PROJECT SCOPE

Project Name: Smart Agriculture System Based On IOT

1. Project Purpose Statement:

   Agriculture plays a pivotal role in the growth of any state.The primary sector of an economy comprises agricultural and other activities and contributes a significant amount to the Gross Domestic Product (GDP).Smart agriculture system mainly comprises of an app which will help farmers to monitor soil moisture, temperature and humidity parameters along with weather forecasting details. Based on these parameters he/she can water the crops by controlling a motor remotely through the mobile application. The main purpose of this project is to provide an ease of workflow for the farmers, since all of the working on farmlands is solely dependent on the rain and irrigation technique.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. IOT development can diminish the cost and update the productivity of standard developing.

2. Background:

   The practice of agriculture is also known as "farming", while scientists, inventors and others devoted to improving farming methods are also said to be engaged in agriculture. Subsistence farming is who farms a small area with limited resource inputs, and produces only enough food to meet the needs of his/her family. At the other end is commercial intensive agriculture, including industrial agriculture. Modern agriculture extends well beyond the traditional production of food for humans and animal feeds.

   Farmers living in different areas have different climates, landscapes, microorganisms, plants and animals so they must adapt their growing practices to local conditions. However, all farmers rely on ecosystem services.To grow crops, it helps if farmers understand local growing conditions (such as knowing when the rainy season starts, which crops grow well together, soil moisture content).When the crops are growing, farmers must water (or rely on rainfall), weed and kill crop pests. Once the crops are mature, the farmers harvest them.

3. Objective:

   - To boost production quality and efficiency of farming products.
   - Monitoring environmental factors to improve yield of efficient crops.
   - To design a IoT platform to manage operational data and events on farms and demonstrate “as a service” functionalities for increasing sustainability.

4. Benefits of Project:

   Our proposed system will be highly beneficial to farmers as farming accounts to more than 60% of occupation in our country. Also crop production will be increased if our system is used, as it uses IOT & different sensors to gather information regarding irrigation outputs & also provides protection to crops. Also farmers can use remote technology to activate/deactivate electric motor which are powered by clean sources of energy thus keeping the environment clean.

5. Out Of Scope:

   - It does not provide information regarding damaged crops.

6. Conclusion:

   Internet of things and cloud computing collectively makes a system that control agriculture sector effectively. This system will sense all the environmental parameters and send the data to the user via cloud. User will take controlling action according to it this will be done by using actuator. This asset allows the farmer to improve the cultivation in a way the plant need. It leads to higher crop yield, prolonged production period, better quality and less use of protective chemicals.