

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". The status bar at the top indicates "Line 18", "Col 2", and "Insert Indent Tab Fill Unindent \* C:NONAME.C". The main editing area has a dark blue background with yellow text. The code is as follows:

```
void main()
{
int  n,r,c,en=2,on=1;
clrscr();
printf("Enter no of rows ");scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(c=1;c<=r;c++)
{
if(r%2==0){printf("%3d",en); en+=2; }
else {printf("%3d",on); on+=2;}
}
printf("\n");
}
getch();
}
```

The Windows taskbar is visible at the bottom, showing icons for various applications including Internet Explorer, Word, and Chrome. The system clock in the bottom right corner displays "4:31 PM" and "06/23/2022".

```

Enter no of rows 10
1
2 4
3 5 7
6 8 10 12
9 11 13 15 17
14 16 18 20 22 24
19 21 23 25 27 29 31
26 28 30 32 34 36 38 40
33 35 37 39 41 43 45 47 49
42 44 46 48 50 52 54 56 58 60

```

od = 1  
en = 2

```

for(r=1;r<=4;r++)
{
for(c=1;c<=r;c++)
{
if(r%2==1){p(en);en+=2 ;}
else {p(on); on+=2;}
}
p("\n");
}

```

2 -  
4 -

```

1 - 1
2 4
3 5 7 - 3
6 8 10 12

```

en  
2 ✓  
4 ✓  
6 ✓  
8  
10  
12

on  
1 ✓  
3 ✓  
5 ✓  
7 ✓

8  
1  
2  
3  
5

```
TC
Line 17 Col 1 Insert Indent Tab Fill Unindent * C:\NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,r,c,f1=0,f2=1,f3;
clrscr();
printf("Enter no of rows ");scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(c=1;c<=r;c++)
{
printf("%3d",f1);f3=f1+f2; f1=f2; f2=f3;
}
printf("\n");
}
getch();
}

TC
Enter no of rows 4
0
1 1
2 3 5
8 13 21 34

Page: 3 of 3 Words: 0 130% 4:37 PM 06/23/2022
```

```

for(r=1;r<=4;r++)
{
for(c=1;c<=r;c++)
{
p(f1); f3=f1+f2;
f1=f2;
f2=f3;
}
p("\n");
}

```

0		
1	1	
2	3	5

<u>n</u>	<u>r</u>	<u>c</u>	<u>f1</u>	<u>f2</u>	<u>f3</u>
4	1	1	0	+	1 = 1
			1	+	1 = 2
			1	+	2 = 3
			2	+	3 = 5
			3	+	5 = 8
			5		8

```
TC
Line 18 Col 18 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,r,c; char ch='A';
clrscr();
printf("Enter no of rows ");scanf("%d",&n);
for(r=1;r<=n;r++)
{
for(c=1;c<=r;c++)
{
if(c==1||c==r||n==r)printf("%2c",'$'); else printf("%2c",ch++);
if(ch>'Z')ch='A';
}
printf("\n");
}
getch();
}
```

```
TC
Enter no of rows 5
$
$ $
$ A $
$ B C $
$ $ $ $ $
```



```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 1 Col 17 Insert Indent Tab Fill Unindent * C:\NONAME.C
#include<stdio.h>
#include<conio.h>
void main()
{
int n,r,c,a=1,b;
clrscr();
printf("Enter no of rows ");scanf("%d",&n);
for(r=1;r<=n;r++)
{b=a+r-1;
for(c=1;c<=r;c++,a++)
{
if(r%2==0)printf("%3d",b--); else printf("%3d",a);
}
printf("\n");
}
getch();
}
```

Enter no of rows 10

```
1
3 2
4 5 6
10 9 8 7
11 12 13 14 15
21 20 19 18 17 16
22 23 24 25 26 27 28
36 35 34 33 32 31 30 29
37 38 39 40 41 42 43 44 45
55 54 53 52 51 50 49 48 47 46
```

```

a=1;
for(r=1;r<=4;r++)
{
  b=a+r-1;
  for(c=1;c<=r;c++, a++)
  {
    if(r%2==0)p(b--); else p(a);
  }
  p("\n");
}

```

r	c	a
1	1	1
2	1 2	2 3
3	1 2 3	4 5 6
4	1 2 3 4	7

5

b

2+2-1=3 2

7+4-1=10

1

3 2

4 5 6

7 10 9 8 7

```

for(r=1; r<=4; r++)
{
  b=a+r-1;
  for(c=1; c<=r; c++, a++)
  {
    if(r%2==0) p(b--);
    else p(a);
  }
  p("\n");
}

