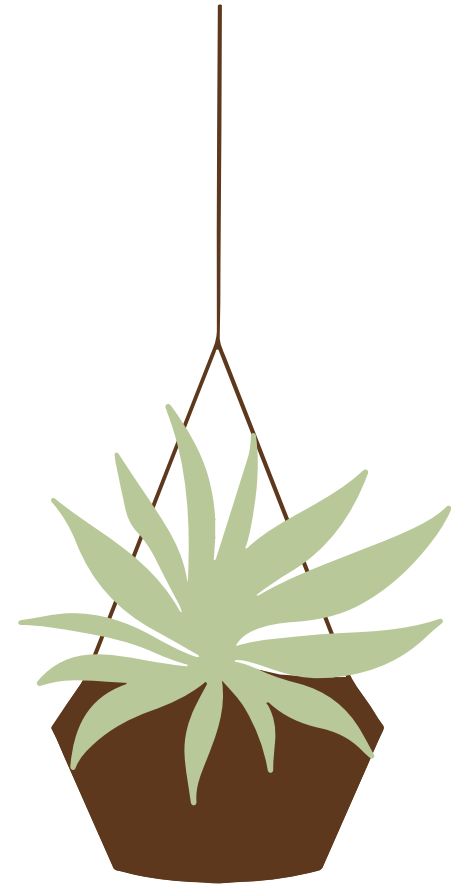


PLANT MASTER



Elevate Your Farming Efficiency with Plant Master
Machine: Automation, Customization, Accuracy





AGENDA

Main Idea

Features

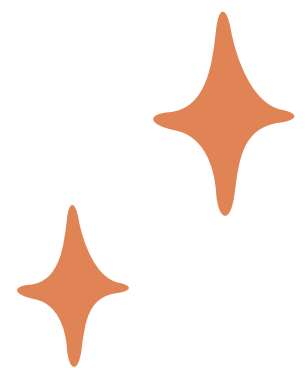
Hardware Modules

Step By Step

Constraints

Future Work





MAIN IDEA

This machinery is designed to plant a specific seed type, like corn or chickpeas, across multiple pots.



Superior User Experience

The machine incorporates a user-friendly LCD display, coupled with a keypad interface and a mobile app for the Planting process.

Beyond Seeds

With the Planting Machine, there are more options besides seeds.

Dispensing Effortlessly

automatic dispensing pot, movable disc for different positions to release ingredients, and the conveyor belt system, eliminating the need for user intervention.



FEATURES

Ordering Pots


The flexibility of ordering planted pots effortlessly via our mobile app or directly through the machine's Intuitive LCD, keyboard.

Seeds Customization

providing the user to choose the type of seeds they want to plant in pot in one or multiple pots.

Moisture and Watering

Helps the user to know the approach to watering the pots. Through user-friendly reports with data-driven insights.





FEATURES

Seamless Dispensing


The ingredients dispensing mechanism eliminates user intervention through the whole process of planted pot preparation

Security

RFID security offers proactive defense with precise tracking, custom access, and real-time insights, ensuring top-tier system security and efficiency.

User Views and Control

The user can turn on the machine, and generates reports of the system



Hardware Moduls



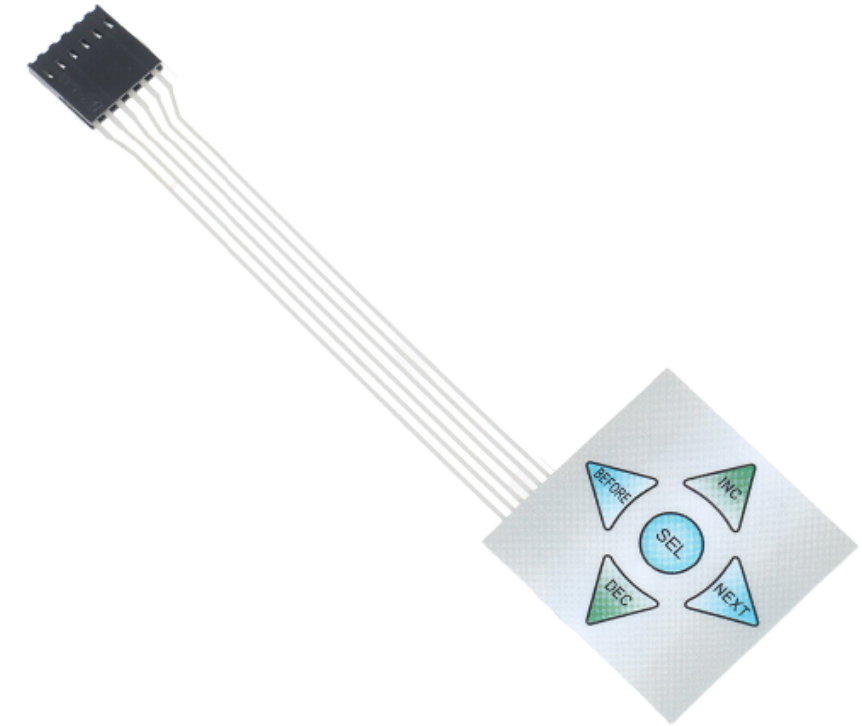
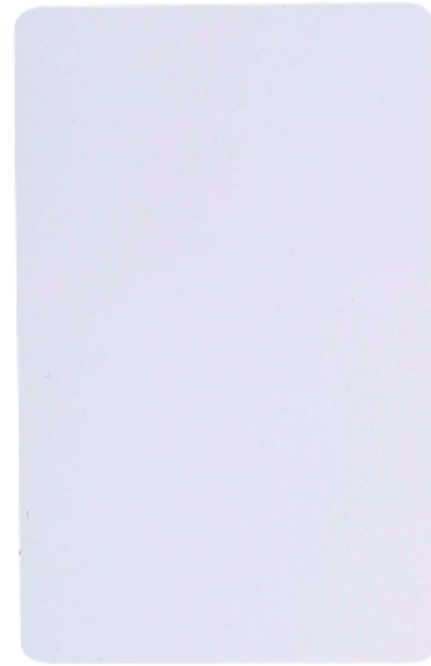
INPUT\OUTPUT UNIT



