Worksheet 4

Objectives

- Use string methods to manipulate text data
- Use dictionaries to store data in memory.
- Use file I/O to work with external data files.

Questions

1. Strings
   a. Create a string and iterate over it, printing one character at a time.
   b. Write a boolean method that determines if a string is a palindrome. Ignore spaces and capitalization. (e.g. "Mom", "Race car")
   c. ~~Use string replace() to~~ get a copy of a string with all occurrences of <name> replaced with your name, e.g. "One day <name> went to the store…"
   d. ~~Use string find(), slicing, and concatenation to accomplish the task in part (c). Don't worry about multiple occurrences (unless you want a challenge).~~
   e. Use string split() to get a list of words from a sentence, then use a loop to print each word.
2. Dictionaries
   a. Create a dictionary and add a few entries, and print an entry using the index operator [ ].
   b. Add multiple entries using the update() method
   c. Iterate over the dictionary, printing the keys and entries.
   d. # Compare and contrast **lists** and **dictionaries**.
3. File I/O
   a. Open the file **(quantum.txt)** in read mode and use a loop to print each line.
   b. Create a new output file (e.g. **outfile.txt**) and write a few lines to it.
   c. Open **quantum.txt** and **outfile.txt** together, and write the first word of each line in quantum in CAPS to outfile.