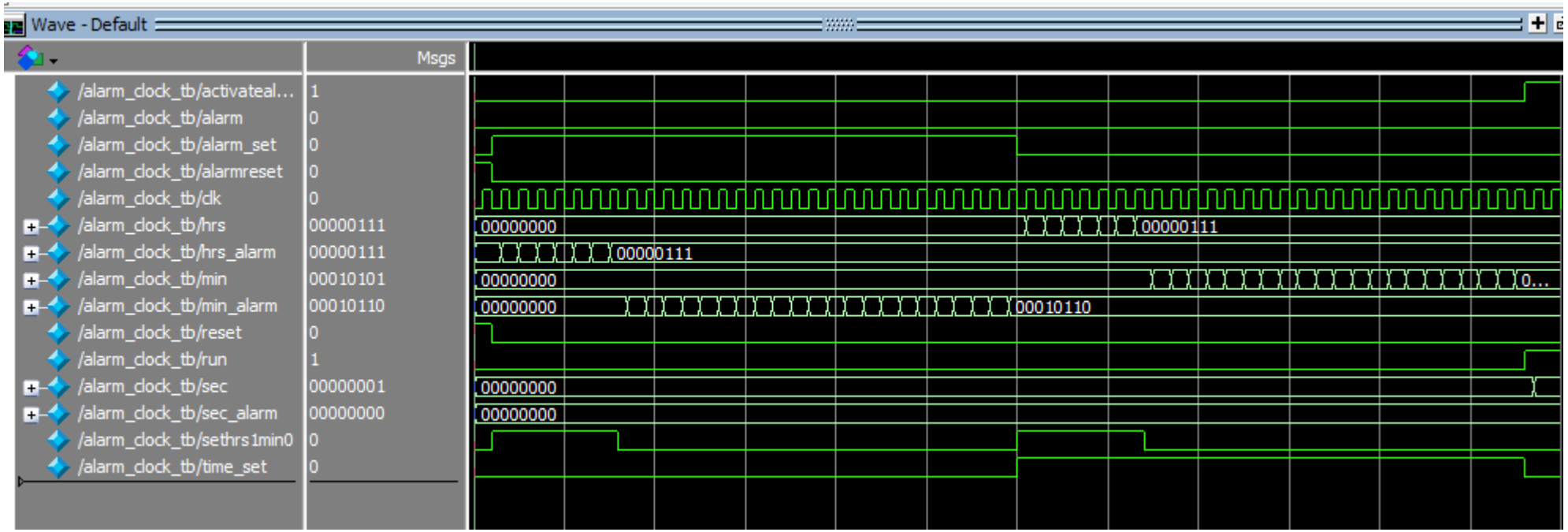
Lab 4

Pranav Nadimpalli

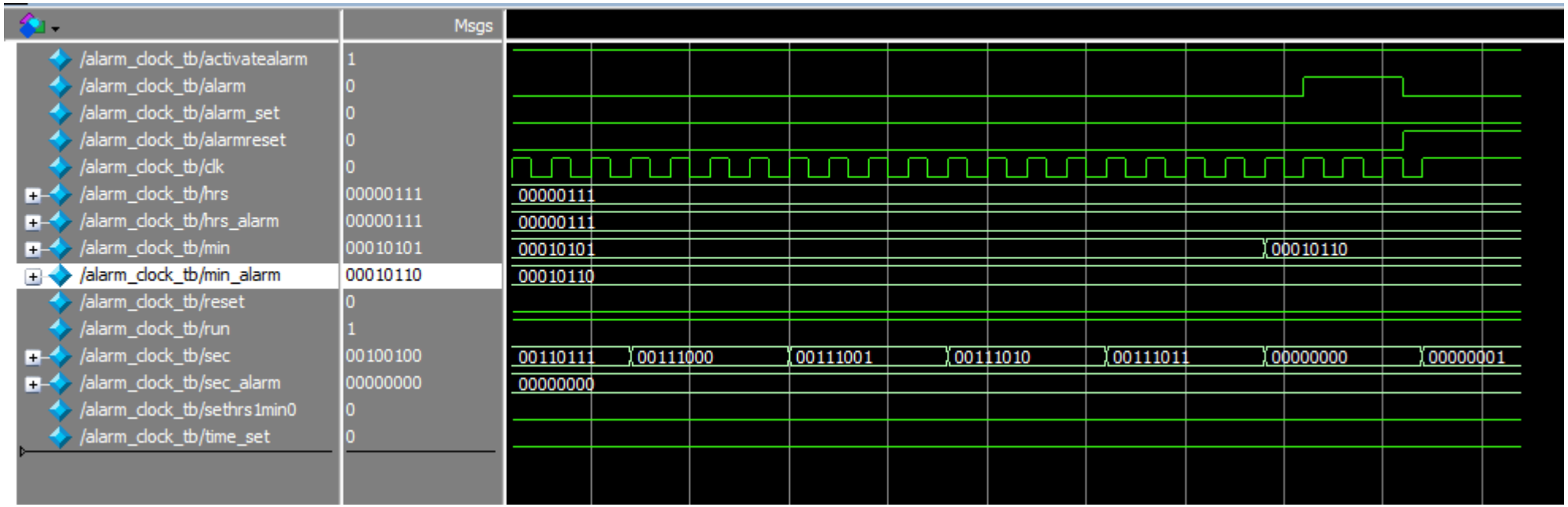
Simulated Alarm Clock pt. 1

- Setting the time. Hours and minutes for alarm set to 7:22:00 while clock is set to 7:21

