Automata, Computability, and Complexity

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SHEET #3:

Exercise 1 :

The language described by M1 is:

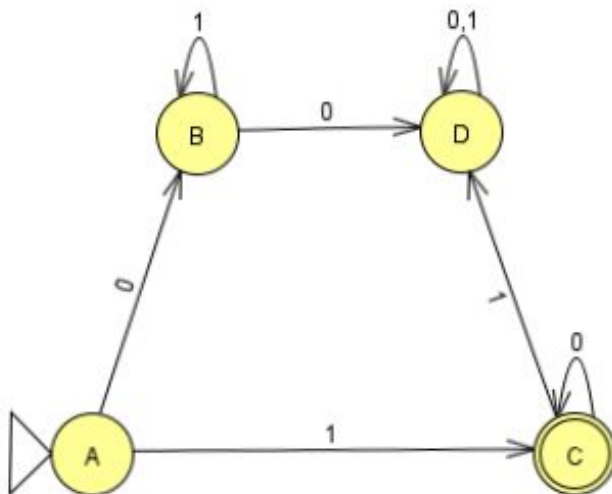L(M1) = {w | w is all string starting with one or starting and ending with 0 }

L(M1) is described by the following RE: 1Σ* ∪ 01*0

The language described by M2 is:

L(M2) = {w | w is either the empty string or a string starting and ending with 0}
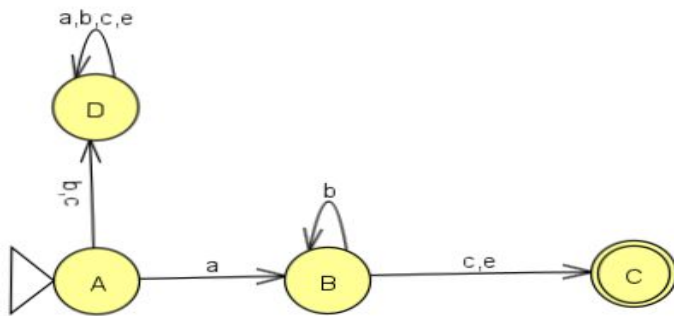
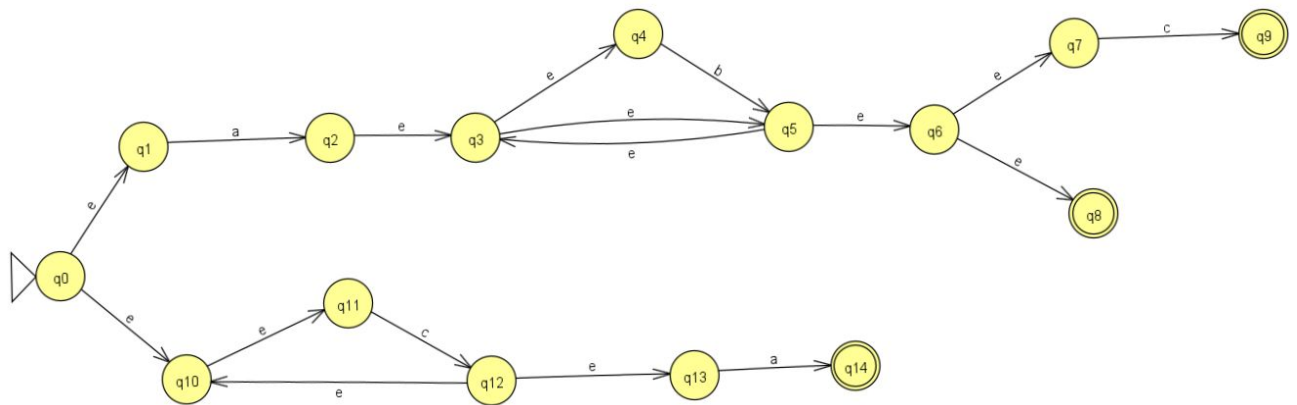L(M2) is described by the following RE: (01*(0 U ∅)) U ∅)

Exercise 2 :

This DFA accepts languages described by the following RE : (10*)

Exercise 3 :

a)

b)

Exercise 4 :