

COSC 2436 Lab 3: Stacks

1. Introduction

You will implement a C++ program to perform the push and pop operations of Stacks to evaluate what the unknown variable x is. The purpose of this lab is for students to get familiar with using stacks to solve a problem. Please name the folder on the server as "lab3".

2. Input File

- The input file will contain an equation with one unknown variable, x .
- Each operator/operand is separated by a single space.
- The left side of the equation will be an expression.
- The right side will be a real non-negative number.
- Assumptions:
 - The unknown variable will always be on the left side
 - The right side will only contain one real number
 - The only algebraic operations are $+$, $-$, $*$, and $/$

3. Output File

- Print the value of x formatted to include two decimal places.

4. Examples

input1.txt

$(2 + 4) * x = 24$

output1.txt

4.00

input2.txt

$x / 12 = 3$

output2.txt

36.00

input3.txt

$(72 - (12 * 3) * 2 + 9) / x = 4$

output3.txt

2.25

5. Turn in your lab assignment

Lab 3 needs to be turned into our Linux server; follow the link here

https://rizk.netlify.app/courses/cosc2430/2_resources/

Make sure to create a folder under your root directory, name it lab3 (the name must be lower case), and only copy your code to this folder; no test cases or other files are needed.

PS: This document may have typos, if you think something is illogical, please email the TAs for confirmation.