

Q1. What is a String in Java?

Ans. String is a collection of characters enclosed in double quotes. In java string is considered as class. **Syntax:** `String var_name = "STRING";`

Q2. Types of Strings in java are?

Ans. Types of strings in java are:

-> **Mutable String**

-> **Immutable String**

Q3. In how many ways can you create string objects in java?

Ans. For **Immutable string** we have two ways to declare a string i.e. Mutable and Immutable way:

Immutable String(Non-changeable):

a) `String var_name = "STRING";`

b) `String var_name = new String("STRING");`

For **Mutable string(Changeable)** we have two ways to declare a string:

`StringBuffer var_name = new StringBuffer("STRING");`

OR

`StringBuilder var_name = new StringBuilder("STRING");`

Q4. What is a string constant pool?

Ans. Whenever we declare a mutable string object then it gets stored inside a string **constant pool** within the heap area.

-> String constant pool present within the heap area and also holds the copy of Immutable string for JVM.

-> String literals are stored inside the SCP.

-> **Duplicates** string objects are not allowed here.

-> **Duplicates** string objects have the same address location

-> We can create only one copy and we can reuse the same object for every requirement and improve the performance and memory utilization.

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

Ans. **Mutable object:** when we create a string object and try to perform any operation and if those changes get reflected in the same object then such string objects are called **mutable objects**.

Example: `StringBuffer object= new StringBuffer("Mohit");`

`object.append("Jangid");//Mohit Jangid changes to the same object`

Immutable object: when we create a string object and try to perform any operation and those changes are not reflected back to the same object instead a new object is created with the changes.

Example: `String object= new String("Mohit");`

`object.concat("Jangid");//new object 'Mohit Jangid' created`

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

Ans: String Constant Pool is located inside the **heap area** where string literals are allocated and duplicacy of string objects is not allowed here. Whenever we create a new object JVM checks all the literals and if a new object is similar then it does not create a new object.