

Computer Science 81, Fall 2006
Assignment 4
Due Thur. Sept. 28
Context-Free Languages

In the Kozen book, please read lectures 19-22 (pages 129-156).

1. Consider the language L represented by the regular expression $(00+01)^*(11)$.

Using derivatives of regular expressions, construct regular expressions for each of the abstract states of L . Then construct the minimal DFA for L from those.

2. Give a context-free grammar for the set of all regular expressions over alphabet $\{0, 1\}$. There are multiple ways of answering this, so discuss any trade-offs.
3. Kozen, page 333, exercise 69.
4. Kozen, page 334, exercise 71.
5. Kozen, page 334, exercise 72 (c), Chomsky normal form only.