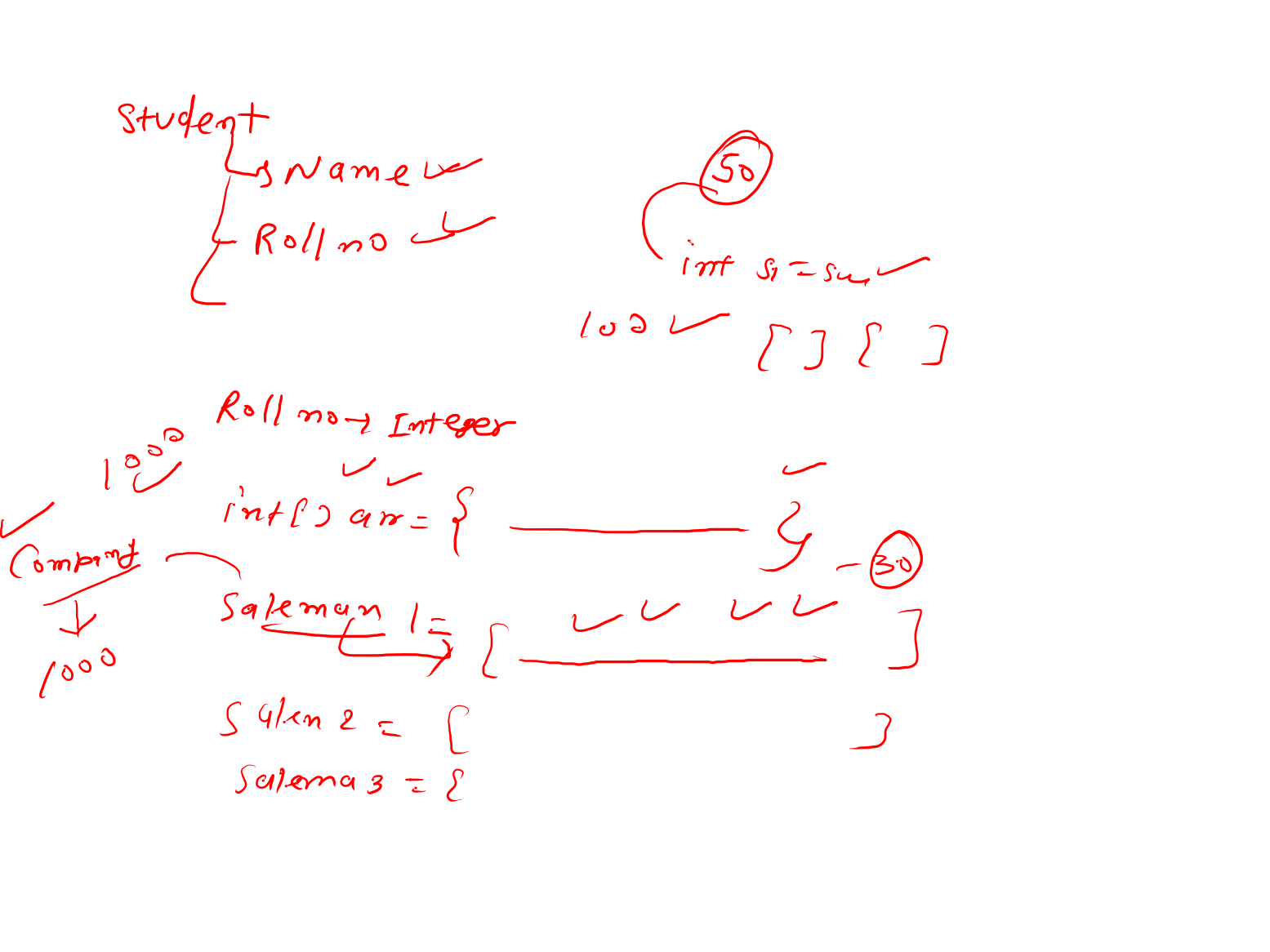

Student
Name
Roll no
50
int Si = Su
100
[ ] [ ]
Roll no → Integer
1000
int[] ar = {
30
Company
1000
Salaman 1 =
Salaman 2 =
Salaman 3 = {

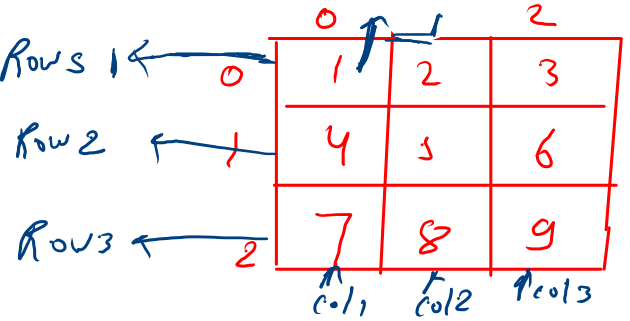
Two types of 2-D Arrays

- Rectangular
  - row
  - column
  - the length
- Jugged 2D Array
  - differ length

