Assignment Question Day-14(String)

Question 1. What is a String in Java?

Answer – String refers to a collection of characters.

Example- String a = “Sachin”;

System.out.println(a);

OUTPUT – Sachin

In java String is by default immutable, meaning once the object is created, we cannot change the value of the object, if we try to change then changes will be reflected on the new object not on the existing object.

Question 2. Types of String in Java are?

Answer – In java String are classified into 2 types –

1.Mutable String – Once if we create a string , on that string if we try to perform any operation and if those changes get reflected in the same object then such string are called “Mutable String”.

Example – StringBuffer, StringBuilder.

2.Immutable String – Once if we create a string, on that string if we try to perform any operation then those changes won’t be reflected in the same object, rather a new object will be created will be created. Such type of string is called as “Immutable String”.

Example - String

Question 3. In how many ways can you create string objects in java?

Answer – In two ways you can create string objects in java

1.By using String literal

String s = “Sachin”;

In this case, 1 object will be created in the String Constant Pool(SCP), the reference will always point to SCP.

2.By using the new operator

String s = new String(“Sachin”);

In this case, 2 object will be created one in the heap and the other one in the String Constant Pool, the reference will always point to Heap.

Question 4. What is a String constant pool?

Answer – When you store a String by using String literal,

Then JVM creates a String object with the given value in a separate block of memory known as String constant pool.

And whenever we try to create another String with same content, then JVM verifies whether any String object with the same value exists in the String constant pool, if so, instead of creating a new object JVM assigns the reference of the existing object to the new variable.

Question 5. what do you mean by mutable and immutable objects?

Answer – Mutable objects are objects whose value can be changed after initialization. We can change the object's values, such as field and states, after the object is created.

Example – StringBuilder, StringBuffer.

Immutable objects are objects whose value can be changed after initialization. We can not change anything once the object is created.

Example – Wrapper class, String class.

Question 6. Where exactly is the string constant pool located in the memory?

Answer – In java heap, string pool located in the memory.