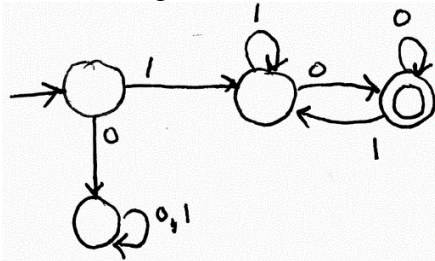


Theory of Computation, CSCI 438 spring 2022
Finite automaton, pg. 31-40, Jan. 12

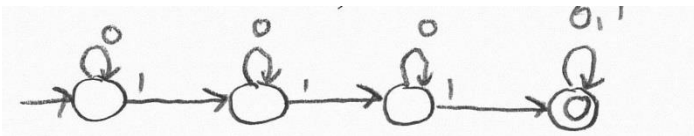
Exercise 1.6 a, b, e, h, j, k, m & n (page 84)

1.6 Alphabet $\Sigma = \{0, 1\}$. Create DFA's for the following:

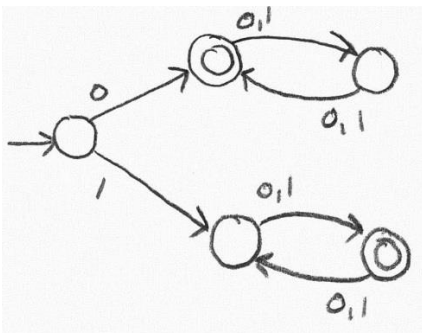
a. $\{w \mid w \text{ begins with a 1 and ends with a 0}\}$



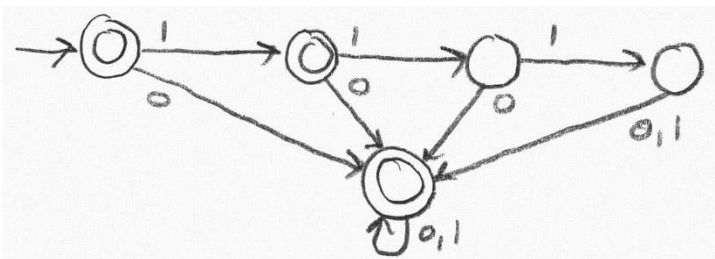
b. $\{w \mid w \text{ contains at least three 1s}\}$



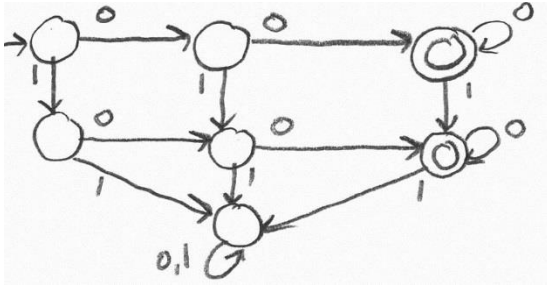
e. $\{w \mid w \text{ starts with 0 and has odd length, or starts with 1 and has even length}\}$



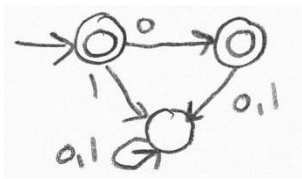
h. $\{w \mid w \text{ is any string except 11 and 111}\}$



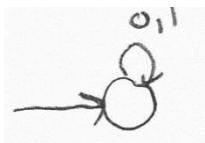
j. $\{w \mid w \text{ contains at least two 0s and at most one 1}\}$



k. $\{\epsilon, 0\}$



m. The empty set



n. All strings except the empty string

