University of Central Florida
School of Computer Science
COT 4210 Spring 2004

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Homework 2

Due date: Feb. 4

Read the slides in http://www.cs.colostate.edu/ whitley/CS301/L3.pdf.

Consider integers written in base 3 with no leading 0s. Let L be the set of such strings which represent even numbers.

1. Construct a DFA that accepts L.
2. Construct a left-linear grammar for L.
3. Write a regular expression for L.
4. Write a regular expression for L^r.
5. Write a grammar for the language (over $\Sigma = \{a, b\}$) consisting of strings not containing the pattern "abba".
6. Write a grammar for the language (over $\Sigma = \{a, b\}$) consisting of palindromes with the same number of a's as b's.