Introduction to Arduino w/ Hydroponics

HackManhattan

Schedule

- Introduction to Arduino
- Powering the module
- Reading the soil moisture level
- Powering the water pump
- Final Assembly Overview

Parts List

- IRF520 Breakout Board

- Adafruit Metro Mini

- USB-A Female Breakout Board

- Micro-USB Breakout Board

- Soil Moisture Sensor

- USB Powered Water Pump

Introduction to Arduino

- Adafruit Metro Mini 5V
- Digital Pins On - Off
- Analog Pins 0-255
- Labs
  a. Hello World Application
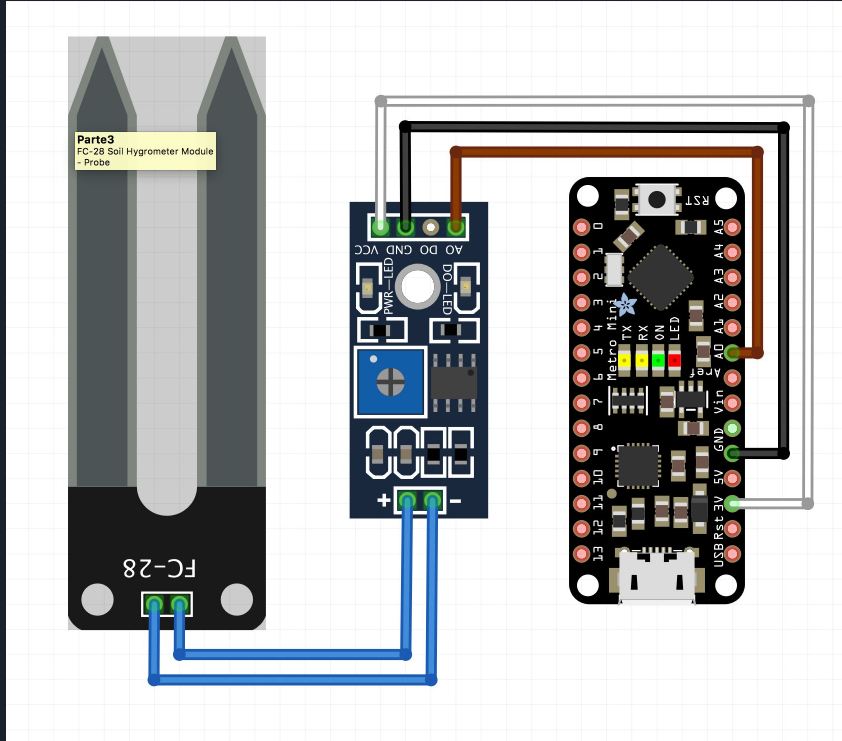 b. Blink Application

Parts List

- Adafruit Metro Mini 5V
- USB Micro Breakout Board
- USB Type-A Female Port
- Mosfet Relay Board

Moisture Reading

- Connected to 3.3V pin
- Water reading: 320
- Dry Soil: 700
- Wet Soil: 360
- Lab: Plot soil moisture

Moisture Sensor Connections

USB Power Supply

- 5 Voltage Output
- 2.1A Current Output
- Components to Power
  - Arduino
  - Water pump
- Lab: Toggle Relay LED

USB Power Connections