CS4A Lab7 – Week 7

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Textbook 10.24 Show the output of the following code.

public class Test {

public static void main(String[] args) {  
 System.out.println("Hi, ABC, good".matches("ABC "));

**false**  
 System.out.println("Hi, ABC, good".matches(".\*ABC.\*"));

**true**

System.out.println("A,B;C".replaceAll(",;", "#"));

**A,B;C**

System.out.println("A,B;C".replaceAll("[,;]", "#"));

**A#B#C**

String[] tokens = "A,B;C".split("[,;]");

for (int i = 0; i < tokens.length; i++)

System.out.print(tokens[i] + " ");

**A,B;C**

}

}

Complete Regexp Table…

|  |  |  |  |
| --- | --- | --- | --- |
| Code | Meaning | Code | Meaning |
| ? | **0 or 1 times** | . | **Any character** |
| \* | **0 or more** | [a-z] | **Any alphabetical character** |
| + | **1 or more** | ^ | **Begin of string** |
| {2} | **Exactly two times** | $ | **End of string** |
| {2,4} | **2 to 4 times** | (abc) | **Capture group a, b or c** |
| A{3} | **A character 3 times** | ^a.\*z$ | **a, any character 0 or more times then a z** |

List Java String Methods that use RegEXP/Patterns.  
**matches, replaceAll, replaceFirst, split.**

Textbook 10.25 Show the output of the following code.

public class Test {

public static void main(String[] args) {

String s = "Hi, Good Morning";  
 System.out.println(m(s));

}

public static int m(String s) {  
int count = 0;  
for (int i = 0; i < s.length(); i++)

if (Character.isUpperCase(s.charAt(i))) count++;

return count;  
 }  
 }

**3**

Complete the StringBuilder, StringBuffer and String table

|  |  |  |  |
| --- | --- | --- | --- |
| Class | Thread Safe? | Static or  Dynamic | Significant Observations (aka merits and/or methods) |
| String | yes | static | Don’t’ need to instantiate a new object of string to use it.  String is treated like a primitive type in java because of its extensive use. |
| StringBuilder | No | Dynamic | Fastest mutable object |
| StringBuffer | yes | dynamic | Thread safe mutable object |

Textbook 10.32 Show the output of the following program:

public class Test {  
public static void main(String[] args) {

String s = "Java";  
 StringBuilder builder = new StringBuilder(s);  
 change(s, builder);  
 System.out.println(s);  
 System.out.println(builder);  
 }  
private static void change(String s, StringBuilder builder) {

s = s + " and HTML";  
 builder.append(" and HTML");  
 }  
}

**Java**

**Java and HTML**