

Section 5

Question 2.

Answer 2.

(a) All strings that do not end with aa.

$$\epsilon + a + b + (ab)^* (ab + ba + bb)$$

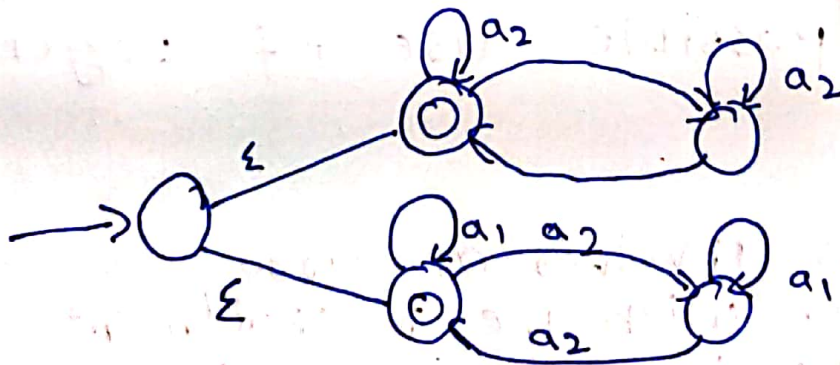
(b) All strings that contains an even number of b

$$a^* (ba^* ba^*)^*$$

(c) All strings which do not contain the substring ba

$$a^* b^*$$

Fig shown an NFA for the language L_2



DFA

DFA stands for Deterministic Finite automata

For each symbolic representation of the alphabet there is only one state transition in DFA

DFA cannot use empty string transition

DFA can be understood as one machine

In DFA, the next possible state is distinctly set

DFA requires more space

NFA

NFA stands for non-deterministic finite automata

No need to specify how does the NFA react according to some symbol

NFA can use empty string transition.

NFA can be understood as multiple little machines computing at the same time.

In NFA, each pair of the state and input symbol can have many possible next state

NFA requires less space than DFA