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

Ans - A String in Java is a sequence of characters, like text. It represents words, sentences, or any textual information.

**2. Types of Strings in Java?**

Ans -

String Literal: String literals are created using double quotes. They are stored in the String Constant Pool and are immutable (cannot be changed after creation).

Example: String name = "Tejas";

String Object: String objects are created using the new keyword. They are stored in the heap memory and are also immutable.

Example: String greeting = new String("Hello");

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

Ans - In Java, you can create String objects in two primary ways:

**1. Using String Literals**

String literals are created by enclosing the characters in double quotes. Java automatically adds the created string to the String Constant Pool, and if a similar string already exists, it is reused.

Example:

String name = "Tejas"; // Created in the String Constant Pool

**2. Using the `new` Keyword**

You can create String objects using the `new` keyword. This creates a new instance of the String class, regardless of whether the content already exists in the String Constant Pool.

Example:

String str = new String("Welcome"); // Created in the heap memory

**4. What is a String Constant pool?**

Ans - The String Constant Pool is a special memory area in Java where identical String values are stored once to save memory. When you create a String, Java checks if it's already in the pool and reuses it if it is. This helps avoid wasting memory and makes string handling more efficient.

**5. What do you mean by Mutable and Immutable objects?**

Ans -

Mutable Objects: These can be changed after creation. Their internal state can be modified without creating a new instance.

Immutable Objects: These cannot be changed after creation. Any attempt to modify their state results in a new object being created with the desired changes.

**6. Where exactly is the String Constant Pool located in memory?**

Ans - The String Constant Pool is located in the heap memory, which is a region of memory where objects in Java are allocated and stored.