**Worksheet 8 - Strings**

1. In what way are Strings different than the primitive data types (such as int, boolean, etc…)?

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1. Suppose we have the following string declaration in the main method:

**String s = “This is a short sentence”**

What would be the result of executing the following statements? (Independently of one another)

|  |  |
| --- | --- |
| **Statement** | **Result** |
| int i = s.length(); | i = |
| String str = s.toLowerCase(); | str = |
| boolean test = s.equals(“This is A Short Sentence”); | test = |
| boolean test = s.equalsIgnoreCase(“This is A Short Sentence”); | test = |
| boolean test = s.endsWith(“Sentence”); | test = |
| String str = s.replace(“r”, “p”); | str = |
| char c = s.charAt(4); | c = |
| int i = s.indexOf(“s”); | i = |
| String sub = s.substring(5, 7); | sub = |
| String sub = s.substring(10); | sub = |
| int i = s.indexOf(“s”, 7); | i = |

1. Consider the following code snippets. Write the output of each:

|  |  |
| --- | --- |
| **Code snippet** | **Output** |
| String message = "JackandJillwentupthehill";  System.out.println(message.substring(message.length() - 4)); |  |
| String digits = "1234567890";  int pos = digits.indexOf("6");  System.out.println(pos + digits.indexOf("a")); |  |
| String name1 = "Franklin Delano Roosevelt";  String name2 = name1.substring(0, 8) + name1.substring(16);  System.out.println(name2); |  |

1. Write a program to output the first and last letters of a word entered by the user. If the word entered is less than two characters, output the error message “The word entered has only 1 character.”
2. Write a program which accepts an email address, and outputs whether it is valid or not. To keep our task simple, an email is acceptable if it contains an “@” sign. **Make use of methods!**
3. Write a program that asks for a sentence and 2 words.  It will then replace all occurrences of the first word with the second word and print the result. (Hint: use scanner.nextLine() for the sentence) **Make use of methods!**
4. Write a program that accepts a String as input and returns the number of digits and number of letters in the String.
5. Write a program that accepts an input from the user and deletes any digits or symbols from it (anything that is not a letter). **Make use of methods!**
6. An anagram is a word made by transposing the letters of another word; for example, "parliament" is an anagram of "partialmen", and "software" is an anagram of "swearoft". Write a program that figures out whether one string is an anagram of another string. **Make use of methods!**
7. Write a program which accepts as input a telephone number in 8 digit format. You should check each character to make sure that it is in digit format. Then according to the first to characters you should output what type of phone number it is:

21: Go Fixed

27: Melita Fixed

79: Go Mobile

99: Vodafone

Any other number: Other