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

Date	03 October 2022
Team ID	PNT2022TMID30928
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 table1 & table 2

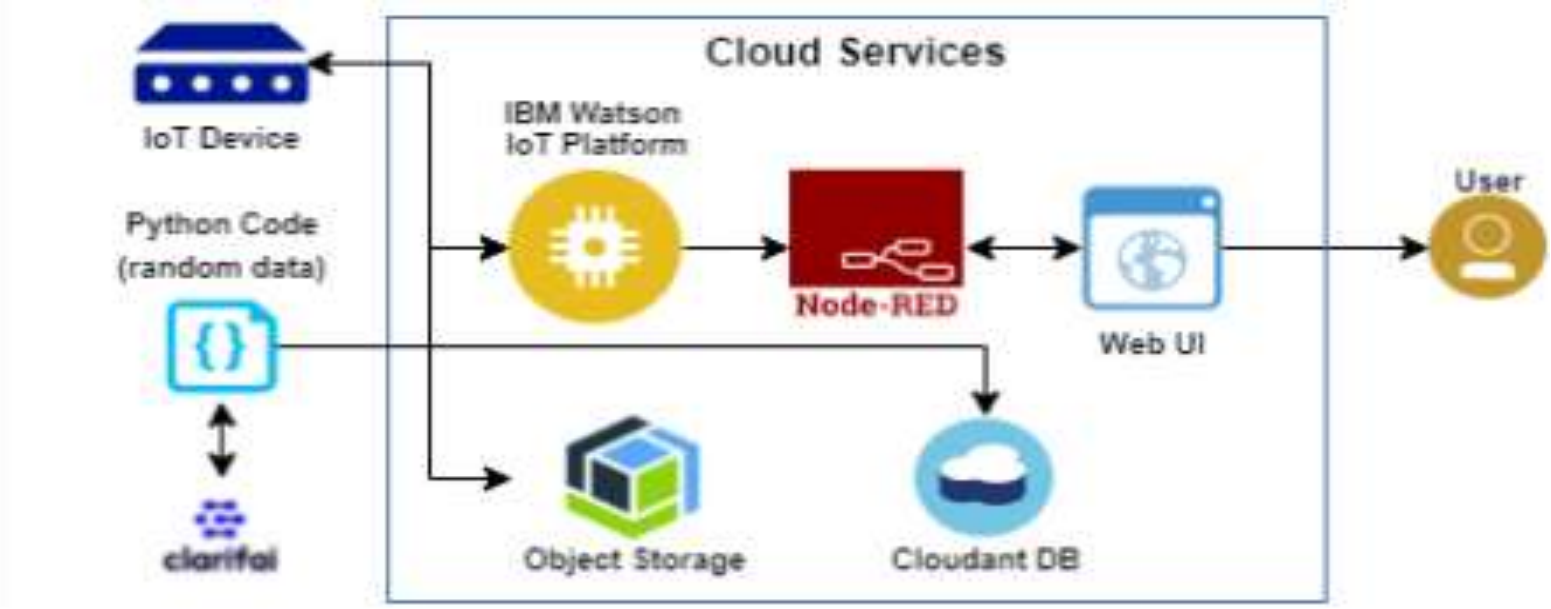

Table-1 : Components & Technologies:

S.No	Component	Description	Technology
1.	User Interface	How user interacts with application e.g. Web UI, Mobile App, Chatbot etc.	In app development
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 STT service
4.	Application Logic-3	Logic for a process in the application	IBM Watson Assistant
5.	Database	Data Type, Configurations etc.	Influx DB,NoSQL
6.	Cloud Database	Database Service on Cloud	Cloudant.
7.	File Storage	File storage requirements	IBM Block storage
8.	External API-1	Purpose of External API used in the application	IBM Weather API
9.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model
10.	Infrastructure (Server / Cloud)	Application Deployment on Local System / Cloud Local Server Configuration: Cloud Server Configuration :	Cloud Foundry

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	List the open-source frameworks used	SAN - SAF
2.	Security Implementations	List all the security / access controls implemented, use of firewalls etc.	IBM encryptions
3.	Scalable Architecture	Justify the scalability of architecture (3 – tier, Micro-services)	IBM cloud architecture
4.	Availability	Justify the availability of application (e.g. use of load balancers, distributed servers etc.)	To deal with climate changes,resourse efficiency,food safety, and animal welfare
5.	Performance	Design consideration for the performance of the application (number of requests per sec, use of Cache, use of CDN's) etc.	Iot compromises smart webs of connected and context-sensitive objects that can be identified,sensed and controlled remotely