

ANUs Academy

Teaching & Learning wing of BiniWorld Innovations Pvt Ltd

Java Pattern Programs

[Without Functions]

Question 1

Java program to print 5x5 square star pattern



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

Program & Output:

```
/*
Pattern program - 5x5 square with stars
ANUs Academy - Java Pattern Programs
*/

public class Pattern1
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j;

        System.out.println("*** Printing the pattern... ");
        System.out.println();

        // outer loop - decides the number of rows
        for (i = 0; i < 5; i++)
        {
            // inner loop - prints * with space
            for (j = 0; j < 5; j++)
            {
```




```
System.out.println("** Printing the multiplication table... ");
System.out.println();
```

```
// outer loop - decides the number of rows
for (i = 1; i <= 10; i++)
{
    // inner loop - prints multiplication table with tab space
    for (j = 1; j <= 10; j++)
    {
        System.out.print(i*j + "\t");    // "\t" for printing tab space
    }
    System.out.println();    // to move to new line
}
}
```

```
/*
** Printing the multiplication table...
```

1	2	3	4	5	6	7	8	9	10
2	4	6	8	10	12	14	16	18	20
3	6	9	12	15	18	21	24	27	30
4	8	12	16	20	24	28	32	36	40
5	10	15	20	25	30	35	40	45	50
6	12	18	24	30	36	42	48	54	60
7	14	21	28	35	42	49	56	63	70
8	16	24	32	40	48	56	64	72	80
9	18	27	36	45	54	63	72	81	90
10	20	30	40	50	60	70	80	90	100

```
*/
```

Question 3

Java program to print left triangle star pattern





Program & Output:

```
/*  
Pattern program - Left (normal) triangle pattern with stars  
ANUs Academy - Java Pattern Programs  
*/
```

```
public class Pattern3  
{  
    public static void main(String[] args)  
    {  
        // variable declaration  

```

```
/*  
** Printing the pattern...  
  
*  
* *  
* * *  
* * * *  
* * * * *  
  
*/
```



Question 4

Java program to print left triangle pattern with numbers

```
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Program & Output:

```
/*
Pattern program - Left (normal) triangle pattern with numbers
ANUs Academy - Java Pattern Programs
*/

public class Pattern4
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j;

        System.out.println("*** Printing the pattern... ");
        System.out.println();

        // outer loop - decides the number of rows
        for (i = 1; i <= 5; i++)
        {
            // inner loop - prints j with with space
            for (j = 1; j <= i; j++)
            {
                System.out.print(j + " ");
            }
            System.out.println();// to move to new line
        }
    }
}
```



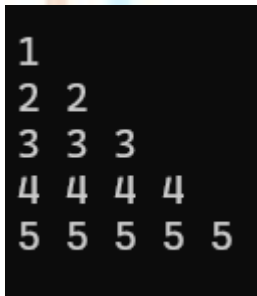
```
/*  
** Printing the pattern...
```

```
1  
1 2  
1 2 3  
1 2 3 4  
1 2 3 4 5
```

```
*/
```

Question 5

Java program to print left triangle pattern with numbers



Program & Output:

```
/*  
Pattern program - Left (normal) triangle pattern with numbers  
ANUs Academy - Java Pattern Programs  
*/
```

```
public class Pattern5  
{  
    public static void main(String[] args)  
    {  
        // variable declaration  
        int i, j;  
  
        System.out.println("*** Printing the pattern... ");  
        System.out.println();  
  
        // outer loop - decides the number of rows  
        for (i = 1; i <= 5; i++)  
        {
```



```
// inner loop - prints i with with space
for (j = 1; j <= i; j++)
{
    System.out.print(i + " ");
}
System.out.println();    // to move to new line
}
}
}
```

```
/*
** Printing the pattern...
```

```
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

```
*/
```

Question 6

Java program to print right side triangle pattern with numbers

```
1
 21
 321
4321
54321
```

Program & Output:

```
/*
Pattern program - Right side triangle pattern with numbers
ANUs Academy - Java Pattern Programs
*/

public class Pattern6
{
    public static void main(String[] args)
    {
```



```
// variable declaration
int i, j;

System.out.println("*** Printing the pattern ... \n");

// outer for loop
for (i = 1; i <= 5; i++)
{
    // inner for loop
    for (j = 5; j >= 1; j--)
    {
        // to print values on right
        if(j <= i)
            System.out.print(j);
        else // to print spaces on the left
            System.out.print(" ");
    }
    System.out.println();
}

/*
** Printing the pattern ...

1
21
321
4321
54321

*/
```

