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Internet Of Things(IOT) Smart Agriculture

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I. ABSTRACT

In olden Days Farmers used to figure the ripeness of soil and influenced suspicions to develop which to kind of yield. They didn't think about the humidity, level of water and especially climate condition which terrible a farmer increasingly The Internet of things (IOT) is remodeling the agribusiness empowering the agriculturists through the extensive range of strategies, for example, accuracy as well as practical farming to deal with challenges in the field. Remote sensor structures are utilized for watching the homestead conditions and tinier scale controllers are utilized to control and mechanize the home shapes. To see remotely the conditions as picture and video, remote cameras have been used.

Keywords: Soil moisture sensor, Water level sensor, Humidity sensor, Temperature sensor, IOT

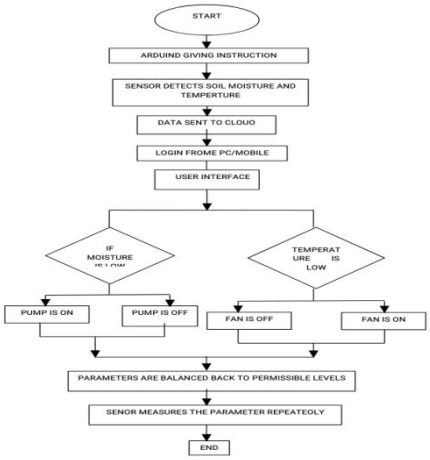
II. INTRODUCTION

With the combination of both advanced technologies in hardware and software, the Internet of things is able to track and count everything which can greatly reduce the waste, lost and cost. the information of parameters of interest can simply abstained at fingertips using electronic devices which ease the user to toke further actions. The IOT transforms the agriculture industry and enables the farmers to contend with their challenges. Innovated applications can address these issues and therefore increase the quality, quantity, sustainability and cost effectiveness of crop production. A company named Flores en la mesa makes use of IOT by applying the wasp mote plug & sense in its greenhouse. Sensor probes are installed at various points to measure the parameter of interest. The system is programmed and connected to a XBee network with star topology. Tow of the sensor nodes send the extracted data to the central node at every interval of 15 minutes. the data is sent via 3G to a server and stored in an internal memory. The information is its then visualized through its web interface. Users can take actions by controlling the irrigation system through the web interface.

III. PROBLEM STATEMENT

1) Limited amount of workers to cover a large area of farm.
2) Limited by time Farmers are hard or even unable to monitor and provide the required condition the plants at during the night or emergency.

IV. CONCEPTUAL DESIGN



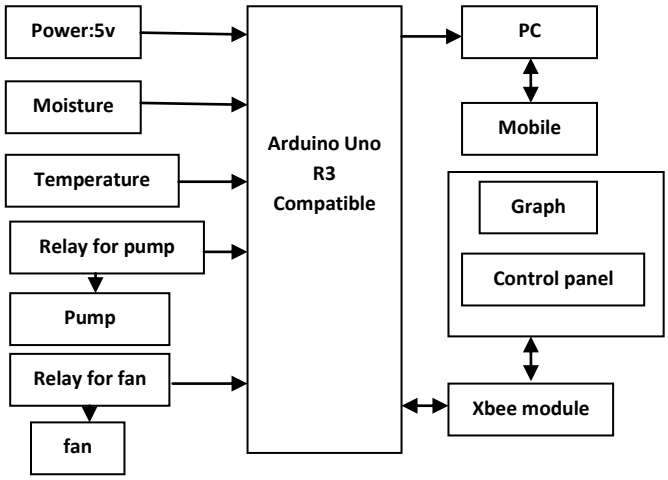
V. OBJECTIVE

1) To overcome the limitations of the irrigation system in convention farming.
2) To provide and maintain the crops in their optimum environment for growth in terms of soil moisture and temperature.

VI. SYSTEM DESIGN

Our proposed mode of smart irrigation system aims to provide and maintain the optimum condition for the crops by growing in an environment with sufficient water supply and ideal temperature, we believe that the growth of plants Can be improved and thus the productivity of the agriculture field will thus increase as we

VII. BLOCK DIAGRAM



VIII. MATERIALS

-  Soil moisture and Temperature sensor.
-  2- Channel Relay Module.
-  Arduino uno R3 Compatibles.
-  Bee PRO 60mw wire Antenna.

IX. CONCLUSION

The main purpose of the irrigation system is to provide and maintain the ideal environment in terms of soil moisture and temperature for the optimum growth of crops. Using electronic devices such as Smartphone and remote computers, use can log in to the cloud storage to extract the sensor data. User can monitor the crops and control the water pumps and fans in the control panel of the user interface there are some advantages that can be highlighted in this system. Firstly, it can save time and water as you do not have to personally go to the farm to do the watering. The irrigation system supplies the right amount for the plants as excessive watering may affect the growth of the plants and something the water from the rainfall is not sufficient for the plants so, this system makes used of the sensor to detect the soil moisture level and do watering by using the water pump. Then since the water is supply directly to the roots of the plants, it can actually prevent weeds from growing around the plants. This may also save you from spending money and energy to do the weeding process soil temperature also has big effect on the plant growth. If the temperature is too high.

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