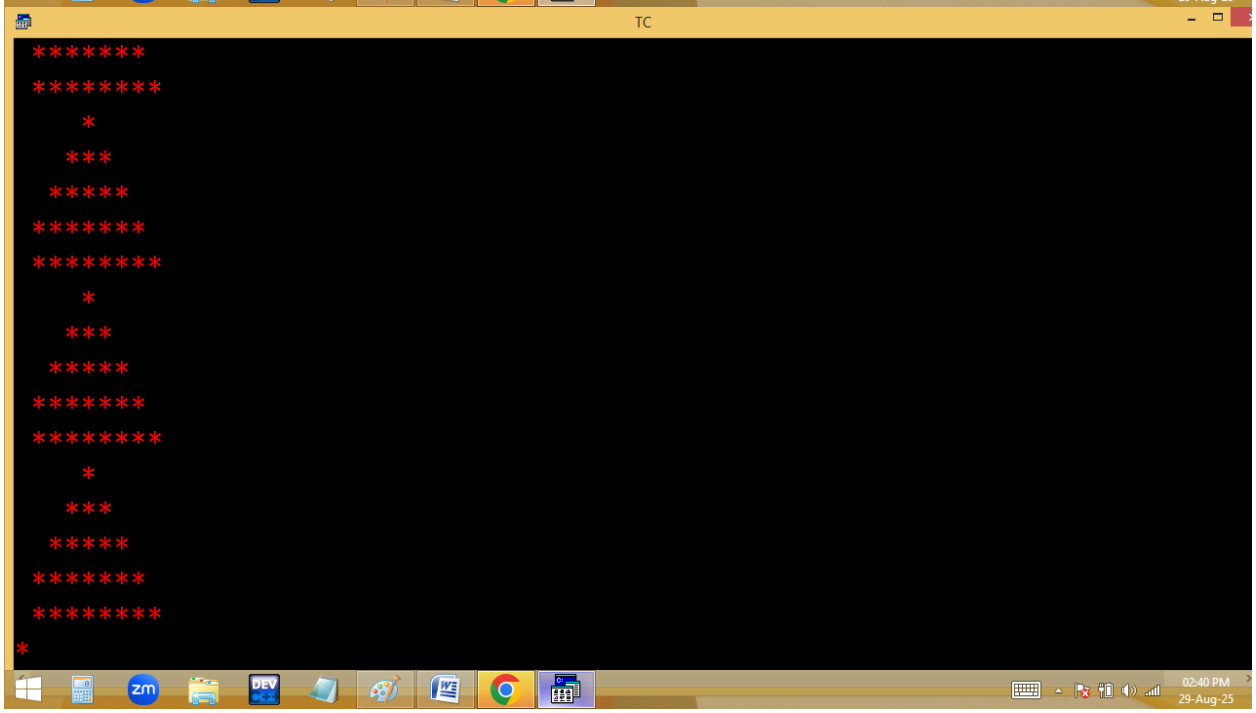
TC

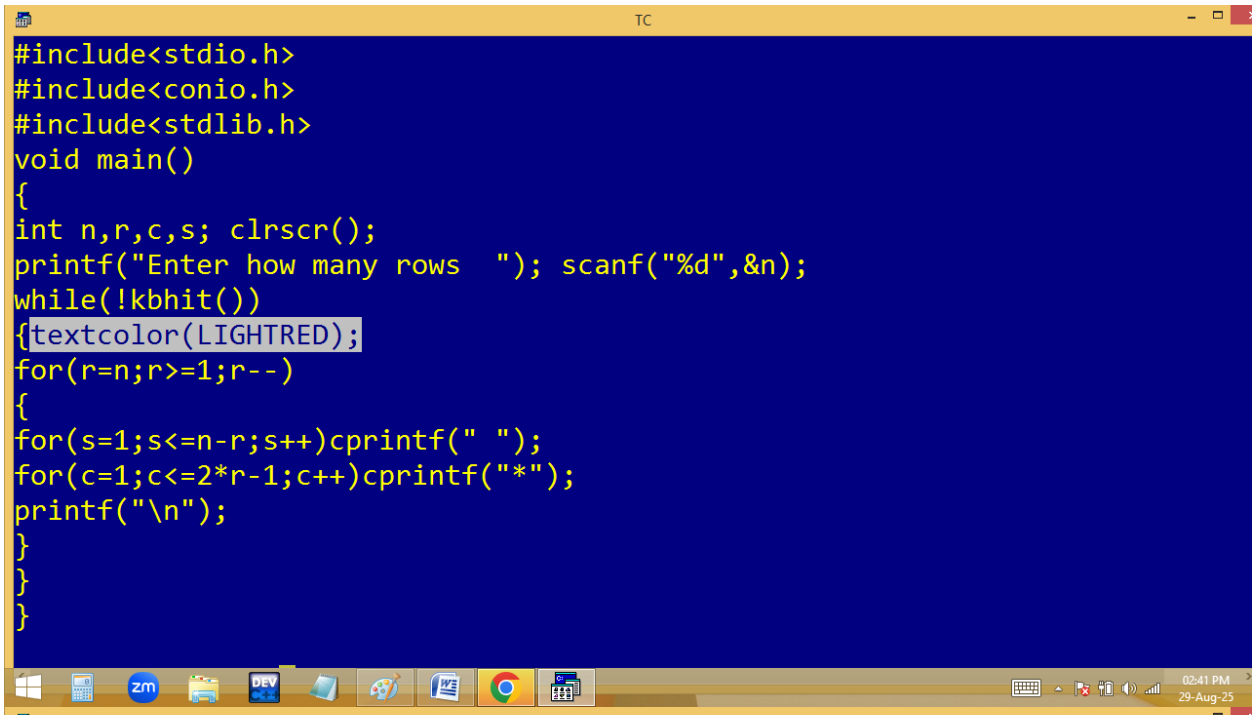
```
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows  "); scanf("%d",&n);
while(!kbhit())
{textcolor(random(16));
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++)cprintf("*");
printf("\n");
}
}
}
```

