

Homework 3

Problem 03-A: Files

Using built in Python support of files, strings, sets, and dictionaries, write a Python program that accepts from the console an input file name and an output file name. The input file should contain text lines as the contents shown in the following example.

```
Most of this book uses high-level tools to read data files from disk into Python data structures.  
However,  
it's      important to understand the basics of how to work with files in Python.  
Fortunately,  
    it's very simple,  
which is one reason why Python is so popular for text and file munging.
```

The program should convert the multi-line input text into one paragraph and write it in the output file. The program should remove extra spaces. The following is the output paragraph corresponding to the above example.

```
Most of this book uses high-level tools to read data files from disk into Python data  
structures. However, it's important to understand the basics of how to work with files in  
Python. Fortunately, it's very simple, which is one reason why Python is so popular for text  
and file munging.
```

Moreover, the program should report the number of input words, the list of input words, the number of unique words, and the word frequency sorted in ascending order as shown in the following partial screen shot.

```
Enter input file name:folder\file1.txt  
Enter output file name:folder\file2.txt  
Number of words: 50  
Words:  
['most', 'of', 'this', 'book', 'uses', 'high-level', 'tools', 'to', 'read', 'data', 'files', 'from',  
Number of unique words: 41  
Word Frequency  
=====  
python    3  
to        3  
is        2  
data      2  
files     2  
of        2  
it's      2  
simple     1  
popular   1  
uses      1  
from      1  
reason    1
```