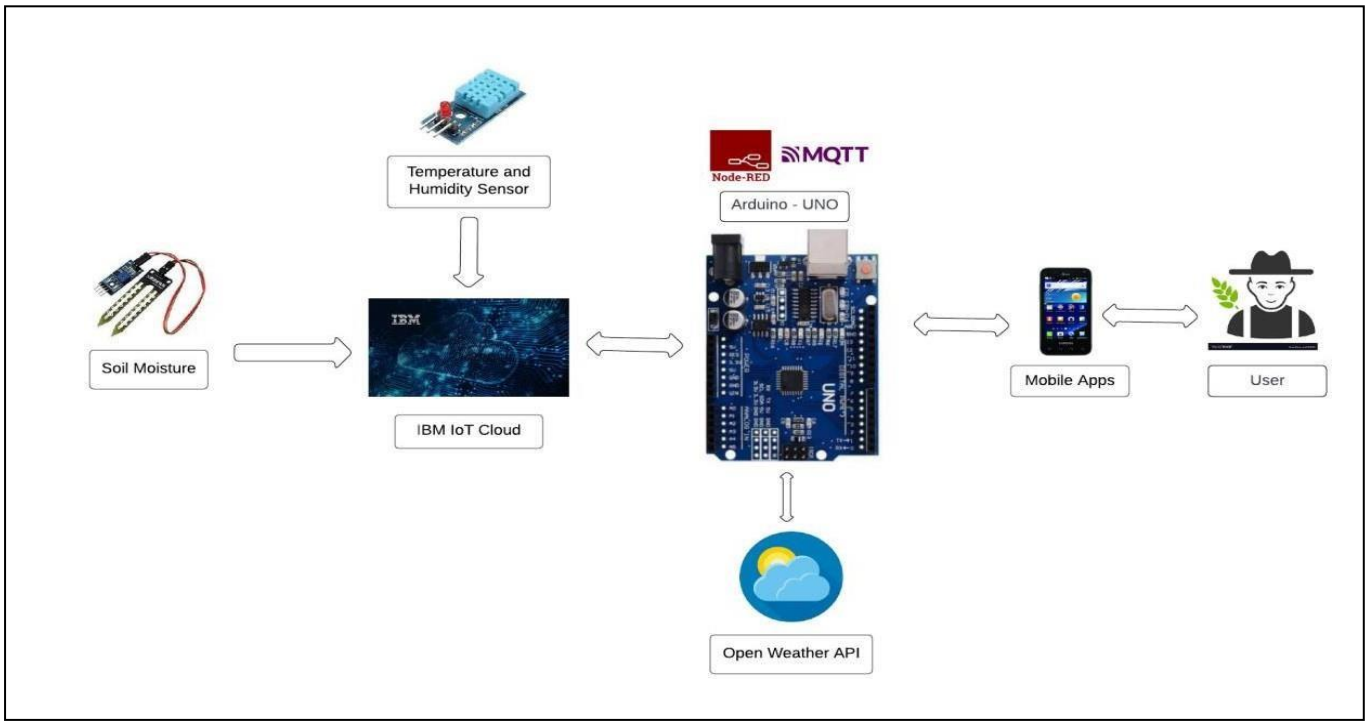
# Project Design Phase - I

## Solution Architecture

| | |
|---|---|
| Date | 16 October 2022 |
| Team ID | PNT2022TMID25689 |
| Project Name | Smart Farmer-IoT Enabled Smart Farming Application |
| Maximum Marks | 4 Marks |




- The different soil parameters (temperature, humidity, Soil Moisture) are sensed using different sensors, and the obtained value is stored in the IBM cloud.

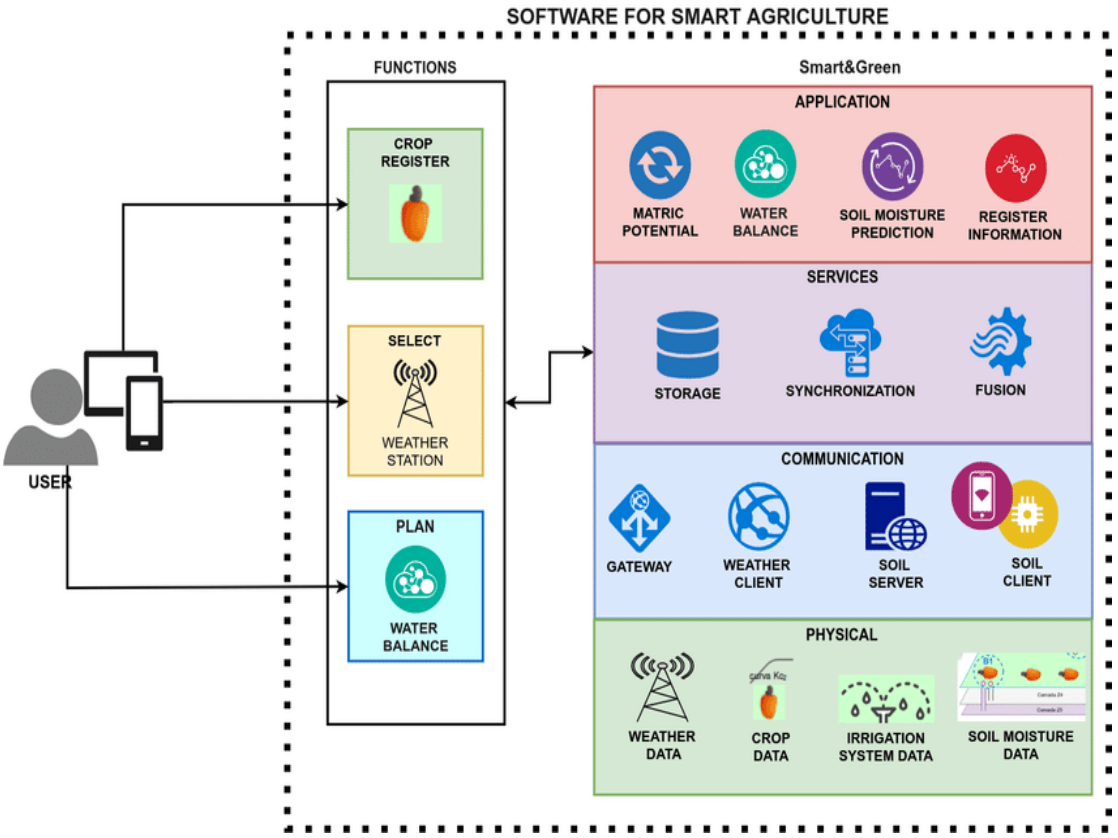
- Arduino UNO is used as a processing unit that processes the data obtained from sensors and weather data from weather API.

- Node-red is used as a programming tool to wire the hardware, software, and APIs. 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 2:




Solution architecture is a complex process – with many sub-processes that bridges the gap between business problems and technology solutions. Its goals are to:

- Find the best tech solution to solve existing business problems.
- Describe the structure, characteristics, behavior, and other aspects of the software to project stakeholders.
- Define features, development phases, and solution requirements.
- Provide specifications according to which the solution is defined, managed, and delivered.