

Project 2

CSC122AB

April 6, 2022

1 Introduction

You will be writing a program to evaluate arithmetic expressions (using infix notation). As mentioned in class, the easiest way to accomplish this is a two-step process:

1. Convert the infix notation expression to the equivalent expression in postfix notation.
2. Evaluate the postfix notation.

It is highly recommended that you work in groups of 2-3 for this assignment. Your group pairings must be clearly stated in each group members moodle submission on repl.it.

2 Setup Submission

1. In your browser visit <https://repl.it>
2. Fork the Project 2 Template by visiting <https://repl.it.com/@GrantSkipper/CSC122AB-Project-2-Templatemain.cpp> .
3. Rename your submission “Project 2 - ” followed by your name and the name of your group members.
4. One group member should submit a join link to your project on Moodle. All other group members must make a text submission on Moodle with the name of their group members.

You must submit your project through repl.it. If you forget to submit the project it will be counted as a late submission.

3 Assignment

For this project will need to write a program to do the following:

1. Prompt the user to submit an arithmetic expression (10 Points).
2. You may assume that the expression is entered with spaces between all numbers and operators.

That is, it will look like this: $((7 + 6) * (16 - 2)) / 2$

Rather than like this: $((7 + 6) * (16 - 2)) / 2$

This will make the reading in of the expression much easier.

3. Evaluate the expression (using the two step process above) (20 Points).
4. Print the value of the expression for the user (20 Points).

For example, running the program might look like this:

```
1 Please enter an arithmetic expression: ( ( 7 + 6 ) * ( 16 - 2 ) ) / 2
2 The value of that expression is: 91
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For this, you will need one code file: the file defining the program (called main.cpp). You should use the STL version of the stack class; writing your own stack class is much more work, and not necessary. We will discuss in class how to best read in the expression and get items from it. Included in the project template is sample code you may use to read in input from a user and store it into a vector.