Homework 2

Cpt S 317, Spring 2009

Due Date: February 4, 2009

Total points: 41

1. (5 points)

   Exercise 2.3.2.

2. (8 points)

   Exercise 2.3.3.

3. (10 points)

   Give an NFA for the following two languages. Try to take advantage of non-determinism as much as possible.

   a) The set of strings over alphabet $\{0, 1, 2\}$ such that the final digit has appeared before.

   b) The set of strings over alphabet $\{0, 1, 2\}$ such that the final digit has *not* appeared before.

4. (5 points)

   Exercise 2.5.2. Hint: use the construction stated in Section 2.5.5 in the book.

5. a) (5 points)

   Exercise 2.5.3 part a.

   b) (8 points)

   Given an $\epsilon-$NFA for accepting the strings that are either $(01)^+$ or $(010)^*$.