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

Date	10 October 2022
Team ID	PNT2022TMID37069
Project Name	IOT BASED SMART CROP PROTECTION SYSTEM FOR AGRICULTURE
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	Hardware requirements	Raspberry pi, Camera module, Temperature sensor, Flame sensor, PH level sensors, Water and Moisture level sensor, Motor pump and Router.
FR-2	Software requirements	Python Software is used to program the hardware.
FR-3	Internet cloud access	IBM cloud service.
FR-4	User interface	Mobile Application created by MIT app inverter, NODE RED.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The proposed smart crop protection device is designed using recent technology which is used to face the challenges in agriculture with automatic farming practices.
NFR-2	**Security**	It should be more secure to avoid unwanted interferences
NFR-3	**Reliability**	The developed system is more reliable such that it satisfies the needs of farmers and found easy handling.
NFR-4	**Performance**	Performance of the device will be optimum.
NFR-5	**Availability**	The device is cost effective and simple design. Hence it is easily available in market and installation is easy.
NFR-6	**Scalability**	This should be developed to scalable product by using sensors and transmitting the data through wireless sensors network and analysing the data in cloud and operation is performed using robots.