



State machine
Automata

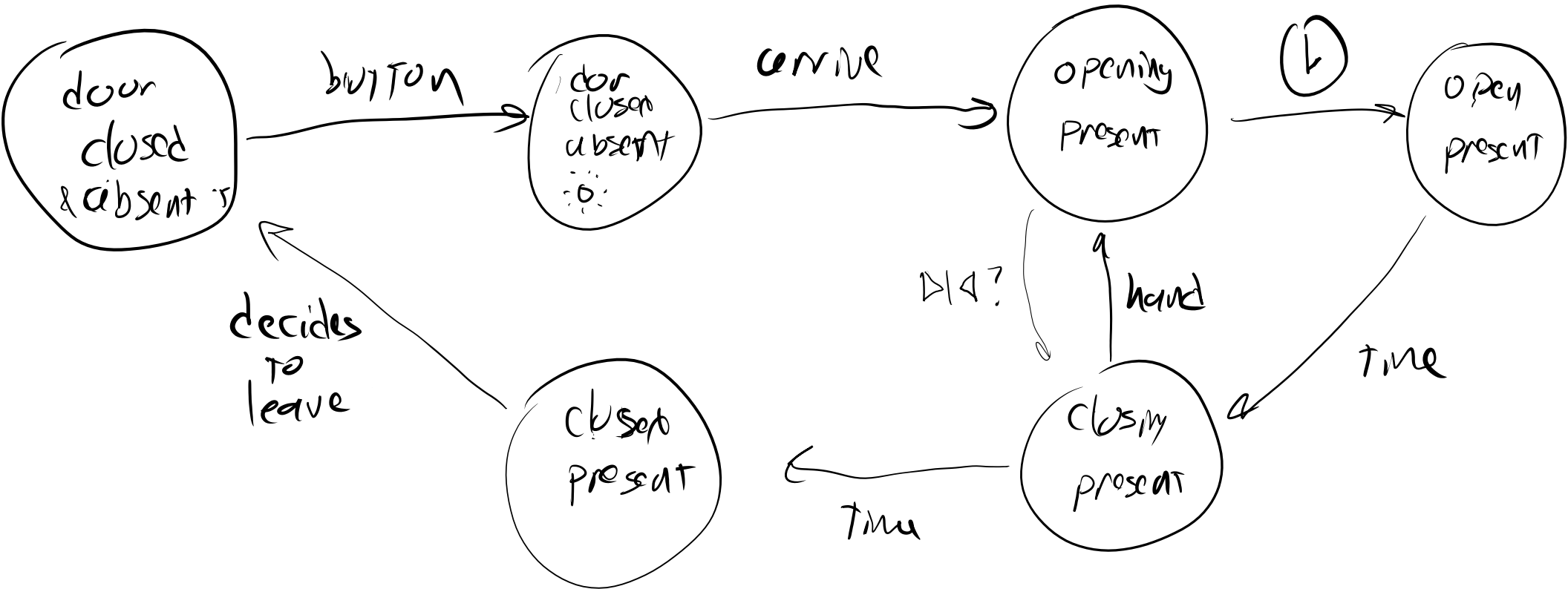
State
distinguish
information

while $x > 0$

$x -= 3$

}

elever door

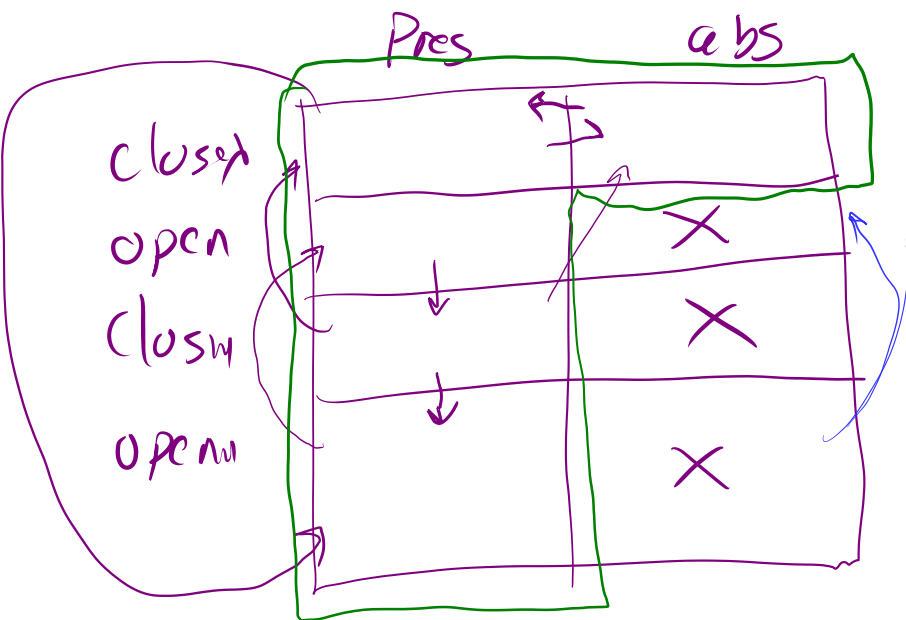


door closed
 open
 closing
 opening

carriage present
 absent

 button lit
 not

$$4 \times 4 \times 2 \times 2 = 16$$



Pres (open x absent) is unreachable

no edge to state

no edge from state to OA
 set of transitions

This OA is unreachable

pf: induction

Base: we define an elevator in a closed + present state

inductive: Assume good state. ^{Show} 1 transition \Rightarrow good state

State machine

Set of states

$\{O, O_{ing}, C_{ing}, CP, CA\}$

Set of transitions, edges
↓
pairs

$(O_{ing}, O_{ing}, hand)$
 $(O_{ing}, O, time)$

$R: \underline{State} \rightarrow \underline{States}$

$O_{ing} \rightarrow O$

(O_{ing}, O)

~~$\{O_{ing}, O\}$~~

$\triangleleft/\triangleright$

$O_{ing} \rightarrow O$

	Sym				
Sym	1	0	1	0	0
0	1	1			

