Recitation 05b
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Strings

Exercise 1 - (Gaddis 8.1) Initials

Write a program that gets a string containing a person's first, middle, and last names, and then display their first, middle, and last initials. For example, if the user enters `John William Smith` the program should display `J. W. S.`

Exercise 2 - (Gaddis 8.2) Sum of Digits

Write a program that asks the user to enter a series of single-digit numbers with nothing separating them. The program should display the sum of all the single digit numbers in the string. For example, if the user enters `2514`, the program should return `12`, which is the sum of 2, 5, 1, and 4.

Exercise 3 - (Gaddis 8.3) Date Printer

Write a program that reads a string from the user containing a date in the form `mm/dd/yyyy`. It should print the date in the form `March 12, 2014`.

Exercise 4 - (Gaddis 8.8) Sentence Capitalizer

Write a program with a function that accepts a string as an argument and returns a copy of the string with the first character of each sentence capitalized. For instance, if the argument is `"hello. my name is Joe. what is your name?"` the function should return the string `"Hello. My name is Joe. What is your name?"` The program should let the user enter a string and then pass it to the function. The modified string should be displayed.

Exercise 5 - (Gaddis 8.9) Vowels and Consonants

Write a program with a function that accepts a string as an argument and returns the number of vowels that the string contains. The application should have another function that accepts a string as an argument and returns the number of consonants that the string contains. The application should let the user enter a string and should display the number of vowels and the number of consonants it contains.

Exercise 6 - (Gaddis 8.10) Most Frequent Character

Write a program that lets the user enter a string and displays the character that appears most frequently in the string.
Hint: you can use the `count()` method provided for string objects

Exercise 7 - (Gaddis 8.11) Word Separator

Write a program that accepts as input a sentence in which all of the words are run together but the first character of each word is uppercase. Convert the sentence to a string in which the words are separated by spaces and only the first word starts with an uppercase letter.

Example:
The string `"StopAndSmellTheRoses."` would be converted to `"Stop and smell the roses."`

Exercise 8 - (Gaddis 8.12) Pig Latin

Write a program that accepts a sentence as input and converts each word to **Pig Latin**. In one version, to convert a word to *Pig Latin* you remove the first letter and place that letter at the end of the word. Then you append the string `"ay"` to the word.

Here is an example:

- English: `I SLEPT MOST OF THE NIGHT`
- Pig Latin: `IAY LEPTSAY OSTMAY FOAY HETAY IGHTNAY`