Question 7

Java program to print inverted left triangle pattern with stars





Program & Output:

```
/*  
Pattern program - Inverted Left triangle pattern with stars  
ANUs Academy - Java Pattern Programs  
*/
```

```
public class Pattern7  
{  
    public static void main(String[] args)  
    {  
        // variable declaration  
        int i, j;  
  
        System.out.println("*** Printing the pattern... \n");  
  
        // outer loop - decides the number of rows  
        for (i = 5; i >= 1; i--)  
        {  
            // inner loop - prints * with with space  
            for (j = 1; j <= i; j++)  
            {  
                System.out.print(" * ");  
            }  
            System.out.println();  
        }  
    }  
}  
  
/*  
** Printing the pattern...
```

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



Question 8

Java program to print inverted left triangle pattern with numbers

```
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
```

Program & Output:

```
/*
Pattern program - Inverted Left triangle pattern with numbers
ANUs Academy - Java Pattern Programs
*/

public class Pattern8
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j;

        System.out.println("*** Printing the pattern... \n");

        // outer loop - decides the number of rows
        for (i = 5; i >= 1; i--)
        {
            // inner loop - prints i with with space
            for (j = 1; j <= i; j++)
            {
                System.out.print(i + " ");
            }
            System.out.println();
        }
    }
}

/*
** Printing the pattern...
```



```
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
```

```
*/
```

Question 9

Java program to print inverted right side triangle pattern with numbers

```
5 5 5 5 5
 4 4 4 4
   3 3 3
    2 2
     1
```

Program & Output:

```
/*
Pattern program - Inverted Right side triangle pattern with numbers
ANUs Academy - Java Pattern Programs
*/
```

```
public class Pattern9
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j, k, n;

        // variable initialization
        n = 5;

        System.out.println("*** Printing the pattern... \n");

        // outer loop - decides the number of rows
        for (i = 5; i >= 1; i--)
        {
            // inner loop 1 - for spaces
            for(j = n - i; j > 0; j--)
```



```
{
    System.out.print(" ");    // to print double space
}

// inner loop 2 - for columns
for(k = 0; k < i; k++)
{
    System.out.print(i + " "); // to print values
}
System.out.println();    // end-line after every row
}
}

/*
** Printing the pattern...
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
*/
```

Question 10

Java program to print inverted triangle pattern with numbers



Program & Output:

```
/*
Pattern program - Inverted triangle pattern with numbers
ANUs Academy - Java Pattern Programs
```



*/

```
public class Pattern10
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j, k, n;

        // variable initialization
        n = 5;

        System.out.println("** Printing the pattern... \n");

        // outer loop - decides the number of rows
        for (i = 5; i >= 1; i--)
        {
            // inner loop 1 - for spaces
            for(j = n - i; j > 0; j--)
            {
                System.out.print(" ");    // to print single space
                // if 2 spaces given here, it will print inverted right side triangle
            }

            // inner loop 2 - for columns
            for(k = 0; k < i; k++)
            {
                System.out.print(i + " "); // to print values
            }
            System.out.println();        // end-line after every row
        }
    }
}
```

/*

** Printing the pattern...

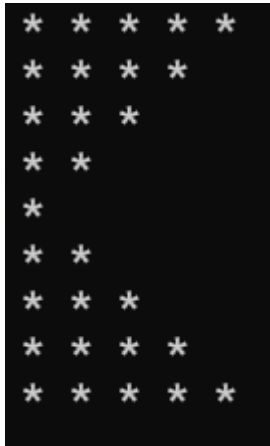
```
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
```



*/

Question 11

Java program to print K pattern with stars



Program & Output:

```
/*
Pattern program - K pattern with stars
ANUs Academy - Java Pattern Programs
*/

public class Pattern11
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j, k;

        System.out.println("** Printing the pattern .. \n");

        //outer loop 1 - to print the first inverted triangle
        for(i = 5; i >= 1; i--)
        {
            //inner loop to print upper triangle values
            for(j = 1; j <= i; j++)
            {
                System.out.print("* ");
            }
            System.out.println();
        }
    }
}
```



```
}
```

```
// outer loop 2 - to print the second triangle
```

```
// if for is started with i = 1, it will print 2 single stars in the middle part
```

```
for (i = 2; i <= 5; i++)
```

```
{
```

```
    // inner loop to print the lower triangle values
```

```
    for(k = 1; k <= i; k++)
```

```
    {
```

```
        System.out.print("* ");
```

```
    }
```

```
    System.out.println();
```

```
}
```

```
}
```

```
}
```

```
/*
```

```
** Printing the pattern ..
```

```
*****
```

```
****
```

```
***
```

```
**
```

```
*
```

```
**
```

```
***
```

```
****
```

```
*****
```

```
*/
```

