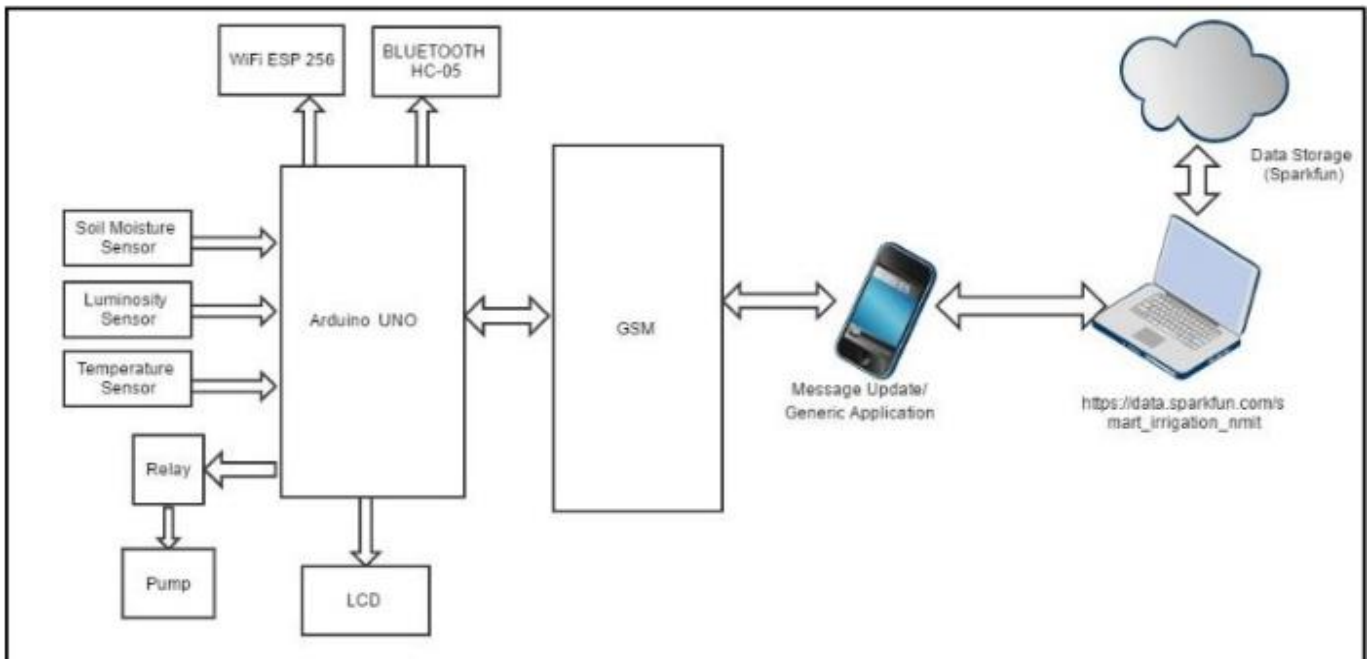
Smartfarmer - IoT Enabled Smart Farming Application

SOLUTION ARCHITECTURE

Date	09 NOV 2022
Team ID	PNT2020TMID13187
Project Name	Smartfarmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

Solution Architecture Diagram:



- The different soil parameters (temperature, humidity, moisture) are sensed using different sensors and the obtained value is stored in IBM cloud.
- NodeMCU is used as a processing unit which processes the data obtained from sensors and weather data from weather API.
- All the collected data are provided to the user through a mobile application which was developed using MIT app inventor.
- Open Weather provides hyperlocal minute forecast, historical data, current state and from short-term to annual and forecasted weather data.
- This sensor has both digital and analogue outputs. Digital output is simple to use but is not as accurate as the analogue output.
- the analog input pin of Arduino can read analog signals being sent from the sensor and return binary integers from 0 to 1023. Greater amount of output implies lesser moisture content.
- All data is available via industry standard APIs.
- The user could make decision through an app, whether to water the crop or not, depending upon the sensor values.