

String Manipulation

COMP SCI / SFWR ENG 2S03

Natalie Perna

Department of Computing and Software
McMaster University

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String Functions

`public class String (Java string data type)`

<code>String(String s)</code>	<i>create a string with the same value as s</i>
<code>int length()</code>	<i>string length</i>
<code>char charAt(int i)</code>	<i>ith character</i>
<code>String substring(int i, int j)</code>	<i>ith through (j-1)st characters</i>
<code>boolean contains(String sub)</code>	<i>does string contain sub as a substring?</i>
<code>boolean startsWith(String pre)</code>	<i>does string start with pre?</i>
<code>boolean endsWith(String post)</code>	<i>does string end with post?</i>
<code>int indexOf(String p)</code>	<i>index of first occurrence of p</i>
<code>int indexOf(String p, int i)</code>	<i>index of first occurrence of p after i</i>
<code>String concat(String t)</code>	<i>this string with t appended</i>
<code>int compareTo(String t)</code>	<i>string comparison</i>
<code>String replaceAll(String a, String b)</code>	<i>result of changing as to bs</i>
<code>String[] split(String delim)</code>	<i>strings between occurrences of delim</i>
<code>boolean equals(String t)</code>	<i>is this string's value the same as t's?</i>

Source: <http://introcs.cs.princeton.edu/java/11cheatsheet/>

Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.length()?
```



Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.length()?
```

↓

```
7
```

Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.charAt(4)?
```



Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.charAt(4)?
```

↓

```
i
```

Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";  
  
a.substring(2, 5)?
```



Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.substring(2, 5)?
```

↓

```
"w i "
```


Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";  
  
a.indexOf("is")?
```



Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.indexOf("is")?
```

↓

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Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
b.equals(c)?
```



Examples

```
String a = "now is";  
String b = "the time";  
String c = "to";
```

```
b.equals(c)?
```

↓

```
false
```

Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.concat(b)?
```



Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";
```

```
a.concat(b)?
```

↓

```
"now is the time"
```

Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";  
  
a.concat(b).concat(c)?
```



Examples

```
String a = "now is ";  
String b = "the time ";  
String c = "to";
```

```
a.concat(b).concat(c)?
```

↓

```
"now is the time to"
```


Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";  
  
b.concat(c).replace('t', 'T')?
```



Examples

```
String a = "now is ";  
String b = "the time";  
String c = "to";  
  
b.concat(c).replace('t', 'T')?
```

↓

```
"The Time To"
```

Question 4 Hints

Do-While Loop

- Evaluates condition at bottom of loop instead of top
- \therefore Statement(s) within do block always executed at least once

```
do {  
    statement(s)  
} while (condition);
```

Characters

Prints a capital A:

```
char letter = 'a';  
System.out.print(Character.toUpperCase(letter));
```