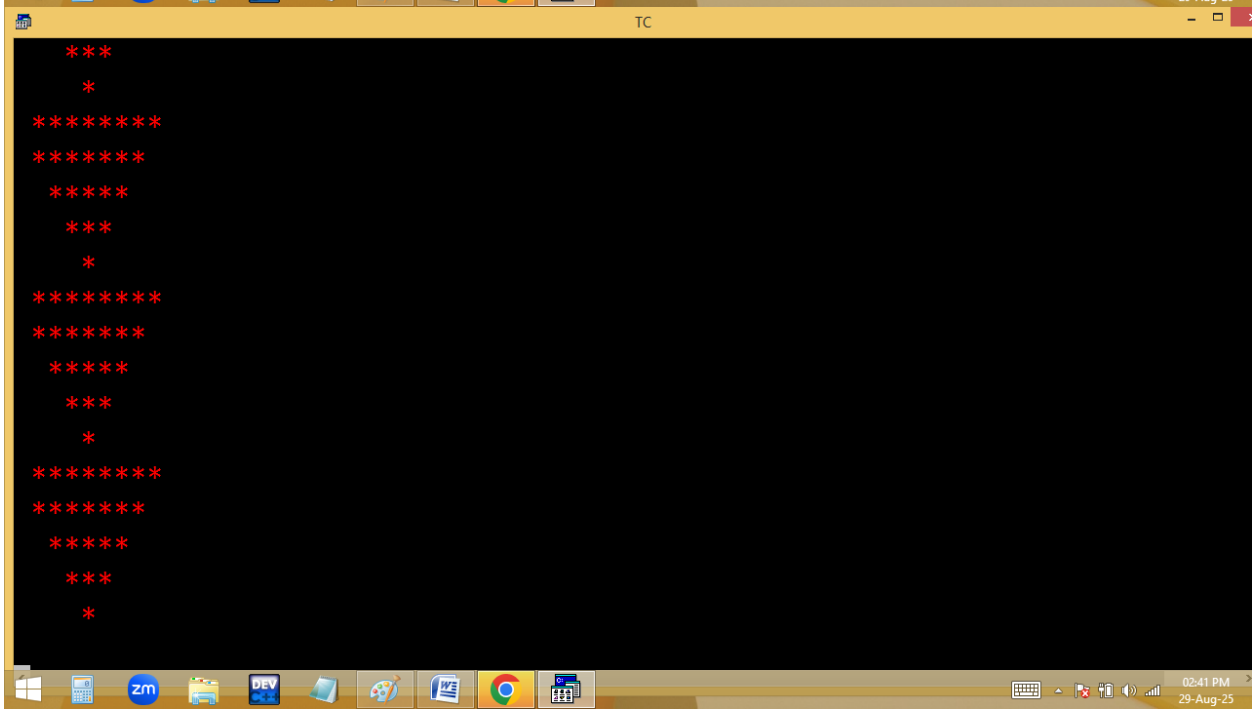
TC

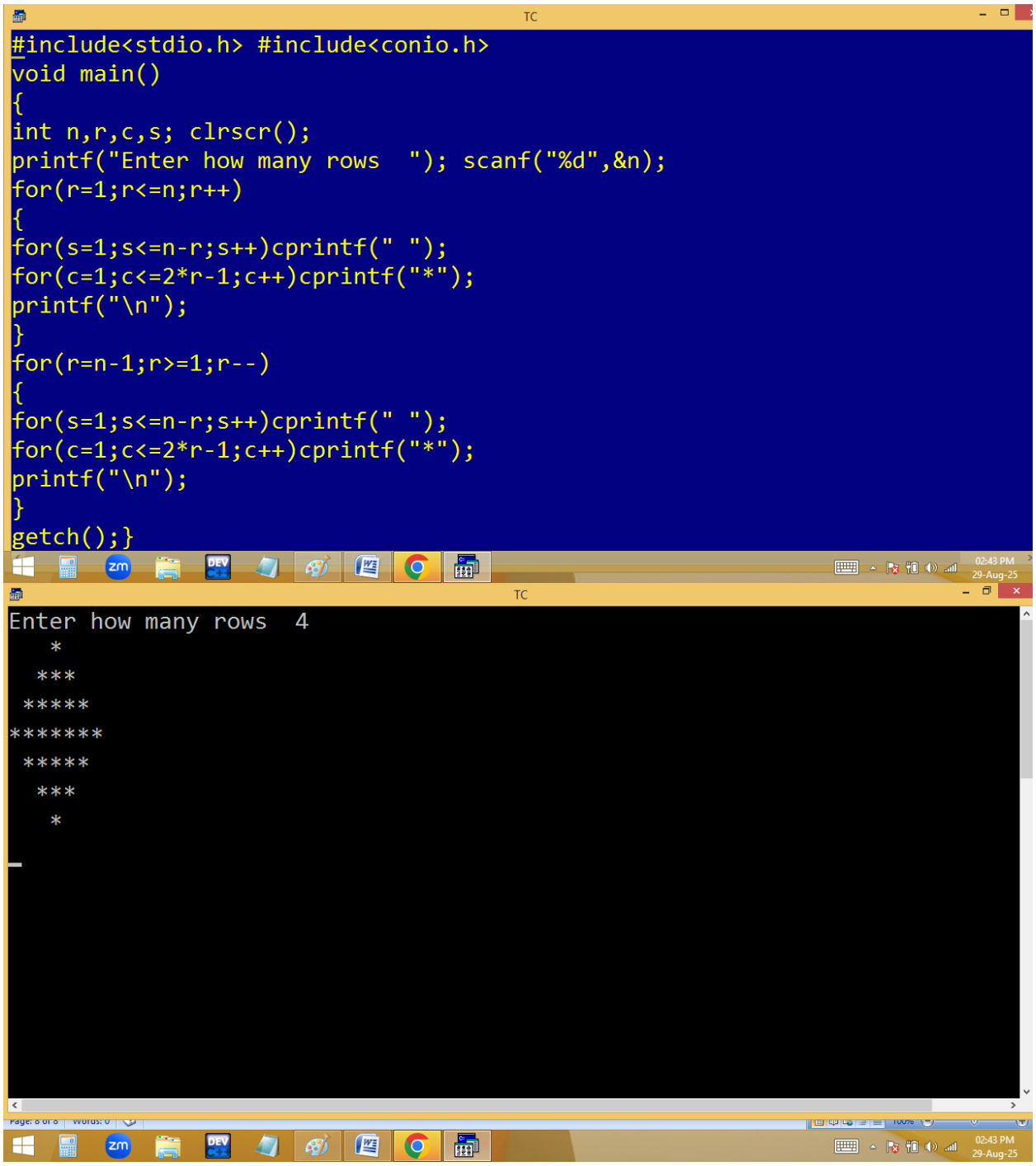
```
       *******
      *********
     ***********
    *************
   ***************
  *****************
 *******************
 *******************
          *
         ***
        *****
       *******
      *********
     ***********
    *************
   ***************
  *****************
 *******************
 *******************
*
```

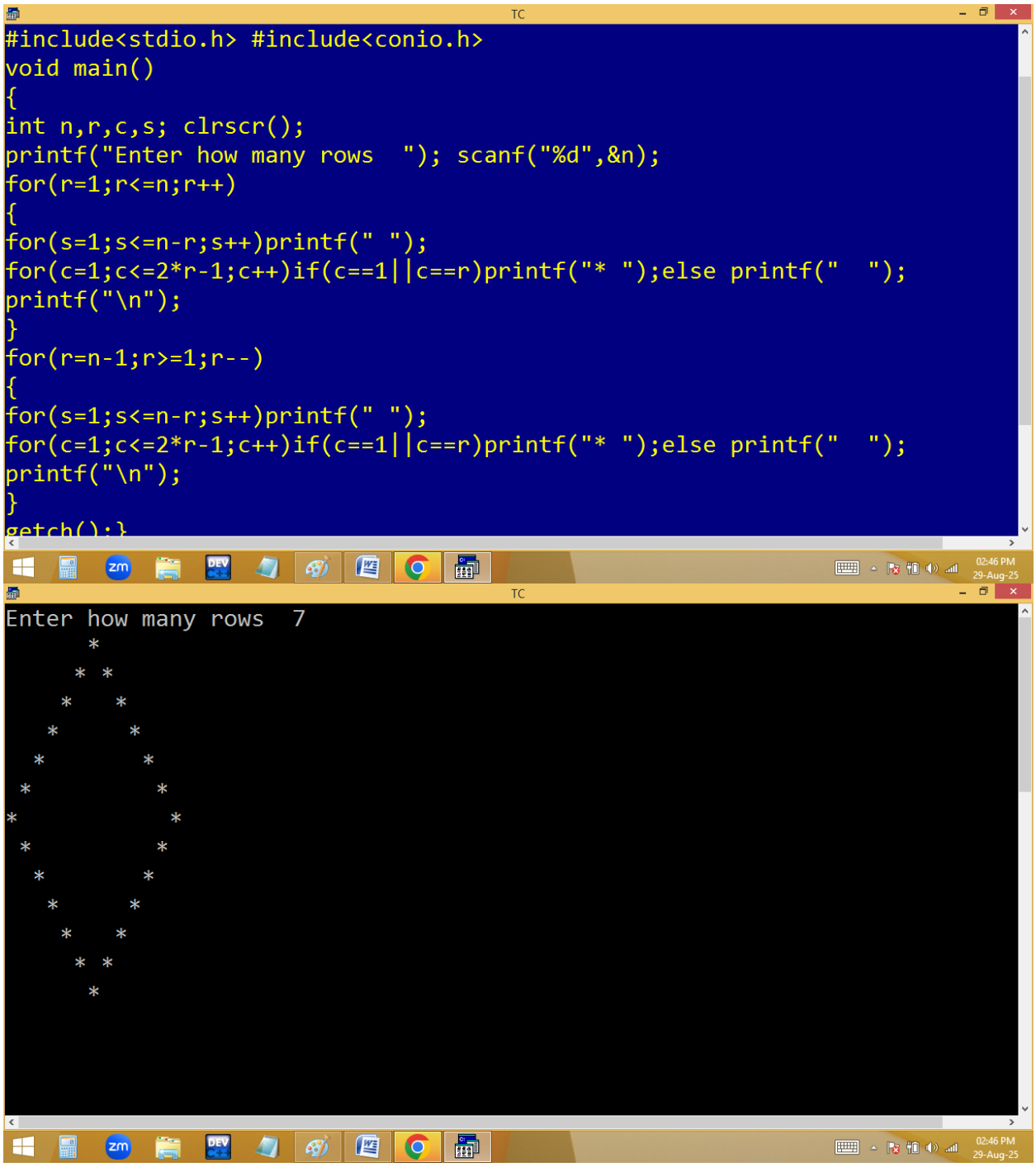

TC
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows "); scanf("%d",&n);
while(!kbhit())
{textcolor(LIGHTRED);
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=2*r-1;c++)cprintf("*");
printf("\n");
}
}
}

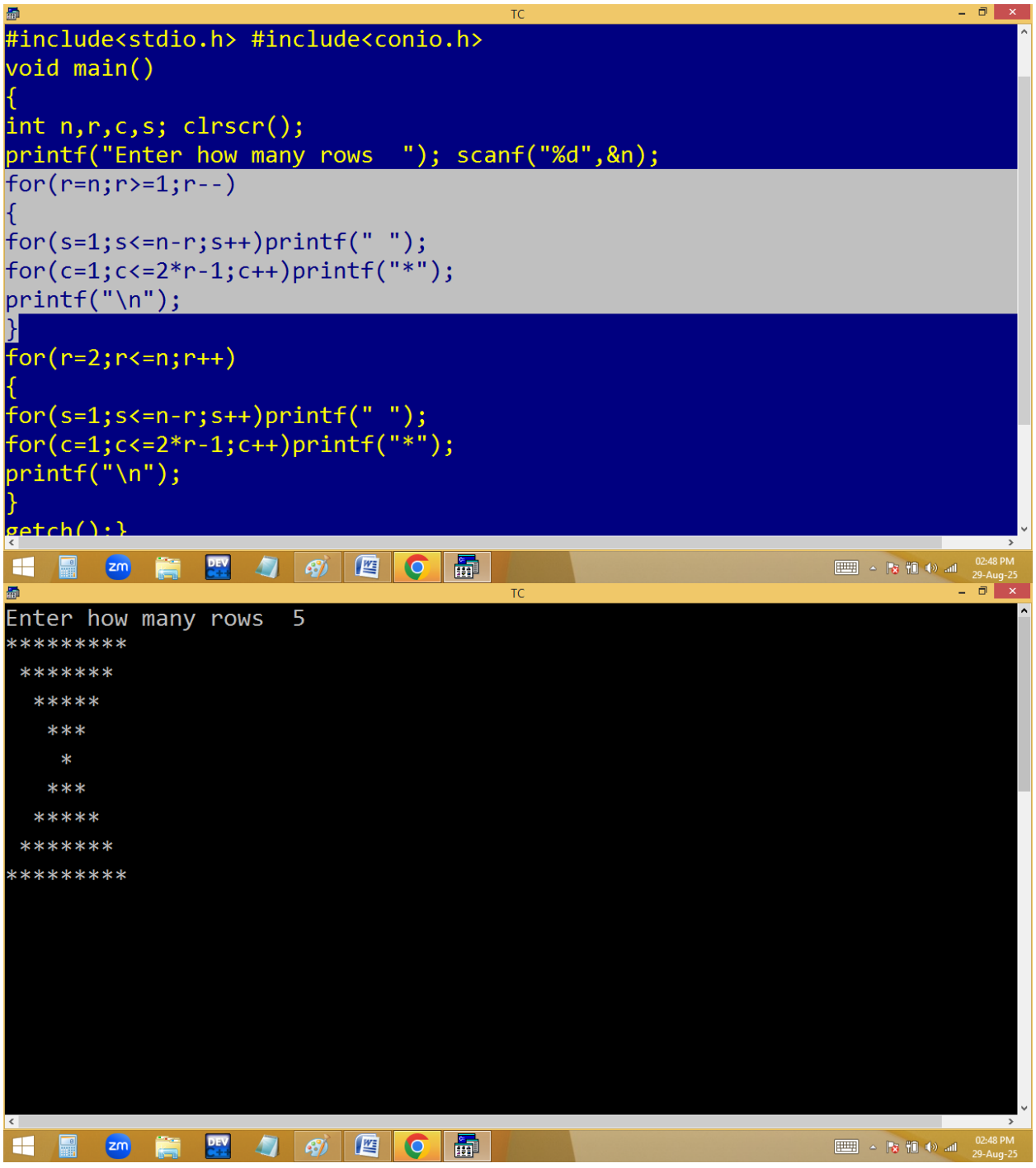

TC
****
****
*
***
*****
****
****
*
***
*****
****
****
*
***
*****
****
****
*


TC
#include<stdio.h>
#include<conio.h>
#include<stdlib.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many 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");
}
}
}


