

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

States

$$Q=\{q_0, q_1, q_2, q_3, q_4, q_5, q_6, q_7\}$$

$$F=\{q_6\}$$

q_0 : START STATE

q_1 : “y” is entered now (ignore case)

q_2 : “open” is entered now (ignore case)

q_3 : “unlock” has been entered before (ignore case)

q_4 : “c” has been entered before (ignore case)

q_5 : “m” has been entered before (ignore case)

q_6 : “w” \vee “up” \vee “s” \vee “down” \vee “a” \vee “left” \vee “d” \vee “right”
has been entered before (ignore case)

q_7 : FAILED STATE

Alphabet

$$\Sigma=\{1,0\}$$

Transition function

δ : transition function

Language

$$L(D)=\{w \in \{0,1\}^* \mid w \text{ ends in } 111111\}$$

