AUTOMATA PROGRAMMING

NFA

1-

from automata.fa.nfa import NFA

nfa = NFA(

states={'q0', 'q1', 'q2'},

input\_symbols={'0', '1'},

transitions={

'q0': {'0': {'q1','q0'}, '1': {'q0'}},

'q1': {'1': {'q2'}},

'q2': {}

},

initial\_state='q0',

final\_states={'q2'}

)

for i in range(1,4):

num = input("Enter the string :")

if(nfa.accepts\_input(num)):

print("Accepted")

else:

print("Rejected")

2-

from automata.fa.nfa import NFA

nfa = NFA(

states={'q0', 'q1', 'q2', 'q3', 'q4'},

input\_symbols={'a', 'b'},

transitions={

'q0': {'a': {'q1','q2'}},

'q1': {'a': {'q2','q4'}, 'b': {'q4'}},

'q2': {'a': {'q2'}, 'b': {'q3'}},

'q3': {},

'q4': {}

},

initial\_state='q0',

final\_states={'q1','q3'}

)

for i in range(1,6):

num = input("Enter the string :")

if(nfa.accepts\_input(num)):

print("Accepted")

else:

print("Rejected")

3-

from automata.fa.nfa import NFA

nfa = NFA(

states={'q0', 'q1', 'q2'},

input\_symbols={'a', 'b'},

transitions={

'q0': {'a': {'q1'}},

'q1': {'b': {'q0', 'q2'}},

'q2': {}

},

initial\_state='q0',

final\_states={'q2'}

)

for i in range(1,8):

num = input("Enter the string :")

if(nfa.accepts\_input(num)):

print("Accepted")

else:

print("Rejected")



