CS 2420 Word Ladder Assignment

Divide and Conquer

* **Problem 1:** dictionary
  + Read in dictionary into multiple vectors
    - Each vector only contains words of a certain amount of characters
      * Done properly, this should still be alphabetized
    - Use a switch nested in a while loop to place words in their proper vectors
      * The while loop condition will read in words from dictionary.txt
* **Problem 2:** obtain starting word and target word
  + Simply store these in strings
  + If obtaining from a user, consider using two functions to gather and return these
  + If obtaining from a randomly generating function, just have those functions return 2 words of the same length
* **Problem 3**: create potential ladders
  + How do I go about creating these?
  + **Problem 4**:Binary search on strings
    - How do I compare strings? Can I include a library or do I need to write my own?
* **Problem 5:** storing potential ladders
  + Check and see if a word is legit using a binary search
  + Store each potential ladder as a linked list
    - Perhaps a DLL<vector<string>>?
      * Will my toString function work with this?
        + I could certainly modify it, but is this even the best way?
    - Use these linked lists as queues
    - See assignment description
  + To check if a word has been used, employ another vector containing only used words and search it each time you want to use a word
  + **Problem 6:** checking each word to see if it is the target
    - Maybe just check as potential words are generated through the brute force method?