LCD & I2C

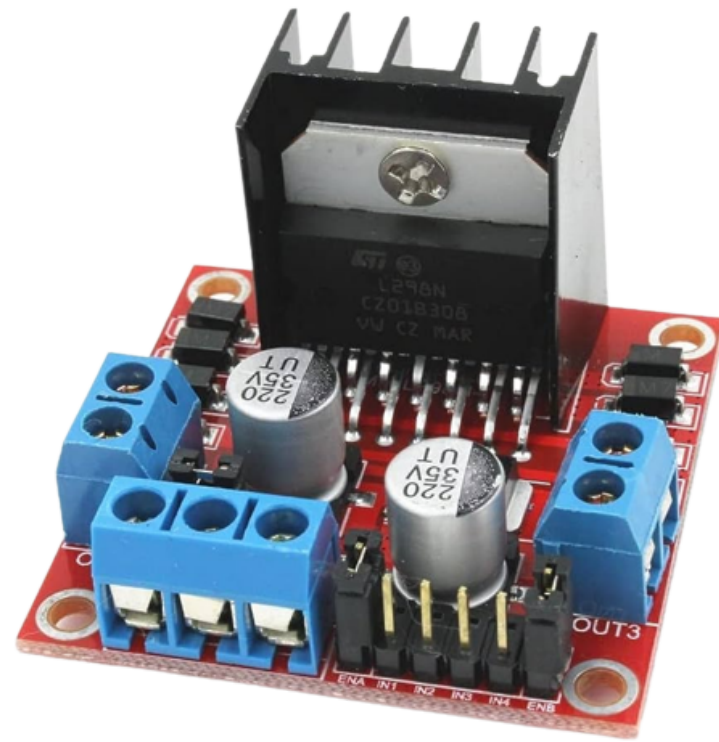


RFID

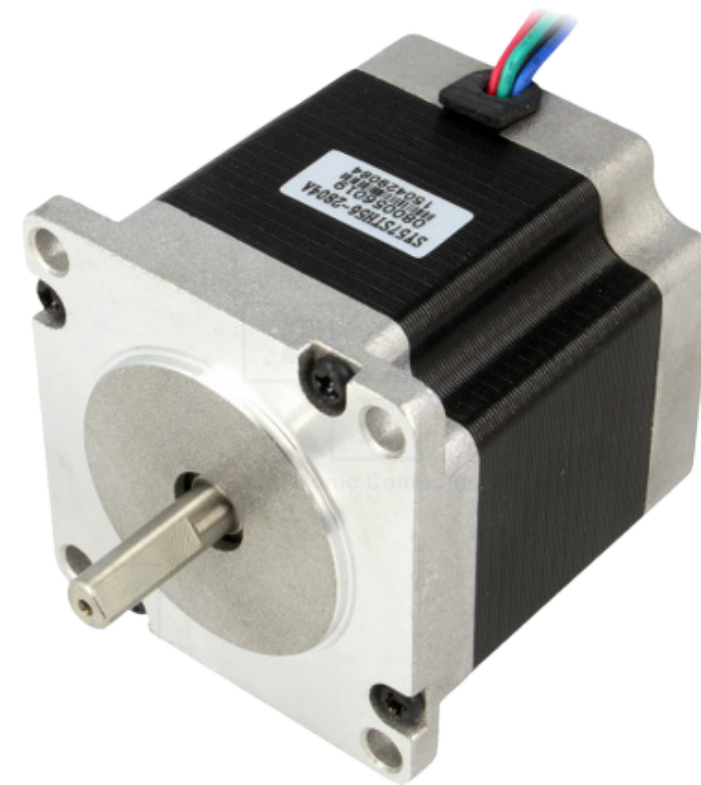


Keypad

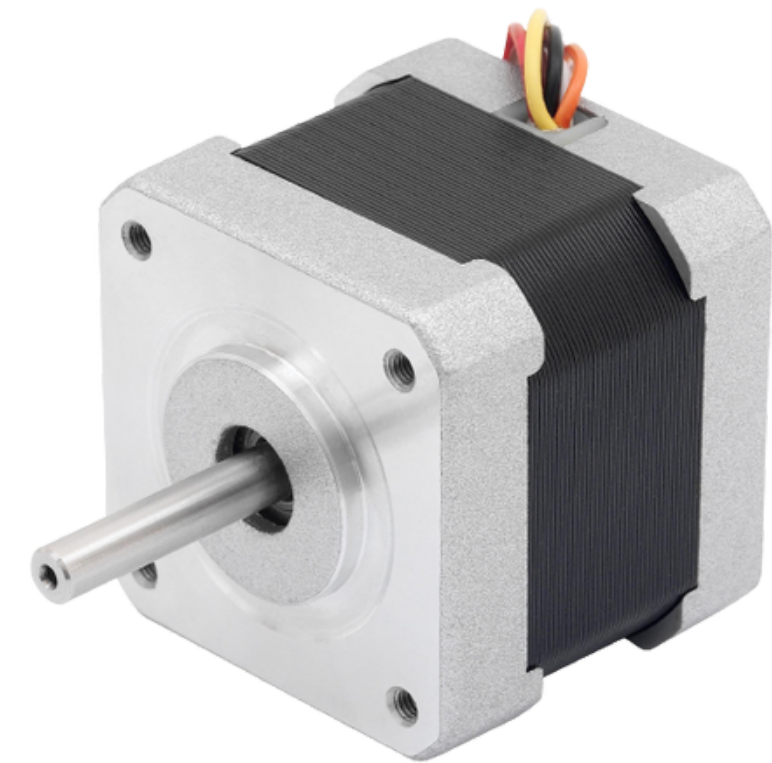
INPUT\OUTPUT UNIT



h-bridge

