CSCI 330
Homework #1
Due February 1

Type your answers to the following questions (watch the formatting when you enter code). The number following the question is how many points it is worth. Email a PDF version of your final submission.

1. What are some features of specific programming languages you know whose rationales are a mystery to you? Explain. (5)

2. What arguments can you make for the idea of a single language for all programming domains? (5)

3. What arguments can you make against the idea of a single language for all programming domains? (5)

4. What common programming language statement, in your opinion, is most detrimental to readability? Explain. (5)

5. How do type declaration statements for simple variables affect the readability of programming languages, considering that some languages do not require them? (5)

6. Explain two reasons why pure interpretation is an acceptable implementation method for several recent scripting languages. (5)

7. To understand the value of recursion in a programming language, write a program that implements binary search, first using recursion and then without recursion – post the code here. (10)
Programming Language Investigation

Investigate at least three different programming languages -- look at examples of programs on http://www.rosettacode.org. Chapter 2 of the book is also a good resource.

8. What are the three languages you evaluated? (1)

9. Describe some design trade-offs between efficiency and safety in these languages. (3)

10. For each language, identify whether it is compiled, interpreted, or hybrid? (3)

11. Which of these languages could be the most "costly" to adopt? Justify your argument. (3)