Taught By: Alexander Rivera

Persistence of Vision Display

Project Info

Project Description: Spinning LED display using arduino to show/animate text

Target Audience: Those with interest in…

- Hardware/Software Design
- High Level Microcontroller programming
- Through hole/Surface Mount Soldering*

Things required from you: Some Spare Time, Willingness to learn, Soldering Station*

Class Overview

Classes will be no longer than an hour. Structure will generally be 30 mins of instruction followed by 30 min of open discussion/questions.

Class Structure:

- Class 1: Introduction
- Class 2*: Hardware Overview/ Working principle
- Class 3: Soldering Tutorial/ Assembling Hardware
- Class 4: Coding Round 1
- Class 5: Coding Round 2
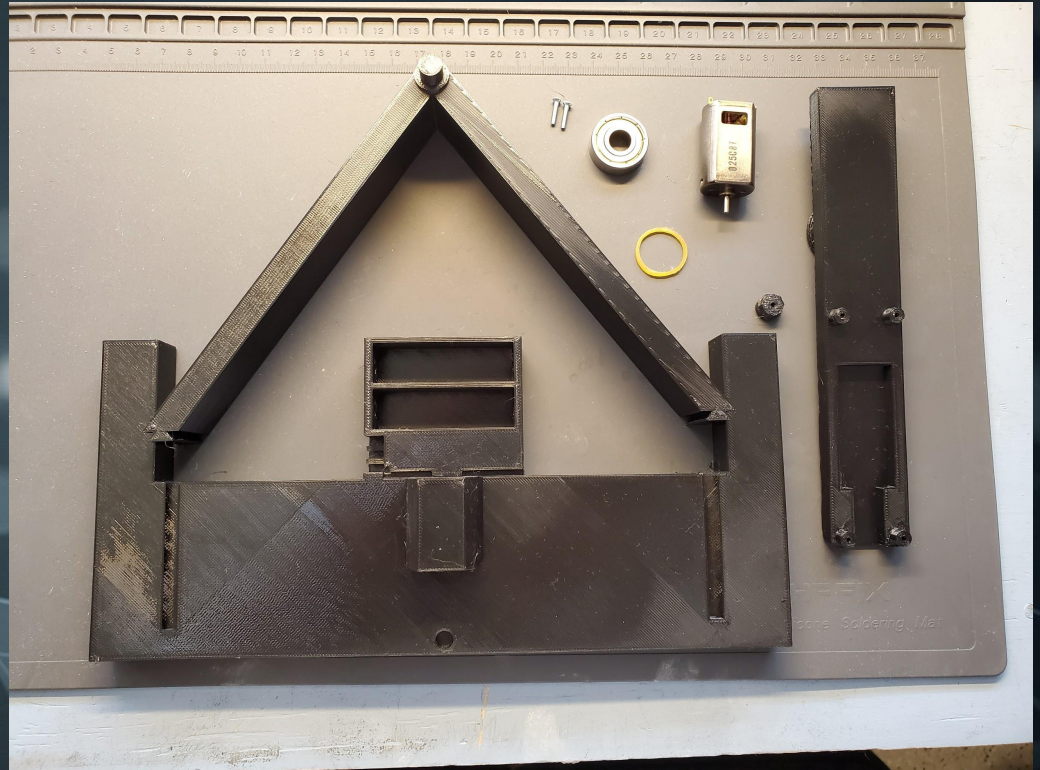- Class 6: Finishing Touches/Debugging*