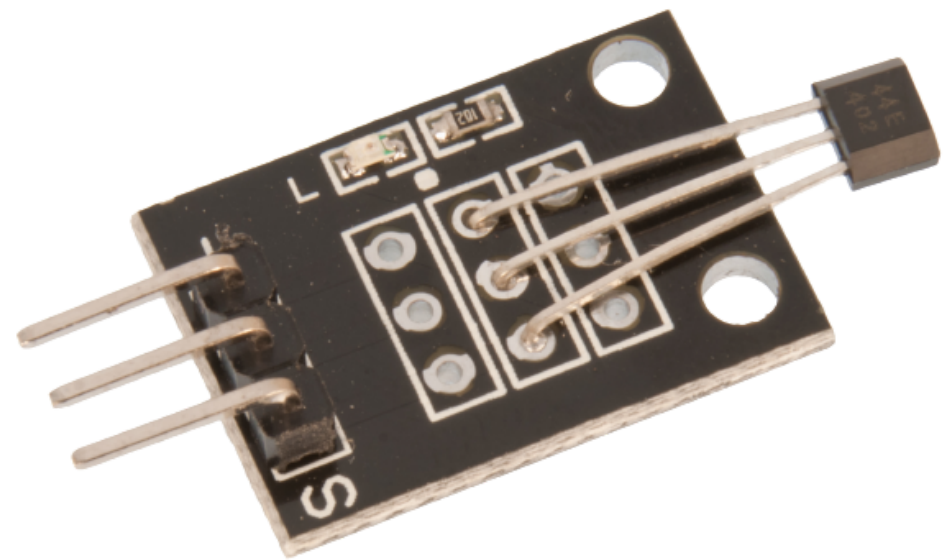


**Stepper
motor**



**Stepper
Motor**

INPUT\OUTPUT UNIT

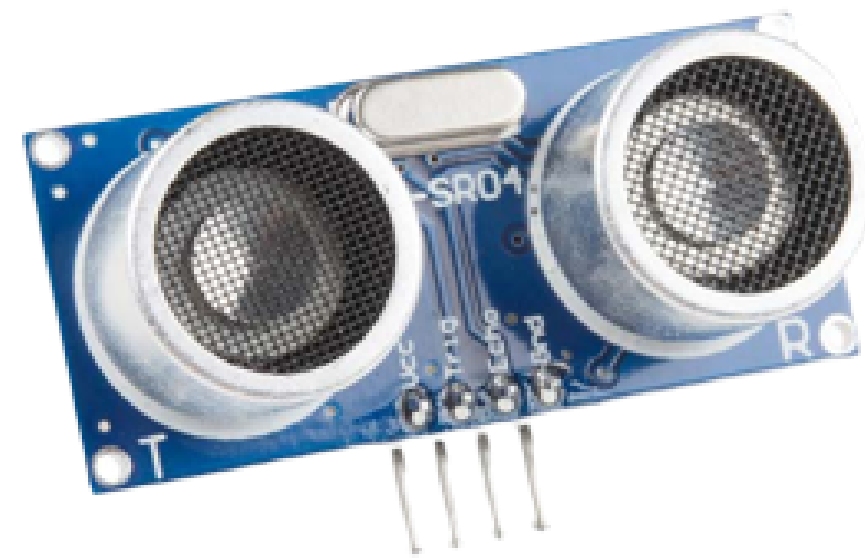


**Hall Effect
Sensor**



IR Sensor

INPUT\OUTPUT UNIT

