

```
package Demos_ControlStatements.Loops.NestedLoop.Type1;

public class CrossPattern_davinder {
    public static void main(String[] args) {
        System.out.println(" Cross Pattern Print ");
        for (int i = 1; i <= 5; i++) {
            for (int j = 1; j <= 5; j++) {
                if ( ( (i%2!=0) && (j%2!=0) || ((i%2==0) && (j%2==0)))) {
                    if((i==3) && (j<3 || j>3) || ((i==1 || i==5) && (j==3))){
                        System.out.print(" ");
                        continue;
                    }else{
                        System.out.print("*");
                    }
                }else{
                    System.out.print(" ");
                }
            }
            System.out.println();
        }
    }
}
```

int n=5;

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

* * * * *

* * * *

* * *

* *

*

$i=3, 3 \leq 5 \rightarrow \text{true}$

$j=5, 5 \geq 3 \rightarrow \text{true}$

$4 \geq 3 \rightarrow \text{true}$

$3 \geq 3 \rightarrow \text{true}$

$i=1, 1 \leq 5 \rightarrow \text{true}$

$j=5, 5 \geq 1$

$5 \geq 1 \rightarrow \text{true}$

$j=4, 4 \geq 1 \rightarrow \text{true}$

$j=5, 5 \geq 4 \rightarrow \text{true}$

$j=3, 3 \geq 1 \rightarrow \text{true}$

$4 \geq 4 \rightarrow \text{true}$

$3 \geq 4 \rightarrow \text{false}$

$i=2, 2 \leq 5 \rightarrow \text{true}$

$j=5, 5 \geq 2 \rightarrow \text{true}$

$4 \geq 2 \rightarrow \text{true}$

$3 \geq 2 \rightarrow \text{true}$

$2 \geq 2 \rightarrow \text{true}$

$1 \geq 2 \rightarrow \text{false}$

$2 \geq 3 \rightarrow \text{false}$

```
int n=5;
```

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

5 5 5 5 5

4 4 4 4

3 3 3

2 2

1

$i=1, 1 \leq 5 \rightarrow \text{true}$

$j=1; j \leq (5+1)-1 \rightarrow j \leq 5.$

$(5+1)-1 \rightarrow (5)$

$j=2; 2 \leq (5) \rightarrow 2 \leq 5.$

$j=3; 3 \leq 5 \rightarrow \text{true}$

$j=4; 4 \leq 5 \rightarrow ?$

$j=5; 5 \leq 5 \rightarrow ?$

$j=6; 6 \leq 5 \rightarrow \text{false}$

$i=2, 2 \leq 5 \rightarrow \text{true}$

$j=1; j \leq (5+1)-2 \rightarrow j \leq 4$

$1 \leq 4$

$2 \leq 4$

$3 \leq 4$

$4 \leq 4$

```
int n = 5;
int printNum=5;
for (int i = 1; i <= n; i++) {
```

```
    //Row Level
    for (int j = 1; j <= (n + 1) - i; j++) {
        System.out.print(printNum);
        //Col Level
    }
    printNum--; //5-4
    //Row Level
    System.out.println();
}
```

printNum = 5
4
3
2
1

$i=1, 1 \leq 5 \rightarrow \text{true} (5+1)-2 \rightarrow 6-2=4$
 $j=1; j \leq (5+1)-1 \rightarrow 6-1=5 \rightarrow \text{true}$

$j=2; 2 \leq 5 \rightarrow \text{true}$ 5
 $j=3; 3 \leq 5 \rightarrow \text{true}$ 5
 $j=4; 4 \leq 5 \rightarrow \text{true}$ 5
 $j=5; 5 \leq 5 \rightarrow \text{true}$ 5
 $j=6; 6 \leq 5 \rightarrow \text{false}$
 printNum $\rightarrow 5 \rightarrow 4 \rightarrow 3$
 $i=2; 2 \leq 5 \rightarrow \text{true}$