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Title: Smart Garden

Problem Definition

With the day to day busy lives, people get busy with their work. So, there should be a convenient way of getting organic produce to the household with a minimum effort in a smart way. Also, an agricultural revolution is going on these days because of the pandemic which occurred in the recent past. But after this is gone people may not have time to take care of their plants. For the above problem, we introduce a concept of "smart garden" which will automate the way of gardening.

Technologies/Frameworks

Mobile Application	-	React Native
Web Application	-	React JS
Web servers	-	Nodejs and ExpressJs
IoT	-	Arduino Mega and ESP8266
Database	-	MongoDB (NoSQL)

Scope Justification

Our system consists of a mobile application, web application, IoT device, and backend servers. Mobile Application and the IoT device will be delivered to the client as our final product. The web application is for the system admin. Mobile Application allows the user to control the Smart Garden functions and to view the statuses of the garden. Web Application is to analyze the data from all the gardens connected to the system and for the admin to control and manage the system

Main functionalities of our smart garden are listed as below:

- Managing and controlling water levels, humidity, and light conditions of plants via mobile phone.
- Automating the watering process, turning on grow lights, and adding fertilizers via mobile app.
- Provide systematic guidelines and support to gardeners to maintain plants. eg: when to water, when to add fertilizers, when to harvest etc.