

### Program 11. Use of break.

```
1 // run a loop until use enter a negative number.
2
3 package intro;
4
5 import java.util.Scanner;
6
7 public class useOfbreak {
8     public static void main(String[] args) {
9         // TODO Auto-generated method stub
10        Scanner sc = new Scanner(System.in);
11
12        for(;;)
13        {
14            int n = sc.nextInt();
15            if(n<0)
16            {
17                System.out.println(" entered number is negative , loop breaks");
18                break;
19            }
20        }
21    }
22 }
23
24
```

```
<terminated> useOfbreak [Java Application] C:\Program Files\Java\jdk-14.0.2\bin\javaw
5
5
75
-1
| entered number is negative , compiler is breaks the loop
```

### Program 12. Pattern1

```
//      *
//      * *
//      * * *
//      * * * *
```

```
1 // Print the pattern1
2 //      *
3 //      * *
4 //      * * *
5 //      * * * *
6
7 package patterns;
8 import java.util.*;
9 public class pattern1 {
10
11     public static void main(String[] args) {
12         // TODO Auto-generated method stub
13         Scanner sc = new Scanner(System.in);
14
15         int n = sc.nextInt();
16         for ( int i =1 ; i<=n ; i ++ )
17         {
18             for ( int j=1; j<=i ;j++)
19             {
20                 System.out.print(" * ");
21             }
22             System.out.println();
23         }
24     }
25 }
26
27
```

```
<terminated> pattern1 [Java Application] C:\Program Fi
5
*
* *
* * *
* * * *
```

### Program 13. Pattern2

```
//      * * * * *
//
//      * * * *
//
//      * * *
//
//      * *
//
//      *
```

```
1 // print the pattern2
2 // 5
3 // * * * * *
4 // * * * *
5 // * * *
6 // * *
7 // *
8
9 package patterns;
10
11 import java.util.Scanner;
12
13 public class pattern2 {
14
15     public static void main(String[] args) {
16         // TODO Auto-generated method stub
17         Scanner sc = new Scanner(System.in);
18
19         int n = sc.nextInt();
20         for ( int i = 1 ; i<=n; i++)
21         {
22             for( int j = 1; j<=2*(i-1) ; j++)
23             {
24                 System.out.print(" "); // or omit 2 in line 14 and print 2 spaces in
25             }
26             for(int j =1 ;j<=n-i+1;j++)
27             {
28                 System.out.print("* ");
29             }
30             System.out.println();
31         }
32     }
33
34 }
35
```

<terminated> pattern2 [Java Application] C:\

```
5
* * * * *
* * * *
* * *
* *
*
```

### Program 14. Pattern3

```
//      * * * * *
//
//      * * * *
//
//      * * *
//
//      * *
//
//      *
```

```

1 // print the pattern3
2 // 5
3 // * * * * *
4 // * * * *
5 // * * *
6 // * *
7 // *
8
9 package patterns;
10
11 import java.util.Scanner;
12
13 public class pattern3 {
14
15     public static void main(String[] args) {
16         // TODO Auto-generated method stub
17         Scanner sc = new Scanner(System.in);
18
19         int n = sc.nextInt();
20         for ( int i = 1 ; i<=n; i++)
21         {
22             for ( int j =1 ; j<=n-i+1 ; j++)
23             {
24                 System.out.print(" * ");
25             }
26             System.out.println();
27         }
28     }
29 }
30
31

```

<terminated> pattern3 [Java Application] C:\Program File

```

5
* * * * *
* * * *
* * *
* *
*

```

Program 15. Pattern4

```

//      *
//      * *
//      * * *
//      * * * *
//      * * * * *

```

```

1 // print the pattern4
2 // 5
3 //      *
4 //      * *
5 //      * * *
6 //      * * * *
7 //      * * * * *
8
9 package patterns;
10
11 import java.util.Scanner;
12
13 public class pattern4 {
14
15     public static void main(String[] args) {
16         // TODO Auto-generated method stub
17         Scanner sc = new Scanner(System.in);
18
19         int n = sc.nextInt();
20         for ( int i = 1 ; i<=n; i++)
21         {
22             for ( int j = 1; j <=n-i ; j++)
23                 System.out.print(" ");
24
25             for( int j = 1 ; j<=i ; j++)
26                 System.out.print(" * ");
27
28             System.out.println();
29         }
30     }
31 }
32
33

