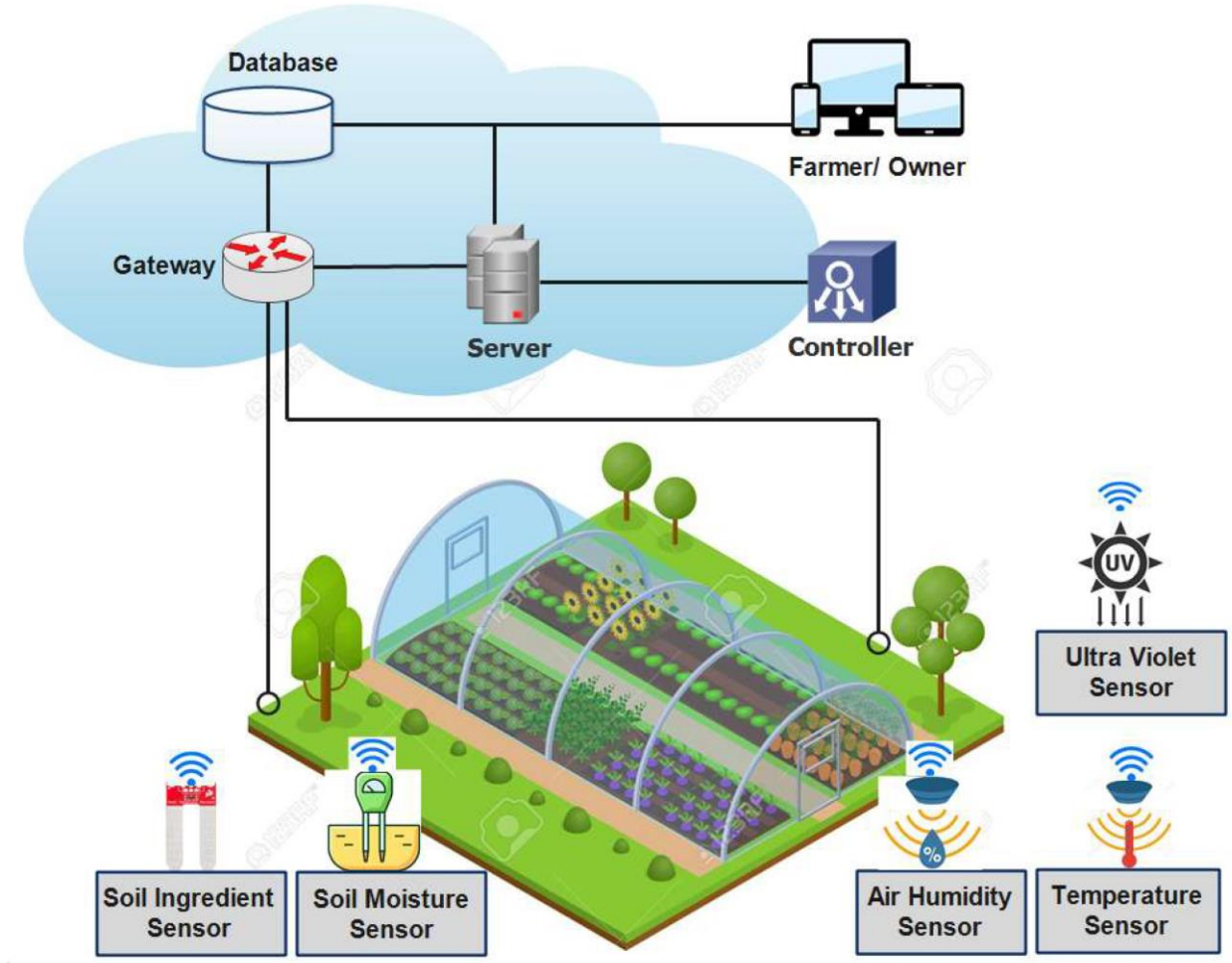
Project Design Phase-I
Solution Architecture

Date	24 September 2022
Team ID	PNT2022TMID30750
Project Name	Project - SmartFarmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

Solution Architecture:

- IoT –based agriculture system helps the farmer in monitoring different parameters of his field like soil moisture, temperature, and humidity using some sensors.
- Farmers can monitor all the sensor parameters by using a web or mobile application even if the farmer is not near his field.
- Watering the crop is one of the important tasks for the farmers.
- They can make the decision whether to water the crop or postpone it by monitoring the sensor parameters and controlling the motor pumps from the mobile application itself.
- The different soil parameters are sensed using different sensors, and the obtained value is stored in the IBM cloud.
- Arduino UNO is used as a processing that 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.
- All the collected data are provided the user through a mobile application that was developed using the MIT app inventor.
- The user could make decision through an app, whether to water the crop or not depending upon the sensor values. By using this app they can remotely access the motor switch.

Solution Architecture Diagram:



Architecture for IoT Enabled smart farming application