Student's final project proposal form
99-355 Intro to Arduino
Carnegie Mellon University

Student name: __________________________ Project title: _______________________________________

Date: ________________ 99-355 section (circle one): A1  A2  A3  B3

By doing this project, I aim to learn:

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Three (or fewer) sentence project description:

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Any special materials/parts/methods needed that aren't available in the Phys Comp Lab? □ yes □ no
If yes, list or explain:

_____________________________________________________________________________________
_____________________________________________________________________________________

Orders for additional parts that IDeATe is purchasing must be submitted via this form: forms.gle/GxHX2Cnx6e1ZPMkW8

Student's criteria for success—i.e. what is the endpoint you'd be satisfied reaching?

_____________________________________________________________________________________
_____________________________________________________________________________________
_____________________________________________________________________________________

Mechanical/physical project sketch

- Can be very sketchy! Aim to show roughly what the thing will look like when built, without need for great detail
- Include multiple views, such as top, front, and side, or whatever other views are appropriate for your design
- Label any salient features or points of user interaction
- The emphasis here is on considering your fabrication plan, not producing a beautiful work of art

example sketch
**Functional block diagram**

- Diagram the flow of data through your system
- List inputs on the left, computational steps in the center, and outputs on the right

**Example functional block diagram**

```
pullbutton → Arduino → LCD display → LED output
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**Electrical/electronic schematic sketch**

- Draw the electronic circuit you'll build below
- Show electrical connections only, *not* physical appearance
- For parts without standardized symbols, simply write the part name or number in a rectangle with pins as follows:
  - power (if any) goes on top
  - ground (if any) goes on bottom
  - inputs (if any) go along the left
  - outputs (if any) go along the right

**Schematic symbols reminders**

- Wire
- Node
- Crossing w/o contact
- Resistor
- Switch
- Button
- LED
- Potentiometer
- 5V power
- Ground
- Arduino (draw pins as needed)