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

 $a{=}w{\vee}up{\vee}s{\vee}down{\vee}a{\vee}left{\vee}d{\vee}right\\ For\,y,unlock,a,c,m,open,exit:ignore\,case$ 

 $L(D) = \{ \text{y, unlock, \{mandatory a, c, m and optional y, unlock in any order with optional repetition} \}, \text{ open} \} \\ Q = \{ q_0, q_1, q_2, q_3, q_4, q_5, q_6, q_7, q_8, q_9, q_{10}, q_{11}, q_{12}, q_{13}, q_{14}, q_{15}, q_{16}, q_{17}, q_{18}, q_{19}, q_{20} \}$ 

 $\begin{array}{l} \Sigma {=} \{y, unlock, a, c, m, open, exit\} \\ \delta: Transition Function \\ F {=} \{q_{18}\} \end{array}$ 

