String Class

17)
```
package com.jspiders.stringclassdemo;
public class Demo1
{
    psvm (String[ ] args)
    {
        Sop("Program starts...");
        String str1 = new String("test");
        Sop("str1 = "+ str1);
        Sop("- - - - - - - - - - -");
        String str2 = new String("test");
        Sop("str2 = "+ str2);
        Sop("- - - - - - - - - - - -");
        Sop("Compare str1 and str2");
        Sop(str1= =str2);
        Sop("- - - - - - - - - - - - - -");
        Sop(str1.equals(str2));
        Sop("Program ends...");
    }
}
```

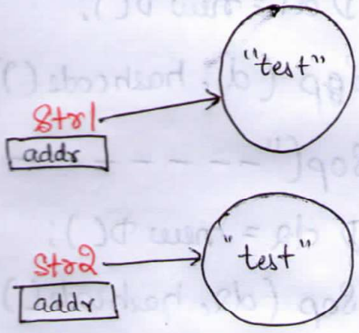
O/p :-

```
program starts...
str1 = test
- - - - - - - -
str2 = test
- - - - - - - -
Compare str1 and str2
false
- - - - - - - - -
true
Program ends...
```

com.jspiders.stringclass

1* String class is used handle , the string values in a program this class is avaliable in java.lang package.

2* String class is final class it cannot be inherited to any sub class.



3* String objects can be created by two ways

3.1* new operator

3.2* using " "

4* When String object is Created using new operator it allows duplicate object to be created in memory.

5* If String objects are created using " " then it will not allow to create duplicate objects.

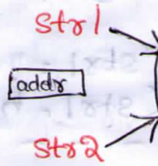
```
18) package com.jspiders.stringclassdemo;
public class Demo1
{ psvm(String[] args)
  { Sop("Program starts...");
    String str1 = "test";
    Sop("str1="+ str1);
    Sop("- - - - - - - - - -");


    String str2 = "test";
    Sop("str2 = "+ str2);
    Sop("- - - - - - - - - -");
    Sop("compare str1 and str2");
    Sop (str1 == str2);
    Sop ("- - - - - - - - - -");
    Sop (str1.equals(str2));
    Sop ("Program ends...");
  }
}
```

O/p:-

```
Program starts...
str1=test
str2=test
- - - - - - - -
compare str1 and str2
true
- - - - - - - -
true
Program ends...
```

* If already a string object exists it uses it otherwise creates new object.

6* Whether an identical object exists or not is verified using equals() method.



7* In String class toString() method is overrided to return the value of object.

8* The equals() method is also overrided to compare ~~two~~ two String objects based on value.

9* hashcode() method is also overrided to return hashcode value based on String value.

10

P105

19)
```
package

public class Demo3
{
  psvm (String [ ], args)
  {
   Sop (" Program starts ... ");

    String  str1 = new String ("test");

    Sop ("str1 = " + str1);
    Sop (str1. hashcode ());
    Sop ("- - - - -  - - - - - - --");

    String  str2 = new String ("test");

     Sop ("str2 = "+ str2);
     Sop (str2. hashcode ());
      Sop ("- - - - - - - - - - - - - -");

       Sop ("Program  ends ...");
    }
}
```

O/p :-

```
Program starts ...
str1 = test
3556498
- - - - - - - - - - - - - - -
str2 = test
3556498
Program   ends ...
```

X String Class - immutable *X*

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20) P106

```
package com.jspiders.stringclassdemo;

public class Demo4
{
    psvm (String[] args)
    {
      Sop ("Program starts...");
      String  s1 = "developer";
      String  s2 = "developer";
      String  s3 = "developer";
      String  s4 = "testing";
      Sop ("s1="+ s1);
      Sop ("s2="+s2);
      Sop ("s3="+s3);
      Sop ("s4="+ s4);
      Sop ("-----------");
      s2 = "tester";
      s4 = "tested";
      Sop ("s1="+ s1);
      Sop ("s2="+ s2);
      Sop ("s3="+s3);
      Sop ("s4="+s4);
      Sop ("Program ends...");
    }
}
```

10 * String is a immutable type because once a string object is created the object value cannot be changed.

If you change value of object, it will create a new object instead of changing existing object. This is known as immutable.

O/p:-

```
Program starts...
s1 = developer
s2 = developer
s3 = developer
s4 = testing
-----------
s1 = developer
s2 = tester
s3 = developer
s4 = tested
Program ends..
```

P107

21)

j	a	v	a	d	e	v	e	l	o	p	e	r
0	1	2	3	4	5	6	7	8	9	10	11	12

```
package com.jspiders.stringclass demo;
pulic class Demo5
{
  psvm (String[] args)
  {
    Sop ("Program starts...");
    String s1 = "javadeveloper";
    Sop ("s1 = "+s1);
    Sop ("String length: "+s1.length());
    Sop ("char @ 4:" + s1.charAt(4));
    Sop ("index of char: "+s1.indexof('e'));
    Sop ("index of char: " + s1.lastIndexOf('e'));
    Sop ("contains dev: " + s1.contains("dev"));
    Sop ("starts with java:" + s1.startsWith("java"));
    Sop ("ends with per:" + s1.endsWith("per"));
    Sop ("is empty? "+s1.isEmpty());
    Sop ("substring: "+s1.subString(8));
    Sop ("substring: " + s1.subString(4,11)); /* (i, i-1)     4 = d
                                                 (4 , 11-1)    10 = p
                                                 (4, 10) */
    Sop (s1.toUpperCase());
    Sop (s1.toLowerCase());
    Sop ("Program ends...");
  }
}
```

O/p:
```
Program starts...
S1= javadeveloper
String length :13
char @ 4:d
Index of char: 5
index of char: 11
contains dev : true
starts with java: true
ends with per: true
is empty? false
Substring : loper
substring : develop
Program ends...
```

←———— jdk 1.5 ——→

	String Builder	String Buffer	String
1*	new operator	new operator	new operator or double quotes " "
2*	toString() is overrided	to String() is overrided	toString() is overrided
3*	equals () is not overrided	equals() is not Overrided	equals is overrided
4*	mutable ├ append() exists └ insert() exits	mutable ├ append() exits └ insert() exits	immutable
5*	reverse () exits	reverse() exits	reverse ( ) does not exists
6*	final Class	final Class	final Class
7*	not thread Safe	thread safe (Synchronized)	not threadsafe

* thread safe means all threads are synchronized i.e threads wait till other threads are executed.

P108

```
22) package com.jspiders.stringclassdemo;
   public class Demo6
   {
     psvm(String[] args)
     {
       Sop("program starts...");
       StringBuffer sb1 = new StringBuffer("java");
       StringBuffer sb2 = new StringBuffer("java");
       Sop ("sb1=" + sb1);
       Sop ("sb2=" + sb2);
       Sop (sb1 == sb2);
       Sop (sb1.equals(sb2));
       Sop ("-------------");
       sb1.append("developer");
       Sop ("sb1=" + sb1);
       Sop (sb1.reverse());
       Sop ("Program ends...");
     }
   }
```

```
Program starts
sb1 = java
sb2 = java
false
false
- - - - - - - -
sb1 = javadeveloper
repolevedavaj
```