Midterm Feedback

This document provides an overview of the results of the midterm, and some high-level feedback. Specific feedback for each student is provided on the exam. Solutions to the exam's problems are also distributed separately.

File Extensions Considered Harmful

- Error 1.1: Meta-characters should not be "escaped" in character classes (e.g. `[]`). If you try to quote or escape in a character class, the quote or backslash itself just becomes another character the character class matches! The one exception is C escape sequences like `\n` which are interpreted like you would expect inside a character class.
- Error 1.2: The `$` symbol should be used to instruct a regular expression to match the pattern only at the end of a line. Including `\n` in the regular expression was incorrect as it caused the newlines to also be replaced – we just wanted to replace exactly the file extension!

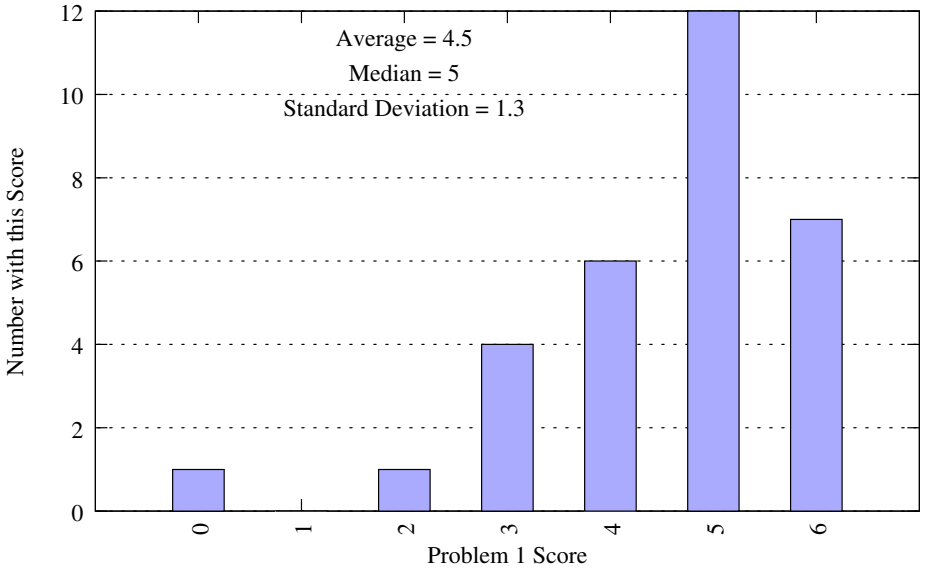

Figure 1: The distribution of grades for problem 1.

Nothing Ever Changes

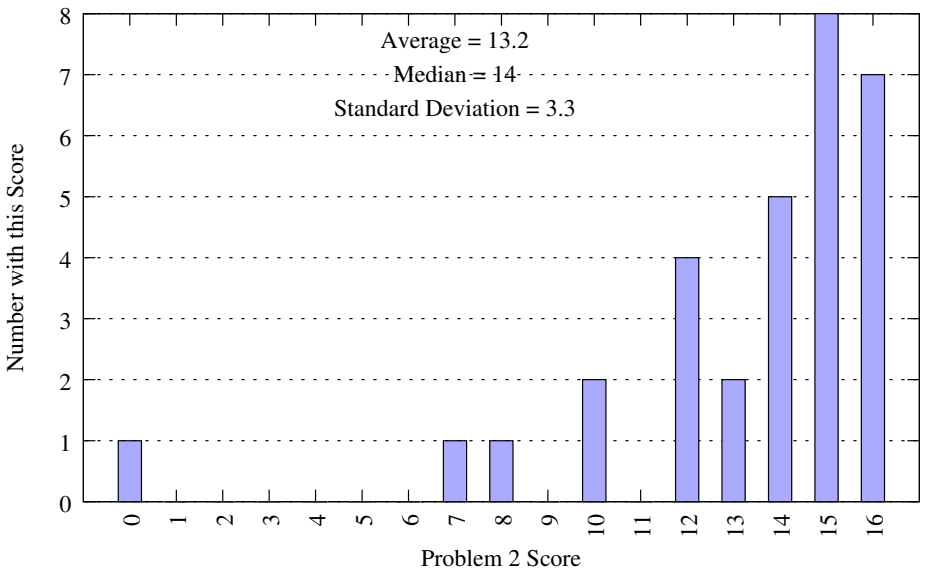

Figure 2: The distribution of grades for problem 2.

How Much Wood ... ?

- The parse table was worth 2 points per row, leaving 3 points each for part a and b.
- In part a and b we gave partial credit for reasonable answers that differed from our reference solutions.

