CS0008: Intro to Python
Weekly Assignment 8
Strings and Dictionaries

Part 1: String Manipulation

Many companies use telephone numbers like 555-GET-FOOD so the number is easier for their customers to remember. On a standard telephone, the alphabetic letters are mapped to numbers in the following fashion:

A, B, C: 2
D, E, F: 3
G, H, I: 4
J, K, L: 5
M, N, O: 6
P, Q, R, S: 7
T, U, V: 8
W, X, Y, Z: 9

Write a program that asks the user to enter a 10-character telephone number in the format XXX-XXX-XXXX. The application should display the telephone number with any alphabetic characters that appeared in the original translated to their numeric equivalent: 555-GET-FOOD should be translated to 555-438-3663

Part 2: Dictionaries

Write an address book program that stores your contacts' names and their email addresses.

The names and email addresses are originally stored in a file called phonebook.in, in the format:

Harry Potter
theboywholived@hogwarts.edu
Hermione Granger
brightestwitch@hogwarts.edu
Ron Weasley

roonilwazlib@hogwarts.edu
Draco Malfoy
myfatherwillhearaboutthis@hogwarts.edu
Severus Snape
halfbloodprince@hogwarts.edu
Albus Dumbledore
alasearwax@hogwarts.edu

Your program should read from the file, storing the names and corresponding email addresses in a dictionary as key-value pairs. Then, the program should display a menu that lets the user enter the numbers 1 through 5, each corresponding to a different menu item:

1) look up an email address
2) add a new name and email address
3) change an email address
4) delete a name and email address
5) save address book and exit

When the user enters 1, the program should prompt them for a name, and then print the corresponding email address. If there is no dictionary entry under that name, the program should print, "Sorry, no contact exists under that name."

When the user enters 2, the program should prompt them for a name and an email address, then add a new key-value pair to the dictionary.

When the user enters 3, the program should prompt them for a name and a new email address for that contact. It should change the value of the corresponding dictionary entry to match the new email address.

When the user enters 4, the program should prompt them for a name and delete the corresponding dictionary entry.

When the user enters 5, the program should write the names and email addresses in alphabetical order by first name to the file phonebook.out
        -You can use the sorted() function which accepts a dictionary argument to
         sort a dictionary based on Key