Some important methods in String class

- 1. **charAt(int index)**: Returns the character at the specified index.
- 2. **length()**: Returns the length of the string.
- 3. **substring(int beginIndex)**: Returns a substring from the specified beginIndex to the end of the string.

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- 4. **substring(int beginIndex, int endIndex)**: Returns a substring from the specified beginIndex to endIndex 1.
- 5. equals(Object obj): Compares the current string to the specified object for equality.
- 6. **equalsIgnoreCase(String anotherString)**: Compares the current string to another string ignoring case considerations.
- 7. **indexOf(int ch)**: Returns the index of the first occurrence of the specified character.
- 8. **lastIndexOf(int ch)**: Returns the index of the last occurrence of the specified character.
- 9. **toLowerCase()**: Returns a string with all the characters in lowercase.
- 10. toUpperCase(): Returns a string with all the characters in uppercase.
- 11. **trim()**: Removes leading and trailing whitespace from the string.
- 12. **replace(char oldChar, char newChar)**: Replaces all occurrences of the specified old character with the specified new character.
- 13. **replaceAll(String regex, String replacement)**: Replaces all occurrences of the specified regular expression with the specified replacement string.
- 14. startsWith(String prefix): Returns true if the string starts with the specified prefix.
- 15. endsWith(String suffix): Returns true if the string ends with the specified suffix.
- 16. **toCharArray()**: Returns a char array of the characters in the string.
- 17. **split(String regex)**: Splits the string into an array of substrings based on the specified regular expression.
- 18. **join(CharSequence delimiter, CharSequence... elements)**: Joins the specified elements into a single string separated by the specified delimiter.

These are just some of the important methods available in the String class in Java. There are many more methods available, and you can refer to the Java documentation for a complete list.

Assignment Questions:

- 1. Write a Java program to count the number of vowels and consonants in a given string.
- 2. Write a Java program to reverse a given string.
- 3. Write a Java program to check if two given strings are anagrams or not.
- 4. Write a Java program to check if a given string is a palindrome or not.
- 5. Write a Java program to find the first non-repeated character in a given string.
- 6. Write a Java program to remove all the whitespace characters from a given string.

How to debug a code:

Breakpoint: breakpoint is where code execution stops at a step.

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To apply breakpoint, click on the vertical bar, beside the number line

```
String str = "abc";

String newStr = str.toUpperCase();
System.out.println(str.toUpperCase());
System.out.println(str);

}

}
```

Click on **debug button**:

```
Elle Edit View Navigate Code Refactor Build Run Tools VCS Window Help StringTestNew-Main.java

StringTestNew | src | Main | Main
```

Execution will pause at debug point

Press F6 to execute highlighted state and go to next step

Press F8 to execute highlighted state and go to next breakpoint

Press F5 to go into method

Press F7 to come out of method