PROJECT REPORT

Project name: ***SMART HOME*** (SMART AGRICULTURAL SYSTEM)

Project Scope:

The stronger the base, the better the built. Agriculture forms the base of an economy. Better the agricultural system, better is the economy.

Agriculture provides raw materials to many industries which form the backbone of the nation. Most importantly, it helps a nation to strive by providing food and other agrarian products. India, for example, which is primarily an agrarian country, has a bulk of the working population engaged in agricultural activities.

Agriculture is important not only for the Supply of Food but also for the Provision of Raw Materials for other Industries such as Textiles, Sugar, Jute, Vegetable oil and Tobacco. Agriculture is not only an Occupation for People but also a Way of life. Most Customs and Cultures in the World revolve around Agriculture.

Project background:

With growing population and increasing demand of products we need to come up with smart methods to meet the needs accordingly.

Smart agricultural system based on iot helps in monitoring soil moisture and climatic conditions to grow and yield a good crop. Farmer is provided a mobile app using which he can monitor the temperature, humidity and soil moisture parameters along with weather forecasting details. Based on all the parameters. This measurement can be done by fixing sensors. Sensors help to know the moisture content and soil conditions. So accordingly, he can water his crop by controlling the motors using the mobile application. Even if the farmer is not present near his crop, he can water his crop by controlling the motors using the mobile application from anywhere. This way the work can be done with less labour and more efficiently.

Functional requirements:

- temperature
- humidity
- soil moisture
- weather forecasting
- allow user to turn on/off the motors accordingly.
- sensors to know the soil conditions.

Project schedule:

week-1	Project planning and kick off Explore IBM cloud platform
week-2	Connecting iot simulator to Watson iot platform. Configure the node red to get the data from IBM IOT Platform and open weather API
week-3	Building a web app
week-4	Configure device to receive the data from the web application and control your motors

Project summary:

Smart home is a web app that helps a farmer to know the weather and soil conditions. The farmer no longer needs to be worried about his presence in the farm to on the motor and water the farm. He can be carefree and can operate motors from anywhere and any time by just one click. This lessens the efforts of farmers and is a smarter way to serve the growing population and demand for the products.