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

Date	10 October 2022
Team ID	PNT2022TMID30647
Project Name	IOT Based Smart Crop Protection System for Agriculture
Maximum Marks	4 Marks

TEAM LEAD:

S. MONIKA

TEAM MEMBERS:

T. CHARU VIKASHINI

N. AKSHAYA

R. SOORYA PRIYA

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	Install the app signing up with Gmail Create a profile Observe the guidelines
FR-2	User Confirmation	Email confirmation required Reassurance via OTP
FR-3	Interface sensor	Connect the sensor and the application so that when animals enter the field, an alarm is generated.
FR-4	Accessing datasets	Sets of data are obtained from the cloudant DB.
FR-5	Mobile application	Mobile applications can be used to control field sprinklers and motors.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The project's contribution to farm protection is demonstrated through the smart protection system.
NFR-2	**Security**	This project was created to protect the crops from animals.
NFR-3	**Reliability**	With the help of this technology, farmers will be able to safeguard their lands and avoid suffering substantial financial losses. They will also benefit from higher crop yields, which will improve their economic situation.
NFR-4	**Performance**	When animals attempt to enter the field, IOT devices and sensors alert the farmer via message. We also utilise an SD card module that helps to store a specific sound to frighten the animals.
NFR-5	**Availability**	We can defend the crops against wild animals by creating and implementing resilient hardware and software.
NFR-6	**Scalability**	This system's integration of computer vision algorithms with IBM cloudant services makes it more efficient to retrieve photos at scale, enhancing scalability.