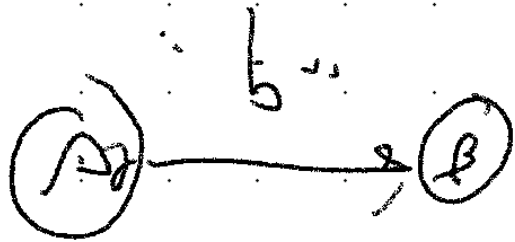


$Q$  states  $A, B, C$

$\Sigma$  alphabet  $'a', 'b', 'c'$

$\Delta$  transition  $Q \times \Sigma \rightarrow Q$

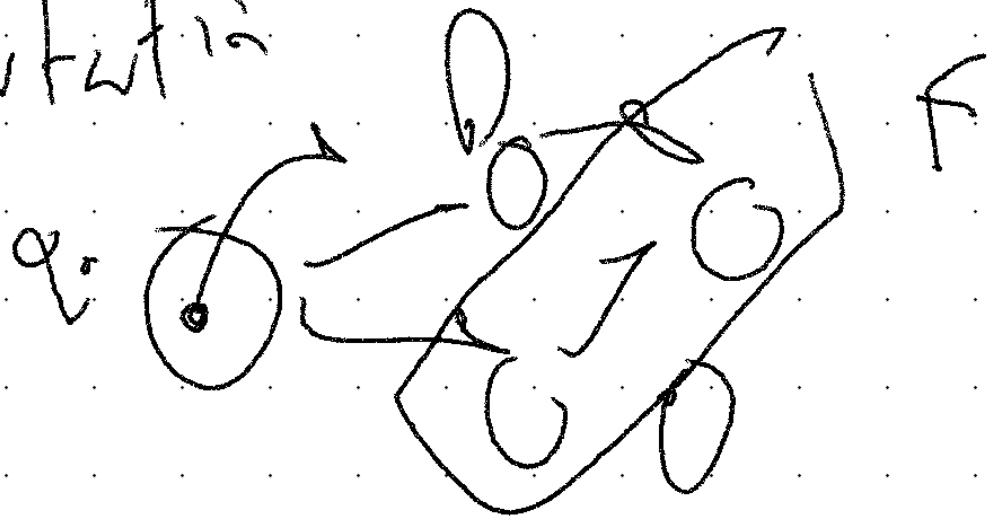


$q_0 \in Q$

$F \subseteq Q$

accept states

Computation:



the "input" is a string over  $\Sigma$

$\Sigma^*$  ← notation





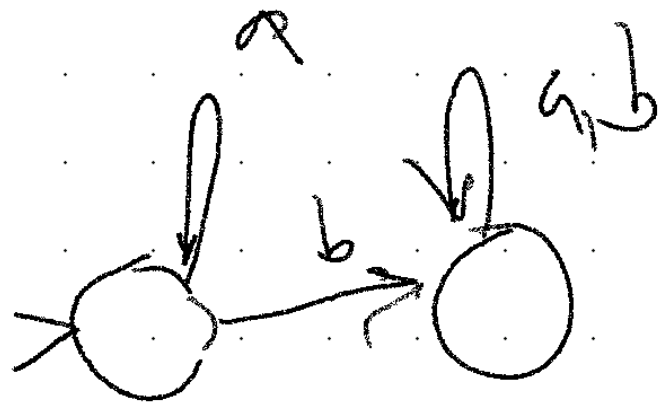
← {a, b}

machine  
accepts

aba a b b a

$L \subseteq \Sigma^*$

language



$a, b \notin \Sigma$   
 $a \in \Sigma$   
 $\epsilon \in \Sigma$

$\Sigma = \emptyset$

$\Sigma = \{a, b\}$

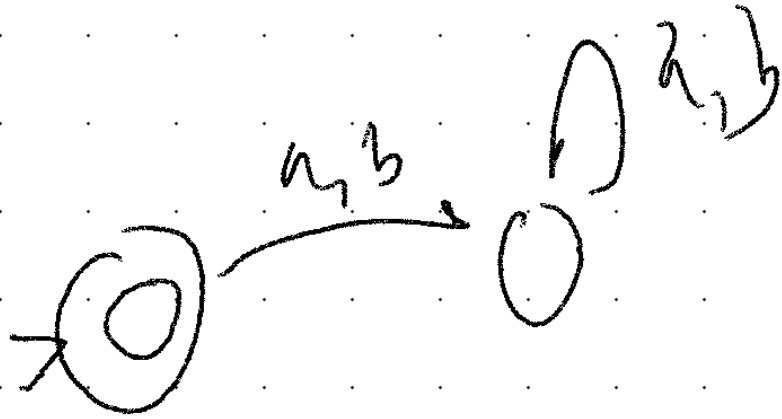
$Q = \{A, B\}$

$\Sigma = \{a, b\}$

$q_0 = A$

$\emptyset \in F$

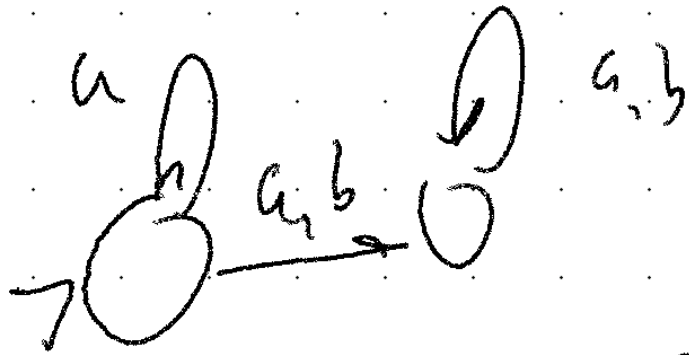
$F = \{A\}$



$$L = \{ \varepsilon \}$$

$\emptyset$  empty set

$\varepsilon$  empty string



because  $f = \emptyset$ ,  $\mathcal{L} = \emptyset$



because  $f = \mathcal{Q}$ ,  $\mathcal{L} = \mathcal{L}^*$