TC
***
*
****
******
*****
***
*
****
******
*****
***
*
****
******
*****
***
*


TC
#include<stdio.h> #include<conio.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows "); scanf("%d",&n);
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();}
02:43 PM
29-Aug-25
TC
Enter how many rows 4
*
***
*****
****
*****
***
*
02:43 PM
29-Aug-25


TC
#include<stdio.h> #include<conio.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows "); scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)printf(" ");
for(c=1;c<=2*r-1;c++)if(c==1||c==r)printf("* ");else printf(" ");
printf("\n");
}
for(r=n-1;r>=1;r--)
{
for(s=1;s<=n-r;s++)printf(" ");
for(c=1;c<=2*r-1;c++)if(c==1||c==r)printf("* ");else printf(" ");
printf("\n");
}
getch();}
02:46 PM
29-Aug-25
TC
Enter how many rows 7
*
* *
*   *
*   *
*   *
*   *
*   *
*   *
*   *
*   *
*   *
* *
*
02:46 PM
29-Aug-25


TC
#include<stdio.h> #include<conio.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many rows "); scanf("%d",&n);
for(r=n;r>=1;r--)
{
for(s=1;s<=n-r;s++)printf(" ");
for(c=1;c<=2*r-1;c++)printf("*");
printf("\n");
}
for(r=2;r<=n;r++)
{
for(s=1;s<=n-r;s++)printf(" ");
for(c=1;c<=2*r-1;c++)printf("*");
printf("\n");
}
getch();}
02:48 PM
29-Aug-25
TC
Enter how many rows 5
****
 ****
  *****
   ***
    *
   ***
  *****
 ****
****
02:48 PM
29-Aug-25

TC

File Edit Run Compile Project Options Debug Break/watch

Line 11 Col 30 Insert Indent Tab Fill Unindent * E:2PM.C

```
#include<stdio.h>
#include<conio.h>
void main()
{
int n,r,c,s; clrscr();
printf("Enter how many 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();
}
```

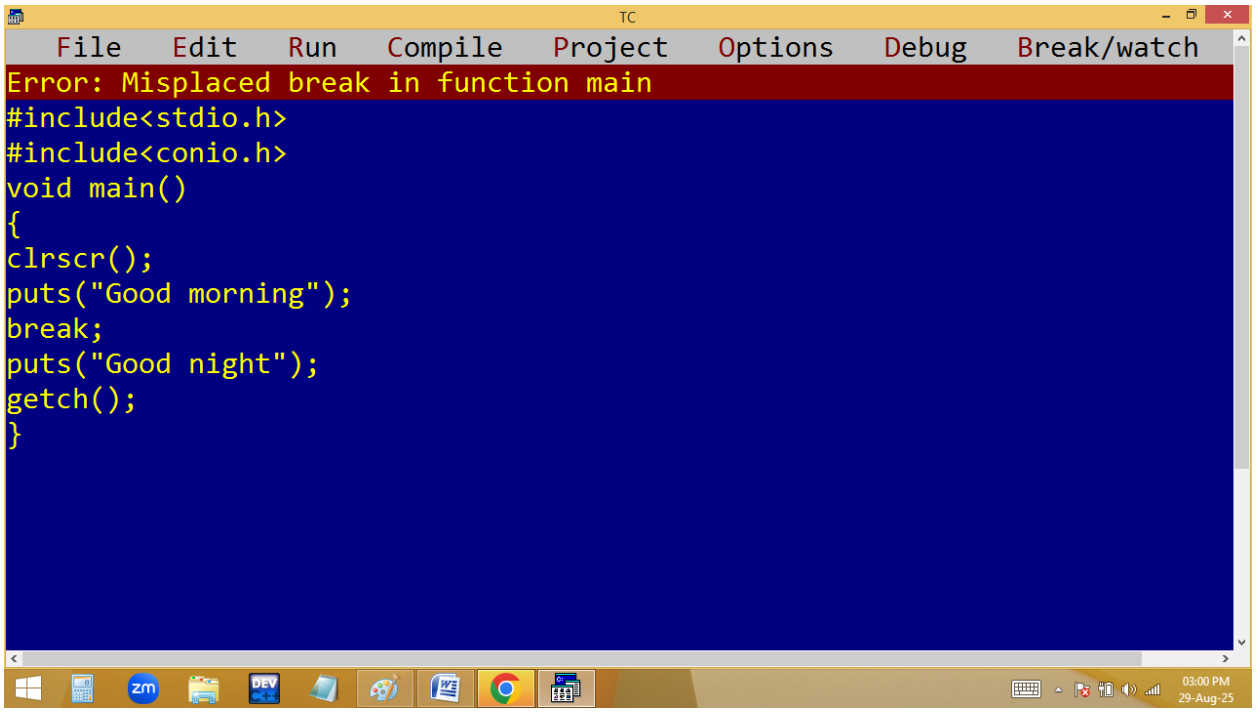
TC

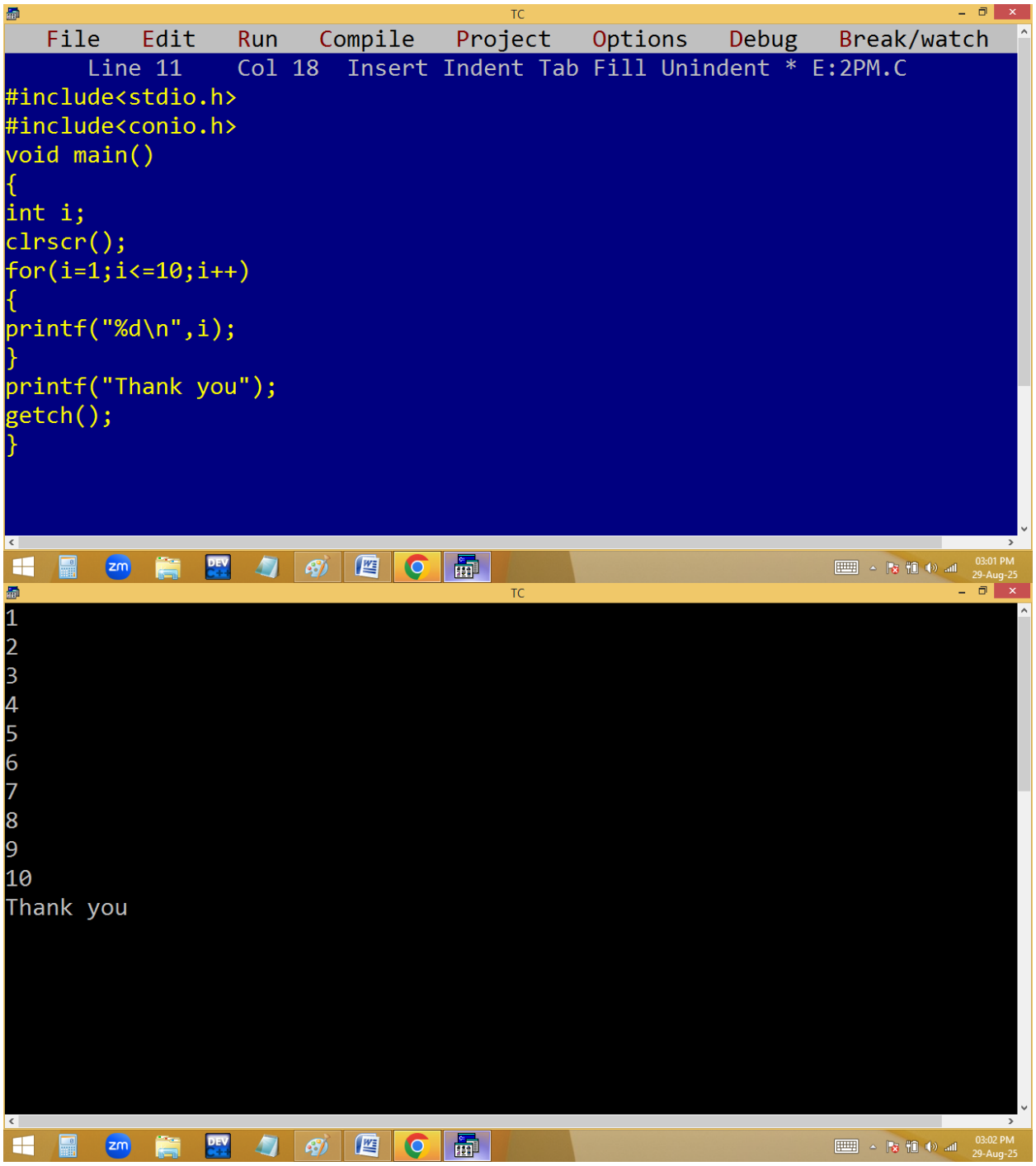
```
Enter how many rows  12
                                    1
                                  1 2 1
                                1 2 3 2 1
                              1 2 3 4 3 2 1
                            1 2 3 4 5 4 3 2 1
                          1 2 3 4 5 6 5 4 3 2 1
                        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
```

