

COSC 251 – Lab #5

Lisping in the darkness.

Purpose: Get used to using emacs and LISP.

Task: For this lab, I'd like you to create three functions (like we have for previous languages). Two of these functions should be familiar to you: summation (summation of all numbers from 1 to n) and Fibonacci (generate the nth Fibonacci number). I do expect to see the proper (non-wasteful) Fibonacci recursion here. The third function will be to create an approximation of π using a form of the Gregory-Leibniz series:

$$4 \sum_{i=0}^n \frac{(-1)^i}{2i+1} = 4 - \frac{4}{3} + \frac{4}{5} - \frac{4}{7} + \dots$$

Note that n should be passed as a parameter to the functions you create.

Each function should return the value as appropriate, not printed.

Deliverable: the .lisp code that you create.

Due: By 11:59pm Tuesday. No exceptions. To be turned in via Blackboard. You are allowed to work in pairs for this lab.