1. What is a String in java?

String is a collection of characters in java. It is denoted by “ ” in java. It refers to the object in java. In java the objects are immutable that is once the object is created the value of that object cannot be changed only the reference can be changed.

1. Types of String in java are?

There are two types of String in java:-

Immutable String => Of class String

Mutable String => Of class StringBuffer and StringBuilder

For example:- String name = “Sarthak”; once we do this a memory location is created in heap area inside the string constant pool in which Sarthak is stored and when we try to change the String then it cant happen only a new memory location will be formed in the string constant pool and the name variable will refer to this new memory location.

StringBuilder name1 = new StringBuilder(“Sarthak”);

By this StringBuilder class when we try to do changes in the String name1 then the changes will be reflected in the same memory location not in the different memory location.

1. In how many ways can you create string objects in java?
2. String name = “Sarthak”
3. String name = new String(“Sarthak”);
4. char[] ch = [‘S’,’a’,’r’,’t‘,‘h‘,‘a‘,‘k‘];

String name = new String(ch);

1. What is a string constant pool?

This string constant pool is a part of heap area which is used to store the data of the type String. When its created directly like String a = “abc”; then the memory abc will be stored in String constant pool. But in other case when we create String object like this String a = new String(“abc”);

Then the memory area will be create in heap area but outside the string constant pool and a copy of that memory will be created in String constant pool area but the difference is that the memory which will be created outside the String constant pool will only have a reference variable but the memory created inside the string constant pool wont have any reference.

1. What do you mean by mutable and immutable objects?

By mutable objects is meant that the object memory can be updated without initialization a new memory space. But in case of immutable objects the system creates a new memory space in the heap area and changes the reference after updation of the old reference.

So Mutable String can be changed within the same object but for immutable for every updation a new object is formed.

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

The String constant pool is located in the heap area of the memory.