**Introduction**

The Compiler Expression Parser works similar to how normal calculators work, where the user is able to input a mathematical expression, and receive the answer to the equation.

The program has the ability to run a variety of mathematical operations, such as:

Addition

Subtraction

Multiplication

Division

Exponentiation

As well as the ability to use parentheses to manually prioritize order of operations.

To run the software, run the makefile by opening a console and typing “make”. This will then create a binary file named “cli” which when run will launch the program.

**Getting Started**

Upon running the software, the user is greeted with an empty text box, where they are free to enter any mathematical expression.

The following operations can be achieved with their respective operators:  
Addition: +

Subtraction: -  
Multiplication: \*

Division: /

Exponentiation: \*\*

**Advanced Features**

The program automatically keeps a history of the users previously entered expressions. The user is able to go back in the history by 1 at any time by typing “BACK”.

The user is able to end the program at any time by typing “END”

**Troubleshooting:**

Waiting to fill out til we have proper errors

**Examples:**

Addition: 5+5  
Subtraction: 5-5

Multiplication: 5\*5

Division: 5/5

Exponentiation: 5\*\*5

Multiple Operations with parentheses: (5+3)\*12-(32+3)