

6.Overview & Miscellaneous

Sakib Abrar

CSE

Bangladesh University of Engineering & Technology

sakib.cgbs@gmail.com

September 8, 2020

Overview

String related classes

String basics

String length and character extraction

Extracting Substrings

String Comparisons

String Concatenation

String Search

String Split

String Conversions

String related classes

- ▶ Java provides three String related classes
- ▶ java.lang package
 - String class: Storing and processing Strings but Strings created using the String class cannot be modified immutable
 - StringBuffer class: Create flexible Strings that can be modified
- ▶ java.util package
 - StringTokenizer class: Can be used to extract tokens from a String

String Basics

- ▶ String class provide many constructors and more than 40 methods for examining in individual characters in a sequence.
- ▶ You can create a String from a String value or from an array of characters.
 - String newString = new String(stringValue);
- ▶ The argument stringValue is a sequence of characters enclosed inside double quotes
 - String message = new String (“Welcome”);
 - String message = “Welcome”;

String length & character extraction

- ▶ Returns the length of a String
–length()
- ▶ Example:
String s1="Hello";
System.out.println(s1.length);

Extraction

- ▶ Get the character at a specific location in a string
–s1.charAt(1)
- ▶ Get the entire set of characters in a string
–s1.getChars(0, 5, charArray, 0)

Extracting Substrings

- ▶ substring method enable a new String object to be created by copying part of an existing String object
 - substring (int startIndex) - copies the characters from the starting index to the end of the String
 - substring(int beginIndex, int endIndex) - copies the characters from the starting index to one beyond the endIndex

String Comparisons

- ▶ equals
 - Compare any two string objects for equality using lexicographical comparison. `s1.equals("hello")`
- ▶ equalsIgnoreCase
 - `s1.equalsIgnoreCase(s2)`
- ▶ compareTo
 - `s1.compareTo(s2)`
 - `s1 < s2` (positive), `s1 > s2` (negative), `s1 = s2` (zero)

String Concatenation

- ▶ Java provide the concat method to concatenate two strings.
String s1 = new String ("Happy ");
String s2 = new String ("Birthday");
String s3 = s1.concat(s2);
s3 will be "Happy Birthday"

String Search

- ▶ Find the position of character/String within a String
 - int indexOf (char ch)
 - int lastIndexOf (char ch)

String Split

- ▶ `split()` method splits a `String` against given regular expression and returns a character array
- ▶

```
String test = "abc,def,123";  
String[] out = test.split(",");  
out[0] - abc , out[1] - def, out[2] - 123
```

String Conversions

- ▶ Generally, the contents of a String cannot be changed once the string is created,
- ▶ Java provides conversion methods
- ▶ **toUpperCase()** and **toLowerCase()**
 - Converts all the characters in the string to lowercase or uppercase
- ▶ **trim()**
 - Eliminates blank characters from both ends of the string
- ▶ **replace(oldChar, newChar)**
 - Replaces a character in the string with a new character

THE END