

ARRAY AND STRING METHODS

1. Arrays Class Methods (`java.util.Arrays`)

Method	Description
<code>Arrays.toString(arr)</code>	Converts an array to a string representation.
<code>Arrays.sort(arr)</code>	Sorts the array in ascending order.
<code>Arrays.binarySearch(arr, key)</code>	Searches for a key in a sorted array using binary search.
<code>Arrays.copyOf(arr, newLength)</code>	Copies the array to a new array with a specified length.
<code>Arrays.copyOfRange(arr, from, to)</code>	Copies a range from an array to a new array.
<code>Arrays.fill(arr, value)</code>	Fills the entire array with a specified value.
<code>Arrays.equals(arr1, arr2)</code>	Compares two arrays for equality.
<code>Arrays.asList(arr)</code>	Converts an array to a <code>List</code> .
<code>Arrays.stream(arr)</code>	Converts an array into a Stream (for functional programming).

2. General Array Methods

Method	Description
<code>arr.length</code>	Returns the length of the array.
<code>System.arraycopy(src, srcPos, dest, destPos, length)</code>	Copies elements from one array to another.

1. String Length & Character Access

Method	Description
<code>str.length()</code>	Returns the length of the string.
<code>str.charAt(index)</code>	Returns the character at the given index.

2. String Modification

Method	Description
<code>str.concat(str2)</code>	Concatenates two strings.
<code>str.toUpperCase()</code>	Converts to uppercase.
<code>str.toLowerCase()</code>	Converts to lowercase.
<code>str.trim()</code>	Removes leading and trailing spaces.
<code>str.replace(oldChar, newChar)</code>	Replaces characters in a string.
<code>str.replaceAll(regex, replacement)</code>	Replaces using a regex pattern.

3. String Comparison

Method	Description
<code>str.equals(str2)</code>	Checks if two strings are equal (case-sensitive).
<code>str.equalsIgnoreCase(str2)</code>	Checks equality ignoring case.
<code>str.compareTo(str2)</code>	Compares two strings lexicographically.
<code>str.compareToIgnoreCase(str2)</code>	Compares ignoring case differences.

4. String Searching

Method	Description
<code>str.contains(substring)</code>	Checks if string contains a substring.
<code>str.indexOf(char/str)</code>	Returns the index of the first occurrence.
<code>str.lastIndexOf(char/str)</code>	Returns the last occurrence index.
<code>str.startsWith(prefix)</code>	Checks if a string starts with a prefix.
<code>str.endsWith(suffix)</code>	Checks if a string ends with a suffix.

5. String Splitting & Joining

Method	Description
<code>str.split(regex)</code>	Splits a string into an array based on a regex.
<code>String.join(delimiter, elements...)</code>	Joins multiple strings with a delimiter.

6. String Conversion

Method	Description
<code>String.valueOf(anyType)</code>	Converts other data types to a string.
<code>str.toCharArray()</code>	Converts a string into a character array.