Deterministic Finite Automata DFAs.

$(Q, \Sigma, \delta, q_0, F)$

Q: set of "states"

Σ: an alphabet

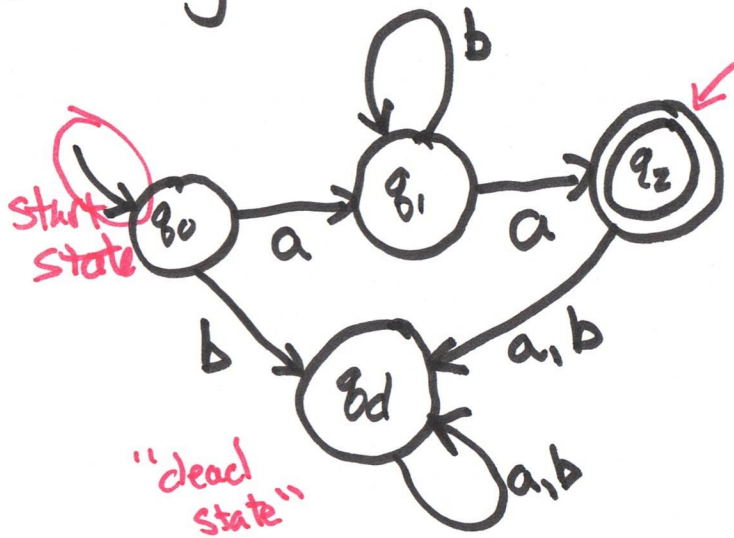
δ: $Q \times \Sigma \to Q$

q_0: start state $q_0 \in Q$

F: final states $F \subseteq Q$

δ	a	b
q_0	q_1	q_d
q_1	q_2	q_1
q_2	q_d	q_d
q_d	q_d	q_d

transition diagram

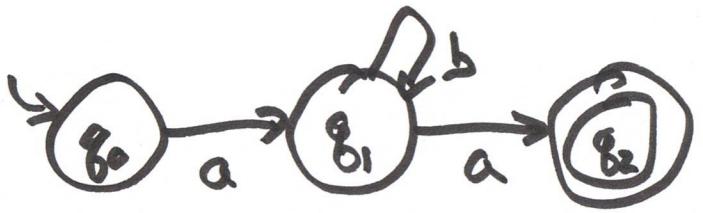


final state (double circles)

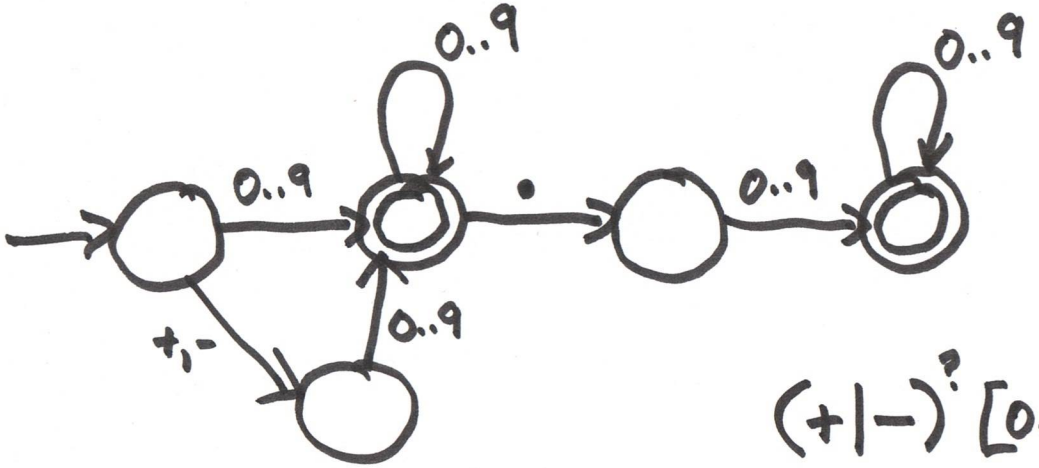
ab^*a

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

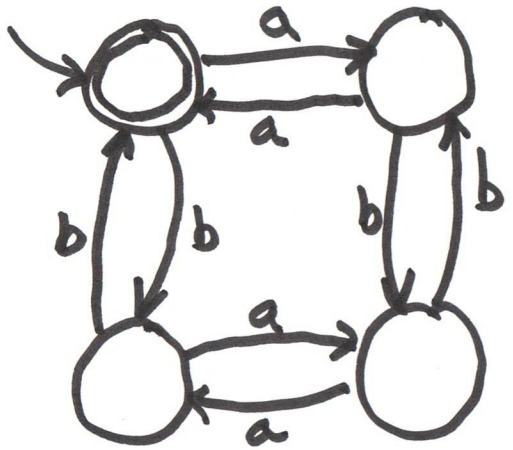
δ: transition function



Language of DFA
= set of all accepted strings



$(+|-)^? [0..9]^+ (. [0..9]^+)^?$



even # of a's, even # of b's.