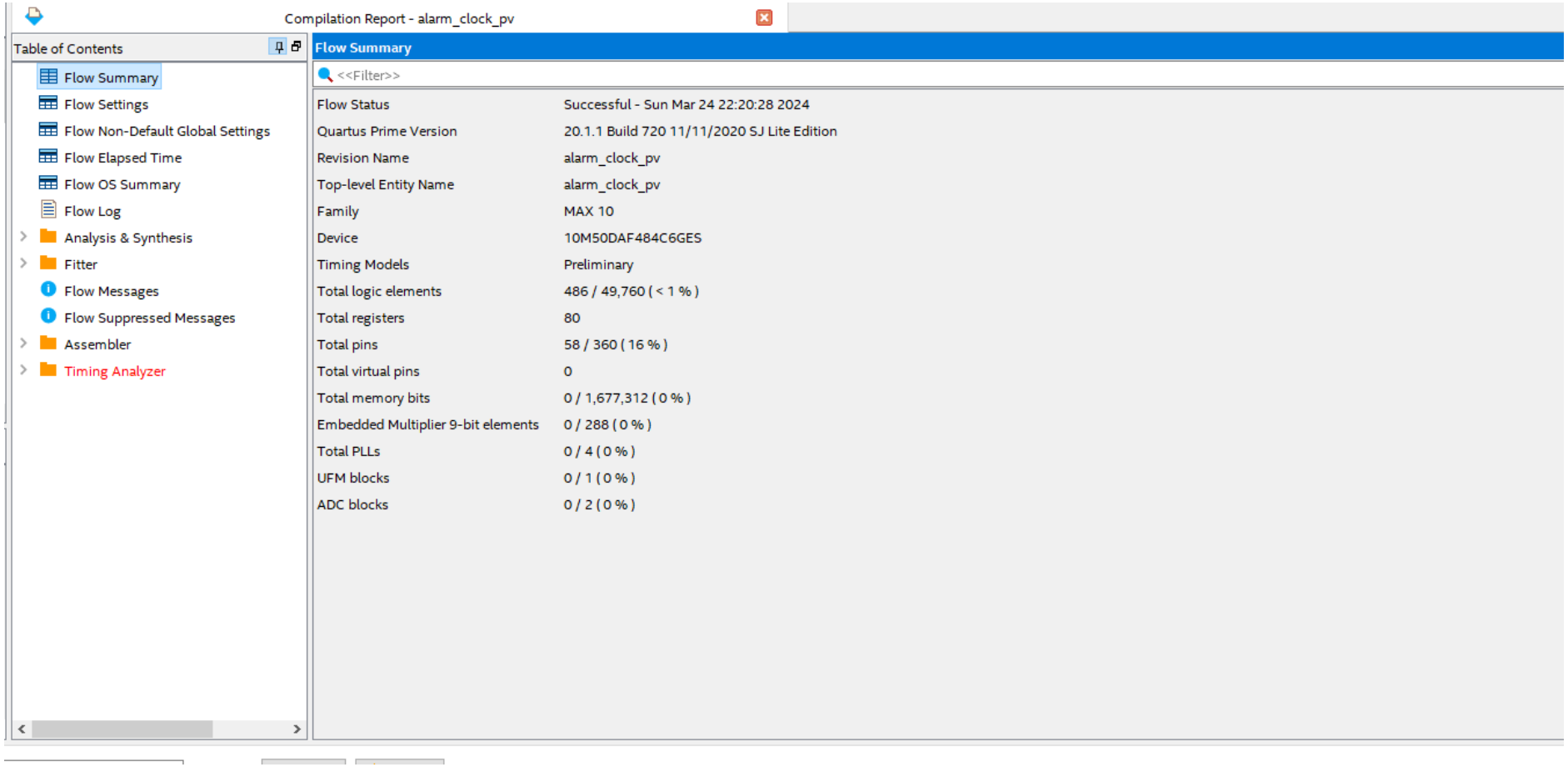


Simulate Alarm Clock Pt. 2

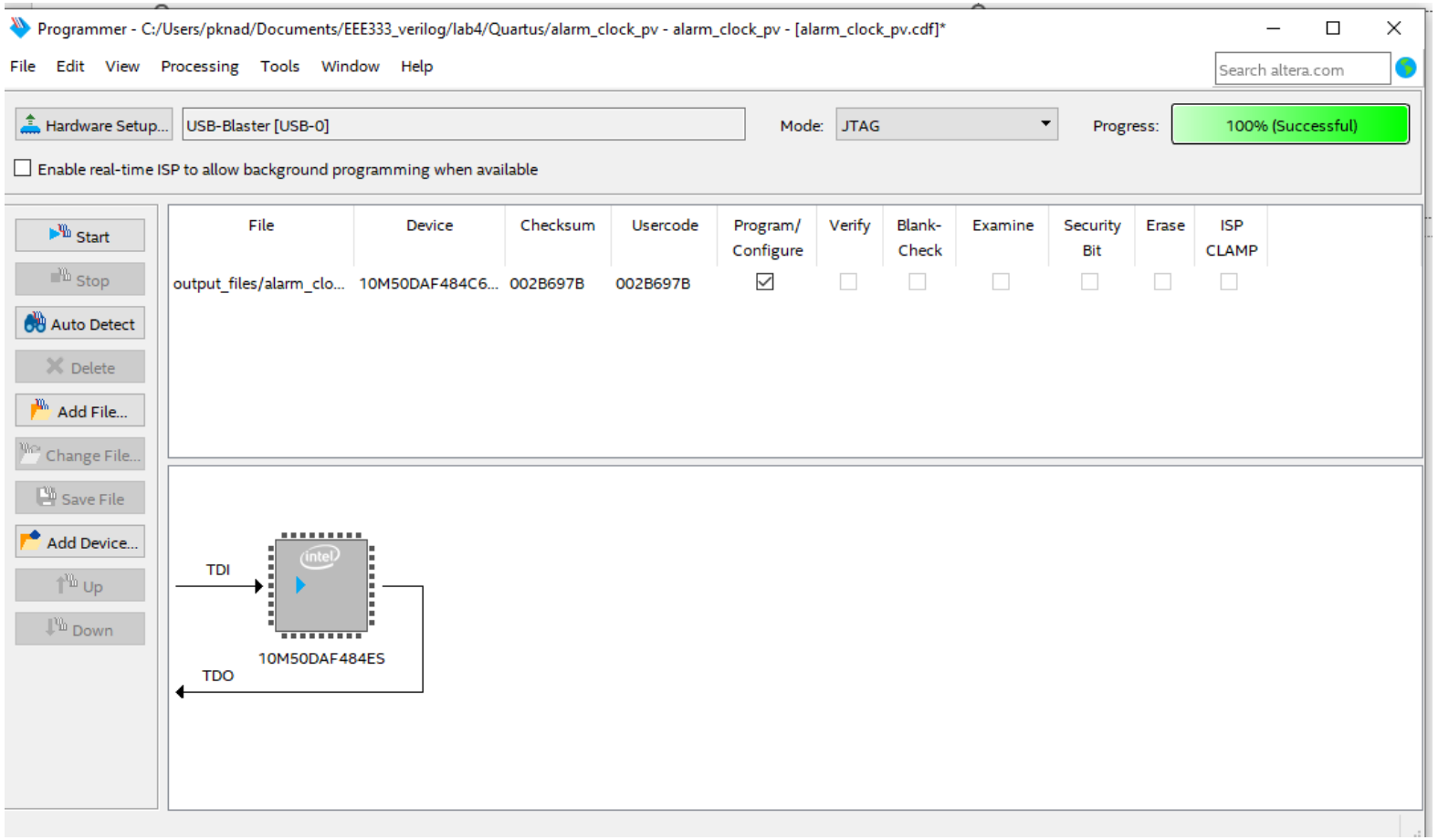
- Running clock till alarm once times match the alarm is set then reset when reset is high. I am only showing the last portion for ease to read.