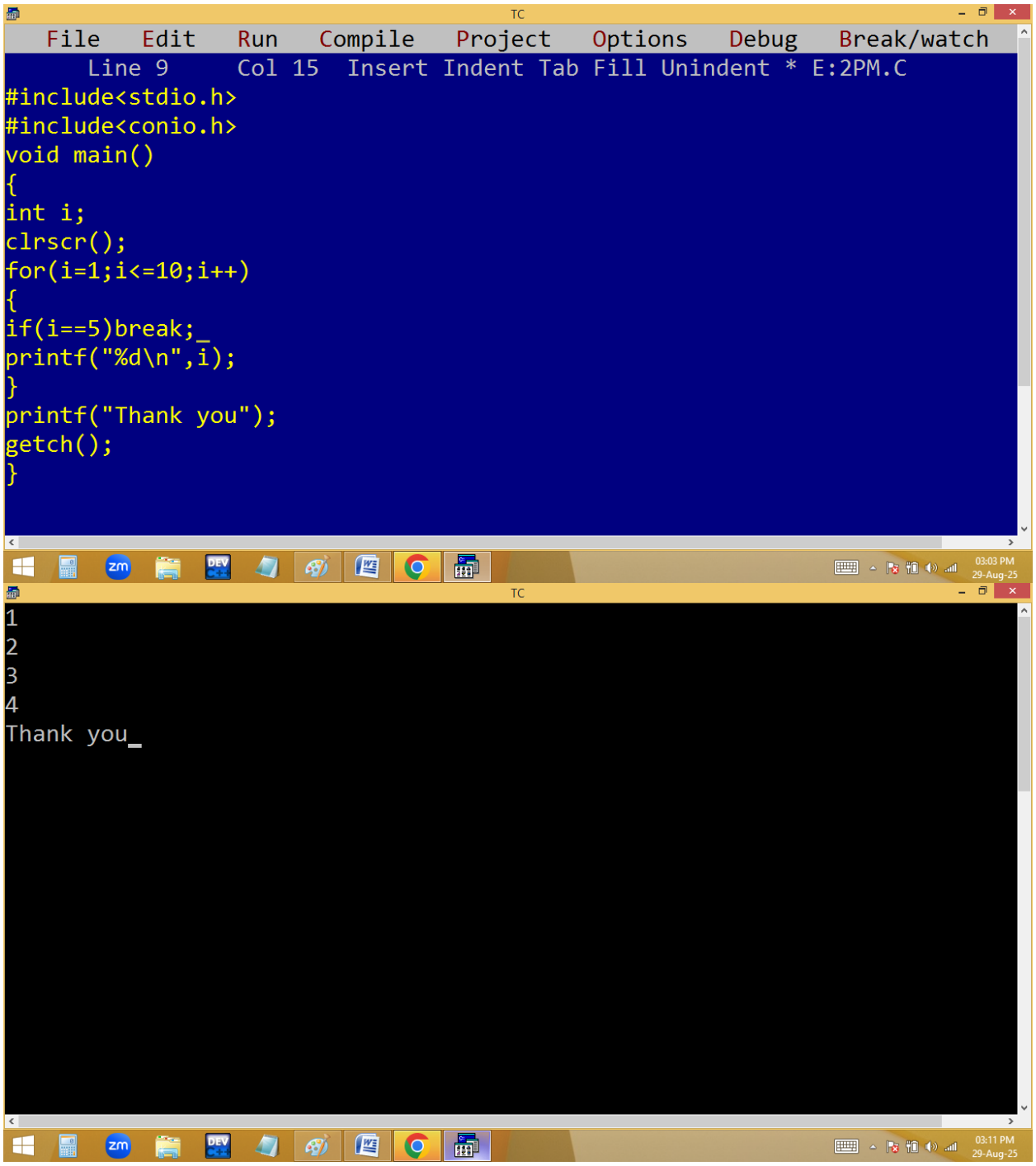
```
for(r=1;r<=4;r++)
{
for(s=1;s<=n-r;s++)p(" ");
for(c=1;c<=r;c++)p(c);
for(c=r-1;c>=1;c--)p(c);
```

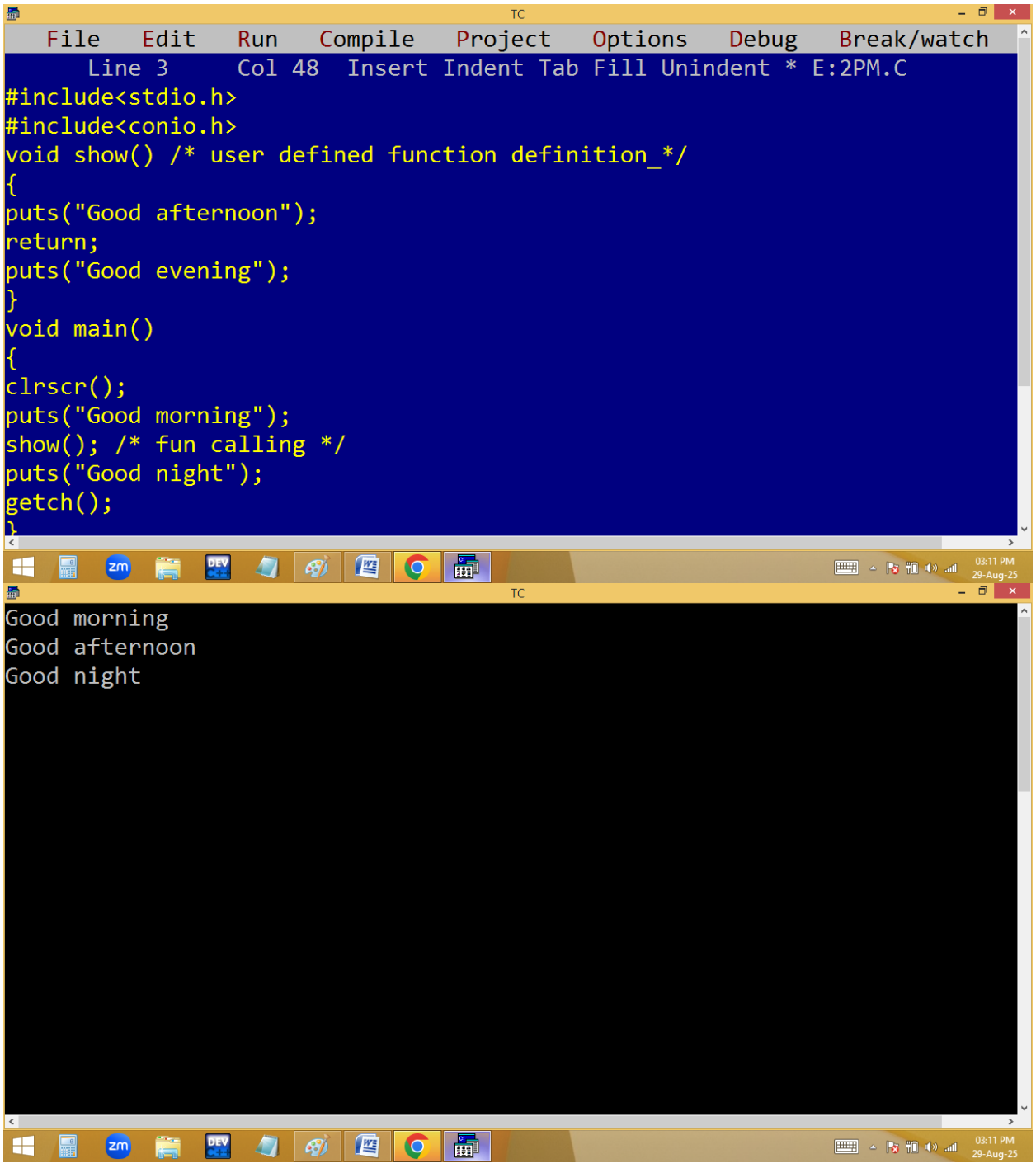
break:

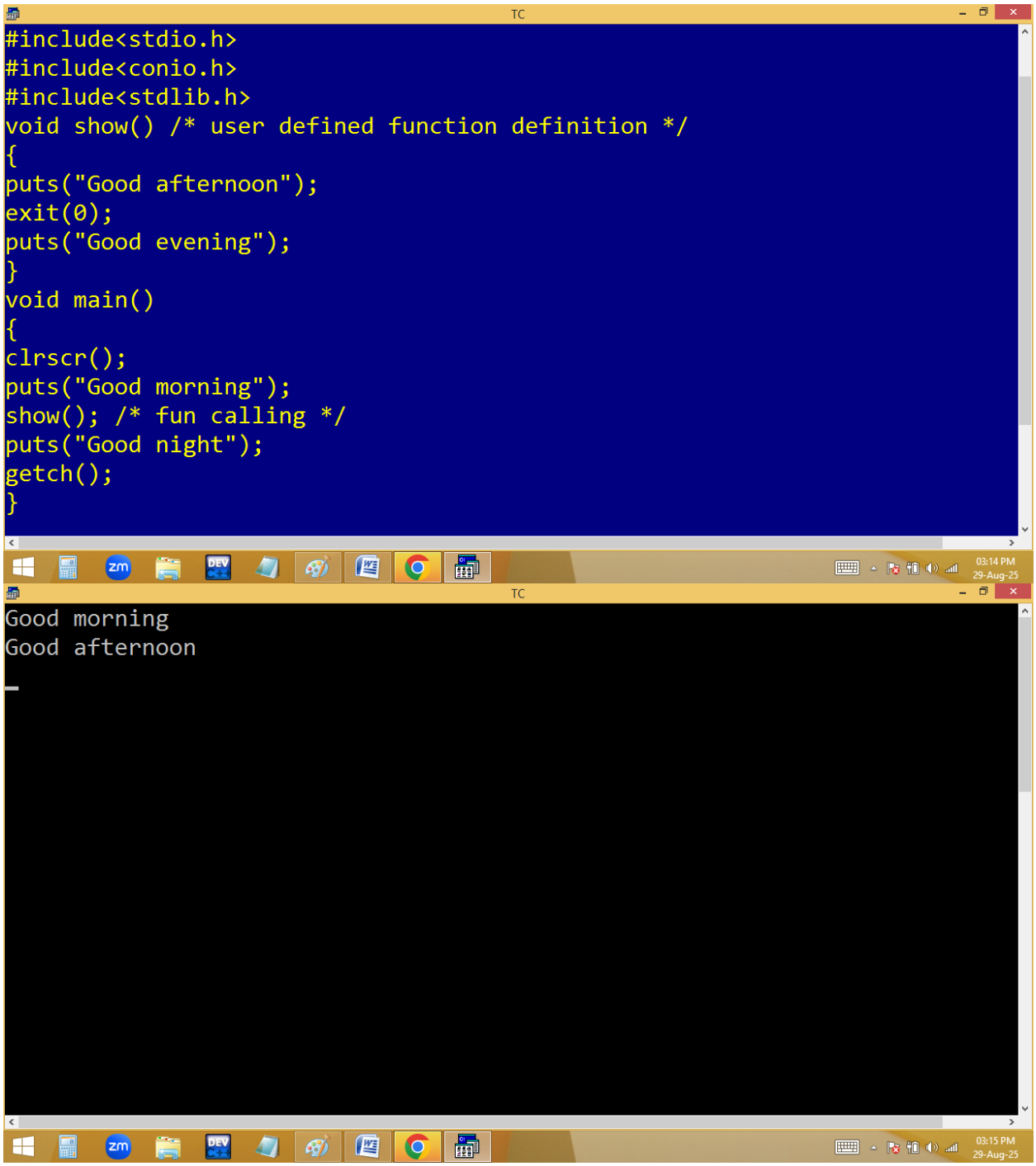
It is a keyword used within switch/loop to stop the execution. When break is occurred, the program execution jumped to the first statement after the switch or loop.




