

Homework #5 Introduction to Computing

Due: March 13, 2010 (Saturday at 11:59 PM)

Concordance Program - Project 8 on page 199

“A file concordance tracks the unique words in a file and their frequencies. Write a program that displays a concordance for a text file. The program should output the unique words and their frequencies in alphabetical order.”

ADDITIONAL REQUIREMENTS:

Before you start writing your program, (re)read section 6.2 on Problem Solving with Top-Down Design, because I want you to actually design your program. **Split your program up into well-defined functions** by doing a top-down design and developing a structure chart.

When you write your program, be sure to use:

- meaningful variable names with good style (i.e., use CamelCase or use underscores)
- docstring comments at the start of the program **and** after the “def”inition of each function which describing what they do
- a main function (see lab4 Part C) located at the top of program with a call to it at the bottom of the file to start execution
- global constants where appropriate with good style (ALL_CAPS_AND_UNDERSCORES).

Save your program in a file called concordance.py

EXTRA CREDIT PARTS:

- A simple definition of a word might be “any sequence of non-whitespace characters.” If your program uses a more accurate definition of a word, you can get some extra credit.
- In addition to maintaining the frequency of each word, also maintain a list of line numbers where the word occurs. If a word occurs multiple times on the same line, the line number should only be in the list once.

Submit your homework electronically at http://www.cs.uni.edu/~schafer/submit/which_course.cgi

The steps for the homework submission system are:

1. Write, debug, and test your program. Save it in a file called concordance.py
2. Log on to the submission system at: http://www.cs.uni.edu/~schafer/submit/which_course.cgi
Use the same AD-ITS User name and password that you use to log on the lab computers.
3. Select the course and section number of "810:051, Intro to Computer, Fienup". Click the "Continue".
4. Select the homework that you wish to submit: "HW 5: File Concordance". Click "Continue"
5. Specify how many extra files you want to submit. Just leave it at 0. Click the "Continue" button.
6. Upload your program by Browsing and selecting your concordance.py file. Click the "Continue" button.
7. The next page reports on the status of the upload(s). You can always continue to upload a better version of the program until the deadline. The newer file will replace an older file of the same name.