

You will need to obtain the signature of your TA on the following items in order to receive credit for your lab assignment. Signatures are due by **Friday, November 15, 2019 (Part 1 Elements)** and **Friday, November 22, 2019 (Part 2 Elements)**.

Print your name below, sign the honor code pledge, circle your course number, and then demonstrate your working hardware & firmware in order to obtain the necessary signatures.

Student Name: HARSH RATHORE

Honor Code Pledge: "On my honor, as a University of Colorado student, I have neither given nor received unauthorized assistance on this work. I have clearly acknowledged work that is not my own."

Student Signature: Bamore

Signoff Checklist

Part 1 Required Elements

- ☒ Pins and signals labeled and decoupling capacitors present on board
- ☒ C code for EEPROM functional, contents present after power cycle
- ☒ I²C diagram/timing analysis

TA signature and date

Part 2 Required Elements

- ☒ LCD functional, C code for basic LCD routines functional
- ☒ LCD control signal timing meets specifications (logic analyzer trace/diagram, analysis)
- ☒ Elapsed time stop, restart, reset to "00:00.0"
- ☒ Good integration with previous code, all functions work, no irregularities

Part 2 Supplemental Elements

- ☐ LCD Hex/DDR/GRAM dumps, custom LCD characters, fun logo
- ☐ SPI interface, logic analyzer trace, compare with I²C
- ☐ TI MSP432 ARM code development, 2 new features, ISR
- ☐ PCF8574 I²C I/O Expander, input, output, ISR

FOR TA/INSTRUCTOR USE ONLY

Part 1 Elements

	Not Applicable	Poor/Not Complete	Meets Requirements	Exceeds Requirements	Outstanding
Schematics, SPLD code	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardware physical implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Required Elements functionality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Sign-off done without excessive retries	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Student understanding and skills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Overall Demo Quality (Part 1 elements)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

FOR TA/INSTRUCTOR USE ONLY

Part 2 Elements

	Not Applicable	Below Expectation	Meets Requirements	Exceeds Requirements	Outstanding
Schematics, SPLD code	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hardware physical implementation	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Required Elements functionality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supplemental Elements functionality	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sign-off done without excessive retries	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Student understanding and skills	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Overall Demo Quality (Part 2 elements)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

TA/Instructor Comments ☐ ☐ ☐

Part 1

- (+) Page work working (extra)
- (+) Data retained in power cycle.
- (+) version control done
- (+) Good UI
- (+) Good error handling.
- (+) Read I2C concepts.

PT2 11/22

Handwritten signature
SHOWED LCD PRINTING HARDCODED STRING
AN RUNNING TIMER. APPEARS ACCURATE
BUT NO UI / CONTROL OF TIMER

PT2 11/23

- (*) Clock functional but ~~not~~ not displaying correct values after 10 minutes (variables not handled properly)
- (*) clock accurate
- (+) stop, restart, reset works with UI.
- (*) Supplemental not done
- (*)

Tammy