Hardware Overview

- 3D Parts: Base, Stand, Blade, and Motor Gear
- Other: 2M Bolts, Bearing, Motor, and Rubber Band
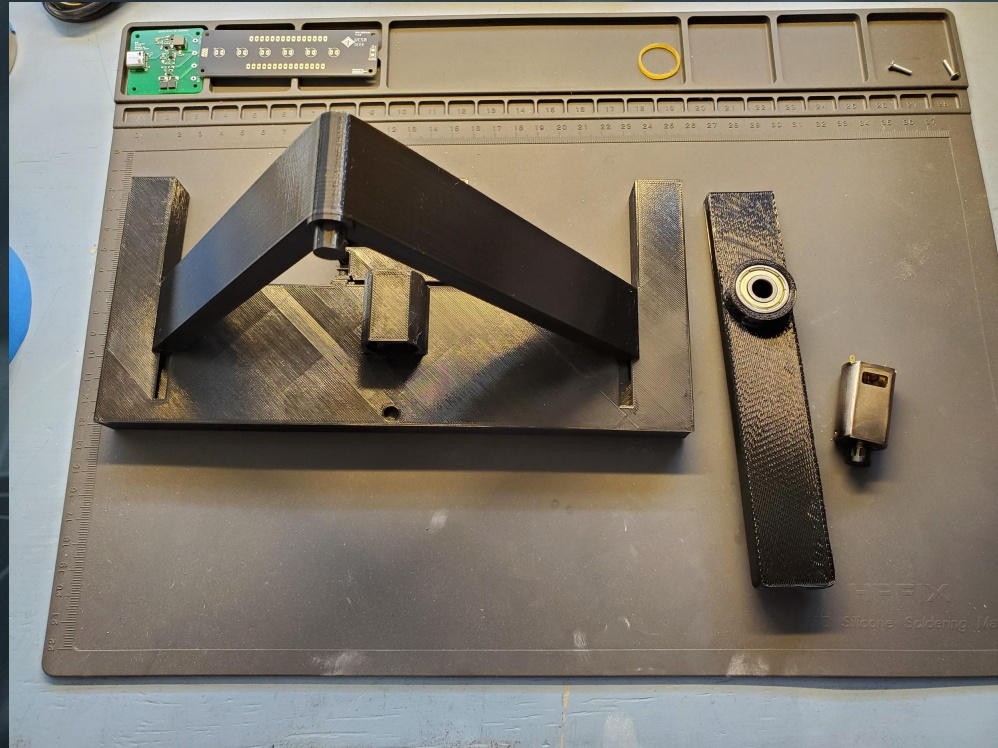- Some assembly required
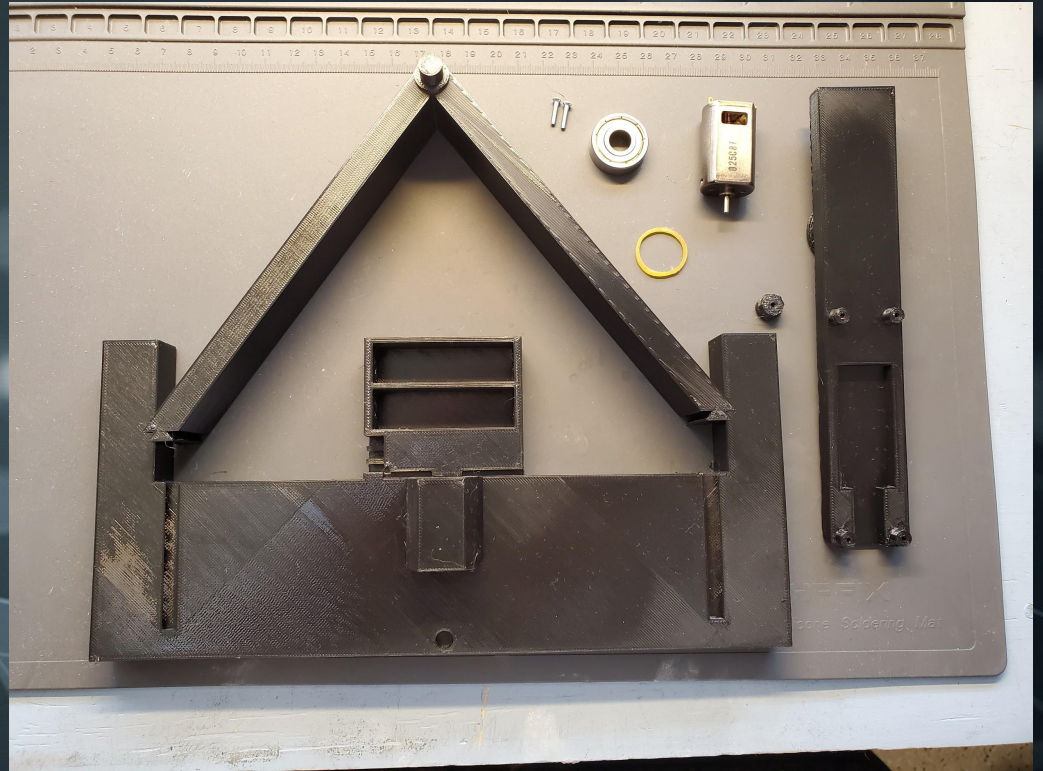
Assembly