Question 12

Java program to print K pattern with numbers



```
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

Program & Output:

```
/*
Pattern program - K pattern with numbers
ANUs Academy - Java Pattern Programs
*/

public class Pattern12
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j, k;

        System.out.println("*** Printing the pattern .. \n");

        //outer loop 1 - to print the first inverted triangle
        for(i = 5; i >= 1; i--)
        {
            //inner loop to print upper triangle values
            for(j = 1; j <= i; j++)
            {
                System.out.print(i + " ");
            }
            System.out.println();
        }

        //outer loop 2 - to print the second triangle
        for (i = 2; i <= 5; i++)
        {
            // inner loop to print the lower triangle values
            for(k = 1; k <= i; k++)
```



```
{
    System.out.print(i + " ");
}
System.out.println();
}
}
```

```
/*
** Printing the pattern ..
```

```
5 5 5 5 5
4 4 4 4
3 3 3
2 2
1
2 2
3 3 3
4 4 4 4
5 5 5 5 5
```

```
*/
```

Question 13

Java program to print K pattern with numbers

```
1 2 3 4 5
1 2 3 4
1 2 3
1 2
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5
```

Program & Output:

```
/*
Pattern program - K pattern with numbers
```



ANUs Academy - Java Pattern Programs

*/

```
public class Pattern13
{
    public static void main(String[] args)
    {
        // variable declaration
        int i, j, k;

        System.out.println("*** Printing the pattern .. \n");

        //outer loop 1 - to print the first inverted triangle
        for(i = 5; i >= 1; i--)
        {
            //inner loop to print upper triangle values
            for(j = 1; j <= i; j++)
            {
                System.out.print(j + " ");
            }
            System.out.println();
        }

        //outer loop 2 - to print the second triangle
        for (i = 2; i <= 5; i++)
        {
            // inner loop to print the lower triangle values
            for(k = 1; k <= i; k++)
            {
                System.out.print(k + " ");
            }
            System.out.println();
        }
    }
}

/**
** Printing the pattern ..
```

```
1 2 3 4 5
1 2 3 4
1 2 3
```



```

1 2
1
1 2
1 2 3
1 2 3 4
1 2 3 4 5

*/

```

Question 14

Java program to print inverted K pattern with stars



Program & Output:

```

/*
Pattern program - inverted K pattern with stars
ANUs Academy - Java Pattern Programs
*/

public class Pattern14
{
    public static void main(String[] args)
    {
        // variable declaration & initialization
        int n = 5;
        int i, j, k;

        System.out.println("*** Printing the pattern .. \n");

        for(i = n; i >= 1; i--) // outer loop 1 for upper triangle
        {

```



```
for(j = n - i; j > 0; j--) // an inner loop for spaces
{
    System.out.print(" "); // to print 2 spaces
}
for(k = 0; k < i; k++) // an inner loop for columns
{
    System.out.print("* "); // to print star & space
}
System.out.println(); // end-line after every row
}
```

```
for(i = 2; i <= n; i++) // outer loop 2 for lower triangle
{
    for(j = n - i; j > 0; j--) // an inner loop for spaces
    {
        System.out.print(" "); // to print 2 spaces
    }
    for(k = 1; k <= i; k++) // an inner loop for columns
    {
        System.out.print("* "); // to print star & space
    }
    System.out.println(); // end-line after every row
}
}
/*
** Printing the pattern ..

* * * * *
* * * *
* * *
* *
*
* *
* * *
* * * *
* * * * *

*/
```



Question 15

Java program to print inverted K pattern with numbers. Get input from user.

