

ECE 3544: Digital Design I  
Project 5 – Datapath and Finite State Machine Design

Student Name: Jacob Abel

Honor Code Pledge: I have neither given nor received unauthorized assistance on this assignment.



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**Grading: The design project will be graded on a 100 point basis, as shown below:**

*Manner of Presentation (30 points)*

\_\_\_\_ / 5 Completed cover sheet included with report

\_\_\_\_ / 15 Organization: Clear, concise presentation of content; Use of appropriate, well-organized sections

\_\_\_\_ / 10 Mechanics: Spelling and grammar

*Technical Merit (70 points)*

\_\_\_\_ / 5 General discussion: *Did you describe the objectives in your own words? Did you discuss your other conclusions and the lessons you learned from the assignment?*

\_\_\_\_ / 15 Design discussion: *Did you discuss the approach you took to designing and implementing the modules that make up your system, and how you synthesized the system from its components?*

\_\_\_\_ / 5 State diagrams: *Does your state diagram model a system that performs the required tasks? Connect this discussion to your design discussion.*

\_\_\_\_ / 5 Testing discussion: *What was your approach to formulating your test benches? How did you verify the correctness of the modules you designed?*

\_\_\_\_ / 10 Supporting figures: *Waveforms showing correct operation of the top-level module.*

\_\_\_\_ / 30 Validation of the final design on the DE1-SoC board

===== **Project Grade**