Lab4: String Functions

Vocabulary:

method- A function of a specific class. Use methods by calling the object name, the dot operator, then the method name. Ex, str.length().

String methods that you will use in this project:

```
String s = "Hello World!"; // Use this string for the examples below.
```

Method Syntax	Example	Notes
length()	s.length()	Returns a value of 12. Note the difference between length and indexes.
substring(int start)	s.substring(6)	Returns the string starting at index start and ending at the end of the string. Returns a value of "World!" Can remove a part of a string (cuts off)
substring(int start,int end)	s.substring(4,7)	Returns the string starting at start, and ending BEFORE (ie, it does not include) end. Returns "o W"
indexOf(String str)	s.indexOf("r")	Returns the index of the first occurrence of the argument. If the argument is not found in the string, the method returns -1. Returns 4
compareTo(String str)	a.compareTo(b)	Returns: neg if a < b 0 if a == b pos if a > b

toUpperCase()
toLowerCase()
	s.toUpperCase()
	s.toLowerCase()
		Returns "HELLO WORLD!" and "hello world!"

Create the following functions:

Task 1:
int spaceCount(String s); // Given a string s, returns the number of spaces in s.

//Insert Code with comments here:

Task 2:
int vowelCount(String s); // Given a string s, returns the number of vowels in s.

//Insert Code with comments here:

Task 3:
int letterCount(String s, String letter); // Given a string s and a letter, return the number of times letter appears in s.

//Insert Code with comments here:

Task 4:
String duplicate(String s, String letter);//Hello, e => Heello, Hello, l => Hellllo

//Insert Code with comments here:

Task 5:
String beforeString(String s, String substr); // Given a string s, return the portion of the string that comes before substr. If substr is not found, return the entire string s. Ex, beforeString("Hello World!","Wo") => "Hello "

//Insert Code with comments here:

Task 6:
String afterString(String s, String substr); // Given a string s, return the portion of the string that comes after substr. If substr is not found, return an empty string "". Ex, afterString("Hello World!","Wo") => "rld!"

//Insert Code with comments here:

Task 7:
String capVowel(String s); // Given a string s, return the string with all vowels capitalized.

//Insert Code with comments here:

Task 8:
String capFirstWord(String s); // Given a string s that contains multiple sentences,return the same string except the first word of each sentence is capitalized. You may assume the only characters in the string are letters, numbers, spaces, and periods. Ex, capFirstWord("hello. my name is dave. goodbye.") => "Hello. My name is dave. Goodbye."

//Insert Code with comments here:

Task 9:
boolean isVowel(String s); // Assume s is a single letter. Returns true if it's a vowel, false if it's not.

//Insert Code with comments here:

Task 10:
String reverse(String s); // Given a string s, return the string backwards. "Hello" => "olleH".

//Insert Code with comments here: