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**Homework 2 Question 6**

Use a stack to pass in a string and reverse each word in the string. For instance, if you

have the string “When Chuck Norris falls in water, Chuck Norris doesn't get wet. Water

gets Chuck Norris.” It should now say, “nehW kcuhC sirroN sllaf ni retaw, …” That is, it

should take in one string and be a function (or multiple functions) that use a stack (or

multiple stacks) to reverse each word in the sentence. Create a text file that you input of

Chuck Norris jokes and have the program reverse each of the jokes.

**Program Description:**

The program reads lines from a file where each line is a Chuck Norris joke. Each line from the file is read as a string and passed into the reverseJoke function where the string is reversed and printed. The reverseJoke function reads each word from the joke string and uses a stack to store the word in reverse order. Once a word has been completely pushed into the stack, each character is printed and popped until the stack is empty, and then the function reads the next word and reverses it contents until there are no more words in the string.

The function includes flags to check if the character seen is a period or a comma. Periods and commas appear in the same position for a reversed word. For example, if we are reversing “Chuck Norris, he’s great.”, the function will output “kcuhC sirroN, s’eh taerg.”. If the function encounters a period or a comma at the top of the stack, this means the word was followed by one of those characters. The character is removed from the stack and the appropriate flags are set to true. The remaining characters, which should be letters, are printed until the stack is empty, and either of the flags are set to true, we print the period or comma, then reset the flag for the next word.

Here are sample outputs from the program:

