Proposal for Haskell Homework Option

By Owen Meyer

October 9, 2012

Goal: To obtain credit for coursework in Haskell programming for the Fall 2012 Computability Program.

Method: I will complete the following studies in Haskell and submit them to Dr. Neil Nelson for review and critique.

- Paralleling the C-Lite compiler project using Haskell.
- Using system outlined by Erik Meijer and Graham Hutton, design a recursive descent parser for the C-Lite grammar to convert strings of C-Lite into abstract syntax.
- Design an abstract syntax in Haskell for C-Lite.
- Write an algorithm in Haskell to type a C-Lite parse tree.

Presentation: Upon request of Dr Neil Nelson I will present my work to the class in the format of his choosing.

Additional Options:

- Implement NFA's in Haskell following the Thompson Paper
    - Note: I have already begun implementing a set library from scratch using trees rather than lists as an exercise, though I assume it is a less efficient approach.
- Take a look at Open GL in Haskell.