Project Design Phase-I
Solution Architecture

Date	19 September 2022
Team ID	PNT2022TMID35659
Project Name	SmartFarmer - IoT Enabled Smart Farming Application
Maximum Marks	4 Marks

Solution Architecture Diagram:

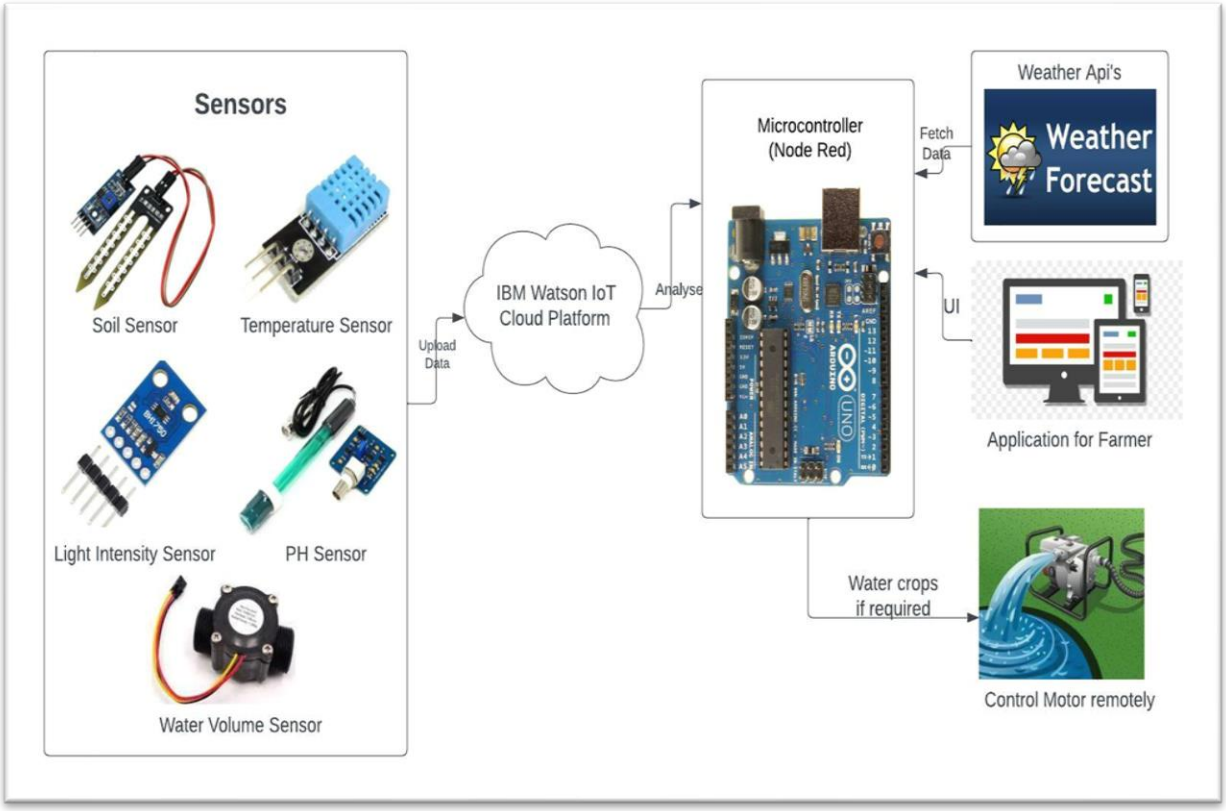

Figure 1: Architecture diagram of Smart farming system.

Architecture Diagram Link:

https://lucid.app/lucidchart/9e091e40-9049-41ac-9308-ebb55f984adc/edit?viewport_loc=152%2C-71%2C2030%2C834%2C0_0&invitationId=inv_e29bbf23-f000-46b6-b314-b52a697d28e5

Solution Architecture:

- Various sensors such as soil moisture sensor, temperature and humidity sensor, PH sensor and light intensity records values and upload it to cloud.
- These sensors data are considered as parameters and also weather forecast data is also fetched using weather API's. These data act as input for the Arduino UNO.
- Arduino UNO is used as a processing unit which processes the data obtained from sensors and weather data from weather API. Based on these values the farmers are suggested with possible decisions.
- Farmer can control the motor remotely using the application developed using MIT App inventor.
- If the farmer wants to water the crop then the Arduino switches on the motor and the water volume sensor ensures that the crops are not watered excessively.
- The application also alerts the farmer at necessary situation.