- Put Motor Gear on Motor Shaft
- Slide bearing in underside of blade
- Slide Dovetail on Stand into base***

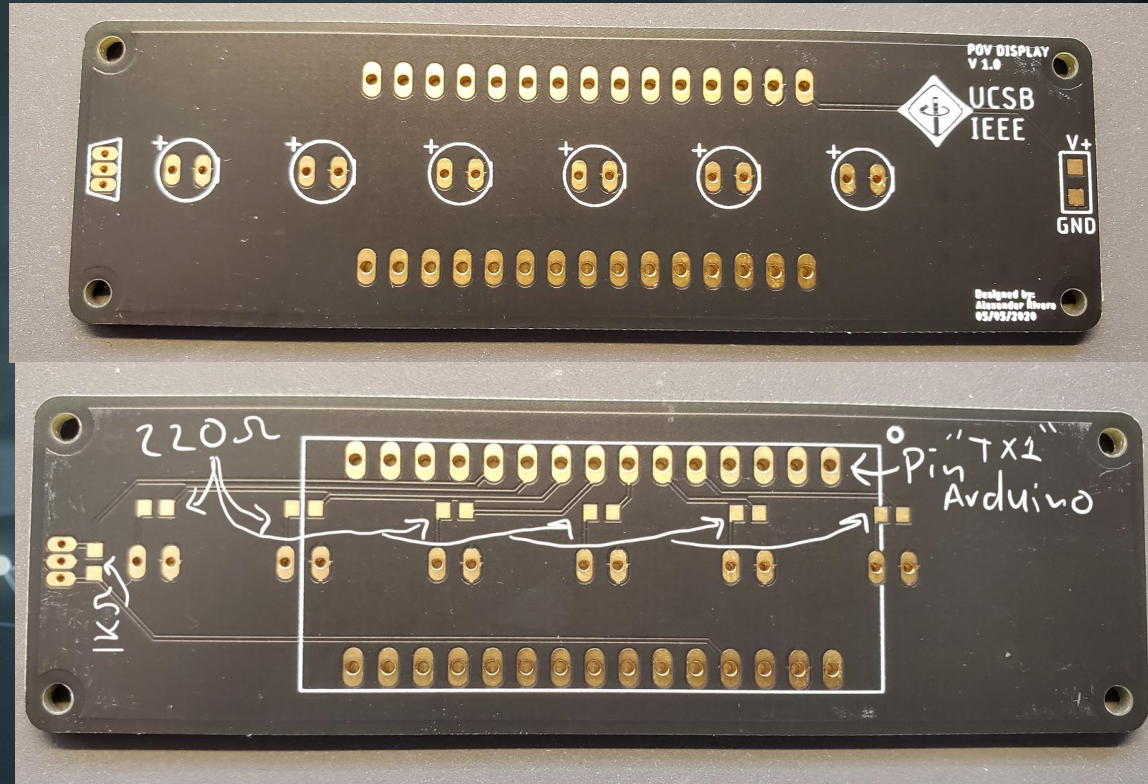*be very careful one leg doesn't