

# Digital Stopwatch

Robert Kozubiak

Shawn Waite

Peter Isho

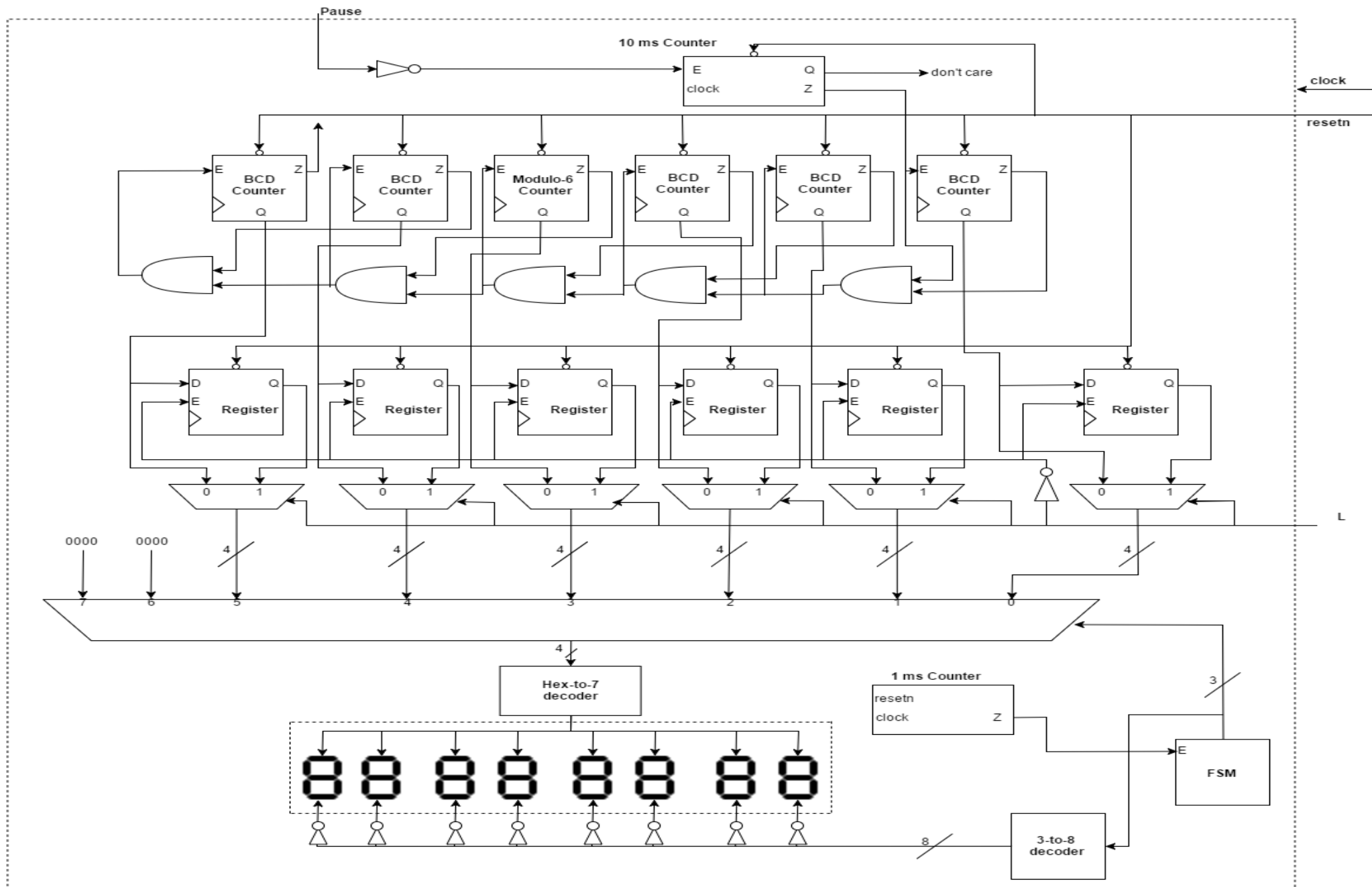
# Functionality

- Max time of 99:59:99 displayed on the 7-segment display
- Increments of 10 ms (0.01 s)
- Start/Pause – Starts and pauses the time
- Lap – Displays the current time on the 7-segment Display for as long as the switch is up
- Reset – Resets the time to 00:00:00
- Clock – Built in 100 mHz

