

COSC 251 – Lab #10

One last LISP Hurrah

Purpose: Using LISP to develop a postfix calculator.

Task: It'd be too easy for me to give you a simple calculator lab, so instead you'll be creating a program to take a calculation in postfix and give the appropriate answer. As a refresher, an example of a postfix equation is:

(2 3 + 4 *)

Which would return 20. For this lab, assume that you'll only be dealing with integers and only three operations +, - and *. The equation should be taken in as a parameter of the function and you may assume that the parameter will always be a list.

Hints: you'll need to convert the list that you get into expressions that LISP would normally be able to handle. So, for the above, you'll convert (2 3 + 4 *) to (* 4 (+ 2 3)). Once you have that list, you can use the **eval** function given by LISP to evaluate the list just as it was an expression. An example in use:

```
>>> (setf l '(* 4 (+ 2 3)))
(* 4 (+ 2 3))
>>> (eval l)
20
```

Deliverable: the lisp code that you create. It must be submitted via Digital Dropbox. Email submissions to me will be ignored (since John is grading the labs).

This lab may be worked on in pairs.

Due: By the start of class Wednesday. No exceptions. To be turned in via Digital Dropbox.