get ahead of the other or it will break!!!
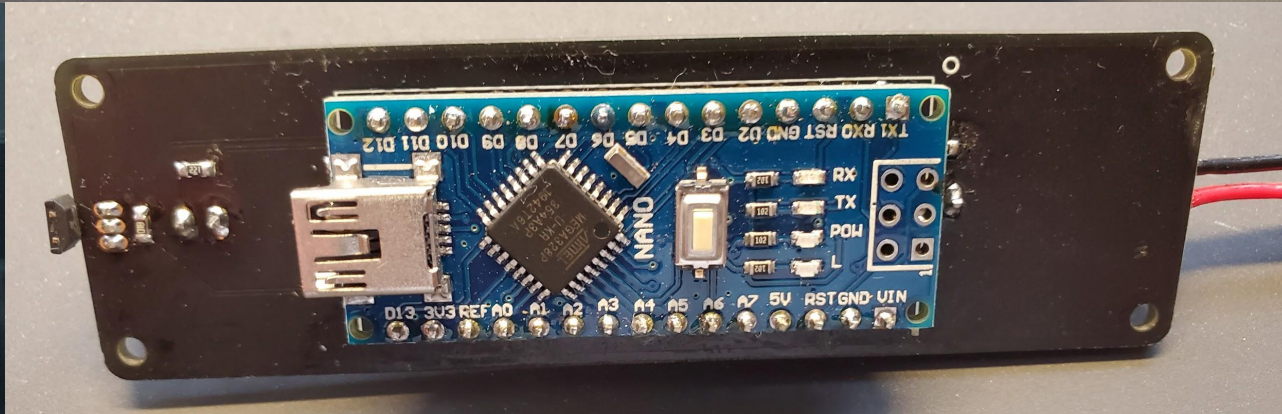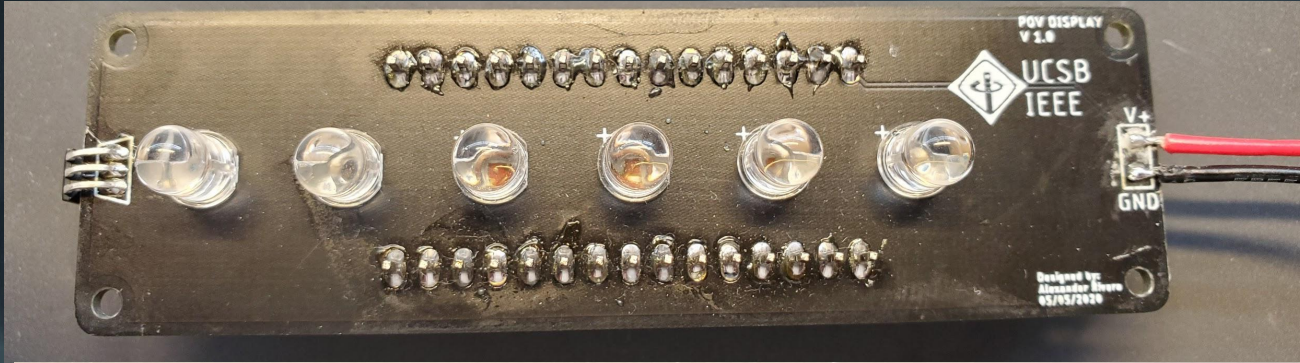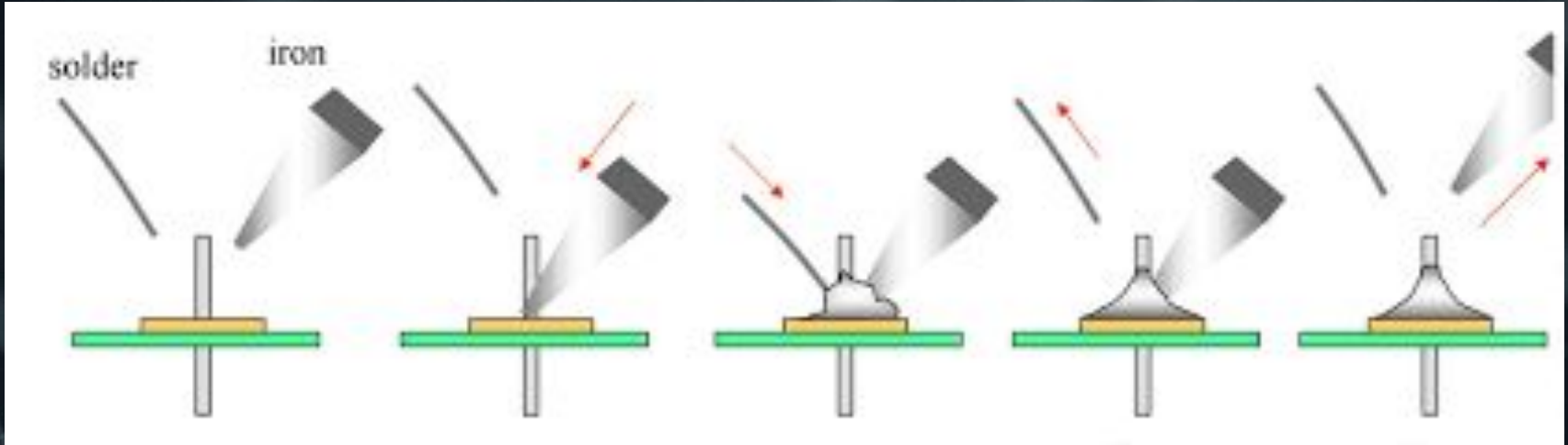
Finished Assembly

