Homework #3
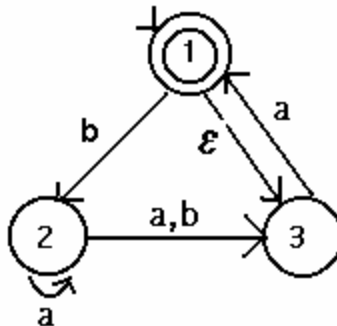
#1. This is the NFA, M, from last Module's homework

Show the regular expression for L(M) (You may work with this or the derived dfa – see Homework 2 solutions)

#2.. Write a regular expression for **s**trings *composed of letters, digits, and underscores that begin with a Letter* (denote it by L), *end with a letter or digit* (denote digit by D*), and contain no consecutive underscores* (denoted underscore by _).
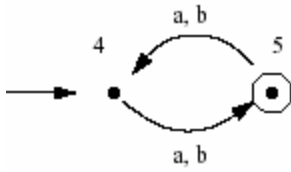
#3. Create regular expressions for:

     a) integers: 1 or more digits

     b) decimals: they begin with 1 or more digits followed by a decimal point, "." , followed by 0 or more digits

c) reals: they consist of an integer or a decimal (see parts a and b) followed by an "E", followed *optionally* by a "+" or "-", followed by 0 or more digits

#4. Consider the following dfas:
M1:
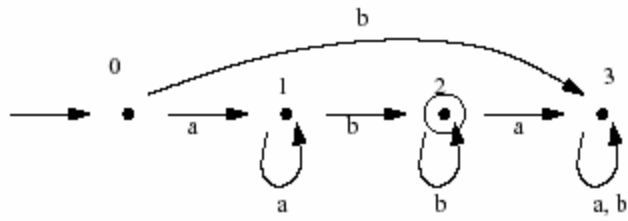
M2:

#5 Prove regular languages are closed under reversal (Hint: look at how closure was showed for complement)