
# *µ*Project #4 "Blinded by the Light" or "Turn up the Heat"

Due Thursday 2/9

**HCI-833 Applied Gadgets, Sensors and Activity Recognition in HCI**
**Spring 2017**

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**Purpose**

This *µ*project explores the use of a resistance based sensor – either a photocell or a thermistor. You can decide which of these sensors to implement.

**What to Build**

Build a simple device which uses four or more LEDs as a simple magnitude display indicating either light level (sensed by a photocell) or temperature (sensed by a thermistor). That is if the light (or temperature) is "low" no LEDs will be lit, and as the light (or temperature) increases more LEDs should be turned on. For the light sensor version, you should tune the response of your device to demo well in a typical classroom by shadowing/covering it with your hand. For the temperature sensor version, you should tune the response of your device to demo well in response to typical ambient room temperature vs. human skin temperature.

You will want to make use of a voltage divider circuit for this µproject with one leg of the circuit being a fixed resistor and the other being your variable resistance sensor.

**Turning the Assignment In and Grading**

This assignment is turned in by having one of your classmates certify completion and turn in a "peer demo" sheet signed by them (and fill out the corresponding on-line form on the Blackboard system as well). This project is pass/fail. *µ*Projects will be accepted without late penalty until Monday April 3rd (after which a 10% per day late penalty will be applied). However, please keep in mind that additional *µ*projects will be coming in rapid sequence (and you only have one breadboard to put your circuits on), so don't fall behind.