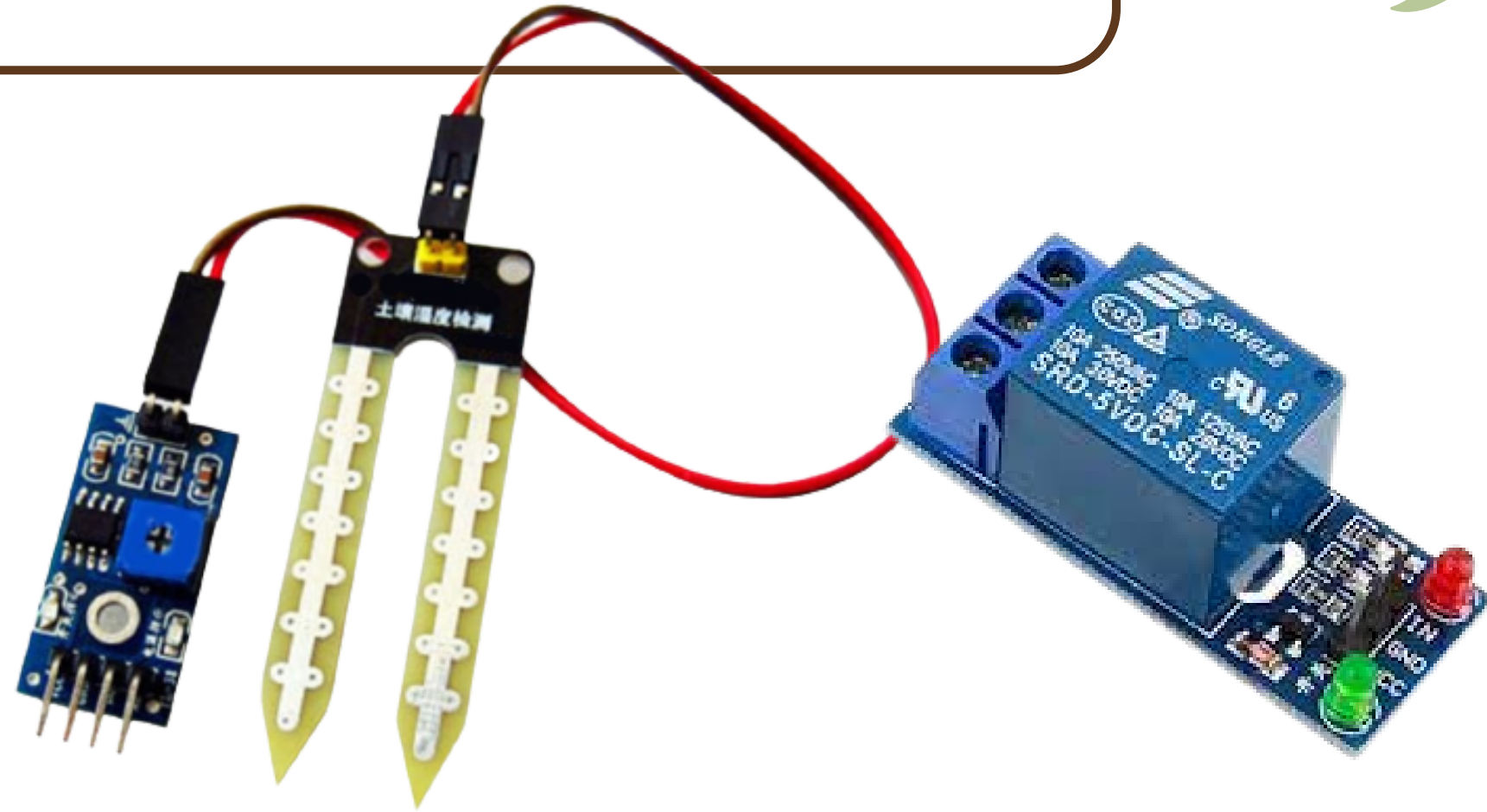


**ultrasonic
Sensor**

WATERING UNIT



Pump



**moisture
sensor**

Relay

WATERING UNIT



bottle



Tubes

CONTROL UNIT

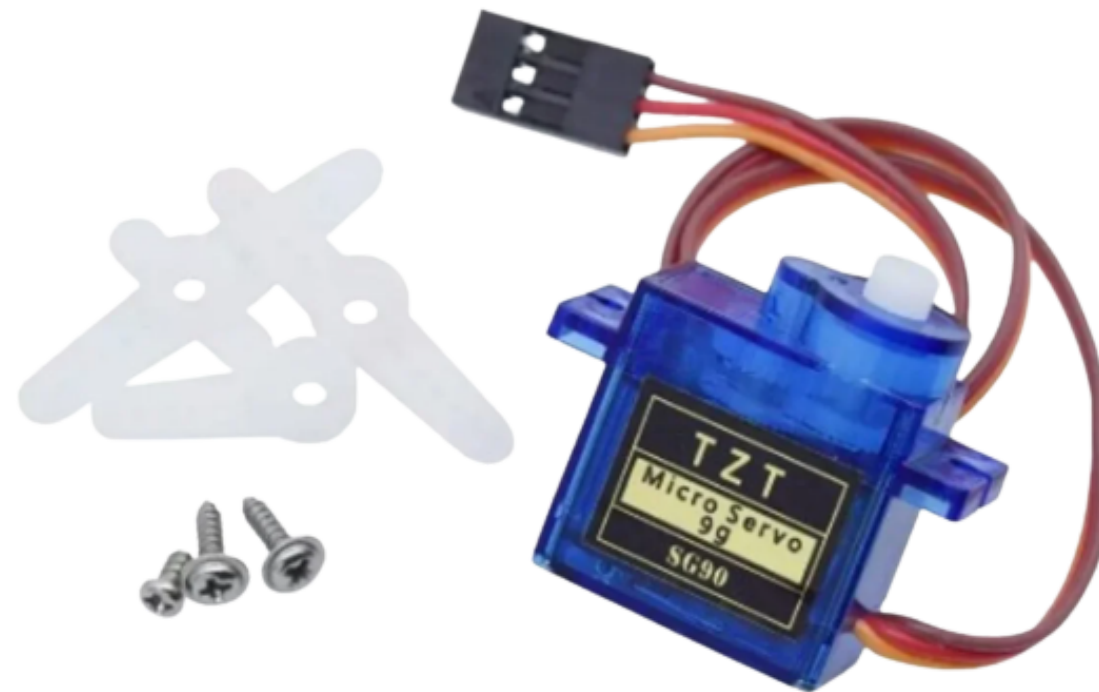