3x3

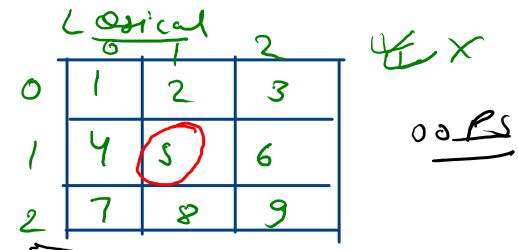
1 2 3
5 6 7 8 9
10 11 12 13

Logic



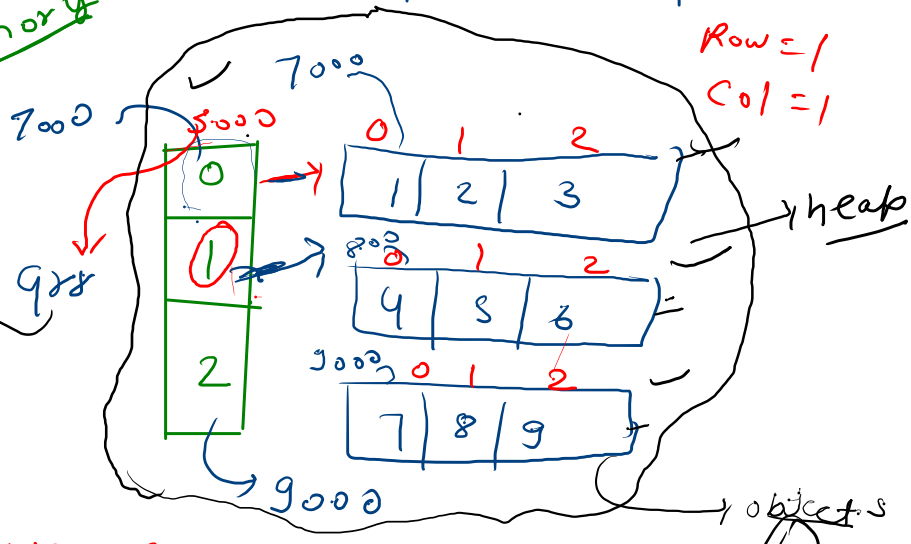
```
int[][] arr = new int[Row_size][Col_size];
```

3 3



arr.length

memory



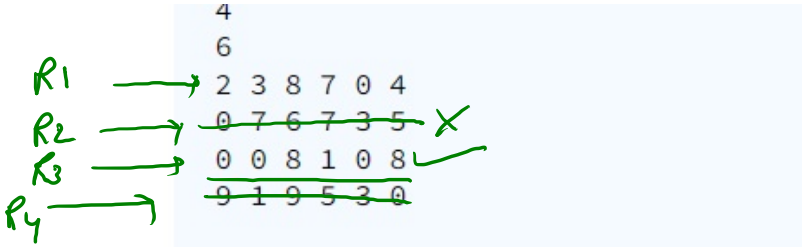
3

3 x 3

arr.length

int rows = arr.length ⇒ 3

int cols = arr[0].length ⇒



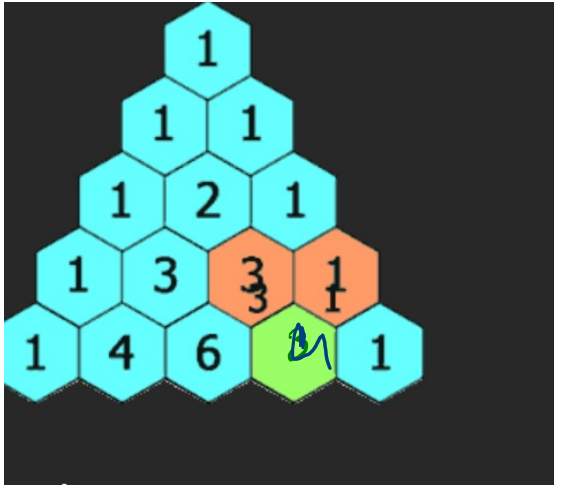
2 3 8 7 0 4

0 0 8 1 0 8

Jagged

```
int[][] arr = new int[rowSize][];
```

pascal triangle



1 2 3
4 5
7 6 8 9

→ 1 col
→ 1 1
→ 1 2 1
→ 1 3 3 1
→ 1 4 6 4 1

rows = 3

cols = 3

	0	1	2
0	(0,0)	(0,1)	(0,2)
1	(1,0)	(1,1)	(1,2)
2	(2,0)	(2,1)	(2,2)

0	1	2	3	4
5	6	7	8	9

arr[1]

```
i < 3
for int i=0 ; i< rows; i++){
                j < 3
   for (int j=0; j< cols; j++) {
```

2

i	j	=	Sc.nextInt()
0	0	=	"
0	1	=	"
0	2	=	"

1, 0
1, 1
1, 2