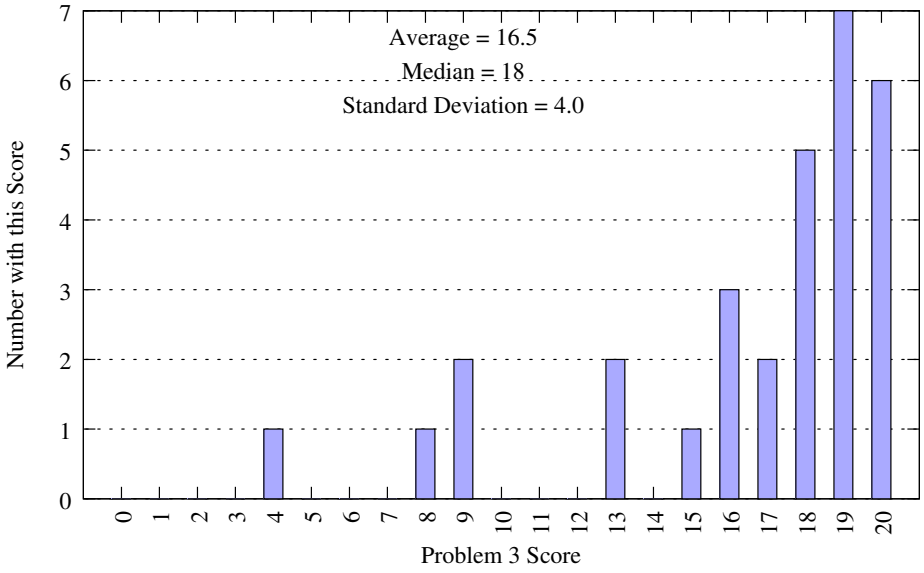

Figure 3: The distribution of grades for problem 3.

Broken Calculator

- Each question was worth 2 points– one for the value, one for the tree.
- It was possible to get 1 point for an incorrect answer for correctly observed that two situations were the same (i.e., wrong answer on a, then writing that b is the same as a)

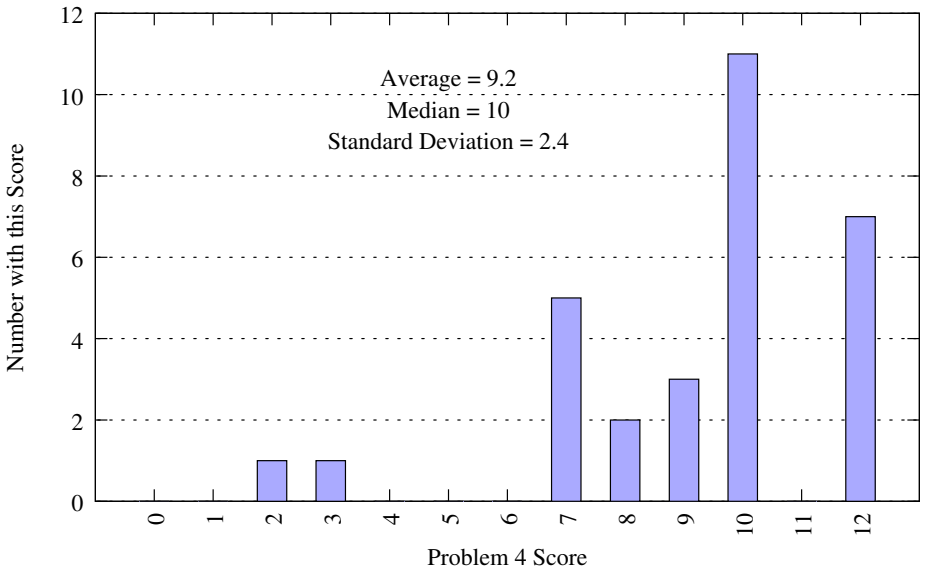

Figure 4: The distribution of grades for problem 4.

The Infamous Alderson Loop

- LL(1) grammars cannot have left-recursion - almost everyone recognized and corrected this error. However, many students did not recognize or eliminate the ambiguity inherent in choosing between `bb` and `bc`.