Arduino Mega



ESP32

DISPENSING UNIT



**Servo Motors
x7**



Funnels

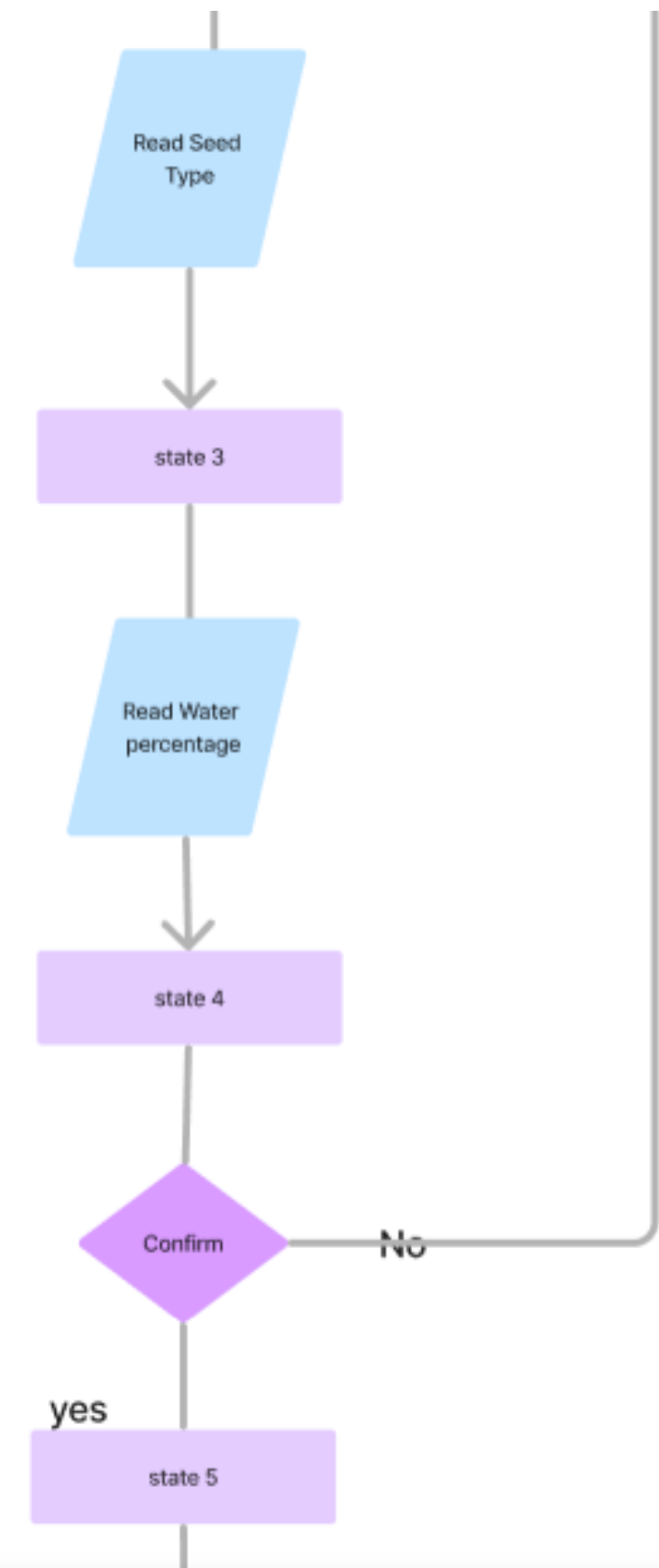
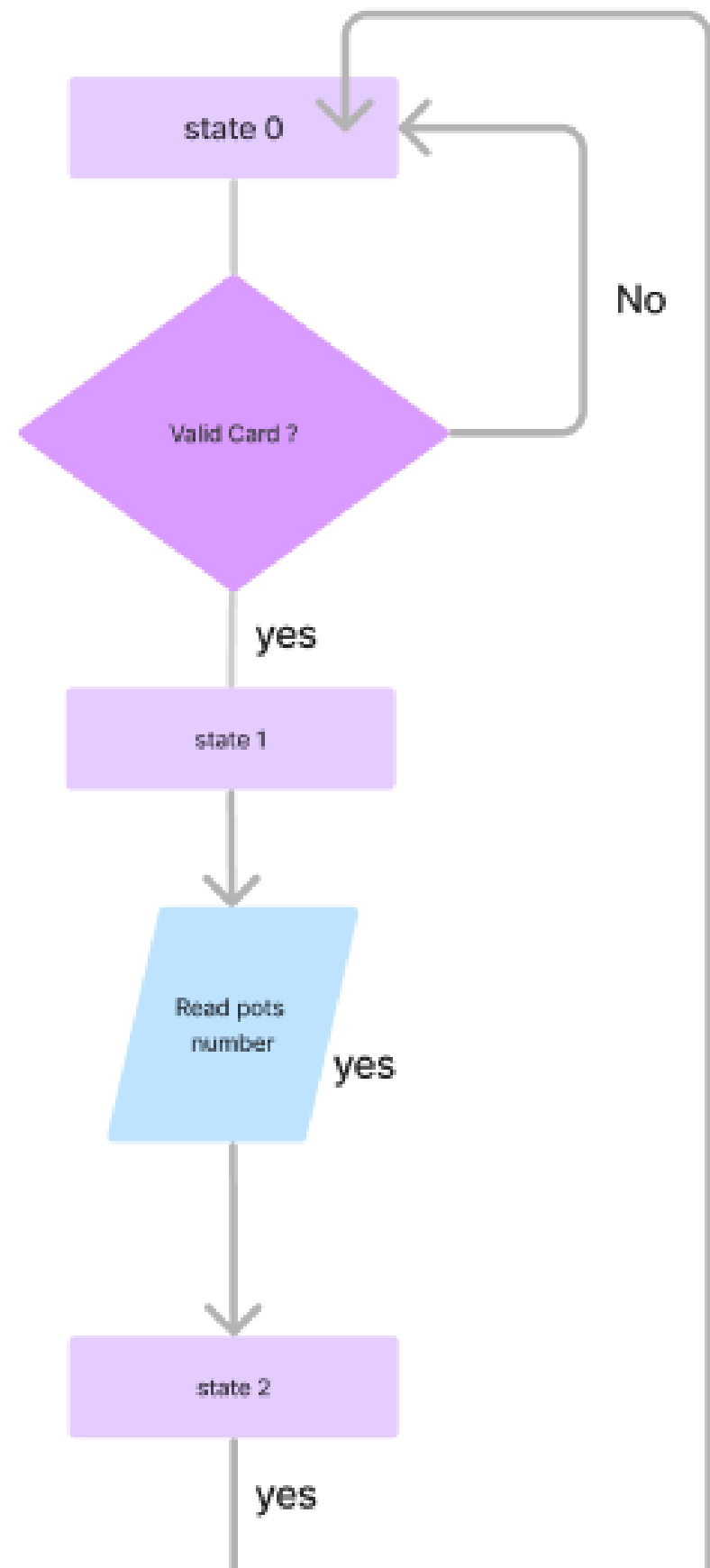
CONUEYOR SYSTEM