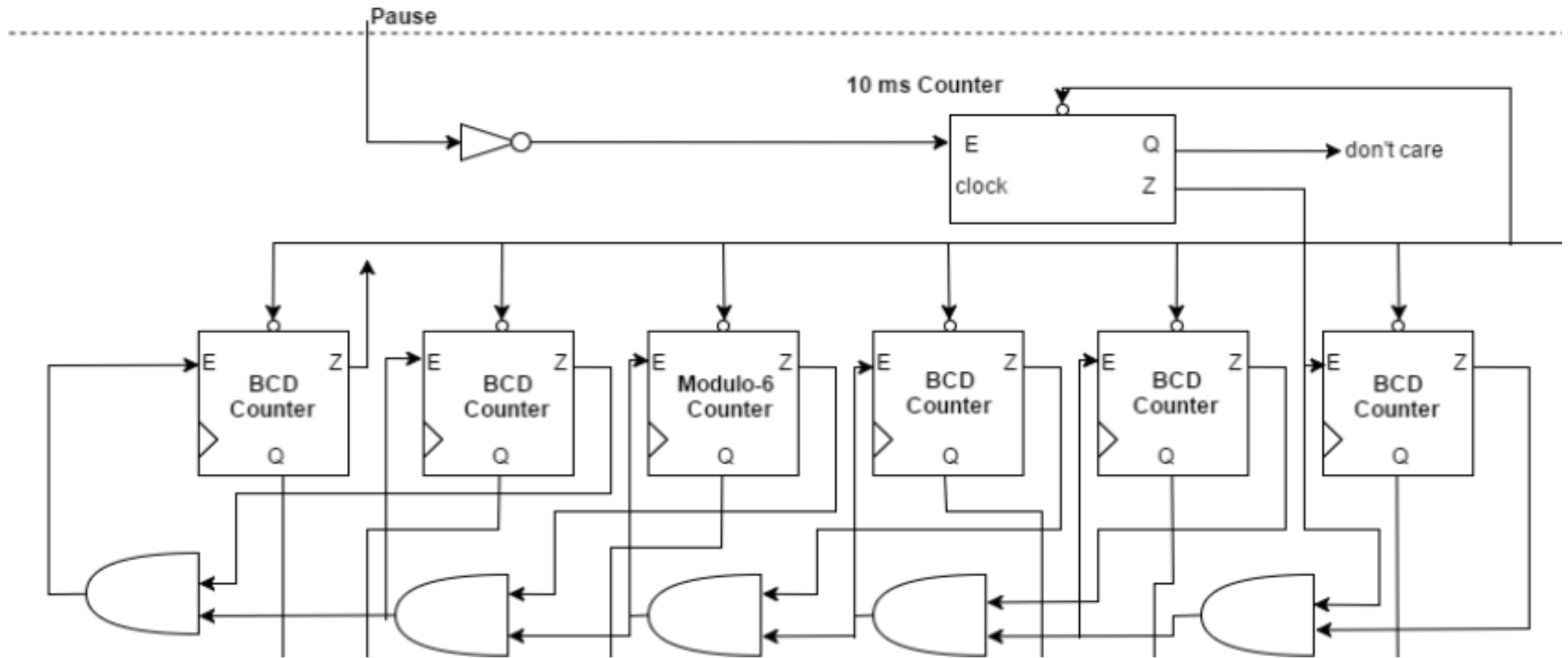
Counters

Lap  
Function

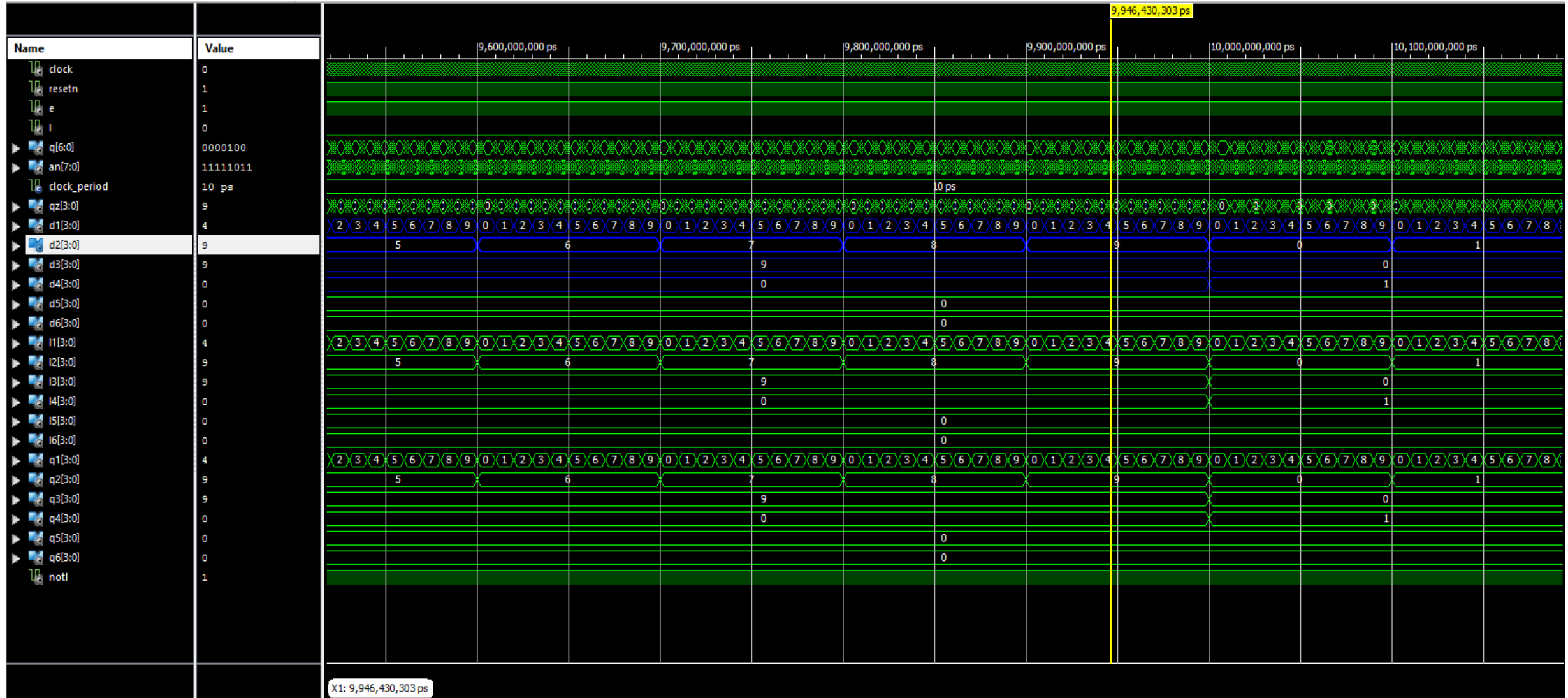
Display



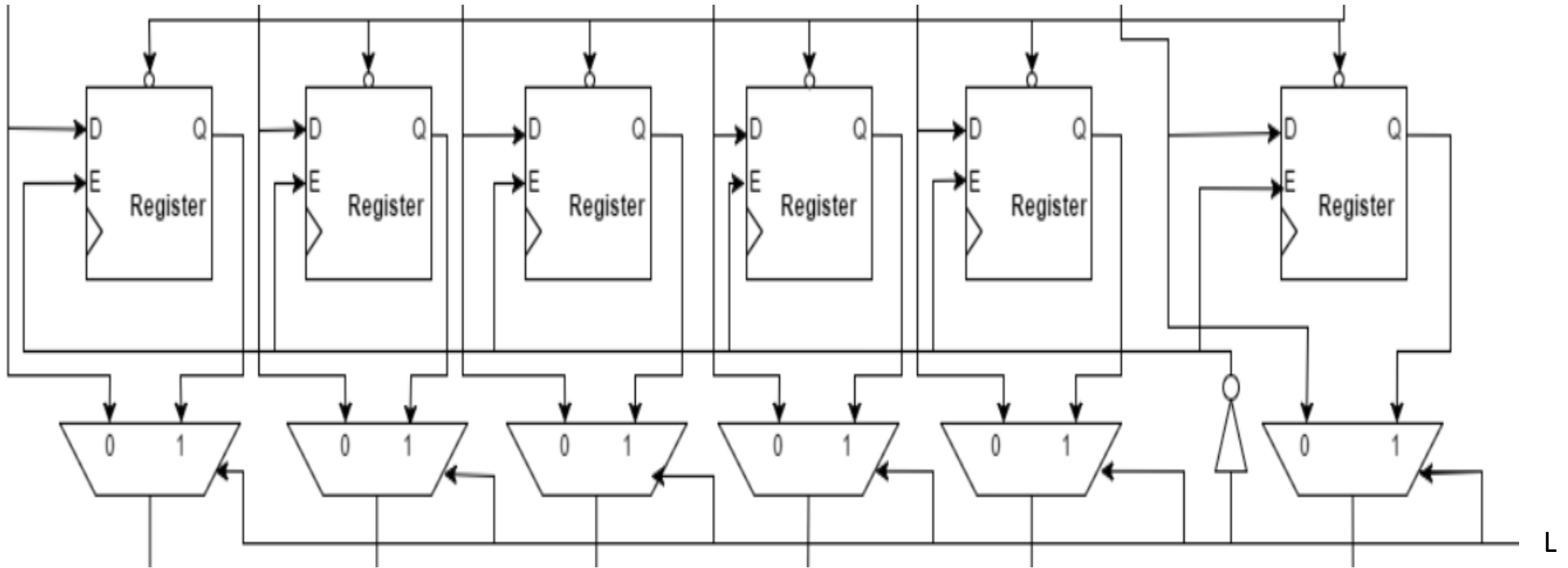
# Counters



# Counter Simulation



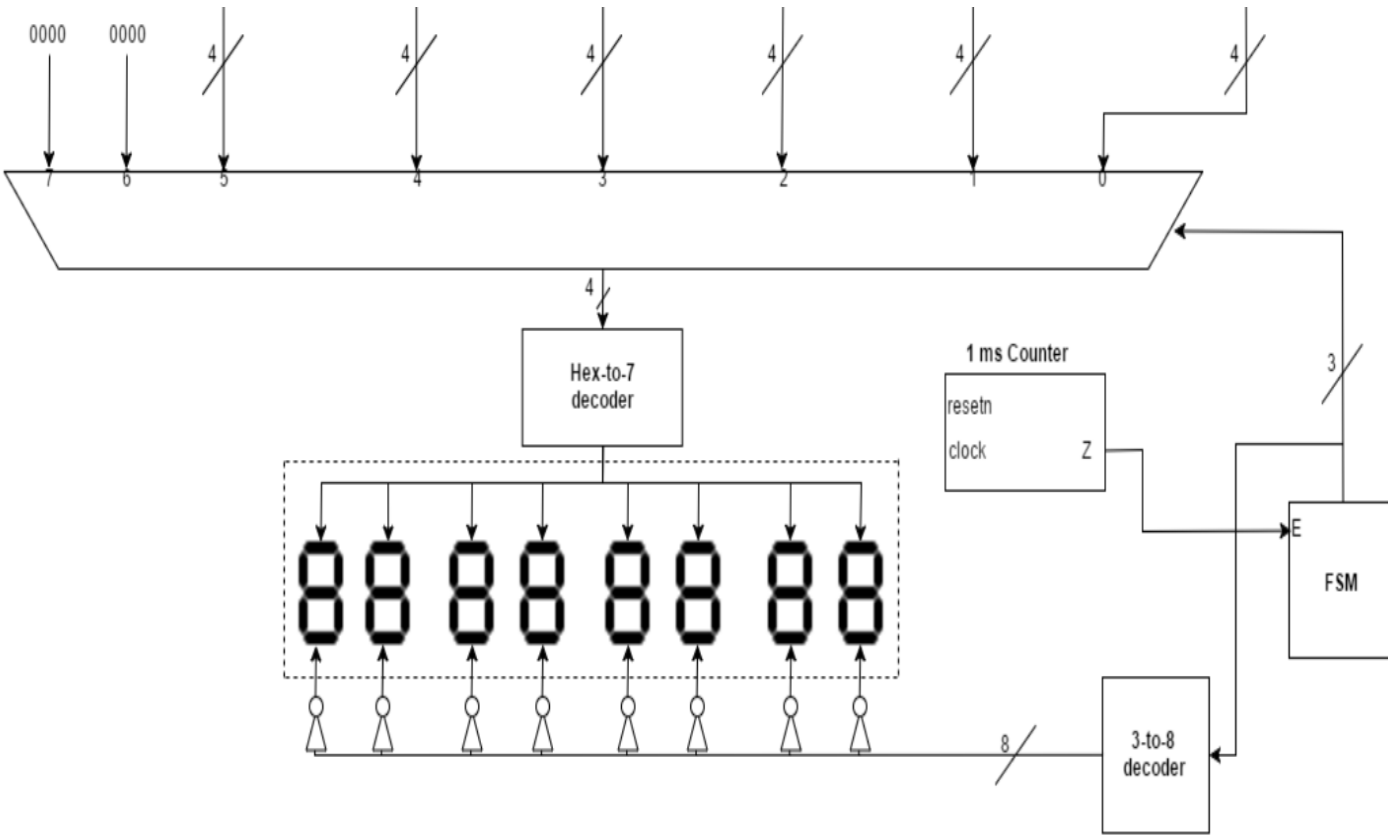
