605.202 Data Structures LAB 1

Use of Stacks

In this assignment you will use recursion to convert prefix expressions directly to postfix expressions. You may not use a stack as you did in Lab 1.

Write a program that accepts a prefix expression containing single letter operands and the operators +, -, *, /, and $ (representing exponentiation). Output the corresponding postfix epression.

For example, if your input is ***AB** then output should be **AB*.** Output of **BA*** is considered incorrect.

In your analysis, be sure to discuss why recursion makes sense. Consider your recursive solution with your iterative solution from Lab 1. Is one better than the other? DO you feel differntly than you didi when you wrote Lab 1. Tell us what you learned and what you would do differently. Be sure to review the Programming Assignment Guidelines for specific requirements for the Analysis and before submitting this assignment.

Don't forget to do reasonable error checking and try to make your error messages specific and helpful. You may not use library functions. You must write your own code. You must read and write from named files.

The required input is provided in a separate file. Handle the input as you did in Lab 1.