



**THIRUVALLUVAR COLLEGE OF ENGG & TECH**

**Department of Electronics & Communication Engineering**

# **Smart Farmer-IOT Enabled Smart Farming Application**

**IBM NALAIYATHIRAN**

## **ProjectDesignPhase -II DataFlowDiagram&UserStories**

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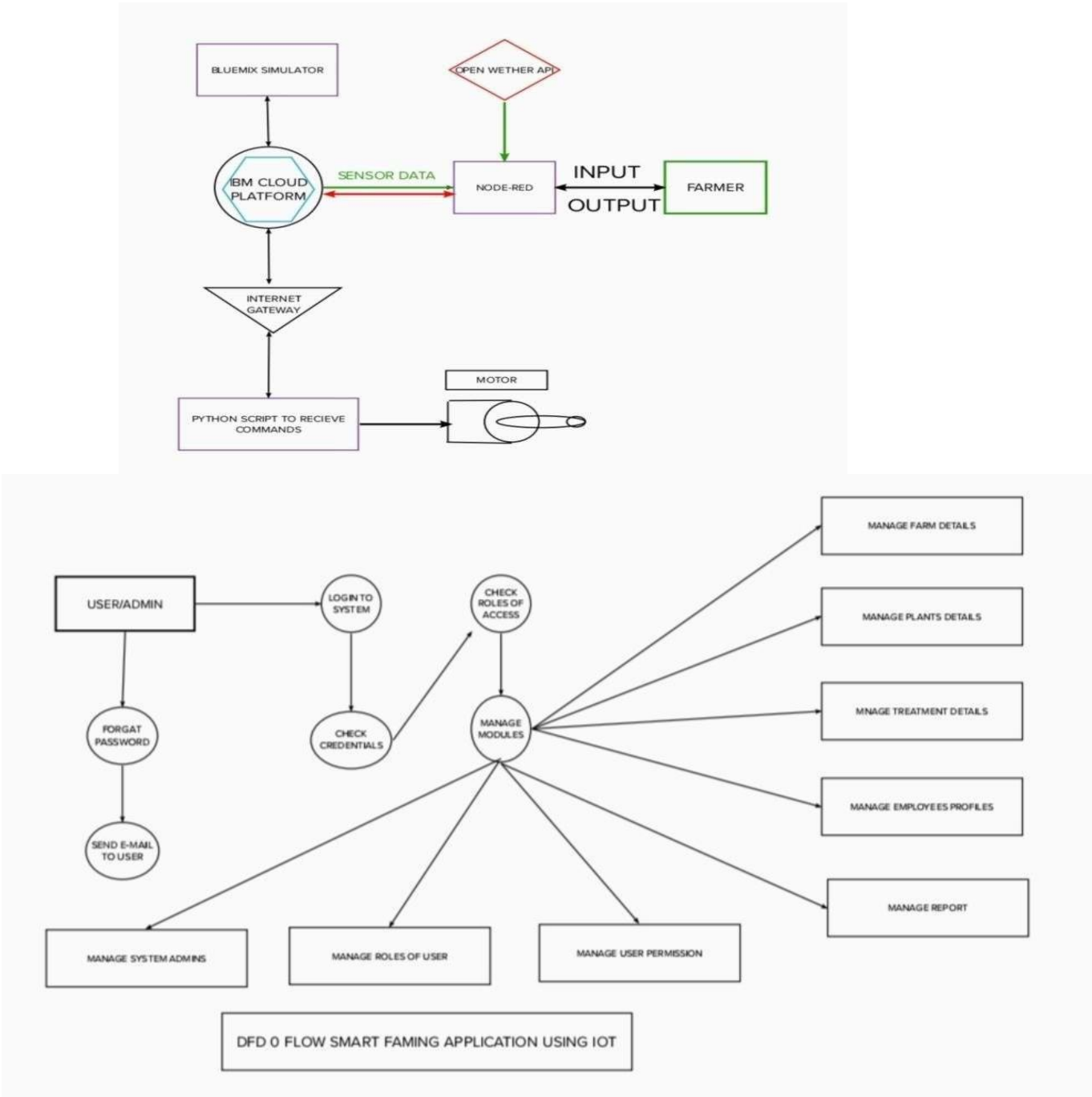
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DataFlowDiagrams:

ADataFlowDiagram(DFD) is atraditionalvisualrepresentationofthe informationflowswithin a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and



leaves the system, what changes the information, and where data is stored.

- The different soil parameters temperature, soil moisture and then humidity are sensed using different sensors and obtained value is stored in the IBM cloud.
- Arduino UNO is used as a processing unit that processes the data obtained from the sensors and whether data from the weather API.
- NODE-RED is used as a programming tool to write the hardware, software, and APIs. The MQTT protocol is followed for the communication.
- All the collected data are provided to the user through a mobile application that was developed using the MIT app inventor. The user could plan through an app, weather to water the crop or not depending upon the sensor values. By using the app they can remotely operate the motor switch.

## User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story/Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account/dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard					
Customer (Web user)						
Customer Care Executive						
Administrator						