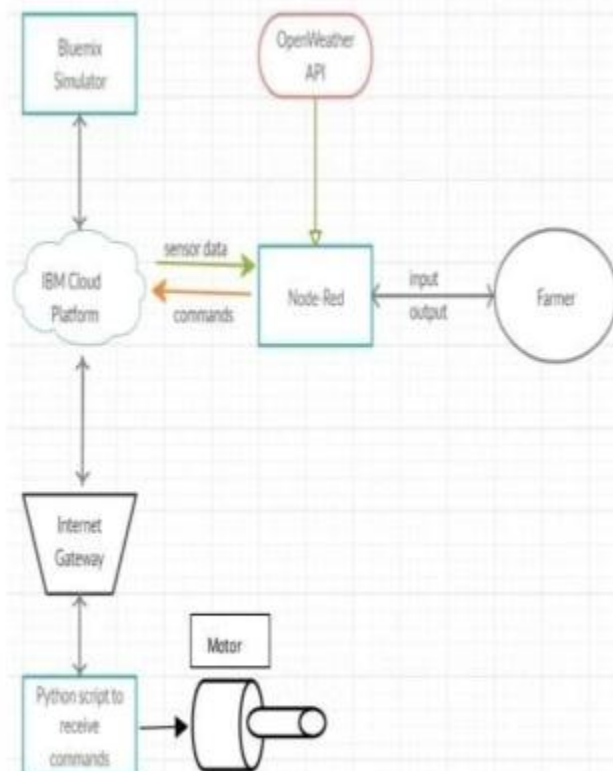# Project Design Phase-II

Technology Stack (Architecture & Stack)

Team ID	PNT2022TMID44437
Project Name	Smart Farming-IOT Enabled Smart Farming Application

Technical Architecture:

The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

- The Different parameters such as the soil moistur e,soil temperature and humidity are sensed using different sensors type and also this value is Obtained and stored in the IBM Cloud.

- Arduino UNO is using like as the processor unit that process the obtained data from the sensors and from the weather API.

- NODE-RED is used as a programming Tool for wiring together software, hardware devices ,APIs.

- The collection of the data are stored through the Mobile application and it was developed by an MIT app inventor.

- The user could decide through an app weather to water the crop or not depanding upon the sensor value ,By using this app they can remotely operate switch.

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.	HTML, CSS, JavaScript / Angular Js / React Js etc.
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 etc.
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.	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.