Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	15 October 2022
Team ID	PNT2022TMID26544
Project Name	Project - 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

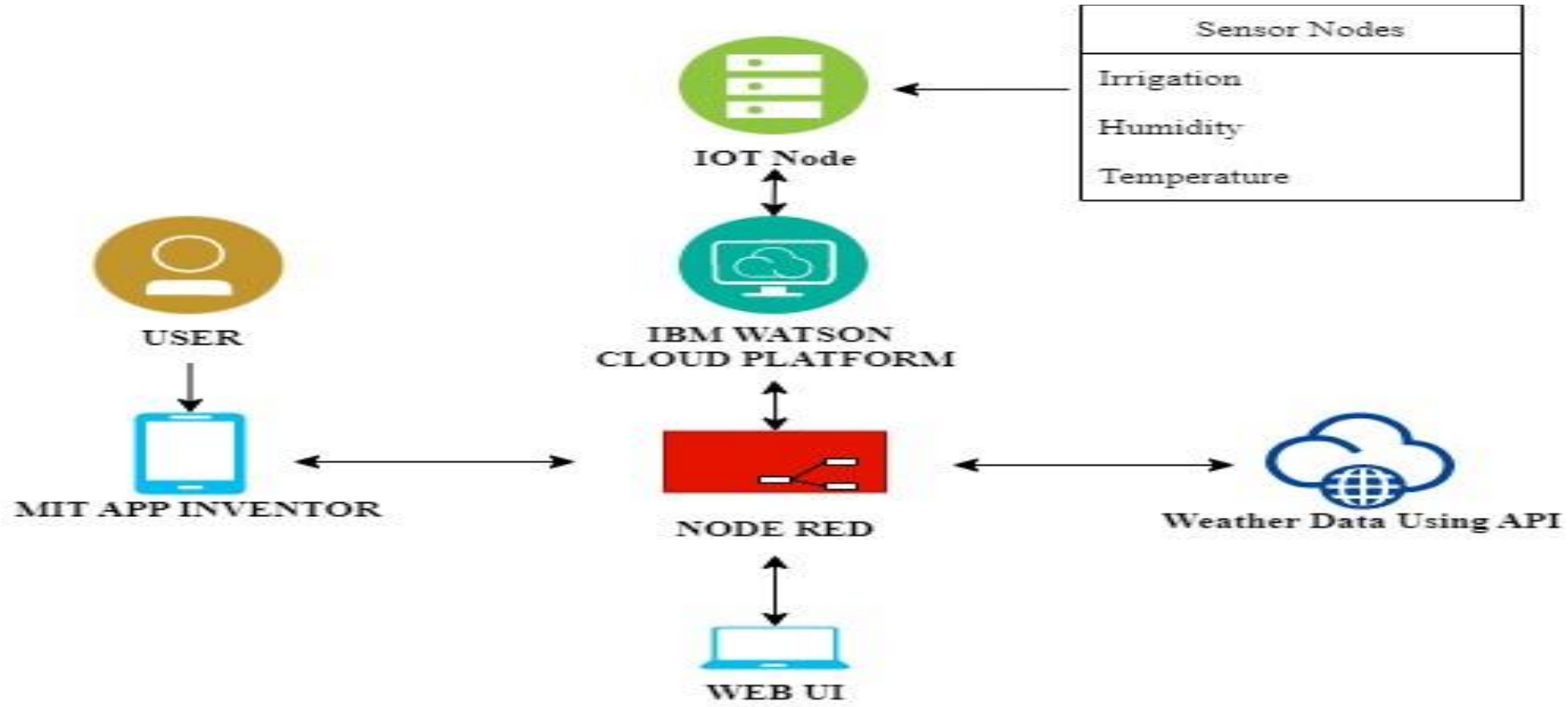

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2.	Application Logic-1	Logic for a process in the application	Python
3.	Application Logic-2	Logic for a process in the application	IBM Watson IOT service

4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM Cloud
7.	File Storage	File storage requirements	IBM Block Storage or Other Storage Service or Local Filesystem
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration:	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	Technology of Opensource framework

2.	Security Implementations	A literature survey of security protocols for various subsectors of security in smart agriculture along with authentication protocols in smart applications provides a detailed direction of the progress in each of farming security sub-areas and identifies the dearth of existing protocols.	e.g., Node-Red, Open weather App API, MIT App Inventor, etc
3.	Scalable Architecture	Scalability is a major concern for IoT platforms. It has been shown that different architectural choices of IoT platforms affect system scalability and automatic real time decision-making is feasible in an environment composed of dozens of thousand	Technology used
4.	Availability	Automatic adjustment of farming equipment made possible by linking information like crops/weather and equipment to auto-adjust temperature, humidity, etc	Technology used
5.	Performance	The Iot Sensor nodes gives accurate date and transfer lively to the user.	Technology used