ASSISGNMENT STRING(03-feb):

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

**Ans**: In Java, a String is an object that represents a sequence of characters. It is a class in the Java programming language and is widely used for manipulating textual data.

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

Ans: In Java, there are two types of String:

Immutable Strings: Once created, their values cannot be changed. Any operation that appears to modify the String actually creates a new String object.

Mutable Strings: These are represented by the StringBuilder and StringBuffer classes, which allow modification of the underlying character sequence.

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

**Ans:** There are several ways to create String objects in Java:

Using string literals: e.g., String str = "Hello";

Using the new keyword: e.g., String str = new String("Hello");

Using character arrays: e.g., char[] charArray = {'H', 'e', 'l', 'l', 'o'}; String str = new String(charArray);

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

Ans: The string constant pool is a special area in the Java heap memory where String literals are stored. It allows the JVM to optimize memory usage by reusing existing String objects rather than creating new ones with the same value.

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

**Ans:** In Java, mutable objects can be modified after creation, while immutable objects cannot be changed once created. String objects in Java are immutable, meaning their values cannot be modified. However, mutable versions of strings are available through the StringBuilder and StringBuffer classes.

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

**Ans:** The string constant pool is located in the heap memory area, specifically in the PermGen or Metaspace (prior to Java 8) or in the native heap (from Java 8 onwards). The exact memory location can vary depending on the Java Virtual Machine (JVM) implementation and version**.**