```
12345
 2345
  345
   45
    5
   45
  345
 2345
12345
```

Program & Output:

```
/*
Pattern program - Inverted K triangle with numbers
ANUs Academy - Java Pattern Programs
*/

// import Scanner class
import java.util.Scanner;

public class Pattern15
{
    public static void main(String[] args)
    {
        // Create a new Scanner object
        Scanner sc = new Scanner(System.in);

        // Get the number of rows from the user
        System.out.println("Enter the number of rows to print the pattern ");

        int rows = sc.nextInt();

        System.out.println("*** Printing the pattern... **\n"); // "\n" for printing new line

        // outer for loop 1 to print the top triangle
        for (int i = 1; i <= rows; i++)
        {

            // inner for loop 1 to print the spaces
```



```
for (int j = 1; j < i; j++)
{
    System.out.print(" ");
}

// inner for loop 2 to print the values
for (int k = i; k <= rows; k++)
{
    System.out.print(k);
}
System.out.println();
}

// outer for loop 2 to print the lower triangle
for (int i = rows-1; i >= 1; i--)
{
    // inner for loop 1 to print the spaces
    for (int j = 1; j < i; j++)
    {
        System.out.print(" ");
    }

    // inner for loop 2 to print the values
    for (int k = i; k <= rows; k++)
    {
        System.out.print(k);
    }
    System.out.println();
}
}
```

```
/*
Enter the number of rows to print the pattern
5
** Printing the pattern... **
12345
2345
345
45
5
```



45
345
2345
12345

*/

Question 16

Java program to print diamond pattern with stars. Get input from user.



Program & Output:

```
/*  
Pattern program - Diamond pattern with stars  
ANUs Academy - Java Pattern Programs  
*/  
  
// import Scanner  
import java.util.Scanner;  
  

```



```
if(n <= 0)
    System.out.println("Enter Positive Number");
```

```
// diamond logic
// for increasing portion
for(int i=1; i<=n; i++)
{
    // print space
    for(int j = i; j<=n; j++)
    {
        System.out.print(" ");
    }
    // print star
    for(int k = 1; k <= 2*i-1; k++)
    {
        System.out.print("*");
    }
    // new line
    System.out.println();
}
```

```
// for decrement portion
for(int i=n-1; i >=1; i--)
{
    // print space
    for(int j=n; j >= i; j--)
    {
        System.out.print(" ");
    }
    // print star
    for(int k=1; k <= 2*i-1; k++)
    {
        System.out.print("*");
    }
    // new line
    System.out.println();
}
```

```
}
```

```
}
```

```
/*
```

```
Enter N value:: 5
```



```

*
***
*****
*****
*****
*****
*****
****
***
*

```

*/

Question 17

Java program to print hollow diamond pattern with stars. Get input from user.



Program & Output:

```

/*
Pattern program - Hollow Diamond pattern with stars
ANUs Academy - Java Pattern Programs
*/

// import Scanner
import java.util.Scanner;
public class Pattern17
{

    public static void main(String[] args)
    {

```



```
// create scanner object
Scanner sc = new Scanner(System.in);
int n = 0;
// take input
System.out.print("Enter N value: ");
n = sc.nextInt();

if(n <= 0)
System.out.println("Enter Positive Number");
```

```
// for first half portion (top to bottom)
for(int i=1; i <= n+1; i++)
{
```

```
    // print space
    for(int j = i; j <= n; j++) {
        System.out.print(" ");
    }

    // print digit or space
    for(int k = 1; k <= 2*i-1; k++) {
        if(k==1 || k==(2*i-1) )
            System.out.print("*");
        else
            System.out.print(" ");
    }

