* **What are constant arrays? How do you define them? When are they used?**
* If we want to create an immutable array, no, we cannot. All arrays in Java are mutable.

If you just want to predefine the array in your class, you can do it:

e.g.:- private static final int[] MY\_ARRAY = {10, 20, 30, 40, 50};

declared static and final is a constant. i.e. you cannot reassign that variable to another object. The MY\_ARRAY field is declared final, this does not mean that array elements could not be changed. Thus it's better not to expose such array to public via public or protected modifier.

* **What is the correct way to iterate through an array in java? How do you ensure that you do not over-run the length of the array?**
* Iterating over an array means accessing each element of array one by one. There may be many ways of iterating over an array in Java, below are some simple ways.

**Method 1:** Using for loop

**Method 2:** Using for each loop

Not to overrun the array we include the condition of iterations should be length of an array which we can get by the method array.length

* **How can you sort an array of integers using java APIs.**
* In java, arrays can be sorted by the method called Sort present in java.util.Arrays which naturally sort the primitive datatyped array in ascending order. For this we just have to call the array in sort.(arrayname) method and import the Arrays in out program from java.util
* **How can you sort an array of Strings (all lowercase) using java APIs. Ascending & descending.**
* An array can be sorted in case-sensitive order using the java.util.Arrays.sort() method. Only a single argument required in this case for this method i.e. the array to be sorted.

And we can use the collections .reverse() for descending order of sorted array

* **How can you sort an array of Strings (case in-sensitive sort) using java APIs.**
* An array can be sorted in case-insensitive order using the java.util.Arrays.sort() method. Also the java.text.Collator class is required as Collator.getInstance() is used to obtain the Collator object for the required locale.
* **How can you sort an array of Employee objects by: First Name (ascending), Age (descending), Salary(ascending & descending) using java APIs to perform all the sorting.**
* for this purpose we can use Arrays.sort method and our Employee class should implement Comparable interface.  
  2. Comparable interface is meant for default natural sorting order i.e. in ascending order.   
  3. We need to implement compareTo method for each of the parameter on the basis of which we want to sort.  
  4. compareTo method returns an integer value i.e. -1, +1, 0.  
  5. If current object is less than passed object then the method will return -1 else if current object is greater then passed object then it will return +1 else if both the objects are same then it will return 0.
* **How can you perform a binary search on an array of longs using java APIs.**
* if we want to perform the binary search in an array we have to import java.util.Arrays and then we have to use Arrays.binarySearch(arr,key).
* **How can you perform a binary search on an array of longs using java APIs.**
* Arrays.binarySearch() is the simplest and most efficient method to find an element in a sorted array in Java

Declaration: public static int binarySearch(data\_type arr, data\_type key )

where data\_type can be any of the primitive data types: byte, char, double, int, float, short, long and Object as well.