

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

Date	03 October 2022
Team ID	PNT2022TMID04781
Project Name	SmartFarmer - 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

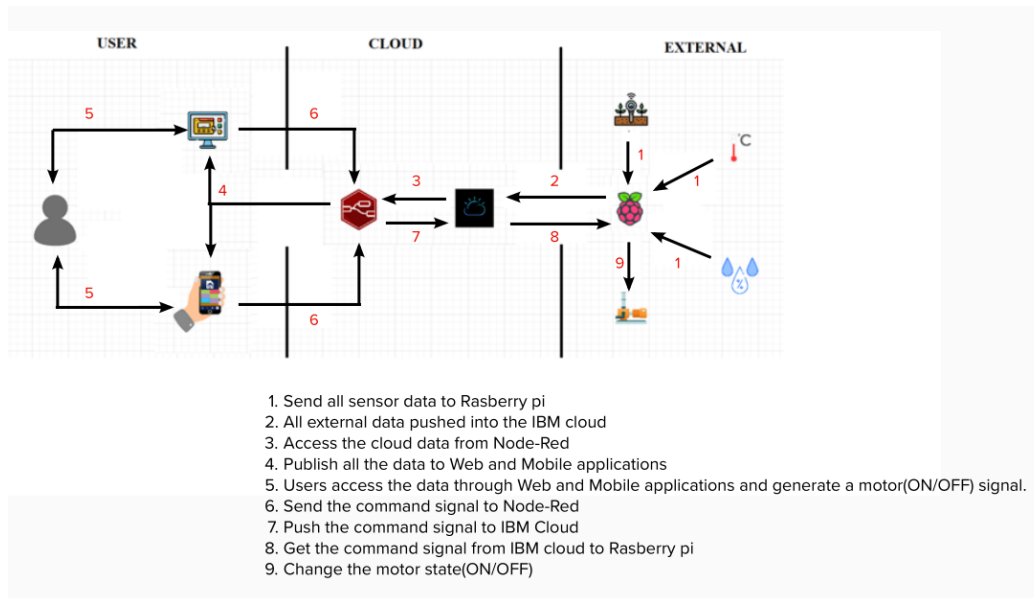


Table-1: Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	Web UI, Mobile App	Node-red, MIT app inventor
2.	Application Logic-1	Sensor data that is randomly generated	Python
3.	Application Logic-2	Sensor data is published and command signals are subscribed	IBM Watson IoT service
4.	Application Logic-3	Connect the cloud data to the web and Mobile Application	Node red
5.	External API-1	To generate the weather data if required	Open Weather API
6.	External API-2	To send an SMS to mobile devices	Fast2SMS API
7.	Infrastructure (Server / Cloud)	Local Server Configuration (Mobile device)	MIT Mobile Application

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	MIT App Inventor, Node-Red	Website
2.	Security Implementations	cloud integrations	API ID, API Token
3.	Scalable Architecture	2 – tier, Micro-services	Cloud, MQTT
4.	Availability	24x7 in IBM Cloud server	IBM Cloud
5.	Performance	Lightweight Application, 200 requests/second,	Python, IBM Watson IoT platform