TC
File Edit Run Compile Project Options Debug Break/watch
Line 11 Col 18 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
printf("%d\n",i);
}
printf("Thank you");
getch();
}
03:01 PM
29-Aug-25
TC
1
2
3
4
5
6
7
8
9
10
Thank you
03:02 PM
29-Aug-25


TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 15 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
if(i==5)break;
printf("%d\n",i);
}
printf("Thank you");
getch();
}
03:03 PM
29-Aug-25
TC
1
2
3
4
Thank you
03:11 PM
29-Aug-25

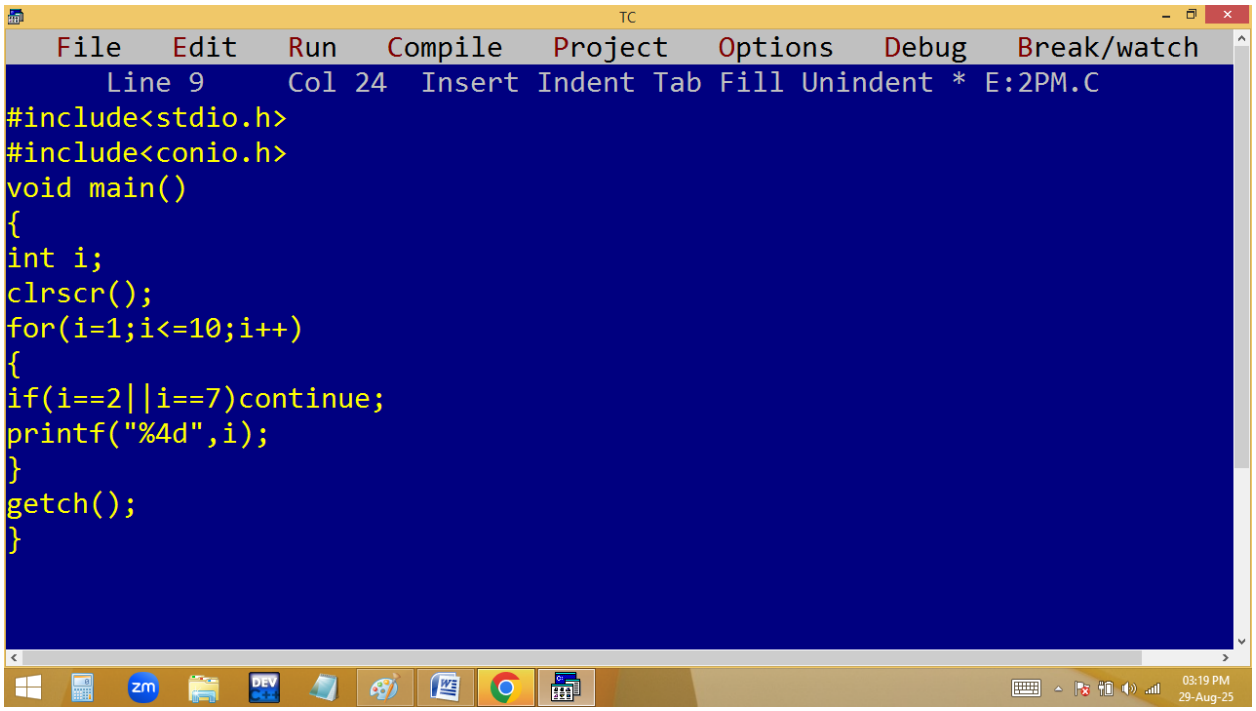

TC
File Edit Run Compile Project Options Debug Break/watch
Line 3 Col 48 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void show() /* user defined function definition_*/
{
puts("Good afternoon");
return;
puts("Good evening");
}
void main()
{
clrscr();
puts("Good morning");
show(); /* fun calling */
puts("Good night");
getch();
}
03:11 PM
29-Aug-25
TC
Good morning
Good afternoon
Good night
03:11 PM
29-Aug-25

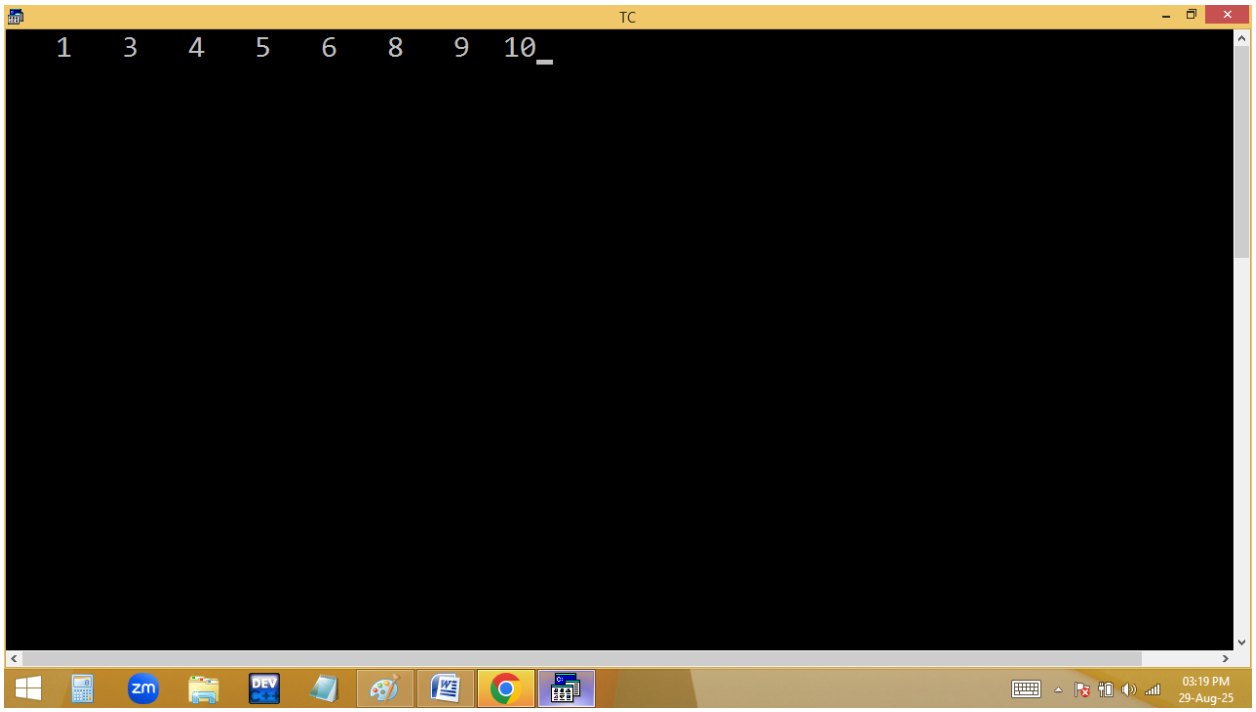


break	exit()	return
Keyword	Function	Keyword
Header file not required	stdlib.h / process.h required	Header file not required
Terminates switch / loop	Terminates total program	Closes that function only
Should be used within	Used any where	Used any where

