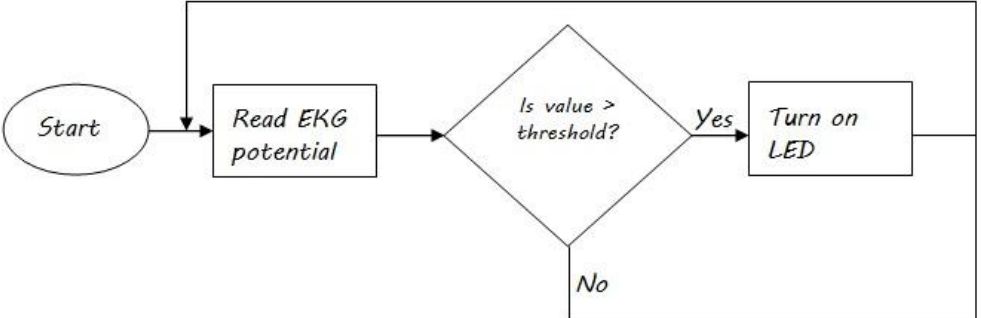
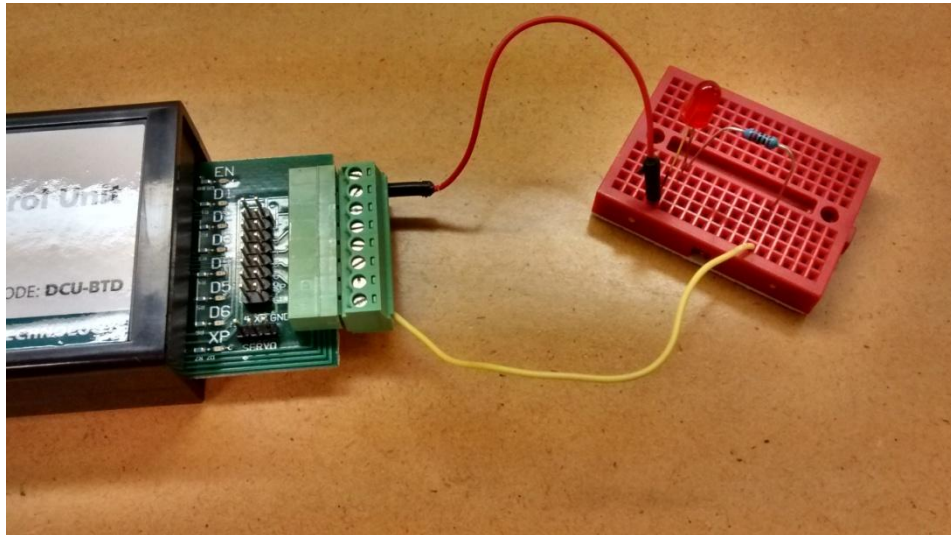


Engineering Design Sheet

Project Code Name: <i>Project Squint</i>	Team Members: <i>Ravi and Tina</i>
Design Objective	<i>We need to detect the position and motion of a person and activate a water pump if they are close and want a drink.</i>
Design Requirements and Constraints	<i>Our device should...</i> <ul style="list-style-type: none"> <i>Run continuously</i> <i>Turn on a light or buzzer when the person blinks</i>
Process Map (Work Flow Diagram)	 <pre> graph LR Start([Start]) --> ReadEKG[Read EKG potential] ReadEKG --> Decision{Is value > threshold?} Decision -- Yes --> TurnOnLED[Turn on LED] TurnOnLED --> ReadEKG Decision -- No --> ReadEKG </pre>
Ideas and Sketches	<p><i>Prototype - EKG sensor connected as shown in Handout, LED and resistor connected to DCU</i></p> <p><i>LED on DCU line 1, turns on when person blinks (>1.4 mV)</i></p> <p><i>If we had an EKG sensor on each eye, we could control three devices (L blink = line 1, R blink = line 2, L+R blink = line 3)?</i></p>
Test Log (Include what did not work and how you changed it)	<ul style="list-style-type: none"> <i>Had to experiment a bit to find a good threshold value for blinking</i> <i>Connected the LED at first backwards - wouldn't ever light up. Used the "Test DCU" option to test out the LED.</i>
Final Design (Include screenshot of Logger Pro Digital Out dialog box)	<i>See pictures below</i>

and pictures, as necessary)



Hardware Set Up:

- DCU Line 1 - LED and Resistor (in series)
- EKG Sensor in CH-1 in LabQuest

Test DCU

☐ Line 1 On ☐ Line 2 On ☐ Line 3 On

Configure Activation

☒ Activate Line 1

If	Potential	Is	>	1.412	mV	
	Potential	Is	>	0	mV	

Logger Pro Digital Out dialog box