

Pattern Programs in Java

Mrs. Kanchanmala D Talekar¹, Mr. Mithun Jadhav², Mr. Ashok Kakad³

¹Lecturer, Dept. of Computer Engineering, GVAP Shelu, Maharashtra, India.

² HOD, Dept. of Computer Engineering, GVAP Shelu, Maharashtra, India.

³Lecturer, Dept. of Computer Engineering, GVAP Shelu, Maharashtra, India.

Display Patterns in java

Program 1:

```
class Pattern1{
public static void main(String args[]){
for(int i=1;i<=5;i++){
for(int j=1;j<=i;j++){
System.out.print("* ");
}
System.out.println();
}
}
}
```

Output

```
C:\Windows\system32\cmd.exe
D:\>javac Pattern1.java
D:\>java Pattern1
*
* *
* * *
* * * *
* * * * *
D:\>
```

Program 2:

```
class Pattern2{
public static void main(String args[]){
for(int i=1;i<=5;i++){
for(int j=1;j<=i;j++){
System.out.print(i);
}
System.out.println();
}
}
}
```

Output:

```
C:\Windows\system32\cmd.exe
D:\>javac Pattern2.java
D:\>java Pattern2
1
22
333
4444
55555
D:\>
```

Program 3:

```
class Pattern3{
public static void main(String args[]){
for(int i=5;i>=1;i--){
for(int j=1;j<=i;j++){
System.out.print(i);
}
System.out.println();
}
}
}
```

Output:

```
C:\Windows\system32\cmd.exe
D:\>javac Pattern3.java
D:\>java Pattern3
55555
4444
333
22
1
D:\>
```

Program 4:

```
class Pattern4{
public static void main(String args[]){
for(int i=5;i>=1;i--){
for(int j=1;j<=i;j++){
System.out.print("* ");
}
System.out.println();
}
}
}
```

Output:

```
C:\Windows\system32\cmd.exe
D:\>javac Pattern4.java
D:\>java Pattern4
* * * * *
* * * *
* * *
* *
*
D:\>
```

Program 5:

```
class Pattern5{
public static void main(String args[]){
int sp=20;
for(int i=1;i<=5;i++){
for(int k=1;k<=sp;k++){
System.out.print(" ");
}
sp--;
for(int j=1;j<=i;j++){
System.out.print("* ");
}
System.out.println();
}
}
}
```

Output:

```
D:\> Select C:\Windows\system32\cmd.exe
D:\>k>javac Pattern5.java
D:\>k>java Pattern5
      *
     * *
    * * *
   * * * *
  * * * * *
D:\>k>
```

Program 6:

```
class Pattern6{
public static void main(String args[]){
int sp=20;
for(int i=5;i>=1;i--){
for(int k=5;k<=sp;k++){
System.out.print(" ");
}
sp++;
for(int j=1;j<=i;j++){
System.out.print("* ");
}
System.out.println();
}
}
}
```

Output:

```
D:\> Select C:\Windows\system32\cmd.exe
D:\>k>javac Pattern6.java
D:\>k>java Pattern6
      *
     * *
    * * *
   * * * *
  * * * * *
 * * * * *
*D:\>k>
```

Program 7:

```
class Pattern7{
public static void main(String args[]){
int sp=20;
int i,j,k;
for( i=1;i<=5;i++){
for( k=1;k<=sp;k++){
System.out.print(" ");
}
sp--;
for( j=1;j<=i;j++){
System.out.print("* ");
}
System.out.println();
}
sp=20;
for(i=4;i>=1;i--){
for(k=4;k<=sp;k++){
System.out.print(" ");
}
sp++;
for(j=1;j<=i;j++){
System.out.print("* ");
}
System.out.println();
}
}
}
```

Output:

```
D:\> Select C:\Windows\system32\cmd.exe
D:\>k>javac Pattern7.java
D:\>k>java Pattern7
      *
     * *
    * * *
   * * * *
  * * * * *
 D:\>k>
```

Program 8:

```
class Pattern8{
public static void main(String args[]){
int n, c, k, space, count = 1;
space =n=5;
for (c = 1; c <= n; c++){
for (k = 1; k < space; k++)
System.out.print(" ");
for (k = 1; k <= c; k++){
System.out.print("*");
if (c > 1 && count < c){
System.out.print("A");
count++;
}
}
}
}
}
```

```
}  
}  
System.out.print("\n");  
space--;  
count = 1;  
}  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern8.java  
D:\k>java Pattern8  
*  
* *  
* * *  
* * * *  
* * * * *  
D:\k>
```

Program 9:

```
class Pattern9{  
public static void main(String args[]){  
int rows, i, j, number= 1;  
rows=4;  
for(i=1; i <= rows; i++){  
for(j=1; j <= i; ++j){  
System.out.print(number);  
++number;  
}  
System.out.print("\n");  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern9.java  
D:\k>java Pattern9  
1  
23  
456  
78910  
D:\k>
```

