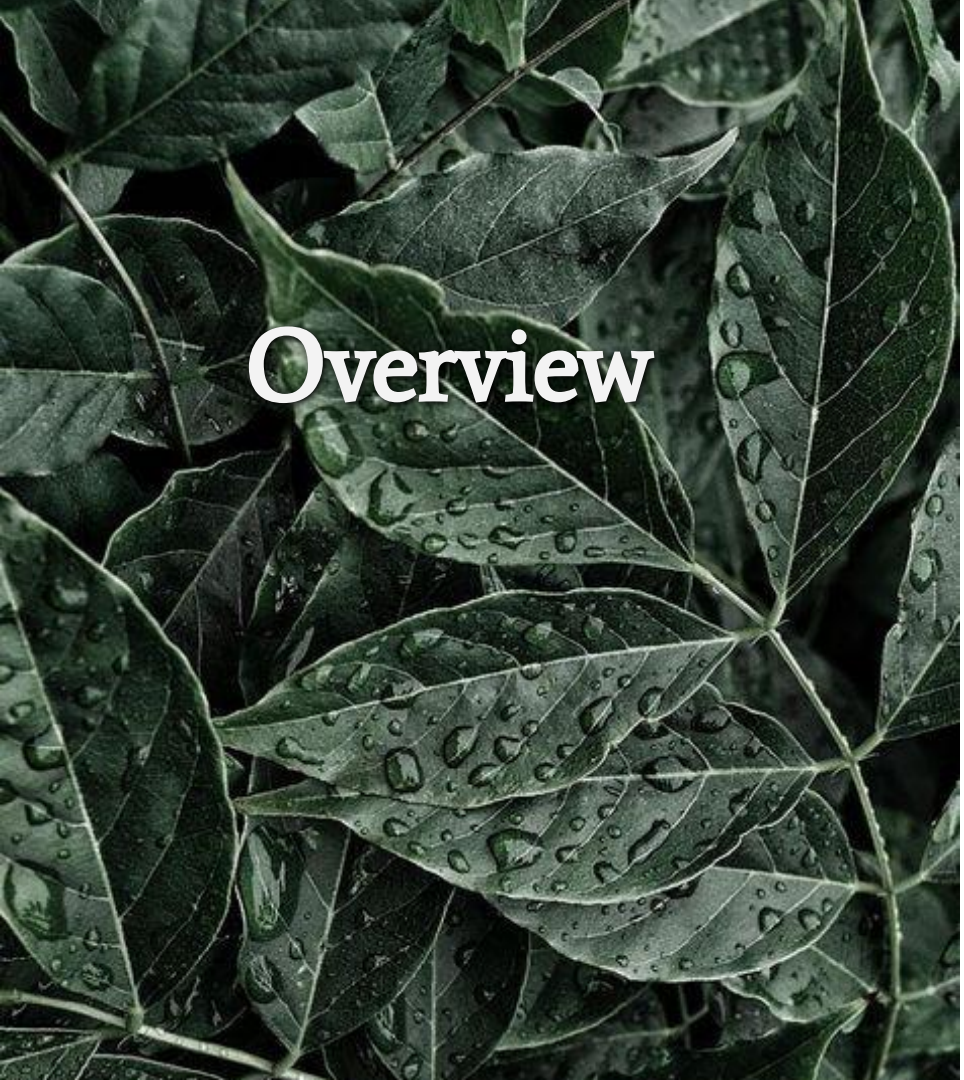

Greenhouse Keeper
- The missings -



Overview

In this project we will measure and collect the data of brightness and temperature in the greenhouse. Then, we will use the stored data from our measure and the outsourced API about weather and plants to compute values for using it to balancing the environment of the close area that suit the plants.

Motivation

We want to do this project because we think it interesting to using the sensors with microcontroller board to find and collect the data. After the brainstorm, it should be work with planting in greenhouse when we using light intensity and temperature sensors.

Also after researching, there is no available API providing enough data that might be useful for agriculture. So the data collected from this project can be used for it too.

Overall architecture

In the data sources, we have 2 ways to collect.

1). collect from microcontroller hardwares which have light intensity and temperature sensors and sent through MQTT broker.

2). collect data from plants and weather api, for more information.

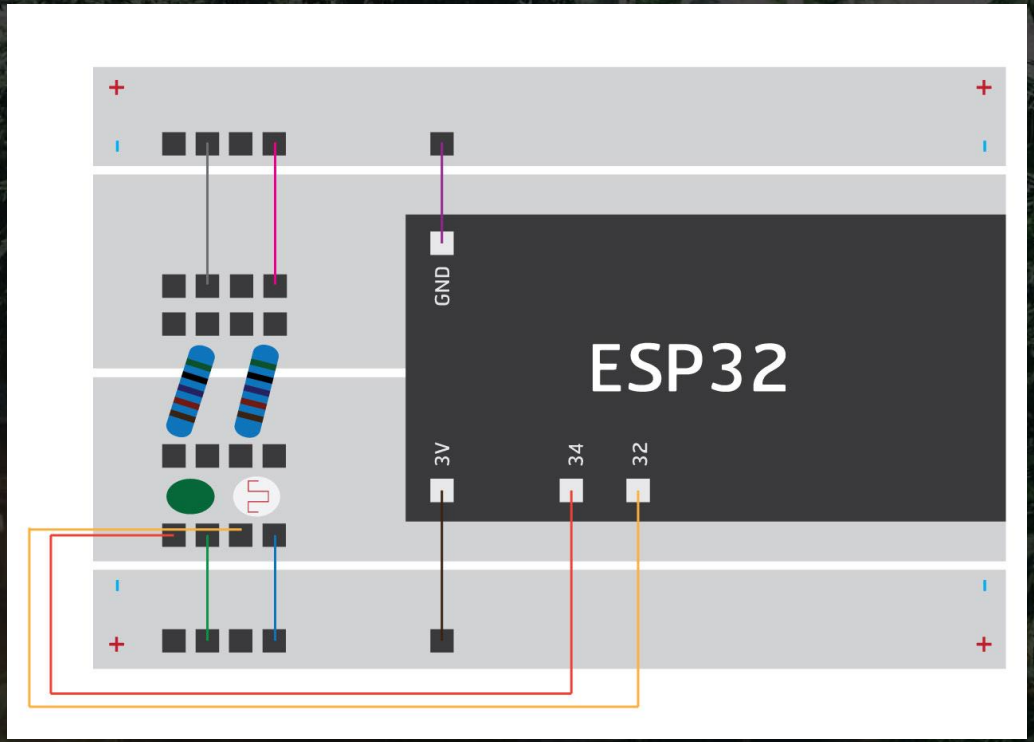
In the database, we use the Node.js express to connect to postgres database.

We collecting temperature, brightness and growth in each greenhouse over time, so we can gather and analyze from the data we collected.

Data visualization

In the data visualization, we use Vue.js framework with css and html for the front-end part and directly pull data from the database.

Microcontroller



Demonstration