

1 Moore's Finite State Machine

Moore's Finite State Machine (FSM) follows a model where the next state of the machine is determined by the current inputs and its current state, while the output is determined by the current state of the machine, following the designed combinational logic.

1.1 Design

Given the specifications required of the pump controller, the functionality of the fsm was represented on Figure 1 and on Table 1, where "LnA" stands for "Last not Activated".

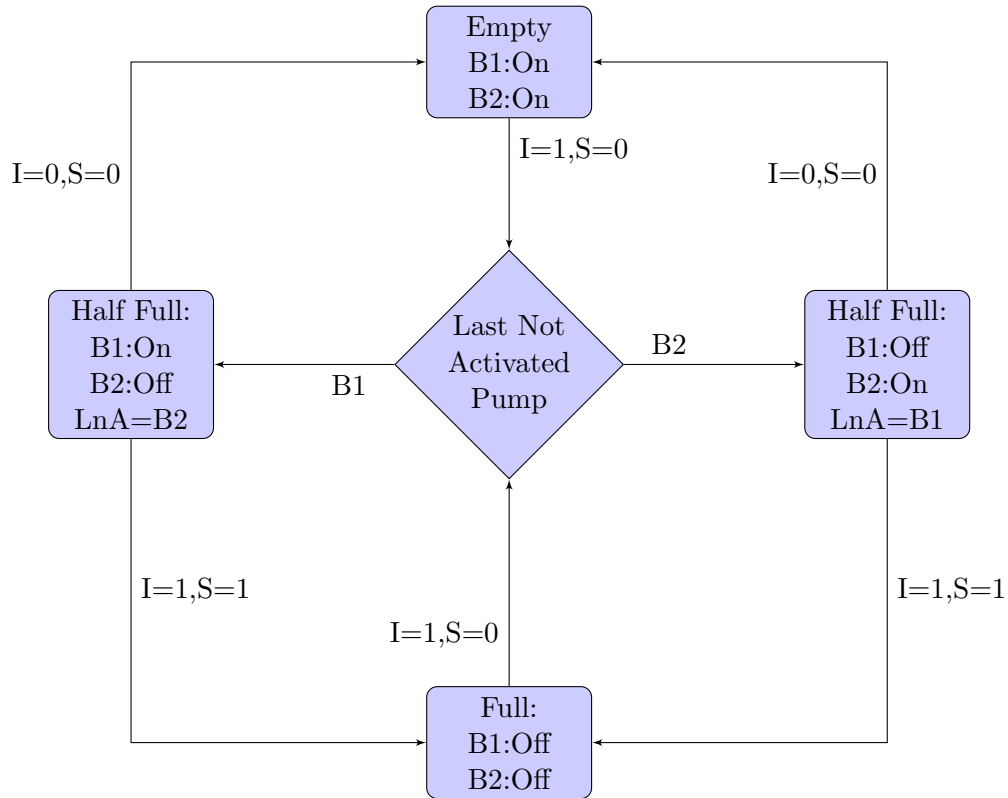


Figure 1: Flow Diagram for Moore's Machine

Current State	Next State				Output	
	S I 0 0	S I 0 1	S I 1 0	S I 1 1	B1	B2
Empty (0 0)	Empty	Half Full	Error	Full	1	1
Half Full (0 1)	Empty	Half Full	Error	Full	\sim LnA	LnA
Error (1 0)	Empty	Half Full	Error	Full	0	0
Full (1 1)	Empty	Half Full	Error	Full	0	0

Table 1: State Transition Table