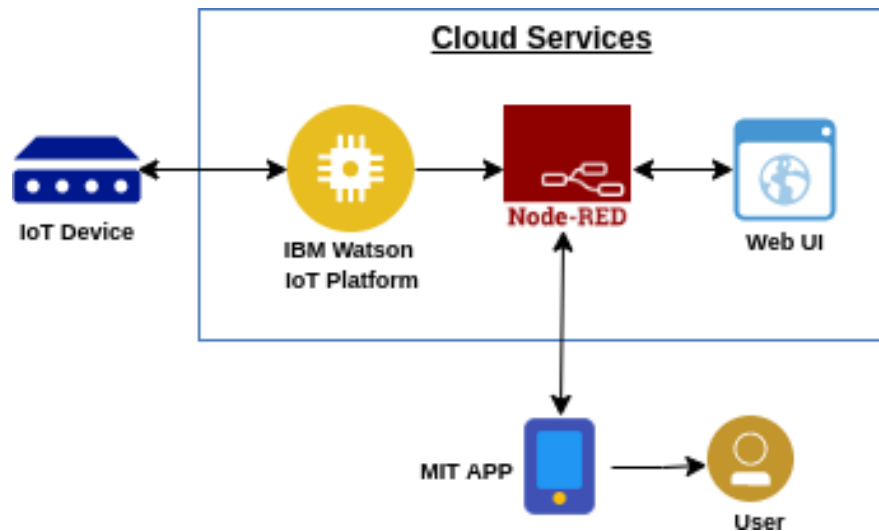


Project Design Phase-II Technology Stack (Architecture & Stack)

Date	29 October 2022
Team ID	PNT2022TMID15746
Project Name	Project :- IoT based smart crop protection 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



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	Web UI, Mobile App, etc.	Python
2.	Application Logic-1	Logic for a process in the application	Java / 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.	MySQL, NoSQL, etc.
6.	Cloud Database	Database Service on Cloud	IBM DB2, IBM Cloudant ,nodered etc
7.	File Storage	File storage requirements	IBM cloudant
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 :	Local, Cloud Foundry, Kubernetes, etc.

Table-2: Application Characteristics:

S.No	Characteristics	Description	Technology
1.	Open-Source Frameworks	*The internet of things system(IoT) refers to the set of devices and systems that stay interconnected with real word sensors and actuators to the internet	Internet of things
2.	Security Implementations	*We can use sensors for detecting surroundings	Sensing technology

S.No	Characteristics	Description	Technology
		*We can use buzzer to alert the farmer	
3.	Scalable Architecture	*it is clearly explained the IoT concept ,crop Damage issues and the need of using smart crop protection system	Internet of things
4.	Availability	*This system is developed using board programmed in embedded C and interfaced with sensing the surroundings	Microchip technology
5.	Performance	*The novelty of the work is that the system automatically alert the farmer by sending sms ,when animals enter into the fields	PIR sensor