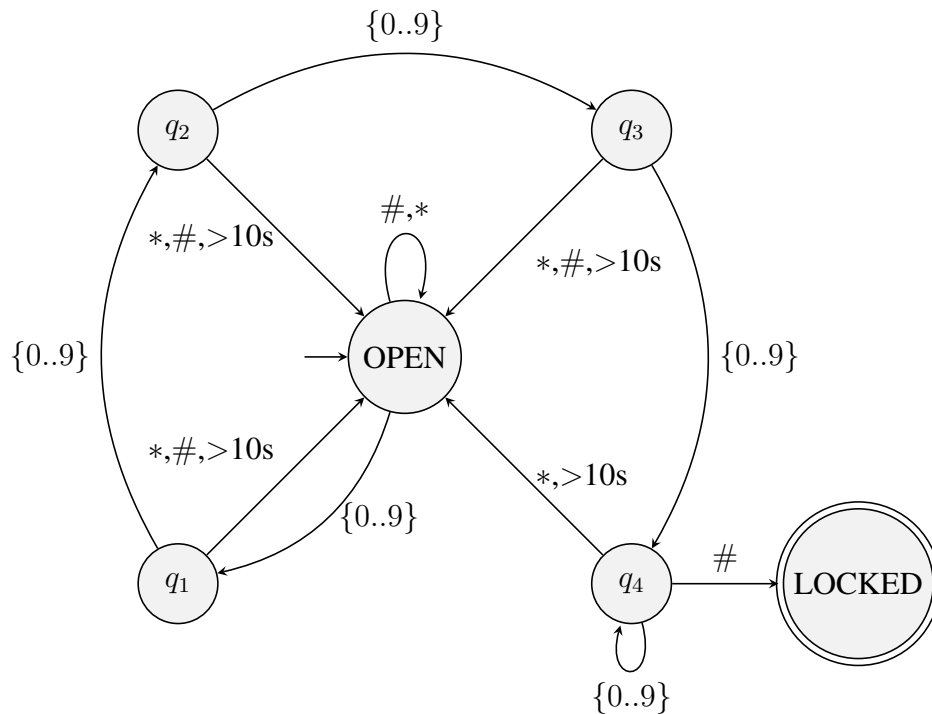# COMP SCI 7411 Event Driven Computing Practice 1 Plan

Tinson Lai

a1812422

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1   Locking

The design above has several notations which might be unclear:

- State is named q_i where i represents the number of digits shown in the panel display.

- $>$10s means the timer has recorded a duration longer than 10 seconds. Notice that the timer is started in state q_1, and will be reset in both OPEN and LOCKED states.

- \# means presssing the key \# once, similar for $*$. $\{0..9\}$ means pressing one of the numeric keys on the panel once.
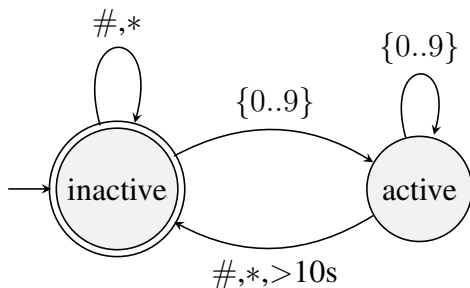
2   Unlocking
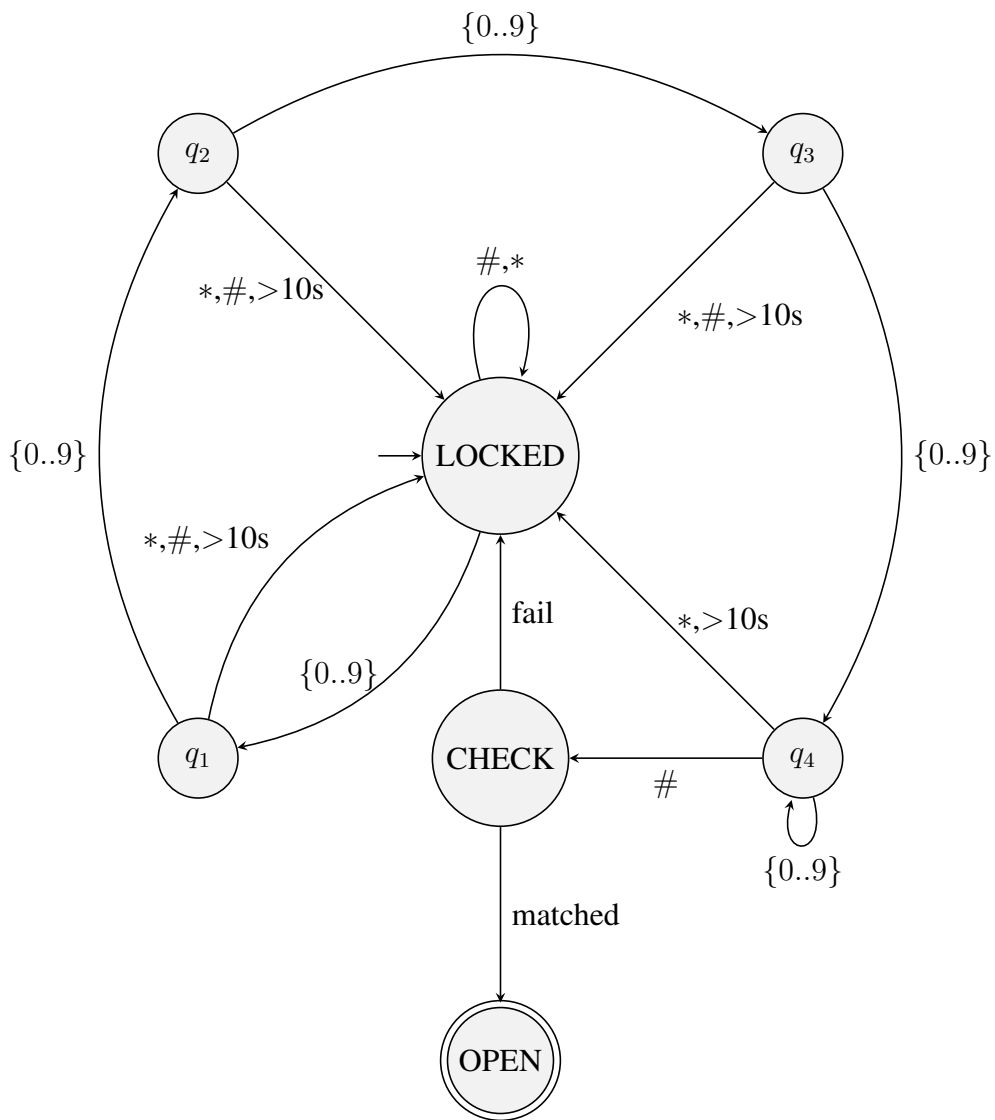
The notations here are the same as the previous graph, and these two graphs are quite similar as well. The CHECK state is an intermediate state used to represent the process of password checking.

3   Timer

The timer used in the previous two graphs has a simpler state diagram.

4 Extra

- Although # and ∗ seems to be identical in the state diagram in the state diagram, in real world, this will usually be just a beep sound played by the lock if someone entered an incorrect password.

- The design choice of the transition from q_4 looping back to q_4 is based on most of the common real-world appliances. All redundant number pressed after the input box is full will be discarded automatically.