

CS 352 Lab 1: Parsing

January 24, 2020

A CALCULATOR OF YOUR OWN

Today's lab involves building a simple calculator app. You can download and build the `egg` parser generator from either Demo 1 or Homework 1, then unzip this lab's starter files in the same directory.

`calc.egg` is a skeleton file which contains three nonterminals:

- `expr`: meant to parse an arithmetic expression, currently unimplemented; should return a double when implemented
- `num`: matches a floating-point number, returns a double
- `_`: matches whitespace

`calc.cpp` is the test file which attempts to repeatedly match an `expr` (printing its returned value) until the command `quit` is seen.

You can build and run the lab exercise with the following terminal commands:

```
./egg compile calc.egg calc.hpp
g++ -std=c++14 calc.cpp -o calc
./calc
```

Implement the following binary operators with the given precedence and associativity:

Precedence	Operator	Associativity
<i>Highest</i>	<code>*</code> , <code>/</code>	Left-associative
	<code>+</code> , <code>-</code>	Left-associative
<i>Lowest</i>	<code>==</code> , <code>!=</code>	Non-associative

The semantics should be the same as Java, and operators on the same precedence line should be able to be mixed.