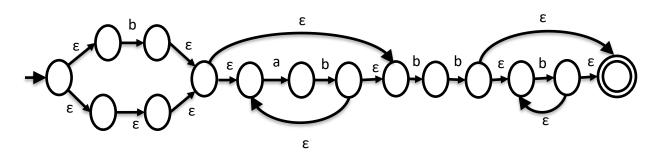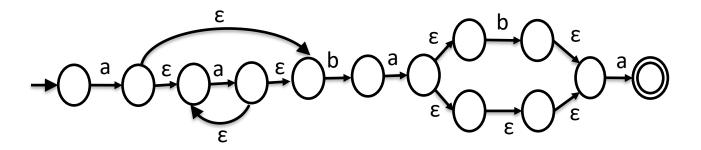# CS 1622 – Homework 2
Due: Thursday, February 8, 2018, at the start of class

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.
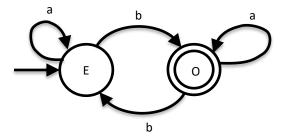
1.) Using the algorithm from lecture, convert the following NFA to a DFA (alphabet is {a,b}):

2.) Using the algorithm from lecture, convert the following NFA to a DFA (alphabet is {a,b}):

3.) Convert the following DFA into a Regular Grammar:

4.) Write a grammar (do not worry about associativity or precedence) for the language of Boolean expressions. Your terminals are the set {T, F, ^, v, !} (for true, false, and, or, not).

5.) Write a grammar for the language of bash input in Linux. Support commands that run programs with or without flags and parameters, and support pipe (|), and redirection (input and output: < >) operators.