

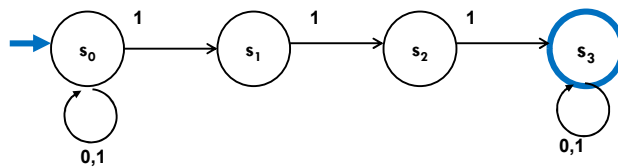
Nondeterministic Finite Automata

An NFA:

Still has exactly one start state and any number of final states.

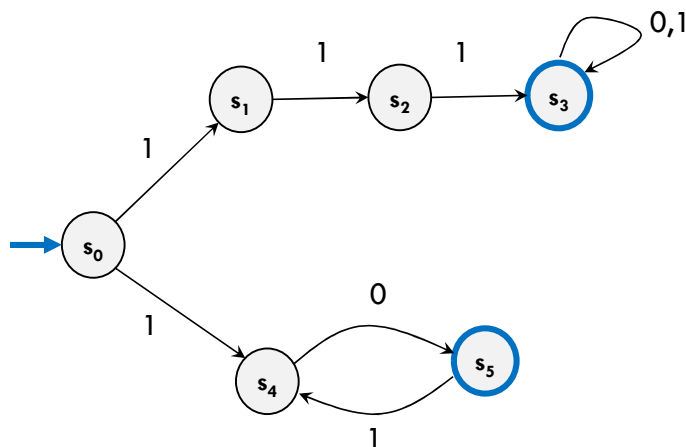
The NFA accepts x if there is some path from a start state to a final state labeled with x .

From a state, you can have 0,1, or many outgoing arrows labeled with a single character. You can choose any of them to build the required path.

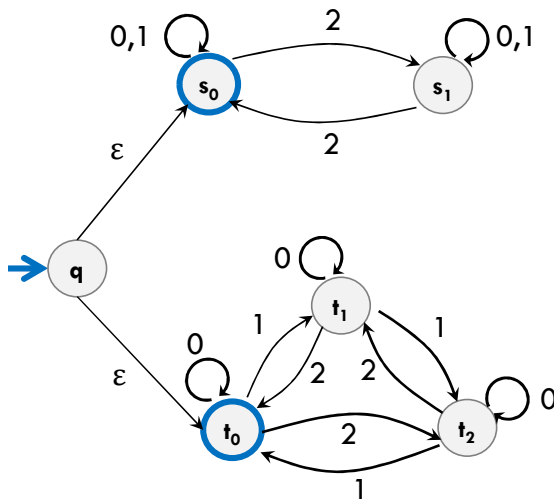


NFA practice

What is the language of this NFA?



What about those ϵ -transitions?



NFA that recognizes “binary strings with a 1 in the third position from the end”

“Perfect Guesser”: The NFA has input x , and whenever there is a choice of what to do, it **magically** guesses a transition that will eventually lead to acceptance (if one exists)

Perfect guesser view makes this easier.

Design an NFA for the language in the title.