Plant Power Final Presentation

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Recap

Plant Power: A user friendly solution for efficiently growing plants with technology

ikea.com

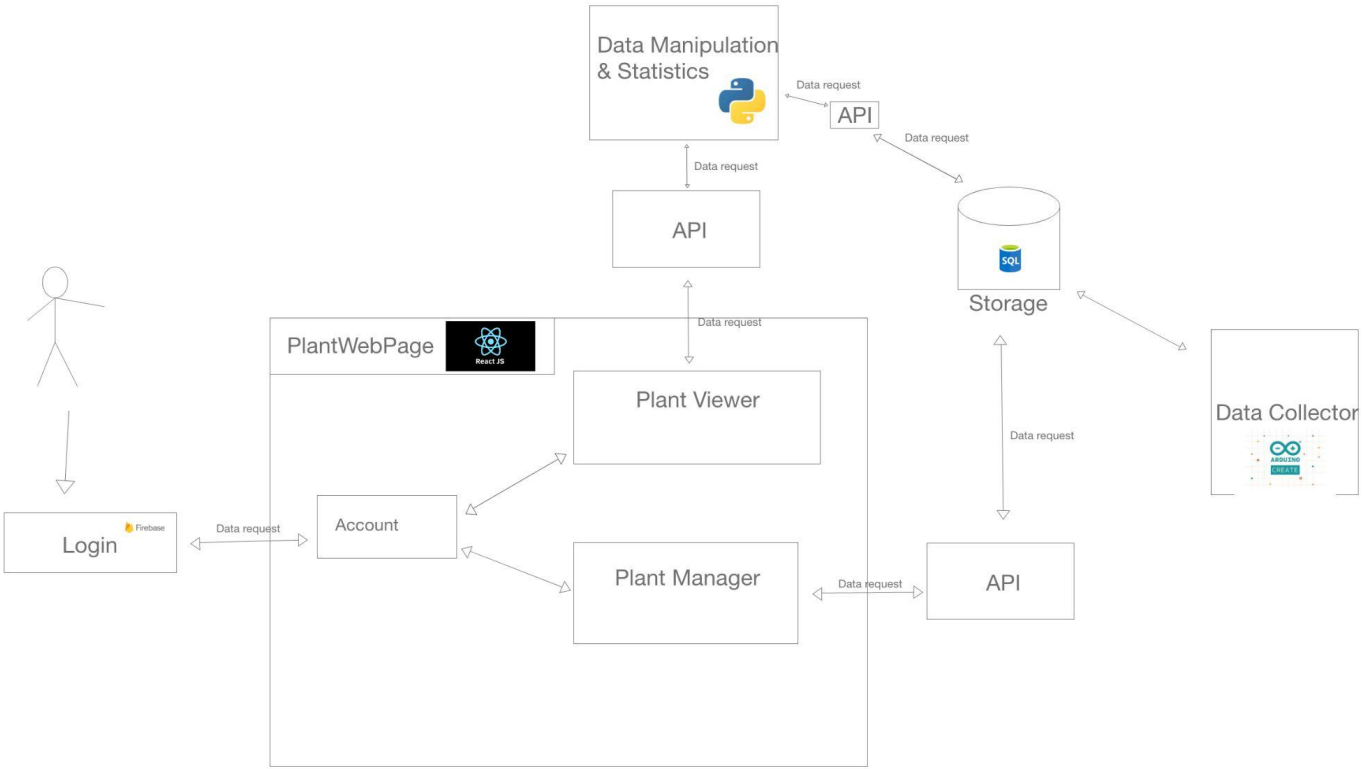
System Overview

Five Components:

- Data collector
- Data manager
- Data analyzer
- Validator
- Plant webpage

thenounproject.com

System Components & System Diagram



Actor identification

Main human actor: the user who is a home grower

gardeningknowhow.com

Main nonhuman actor:arduino microcontroller

store.arduino.cc

Architectural Style

Event Driven Architecture Style

System reacts to external events

and communicates with events

dezeen.com

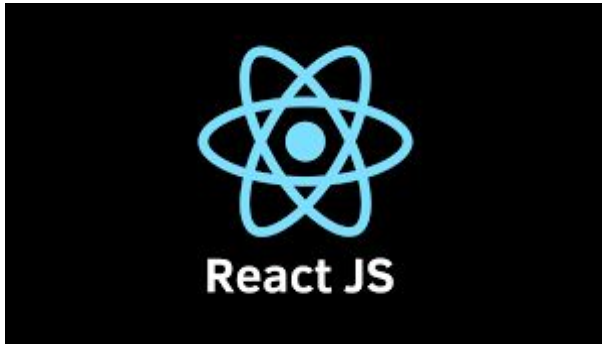
Design Pattern

Command Design Pattern

Encapsulates command request letting you parametrize the clients with different requests

