

# Secret door logic (boolean secretDoorUnlocked)

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## 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 `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

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

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

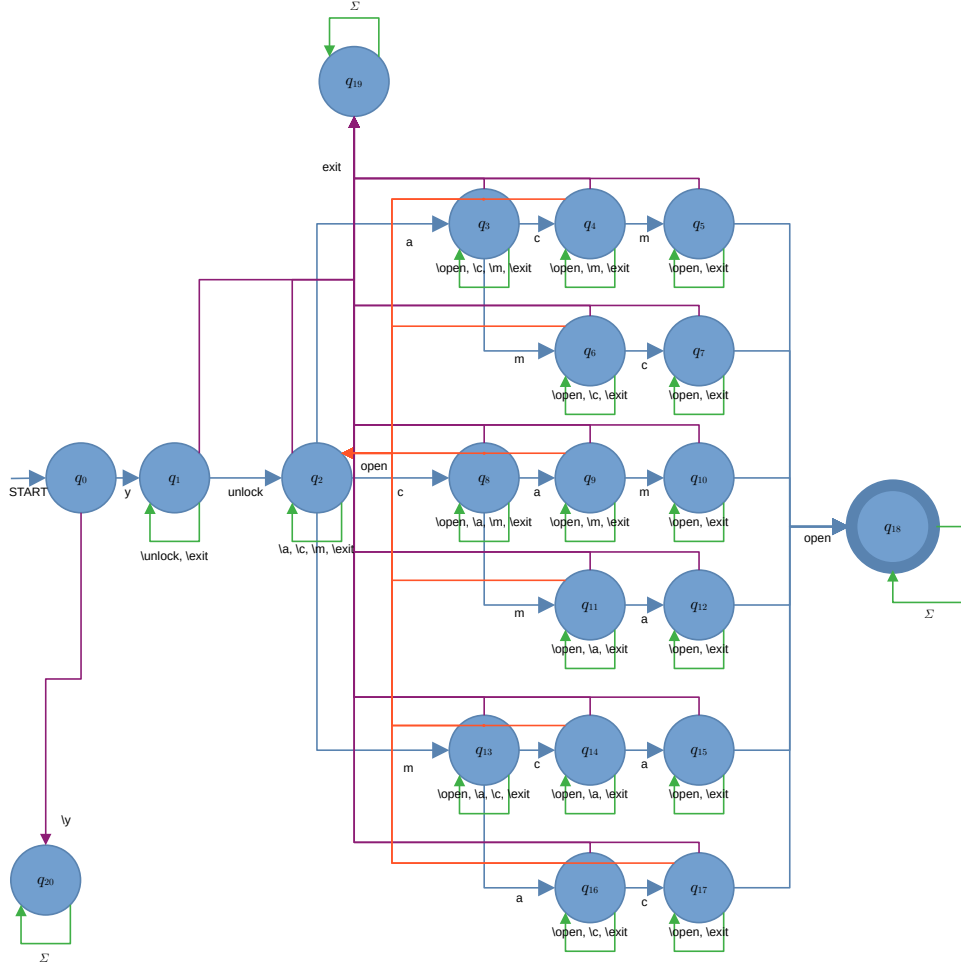
$\Sigma=\{y, unlock, a, c, m, open, exit\}$  (caseless check)

$\delta$ : Transition Function

$L(D)=\{y, unlock, \{\text{mandatory } a, c, m \text{ and optional } y, unlock \text{ in any order; repetition is possible}\}, open\}$

$Q=\{q_0, q_1, q_2, q_3, q_4, q_5, q_6, q_7, q_8, q_9, q_{10}, q_{11}, q_{12}, q_{13}, q_{14}, q_{15}, q_{16}, q_{17}, q_{18}, q_{19}, q_{20}\}$

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



Table

State	y	unlock	a	c	m	open	exit
$\rightarrow q_0$	$q_1$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$	$q_{20}$
$q_1$	$q_1$	$q_2$	$q_1$	$q_1$	$q_1$	$q_1$	$q_{19}$

[illegible]