Project Design Phase - II

Solution Requirements (Functional & Non-functional)

Date	03 October 2022
Team ID	PNT2022TMID12758
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	**User Registration**	Registration through application using Gmail
FR-2	**User Confirmation**	Confirmation via Email
FR-3	**Authentication**	Authentication through Password and Username
FR-4	**External Interfaces**	Web application/ Android mobile application for a user-friendly GUI.
FR-5	**Installation**	The designed system should be installed properly to provide the best results. The system should be periodically checked for better performance.
FR-6	**User preferences**	The user can prefer to use the system for multiple places according to the area of the field. The user can configure the system based on their preference.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The user can easily interact with the system using the Simple User Interface of the specially designed application to monitor the crop and protect the crops from the animals and catastrophic failure.
NFR-2	**Security**	The encrypted user details and data collected would be stored in a highly secure database.
NFR-3	**Reliability**	The sensors would have a higher accuracy to increase the reliability of the solution.
NFR-4	**Performance**	The application developed would require minimum processing time and faster response, thus providing a satisfactory user experience for the farmers.
NFR-5	**Availability**	The system would be easily available to all sectors of the population and can be accessed from anywhere.
NFR-6	**Scalability**	Multiple systems can be installed to provide efficient protection of the crops from climatic conditions and from animals.