Exercises for the datatype *string*

1.) Write a program that counts the number of i:s in the word Mississippi. Use the declaration
`char state [] = "Mississippi";`

2.) Write a program that counts spaces and tabs in a string. Remember that a space is `' '` and a tab is **`'\t'`**. You can also use the ASCII value 32 for a space:
`char ch = 32;  //the value of the character is ' '`

3.) Write a function that appends the string **`"-> "`** to a given string.

4.) Write a function that converts a string to all lowercase. Tips: The ASCII value of 'A' is 65 and the ASCII value of 'a' is 97 ('A' + 32 or 'A' plus ' ', that is a space). The ASCII value of 'B' is 66, etc.

5.) Write a function that converts a string to all uppercase.

6.) Write a function that counts and returns the number of vowels in a string. Vowels in this case are the letters A, E, I, O, U (or their lower case equivalents).

7.) Write a function that counts and returns the number of consonants in a string.

8.) Write a function that returns the integer value of all the characters in a string. Each character's ASCII value is added to the previous character's ASCII value to give a sum that is returned. So, the string **`“abc”`** would yield 97+98+99.

9.) Write a function that reverses a string ("string" becomes "gnirts").

10.) Write a function that checks to see if a string is a palindrome (the same word forward and back, like "abba").