Textbook Assignment #1: Introduction

Issued: Wednesday, January 18
Due: Wednesday, February 22

Purpose

This assignment asks you to begin thinking about programming languages and programming-language translation.

Submission

Homework is due at 11:59PM, Mountain Time, on the day it is due. Late work is not accepted. To submit your solution to an assignment, login to a lab computer, change to the directory containing the files you want to submit, and execute:

```
submit jbuffenb class assignment
```

For example:

```
submit jbuffenb cs101 hw1
```

The `submit` program has a nice `man` page.

When you submit a program, include: the source code, sample input data, and its corresponding results.

Scores are posted in our `pub/scores` directory, as they become available. You will receive a code, by email, indicating your row in the score sheet. You are encouraged to check your scores to ensure they are recorded properly. If you feel that a grading mistake has been made, contact me as soon as possible.

Textbook Exercises

For each exercise, read it in the textbook, then adjust it according to what's here.

Edition 4: question 1.1, page 38.

Give examples of various kinds of errors. Use Java for your examples.

Edition 4: question 1.8, page 39.

Consider the accuracy of `make`.

Note that plain-old `make` relies on operating-system timestamps.

Edition 4: question 2.1 (a,b,c), page 105.

Give regular expressions for character-string literals in C, comments in Pascal, and numeric literals in C.

For each of the three parts, start by giving some example strings in the language.

Edition 4: question 2.13 (a,b), page 108.

Give a parse tree and a rightmost derivation, of a string, according to a context-free grammar.

Note that we do not cover grammar characteristics, like LL(1).

Edition 4: question 2.17, page 109.

Extend the context-free grammar from Figure 2.25, which is on page 91, which is in Section 2.3. Note that we do not cover Section 2.3, but we can still use the grammar.