

Homework 2: Lab Report for Lab 4**Due: Friday, October 18, 2019 at 11:59pm**

For this homework assignment, you are to write up a lab report for what you did for Lab 4.

This is an individual assignment, submit as a PDF to GradeScope by 11:59pm Friday 10/18/19.

As a reminder: Lab 4 was to print out one of 5 specific lines of text to a 16x2 display based on how much light was detected by at photoresistor. The 5 specific lines of text are:

- dark
- partially dark
- medium
- partially light
- fully lit

The entire write-up for the lab can be found at:

https://www3.cs.uic.edu/pub/CS362/LabsF19/CS_362_Lab_4.pdf

The lab report should contain all of the information needed to re-create the working Arduino for the lab (code and wiring) plus a description of what/why the given code and wiring is needed.

Since different photoresistors can produce different analog values under the same light conditions, the lab report should also contain your “experiment” for determining your chosen values to distinguish between the 5 text outputs.

The form of lab report should mimic the Tutorial pages from the Arduino web pages. The required sections are:

- Title
- Name and NetId
- Description of the Lab Assignment (paraphrase the write-up)
- Hardware needed (all pieces include wires, breadboard, Arduino Uno, etc)
- Circuit and Wiring
 - Written description of step-by-step wiring
 - Diagram (use of a Fritzing diagram is wonderful: <http://fritzing.org/projects/>)
- Schematics – Only needed if placement of resistors/components and types of resistors/components is not obvious in Circuit and Wiring section.
- Code used (include the entire code here)
- References (links to information used/useful for completing lab)
- Experiment performed with Photoreistor
 - Why/how did you select the ranges that determine which line of text is displayed?
 - How did you simulate/create a “fully lit” environment?
 - How did you simulate/create a “partially lit” environment?
 - ...
 - How did you simulate/create a “dark” environment?
- Conclusion - Discussion/Ideas/Thoughts/Lessons-Learned