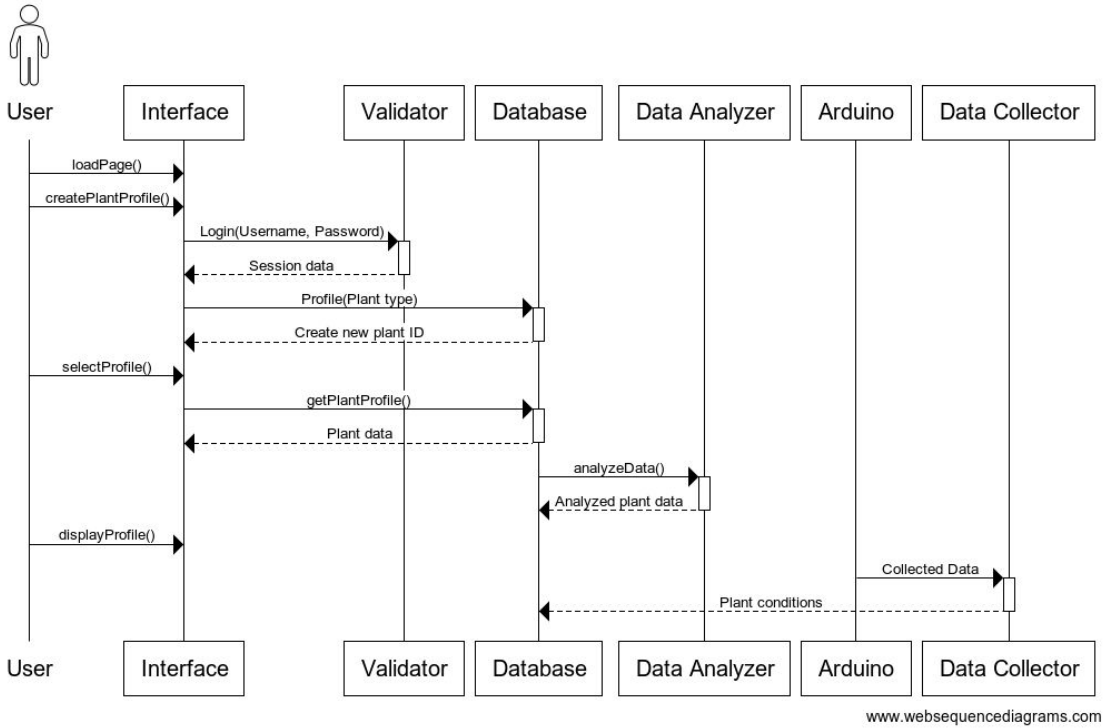
Frameworks

React Framework for our webpage

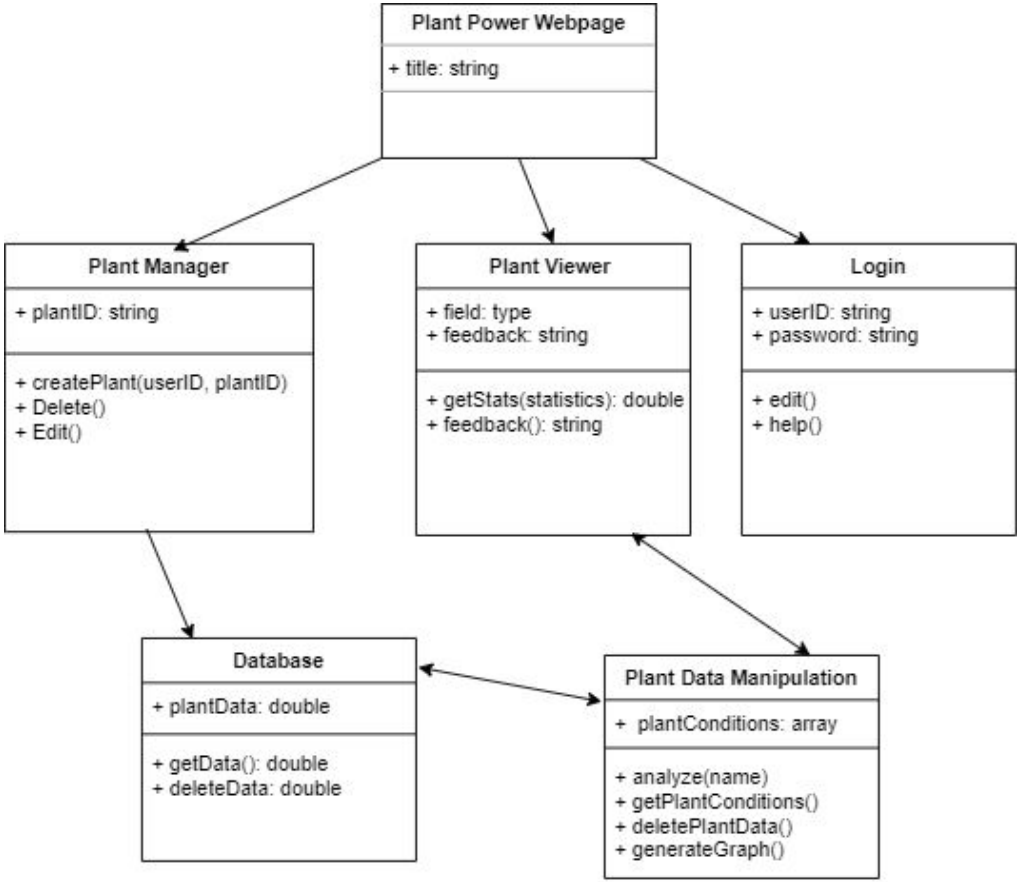


Reactjs.org

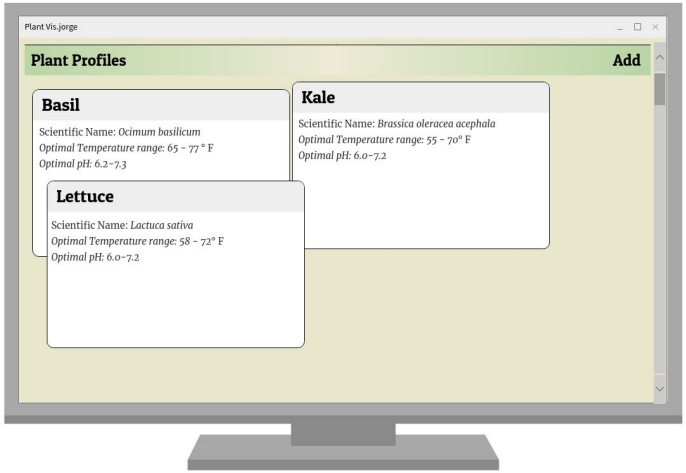
Sequence Diagram

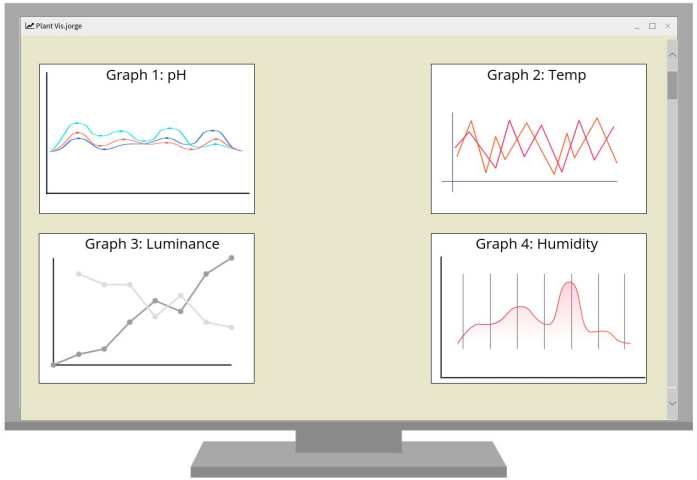


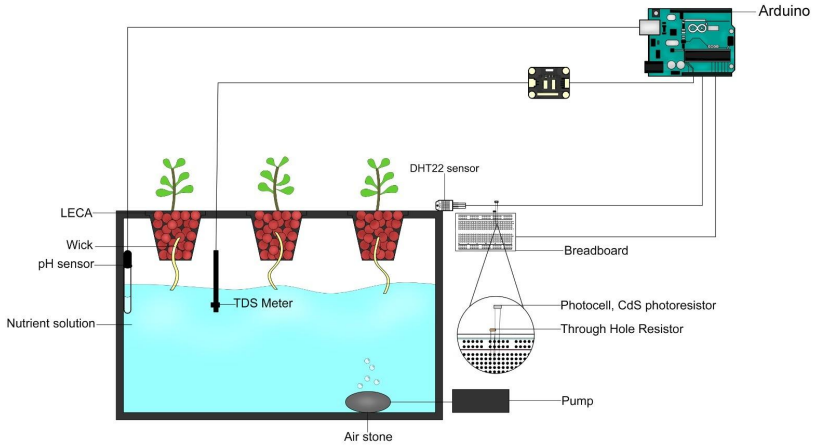
Class Diagram



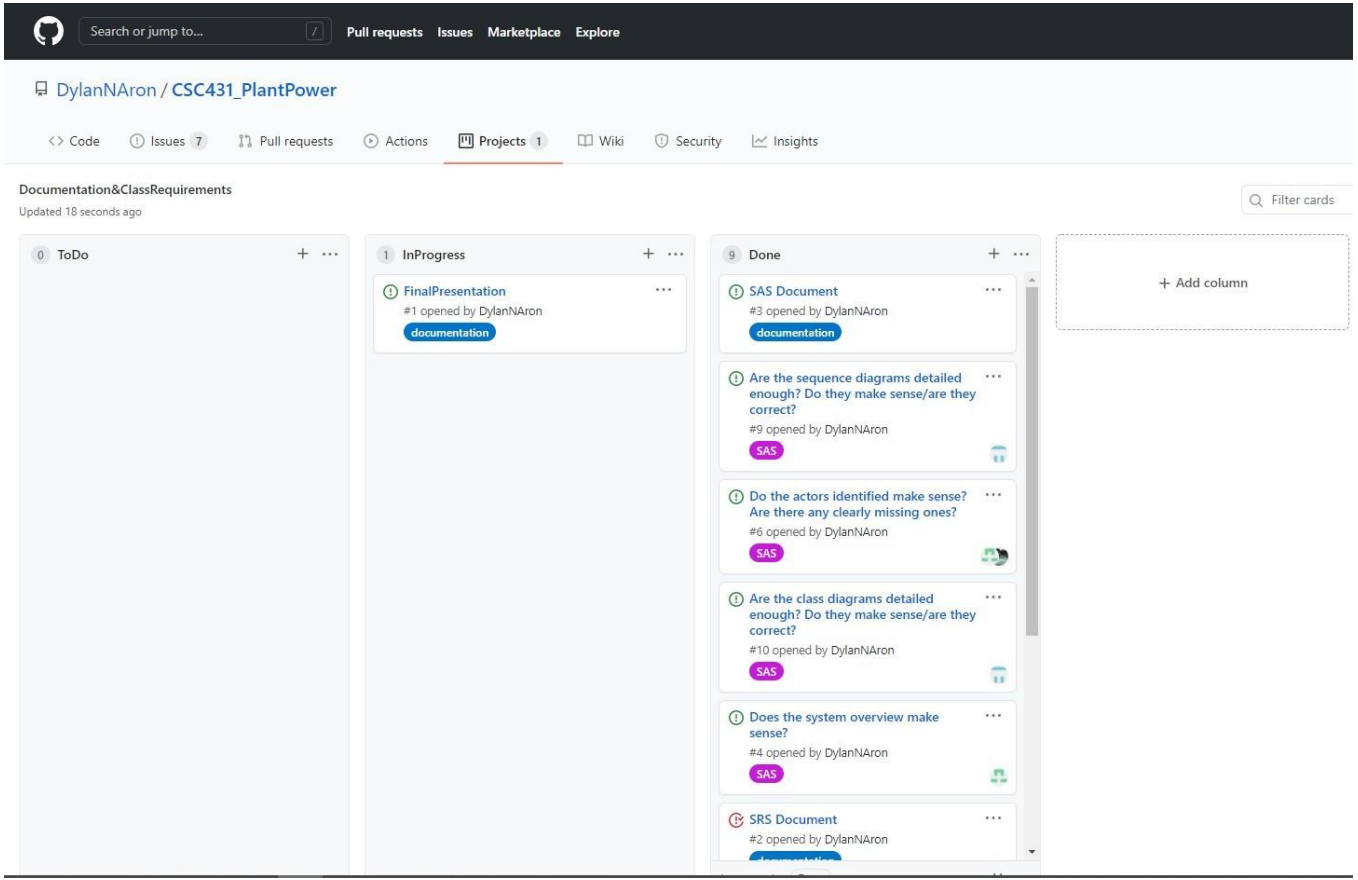
Mockups


Plant Vis.jorge
Plant Profiles
Add
Basil
Scientific Name: Ocimum basilicum
Optimal Temperature range: 65 - 77 ° F
Optimal pH: 6.2-7.3
Kale
Scientific Name: Brassica oleracea acephala
Optimal Temperature range: 55 - 70° F
Optimal pH: 6.0-7.2
Lettuce
Scientific Name: Lactuca sativa
Optimal Temperature range: 58 - 72° F
Optimal pH: 6.0-7.2


Plant Vis.jorge
Graph 1: pH
Graph 2: Temp
Graph 3: Luminance
Graph 4: Humidity


Arduino
DHT22 sensor
LECA
Wick
pH sensor
Nutrient solution
TDS Meter
Breadboard
Photocell, CdS photoresistor
Through Hole Resistor
Pump
Air stone

Github Project Planning



Github Link

https://github.com/DylanNAron/CSC431_PlantPower