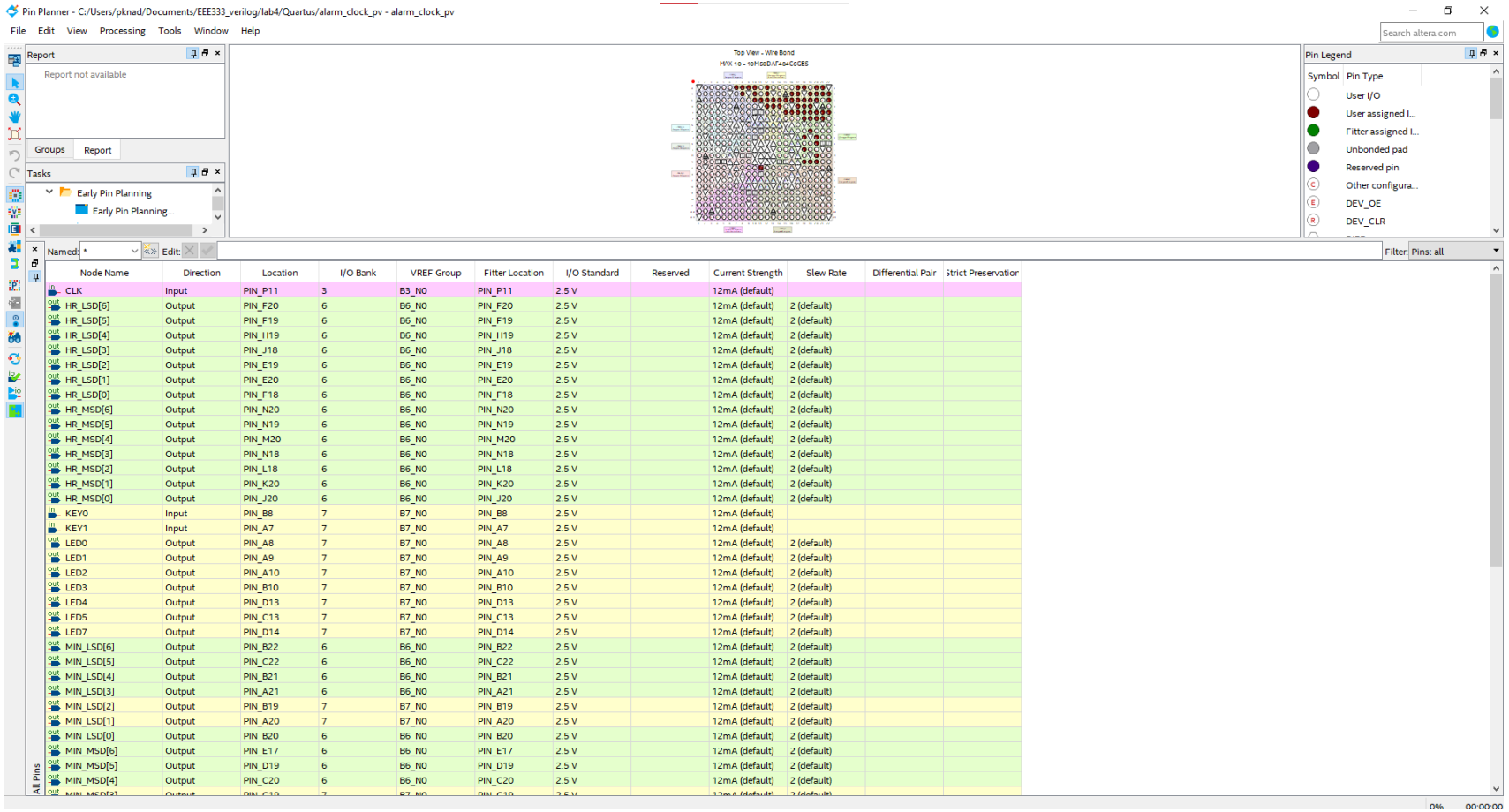
Flow Summary



Programmed

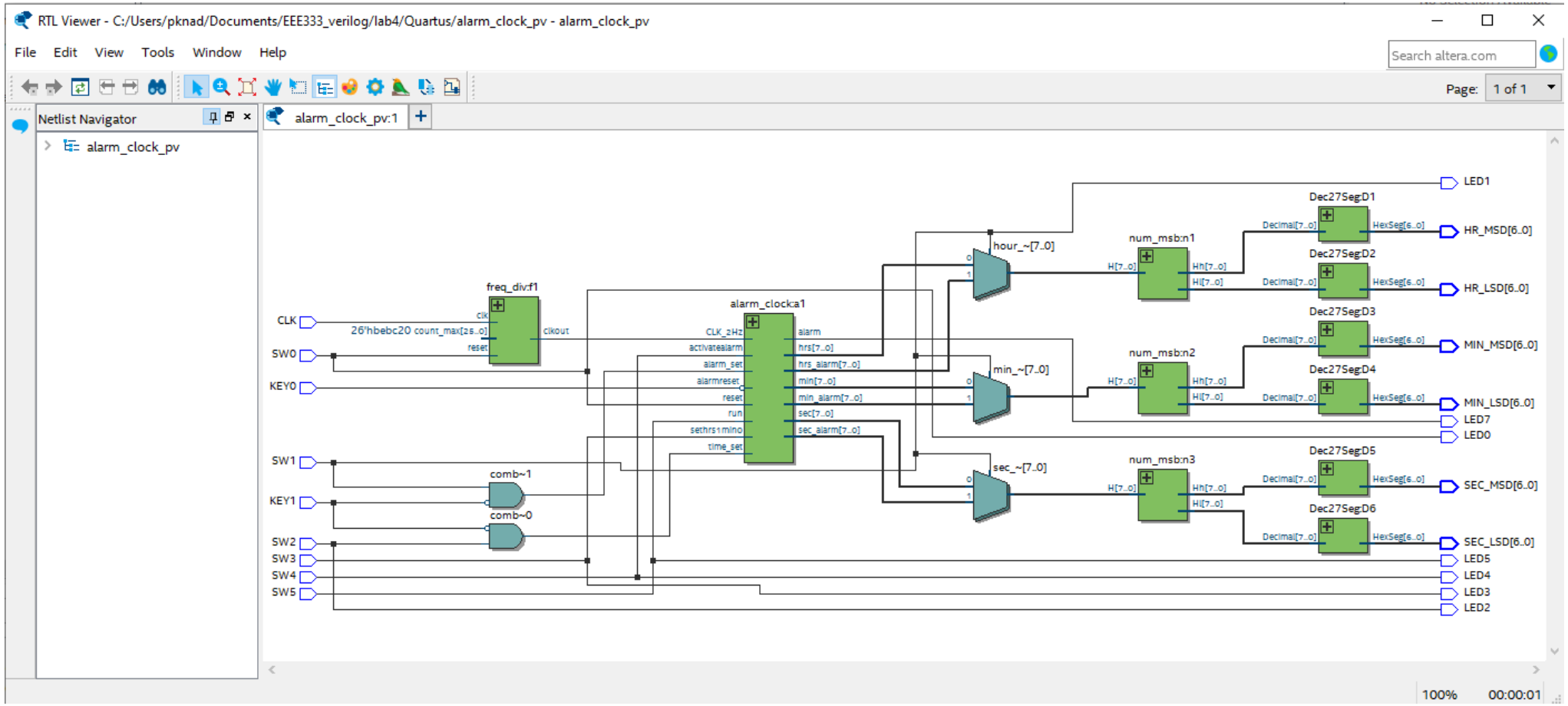

Programmer - C:/Users/pknad/Documents/EEE333_verilog/lab4/Quartus/alarm_clock_pv - alarm_clock_pv - [alarm_clock_pv.cdf]*
File Edit View Processing Tools Window Help
Search altera.com
Hardware Setup...
USB-Blaster [USB-0]
Mode: JTAG
Progress:
100% (Successful)
Enable real-time ISP to allow background programming when available
Start
Stop
Auto Detect
Delete
Add File...
Change File...
Save File
Add Device...
Up
Down
File
Device
Checksum
Usercode
Program/ Configure
Verify
Blank-Check
Examine
Security Bit
Erase
ISP CLAMP
output_files/alarm_clo...
10M50DAF484C6...
002B697B
002B697B
TDI
10M50DAF484ES
TDO