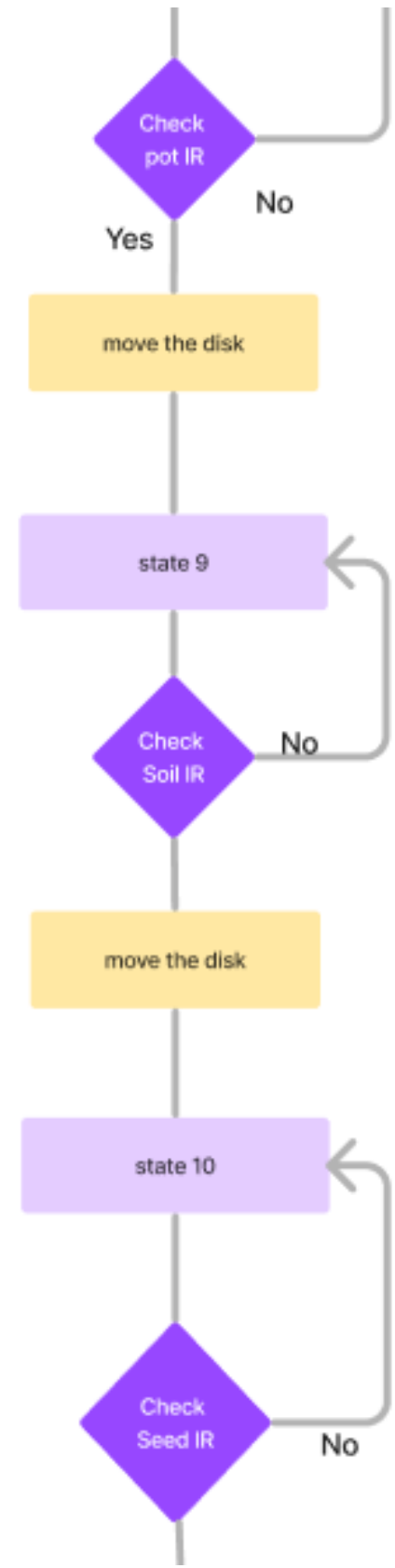
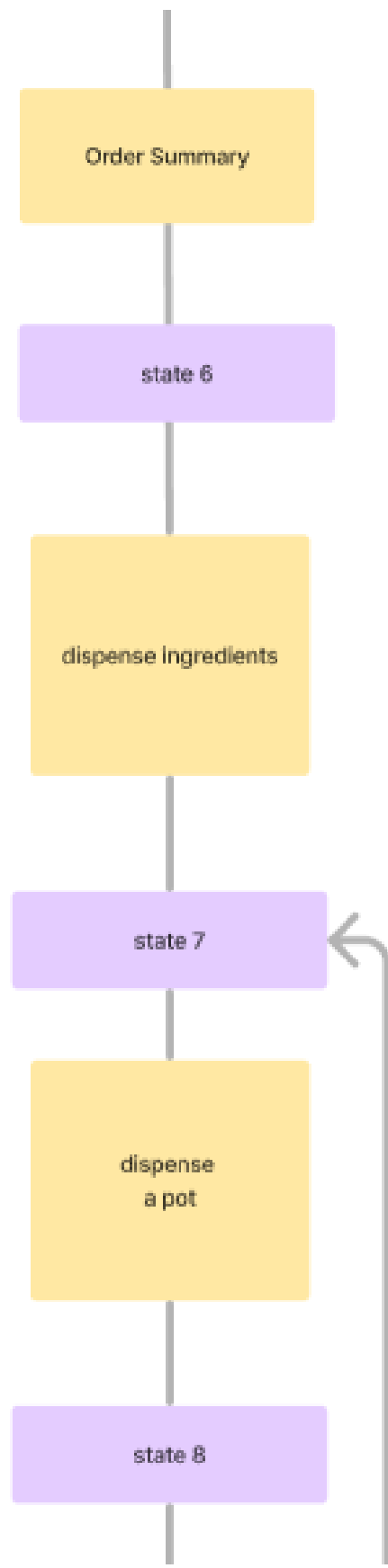


