SMART FARMING TECHNOLOGY SYSTEM

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Guide:
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Statement of problem

- This project aims at determining the most efficient soil moisture detection.
- The system is designed to overcome the challenges of water wastage, nutrition deficit and leaching of nutrients.
- This proposed smart farming technology is environmentally friendly, efficient, cost effective and gives the farmer the power to control and monitor production in real time.

SCOPE OF THE PROJECT:

- The idea that stands behind this project is building an IoT system that monitors the soil moisture , detecting when it gets too dry.
- This project displays the humidity soil status using a Humidity sensor.
- We can even detect the temperature and water levels of the soil using different types of sensors.
- By this, we can predict the values and can convey a short message to the user alerting him.

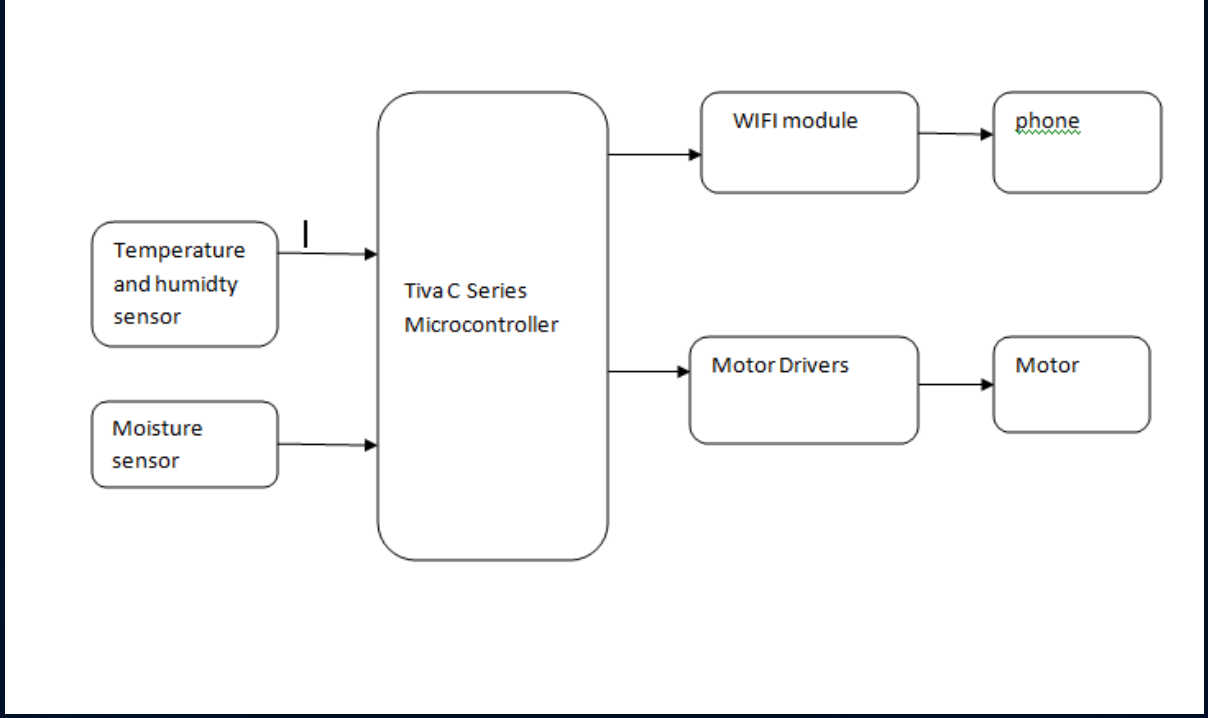
Hardware Requirements

- Launch pad
- Temperature and Humidity Sensor
- Display
- Connecting Wires
- CC3100 wifi module
- Motor
- Motor driver-ULN2003APG
- Relay

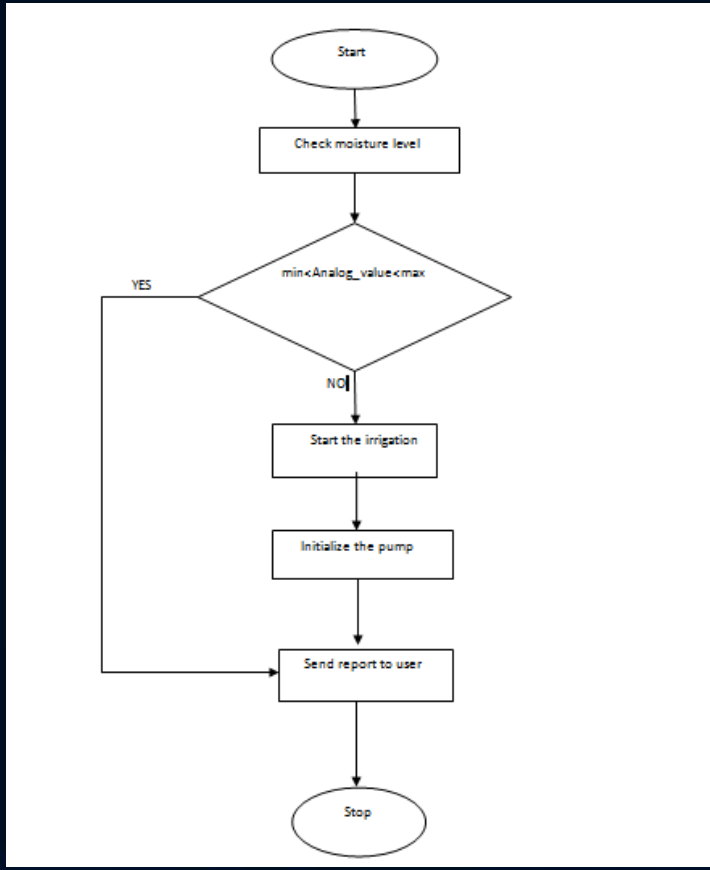
Software Tools:

