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

Date	19 October 2022
Team ID	PNT2022TMID22839
Project Name	Project - IoT Based Smart Crop Protection System for Agriculture
Maximum Marks	4 Marks

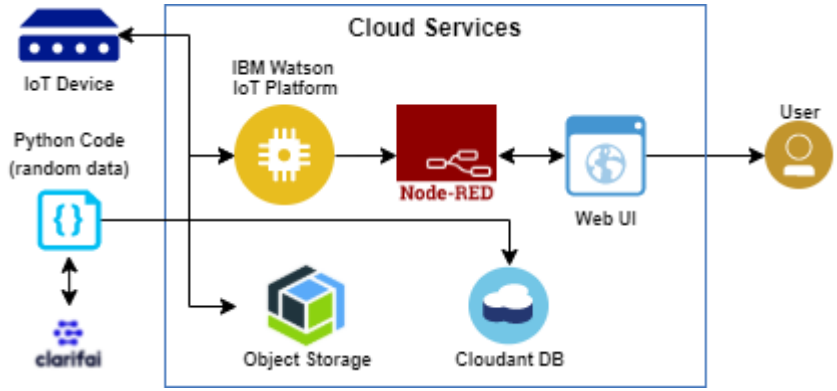

Table-1 : Components & Technologies:

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/node red
4.	Application Logic-3	Logic for a process in the application	IBM Watson/node red

5.	Database	Data Type, Configurations etc.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM Cloudant.
7.	Temperature sensor	Monitor the temperature	TMP36
8.	Humidity sensor	Monitor the humidity	DHT11
9.	Soil moisture sensor	Measure the amount of water in the soil	Soil maoisture sensor
10.	Weather monitoring	Monitor the weather	Temperature sensor

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	Clarifai, Node- red	Software
2.	Security Implementations	Sensitive and private data must be protected from their protection until the decision-making and storage stages.	Encryption process
3.	Scalable Architecture	Scalability is a major concern for IOT platform it has been shown that different architectural choices of IOT platform affect system capability and that automatic real time decision making is feasible in an environment composed of dozens of thousand.	Software
4.	Availability	Automatic adjustment of farming equipment made possible by linking information like crops/weather and temperature, humidity etc.	Software
5.	Performance	The ideas of implementing integrated sensors with sensing soil and environmental or ambient parameters in framing will be more efficient for overall monitoring .	Software