

Project Design Phase-I Solution Architecture

| | |
|---------------|---|
| Date | 30 September 2022 |
| Team ID | PNT2022TMID28579 |
| Project Name | SmartFarmer – IoT Enabled Smart Farming Application |
| Maximum Marks | 4 Marks |

Solution Architecture:

- The different soil parameters (temperature, humidity, Soil Moisture) are sensed using different sensors, and the obtained value is stored in the IBM cloud.
- Arduino UNO is a microcontroller which used to 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 that was developed using the MIT app inventor. The user could make a decision through an app, whether to water the crop or not depending upon the sensor values. By using the app they can remotely operate the motor switch.

Solution Architecture Diagram:

