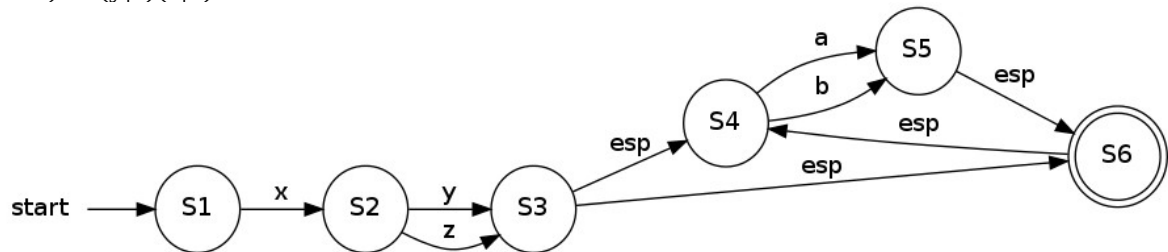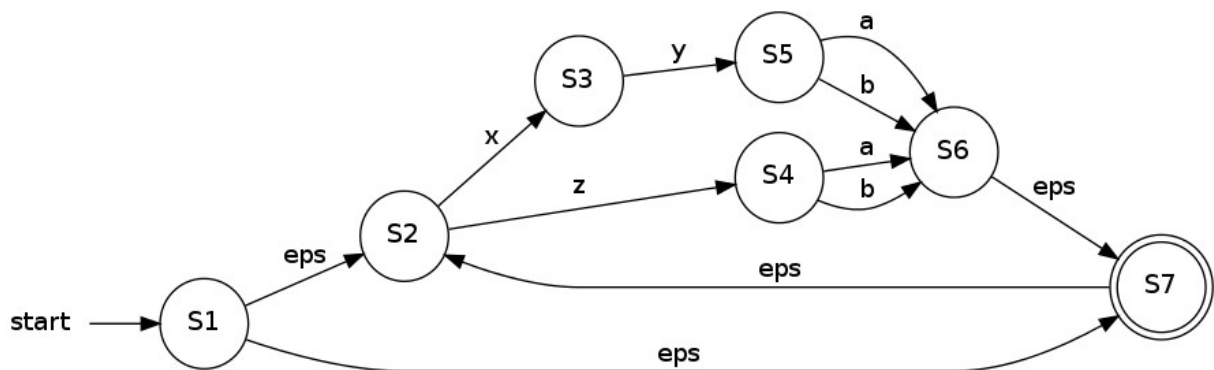Sunny Patel
CS360
Kurt Schmidt
HW1 – FSM

I. Provide an NFA for each fo the following REs, following the rules of construction provided
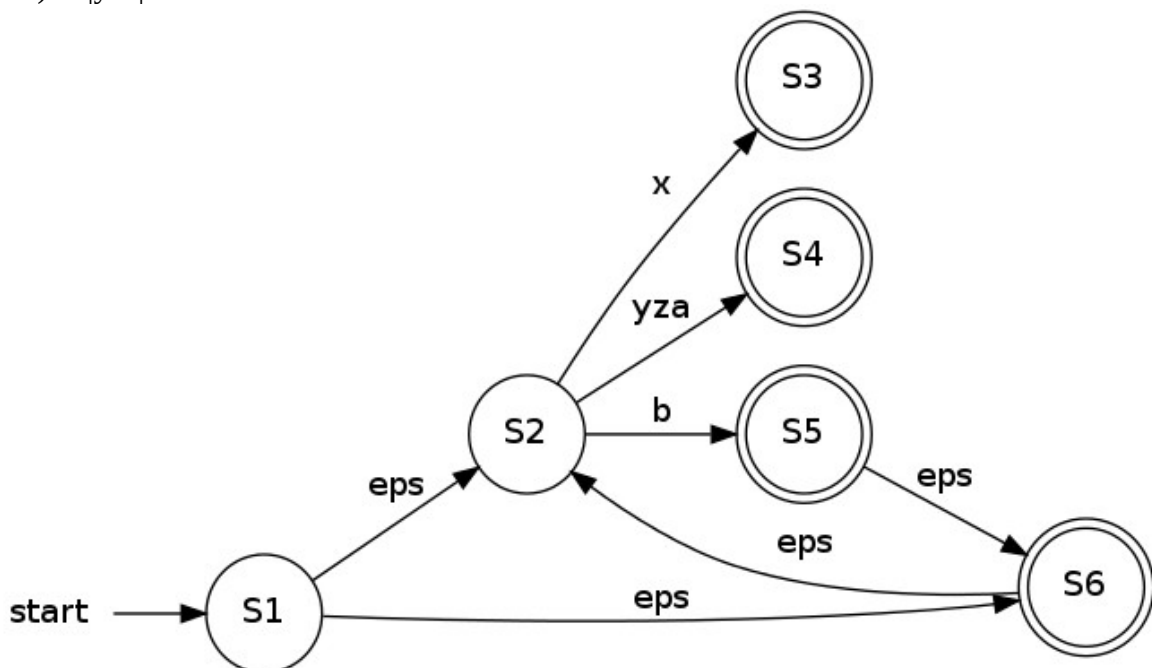   in class, or in the CS270 text.

