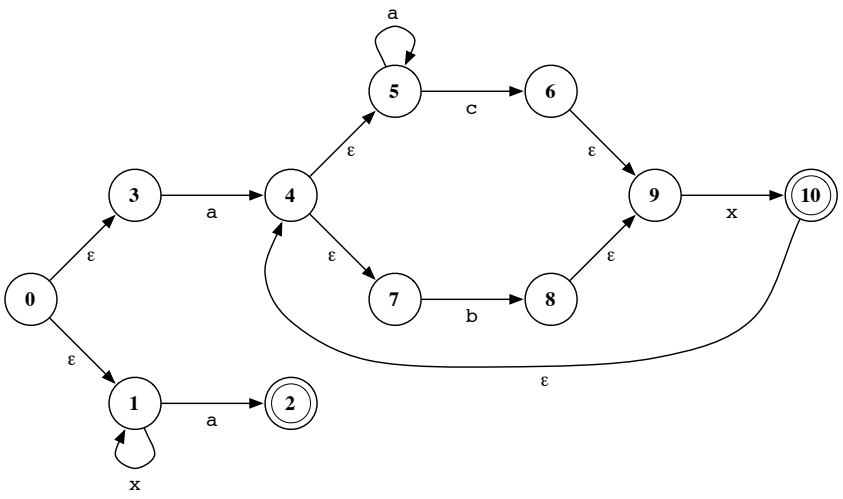
CMSC 22610 Winter 2011	Implementation of Computer Languages I	Homework 2 Due February 3

1. Write regular expressions for the following languages:
   (a) Strings over the alphabet $\{a, b, c\}$ with an odd number of as.
   (b) Strings over the alphabet $\{a, b, c\}$ where the first a precedes any occurrence of b.
   (c) Strings over the alphabet $\{0, 1\}$ that represent powers of two.
2. (a)-(c) Draw the finite state machines (NFAs) for the languages in 1(a)-(c).
3. Convert the following NFA to a DFA using the subset-construction method.



4. Give an RE for that defines the same language as the NFA in Problem 3.