Abstract

There are many devices in India that are used with man power (manual) that is they are operated with physical presence of a human being. Sprinklers or drip emitters or both can be used for making a effective system for all plants in any farm or field. They will not measure the water content of the soil and the required temperature to know if the soil actually needs watering or not .Improper watering of fields which is a direct cause for the damage of plant health. A simple automatic plant watering system will do the job.

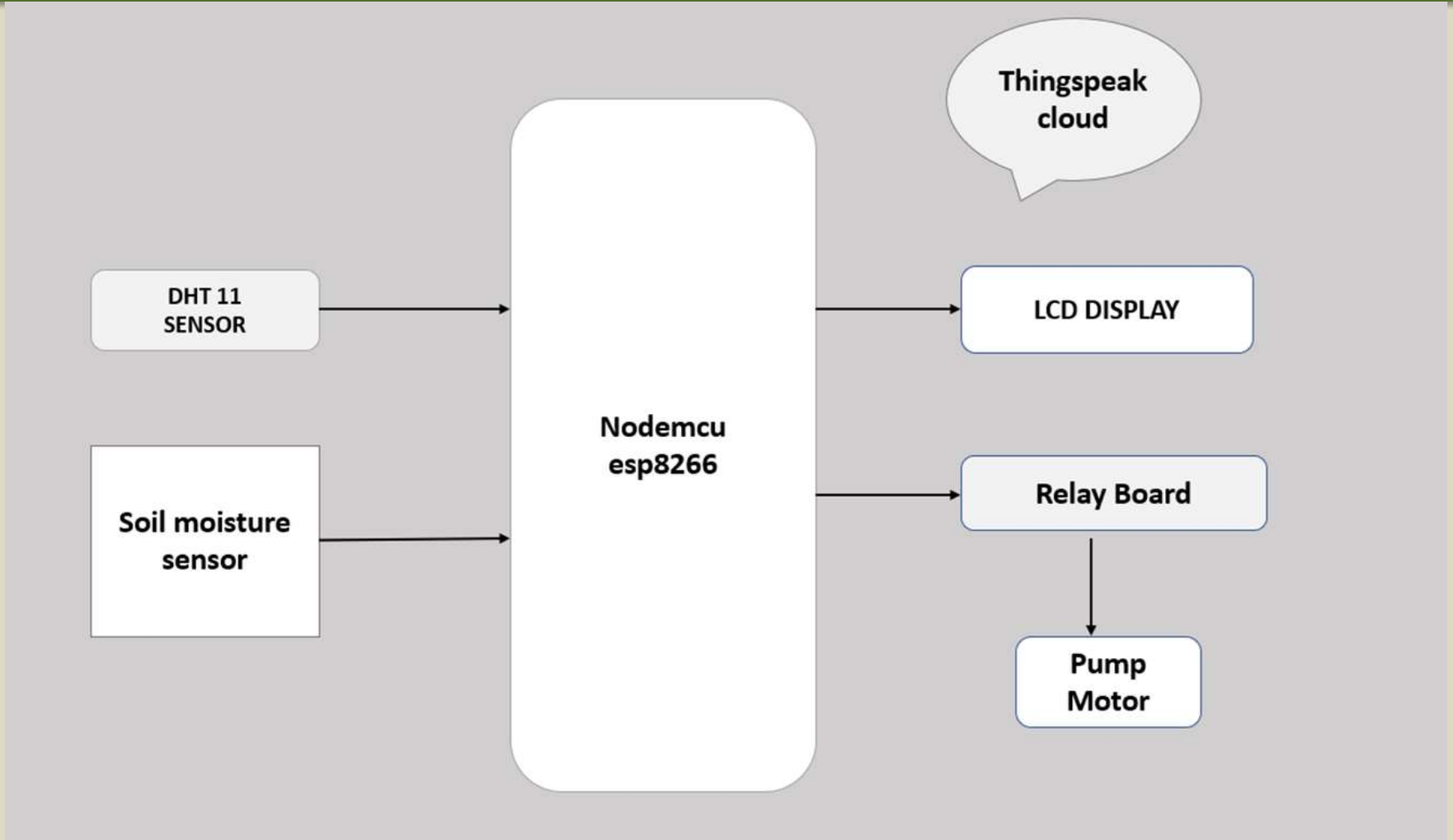
LITERATURE SURVEY

Reference number	Publication /patent title	Advantages	Disadvantages
[1]. 19139197 IEEE PAPER	Smart Watering System	It saves time by using smart plant watering system equipped with multiple sensors. Over watering of plant is avoided	The Humidity and Temperature is not detected
[2]. 2320-2882 IJCRT PAPER	Smart Plant Watering System Using Nodemcu	Multiple soil moisture sensors are used for better readings.	The Humidity and Temperature is not detected. System is internet operated; a no internet case affects the plants.

Novelty

LCD Display is attached which helps us to know the status even if there is no internet. The Humidity and Temperature Sensor measures the plant along with temperature.

