n=5

① ②

H/W: ① Mat mult. Code^ Rev.

② Develop table

for ① and ②.

i	j ≤ (n-i) #Spaces	j ≤ i Stars
1	4	1
2	3	2
3	2	3
4	1	4
5	0	5

i	j ≤ (i-1) Stars
1	0
2	1
3	2
4	3
5	4

_or_

i	j ≤ (2*i-1) Stars
1	1
2	3
3	5
4	7
5	9

$$n=5$$

i	$j \leq (i-1)$ Spaces	$j \leq (n-i)$ Stars		i	$j \leq (n-i+1)$ Stars
1	0	4		1	5
2	1	3		2	4
3	2	2		3	3
4	3	1		4	2
5	4	0		5	1

n=5

2

3

$i = 1 \text{ to } (n-1)$ $j \leq i$ $j \leq (n-i)$ $\Big\{$ $j \leq (n-i-1)$

i	Spaces	Stars		Stars
1	1	4		3
2	2	3		2
3	3	2		1
4	4	1		0

<u>Array List</u>.   Resizable array.

<u>Syntax:</u>
Array List < Type> arraylist = new Array List < > ();

Integer array list.
Array List< Integer> arr = new ArrayList<>();

String arraylist:
Array List < String> sarr = new ArrayList <> ();

```java
// ArrayList
import java.util.ArrayList;
public class Main
{
    public static void main(String[] args)
    {
        ArrayList<String> students = new ArrayList<>();
        System.out.println(students);
        students.add("Siri");
        System.out.println(students);
        students.add("Arunangshu");
        System.out.println(students);
        students.add("Shubham");
        System.out.println(students);
        students.add(0, "Lohit");
        System.out.println(students);
        students.add(2, "Darshan");
        System.out.println(students);
    }
}
```

Handwritten annotations:

[ ]

[Siri]

[Siri, Arunangshu]

[Siri, Arunangshu, Lohit]

[Lohit, Siri, Arunangshu, Lohit]

[Lohit, Siri, Darshan, Arunangshu, Lohit]