Pin assignment

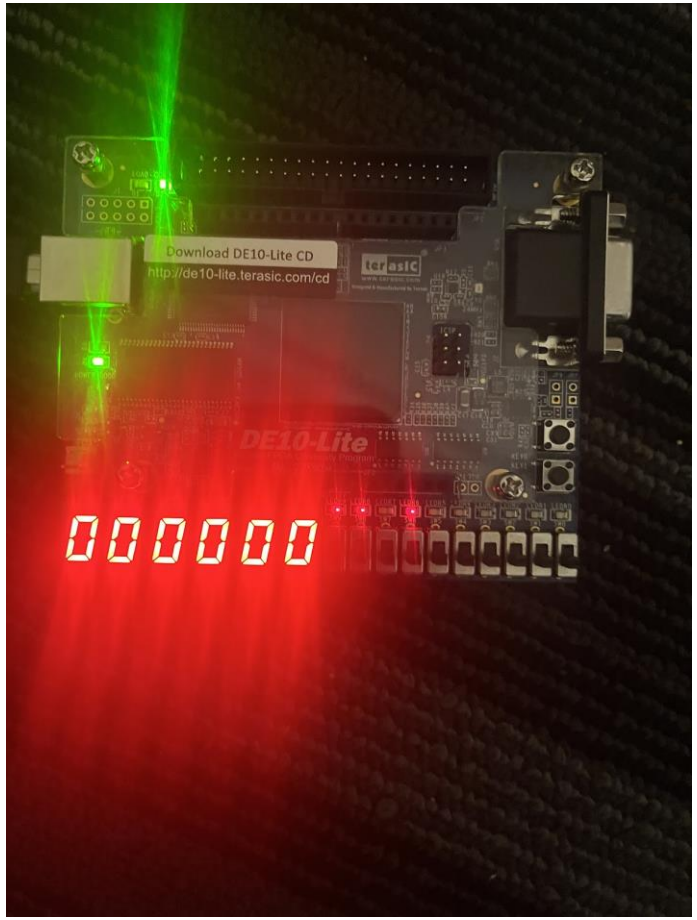


Node Name	Direction	Location	I/O Bank	VREF Group	Fitter Location	I/O Standard	Reserved	Current Strength	Slew Rate	Differential Pair	Strict Preservation
CLK	Input	PIN_P11	3	B3_N0	PIN_P11	2.5 V		12mA (default)			
HR_LSD[6]	Output	PIN_F20	6	B6_N0	PIN_F20	2.5 V		12mA (default)	2 (default)		
HR_LSD[5]	Output	PIN_F19	6	B6_N0	PIN_F19	2.5 V		12mA (default)	2 (default)		
HR_LSD[4]	Output	PIN_H19	6	B6_N0	PIN_H19	2.5 V		12mA (default)	2 (default)		
HR_LSD[3]	Output	PIN_J18	6	B6_N0	PIN_J18	2.5 V		12mA (default)	2 (default)		
HR_LSD[2]	Output	PIN_E19	6	B6_N0	PIN_E19	2.5 V		12mA (default)	2 (default)		
HR_LSD[1]	Output	PIN_E20	6	B6_N0	PIN_E20	2.5 V		12mA (default)	2 (default)		
HR_LSD[0]	Output	PIN_F18	6	B6_N0	PIN_F18	2.5 V		12mA (default)	2 (default)		
HR_MSD[6]	Output	PIN_N20	6	B6_N0	PIN_N20	2.5 V		12mA (default)	2 (default)		
HR_MSD[5]	Output	PIN_N19	6	B6_N0	PIN_N19	2.5 V		12mA (default)	2 (default)		
HR_MSD[4]	Output	PIN_M20	6	B6_N0	PIN_M20	2.5 V		12mA (default)	2 (default)		
HR_MSD[3]	Output	PIN_N18	6	B6_N0	PIN_N18	2.5 V		12mA (default)	2 (default)		
HR_MSD[2]	Output	PIN_L18	6	B6_N0	PIN_L18	2.5 V		12mA (default)	2 (default)		
HR_MSD[1]	Output	PIN_K20	6	B6_N0	PIN_K20	2.5 V		12mA (default)	2 (default)		
HR_MSD[0]	Output	PIN_J20	6	B6_N0	PIN_J20	2.5 V		12mA (default)	2 (default)		
KEY0	Input	PIN_B8	7	B7_N0	PIN_B8	2.5 V		12mA (default)			
KEY1	Input	PIN_A7	7	B7_N0	PIN_A7	2.5 V		12mA (default)			
LED0	Output	PIN_A8	7	B7_N0	PIN_A8	2.5 V		12mA (default)	2 (default)		
LED1	Output	PIN_A9	7	B7_N0	PIN_A9	2.5 V		12mA (default)	2 (default)		
LED2	Output	PIN_A10	7	B7_N0	PIN_A10	2.5 V		12mA (default)	2 (default)		
LED3	Output	PIN_B10	7	B7_N0	PIN_B10	2.5 V		12mA (default)	2 (default)		
LED4	Output	PIN_D13	7	B7_N0	PIN_D13	2.5 V		12mA (default)	2 (default)		
LED5	Output	PIN_C13	7	B7_N0	PIN_C13	2.5 V		12mA (default)	2 (default)		
LED7	Output	PIN_D14	7	B7_N0	PIN_D14	2.5 V		12mA (default)	2 (default)		
MIN_LSD[6]	Output	PIN_B22	6	B6_N0	PIN_B22	2.5 V		12mA (default)	2 (default)		
MIN_LSD[5]	Output	PIN_C22	6	B6_N0	PIN_C22	2.5 V		12mA (default)	2 (default)		
MIN_LSD[4]	Output	PIN_B21	6	B6_N0	PIN_B21	2.5 V		12mA (default)	2 (default)		
MIN_LSD[3]	Output	PIN_A21	6	B6_N0	PIN_A21	2.5 V		12mA (default)	2 (default)		
MIN_LSD[2]	Output	PIN_B19	7	B7_N0	PIN_B19	2.5 V		12mA (default)	2 (default)		
MIN_LSD[1]	Output	PIN_A20	7	B7_N0	PIN_A20	2.5 V		12mA (default)	2 (default)		
MIN_LSD[0]	Output	PIN_B20	6	B6_N0	PIN_B20	2.5 V		12mA (default)	2 (default)		
MIN_MSD[6]	Output	PIN_E17	6	B6_N0	PIN_E17	2.5 V		12mA (default)	2 (default)		
MIN_MSD[5]	Output	PIN_D19	6	B6_N0	PIN_D19	2.5 V		12mA (default)	2 (default)		
MIN_MSD[4]	Output	PIN_C20	6	B6_N0	PIN_C20	2.5 V		12mA (default)	2 (default)		

