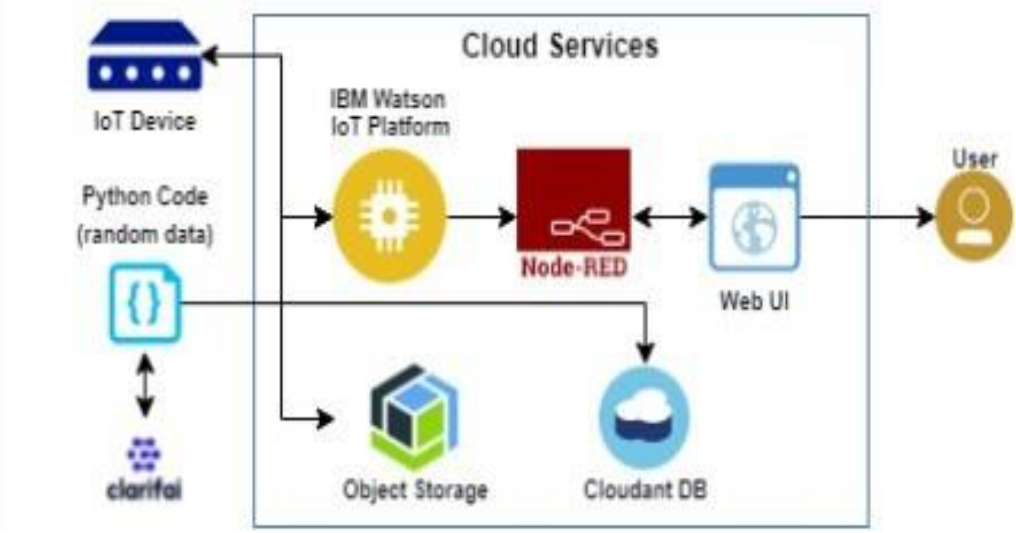
Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	**19 October 2022**
Team ID	**PNT2022TMID04613**
Project Name	**IoT Based Smart Crop Protection System For Agriculture**
Maximum Name	**4 Marks**

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table2.



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 the Web UI	App development
2.	Application Logic-1	Logic for a process in the application	Python Objectives
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	Node-RED service
		application	
5.	Database	Data Type	Database Cloudant DB
6.	Cloud Database	Database Service on Cloud	Cloud Object store service
7.	File Storage	File storage requirements	IBM Block Storage
8.	External API-1	Purpose of External API used in the application	IBM Weather API, etc.
9.	External API-2	Purpose of External API used in the application	Aadhar API, etc.
10.	Machine Learning Model	Purpose of Machine Learning Model	Object Recognition Model, etc.
11.	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	The open- source frameworks used	SAN-SAF
2.	Security Implementations	List all the security / access controls implemented	IBM cloud encryptions
3.	Scalable Architecture	Justify the scalability of architecture (3 – tierr Micro-services)	IBM cloud Architecture
4.	Availability	Justify the availability of applications (e.g. use of load balancersr distributed servers etc.)	Web Application can even be used by the framers in the horticulture
5.	Performance	Design consideration for the performance of the application	Since the web application is high efficientr it can be used by the farmers irrespective of time