ArrayList:

* If you don't know the size of the array. Let java handle the size by using ArrayList.

Syntax:

```
ArrayList <(datatype)> name = new ArrayList <> ();
```

Here you should not write int we should write (generic)

Rapour class (Integer).

* To add value to ArrayList

```
name.add(value);
```

* To print ArrayList.

```
Sout(name);
```

* When you use initial capacity in () while declaring. But you can also add more.

* To check whether the value is in arraylist.

```
name.contains(value); //return true or false.
```

* To change specific value at particular index use.

```
name.set(index, value);
```

+ To remove the value from ArrayList:

```
name.remove(index);
```

+ To fetch item or value from specific index use

```
name.get(index);
```

and you should not use `name[index];`

Note:

+ Size of the Arraylist is fixed internally.
+ Arraylist creates another arraylist of size double the old list and copy the array list to that when the first arraylist is filled by 50% and old arraylist will be deleted.

Eg:- `[1, 2, 9, , ]` (50% full) ⇒ `[1, 2, 9, , , , , ]` (Doubles the size and stores)

+ Even if it double the array and store the time complexity is still O(1)

Multi Dimensional ArrayList:

Syntax:

```
ArrayList<ArrayList<(ddatype)>> name = new ArrayList<>();
```

Initializing ArrayList:

```
name.add(new ArrayList<>());
```