

## Array in Java

### 1. What is the default value of Array for different data type?

**Answer:** Java will assign the default value 0 to each element of the array in the case of an int array. Similarly, in the case of a Boolean array, it will be false, in the case of a String array the default value is null in java, in the case of a User-Defined type the default values is null in java, and in the case of a char array, the default value is Unicode (\u0000).

### 2. Can you pass the negative number in Array size?

**Answer:**

No, we cannot pass the negative number in the array size.

If we pass the negative number in the array size then it will throw an exception `NegativeArraySizeException`.

### 3. Where does Array stored in JVM memory?

**Answer:** Array are stored in the heap memory. Array are reference types we create them using the new keyword. And the reference types in Java are stored in heap area.

The heap is created at the JVM startup and can grow or shrink while the application is running. When the heap fill up, the waste is collected. During garbage collection, objects that are no longer in use are deleted, making room for new objects.

### 4. What are the disadvantages of Array?

**Answer: Disadvantages of Arrays in Java:**

- The size of the array cannot be increased or decreased once it is declared—arrays have a fixed size.
- Java cannot store heterogeneous data. It can only store a single type of data.
- **Wasted space:** If an array is not fully populated, there can be wasted space in the memory allocated for the array. This can be a concern if memory is limited.
- **Insertion and deletion issues:** Inserting or deleting an element from an array can be inefficient and time-consuming because all the elements

after the insertion or deletion point must be shifted to accommodate the change.

### 5. What is an Anonymous Array in Java? Give an example?

**Answer:** An array in java without any name is known as an anonymous array. It is an array just for creating and using instantly. Using an anonymous array, we can pass an array with user value without the referenced variable.

#### Properties of Anonymous Arrays:

- We can create an array without a name. Such types of nameless arrays are called anonymous arrays.
- The main purpose of an anonymous array is just for instant use (just for one-time usage).
- An anonymous array is passed as an argument of a method.

Example:

```
class Demo {  
    int total = 0;  
    public void sum(int [] a){  
        for (int s: a) {  
            total += s;  
        }  
        System.out.println("Sum is: "+total);  
    }  
}  
  
public class AnonymousEx1 {  
    public static void main (String [] args) {  
        Demo d = new Demo ();  
        d.sum (new int [] {10, 15, 20, 30, 40}); // Anonymous array  
    }  
}
```

Output: Sum is: 115

**6. What are the different ways to traverse an array in Java?**

**Answer:** We can traverse through an array using for-loop or for-each loop. Arrays are the containers that store multiple variables of the same datatype. These are of fixed size and the size is determined at the time of creation. Each element in an array is positioned by a number starting from 0. For accessing each element we use for-loop or for-each loop.

**7. What is the difference between length and length () method Give an example?**

**Answer:**

**length:** length is a final variable applicable for arrays. With the help of the length variable, we can obtain the size of the array.

**length ():** length () method is a final method which is applicable for string objects. The length () method returns the number of characters present in the string.

**length vs length ()**

1. The length variable is applicable to an array but not for string objects whereas the length() method is applicable for string objects but not for arrays.
2. length is a property of an array which helps to know the size of the array and length() is the method which helps to find the length (Number of characters) in a string.