Exercise 1 (0 Points)  Install the Erlang development environment on your computer and make sure that it is running correctly. Visit http://erlang.org/ for instructions. Note that Erlang does not come with an IDE but you may find a plug-in for Eclipse or you may use the Emacs text editor.

Hint:  Users of the Debian, Ubuntu and Fedora Linux distributions may find prebuilt and preconfigured packages in their software repositories. It is a good idea to install these.

Exercise 2 (2 Points)  Write a small program that prints "hello world" to the screen. Document how to compile and how to execute the program.

Exercise 3 (4 Points)  Implement the Fibonacci function in Erlang. The Fibonacci function is defined by the recurrence

\[
\begin{align*}
  f(0) &= 1 \\
  f(1) &= 1 \\
  f(n) &= f(n - 2) + f(n - 1) \text{ if } n > 1.
\end{align*}
\]

Write one version that is based on this recurrence and another version that is tail-recursive.

Exercise 4 (8 Points)  Write a small evaluation function that takes a string representing an expression and returns the value. You will need to write a small parser.

For example, the result of eval("2") shall be 2, The result of 2+5*8 shall be 42. Document your implementation.