29TH MAY ARRAY IN JAVA

1. **What is the default value of Array for different data types?**

Ans: The default values of an array in Java depend on the data type:

For numeric data types (byte, short, int, long, float, double), the default value is 0.

For boolean arrays, the default value is false.

For arrays of reference types (objects, strings), the default value is null.

2. **Can you Pass the negative number in Array size?**

Ans: No, you cannot pass a negative number as the size of an array in Java. The size of an array must be a non-negative integer. If you try to create an array with a negative size, it will result in a negativeArraySizeException.

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

Ans: Arrays are stored in the heap memory of the Java Virtual Machine (JVM). When you create an array, memory is allocated from the heap to store the elements of the array. The reference to the array is stored in the stack or as a member variable of an object.

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

Ans: Disadvantages of arrays in Java include:

Fixed size: Arrays have a fixed size that is defined at the time of creation. It's not easy to change the size of an array dynamically.

Lack of flexibility: Arrays cannot dynamically grow or shrink. Once an array is created, its size remains constant.

Inefficient insertions and deletions: Inserting or deleting elements in the middle of an array requires shifting other elements, which can be inefficient for large arrays.

No built-in methods: Arrays do not provide built-in methods for common operations like sorting or searching. You need to implement these operations manually or use utility classes like Arrays or Collections.

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

Ans: Anonymous arrays in Java are arrays that are created without explicitly assigning them to a variable. They are used for one-time or immediate use. Here's an example of an anonymous array:

```
int sum = 0;

sumArray(new int[]{1, 2, 3, 4, 5}); // Passing an anonymous array to a method


public static void sumArray(int[] arr) {
   int sum = 0;
   for (int num : arr) {
      sum += num;
   }
   System.out.println("Sum: " + sum);
}
```

In the above example, an anonymous array {1, 2, 3, 4, 5} is passed directly to the sumArray method without assigning it to a variable.

6. What are the different ways to traverse an Array in java?

Ans: There are multiple ways to traverse an array in Java:

Using a for loop: Iterate over the array using a traditional for loop with an index variable.

Using an enhanced for loop: Also known as a for-each loop, it simplifies iterating over the elements of an array without using an index.

Using the Arrays class: The Arrays class in Java provides utility methods like toString() or asList() that can be used to traverse and manipulate arrays.

Using streams: In Java 8 and above, you can use streams to traverse and perform operations on arrays using functional programming constructs.

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

Ans: In Java, length is a property of an array, while length() is a method of the String class.

length property for arrays:

It returns the number of elements in the array.

It is a final variable, so it doesn't require parentheses.

Example: int[] numbers = {1, 2, 3}; int length = numbers.length; // length is 3

length() method for strings:

It returns the number of characters in the string.

It is a method, so it requires parentheses.

Example: String str = "Hello"; int length = str.length(); // length is 5