Lab 1 Report Rubric

Group Rubric (20 points)			
Part 1	All requirements met. (5 points)	Some requirements met. (2-4 points)	No requirements met. (0 points)
Part 2	Same as above (5 points)	Same as above (2-4 points)	Same as above (0 points)
Part 3	Same as above (10 points)	Same as above (4-8 points)	Same as above (0 points)

Individual Rubric (30 points)			
Team Evaluation:	Team evaluation is included (5 points)		No team evaluation (0 points)
Prelab:	Completely finished (5 points)	Some parts unfinished (2-4 points)	Not started (0 points)
Lab Report	See Lab Report (20 points)		No Lab Report (0 points)

Hardware Design Rubric (20 points)			
Part 1 - Design	The circuit diagram is complete. Appropriate colors are chosen for the wire-wrapping portion. (5 points)	The circuit diagram is vague and does not include pin numbers. Colors for wire-wrapping are not chosen according to any pattern (2-4 points)	No circuit diagram is provided (0 points)
Part 2 - Design	Pin numbers on the LCD and microcontroller are included. Appropriate colors are used for each wire. (5 points)	No attention was paid to color scheme. Soldering and wire-wrapping is messy. (2-4 points)	No cable is connected. (0 points)
Part 3 - Design	Same as part 1 (10 points)	Same as part 1 (4-8 points)	Same as part 1 (0 points)

Software Design Rubric (20 points)			
Part 1 - Code	Buttons are debounced. LEDs are clearly distinguished in the code. The RUN LED is initially on. (5 points)	Buttons are not debounced. LEDs are not clearly distinguished in the code. The RUN LED is not initially on. (2-4 points)	Software does not fulfill the requirements at all. (0 points)
Part 2 - Code	All functions work properly (5 points)	Some functions do not work properly (2-4 points)	LCD will not initialize (0 points)
Part 3 - Code	Interrupts are used, state machine implementation, requirements are fulfilled. (5 points)	Interrupts are not used, no state machine implementation, requirements are not fulfilled. (2-4 points)	No requirements are followed. (0 points)
Code Readability:	Define statements should be used for all LAT and PORT usages. Comments are given for each function as a description. Initialization code is in separate files. Coding guidelines are followed Source control commit history is included. (5 points)	Some requirements missing. (2-4 points)	No requirements met. (0 points)

Quality Assurance Rubric (20 points)			
Part 1 - Tests	A circuit diagram for the circuit to test the LEDs is provided. Picture, circuit diagram, or proof of at least two other tests are provided. (5 points)	It is not clear the LEDs were tested. Other tests appear to have been done, but the details are not clear. (2-4 points)	It is not clear that any test was done. (0 points)
Part 2 - Tests	Code for testing the delayUs() is provided and clearly listed. Code for testing writeLCD() is shown and the oscilloscope screenshot is provided. A screenshot for each of the four data pins for the writeLCD is provided. (5 points)	Some requirements missing. (2-4 points)	No requirements met. (0 points)
Part 3 - Code	Software is provided for testing the getTimeString() function. (5 points)	No software provided or it is not clear the code actually tests the function. (2-4 points)	No requirements are followed. (0 points)
Code Readability:	Coding guidelines are followed All test code "includes" code from another header file, presumable made by the software designer. (5 points)	Some requirements missing. (2-4 points)	No requirements met. (0 points)

Systems Integrator Rubric (20 points)			
Part 1 - Hardware	LEDs, resistors, and headers are properly soldered onto the vector board. Wire wrapping is done. A picture is provided. (5 points)	LEDs, resistors, and headers are not properly soldered onto the vector board. No wire-wrapping is done. A picture is not provided. (2-4 points)	LEDs and resistors remain on the breadboard. (0 points)
Part 2 - Hardware	Same as for Hardware, Part 2. Also, have header pins properly soldered to the LCD Display. Show a picture of your work. (5 points)	Same as for Hardware, Part 2 (2-4 points)	Same as for Hardware, Part 2 (0 points)
Part 3 - Hardware	Everything is wire-wrapped and soldered. (10 points)	Soldering or wire-wrapping is incomplete or messy. (4-8 points)	No requirements are followed. (0 points)