CS3133

HW#2

DUE: Tuesday, September 3

1. (5 points) Describe an NFA to accept the set of nonempty strings over $\{a,b,c\}^*$ such that the final character has appeared before.

2. (8 points) For the e-NFA of **Exercise 2.5.2** of our text,

a) Compute the e-closure of each state.

b) Describe all the strings of length 2 or less accepted by the automaton.

c) Describe a string in $\{a,b,c\}^*$ which is not accepted by the automaton, or prove that the language accepted by the automaton is $\{a,b,c\}^*$.

d) Convert the automaton to a DFA.

3. (4 points) Design an e-NFA to accept the set $L_{010\vee1011}$ of binary strings which contain an 010 repeated one or more times or a 1011 repeated one or more times.