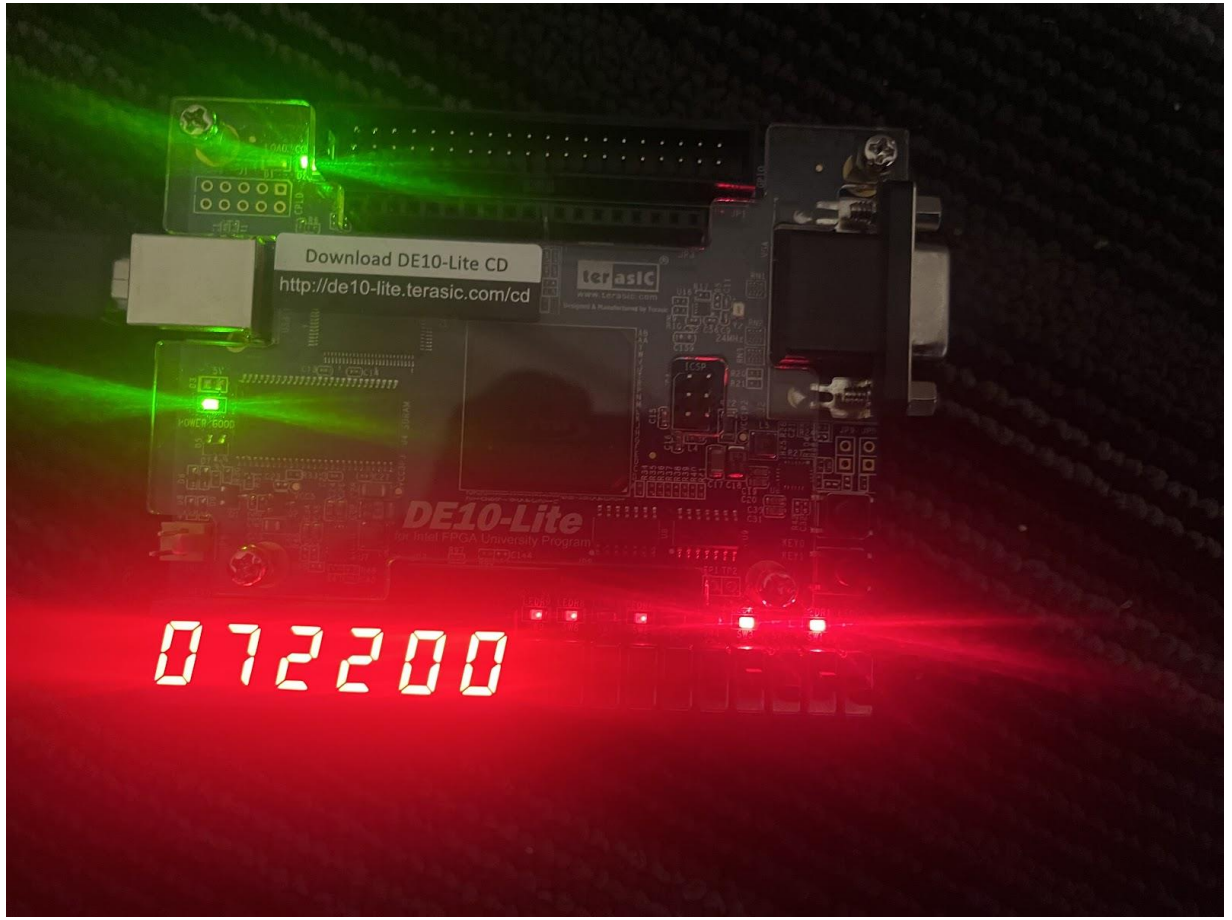
Net List viewer



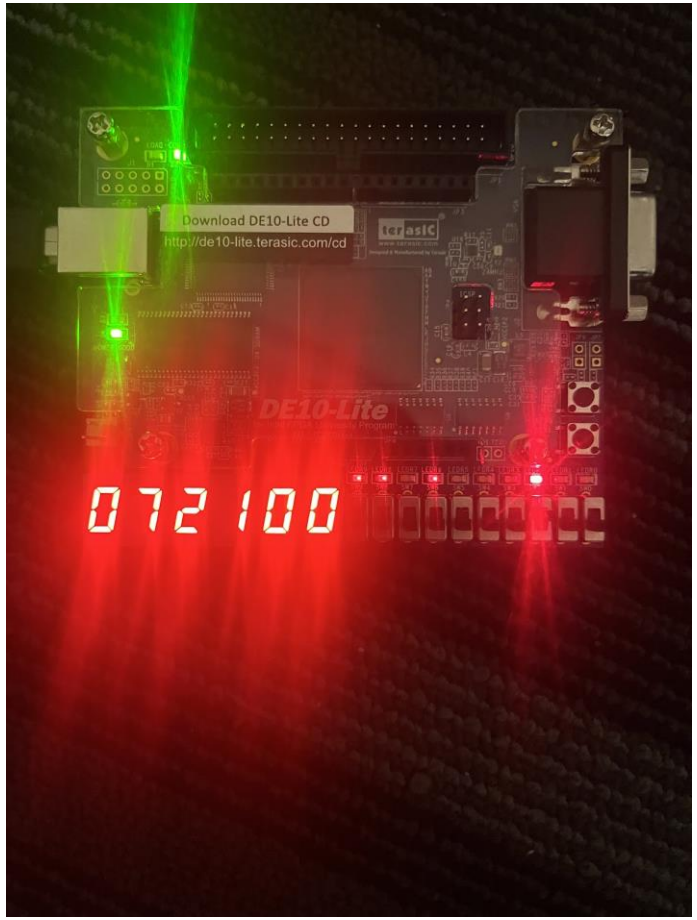
Clk & alarm reset



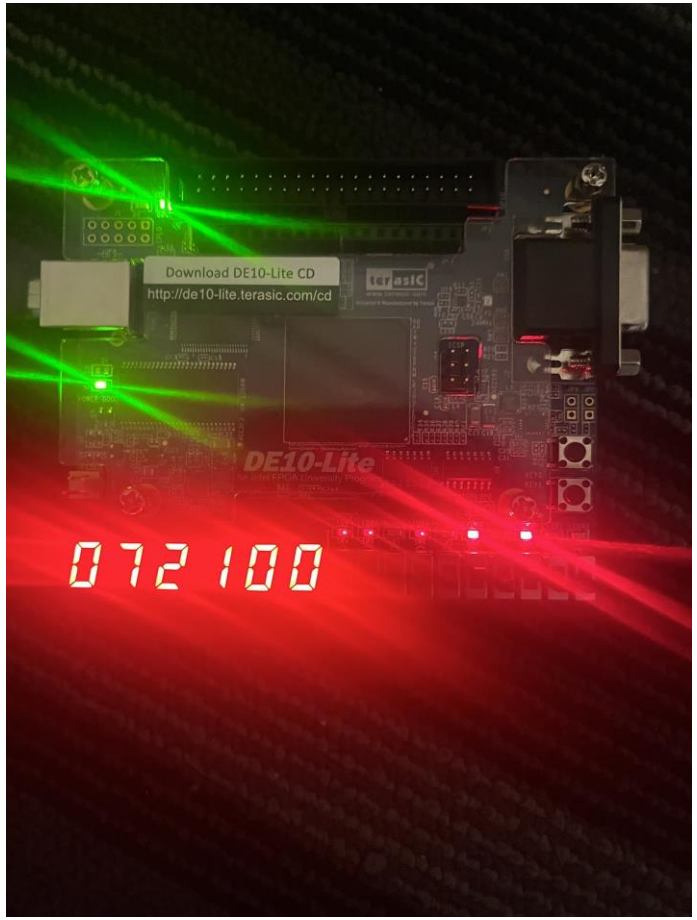
