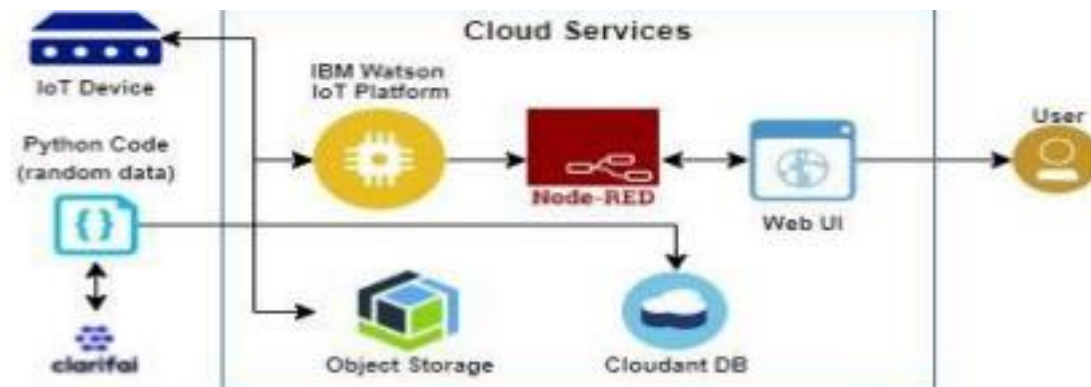


Project Design Phase-II

Technology Stack (Architecture & Stack)

Date	03 October 2022
Team ID	PNT2022TMID15011
Project Name	IOT based smart crop protection system for agriculture
Team Leader	Brijesh Chandra Aksharan K
Team Members	Shriraam PM, Sujith S, Saravanan R
Maximum Marks	4 Marks

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



GUIDELINES:

*An intelligent crop protection system helps the farmers in protection the crop from animals and birds which destroy the crop *This system also helps farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field *The motors and sprinklers in the field can be controlled using the mobile application.

DESCRIPTION:

A monitoring procedure for farm safety against animal attacks and climate change conditions. An intelligent crop protection system helps the farmers in protecting the crop from the animals and birds which destroy the crop. This system also helps farmers to monitor the soil moisture levels in the field and also the temperature and humidity values near the field. The motors and sprinklers in the field can be controlled using the mobile application

TABLE-1:**COMPONENTS & TECHNOLOGIES**

S. N O	COMPONENTS DESCRIPTION	TECHNOLOGY
1	User Interface How the user interacts with the application e.g., Web UI, Mobile App.	HTML, CSS, JavaScript / Angular Js / React Js etc.
2	Application Logic-1 The logic for a process in the application.	Python
3	Application Logic-2 The logic for a process in the application.	IBM Watson IoT service.
4	Application logic-3 The logic for a process in the application.	IBM Watson Assistant.

5	Database Data type, configurations, etc.	MySQL, NoSQL, etc.
6	Cloud Database Database service on the cloud.	IBM cloud.
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	Learning Model Purpose of hine Learning Model.	Object Recognition Model, etc.
10	Infrastructure Application Deployment on Local System/Cloud (server/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.	The technology of the Open Source framework.
2	Security Implementations Sensitive and private data must be protected from their production until the decision making and storage stages.	e.g., Node-Red, Open weather App API, MIT App Inventor, etc
3	Scalable Architecture scalability is a major concern for IoT platforms. It has been shown that different architectural choices of IoT platforms affect system scalability and that automatic real time decision-making is feasible in an environment composed of dozens of thousand.	Technology used.
4	Availability Automatic adjustment of farming equipment is made possible by linking information like crops/weather and equipment to auto-adjust temperature, humidity, etc.	Technology used.

5	<div>Performance</div> <div>The idea of implementing sensors with crop protection will be more efficient for monitoring</div>	Technology Used.
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