Lab 3

Haskell

In today's lab you will learn the basics of the functional paradigm with the help of the Haskell language. The tutorial is very long, but this lab will only cover the first 6 chapters. At the end of the lab you won't know enough to write a full application, but you will have a much better understanding of the concepts.

Do make sure you understand the syntax enough to read and write a little. You may see it again.

Tips:

- The tutorial assumes you are using UNIX, not Windows so a few things are different.
- Instead of running `ghci`, use WinGHCi instead.
  - `:l lab3.hs` (lowercase L) to load the lab turn in after you edit
  - `:r` to reload the last loaded file after you edit
  - `:q` to quit
- The arrow keys work if you want to edit previous commands.
- Line comments begin with `--`
- Block comments begin with `{-` and end with `-}`

Part 1

Open the tutorial at http://learnyouahaskell.com/chapters and work through Chapter 1. This chapter provides an overview of the language and instructions for installing Haskell. The lab computers have Haskell already installed. If you wish to install Haskell on your personal computer, you can find it at https://www.haskell.org/platform/windows.html .

Part 2

Work through chapters 2-6. As you finish each chapter, work on the exercises in the provided lab3.hs. This is the file you will turn in. Each exercise gives a short description of what the function should do then provides the function header. When you begin, the function is defined as `undefined`. Your task is to replace `undefined` with a working version of the function.

Remember, you can load and reload the file into WinGHCi with `:l lab3.hs` (that is a lower case L after the colon) at any time.

Turn In

Upload your completed **lab3.hs** file to Blackboard.

If you enjoyed working in Haskell and want to learn more, please feel free to finish the tutorial. Remember, in this lab, you haven't even seen "Hello, World" yet and don't know how to write a full application.