

String Class

What is String in java?

Generally, string is a sequence of characters. But in java, string is an object that represents a sequence of characters.

The java.lang.String class is used to create string object.

How to create String object?

There are two ways to create String object:

1. By string literal
2. By new keyword

1) String Literal

Java String literal is created by using double quotes.

For Example:

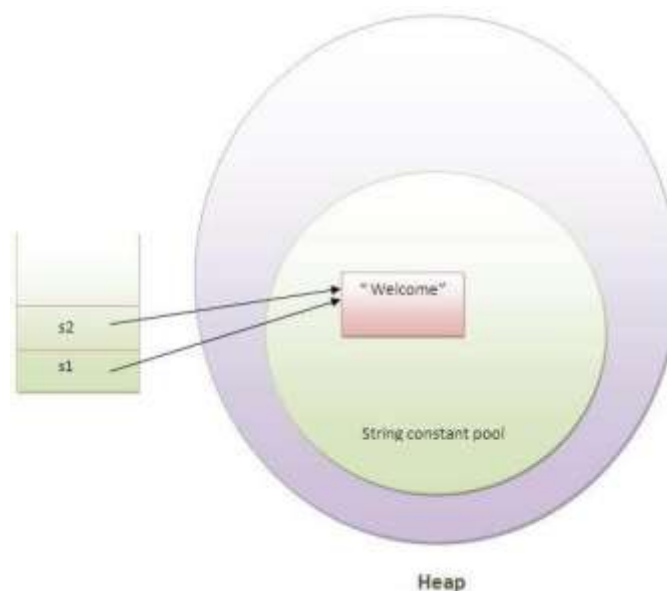
```
String s="welcome";
```

Each time you create a string literal, the JVM checks the string constant pool first. If the string already exists in the pool, a reference to the pooled instance is returned.

If string doesn't exist in the pool, a new string instance is created and placed in the pool.

For example:

```
String s1="Welcome";  
String s2="Welcome";//will not create new instance
```



In the above example only one object will be created. Firstly JVM will not find any string object with the value "Welcome" in string constant pool, so it will create a new object. After that it will find the string with the value "Welcome" in the pool, it will not create new object but will return the reference to the same instance.

Note: String objects are stored in a special memory area known as string constant pool.

Why java uses concept of string literal?

To make Java more memory efficient (because no new objects are created if it exists already in string constant pool).

2) By new keyword

```
String s=new String("Welcome");
```

In such case, JVM will create a new string object in normal(non pool) heap memory and the literal "Welcome" will be placed in the string constant pool. The variable s will refer to the object in heap(non pool).

String class is immutable that means whose content cannot be changed at the time of execution of program.

String class object is immutable that means when we create an object of String class it never changes in the existing object.

Example:

```
class StringHandling
{
public static void main(String arg[])
{
String s=new String("java");
s.concat("software");
System.out.println(s);
}
}
Output
java
```

Explanation: Here we cannot change the object of String class so output is only java not java software.