Spell Checker

In this assignment, you will write a simple spell checker in C. First, checkout the assignment using the command `handin --checkout a2`. Inside the `a2` directory you will find four files: `main.c`, `spellcheck.c`, `spellcheck.h`, `Makefile`, and `dict.txt`. You will use these four files to build your assignment.

Instructions

- Your code must be split up between the files `main.c`, `spellcheck.h`, and `spellcheck.c`. The file `main.c` should only contain the main function of the program, which should be kept as brief as possible.
- Your program should read words one at a time from `stdin`, and check if they are spelled correctly. If a word is misspelled (or not in the dictionary), print the word and the line number it was found on.
- In order to check the spelling of the words, you will need a dictionary. Before reading the words from `stdin`, you program should open `dict.txt` and read the words, which are stored one per line, into a binary tree. To check the spelling of a word, you will simply search for it in the tree.
- If the command line argument `-a` is passed, then your program should prompt the user when a misspelled word is encountered and ask if the user wants to add the word to the dictionary. If they answer "yes", then the word should be added not only to the tree, but also should be written to the file `dict.txt`. Be careful not to overwrite the entire file!
- Finally, you should fill out `Makefile` so that your code is compiled correctly when the command `make` is ran. You may actually want to get this working first, so debugging goes a little smoother.

Grading

- 10 points: Code organization / documentation
- 10 points: Correctness / ease of use