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

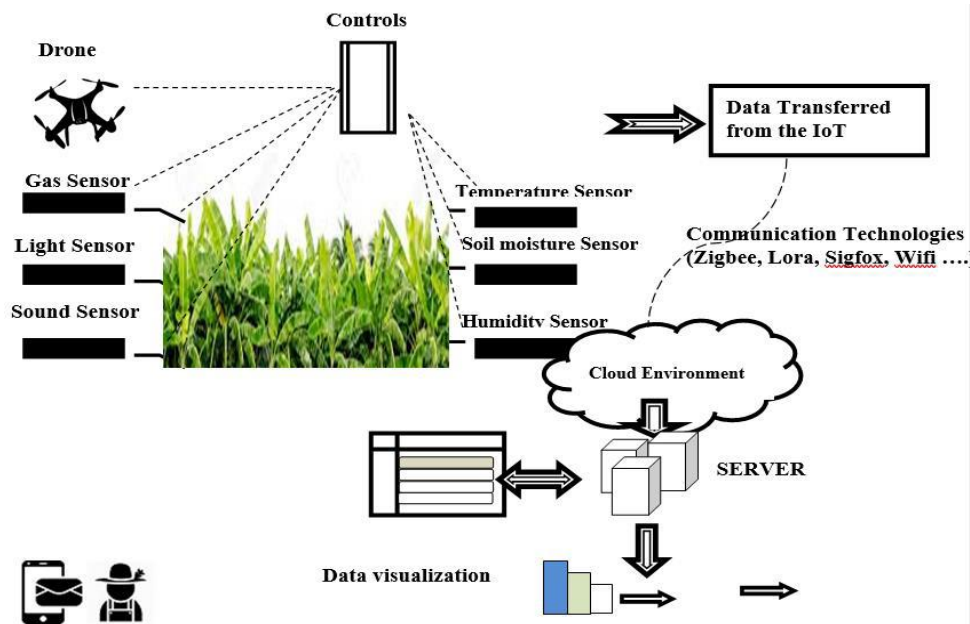| Date	14 October 2022
Team ID	PNT2022TMID20174
Project Name	Smart Farmer-IOT Enabled Smart Farming Application
Maximum Marks	4 Marks

Technical Architecture:

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.	Wi-Fi,GPS
2.	Application Logic-1	Logic for a process in the application	Python IDLE
3.	Application Logic-2	Logic for a process in the application	IBM Watson STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Cloud service
5.	Database	Data Type, Configurations etc.	MonogoDB
6.	Cloud Database	Database Service on Cloud	MySQL,NoSQL
7.	File Storage	File storage requirements	Stored Arera Network (SANs)
8.	External API-1	Purpose of External API used in the application	To Tracking the unwanted crop grassy growth
9.	External API-2	Purpose of External API used in the application	To Tracking the Growing
10.	Machine Learning Model	Purpose of Machine Learning Model	Inter Quartel range Model
11.	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	List all the security / access controls implemented, use of firewalls etc.	e.g. SHA-256, Encryptions, IAM Controls, OWASP etc.
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	Restore the soil health and fertility status

S.No	Characteristics	Description	Technology
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	Lands
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	To monitor the growth of plants and crops