

Java Day-2 [Arrays, Collections & enums]:

1) Arrays:

- 1) Declaration:
 - 1) `int[] a = new int[5];` //default value -> 0
 - 2) `int[] b = {1,2,3,4,5,6};` //hard-coded values
 - 3) `Integer[] c = new Integer[5];` //default value-> null
- 2) Length:
 - 1) `<<arr-name>>.length`
- 3) Inserting values:
 - 1) `a[0]=5;`
 - 2) Use for loop

2) ArrayList:

- 1) Is used to store values of the same or different type and is of variable length
- 2) Basic difference b/w array and array list:
 - 1) Printing:
 - 1) `System.out.println(array)` -> address
 - 2) `System.out.println(list)` -> list values are printed
 - 2) Size:
 - 1) `arr.length`
 - 2) `list.size()`
- 3) While declaring ArrayList we use Generic Data Types(Integer, String,Character etc.) & not primitive data types(int , char etc.)
- 4) Methods:
 - 1) `.add`
 - 2) `.add(inde,value)`
 - 3) `.addAll(List<>)`
 - 4) `.contains`
 - 5) `.remove(index)`
 - 6) `.removeAll(list)`
 - 7) `Collections.sort(list)`
 - 8) `Collections.sort(list, Collections.reverseOrder())`
 - 9) `.listIterator()`

3) Sets:

- 1) In Java sets -> we cannot have duplicate values
- 2) Types:
 - 1) HashSet: It will store data in any random order
 - 2) LinkedHashSet: it will store data in the order in which the values are inserted
 - 3) TreeSet: It will store data in sorted order(ascending order)
- 3) We cannot do index-based iterations on SETs

NOTES:

1) Method-Overloading: same method name but different argument types or different length of argument string