

## Project Design Phase – II

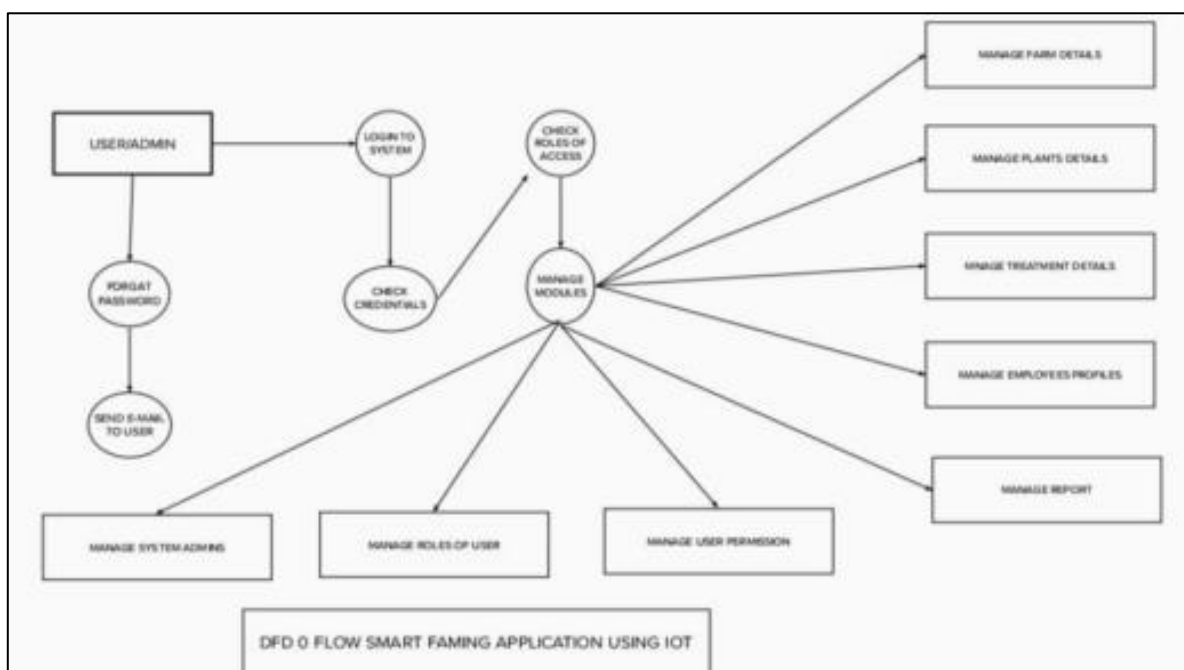
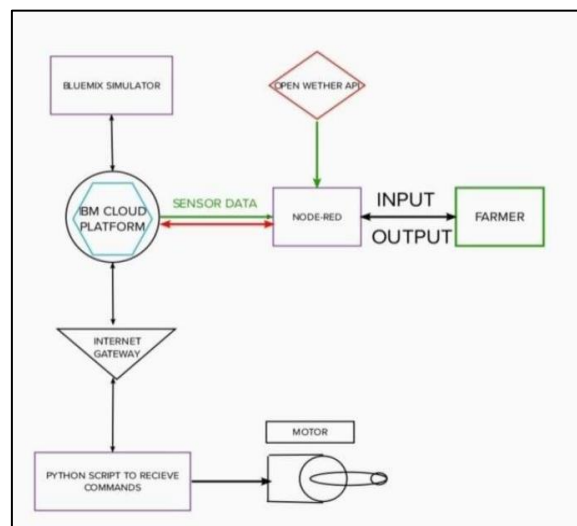
### Data Flow Diagram & User Stories

#### SMART FARMER – IoT ENABLED SMART FARMING APPLICATION

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#### Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within 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.



## Description:

- The parameters from the farming environment such as temperature, humidity, soil moisture is sensed using different sensors and the obtained value is stored in the IBM cloud.
- Arduino UNO board is used as a processing unit that processes the data obtained from sensors and weather data from weather API.
- Node-Red is used as a programming tool to wire the hardware, software, and API's.
- The MQTT protocol is used for communication.
- The data collected from the sensors is given to the mobile application through IBM IoT Cloud. The mobile application was developed using MIT app inventor.
- User can take decisions based on the parameters displayed in the mobile application.
- User can monitor and control the process of their field/plant through the mobile application itself.

## User Stories:

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						