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

Smart Farmer- IoT Enabled Smart Farming Application

Date	03 October 2022
Team ID	PNT2022TMID11377
Project Name	Smart Farmer IOT Enabled smart farming application
Maximum Marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

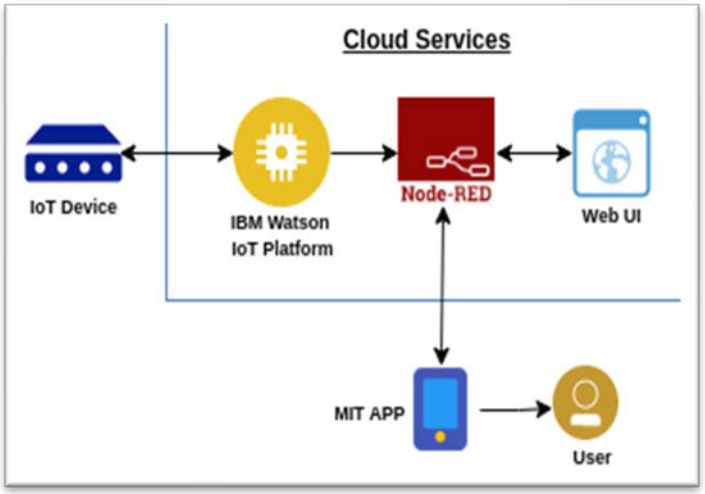

Table- 1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	MIT app inventor
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	Node Red/IBM Watson
4.	Application Logic-3	Logic for a process in the application	Node red/IBM Watson
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM cloud.
7.	Temperature sensor	Monitors the temperature	TMP36
8.	Humidity sensor	Monitors the humidity	DHT11
9.	Soil moisture sensor (Tensiometers)	Measuring the amount of water in the soil	Soil Moisture sensor
10.	Weather Monitoring	Monitors the weather	Temperature sensor

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	MIT app inventor, Node-Red	Software
2.	Security Implementations	Sensitive and private data must be protected from their production until the decision-making and storage stages.	Encryption Process
3.	Scalable Architecture	scalability is a major concern for IoT platforms. It has been shown that different architectural choices of IoT platforms affect system capability and that automatic real time decision-making is feasible in an environment composed of dozens of thousand.	Software

S.No	Characteristics	Description	Technology
4.	Availability	Automatic adjustment of farming equipment made possible by linking information like crops/weather and equipment to auto-adjust temperature, humidity, etc	Software
5.	Performance	The idea of implementing integrated sensors with sensing soil and environmental or ambient parameters in farming will be more efficient for overall monitoring	Software