

# Homework #5

**Due:** February 27, 2012

**Points:** 100

As for all earlier assignments, please put refinements for all your programs into one file called “refinements.txt” or “refinements.pdf”, and error journal entries for all your programs into one file called “errors.txt” or “errors.pdf”.

In the example outputs, what your program outputs is in **typewriter font**, what the user types is in *italicized typewriter font*, and the user typing “enter” or “return” is represented by the character “`↵`”. You don’t need to change the font, use italics, or show the “`↵`” in your output.

1. (50 points) This program asks you to modify the *linsearch.py* program we discussed in class to read words from a file. Please take that program and add the following command to it. When the user types `f file`, the contents of “*file*” is appended to the list. The “*file*” will contain one word per line. For example, if the file “xxx.txt” contains the words

```
we
people
these
united
states
```

an example execution of the program would be:

```
what do I do (s word, a word, f file, p)? f xxx.txt↵
Added word 'we' to list
Added word 'people' to list
Added word 'these' to list
Added word 'united' to list
Added word 'states' to list
added words to wordlist
what do I do (s word, a word, f file, p)? p↵
1. when
2. in
3. the
4. course
5. of
6. human
7. events
8. we
9. people
10. these
11. united
12. states
what do I do (s word, a word, f file, p)? s states↵
'states' is word number 12
what do I do (s word, a word, f file, p)? ↵
```

**Submit:** Please turn in your program in the file “ls1a.py”.

2. (50 points) Write a program that asks the user for a URL, reads from that URL, and prints the contents. When it prints each line, it also prepends the line number, with the largest line number left-justified and all other line numbers with units’ digit lined up with that of the largest line number, then outputs a tab, and then prints the line. Here is sample input and output (as there are 115 lines in the output, it is truncated):

What URL should I fetch? *http://www.rfc-editor.org/rfc/rfc1149.txt*,

- 1.
- 2.
- 3.
- 4.
- 5.
- 6.
7. Network Working Group
8. Request for Comments: 1149
- 9.
- 10.
- 11.
12. A Standard for the Transmission of IP Datagrams on Avian Carriers
- 13.
- . . . *skipping lines 14 through 112* . . .
- 113.
114. Waitzman
- 115.

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BBN STC  
1 April 1990

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**Submit:** Please turn in your program in the file “urlread.py”.

### Extra Credit

Submit this program in the Extra Credit 5 area of SmartSite—not in the Homework 5 area.

1. (*30 points*) Modify your program in problem 1 to read an initial value of `wordlist` from the file “words.txt”. That is, before entering the “while” loop in the main routine, the program should read the words from the file “words.txt” (one word per line) and set `wordlist` to contain only those words.

**Submit:** Please turn in your program in the file “ls1b.py”.