Set alarm to 7: 22



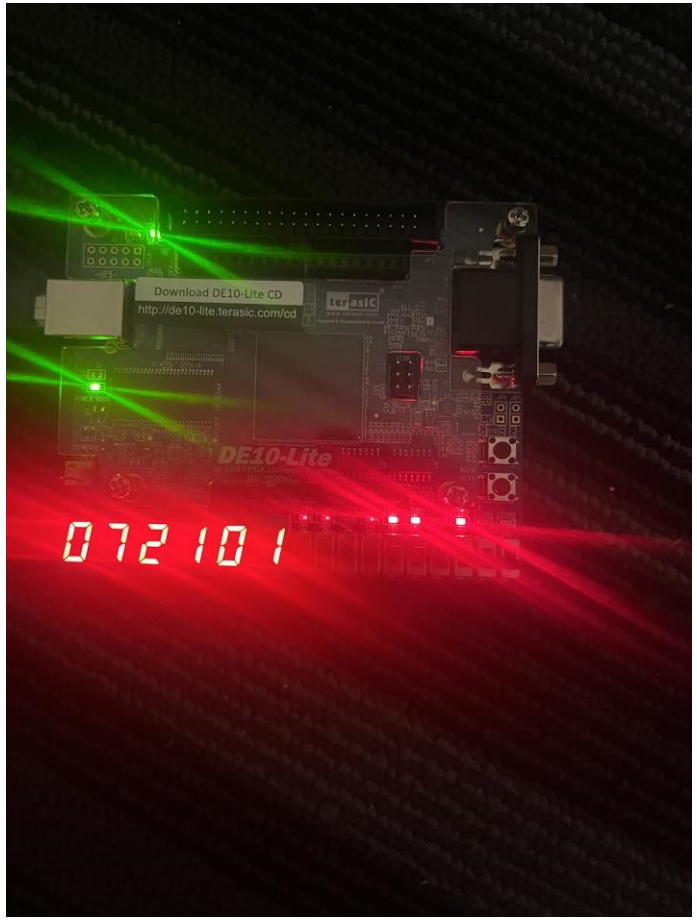
Set clock to 7:21



Active alarm



Run timer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