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

Date	15 October 2022
Team ID	PNT2022TMID11461
Project Name	IOT Based Smart Crop Protection System For Agriculture
Maximum marks	4 Marks

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table 1 & table 2.

Guidelines:

1. Include all the processes (As an application logic / Technology Block)
2. Provide infrastructural demarcation (Local / Cloud)
3. Indicate external interfaces (third party API's etc.)
4. Indicate Data Storage components / services
5. Indicate interface to machine learning models (if applicable)

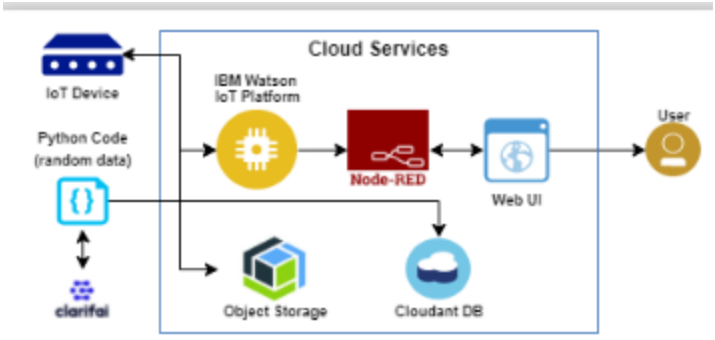

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App	HTML, CSS, JavaScript
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
4.	Application Logic-3	Logic for a process in the application	NODE-Red
5.	Applicatiom Logic-4	Logic for a process in the application	clarifial
6.	Cloud Database	Database Service on Cloud	Cloudant DB
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 etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Intelligent Silos	sensors monitor the amounts of harvested produce in storage.The information flows into the farmer's database so that he always has an accurate idea of his current stocks	Technology used
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	e.g.PIR sensor
3.	satellites and mobile radio antennas	Data collection hub.the information colllected in the field is passed on to	Technology used

		servers.the commands are sent from the analysis platform or the farmer to machinery ,weather data from rader satelliteto waring systems,etc	
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Technology used
5.	User-Friendly	The farmer receives yield predictions and recommendations on crop protection and irrigation etc.. on his smartphone,laptop or tablet.he knows what is happening in his fileds at all times.	Technology Used
6.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Technology used