    // new line
    System.out.println();
}
```

```
// for second half portion
for(int i=n; i >= 1; i--) {
```

```
    // print space
    for(int j=n; j >= i; j--) {
        System.out.print(" ");
    }
```

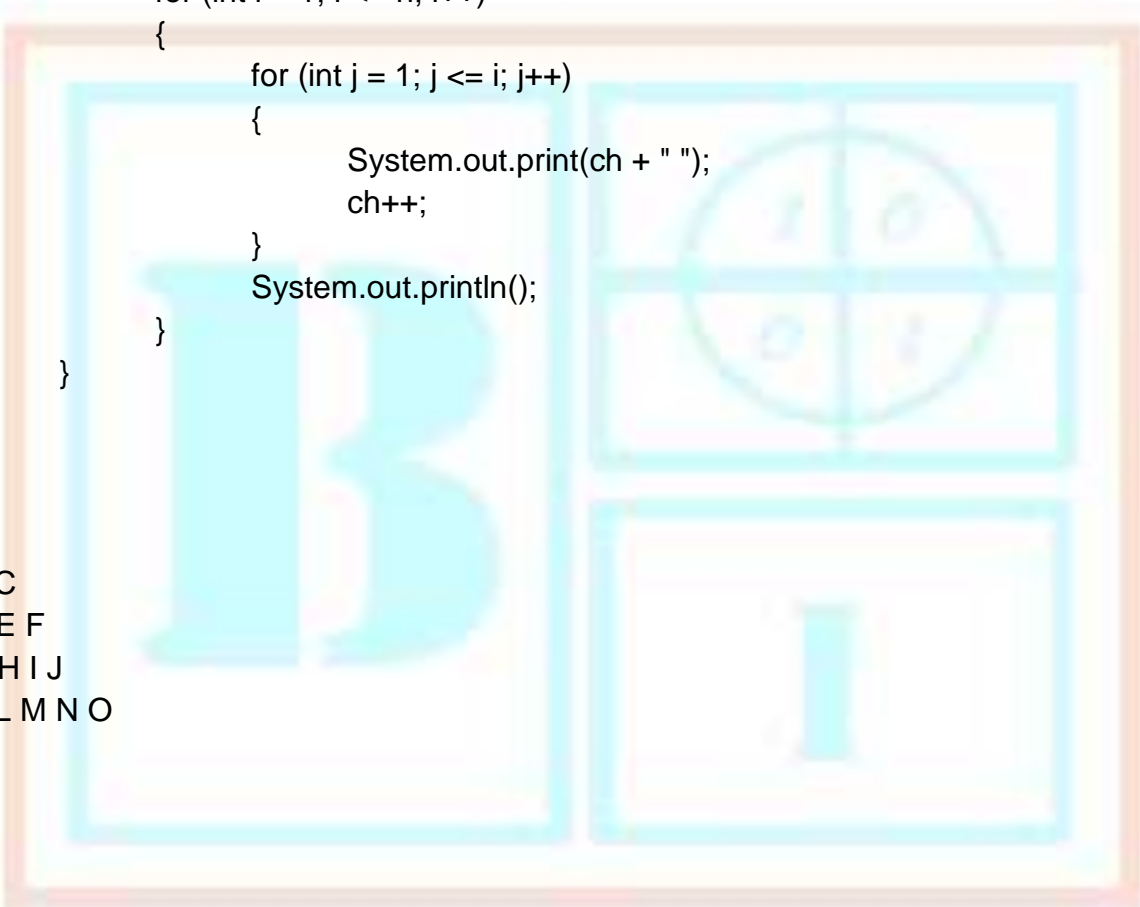
```
    // print digit or space
    for(int k=1; k <= 2*i-1; k++) {
        if(k==1 || k==(2*i-1) )
            System.out.print("*");
```




```
public class Pattern18
{
    public static void main(String[] args)
    {
        // Number of rows
        int n = 5;
        // Starting character
        char ch = 'A';

        for (int i = 1; i <= n; i++)
        {
            for (int j = 1; j <= i; j++)
            {
                System.out.print(ch + " ");
                ch++;
            }
            System.out.println();
        }
    }
}

/*
A
BC
DEF
GHIJ
KLMNO
*/
```



Question 19

Java program to print E pattern with letter E.





Program & Output:

```
/*
Pattern program - E pattern with letter E
ANUs Academy - Java Pattern Programs
*/

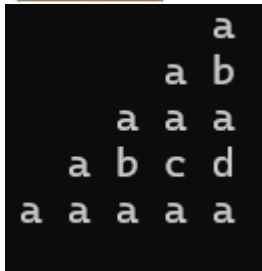
public class Pattern19
{
    public static void main(String[] args)
    {
        int n = 5; // Height of the letter "E"

        for (int i = 1; i <= n; i++)
        {
            for (int j = 1; j <= n; j++)
            {
                if (j == 1 || i == 1 || i == n || i == n / 2 + 1)
                {
                    System.out.print("E ");
                }
                else
                {
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}

/*
E E E E E
E
E E E E E
E
E E E E E
*/
```

Question 20

Java program to print the given alphabetic pattern.



Program & Output:

```
/*
Pattern program - a / b right triangle
ANUs Academy - Java Pattern Programs
*/

public class Pattern20
{
    public static void main(String[] args)
    {
        // no. of rows
        int n = 5;

        char ch;

        for (int i = 1; i <= n; i++)
        {
            ch = 'a';
            for (int j = 1; j <= n-i; j++)
            {
                System.out.print(" "); // 2 spaces
            }

            for (int j = 1; j <= i; j++)
            {
                if(i % 2 != 0)
                    System.out.print(ch + " ");
                else
                    System.out.print(ch++ + " ");
            }
            System.out.println();
        }
    }
}
```



/*

a
ab
aaa
abcd
aaaaa

*/

ALL The BEST!



Dr. Anasuya Threse Innocent

<https://www.biniworld.com>