```

r	c	a	b
1	1	1	
2	1 2	2 3	2+2-1=3, 2, 1
3	1 2 3	4 5 6	
4	1 2 3 4	7	7+4-1=10

10 9 8 7



The image shows a screenshot of the Turbo C++ (TC) IDE. The top window displays the source code for a C program named C:\NONAME.C. The code is as follows:

```
File Edit Run Compile Project Options Debug Break/watch
Line 5 Col 15 Insert Indent Tab Fill Unindent * C:\NONAME.C
#include<stdio.h>
#include<conio.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("*");
}
printf("\n");
}
getch();
}
```

The bottom window shows the program's execution. It prompts the user to "Enter no of rows 10". The output is a pyramid of asterisks, where each row contains a number of asterisks equal to the row number, and the spaces between them create a triangular shape.

```
Enter no of rows 10
      *
     **
    ***
   ****
  *****
 *****
*****
*****
*****
*****
*****
```

The taskbar at the bottom of the screen shows various application icons, including Windows Explorer, Microsoft Word, and the Turbo C++ IDE itself. The system clock in the bottom right corner indicates the time is 5:22 PM on 06/23/2022.

```

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

```

```

- - - *
- - **
- ***
****

```

<u>n</u>	<u>r</u>	<u>s</u>	<u>c=1 to r</u>
4 -	1 =	3 - - -	* /
4 -	2 =	2 - -	* *
4 -	3 =	1 -	* * *
4 -	4 =	0	* * * *



```
for(r=1;r<=4;r++)
```

```
{
```

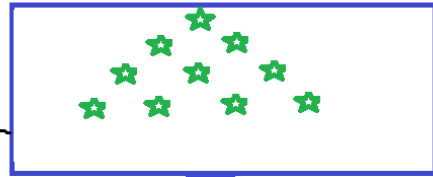
```
for(s=1;s<=n-r;s++)p(" ");
```

```
for(c=1;c<=r;c++)p("* - ");
```

```
p("\n");
```

```
}
```

```
  - - - *  
  - - * - * -  
  - * - * - * -  
 * - * - * - *
```



<u>n</u>	<u>r</u>	<u>S</u>	<u>c=1 to r</u>
4 -	1 =	3 - - - *	
4 -	2 =	2 - - * *	
4 -	3 =	1 - * * *	
4 -	4 =	0 * * * *	



```
for(r=1;r<=4;r++)
```

```
{
```

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

```
for(c=1;c<=r;c++)p("* - ");
```

```
p("\n");
```

```
}
```

$$\frac{2*r-1}{4-1=3}$$

$$2*1-1=1$$

$$2*2-1=3$$

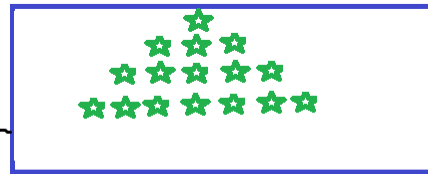
$$2*3-1=5$$

$$2*4-1=7$$

```

- - - *
- - * - * -
- * - * - * -
* - * - * - *

```



<u>3</u>	<u>4</u>	<u>5</u>	<u>c=1 to 4</u>
4 -	1 -	3 - - -	*
4 -	2 -	2 - -	* *
4 -	3 -	1 -	* * *
4 -	4 -	0	* * * *

```
TC
File Edit Run Compile Project Options Debug Break/watch
Line 14 Col 12 Insert Indent Tab Fill Unindent * C:NONAME.C
#include<stdio.h>
#include<conio.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("***");
}
printf("\b \n");
}
getch();
}
```

Enter no of rows 10

```

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





```
TC
Line 18 Col 19 Insert Indent Tab Fill Unindent * C:NONAME.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++)
{
textcolor(random(16));
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=r;c++) cprintf("* ");
printf("\n");
}
}
}
```

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

```
TC
Line 18 Col 1 Insert Indent Tab Fill Unindent * C:NONAME.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())
{
textcolor(random(16));
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=r;c++) cprintf("* ");
printf("\n");
}
}
}
```

```
TC
* * * *
* * * * *
* * * * *
* * * * *
      *
     * *
    * * *
   * * * *
  * * * * *
 * * * * *
* * * * *
 * * * * *
      *
     * *
    * * *
   * * * *
  * * * * *
 * * * * *
* * * * *
 * * * * *
      *
*
5:44 PM
06/23/2022
```

```
TC
Line 18 Col 16 Insert Indent Tab Fill Unindent * C:NONAME.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())
{
textcolor(LIGHTRED);
for(r=1;r<=n;r++)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=r;c++) cprintf("* ");
printf("\n");
}
}
}
```

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

```
Line 18 Col 17 Insert Indent Tab Fill Unindent * C:NONAME.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())
{
textcolor(LIGHTRED);
for(r=n;r>=1;r--)
{
for(s=1;s<=n-r;s++)cprintf(" ");
for(c=1;c<=r;c++) cprintf("* ");
printf("\n");
}
}
}
```

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

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