```

<terminated> pattern4 [Java Application] C:\Program Files\Java\

```

5
      *
      * *
      * * *
      * * * *
      * * * * *

```

```
//      *
//      *  *
//      *  *  *
//      *  *  *  *
//      *  *  *  *  *
```

[illegible]

```
//      1
//      2 3
//      4 5 6
//      7 8 9 10
//     11 12 13 14 15
```

```
1//      print the pattern6 :
2//      5
3//      1
4//      2 3
5//      4 5 6
6//      7 8 9 10
7//      11 12 13 14 15
8
9package patterns;
10
11import java.util.Scanner;
12
13public class pattern6 {
14
15    public static void main(String[] args) {
16        // TODO Auto-generated method stub
17        Scanner sc = new Scanner(System.in);
18        int number = 1; // maintain a number variable and keep on incrementing after e
19        int n = sc.nextInt();
20        for (int i = 1 ; i<=n; i++)
21        {
22            for (int j =1 ; j<=n-i ; j++)
23            {
24                System.out.print(" "); // at every i th row, the spaces before number
25            }
26
27            for(int j = 1 ; j <=i ;j++)
28            {
29                System.out.print(number+ " "); // at every row, there are 3 spaces
30                number++;
31            }
32
33            System.out.println();
34        }
35    }
36
37 }
```

```
<terminated> pattern6 [Java Application] C:\Program Files\Java\jdk-14.0.2\bin\ja
5
      1
      2 3
      4 5 6
      7 8 9 10
      11 12 13 14 15
```

## Program 18. Pattern7

```
//      *
//
//      **
//
//      ***
//
//      ****
//
//      *****
//
//      ****
//
//      ***
//
//      **
//
//      *
```

```
1 // print the pattern/
2 //intuition: 1. use pattern1 for n=4 and then patter4 for n=3
3 //      2. use is else and print "*" accordingly to ith row.
4 // 5
5 // *
6 // **
7 // ***
8 // ****
9 // *****
10 // ***
11 // **
12 // *
13
14 package patterns;
15
16 import java.util.Scanner;
17
18 public class pattern7 {
19
20     public static void main(String[] args) {
21         // TODO Auto-generated method stub
22         Scanner sc = new Scanner(System.in);
23         int n = sc.nextInt();
24         int rows = 2*n - 1;
25         for ( int i = 1 ; i<=rows; i++)
26         {
27             if(i <=n)
28                 for ( int j =1 ; j<=i ; j++)
29                 {
30                     System.out.print("* ");
31                 }
32
33             else
34                 for( int j =1 ; j<rows-i+1 ; j++)
35                 {
36                     System.out.print("* ");
37                 }
38
39             System.out.println();
40         }
41     }
42 }
```

```
<terminated> pattern7 (Java Application) C:\Program Files\Java\jdk-14.0.2\
5
*
* *
* * *
* * * *
* * * * *
* * *
* *
*
```

### Program 19. Pattern8

```
//      *
//
//      * *
//
//      * * *
//
//      * * * *
//
```

```

1 // print the pattern8
2 // 5
3 // *
4 // **
5 // ***
6 // ****
7 // *****
8
9 package patterns;
10
11 import java.util.Scanner;
12
13 public class pattern8 {
14
15     public static void main(String[] args) {
16         // TODO Auto-generated method stub
17         Scanner sc = new Scanner(System.in);
18         int n = sc.nextInt();
19
20         for (int i = 1; i <= n; i++)
21         {
22             if (i == 1 || i == n)
23             {
24                 for (int j = 1; j <= i; j++)
25                 {
26                     System.out.print("* ");
27                 }
28             }
29             else
30             {
31                 System.out.print("* ");
32                 for (int j = 1; j <= i-2; j++)
33                 {
34                     System.out.print(" ");
35                 }
36                 System.out.print(" ");
37             }
38         }
39     }
40 }

```

<terminated> pattern8 [Java Application] C:\Program File

```

5
|
*
* *
*  *
*   *
*    *

```