Smart Farmer - IoT Enabled Smart Farming Application -SOLUTION ARCHITECTURE

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TEMPERATURE AND HUMIDITY SENSOR

Node-RED

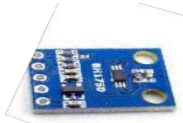
MQTT

ARDUINO-UNO

L293D (16 PIN IC)

SOIL MOISTURE SENSOR

MOBILE APP



LIGHT INTENSITY SENSOR

PH SENSOR

OPEN WEATHER API

•The different soil parameters (temperature, humidity, light intensity, pH level) are sensed using different sensors and the obtained value is stored in IBM cloud.

•Arduino uno is used as a processing unit which processes the data obtained from sensors and weather data from weather API.

•Node red is used as a programming tool to wire the hardware, software and APIs. The MQTT protocol is followed for communication

•All the collected data are provided to the user through a mobile application which was developed using MIT app inventor. The user could make decision through an app, whether to water the crop or not depending upon the sensor values.