# Print Pyramids and Patterns

**Step 1 Printing basic building blocks**

**Size : How many row you want in the pattern**
**Putting together nested loops**

int n = 5;                                                      **Output**

```
for( int j = 1; j<=n; j++)        // index 1 to < = n          * * * * *
{                                 j:  1 2 3 4 5
   system.out.print("*");
}
```

or

```
for (int j =0; j<n; j++)          // index 0 to < n            output
{                                 j: 0 1 2 3 4                  * * * * *
   system.out.print("*");
}
```

**Print and Println statement**                                **output**

```
int = 5                                              * * * * * * * * * * *
for (int i =1; i<=n; i++) {
  for (int j =0; j<n; j++) {
    system.out.print("*");
  }
}
```

**Print and Println statement**                    output

```
int = 5
for (int i =1; i<=n; i++) {
   for (int j =0; j<n; j++) {
      system.out.print("*");
 }
}
```

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

**Square pattern**                                 output

```
int = 5
for (int i =1; i<=n; i++) {
   for (int j =0; j<n; j++) {
      system.out.print("*");
 }
system.out.println();
}
```

* * * * *

* * * * *

* * * * *

* * * * *

* * * * *

## Increasing triangle pattern

```
int = 5
for (int i =1; i<=n; i++) {
   for (int j =1; j<i; j++) {
      system.out.print("*");
   }
system.out.println();
```

**output**

```
i = 1   *
i = 2   * *
i = 3   * * *
i = 4   * * * *
i = 5   * * * * *
```

## Decreasing triangle pattern

```
int = 5
for (int i =1; i<=n; i++) {
   for (int j =i; j<=n; j++) {
      system.out.print("*");
   }
system.out.println();
```

**output**

```
1 to 5   * * * * *
2 to 5   * * * *
  3 to 5   * * *
4 to 5   * *
5 to 5   *
```

## Left  Triangle

```
int = 5
for (int i =1; i<=n; i++) {
   for (int j =i; j<=i; j++) {
      system.out.print(" ");
   }
for (int j =i; j<=n; j++) {
   system.out.print("* ");
   }
system.out.println();
}
```

**Right Triangle**

```
int = 5
for (int i =1; i<=n; i++) {
  for (int j =i; j<n; j++) {
    system.out.print(" ");
  }
  for (int j =1; j<=i; j++) {
    system.out.print("* ");
  }
  system.out.println();
}
```

```
        *     i = 1
      * *     i = 2
    * * *     i = 3
  * * * *     i = 4
* * * * *     i = 5
```

Decreasing triangle of space
Increasing triangle of star