String Class

String is a class in java defined in java.lang package. String is a final class. String is a thread safe class. String is an immutable class. In string class three object class methods are overridden.

1. toString method:
   This method reutrns object value.

2. hashcode method:
   Hashcode will be generated based on object value.

3. Equals method:
   Equal method compare two objects value.

String class object can be created in two ways:
1. Using a new operator.
2. Without using a new operator.

String object will be stored in String pool area. String pool area is divided into two pool areas:
1. Constant pool area.
2. Non-constant pool area.

String object created without using new operator is stored inside Constant pool area. It wont allow to store duplicate String objects.

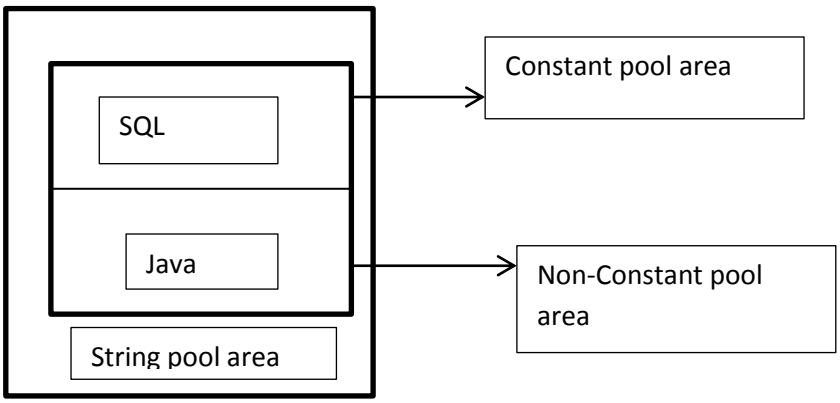
String object created using new operator is stored inside non-constant pool area. Non-constant allows to store duplicate String objects.

Since String is an immutable class, we cannot modify String object.

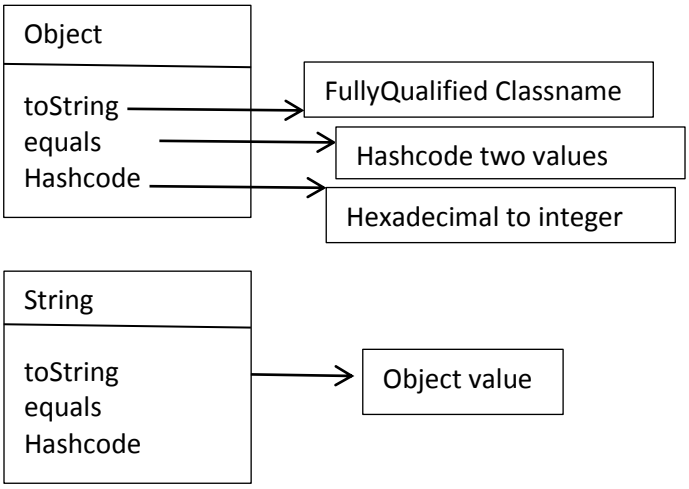
If we modify String object it creates new objects in a memory hence it consumes more memory space. To over come this drawback we should go for String buffer and String builder.

1. Using new operator
String s1=new String ("Java");

2. Without using new operator
String S2="SQL";



Heap Area




```
public class StringMain1 {
	public static void main(String[] args)
	{
		String s1=new String("Java");
		String s2=new String("SQL");

		String str=s1.toString();
		System.out.println(str);

		boolean b=s1.equals(s2);
		System.out.println(b);

		int x=s1.hashCode();
		System.out.println(x);
	}
}
```

String methods:

Length() -> Return integer value.used to calculate length of string.
CharAt(int index) -> return character value, used to return character at given index.
Startswith(string) -> verify string starting value, return boolean
Endswith(string) -> Verify string ends with value
toUpperCase()-> convert string to upper case value.
toLowerCase()-> convert string to lower case value.
Substring(index start, index end)-> to obtain sub string.

```
public static void main(String[] args)
	{
		String s1=new String("Ashwini");
		int x=s1.length();
		System.out.println(x);
		char y=s1.charAt(3);
		System.out.println(y);
		boolean b=s1.startsWith("A");
		System.out.println(b);
		boolean b1=s1.endsWith("ni");
		System.out.println(b1);
		String str=s1.toUpperCase();
```

```
            System.out.println(str);
            String str1=s1.toLowerCase();
            System.out.println(str1);
            String str2=s1.substring(0, 5);
            System.out.println(str2);
    }
```

CharArray

CharArray is used to convert a string into an array function is toCharArray();

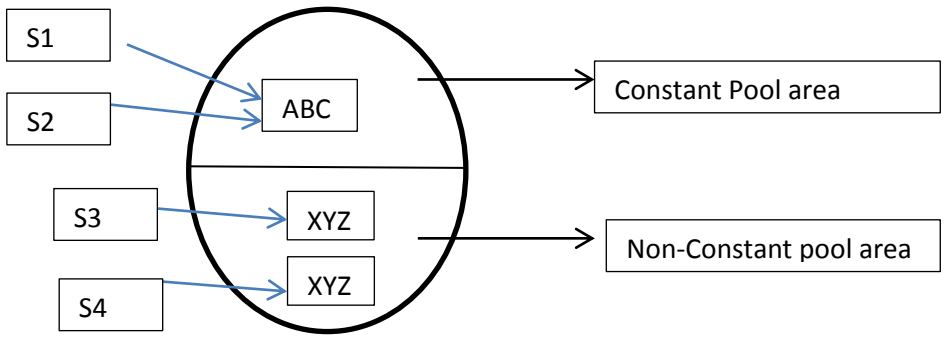
```
    public static void main(String[] args)
    {
            String s1="QSPIDERS";
            char ch[]=s1.toCharArray();
            for (int i = 0; i < ch.length; i++)
            {
                    System.out.println(ch[i]);
            }
    }
```

Split function

```
    public class Split
{
    public static void main(String[] args)
    {
            String s1="qs,pi, de ,r s";
            String st1[]=s1.split(",");
            for (int i = 0; i < st1.length; i++)
            {
                    System.out.println(st1[i]);
            }
    }
}
```

Split used to split object based on arguments passed inside split parameter.

String s1=”ABC”;
String s2=”DEF”;
String s3= new String(“XYZ”);
String s4=new String(“XYZ”);



Difference between Constant and non-constant pool area

Constant Pool area	**Non-Constant pool area**
Stores string object created without new.	Stores Sting object created with new.
Doesn't allow to store duplicate object	Stores to allow duplicate object

Operator == compares two Sting object based on object Address . Equal method compare two string values based on object value.
String s1="ABC";
String s2="ABC";
String s3=new String("XYZ");
String s4=new String("XYZ");