

More About NFAs and DFAs

CS 712

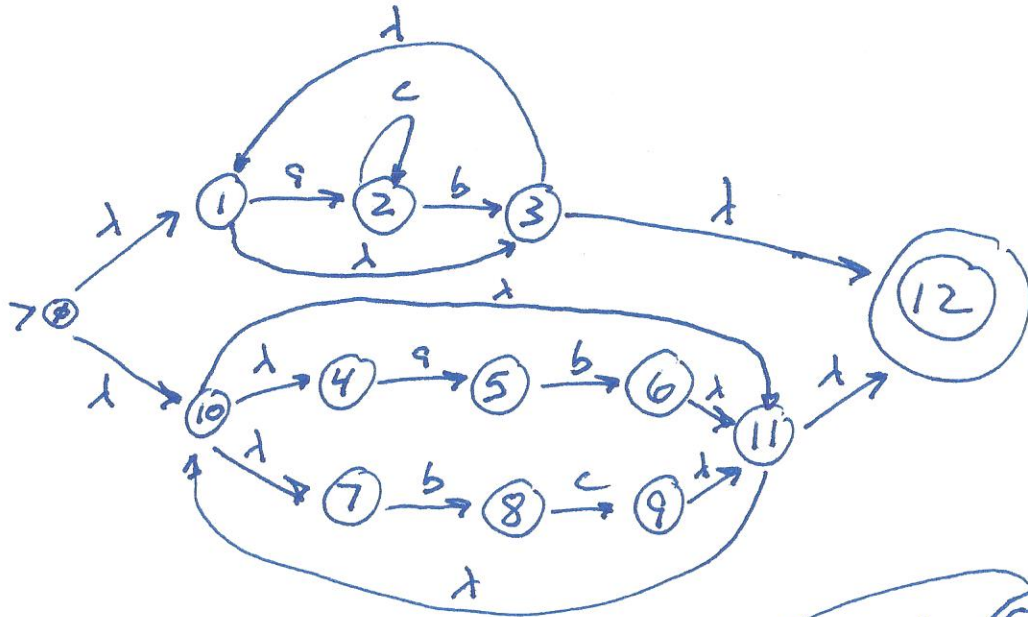
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Theorem Any NFA can be transformed to an equivalent DFA.

Proof By subset construction.

Key Ideas  $\lambda$ -closure of a state  $s$  is  $s$  plus all states that can be reached from  $s$  by using only  $\lambda$  arcs.

example  $(ac^*b)^* | ((ab)|(bc))^*$



ac**cc**ba**b** ✓  
 ab**a**bb**c** ✓

