Project Design Phase-II
Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID41287
Project Name	Smart Farmers-IOT based Smart farming
Maximum Marks	4 Marks

Technical Architecture:

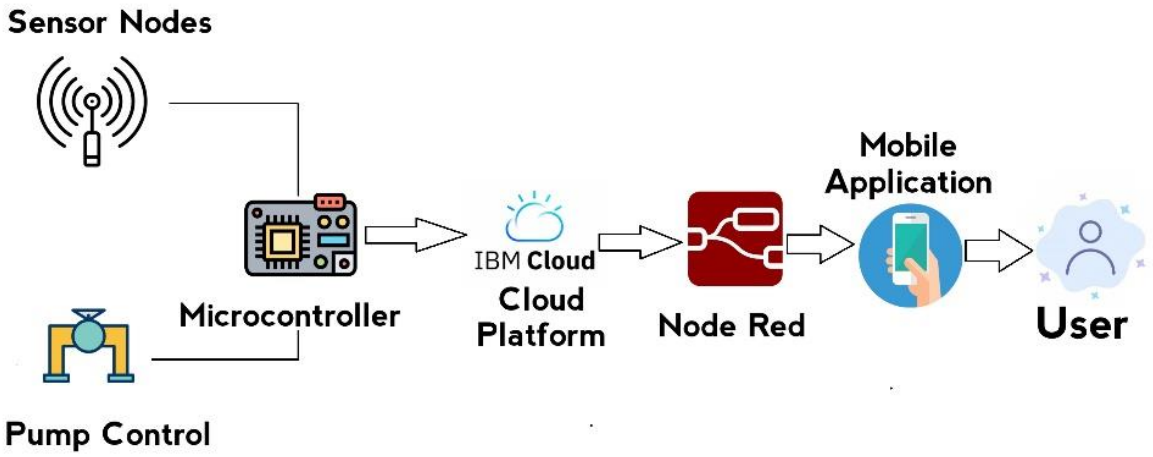

Table-1: Components & Technologies:

S. No	Component	Description	Technology
1.	User Interface	Mobile Application	MIT app Inventor
2.	Reading Parameters	Reading Field Parameters like Soil Moisture, Humidity, Temperature	Various Sensors nodes
3.	Motor Controlling	Motor Pump Controlling	Solenoid Valve connected with Microcontroller
4.	Hardware device	For Handling Sensors and Valve	Microcontroller/Microprocessor Board
5.	Cloud Connectivity	Connecting Hardware to Cloud	Wi-fi Module or ESP32
6.	Cloud Database	Database Service on Cloud	IBM Watson
7.	External API-1	Purpose of External API used in the application	IBM Weather API
8.	External API-2	Purpose of External API used in the application	GPRS

Table-2: Application Characteristics:

S. No	Characteristics	Description	Technology
1.	Open-Source Frameworks	open-source frameworks used	Django
2.	Security Implementations	security / access controls implemented, use of firewalls etc.	User login Credentials
3.	Scalable Architecture	scalability of architecture	Can add and Modify Sensors anytime
4.	Availability	availability of application	The Applications will be Available on Playstore and File will be provided for the users directly
5.	Performance	Performance of System	Can handle connected sensors data and Network connectivity simultaneously