**String Assignment**

1. **What is String in Java?**

**Ans:** In Java, a string is an object that represents a sequence of characters. The java.lang.String class is used to create a string object. Strings are the type of objects that can store the character of values. A string acts the same as an array of characters in Java. You can create a string object by using either string literal or by using the new keyword.

1. **Types of String in Java are?**

**Ans:** There are two types of String in java :

1. immutable (String)
2. mutable (StringBuilder and String Buffer)
3. **In how many ways can you create string objects in Java?**

**Ans:** There are two ways to create a String object in Java. We can create a string object by using either string literal or by using the new keyword.

1. **What is a string constant pool?**

**Ans:** The string constant pool is a small cache that resides within the heap. Java stores all the values inside the string constant pool on direct allocation. This way, if a similar value needs to be accessed again, a new string objects created in the stack can reference it directly with help of a pointer.

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

**Ans:** In Java, mutable objects can be modified after object creation, while immutable objects cannot. Mutable objects provide methods to change the content of the object, while immutable objects do not. Mutable objects support both setters and getters, while immutable objects only support getters. Mutable objects may or may not be thread-safe, while immutable objects are thread-safe by default.

Examples of mutable objects are StringBuffer, StringBuilder, and java.util.Date, While examples of immutable objects are String, Integer, and java.time.LocalDate.

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

**Ans:** The string constant pool is a separate place in the heap memory where the values of all the strings which are defined in the program are stored. The string constant pool is a special memory area. When we declare a Sting literal, the JVM creates the object in the pool and stores its reference on the stack. Before creating each String object in memory, the JVM performs some steps to decrease the memory overhead.