## DATA FLOW DIAGRAMS AND USER STORIES

| Date          | 15 November 2022  |
|---------------|---|
| Team ID       | PNT2022TMID46489  |
| Project Name  | Project - Smart Farmer-IoT Enabled SmartFarming Application |
| Maximum Marks | 4 Marks   |

## **Data Flow Diagrams:**

A Data flow diagram (DFD) is a common visual representation of how information moves through a system. A clean and understandable DFD can graphically represent the appropriate quantity of the system need. It displays how information entersand exits the system, what modifies the data, and where information is kept.

|         | Jsing various sensors, the various soil parameters, including temperature, noisture content and humidity are measured. |
|---------|--|
| П       | The results are then stored in the IBM cloud.  |
|         | The Arduino UNO is utilized as a processing unit to process the data from he sensors and weather API.                  |
| To writ | te the hardware, software, and APIs. NODE-RED is employed as a   |
| prograi | mming tool. In order to communicate, the MQTTprotocol is used  |

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☐ A mobile application created with MIT App Inventor makes all the collected data available to the user. Depending on thesensor results, the user might decide whether or not to irrigate the crop using an app. They can control the motor switch remotely by utilizing the app.

## **User Stories**

| User Type                     | Functional<br>Requireme<br>nt(Epic) | User<br>Story<br>Numbe<br>r | User Story / Task  | Acceptance<br>criteria                                 | Priorit<br>y | Releas<br>e |
|-------------------------------|-------------------------------------|-----------------------------|--|--|--------------|-------------|
| Customer<br>(Mobile<br>user)  | Registration                        | 1                           | Can register for<br>the application<br>by entering my<br>email,<br>password, and<br>confirming my<br>password. | Can access my account / dashboard                      | High         | Sprint-1    |
|                               |                                     | 2                           | Will receive<br>confirmation<br>email once I<br>have<br>registered for<br>the<br>application                   | Receive<br>confirmati<br>onemail &<br>click<br>confirm | High         | Sprint-1    |
|                               |                                     | 3                           | Can register for the applicati on through Faceboo k  | Can register & accessthe dashboard with Facebook Login | Low          | Sprint-2    |
|                               |                                     | 4                           | Can Register for the applicatio n through Gmail  |  | Mediu<br>m   | Sprint-1    |
|                               | Login                               | 5                           | Can Log into the applicatio n by entering email & password   |  | High         | Sprint-1    |
|                               | Dashboard                           |                             | F 300 H 02 W   |  |              |             |
| Custom<br>er (Web<br>user)    |                                     |                             |  |  |              |             |
| Customer<br>Care<br>Executive |                                     |                             |  |  |              |             |