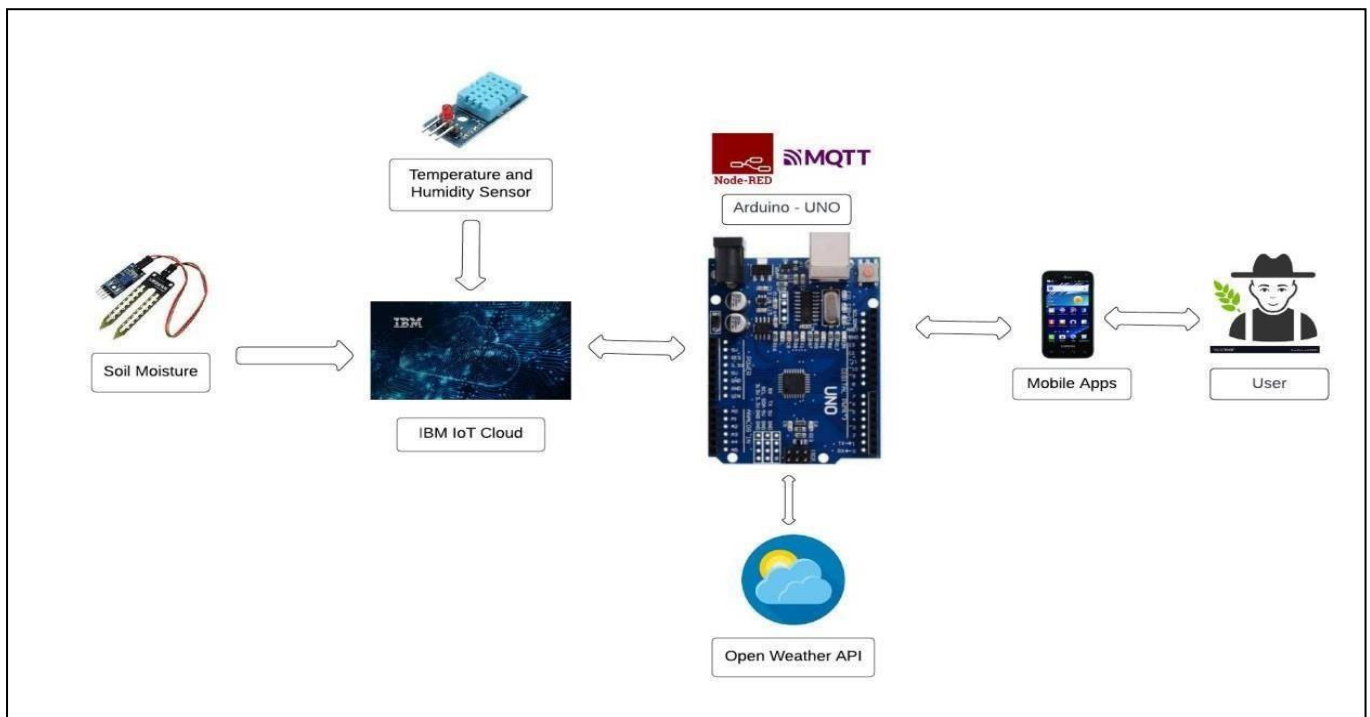


Project Design Phase - I

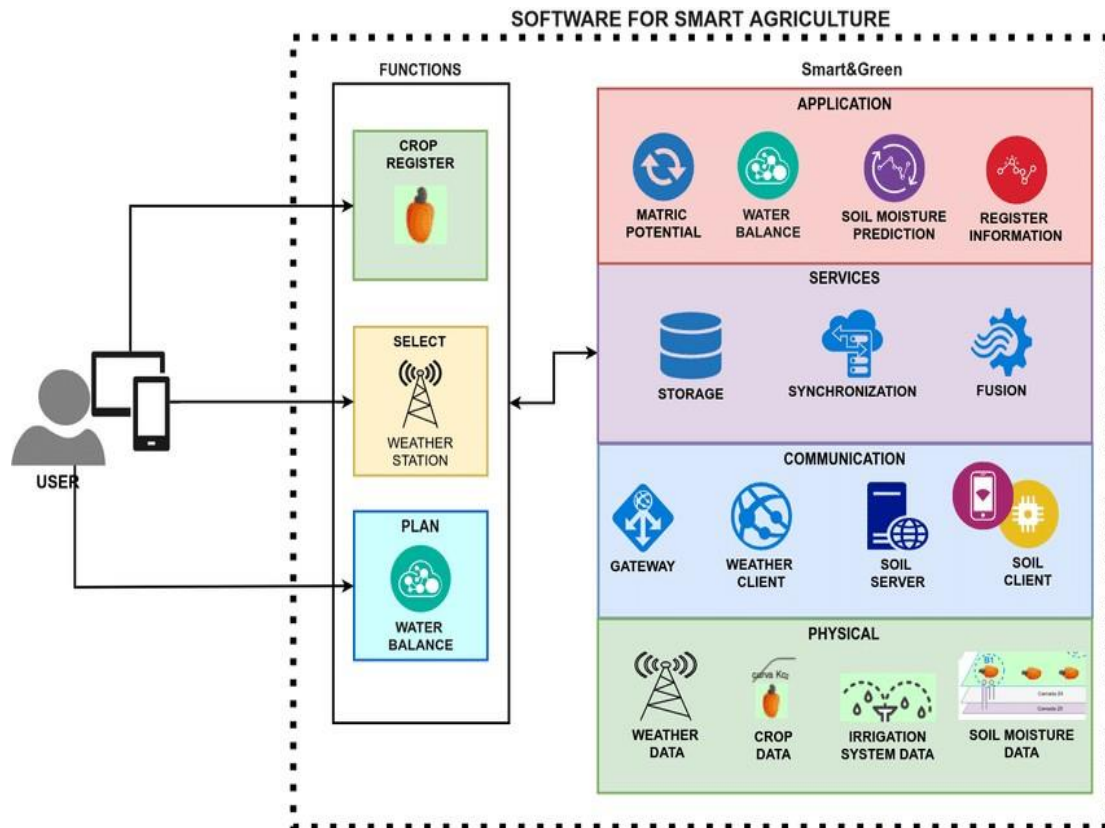
Solution Architecture

Date	16 October 2022
Team ID	PNT2022TMID53009
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 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.

