TBD Gardening Project Name - Group 9

Team members:

Nicholas Chitty
Brendan College
Scott Peirce
Justin Pham-Trinh

UCF Senior Design Fall 2022 - Spring 2023

Contents

List of Figures

List of Tables

1 Narrative

1.1 Problem

1.2 Narrative

1.3 Goals

2 Requirements

2.1 MCU

2.1.1 Minimum Viable Product

2.1.2 Stretch

2.2 Power

2.2.1 Minimum Viable Product

2.2.2 Stretch

2.3 Sensing

2.3.1 Minimum Viable Product

2.3.2 Stretch

2.4 Web

2.4.1 Minimum Viable Product

The web component of the project should:

- Attach to a weather API to receive:
  - Rain
  - Sun light
  - Temperature
  - Frost warnings
  - Humidity

- Alert users of conditions outside of automatic control (i.e. soil composition and frost)
- Change control parameters:
  - Sun light
  - Water
  - Soil parameters
- Have an intuitive user interface
- Communicate with the MCU

2.4.2 Stretch

It would be nice to have the web component:

- Set control parameters based on presets for plants
- Get plant data from the web to pass to MCU
- Communicate over secure channels

3 Block Diagrams

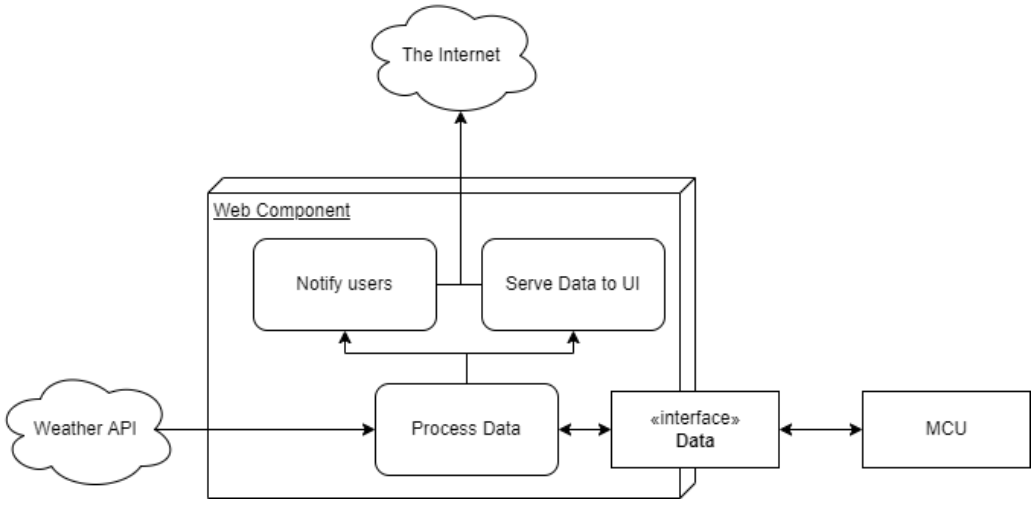
3.1 MCU

3.2 Power

3.3 Sensing

3.4 Web

Figure 1: Web component block diagram



4 Project Management

4.1 Budget

4.2 Finance

4.3 Milestones

4.3.1 Fall

4.3.2 Spring