Homework 7: Dictionaries

L555

Due Monday, October 29

1. (a) Write a program that reads in the POS tagged text from file *vm.pos* and creates a POS lexicon that stores every POS tag and its frequency. Use a dictionary to store these data. Then print a list of the POS tags and their frequencies.

(b) Extend the program so that it prints the POS tags based on their frequency in descending order.

Note: do not use NLTK tools for this question.

2. Write a program that allows the users to create their own dictionaries. They should be able to insert a new source word plus its translation into the dictionary, look up a word, look up all the source words, delete entries, and check whether a certain translation is in the dictionary. In other words, you are providing an interface for users to choose an option, give the necessary input, and then the action is performed internally.

Note: assume only one translation per word for this question.

3. At the top of a program, create a small dictionary of translations, e.g., 20 words from two of your favorite languages, e.g., an English-to-Spanish dictionary. Allow for multiple translations by having each key point to a list of possible translations. Write code which takes a L1-to-L2 dictionary and gives you an L2-to-L1 dictionary, e.g., Spanish-to-English.

Be sure to test it with one-to-many (one L1 with many L2 translations) and many-to-one (many L1 words with the same L2 translation) mappings.