Devices used:

* Raspberry pi zero w
* DHT11 temperature and humidity sensor module
* YL-69 Soil moisture sensor module

Functions

* Collect soil’s binary moisture value
  + Use it turn on led to remind user to water the plant
  + Send data to mongadb atlas
* Collect ambient temperature and humidity
  + Send data to mongadb atlas
  + Present on website as a graph getting data from mongadb in the server side of the host box

Backend:

* Model folder and Utils folders holding schema and mongadb connection with the realtime updated data
* Code to collect the sensor data from mongo to send current sensor’s, soil moisture status, ambient temperature, and humidity to be sent to the website/client to be displayed.
* Write code to turn LED on when soil is dry.

Frontend:

* Use receiving dataset to implement a graph with adjustable time span to showcase past to current change in temperature, humidity, and soil moisture.
* A live preview of current stat values on top of page, using information from the received object.
* A section mentioning last time the plant was watered

System encloser:

Build an encloser to hold all wiring, raspberry pi zero w, breadboard and needed wiring extensions to reach pot. Solder connections needed and run power to pi.

Current to do/progress log:

* ~~Figure out express from nodeJS~~
* ~~Setup server using express~~
* ~~Create sample water py file~~
* ~~Send and receive data from mongodb~~
* ~~Setup MVC model in the code~~
* Figure out a way to make incompatible pi to run mongodb on it’s arm6 processor
* Get Pi to send data to mongo