Block Diagram



AIM:
OBJECTIVES:

AIM

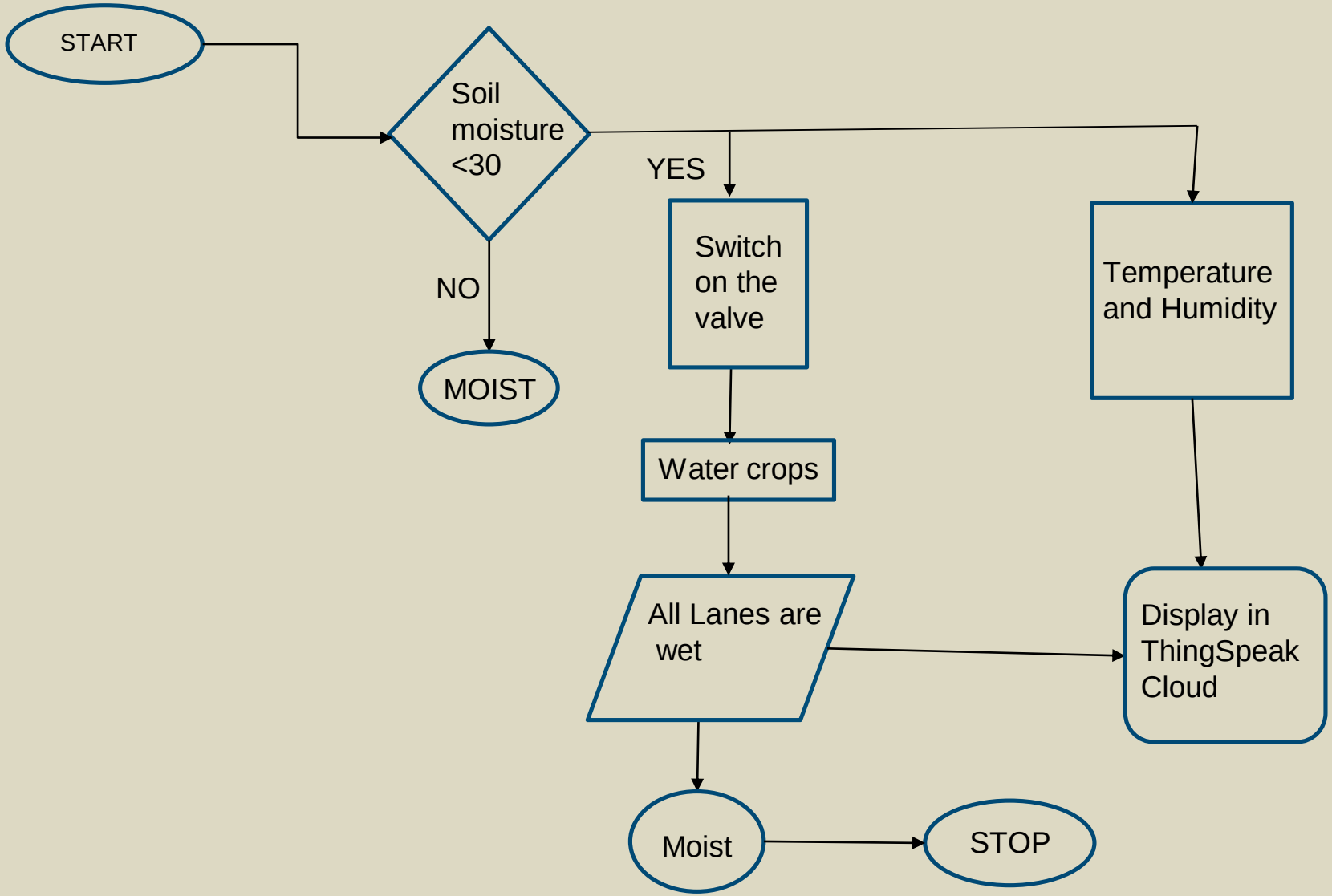
Our aim is to build a Smart plant watering System which helps maximize irrigation efficiency by reducing water waste, while maintaining plant health and quality.