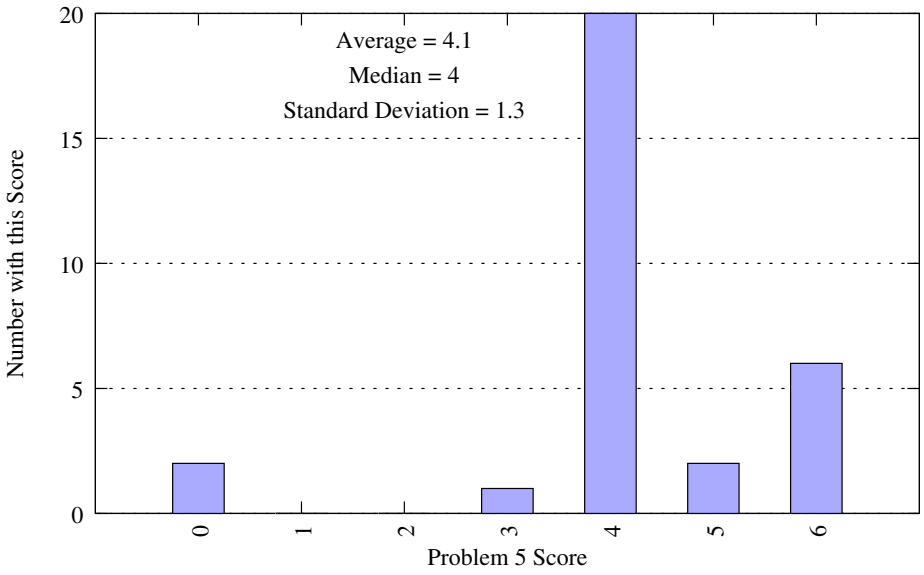

Figure 5: The distribution of grades for problem 5.

Simple Lists

- The grammar was almost LR(0) except for a shift-reduce conflict in the configurating set which contains $\mathbf{P} \rightarrow \mathbf{D}$ .. In addition to this reduce option, the parser also has several shift options - hence the conflict.

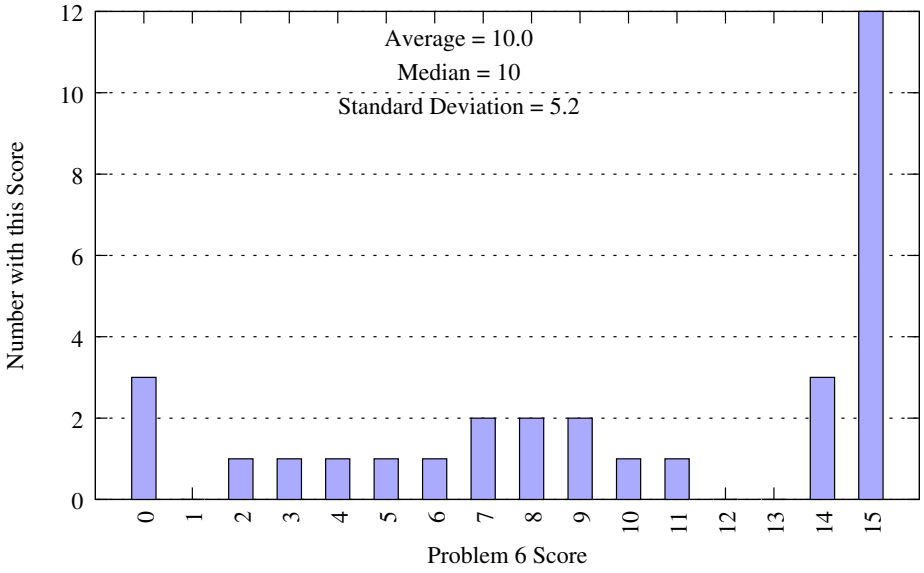

Figure 6: The distribution of grades for problem 6.

Overall Grade Distribution

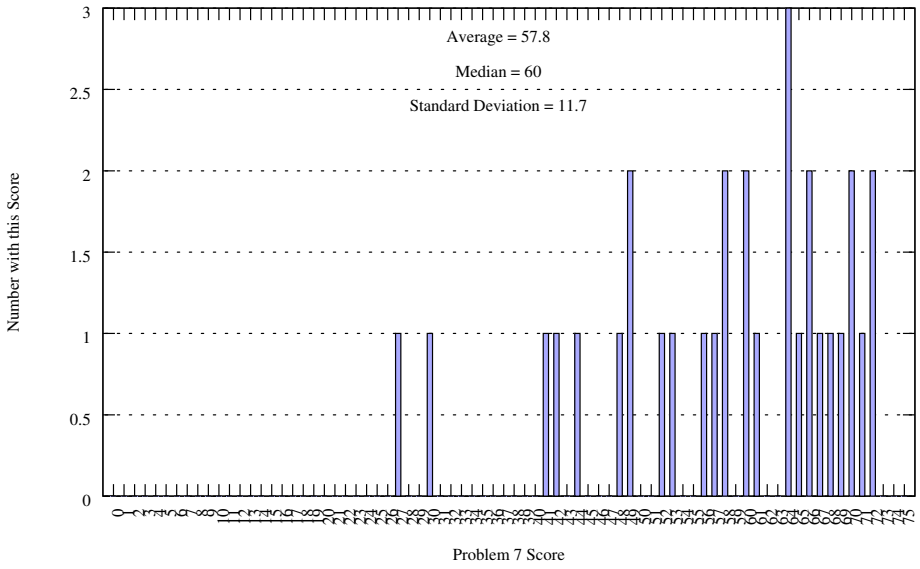

Figure 7: The overall distribution of grades for the midterm.