String

Assignment Solutions

1. What is a String in Java?

String is a sequence of characters. But in Java, string is an object that represents a sequence of characters. The java.lang.String class is used to create a string object.

2. Types of String are?

In java Strings are classified into 2 types
- Mutable String
- Immutable String

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

There are two ways to create string objects in Java. One is using a new operator and another one is using string literals. The objects created using the new operator are stored in the heap memory and objects created using string literals are stored in the string constant pool.
String s1 = new String("abc"); //Creating string object using new operator
String s2 = "abc";   //Creating string object using string literal

4. What is a string constant pool?

String objects are the most commonly used data objects in Java. Hence, Java has a special arrangement to store the string objects. String Constant Pool is one such arrangement.
String Constant Pool is the heap memory space dedicated to storing string objects created with string literals. In the String Constant Pool, there will be no two string objects with the same content.
When you use a string literal to create a string object, JVM first checks the object's content. If there is an object in the string constant pool with the same content, then it returns the reference to that object. It doesn't create a new object. If the content differs from the existing objects, nonevent is generated.

5. What do you mean by "mutable" and "immutable" objects?

Immutable objects are like constants. You can't modify them once they are created. They are final in nature. Whereas mutable objects are concerned, you can perform modifications on them.

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

Inside the heap memory. JVM reserves some part of the heap memory to store string objects created using string literals. In Java, strings are special. String types receive special treatment in Java that other types do not. For example, to create the string objects, you do not need to use the "new"' keyword. Whereas to create other types of objects, you have to use the "new" keyword. Like this, strings enjoy some special attention from Java. This attention is worth the while, because the strings are used almost everywhere while developing any kind of application