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Lab 6 Laser System
No partner

Lab Report

Overview
In this lab we created a laser surgery system using a timer and a finite state machine.

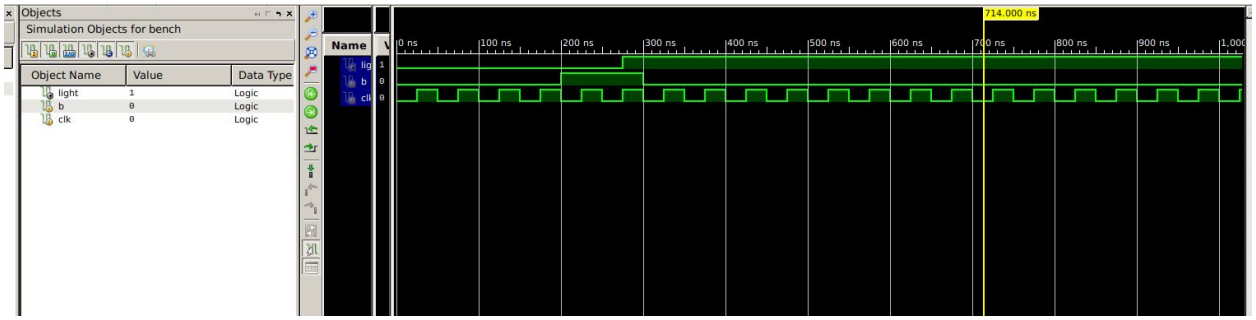
New Concepts
We learned how to implement FSMs in verilog.

Discussion:
The hardest part was debugging the CASE statement for the finite state machine.

Conclusion
The purpose of this part of the lab was to expand our knowledge of state machines in verilog.

Questions

Question 1
Notice that light turns on 1 clock cycle after b is pressed.



We do not see light turn off since simulation time is too short

Question 2

Through a combination of changing our clock frequency and our cnt_rst value, we can change the time at which the light resets.

For example, right now cnt_rst = 250000000 (base 10), and our timer is 25mhz. Therefore we reset at 10 seconds, since 250000000/25mhz = 10000000 ms or 10 seconds. If we want 20 seconds, we simply make cnt_rst =500000000 (base 10).