Assignment

Q1. What is String in java ?

Ans -> In [Java](https://www.javatpoint.com/java-tutorial), string is basically an object that represents sequence of char values. An [array](https://www.javatpoint.com/array-in-java) of characters works same as Java string. For example:

1. **char**[] ch={'j','a','v','a','t','p','o','i','n','t'};
2. String s=**new** String(ch); is same as: String s="javatpoint";

Q2. Types of string in java are ?

Ans- > There are two types of Strings in java : -

1. Mutable Strings
2. Immutable Strings

1. Mutable strings - once if we create any string object in java and then we would try to perform any operations on that string so, if those changes get reflected in same String object then it is an mutable string for example -Stringbuffer , Stringbuilder .

2. IMMutable Strings - once if we create any String in java and try to perform any operations on that string then those changes wont get reflected on that string object rather anothe new r object will be created . for example- String .

Q 3. - In how many ways can you create a string objects in java ?

Ans -> There are two **ways to create the string object in Java**

1. By using String Literal
2. By using new Keyword

### 1) String object creation using string literal

* String Literal is a proper sequence of characters.
* String Literal is enclosed in double-quotes from the source set of characters.
* We should go for String Literal when we want to represent a proper sequence of characters taken together.
* Every String Literal must be terminated with "\n" (null) character.
* A string Literal is created in java by using double quotes(" ").

**Example:**

String str = "Java Programming";

### 2) Creating a String object by using "new" keyword

Here, we will see the second category by using **"new"** keyword and how to create a string object with the help of the **"new"** keyword.

It is similar kind of other object creation by using **"new"** keyword.

**Example:**

String str = new String("Java Programming");

Q4 . What is String constant pool ?

Ans -> A 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. When we declare a string, an object of type String is created in the stack, while an instance with the value of the string is created in the heap. On standard assignment of a value to a string variable, the variable is allocated stack, while the value is stored in the heap in the string constant pool.

Q5. what do you mean by mutable and immutable objects?

Ans -> The mutable objects are objects whose value can be changed after initialization. We can change the object's values, such as field and states, after the object is created. For example, [**Java.util.Date**](https://www.javatpoint.com/java-util-date)**,** [**StringBuilder**](https://www.javatpoint.com/StringBuilder-class)**,** [**StringBuffer**](https://www.javatpoint.com/StringBuffer-class), etc.

The immutable objects are objects whose value can not be changed after initialization. We can not change anything once the object is created. For example, **primitive objects** such as [int](https://www.javatpoint.com/int-keyword-in-java), [long](https://www.javatpoint.com/long-keyword-in-java), [float](https://www.javatpoint.com/float-keyword-in-java), [double](https://www.javatpoint.com/double-keyword-in-java), **all** [**legacy classes**](https://www.javatpoint.com/legacy-class-in-java)**,** [**Wrapper class**](https://www.javatpoint.com/wrapper-class-in-java)**,** [**String class**](https://www.javatpoint.com/methods-of-string-class), etc.

Q6 . where exactly the string constant pool is located in memory ?

Ans - In heap memory .