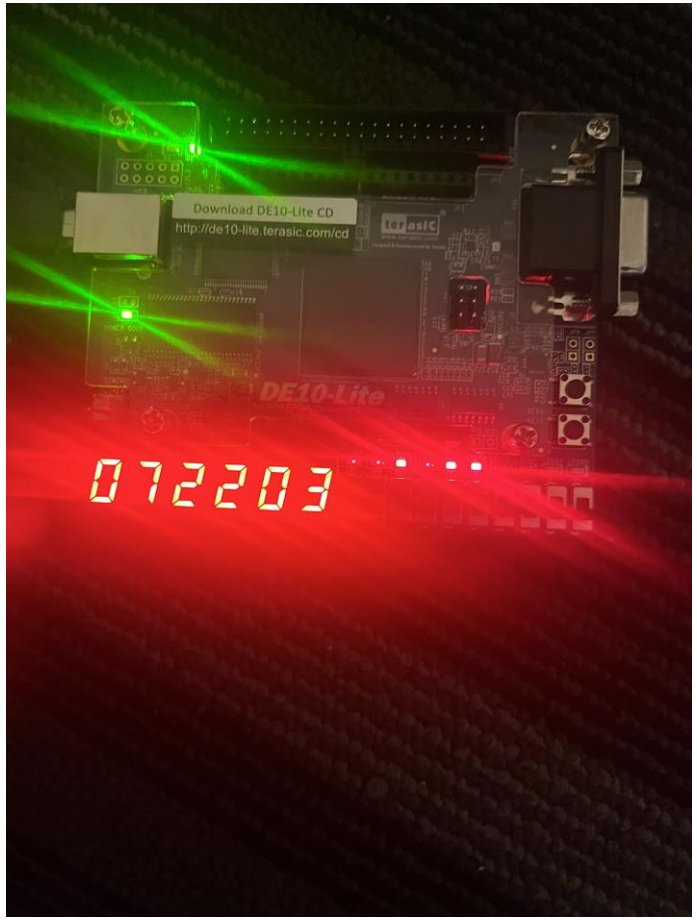
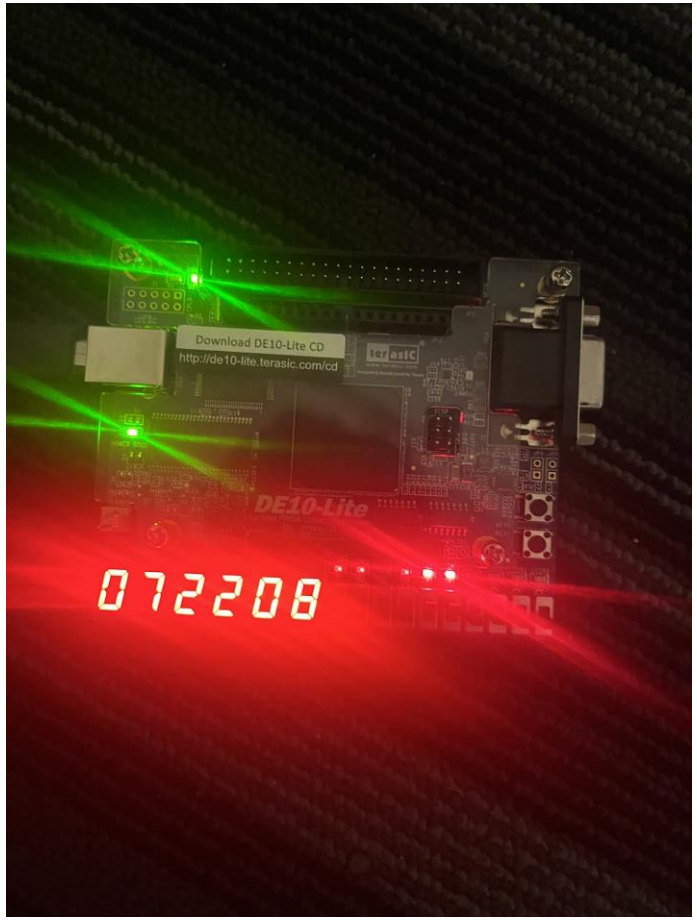
Alarm went off



Alarm reset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