    a) x(y|z)(a|b)*

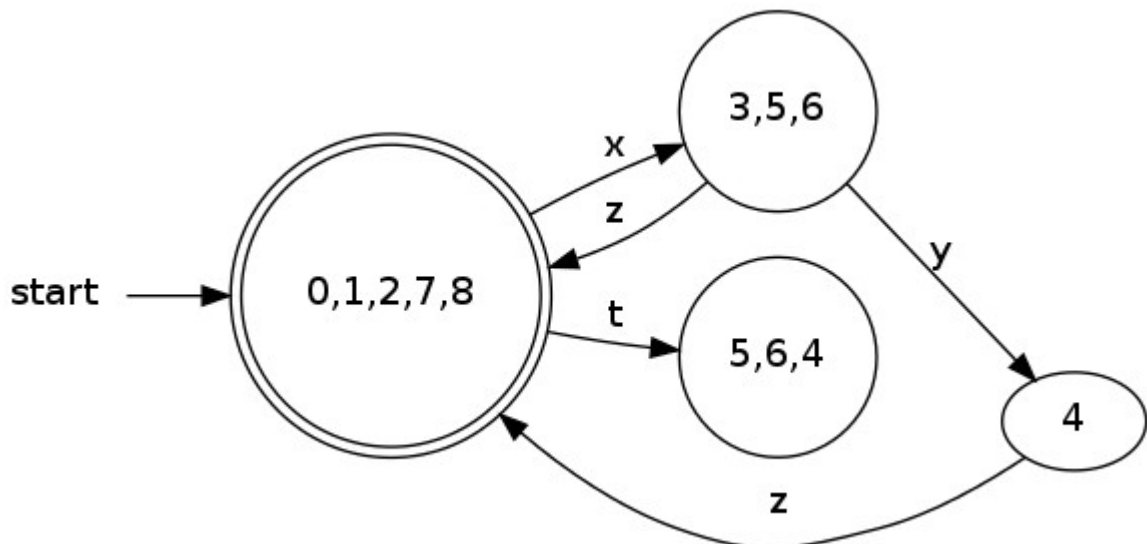   b) ((xy|z)(a|b))*

    c) x|yza|b*

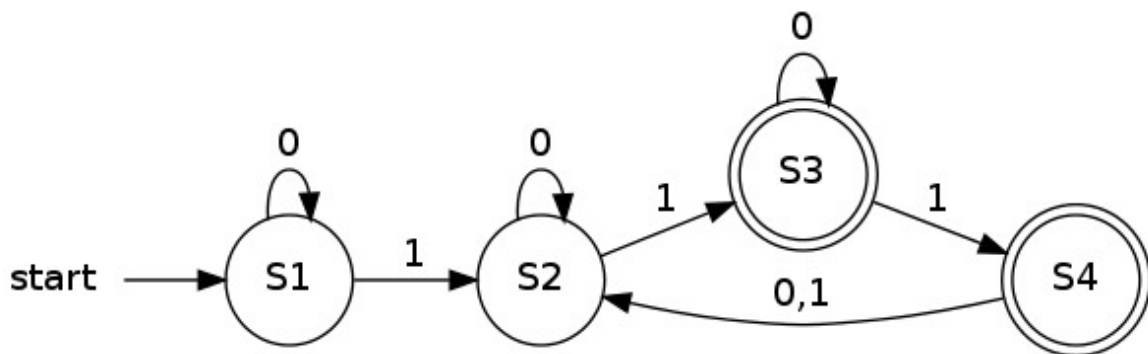II. Given the following FSM, determine if each of the following strings is accepted.
   a) Xxx – accepted
   b) yxyz – accepted
   c) yxxyxxy – accepted
   d) zyy – accepted
   e) zyyx – accepted
   f) zyyxy – accepted
   g) eps - accepted

III. Converted NFA to a DFA
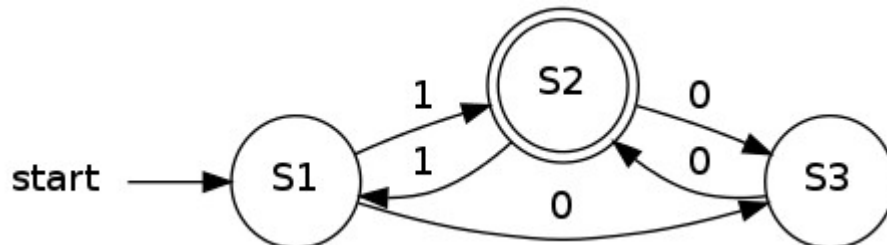

IV. For each of the following, provide a FSM that accepts the language described:
   a) Strings of 1s and 0s, where the number of 1s is a multiple of 3

   b) Strings of 1s and 0s, where the number of 1s is odd, and the number of 0s is even

c) Given a binary number (strings of 1s and 0s), determine if the number is divisible by 3