OBJECTIVE

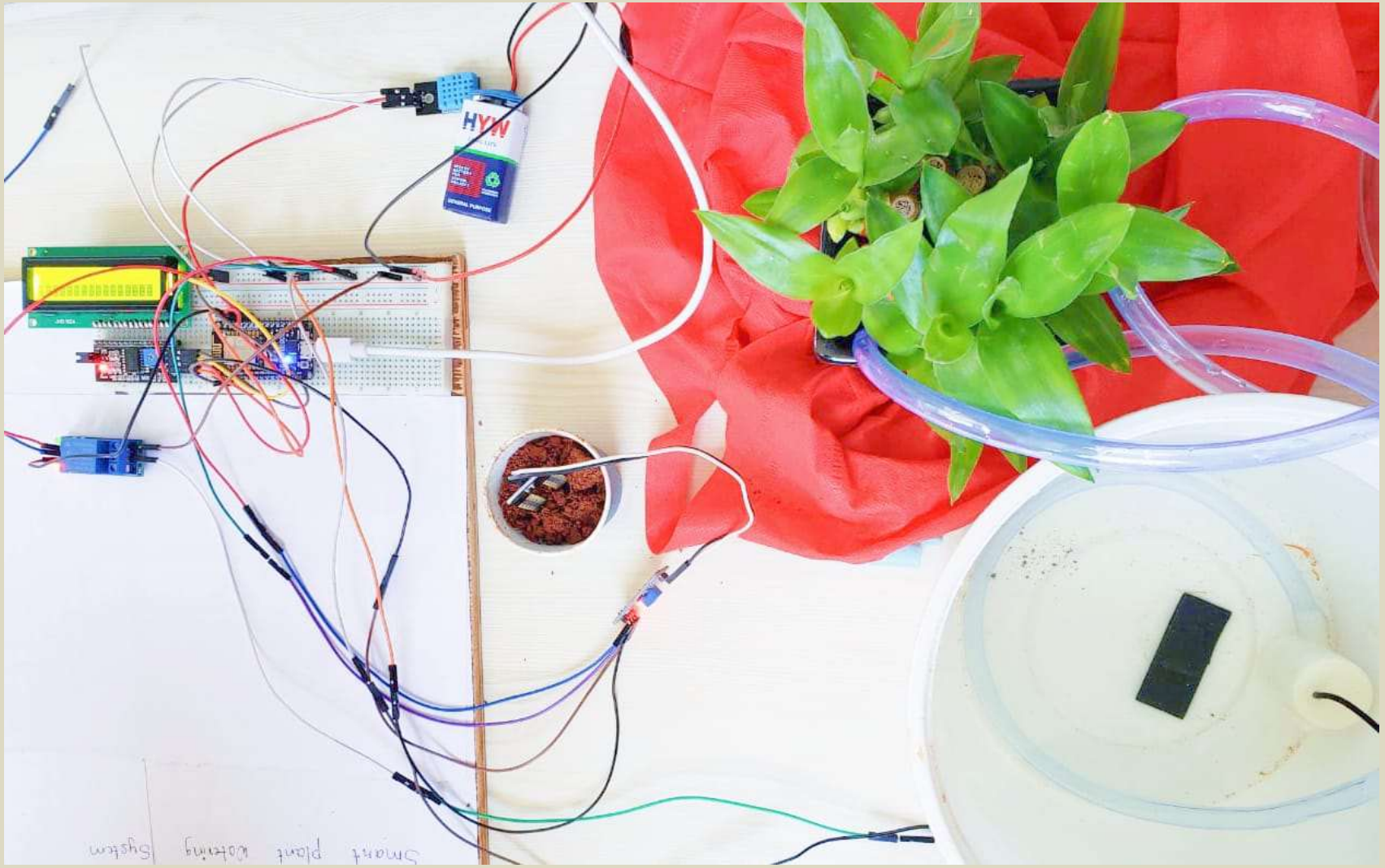
•The main objective is to apply the system for improvement of health of the soil and hence the plant via multiple sensors.

•The Temperature Sensors measures the temperature around plant which helps us to know suitable temperature required for plant to grow.

Flow chart of the Program



Picture of the Project with label (With neat background)



Budget in detail(with components):

S.NO	Components used	Cost
[1].	node MCU	400
[2].	dht 11	100
[3].	soil moisture sensor	100
[4].	Single channel relay	70
[5].	small water pump	250
[6].	9V Battery , 5V Adapter with cable	150
[7].	Jumper wires	60
[8].	wooden plane	100
[9].	lcd display	250
	TOTAL	1480

Conclusion :

This design implements a Plant watering system that is innovative, time-saving, user-friendly in addition to being more efficient than the currently existing systems. Four soil and environment parameters such as pH value, soil moisture, flame and temperature values are measured to decide whether the plant needs irrigation. The system also predicts the health status of the plant and sends an e-mail alert to the person concerned. Owing to the server updates, the user can be informed about the crop health and environments conditions anytime and anywhere.

The outcome of the Project

The Automated Water Planting System using Nodemcu esp 826G, is a system that measures the water content in the soil and controls the flow of water. The system uses sensors, placed in soil, to get the amount of water present in the soil. The system, after attaining the moisture content, checks if it is in the scientifically prescribed range. The proposed model automates the control of the state of the system(ON/OFF), thereby eliminating the manual need, according to the result of the checking performed. Finally, we were able to implement this idea and we were able to see all the data in Things speak Cloud.

References(IEEE format)

1] Siva, Kotni Naga; Kumar G., Raj; Bagubali, A.; Krishnan, Kishore V. (2019). *[IEEE 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN) - Vellore, India (2019.3.30-2019.3.31)] 2019 International Conference on Vision Towards Emerging Trends in Communication and Networking (ViTECoN) - Smart watering of plants. , (), 1–4.* doi:10.1109/ViTECoN.2019.8899371

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