

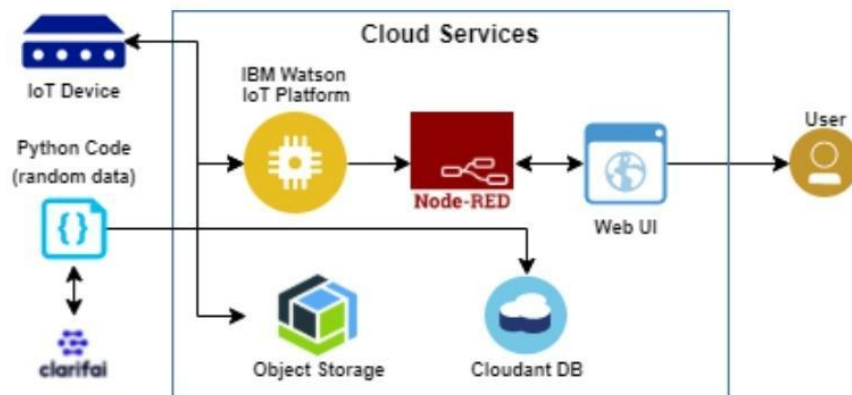
## Project Design Phase-II Technology Architecture

Date	15 October 2022
Team ID	PNT2022TMID50062
Project Name	Project - 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

**Example: Order processing during pandemics for offline mode**



#### Guidelines:

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

**Table-1 : Components & Technologies:**

S.No	Component	Description	Technology
1.	User Interface	The point of human-computer interaction and communication in a device (E.g ) <b>Display screen</b>	SMTP email , IP network protocol
2.	Application Logic-1	The logic governing what a computer program is trying to accomplish	High -level programming include <b>C++,Java ,Python</b>
3.	Application Logic-2	Since application logic is user-facing,any glitches will directly affect consumers	E commerce application Technology
4.	Application Logic-3	research and product development;demonstration and market validation; and commercialization	GPS technology
5.	Database	an organized collection of structured information, or data, typically stored electronically in a computer system	solarwinds database,DbVisualizer
6.	Cloud Database	its a digital data visualization tool connected to sensors placed around the farm and software that makes sense of the information they gather	monitor and optimize
7.	File Storage	a hierarchical storage methodology used to organize and store data on a computer hard drive	facilitates the storage of unstructured data
8.	External API-1	Agricultural practices that use high amounts of external-inputs,such as inorganic fertilizers,pesticides and other amendments	Utilization of drones
9.	External API-2	Increased dependency on high cost external inputs in agriculture also made farmers to depend on external credit on a regular basis	,Minichromosome technology
10.	Machine Learning Model	a file that has been trained to recognize certain types of patterns	Machine learning in cybersecurity and Deep Neural Networks
11.	Infrastructure (Server / Cloud)	The agriculture infrastructure sector is important to enhance the productivity and to reduce the post-harvest losses	3G and 4G cellular networks

**Table-2: Application Characteristics:**

<b>S.No</b>	<b>Characteristics</b>	<b>Description</b>	<b>Technology</b>
1.	Open-Source Frameworks	a template for software development that is designed by a social network of software developers	GNU/Linux and Android
2.	Security Implementations	The farm security method which is right now going that is more unplanned typical way adopted time consuming and as well as laborious	RFID Technology
3.	Scalable Architecture	a system,network, or process that is designed to handle a workload that may change in scope	supports higher workloads without any fundamental changes to it
4.	Availability	he assurance that an enterprises IT infrastructure has suitable recoverability and protection from system failures,natural disasterst	the quality or state of being available
5.	Performance	considering all these aspects within an industrial segment ends up becoming a complicated practice	Remote sensing technologies and Tele-metrics positioning technologies