

String methods

♦ Creation

- `String str = "Hello";`
 - `String str2 = new String("Hello");`
-

♦ Important String Methods

1. Length & Character Access

`length()` → returns number of characters.

```
String s = "Hello";  
System.out.println(s.length()); // 5
```

○

`charAt(int index)` → returns char at given index.

```
System.out.println(s.charAt(1)); // e
```

○

2. Comparison

- `equals(String s2)` → compares contents (case-sensitive).
- `equalsIgnoreCase(String s2)` → compares ignoring case.
- `compareTo(String s2)` → lexicographic comparison.

3. Searching

- `contains(CharSequence s)` → checks substring.
- `startsWith(String prefix)` → checks beginning.
- `endsWith(String suffix)` → checks ending.

- `indexOf(String str)` → returns first index of substring.
- `lastIndexOf(String str)` → returns last index.

4. Substring & Parts

- `substring(int begin)` → from index to end.
- `substring(int begin, int end)` → from begin to end-1.

5. Case Conversion

- `toLowerCase()`
- `toUpperCase()`

6. Trimming & Replacing

- `trim()` → removes leading and trailing spaces.
- `replace(char old, char new)` → replaces characters.
- `replaceAll(String regex, String replacement)` → replaces using regex.

7. Splitting & Joining

`split(String regex)` → splits into array.

```
String s = "a,b,c";  
String[] arr = s.split(",");
```

-
- `join(CharSequence delimiter, String... elements)` → joins strings.

8. Conversion

- `toCharArray()` → converts to char array.
- `valueOf(int/float/char/boolean)` → converts primitive to String.

9. Checking Empty / Blank

- `isEmpty()` → true if length == 0.
- `isBlank()` (Java 11+) → true if only spaces or empty.

10. Formatting

- `format(String format, Object... args)` → formatted string like `printf`.

✓ Example:

```
public class StringMethods {
    public static void main(String[] args) {
        String s = " Java Programming ";

        System.out.println(s.length());           // 17
        System.out.println(s.trim());              // "Java Programming"
        System.out.println(s.toUpperCase());        // " JAVA PROGRAMMING "
        System.out.println(s.toLowerCase());        // " java programming "
        System.out.println(s.substring(1,5));       // "Java"
        System.out.println(s.contains("Program"));  // true
        System.out.println(s.indexOf("a"));         // 2
        System.out.println(s.replace("Java","C++")); // " C++ Programming "
    }
}
```

👉 Do you want me to also make a **table of all String methods with short definitions** so you can revise them quickly for placements?