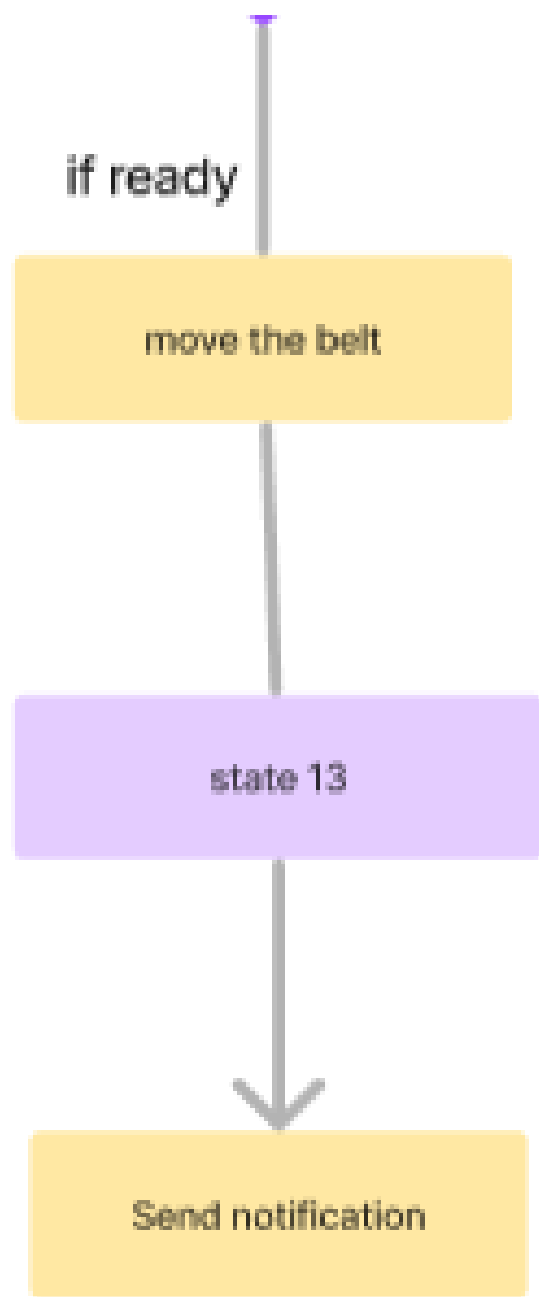
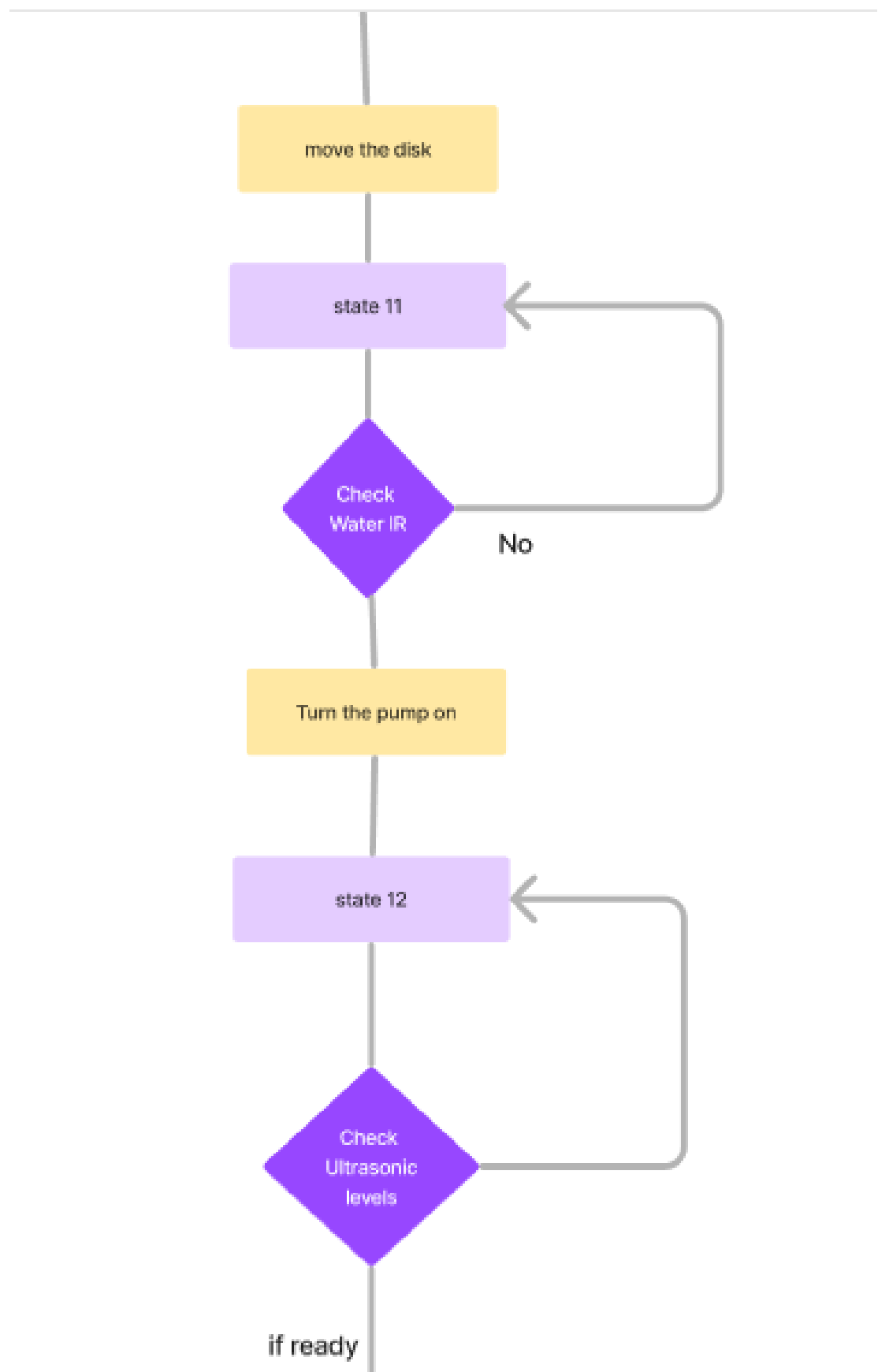
Conveyor Belt