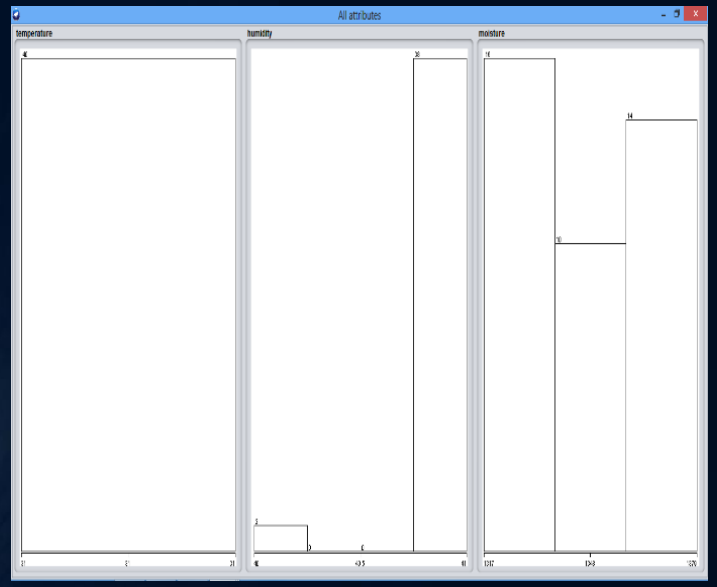
- Energia
- Weka Tool
- Tera Term
- Blynk app

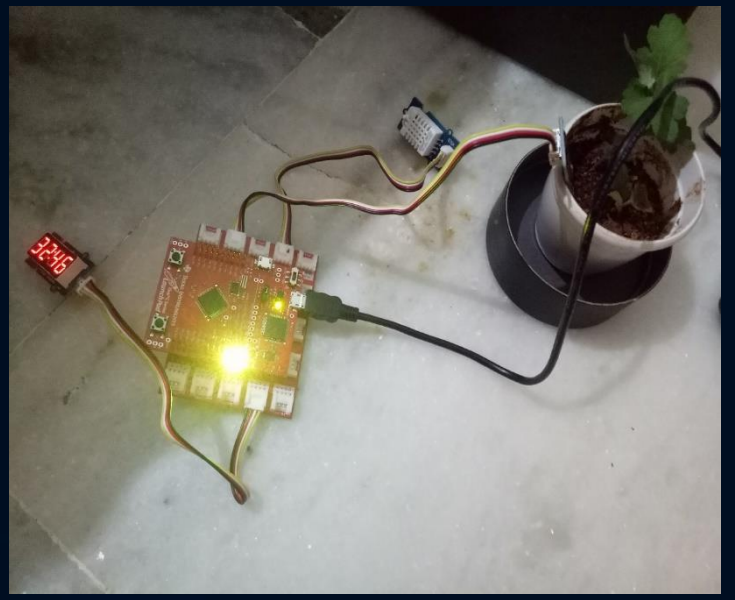
Design


Temperature and humidty sensor
Moisture sensor
Tiva C Series Microcontroller
WIFI module
phone
Motor Drivers
Motor

Flow chart


Start
Check moisture level
min<Analog_value<max
YES
NO
Start the irrigation
Initialize the pump
Send report to user
Stop


All attributes
temperature
humidity
moisture



Conclusion

- This project is thus used to water the crop or plant automatically without the intervention of user.
- User is given another option to water manually as the readings are sent to his mobile.
- In addition to smart farming system, this project can be applied in Weather monitoring system.

Future scope

- Smart Farming is key for the future of agriculture.
- Smart farming is farming management concept using modern technology to increase the quantity and quality of the agricultural products.
- Farmers in the 21st century have access to upcoming technologies, data management and IOT technologies by which they can improve the quality of crops.
- We can extend this project by introducing drones through which we can effectively monitor the field.
- By introducing pest controlling features, it becomes even more useful.

THANKYOU