Program 10:

```
class Pattern10{  
public static void main(String args[]){  
int rows, c = 1, space, i, j;rows=5;  
for(i=0; i<rows; i++){  
for(space=1; space <= rows-i; space++)  
System.out.print(" ")  
if (j==0 || i==0)  
c = 1;
```

```
else  
c = c*(i-j)/j;  
System.out.print(" "+c);  
System.out.print("\n");  
}  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern10.java  
D:\k>java Pattern10  
1  
1 1 1 1  
1 1 3 6 4 1  
D:\k>
```

Program 11:

```
class Pattern11{  
public static void main(String args[]){  
int i, space, rows, k=0, count = 0, count1 = 0;  
rows=5;  
for(i=1; i <= rows; ++i) {  
for(space=1; space <= rows-i; ++space) {  
System.out.print(" ")  
++count;  
}  
while(k != 2*i-1) {  
if (count <= rows-1) {  
System.out.print(" "+(i+k));  
++count;  
}  
else {  
++count1;  
System.out.print(" "+(i+k-2*count1));  
}  
++k;  
}  
count1 = count = k = 0;  
System.out.print("\n");  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern11.java  
D:\k>java Pattern11  
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  
D:\k>
```

Program 12:

```
class Pattern12{  
public static void main(String args[]){  
for(int i=1;i<=5;i++){  
for(int j=1;j<=5;j++){  
System.out.print("* ");  
}  
System.out.println();  
}  
}
```

Output:

```
D:\k>javac Pattern12.java  
D:\k>java Pattern12  
* * * * *  
* * * * *  
* * * * *  
* * * * *  
* * * * *
```

Program 13:

```
class Pattern13{  
public static void main(String args[]){  
for (int i=1; i<=5; i++) {  
for (int j=5; j>=i; j--) {  
System.out.print(" ");  
}  
for (int k=1; k<=i; k++) {  
System.out.print("*");  
}  
System.out.print("\n");  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern13.java  
D:\k>java Pattern13  
*  
**  
***  
****  
*****  
D:\k>
```

Program 14:

```
class Pattern14{  
public static void main(String args[]){  
int i,j,k,sp=1;  
for (i=5; i>=1; i--) {  
for (k=sp; k>=0; k--) {  
System.out.print(" ");// only 1 space  
}  
for (j=i; j>=1; j--) {
```

```
System.out.print("*");  
}  
sp = sp + 1;  
System.out.print("\n");  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern14.java  
D:\k>java Pattern14  
*****  
****  
***  
**  
*  
D:\k>
```

Program 15:

```
class Pattern15{  
public static void main(String args[]){  
int i,j,k,sp=1;  
for (i=1; i<=5; i++) {  
for (k=sp; k<=5; k++) {  
System.out.print(" ");  
}  
for (j=0; j< i; j++) {  
System.out.print("*");  
}  
sp = sp + 1;  
System.out.print("\n");  
}  
sp = 1;  
for (i=4; i>=1; i--) {  
for (k=sp; k>=0; k--) {  
System.out.print(" ");  
}  
for (j=i; j>=1; j--) {  
System.out.print("*");  
}  
sp = sp + 1;  
System.out.print("\n");  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern15.java  
D:\k>java Pattern15  
*  
**  
***  
****  
*****  
****  
***  
**  
*  
D:\k>
```

Program 16:

```
class Pattern16{  
public static void main(String args[]) {  
int i, j=5, k, x;  
for (i=1;i<=5;i++) {  
for (k=1;k<=j;k++) {  
System.out.print(" ");  
}  
for (x=1;x<=i;x++) {  
System.out.print(i);  
System.out.print(" ");  
}  
System.out.print("\n");  
j=j-1;  
}  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern16.java  
D:\k>java Pattern16  
1  
2 2  
3 3 3  
4 4 4 4  
5 5 5 5 5  
D:\k>
```

Program 17:

```
class Pattern17{  
public static void main(String args[]) {  
int i,j,k;  
for (i=1;i<=5;i++) {  
for (j=5;j>=1;j--) {  
if(j<=i)  
System.out.print(j);  
else  
System.out.print(" ");  
}  
System.out.print("\n");  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern17.java  
D:\k>java Pattern17  
1  
21  
321  
4321  
54321  
D:\k>
```

Program 18:

```
class Pattern18{  
public static void main(String args[]) {  
int i,j,k;  
for (i=1;i<=5;i++) {  
for (j=1;j<=5;j++) {  
if(j<=i)  
System.out.print(j);  
else  
System.out.print(" ");  
}  
for (j=5;j>=1;j--) {  
if(j<=i)  
System.out.print(j);  
else  
System.out.print(" ");  
}  
System.out.print("\n");  
}  
}
```

