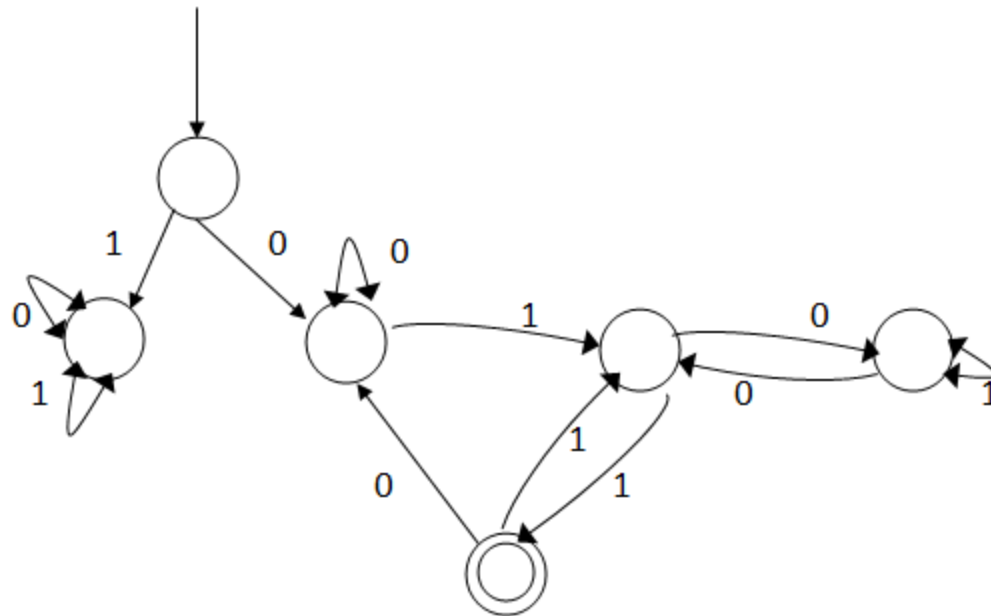


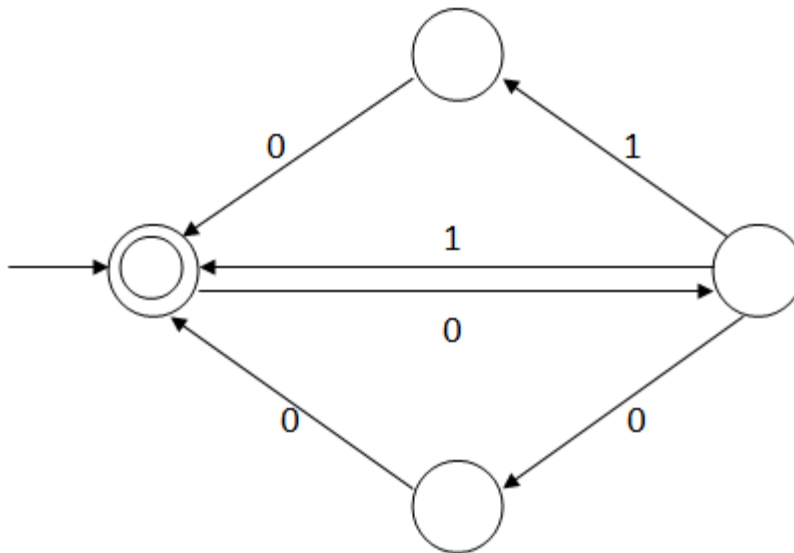
Assignment#3.1

1. Present a transition diagram for a DFA that recognizes the set of binary strings that starts with a 1 and, when interpreted as entering the DFA least to most significant digit, each represents a binary number that is divisible by six. Thus, 110, 1100 and 1000010 are in the language, but 101, 1001 and 11001 are not.



Assignment # 3.2a

a.) Present a transition diagram for an NFA for the language associated with the regular expression $(000 + 010 + 01)^*$. Your NFA must have no more than four states.



Assignment # 3.2b

Assignment

b.) Use the standard conversion technique (subsets of states) to convert the NFA from (a) to an equivalent DFA.

Be sure to not include unreachable states.

Hint: This DFA should have no more than six states.

