PROJECT DESIGN PHASE – II

SOLUTION REQUIREMENTS(FUNCTIONAL & NON FUNCTIONAL)

DATE	8 October 2022
TEAM ID	PNT2022TMID30731
PROJECT NAME	IoT Based Smart Crop Protection System For Agriculture

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	Download the app Registration through Gmail Create an account Follow the instructions
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Sensors	Sensors is used to monitor and control the crop from insects or animals or other environmental conditions. Then send the data to the processor.
FR-4	Smart irrigation	Using an irrigation system helps to soil maintenance moisture and protect the soil from drying out
FR-5	Accessing datasets	Datasets are retrieved from Cloudant DB
FR-6	cloud	Data storing for the information about the crops.
FR-6	Mobile application	Motos and sprinklers in the field can be controlled by mobile application.

NON-FUNCTIONAL REQUIREMENTS:

The non-functional requirements for the suggested solution are listed below.

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	Since IBM Cloudant services integrated with ion methods aid effectively retrieve enormous quantities of photos, thus strengthening scalability