

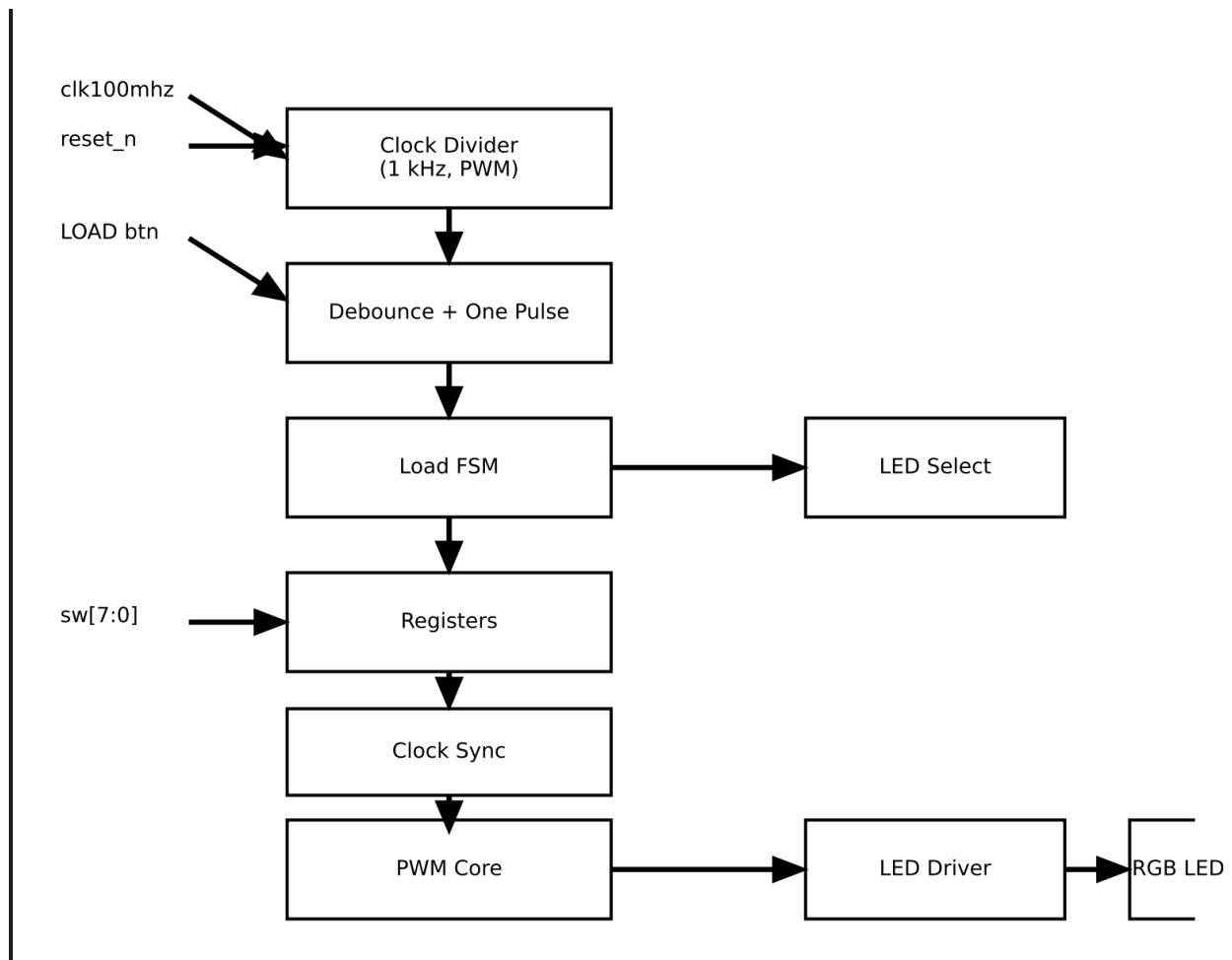
Lab Report 8

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Block Diagram:

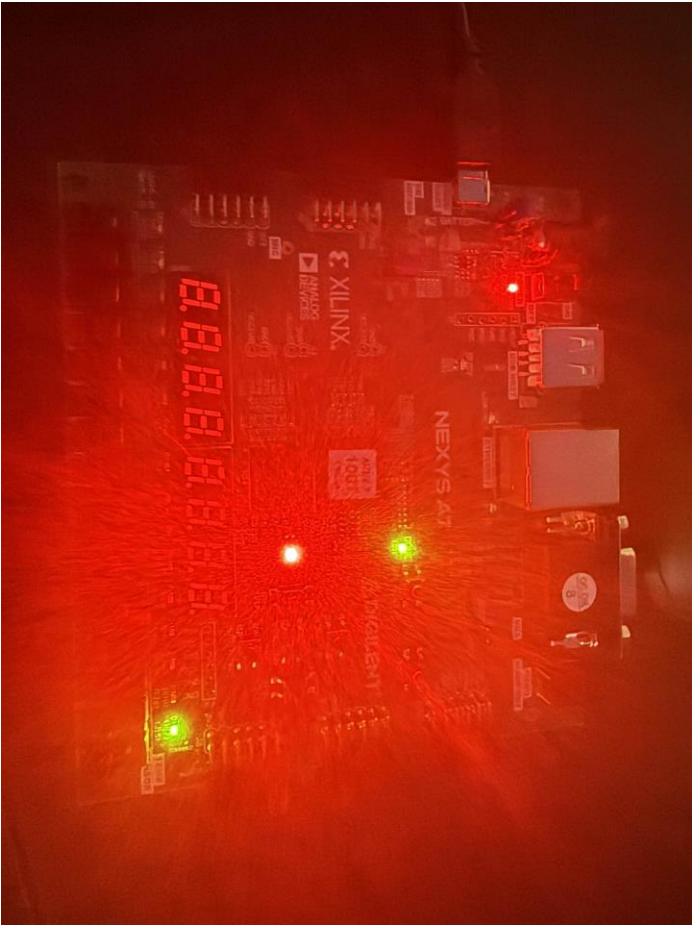


4 Slot loading & RES + 1:

The load finite state machine uses 4-slot loading to update the registers that control the RGB LED. The four slots correspond to RES, R, G, and B. Each press of the LOAD button advances the active slot in a fixed sequence, allowing only one register to be written at a time from the switch inputs. The RES + 1 behavior means that after loading the RES slot, the FSM automatically advances to the R slot on the next load pulse. This ensures the reset register is always the starting point before cycling through the individual color registers.

Name	Value	249,993 ps	249,994 ps	249,995 ps	249,996 ps	249,997 ps	249,998 ps	249,999 ps
clk	1							
rst_n	1							
> period[7:0]	07				07			
> dr[7:0]	02				02			
> dg[7:0]	04				04			
> db[7:0]	06				06			
pr	0							
pg	0							
pb	0							
> i[31:0]	00000008				00000007			
> hr[31:0]	00000002				00000002			
> hg[31:0]	00000004				00000004			
> hb[31:0]	00000006				00000006			

Picture of board with full brightness



Contributions:

Hector Garibay: Code/Report 50%

Justin Wong: Code/Report 50%