A Step-by-Step Overview









ESP32 Web Server



ESP32 Web Server

Login

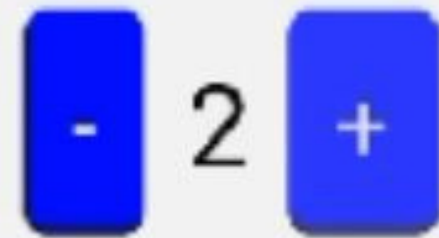
user@example.com

.....d

Login

ESP32 Web Server

Number of Pots



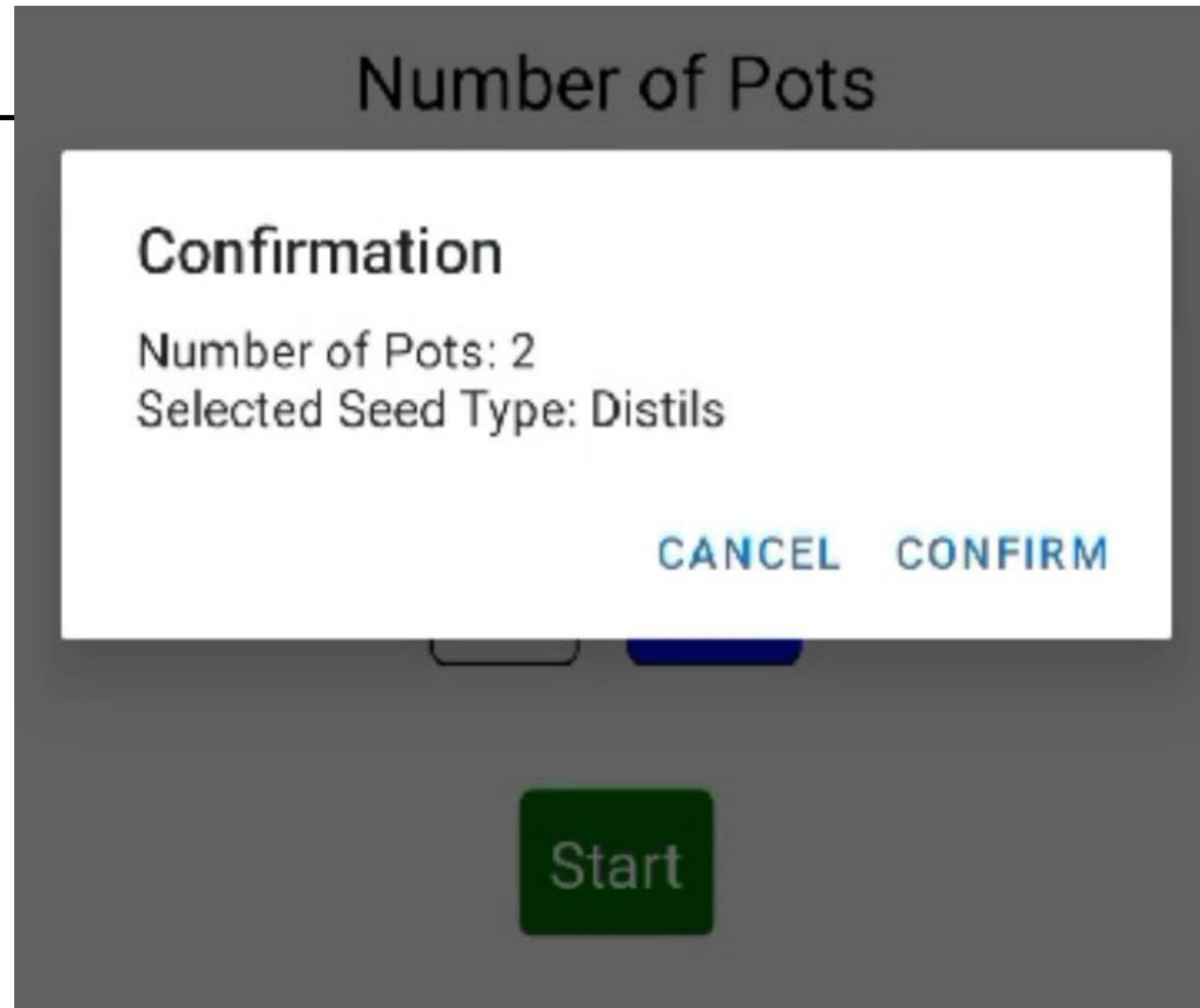
Select Seed Type

Corn

Distils

Start

ESP32 Web Server



ESP32 Web Server



Constraints

Pot dispensing

**Interfacing the
Arduino with other
components
(relays and
stepper motors)**

**The pressure of the
pump**

Constraints

**The quantity and
type of seeds and
the method of
disperse them**

**Connecting the
Esp32 to the
(internet)**

Future Work

Add a sensor to check the quantity of ingredients and send a notification to the user with the information

Automated Cleaning: Implement automated cleaning to maintain optimal planting conditions between cycles.

Planting multiple pots simultaneously.



**A WARM
THANK YOU
TO ALL OF YOU!**

