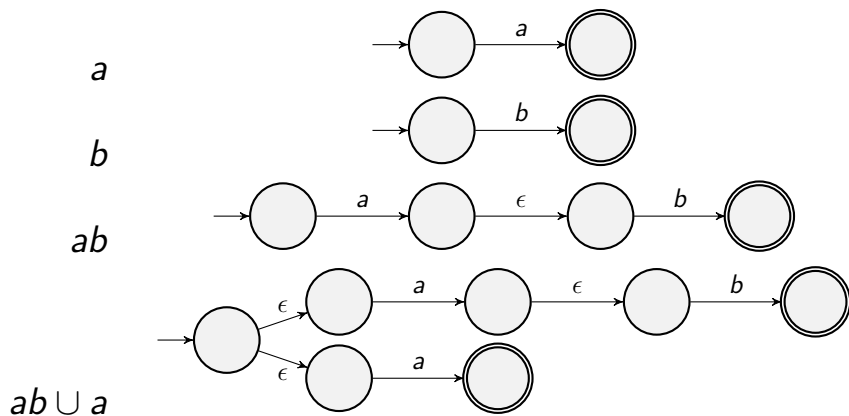
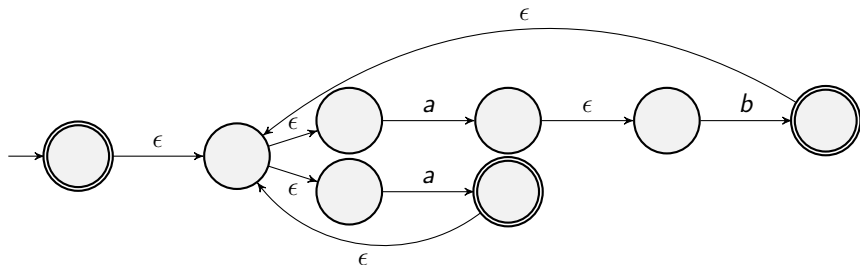


Example: Fig 1.57 $(ab \cup a)^* \mid$



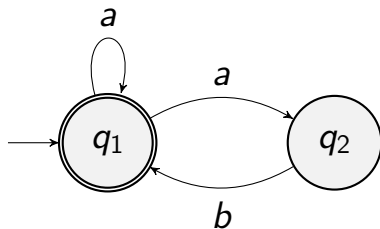
Example: Fig 1.57 $(ab \cup a)^*$ II

$(ab \cup a)^*$



- Such a construction usually does not give an NFA with the smallest number of states
- This example \Rightarrow can be by 2 states

Example: Fig 1.57 $(ab \cup a)^*$ III

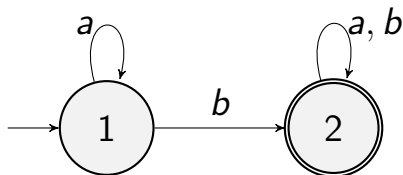


$(\{q_1, q_2\}, \{a, b\}, \delta, q_1, \{q_1\})$

	a	b	ϵ
q_1	$\{q_1, q_2\}$	\emptyset	\emptyset
q_2	\emptyset	$\{q_1\}$	\emptyset

Regular \Rightarrow a regular expression: a simple example I

- Given an NFA, how can we convert it to a regular expression?
- Example:



- Quickly we see that this corresponds to

$$a^*b(a \cup b)^*$$

Regular \Rightarrow a regular expression: a simple example II

- However, in other situations we may not easily see what the regular expression is