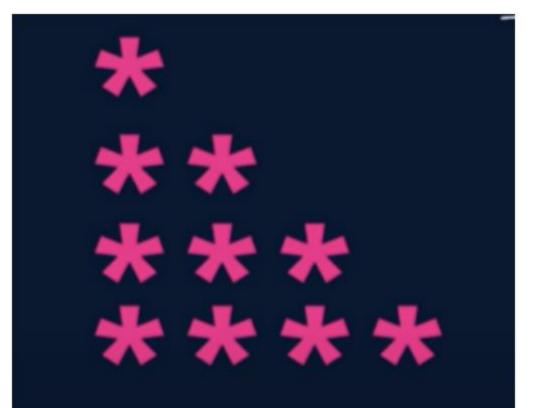
Lecture 6

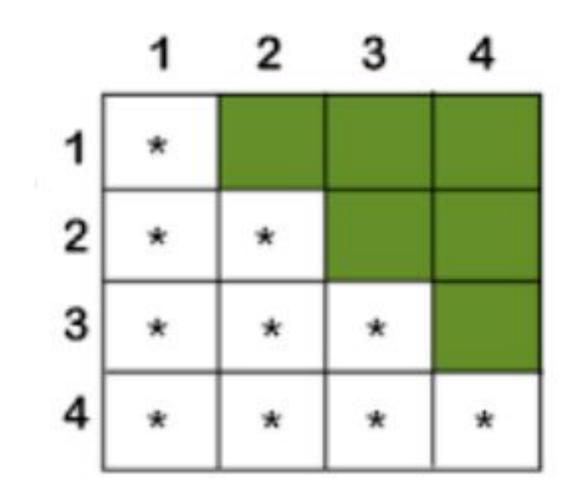
Loops Patterns

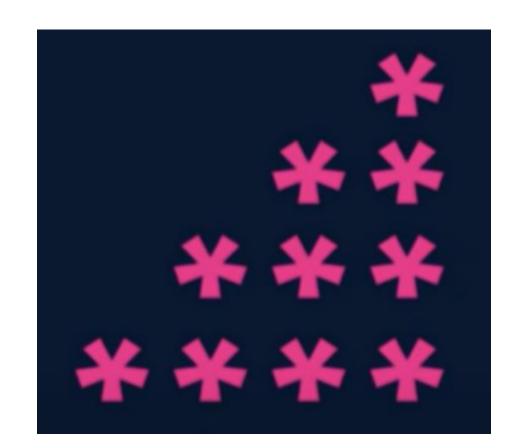
*** *** *** ***



```
for(int i = 0; i < 4; i++) {
    for(int j = 0; j \le i; j++) {
        System.out.print("*");
    for (int k = i + 1; k \le i; k++) {
        System.out.print(" ");
    System.out.println();
```

```
for(int i = 0; i < 4; i++) {
    for(int j = 0; j <= i; j++) {</pre>
        System.out.print("*");
    System.out.println();
```

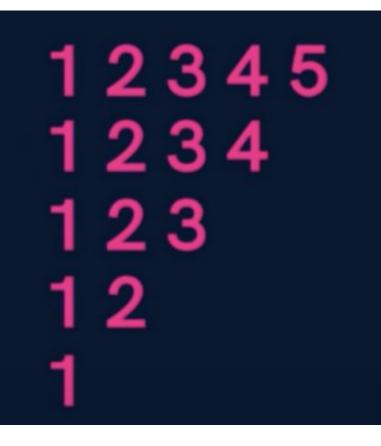




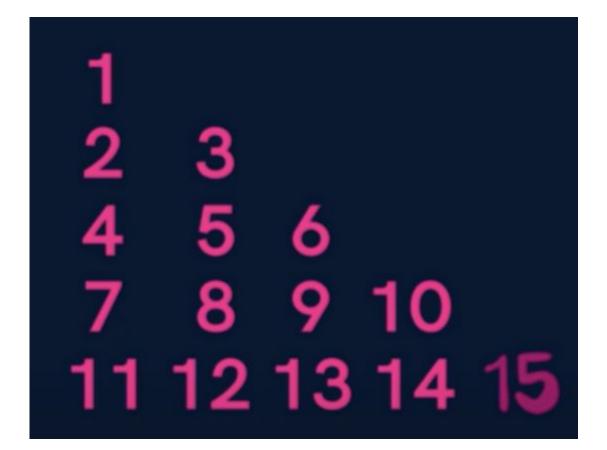
```
int rows = 4;
for (int i = 0; i < rows; i++) {</pre>
    for (int j = 0; j < rows - (i + 1); j++) {
        System.out.print( " ");
    for (int k = rows; k > rows - (i + 1); k--) {
        System.out.print("*");
    System.out.println();
```



```
int rows = 5;
for(int i = 0; i < rows; i++) {</pre>
    for(int j = 0; j <= i; j++) {
        System.out.print(j + 1);
    System.out.println();
```



```
int rows = 5;
for(int i = 0; i < rows; i++) {</pre>
    for(int j = 0; j < rows - i; j++) {</pre>
        System.out.print(j + 1);
    System.out.println();
```



```
int rows = 5;
int k = 1;
for(int i = 0; i < rows; i++) {</pre>
    for(int j = 0; j <= i; j++) {
        System.out.print(k);
        k++;
    System.out.println();
```



```
int rows = 5;
for (int i=1; i<=rows; i++)
   for (int j = 1; j <= i; j++)
       System.out.print"(*");
    for (int k = i*2; k <= rows*2-1; k++)
       System.out.print"( ");
   for (int 1 = 1; 1 <= i; 1++)
       System.out.print"(*");
    System.out.println();
for (int i=1; i<=rows-1; i++)
   for (int j = rows-1; j >= i; j--)
       System.out.print"(*");
    for (int k = 1; k <= i*2; k++)
       System.out.print"( ");
   for (int 1 = rows-1; 1 >= i; 1--)
       System.out.print"(*");
    System.out.println();
```