Activity 2-5

Task 1: Practice Evaluating Python Dictionaries

Download and save ACT2-5.py. Open it in Sublime. Three variables are already defined: origString, freqDict, and phoneDict.

Evaluate the Dictionaries

1. Evaluate freqDict inside main().

   - What type are the keys?
   - What type are values?

2. Evaluate phoneDict inside main().

   - What type are the keys?
   - What type are values?

Evaluate Individual Keys

1. The syntax for evaluating the key 'a' in the freqDict dictionary is freqDict['a']. Try this.

2. Evaluate the keys 'hat' and 'the' in the freqDict dictionary.

3. Evaluate the keys 'Carol' and 'Doug' in the phoneDict dictionary.

Test if a Key is in a Dictionary

1. Use the key in dict syntax to determine if the string 'mat' is a key in freqDict.

2. Use the key in dict syntax to determine if the string 'Alice' is in phoneDict.

Get List of Keys and Values

1. Use the keys() function to get a list of keys for freqDict and then for phoneDict

2. Use the values() function to get a list of values for freqDict and then for phoneDict

3. Suppose we want to print the keys and values in a dictionary. Why is the keys() function more useful than the values() function?

Task 2: Manipulating Dictionaries

Adding, Removing, and Updating Key-Value Pairs

1. Add the key 'mat' with the value `0` to `freqDict`. Verify your change by evaluating `freqDict`

2. Remove the key 'cat' from **freqDict**. Verify your change by evaluating `freqDict`.

3. Put the key 'Alice' with the value '401-555-5555' in `phoneDict`. What happened to the dictionary? What does this mean about keys?

Dictionaries vs. Lists

1. Inspect the `printDict()` function. How does it print the key-value pairs for a dictionary? Run `printDict()` on `freqDict` and then `phoneDict`.

2. Now inspect the `printList()` function. Since this function takes a list, use the `split()` function to split `origString` on whitespace. Pass this list to the `printList()` function. What differences and similarities do you notice when you compare the output of `printDict()` and `printList()`?

Task 3: Computing a Dictionary of Word Frequencies

1. Run the `wordFreq()` function. Think about how to modify this function to return a dictionary of word frequencies. Then write the function.