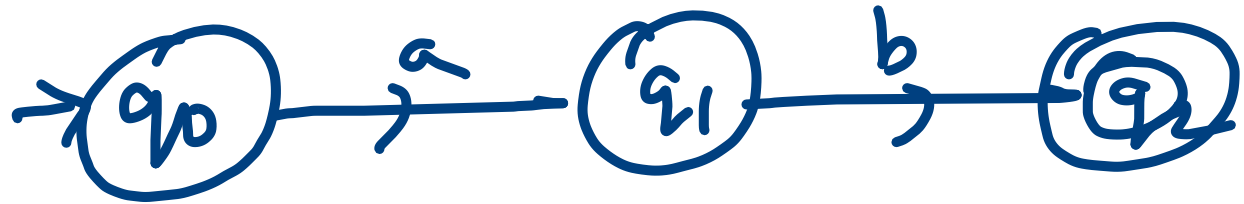


3 simple tricks to create DFA

1) Create DFA that accepts a string ab $\Sigma_{a,b}$

- a) Create a generalized automata
- b) make sure every state has a single outgoing transition with a, b
- c) make sure right answers get accepted
" " wrong " must not get accepted

Created a generalized automata



Every state has single outgoing transition on either a, b

$q_0(a) \rightarrow \checkmark$	$q_0(b) \times$
$q_1(b) - \checkmark$	$q_1(a) \times$

$q_2 \times \times a, b$

Right answers: acceptance

ab, aab, bab, bbab, abaa

Wrong Answers must
not get accepted

aa, bb, ab, bbb, aaa → must not
get accepted

baab
bab

Create DFA that accepts

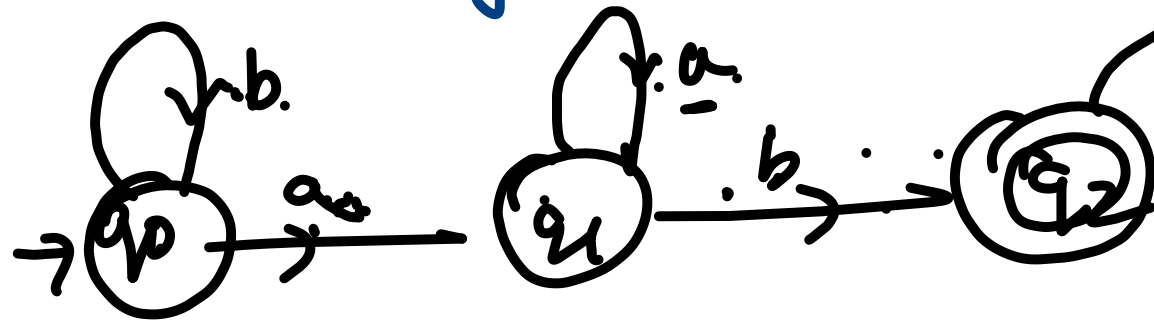
String ab

ab, bab, bbab

$q_0 \rightarrow a, b$

$q_1 \rightarrow b$

$q_2 \rightarrow$



Right Answer.