# Lap Function



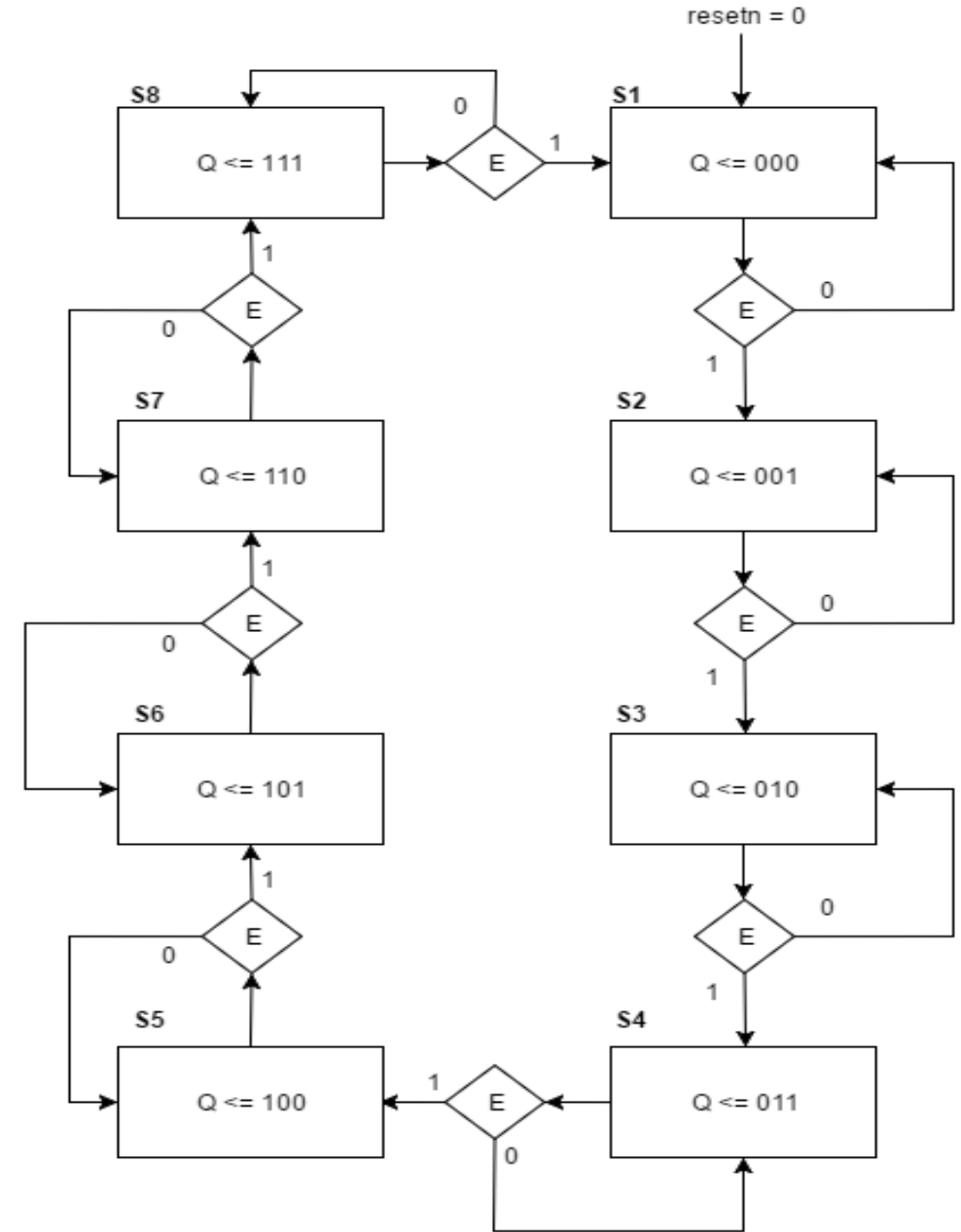
# Lap Function

		0.000000 us											
Name	Value	0 us	100 us	200 us	300 us	400 us	500 us	600 us	700 us	800 us	900 us	1,000 us	1,100 us
clock	0												
resetrn	1												
e	1												
l	0												
q[6:0]	0000001												
an[7:0]	11111110												
clock_period	100 ps												
notl	1												
d1[3:0]	0000	0000	0001	0010	0011	0100	0101	0110	0111	1000	1001	0000	0001
l1[3:0]	0000	0000	0001	0010	0011			0100			1001	0000	0001
q1[3:0]	0000	0000	0001	0010	0011			0100			1001	0000	0001

# Display



## FSM (ASM Form)





Demo Time