

Language Study: Erlang

CMSC 233

-Homework 1

Goals

To learn about Erlang's history and become familiar with the Erlang interactive environment and get comfortable working in there by playing around with assorted stuff.

Instructions

Part One

- Read *A History of Erlang* by Joe Armstrong. It's linked on our class site.
- Listen to Joe Armstrong being interviewed on episode 89 of Software Engineering Radio. It's also linked from our class site.

All content from both of these sources is fair game for tests so sit back, relax, and get into learning about the history and philosophy of Erlang.

Part Two

- Download and install (or build from its source code) Erlang on your own system.
- Fiddle around in the interactive environment by going through all the examples in chapter two of our book.

Part Three

- Answer the following questions on topics found in chapter two in our book, the history paper, and the interview:
 1. What is single assignment?
 2. What's the difference between a *bound* and *unbound* variable?
 3. How does variable scope work in the Erlang environment?
 4. Does Erlang implement mutable or immutable memory state? Why?
 5. Describe Erlang's memory management system.
 6. What does "Erlang" mean or stand for, if anything?
 7. Contrast "soft real time" from "hard real time".
 8. Why is Erlang so well suited for concurrency-oriented programming?
 9. Explain Erlang's "let it crash" philosophy.
 10. What's the difference between a tuple and a list?
 11. What's BEAM?
 12. How can it be that we can make more Erlang "processes" than are allowed for in the operating system?
 13. Why are we here?

Submitting

Type up your answers, print them out, and hand them in at the start of the class in which it is due. Remember to include your name and the date.