loop :-

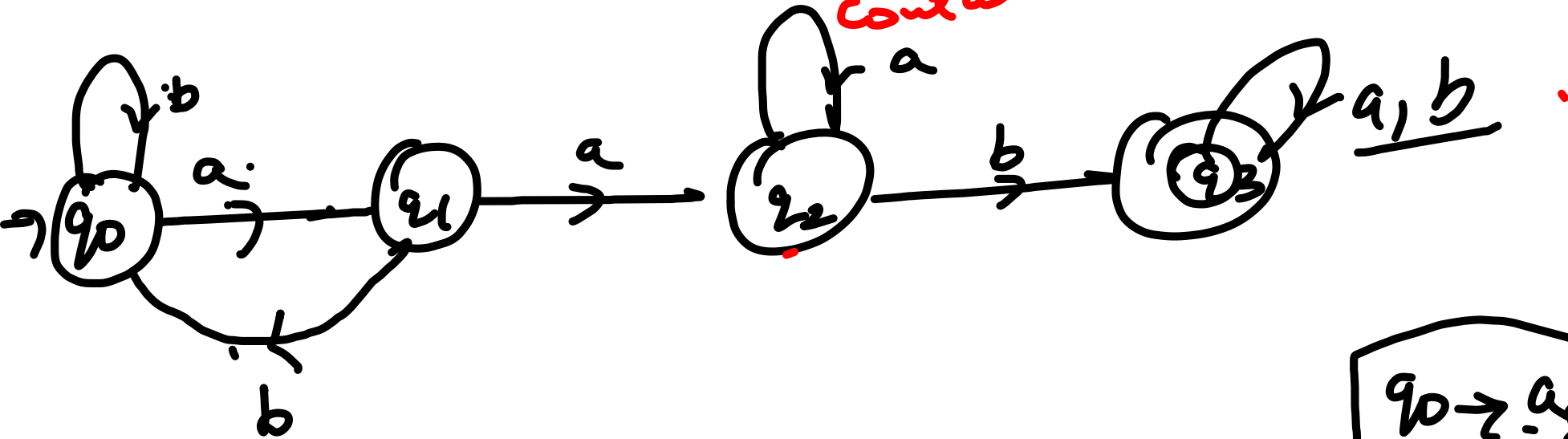
Any no of a's
" " " b's

Combination of a's & b's

ab a a a

abbbab

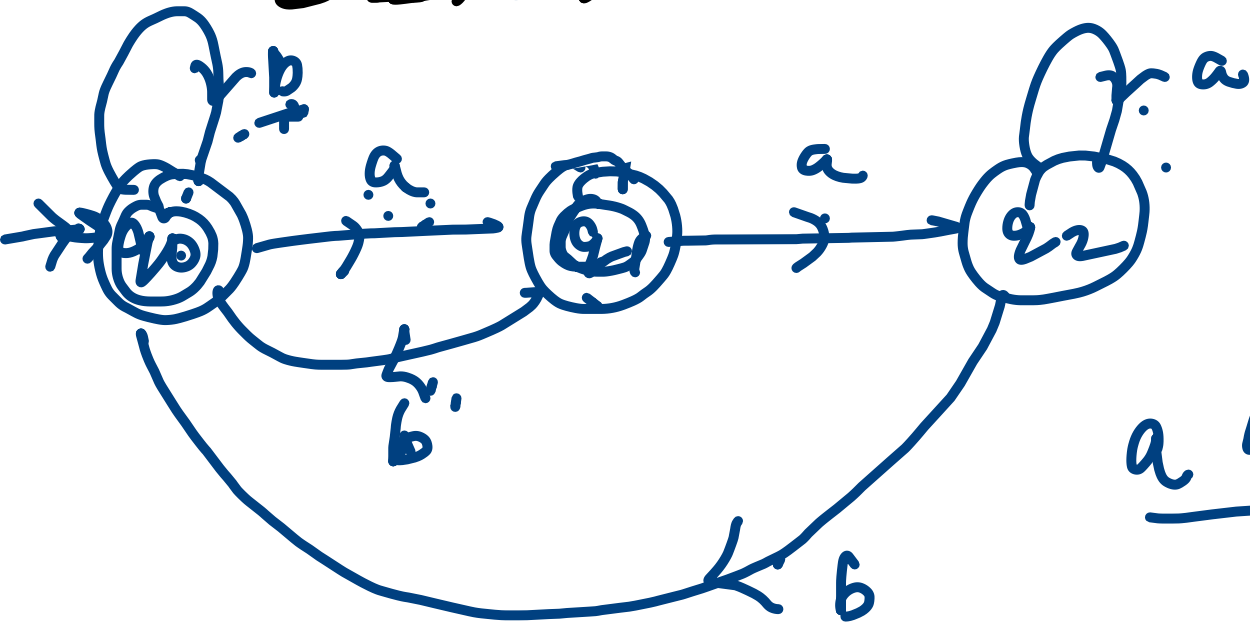
Create DFA that accepts aab



$q_0 \rightarrow a, b$
 $q_1 \rightarrow a, b$
 $q_2 \rightarrow b, a$
 $q_3 \rightarrow ? a, b$

Q3 → Create DFA that
 doesn't end with aa
 $\Sigma \underline{\underline{a}}, \underline{\underline{b}}, \underline{\underline{ab}}, \underline{\underline{ba}}, \underline{\underline{abb}}, \underline{\underline{bab}}$

abab aab



abab

aaaba

$q_0 \rightarrow \underline{a, b}$

$q_1 \rightarrow \underline{a, b}$

$q_2 \rightarrow \underline{a, b}$