Lab 3 Report
Topics and Questions

ECE341, University of Idaho

Spring 2015

The following apply only to the report for Lab 3:

- In the testing and verification section:
  - Include and complete a table similar to the one below. Use the oscilloscope to measure the step delay (*not* the stopwatch tool); be sure to include oscilloscope screen captures (of the stepper motor signals and your instrumentation LEDs) for each entry in the table.

Inputs		**Stepper Parameters**		
BTN2	BTN1	Step Mode	Desired Step Delay	Measured Step Delay
OFF	OFF	FS	40ms	
OFF	ON	HS	20ms	
ON	OFF	HS	20ms	
ON	ON	FS	40ms	

  - Measure how long it takes to execute code that is *not* part of the delay period. Describe the method used to measure this delay [1].

- In the conclusion of your report:
  - What are some various methods for implementing a FSM in C? When might one method be better than another in a given situation? Describe the advantages and disadvantages of each method. What method do you like best? You will likely have to do some research, make sure to cite your sources.
  - What are the biggest differences between an FSM implemented on a microcontroller and an FSM implemented on an FPGA?
  - How often are the button inputs sampled? Discuss the consequences of this and briefly describe one possible way of solving the problem.

[1] Hint: Use one of the unused LEDs on the stepper motor header to determine the time it takes to execute the code.