Objective: The purpose of this assignment is to practice text files, functions, pointers, and strings.

Details:

Write a program that does the following:

- Opens two text files (input.txt and out.txt)
    - input.txt contains the input and you will write the output to out.txt
- The input file contains lines in the following format:
    - Operator operand1 operand2 where
        - Operator can be + - * / ^
        - Operands are integer values between -100 and 100
    - As an example, a line might be: + 2 5
    - The output file should contain the result of the arithmetic operation, for example:
        - 7 = 2 + 5
    - You can expect there to be a newline at the end of every line
- Your program must have a main file and at least one header file (with at least one implementation file). Methods that the header implements should at least involve:
    - Any functions for reading in values from the file
    - Any functions related to processing the arithmetic (i.e., add, subtract, multiply, divide, power) to discover the resultant value of the operation
- You should read the input file until you reach end of file
- If errors are encountered (invalid operator, divide by 0) then print an error message for that line:
    - You cannot divide by zero: / 5 0
    - You entered an invalid operator: & 4 5
- If a double value is on a line rather than an int (i.e., a '.' appears somewhere in the line) you should write to the output file that there was an error and keep reading from the file:
    - Error reading line 5

Submit your source files (*.c and *.h) for the assignment.

70 points