**Playing With Strings Activity Name:**

Use the PlayingWithStrings.java code to answer the questions below.

1. Fill in the values for each String constructed with the lines of code below:

String greeting = "Hello World";

String message = new String("Powhatan Indians Rocks!");

String question = "How old are you?";

greeting

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| char |  |  |  |  |  |  |  |  |  |  |  |
| index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |

message

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| char |  |  |  |  |  |  |  |  |  |  |  |  |
| index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| char |  |  |  |  |  |  |  |  |  |  |  |
| index | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |

question

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| char |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| index | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |

1. Without running the program predict what the output will be for each section of code:

System.out.println("\n\nThe length method: ");

System.out.println("greeting has " + greeting.length() + " characters");

System.out.println("message has " + message.length() + " characters");

System.out.println("question has " + question.length() + " characters");

|  |
| --- |
| **output** |
|  |

System.out.println("\n\nchanging to Uppercase");

String modifiedGreeting = greeting.toUpperCase();

System.out.println("original greeting: " + greeting);

System.out.println("modified greeting: " + modifiedGreeting);

|  |
| --- |
| **output** |
|  |

//Finding substrings

String greetingSubString1 = greeting.substring(8);

String greetingSubString2 = greeting.substring(3, 8);

System.out.println("\n\nSubstring examples");

System.out.println("original greeting: " + greeting);

System.out.println("greeting.substring(8) " + greetingSubString1);

System.out.println("greeting.substring(3, 8) " + greetingSubString2);

|  |
| --- |
| **output** |
|  |

//looking at individual characters

char secondLetter = greeting.charAt(1);

char fifthLetter = greeting.charAt(4);

System.out.println("\n\ncharAt examples");

System.out.println("original greeting: " + greeting);

System.out.println("greeting.charAt(1) " + secondLetter);

System.out.println("greeting.charAt(4) " + fifthLetter);

|  |
| --- |
| **output** |
|  |

//replacing letters

String scrambledGreeting = greeting.replace("ll", "!!");

System.out.println("\n\nreplace examples");

System.out.println("original greeting: " + greeting);

System.out.println("scrambled greeting: " + scrambledGreeting);

|  |
| --- |
| **output** |
|  |

//finding letters with indexOf

System.out.println("\n\nindexOf examples");

System.out.println("original greeting: " + greeting);

System.out.println("substring \"orl\" starts at index: "+ greeting.indexOf("orl"));

|  |
| --- |
| **output** |
|  |

1. Download the PlayingWithStrings.java file, and run it to check your answers.
2. Did you make any mistakes? If so, what were they?
3. Add the following code to the file.
   1. Create and display a new String that holds the lowercase version of message.
   2. Create and display two new String s that hold substring of question, use both substring methods.
   3. Create and display three char variables to hold 3 different characters of message.
   4. Create and display two new String that hold modifications of message and question using the replace method.
   5. Use the indexOf method to display the starting positions of letter combinations in message and question.
   6. Create a scrambled-word using a combination of characters of greeting, message and question, use upper case and lower case letters.

public class PlayingWithStrings{

public static void main(String[] args) {

String greeting = "Hello World";

String message = new String("Powhatan Indians Rock!");

String question = "How old are you?";

System.out.println("Original Strings:");

System.out.println(greeting);

System.out.println(message);

System.out.println(question);

System.out.println("\n\nThe length method: ");

System.out.println("greeting has " + greeting.length() + " characters");

System.out.println("message has " + message.length() + " characters");

System.out.println("question has " + question.length() + " characters");

System.out.println("\n\nchanging to Uppercase");

String modifiedGreeting = greeting.toUpperCase();

System.out.println("original greeting: " + greeting);

System.out.println("modified greeting: " + modifiedGreeting);

//Finding substrings

String greetingSubString1 = greeting.substring(8);

String greetingSubString2 = greeting.substring(3, 8);

System.out.println("\n\nSubstring examples");

System.out.println("original greeting: " + greeting);

System.out.println("greeting.substring(8) " + greetingSubString1);

System.out.println("greeting.substring(3, 8) " + greetingSubString2);

//looking at individual characters

char secondLetter = greeting.charAt(1);

char fifthLetter = greeting.charAt(4);

System.out.println("\n\ncharAt examples");

System.out.println("original greeting: " + greeting);

System.out.println("greeting.charAt(1) " + secondLetter);

System.out.println("greeting.charAt(4) " + fifthLetter);

//replacing letters

String scrambledGreeting = greeting.replace("ll", "!!");

System.out.println("\n\nreplace examples");

System.out.println("original greeting: " + greeting);

System.out.println("scrambled greeting: " + scrambledGreeting);

//finding letters with indexOf

System.out.println("\n\nindexOf examples");

System.out.println("original greeting: " + greeting);

System.out.println("substring \"orl\" starts at index: " +

greeting.indexOf("orl"));

}

}