Project Design Phase-I
Solution Architecture

Date	30 September 2022
Team ID	PNT2022TMID40817
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: