StringBuffer is a class in Java that represents a mutable sequence of characters. It provides an alternative to the immutable String class, allowing you to modify the contents of a string without creating a new object every time.

### **Here are some important features and methods of the StringBuffer class:**

1. StringBuffer objects are mutable, meaning that you can change the contents of the buffer without creating a new object.
2. The initial capacity of a StringBuffer can be specified when it is created, or it can be set later with the ensureCapacity() method.
3. The append() method is used to add characters, strings, or other objects to the end of the buffer.
4. The insert() method is used to insert characters, strings, or other objects at a specified position in the buffer.
5. The delete() method is used to remove characters from the buffer.
6. The reverse() method is used to reverse the order of the characters in the buffer.

### **Important Constructors of StringBuffer class**

* 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.

| **Methods** | **Action Performed** |
| --- | --- |
| append() | Used to add text at the end of the existing text. |
| length() | The length of a StringBuffer can be found by the length( ) method |
| capacity() | the total allocated capacity can be found by the capacity( ) method   * The capacity() method of StringBuffer class returns the current capacity of the buffer. The default capacity of the buffer is 16. If the number of character increases from its current capacity, it increases the capacity by (oldcapacity\*2)+2. * For example if your current capacity is 16, it will be (16\*2)+2=34. |
| charAt() | This method returns the char value in this sequence at the specified index. |
| delete() | Deletes a sequence of characters from the invoking object |
| deleteCharAt() | Deletes the character at the index specified by *loc* |
| ensureCapacity() | Ensures capacity is at least equals to the given minimum. |
| insert() | Inserts text at the specified index position |
| reverse() | Reverse the characters within a StringBuffer object |
| replace() | Replace one set of characters with another set inside a StringBuffer object |