

DUE Monday, 9/26/16

CSCI 48400

Assignment 4

I. Pencil and paper work from the textbook (for Instructor)

Be sure you read each question carefully and understand what is being asked.

Section 4.1: #24 [note - the question asks whether the LANGUAGE Shift(L) is regular)]

Extra problem (not extra credit)

If L_1 is regular and L_1L_2 is regular, is L_2 regular? Prove or disprove.

I. Pencil and paper work from the textbook (for TA)

Section 4.1: #11

Section 4.2: #2

Section 4.3: #4, 5d, 6c, 7b

Also, in Example 4.11: Explain why the author's proof fails if the opponent picks $m = 1$ (a legitimate choice). Then prove why the solution is correct if you pump up instead of pumping down.

II. No problems

III. Problems from JFLAP Activities.pdf file, Section 2.4

2.4 #1a Turn in the JFLAP file for the modified nfa; also a Word doc with a screen snapshot of the JFLAP result.

2.4 Try the JFLAP Regular Pumping Lemma game. Select that the computer goes first, i.e., the computer is the "opponent." Then select the language $L = ww^R$. Walk through the solution given in Example 4.8. This provides a nice visualization of how the solution works. Nothing to turn in.