Output:

```
C:\Windows\system32\cmd.exe  
D:\k>javac Pattern18.java  
D:\k>java Pattern18  
1  
12 1  
123 321  
1234 4321  
1234554321  
D:\k>
```

Program 19:

```
class Pattern19{  
public static void main(String args[]) {  
int i,j,k;  
for (i=1;i<=5;i++) {  
j=i;  
for (k=1;k<=i;k++) {  
System.out.print(j++);  
}  
System.out.print("\n");  
}  
}
```

Output:

```
Command Prompt  
D:\k>javac Pattern19.java  
D:\k>java Pattern19  
1  
23  
345  
4567  
56789  
D:\k>
```

Program 20:

```
class Pattern20{  
public static void main(String args[]) {  
int i,j;  
for (i=1;i<=4;i++) {  
for (j=i;j>1;j--)  
System.out.print(j);  
for (j=1;j<=i;j++)  
System.out.print(j);  
System.out.print("\n");  
}  
}  
}
```

Output:

```
D:\k>javac Pattern20.java  
D:\k>java Pattern20  
1  
212  
32123  
4321234  
D:\k>
```

Program 21:

```
class Pattern21{  
public static void main(String args[]) {  
int i,j;  
for (i=1;i<=5;i++) {  
for (j=1;j<=5;j++) {  
if(j==5 || j==1 || i==1 || i==5)  
System.out.print("1");  
else  
System.out.print(" ");  
}  
System.out.print("\n");  
}  
}
```

Output:

```
D:\k>javac Pattern21.java  
D:\k>java Pattern21  
11111  
1 1  
1 1  
1 1  
11111  
D:\k>
```

Program 22:

```
class Pattern22{  
public static void main(String args[]) {  
int i, j, k;  
for (i=1;i<=5;i++) {
```

```
for (j=i;j<5;j++) {  
System.out.print(" ");  
}  
for (k=1;k<(i*2);k++) {  
System.out.print(k);  
}  
System.out.print("\n");  
}  
for (i=4;i>=1;i--) {  
for (j=5;j>i;j--) {  
System.out.print(" ");  
}  
for (k=1;k<(i*2);k++) {  
System.out.print(k);  
}  
System.out.print("\n");  
}
```

Output:

```
D:\k>javac Pattern22.java  
D:\k>java Pattern22  
1  
123  
12345  
1234567  
123456789  
1234567  
12345  
123  
1  
D:\k>
```

Program 23:

```
class Pattern23{  
public static void main(String args[]) {  
int i,j;  
for (i=1;i<=10;i++) {  
for (j=1;j<=i;j++) {  
System.out.print(i*j);  
}  
System.out.print("\n");  
}
```

Output:

```
D:\k>javac Pattern23.java  
D:\k>java Pattern23  
1  
24  
369  
481216  
510152025  
61218243036  
7142128354249  
816243240485664  
91827364554637281  
102030405060708090100  
D:\k>
```

Program 24:

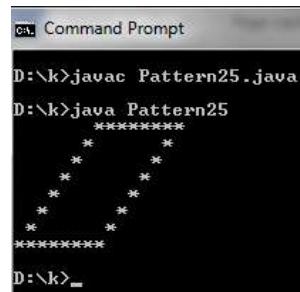
```
class Pattern24{  
public static void main(String args[]){  
int i,j,r,k=1;  
r=10;  
System.out.print("FLOYD'S TRIANGLE\n\n");  
for(i=1;i<=r;i++){  
for(j=1;j<=i;j++,k++)  
System.out.print(k);  
System.out.print("\n");  
}  
}  
}
```

Output:

```
D:\k>javac Pattern24.java  
D:\k>java Pattern24  
FLOYD'S TRIANGLE  
1  
23  
456  
78910  
1112131415  
161718192021  
22232425262728  
2930313233343536  
373839404142434445  
46474849505152535455  
D:\k>
```

Program 25:

```
class Pattern25{  
public static void main(String args[]){  
int i, j, rows;  
/* Input number of rows from user */  
rows=8;  
for(i=1; i<=rows; i++) {  
/* Print trailing spaces */  
for(j=1; j<=rows-i; j++) {  
System.out.print(" ");  
}  
/* Print stars and center spaces */  
for(j=1; j<=rows; j++) {  
if(i==1 || i==rows || j==1 || j==rows)  
System.out.print("*");  
else  
System.out.print(" ");  
}  
System.out.print("\n");  
}  
}
```

Output:**REFERENCES**

1. <http://scantree.com/programs/c/programs-to-print-pyramid-patterns-in-c-part-1/>