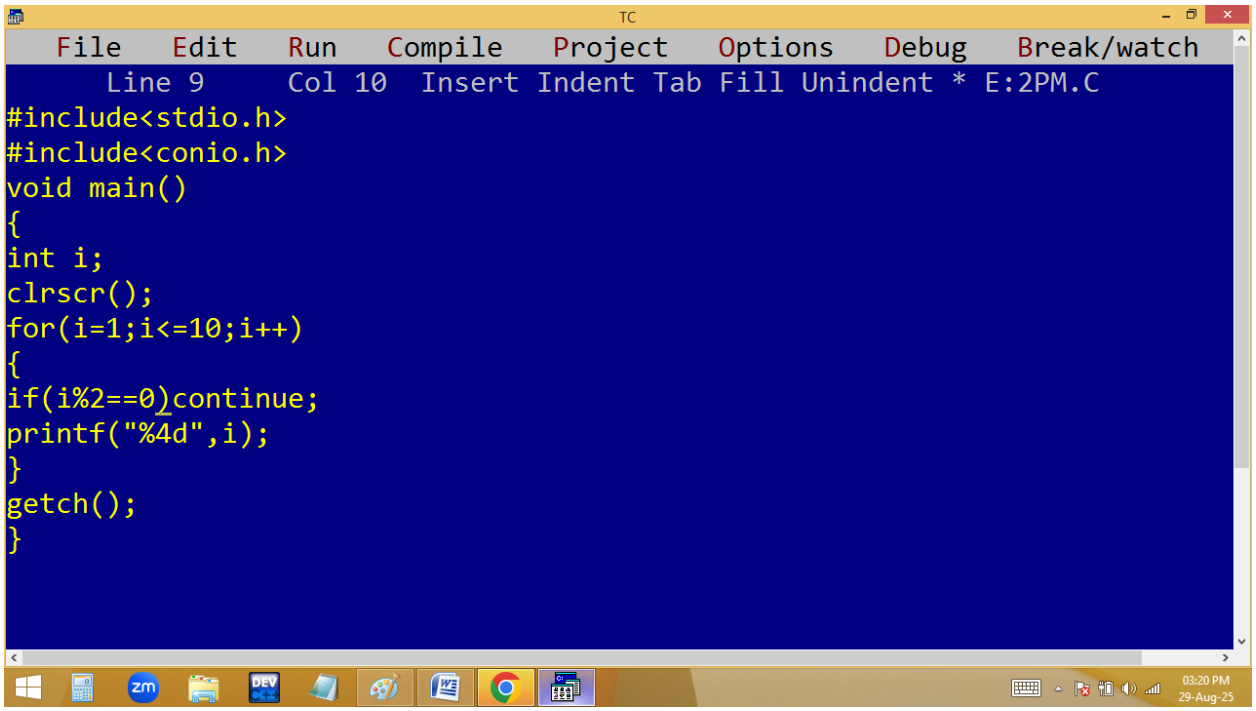
switch/loop		

continue: It is a keyword used within loops only. When continue occurred, the program execution jumped to loop ending and later to the beginning. Due to this the remaining statements in that loop are skipped.



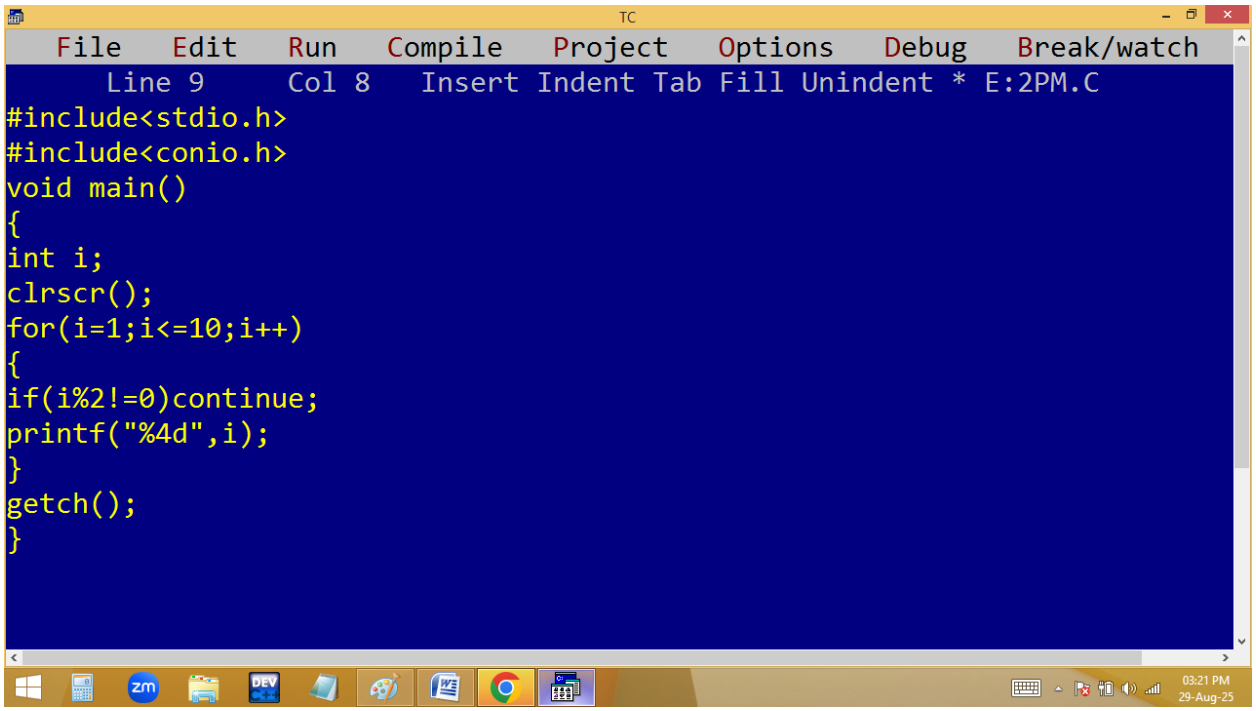


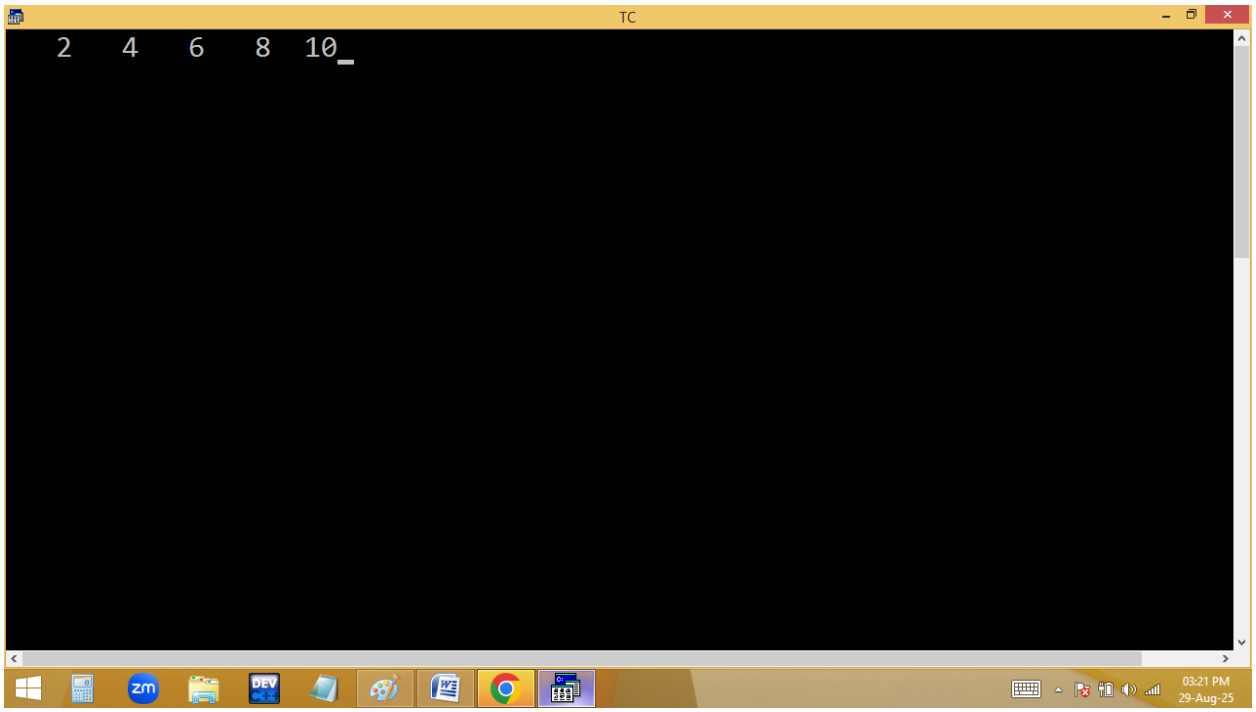
Printing 1..10 odd no's using continue:

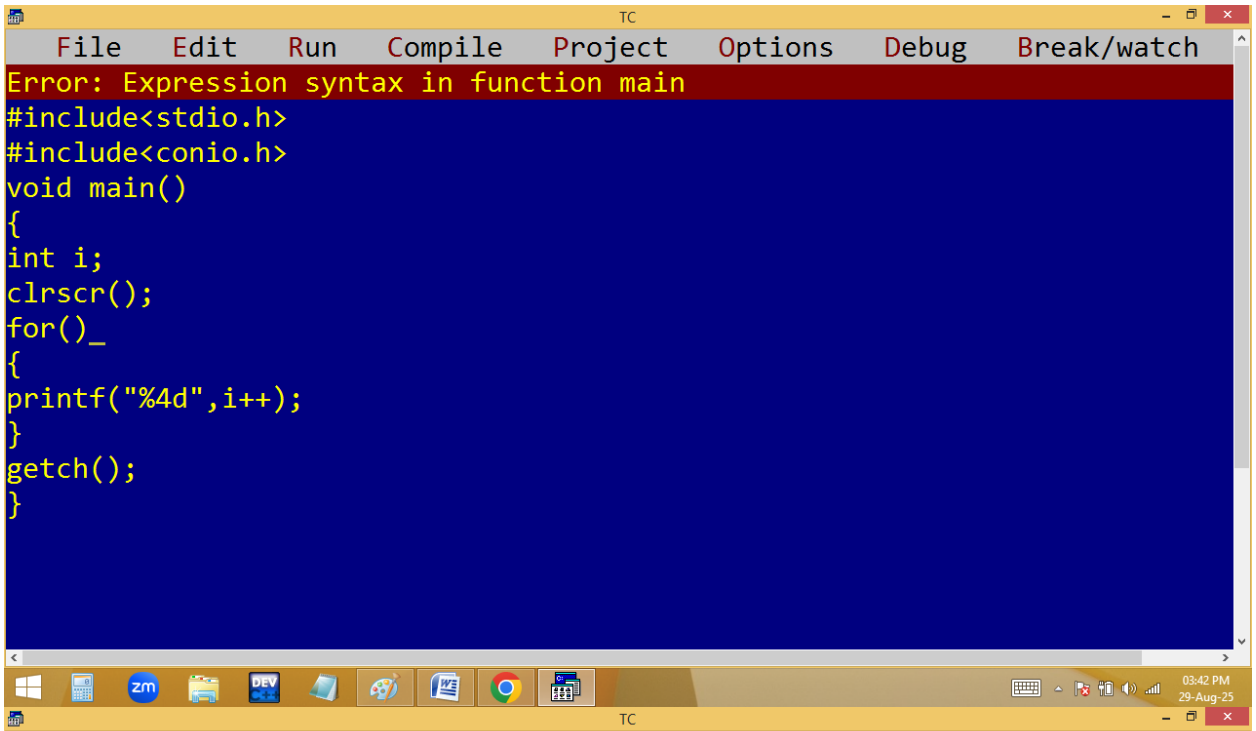

TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 10 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
if(i%2==0)continue;
printf("%4d",i);
}
getch();
}

