

PW SKILLS

JAVA With DSA & System Design

Assignment – Arrays in Java

Part - 2

1. What is the default value of an array for different datatypes?

Ans: It's not always necessary to assign a value when a field is declared. Fields that are declared but not initialized will be set to a reasonable default by the compiler. Generally speaking, this default will be zero or null, depending on the data type. Relying on such default values. The default value of array for different datatypes are as follows:

Datatypes	Default Value
byte	0
short	0
int	0
long	0L
float	0.0f
double	0.0d
char	'\u0000'
string (or any object)	Null
boolean	False

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

Ans: No, we cannot use a negative integer as size, the size of an array represents the number of elements in it, negative (-ve) number of elements in an array makes no sense.

Still if you do so, the program gets compiled without issues but, while executing it generates a runtime exception of type `NegativeArraySizeException`

Example

In the following Java program, we are trying to create an array with a negative value as size.

```
public class Test {  
    public static void main(String[] args) {  
        int[] intArray = new int[-5];  
    }  
}
```

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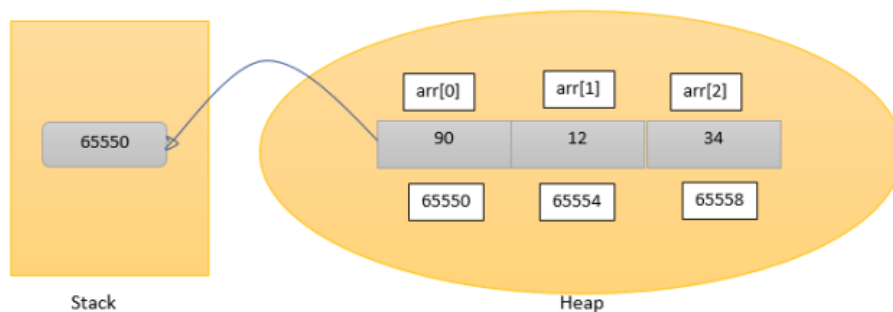
Run time exception

On executing, this program generates a run time exception as shown below.

Exception in thread "main" java.lang.NegativeArraySizeException
at myPackage.Test.main(Test.java:6)

3. Where does Array store in JVM memory?

Ans: Array stores in the **Heap** in JVM memory. The reference types in Java are stored in heap area. Since arrays are reference types (we can create them using the new keyword) these are also stored in heap area.



4. What are the disadvantages of Array?

Ans: There are the following types of disadvantages of array:

- Arrays in Java do not have in-built remove or add methods.
- In Java arrays, we need to specify the size of the array. So, there might be a change of **memory wastage**. So, it is recommended to use ArrayList.
- Arrays in Java are **strongly typed**.
- You can store objects in an array but you cannot store objects of different types.

5. What is an Anonymous Array in Java? Give Examples.

Ans: An array without any name is an anonymous array in java. They are mainly created for one time use only. It is an array just for creating and using instantly.

Syntax: Anonymous Array

```
// anonymous int array
new int[] { 1, 2, 3, 4};

// anonymous char array
new char[] {'x', 'y', 'z'};

// anonymous String array
new String[] {"Geeks", "for", "Geeks"};
```

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```
// anonymous multidimensional array  
new int[][] { {10, 20}, {30, 40, 50} };
```

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

Ans: There are the different ways to transverse an Array in java are as:

- Using For loop
- Using For each loop
- Using Iterator < >
- Using ListIterator < >
- Using the forEach method
- Using ListIterator < > to traverse in reverse

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

Ans:

length:

- It is a property of the array type class.
- The length variable in an array returns the length of an array i.e. a number of elements stored in an array.
- The length variable is used only for an array.

length():

- It is a method of String class.
- The length() method is a static method of String class.
- The length() returns the length of a string object i.e. the number of characters stored in an object.
- String class uses this method because the length of a string can be modified using the various operations on an object.
- The String class internally uses a char[] array that it does not expose to the outside world.