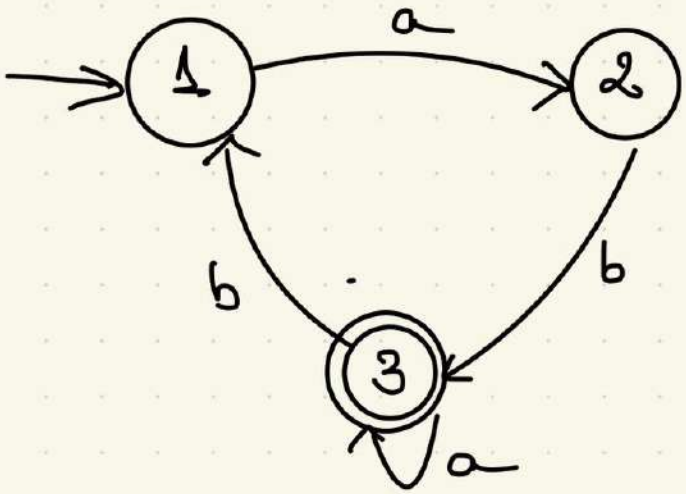
LFA – lab 1 – 01.03.2024

LAB – 30% notă, to minim 5

3 proiecte (III, V, VII)



$A = (Q, \Sigma, \delta, q_0, F)$

$\delta : Q \times \Sigma \longrightarrow Q$

exemple
$\delta(1, a) = 2$
$\delta(3, a) = 3$

$\Sigma^* = (\Sigma, \cdot) = \{\lambda, a, b, aa, ab, ba, \dots\}$

$\tilde{\delta} : Q \times \Sigma^* \to Q$

$\tilde{\delta} : Q \times \Sigma^* \rightarrow Q$

$\tilde{\delta}(q, a) = \delta(q, a)$

$\tilde{\delta}(a, aw) = \tilde{\delta}(\delta(q, a), w)$

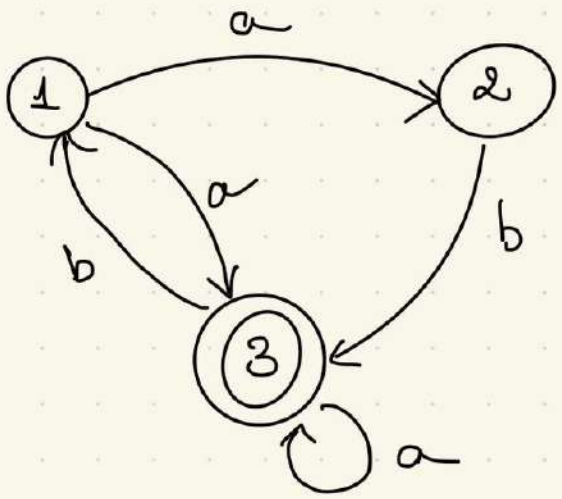
$aw = \text{"moore"} \Rightarrow \begin{cases} a = m \\ w = oore \end{cases}$

```
def d_tilde (q, w):
    if len(w) == 1 :
        ret delta(q, w[0])
    else:
        ret d_tilda(delta(q, w[0]), w[1:])
```

```
def delta (q, a):
    if q == 1 && a == 'a' :
        ret 2
    elif q == 2 && a == 'b' :
        ret 3
```

$L(A) = \{ w \in \Sigma^* \mid \tilde{\delta}(q_0, w) \in F \}$

NFA - pt nota 10



$\delta : Q \times \Sigma \to 2^Q$

$\delta(2,b) = \{3\}$

$\delta(1,a) = \{2,3\}$

$\tilde{\delta} : Q \times \Sigma^* \to 2^Q$

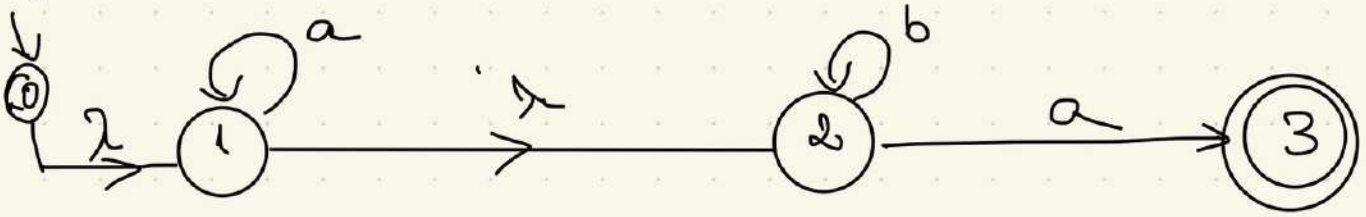
$\tilde{\delta}(q,a) = \delta(q,a)$

$\tilde{\delta}(q,aw) = \bigcup_{r \in \delta(q,a)} \tilde{\delta}(r,w)$

2^Q mt tuturor multimilor

$2^Q = \{\emptyset, \{1\},\{2\},\{3\},\{1,2\},\{1,3\},\{2,3\},Q\}$

pt nota 11 λNFA

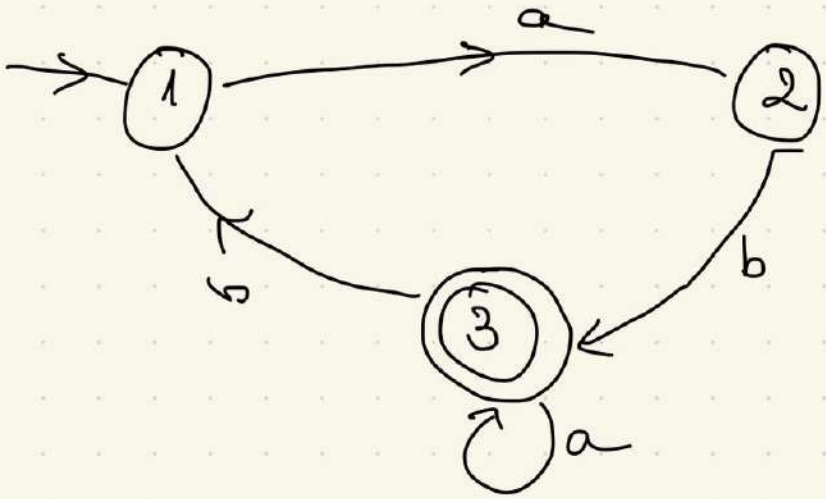


<1> : 1, 2

↳ lambda inchiderea unei stări

$\delta : Q \times (\Sigma \cup \{\lambda\}) \rightarrow 2^Q$

$\delta(q, aw) =$



f	a	b
1	2	
2		3
3	3	1

DFA : ma[1][1'a'] = 2

int ma[50][256]

NFA : ma[1][1'a'][2] = 1

d = { }

d[1] = { }

d[1]['a'] = [2]

$(1, abaa) \vdash^{*} (3, \lambda)$

(1, abaa)	(2, baa)

while queue:

q, w = queue.pop(0)

r = delta(q, w[0])

queue.push((r, w[1:]))

pt NFA

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- - -

for r in delta(q, w[0])

queue.push((r, w[1:]))