PCB Assembly

- Parts to Solder: Arduino Nano, Hall Effect Sensor, 6 Led's, 6 220 Ohm resistors, 1 1k Ohm resistor
- SOLDER ARDUINO LAST!!! Resistors and LED's are underneath arduino
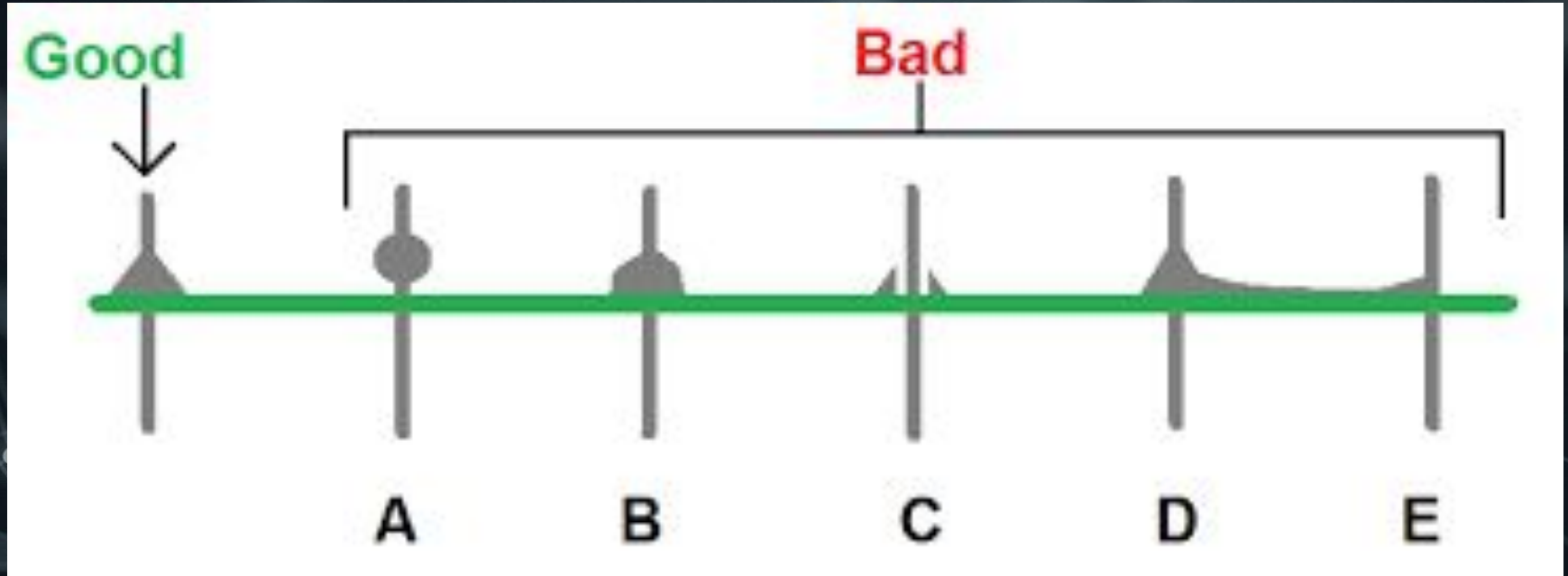- Use Silkscreen/Pictures for which side to solder components
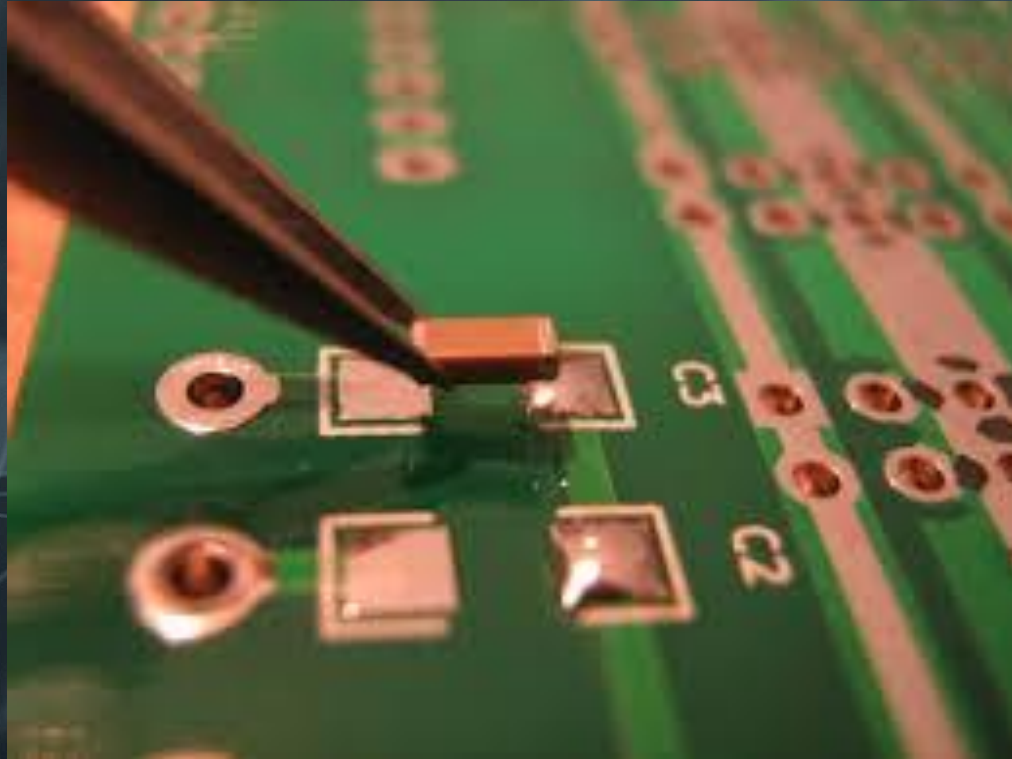
Finished Assembly

Soldering Techniques

Soldering Techniques

Soldering Techniques

Complete Hardware Guide

https://www.youtube.com/watch?v=qQhcBNbIjTM&t=1s

Questions For You

- Please download KiCad for next week's PCB tutorial
- Get Mailing List/Payment.

Open Discussion

Questions, Comments, Concerns...