

UNIT-II

Building Blocks of Language

StringBuffer

- **Java StringBuffer class is used to create mutable (modifiable) string.** The StringBuffer class in java is same as String class except it is **mutable** i.e. **it can be changed.**
- Unlike Strings, objects of type **StringBuffer** and **String builder** can be modified over and over again without leaving behind a lot of new unused objects.

- The **StringBuilder** class was introduced as of Java 5 and the main **difference** between the **StringBuffer** and **StringBuilder** is that **StringBuilders methods are not thread safe (not synchronised)**.
- It is recommended to use **StringBuilder** whenever possible because it is **faster** than **StringBuffer**. However, if the **thread safety** is necessary, the best option is **StringBuffer** objects.

- 3 types of Constructors:
 - **StringBuffer()**: creates an empty string buffer with the initial capacity of 16.
 - **StringBuffer(String str)**: creates a string buffer with the specified string.
 - **StringBuffer(int capacity)**: creates an empty string buffer with the specified capacity as length.

```
public class Test
{
    public static void main(String args[])
    {
        StringBuffer sBuffer = new StringBuffer("test");
        sBuffer.append(" String Buffer");
        System.out.println(sBuffer);
    }
}
```

Append(): It is used to append the string to the end of current string.

String vs StringBuffer

String	StringBuffer
String class is immutable .	StringBuffer class is mutable .
String is slow and consumes more memory when you concat too many strings because every time it creates new instance.	StringBuffer is fast and consumes less memory when you concat strings.
String class overrides the equals() method of Object class. So you can compare the contents of two strings by equals() method.	StringBuffer class doesn't override the equals() method of Object class.

StringBuffer vs StringBuilder

StringBuffer	StringBuilder
StringBuffer is synchronized i.e. thread safe . It means two threads can't call the methods of StringBuffer simultaneously.	StringBuilder is non-synchronized i.e. not thread safe . It means two threads can call the methods of StringBuilder simultaneously.
StringBuffer is less efficient than StringBuilder.	StringBuilder is more efficient than StringBuffer.