CS3133
HW #3

DUE: Thursday, September 14

1. (4 points) Do **Exercise 1** from Chapter 6 of our text.

For Problems 2, 3 and 4, you may describe the DFA with a state diagram or a formal definition. Do not use nondeterminism or incomplete determinism. That is, δ should be a total function from $Q \times \Sigma$.

2. (4 points) Do **Exercise 5** from Chapter 6 of our text.

3. (4 points) Do **Exercise 8** from Chapter 6 of our text.

4. (2 points) Describe a DFA which accepts the set of strings over $\Sigma = \{a, b\}$ which contain an even number of *a*'s.

5. (3 points) Describe an NFA to accept the regular expression $b(a \cup b)^* b$.