

Course Name: A Level (2nd Sem)

Subject: JAVA

Topic: String methods in java [continued]

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Methods of String class

21-toString() method

The toString method is used to return a string representation of an object. If any object is printed, the toString() method is internally invoked by the java compiler. Else, the user implemented or overridden toString() method is called.

```
class Disease
{
    int id;
    String virus;
    String city;
    Disease(int id, String virus, String city)
    {
        this.id=id;
        this.virus=virus;
        this.city=city;
    }
    public String toString()
    {
        return id+" "+virus+" "+city;
    }
    public static void main(String args[])
    {
        Disease d1=new Disease(56,"corona","Wuhan");
        Disease d2=new Disease(29,"hanta","Beijing");
        System.out.println(d1);
        System.out.println(d2);
    }
}
```

StringBuffer class in Java

Java StringBuffer class is used to create mutable (modifiable) string object. A string buffer is like a String, but can be modified. StringBuffer class represents growable and writable character sequence. It is also thread-safe i.e. multiple threads cannot access it simultaneously.

Constructors of StringBuffer class:

- **StringBuffer ()** : Creates an empty string buffer with the initial capacity of 16.
- **StringBuffer (int capacity)** : Creates an empty string buffer with the specified capacity as length.
- **StringBuffer (String str)** : Creates a string buffer initialized to the contents of the specified string.
- **StringBuffer (charSequence[] ch)** : Creates a string buffer that contains the same characters as the specified CharSequence.

Methods of StringBuffer class:

1) StringBuffer append() method

The append() method concatenates the given argument with this string.

```
class StringBuffer1
{
    public static void main(String args[])
    {
        StringBuffer s1=new StringBuffer("corona ");
        s1.append("virus");//now original string is changed
        System.out.println(s1);//prints corona virus
    }
}
```

2) StringBuffer insert() method

The insert() method inserts the given string with this string at the given position.

```
class StringBuffer2
{
    public static void main(String args[])
    {
        StringBuffer s1=new StringBuffer("corona ");
        sb.insert(1,"virus");
    }
}
```

```

        System.out.println(s1);
    }
}

```

3) StringBuffer replace() method

The replace() method replaces the given string from the specified beginIndex and endIndex.

```

class StringBuffer3
{
    public static void main(String args[])
    {
        StringBuffer s3=new StringBuffer("corona");
        sb.replace(1,3,"virus");
        System.out.println(s3);
    }
}

```

4) StringBuffer delete() method

The delete() method of StringBuffer class deletes the string from the specified beginIndex to endIndex.

```

class StringBuffer4
{
    public static void main(String args[])
    {
        StringBuffer s4=new StringBuffer("isolation");
        sb.delete(1,3);
        System.out.println(s4);
    }
}

```

5) StringBuffer reverse() method

The reverse() method of StringBuiler class reverses the current string.

```

class StringBuffer5
{
    public static void main(String args[])
    {
        StringBuffer s5=new StringBuffer("quarantine");
        s5.reverse();
        System.out.println(sb);
    }
}

```

Difference between String and StringBuffer

String	StringBuffer
String class is immutable.	StringBuffer class is mutable.
String are stored in Sting pool.	StringBuffers are stored in heap.
While performing concatenations, String is slow because you are actually creating new object(internally) every time since String is immutable.	StringBuffer is fast and consumes less memory when you cancat strings.
You can compare the contents of two strings by equals() method as String class overrides the equals() method of Object class.	StringBuffer class doesn't override the equals() method.

Exercise:-

- 1-what is the benefit of StringBuffer explain?
- 2- what is StringBuffer class in java?