## Secret door logic (boolean secretDoorUnlocked)

## General description

The secret door logic is triggered when <boolean> secretDoorUnlocked is true and will replace the map with an empty map containing a dutch flag. It will also replace the green player symbol with a blue one.

The <boolean> secretDoorUnlocked is true if the player supplies the following input in order:

- 1. y (caseless check)
- 2. Nothing OR anything other than exit (caseless check)
- 3. unlock (caseless check)
- 4. Nothing OR anything other than exit (caseless check)
- 5. Mandatory a, c AND m plus optional y AND/OR unlock in any order (caseless check, repetition is possible)
- 6. Nothing OR anything other than exit (caseless check)
- 7. open (caseless check)

After point 7, the <boolean> secretDoorUnlocked is true and the secret door logic triggers.

## **Automaton**

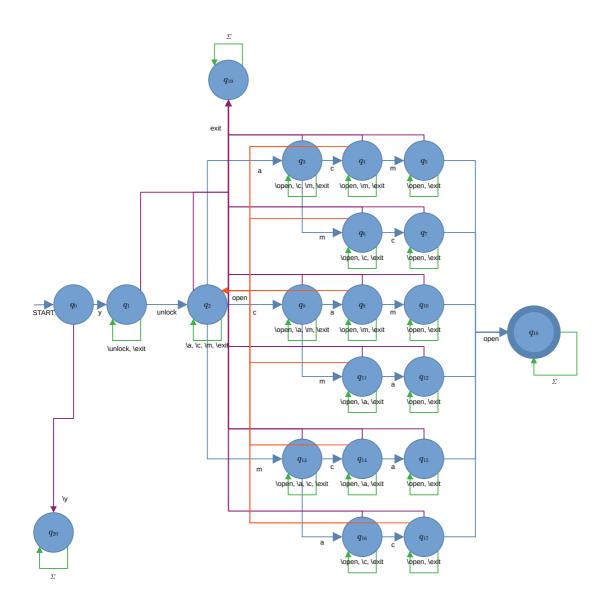
$$D = (Q, \Sigma, \delta, q_0, F)$$

 $a{=}w, up, s, down, a, left, d, right$ 

 $\Sigma {=} \{y, unlock, a, c, m, open, exit\}$  (caseless check)  $\delta {:} Transition Function$ 

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

 $F = \{q_{18}\}$ 



Table

State	у	unlock	a	С	m	open	exit
$^{ ightarrow}q_0$	$q_1$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$
$q_1$	$q_1$	$q_2$	$q_1$	$q_1$	$q_1$	$q_1$	$q_{19}$
$q_2$	$q_2$	$q_2$	$q_3$	$q_8$	$q_{13}$	$q_2$	$q_{19}$
$q_3$	$q_3$	$q_3$	$q_3$	$q_4$	$q_6$	$q_2$	$q_{19}$
$q_4$	$q_4$	$q_4$	$q_4$	$q_4$	$q_5$	$q_2$	$q_{19}$
$q_5$	$q_5$	$q_5$	$q_5$	$q_5$	$q_5$	$q_{18}$	$q_{19}$
$q_6$	$q_6$	$q_6$	$q_6$	$q_7$	$q_6$	$q_2$	$q_{19}$
$\overline{q_7}$	$q_7$	$q_7$	$q_7$	$q_7$	$q_7$	$q_{18}$	$q_{19}$
$q_8$	$q_8$	$q_8$	$q_9$	$q_8$	$q_{11}$	$q_2$	$q_{19}$
$q_9$	$q_9$	$q_9$	$q_9$	$q_9$	$q_{10}$	$q_2$	$q_{19}$
$q_{10}$	$q_{10}$	$q_{10}$	$q_{10}$	$q_{10}$	$q_{10}$	$q_{18}$	$q_{19}$
$q_{11}$	$q_{11}$	$q_{11}$	$q_{12}$	$q_{11}$	$q_{11}$	$q_2$	$q_{19}$
$q_{12}$	$q_{12}$	$q_{12}$	$q_{12}$	$q_{12}$	$q_{12}$	$q_{18}$	$q_{19}$
$q_{13}$	$q_{13}$	$q_{13}$	$q_{16}$	$q_{14}$	$q_{13}$	$q_1$	$q_{19}$
$q_{14}$	$q_{14}$	$q_{14}$	$q_{15}$	$q_{14}$	$q_{14}$	$q_2$	$q_{19}$
$q_{15}$	$q_{15}$	$q_{15}$	$q_{15}$	$q_{15}$	$q_{15}$	$q_{18}$	$q_{19}$
$q_{16}$	$q_{16}$	$q_{16}$	$q_{16}$	$q_{17}$	$q_{16}$	$q_2$	$q_{19}$
$q_{17}$	$q_{17}$	$q_{17}$	$q_{17}$	$q_{17}$	$q_{17}$	$q_{18}$	$q_{19}$
$^*q_{18}$	$q_{18}$						
$q_{19}$	$q_{19}$	$q_{19}$	$q_{19}$	$q_{19}$	$q_{19}$	$q_{19}$	$q_{19}$
$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$