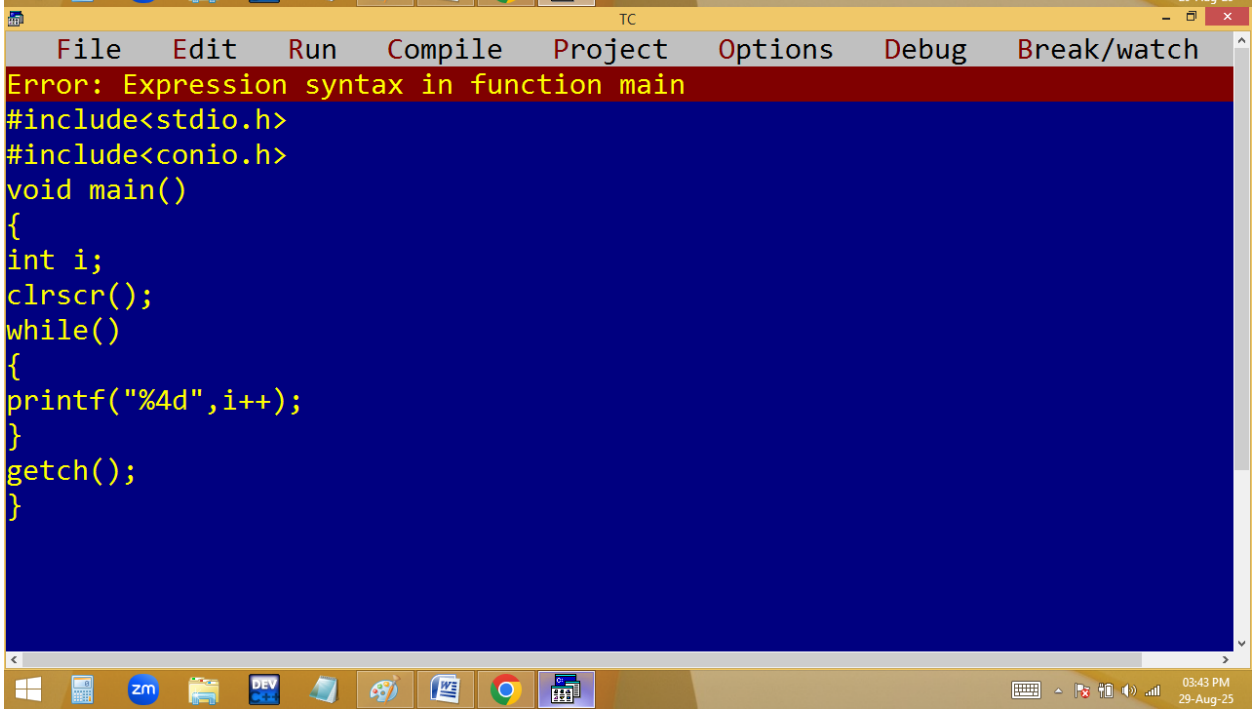
TC
1 3 5 7 9

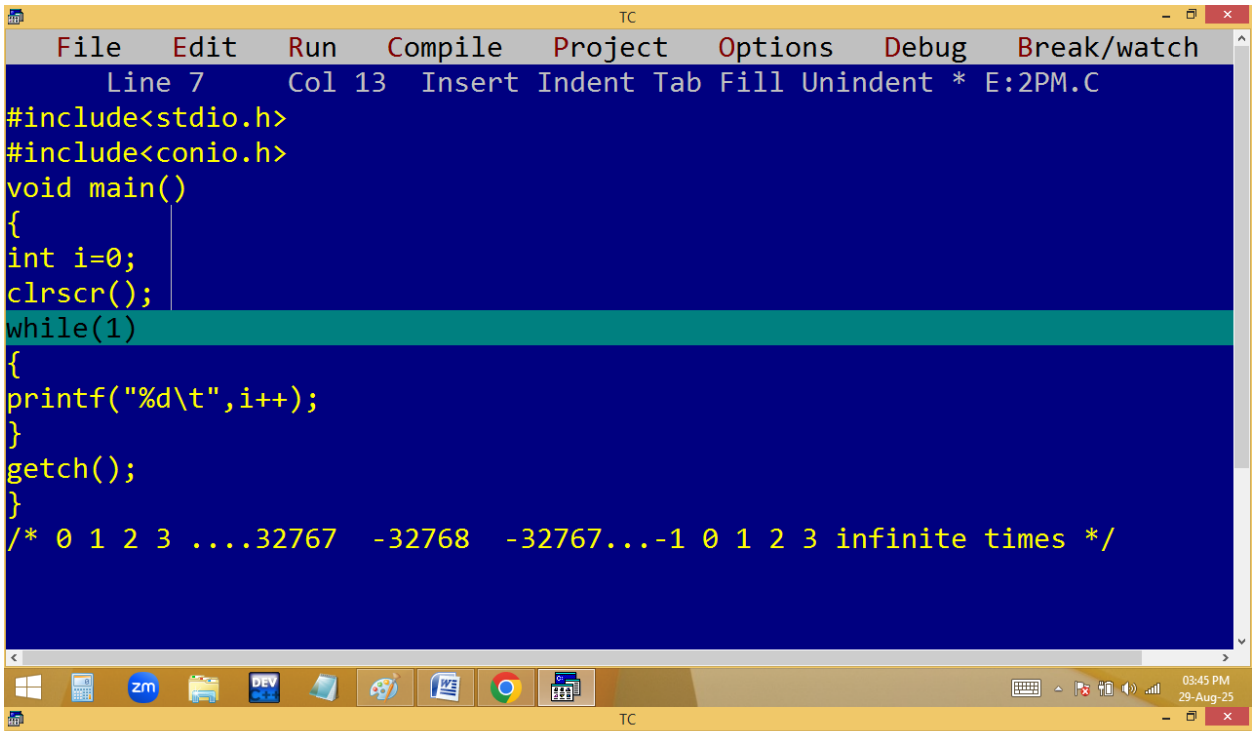
Even no’s:

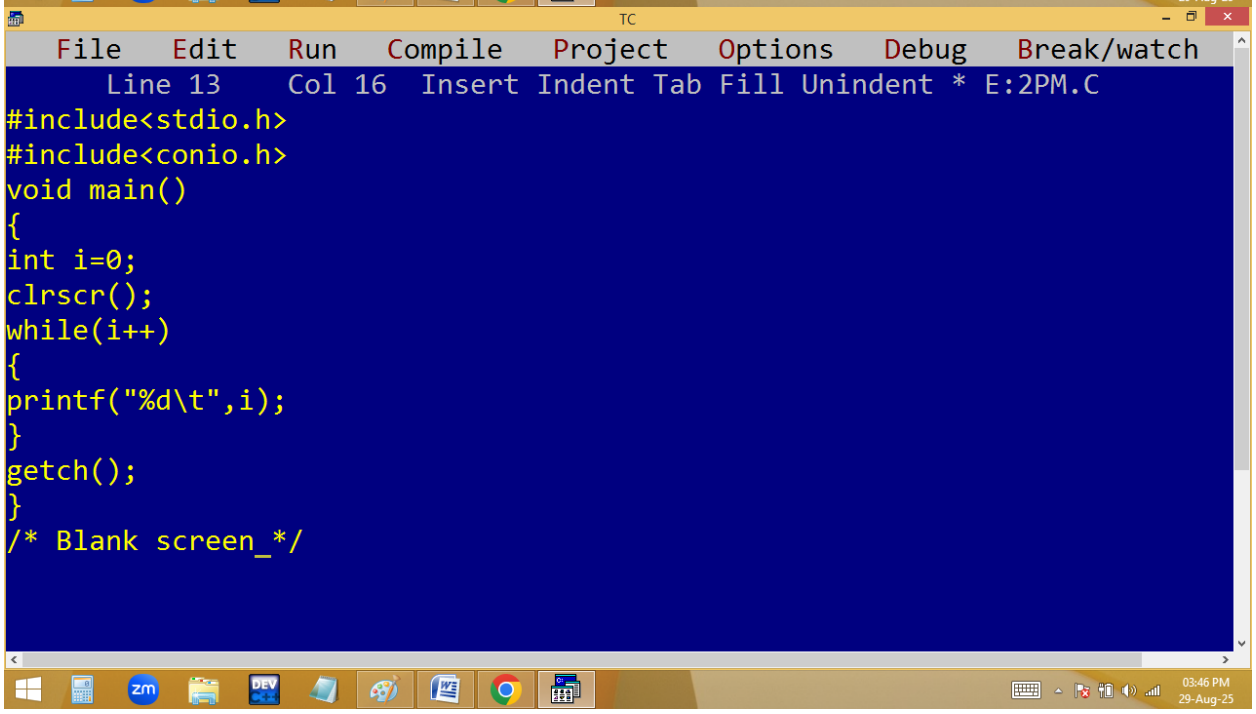

TC
File Edit Run Compile Project Options Debug Break/watch
Line 9 Col 8 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for(i=1;i<=10;i++)
{
if(i%2!=0)continue;
printf("%4d",i);
}
getch();
}

