Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	11 October 2022
Team ID	PNT2022TMID46404
Project Name	Smart Farmer - IOT Enabled Smart Farming Application
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	❖ Registration through Gmail E-MAIL: Enter email address PASSWORD: Enter password
FR-2	User Confirmation	❖ Confirmation via Email ❖ Confirmation via OTP
FR-3	IBM Cloud services configuration	❖ Create IBM Watson IoT platform. ❖ Create a device &configure the IBM IoT platform. ❖ Crete node-RED service. ❖ Create a database in cloudant DB to store all the sensor parameters.
FR-4	Manage Modules	❖ Manage roles of user. ❖ Manage user permission.
FR-5	Data Management	❖ Manage the data of weather condition. ❖ Manage the data of crop condition.
FR-6	Mobile Application Requirements	❖ The mobile app should have the following features ❖ Display the sensor parameters ❖ Should communicate with the IBM cloud using API to get the sensor data and send the commands.

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	❖ User friendly guidelines for users to avail the features. ❖ Most simplistic user interface for ease of use.
NFR-2	**Security**	❖ All the details about the user are protected from unauthorized access. ❖ Detection and identification of any malfunction of sensors.
NFR-3	**Reliability**	❖ It is used for remote monitoring, It can be used in cases where a single farmer is managing the entire farm. ❖ Data should be more accurate and should not be misleading.
NFR-4	**Performance**	❖ The use of modern technology solutions helps to achieve the maximum performances thus resulting in better quality and quantity yields.
NFR-5	**Availability**	❖ It should monitor water level, temperature, humidity and soil moisture. ❖ This app is available for all platforms
NFR-6	**Scalability**	❖ Scalability refers to the ability to increase available resources and system. ❖ It should be made used in remote areas where technological advancements have not even been raised and should deliver a more productive and sustainable form of agriculture.