CS 1622 – Homework 2
Due: Monday, October 16, 2017, at the start of class

Please submit a typewritten document. I'd prefer you draw your DFA on the computer, but if this is a challenge, you may hand draw them neatly on the paper by hand.

1.) For the grammar from homework 1, rewrite it to encode precedence and left factor. Not (!) should be highest precedence, && middle precedence, and || should be lowest.

E → E && E   E → true

E → E || E   E → false

E → ! E

2.) Construct an LL(1) parse table for your grammar from 1. Show the First and Follow sets you generated.

3.) Show the LL(1) parsing action list for the input:

$$\text{!false || true \&\& false}$$

4.) Construct the DFA of LR(0) items for the following grammar:

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A → a B | a D a

B → b C b

C → e | ε

D → d
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5.) Build the SLR parse table for the above grammar. Show the Follow sets you built to determine the reduce actions.