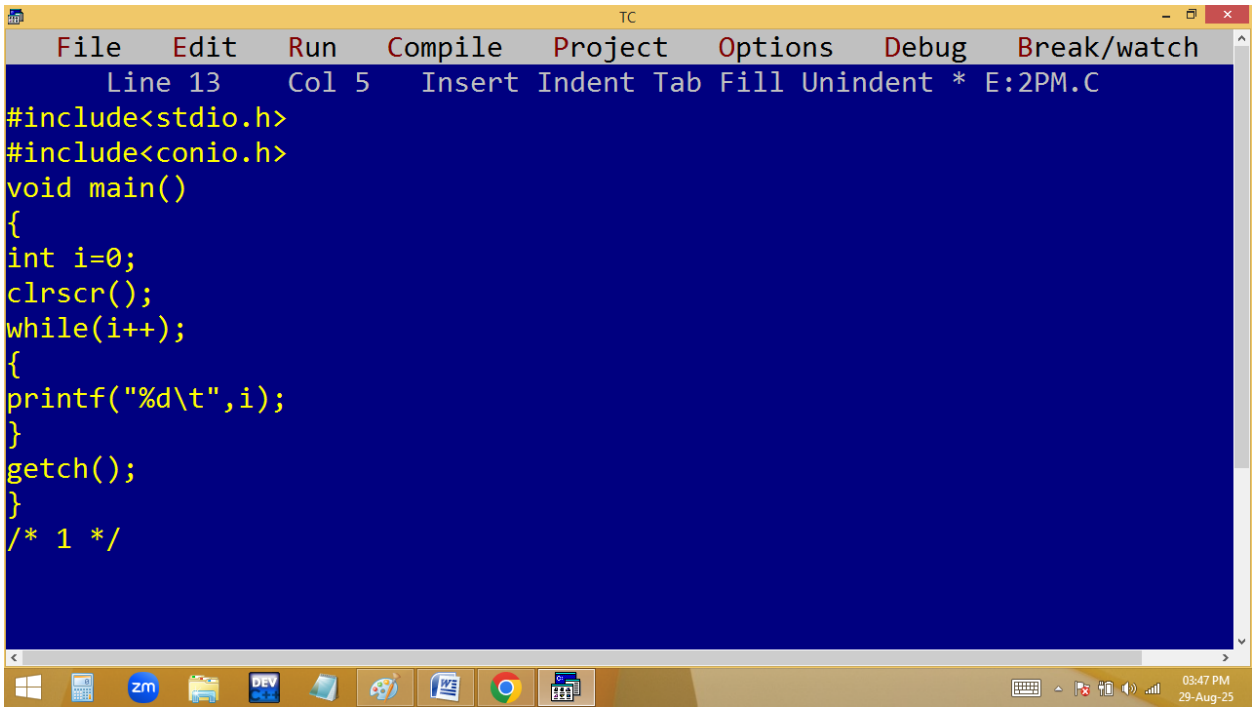

TC
2 4 6 8 10

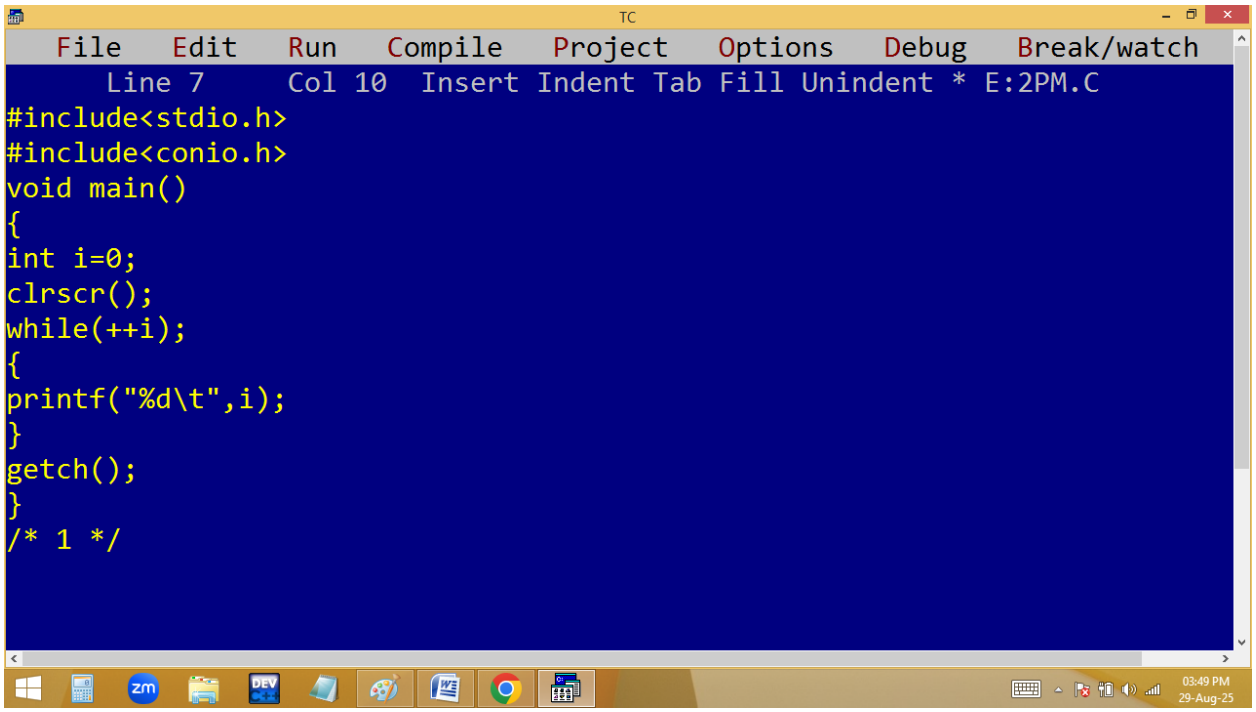

TC
File Edit Run Compile Project Options Debug Break/watch
Error: Expression syntax in function main
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
for()_
{
printf("%4d",i++);
}
getch();
}
03:42 PM
29-Aug-25

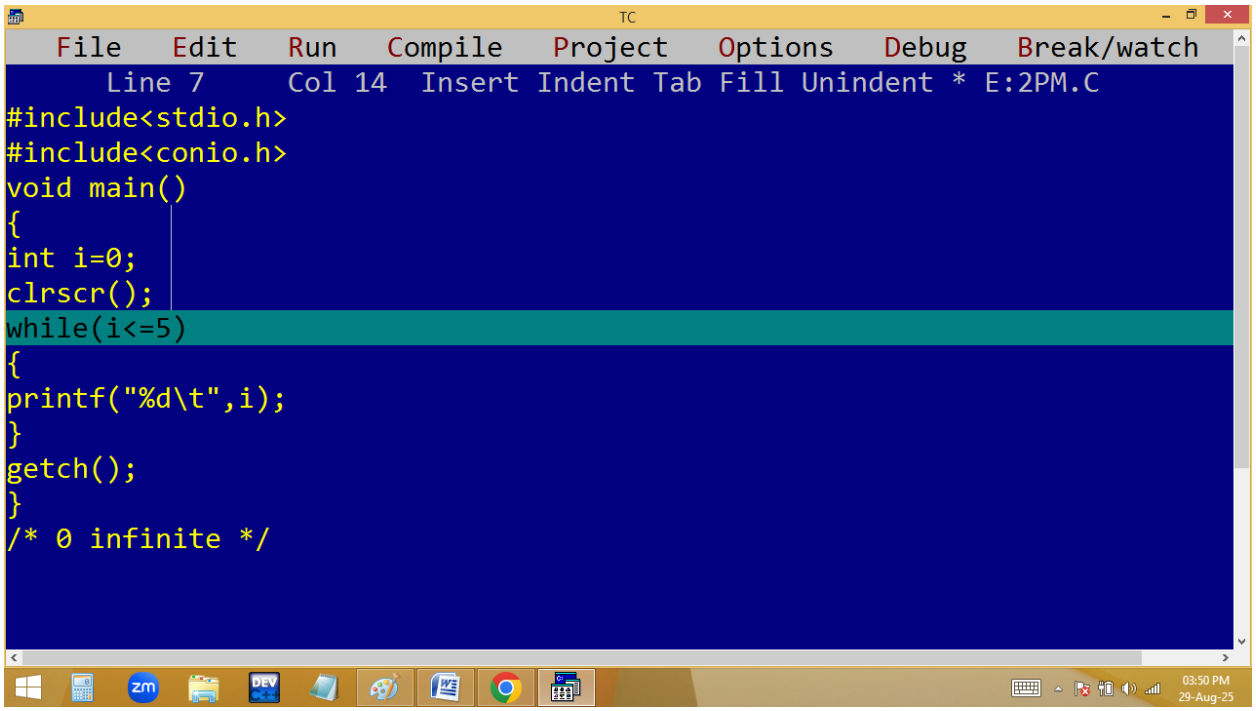

TC
File Edit Run Compile Project Options Debug Break/watch
Error: Expression syntax in function main
#include<stdio.h>
#include<conio.h>
void main()
{
int i;
clrscr();
while()
{
printf("%4d",i++);
}
getch();
}
03:43 PM
29-Aug-25


TC
File Edit Run Compile Project Options Debug Break/watch
Line 7 Col 13 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i=0;
clrscr();
while(1)
{
printf("%d\t",i++);
}
getch();
}
/* 0 1 2 3 ....32767 -32768 -32767...-1 0 1 2 3 infinite times */


TC
File Edit Run Compile Project Options Debug Break/watch
Line 13 Col 16 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i=0;
clrscr();
while(i++)
{
printf("%d\t",i);
}
getch();
}
/* Blank screen_*/


TC
File Edit Run Compile Project Options Debug Break/watch
Line 13 Col 5 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i=0;
clrscr();
while(i++);
{
printf("%d\t",i);
}
getch();
}
/* 1 */
03:47 PM
29-Aug-25


TC
File Edit Run Compile Project Options Debug Break/watch
Line 7 Col 10 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i=0;
clrscr();
while(++i);
{
printf("%d\t",i);
}
getch();
}
/* 1 */
03:49 PM
29-Aug-25


TC
File Edit Run Compile Project Options Debug Break/watch
Line 7 Col 14 Insert Indent Tab Fill Unindent * E:2PM.C
#include<stdio.h>
#include<conio.h>
void main()
{
int i=0;
clrscr();
while(i<=5)
{
printf("%d\t",i);
}
getch();
}
/* 0 infinite */
03:50 PM
29-Aug-25