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

Date	03 October 2022
Team ID	PNT2022TMID04704
Project Name	Project - SmartFarmer - 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	**Arduino Board**	To interface temperature, humidity, soil moisture sensors.
FR-2	**ESP 8266**	It facilitates any microcontroller to access Wi-Fi network.
FR-3	**IBM cloud**	To store the sensors information
FR-4	**MIT App inventor**	To develop an app to display the temperature, humidity and soil moisture level.
FR-5	**Open weather API**	Used to get the information and access the resources.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The temperature, humidity and soil moisture sensors are connected to arduino and by using the IBM cloud to store the information of the sensors. With the help of mobile application, farmer will easily know the results about their field. The mobile application will send the notification message to his mobile phone.
NFR-2	**Security**	To prevent from the intruder, password is specified.
NFR-3	**Reliability**	The mobile application is more reliable to the farmer because it is developed with API.
NFR-4	**Performance**	

		Because of using the sensors, it provides an accurate results.
NFR-5	**Availability**	Automatic adjustment of farming equipment made possible by linking information like crops/weather and equipment to auto-adjust temperature, humidity, etc.
NFR-6	**Scalability**	Without getting any inputs from the farmer, the results will be updated.