

Documentation – Finite Automata

$$M = (Q, \Sigma, P, q_0, F)$$

Q – set of states

Σ - alphabet P –

transitions q_0 –

initial state

F – set of final states

file.txt

```
1 q0 q1 q2
2 1 0 2
3 6
4 q0 q1 0
5 q1 q0 4
6 q2 q1 3
7 q1 q2 2
8 q2 q0 5
9 q0 q2 1
```

BNF

$\langle \text{set_of_states} \rangle ::= \langle \text{state} \rangle \langle \text{set_of_states} \rangle \mid \langle \text{state} \rangle$

$\langle \text{state} \rangle ::= "q0" \mid "q1" \mid "q2"$

$\langle \text{alphabet} \rangle ::= \langle \text{alphabet_el} \rangle \langle \text{alphabet} \rangle \mid$

$\langle \text{alphabet_el} \rangle \langle \text{alphabet_el} \rangle ::= "0" \mid \dots \mid "5"$

$\langle \text{begin_end_transitions} \rangle ::= \langle \text{begin_index_transition} \rangle \langle \text{value_index} \rangle \langle \text{end_index_transition} \rangle$

$\langle \text{transition_line} \rangle ::= \langle \text{begin_state} \rangle \langle \text{destination_state} \rangle \langle \text{value} \rangle$

$\langle \text{transitions} \rangle ::= \langle \text{transition_line} \rangle \backslash \text{n} \langle \text{transitions} \rangle \mid \langle \text{transition_line} \rangle$