**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

|  |  |
| --- | --- |
| Date | 14 October 2022 |
| Team ID | PNT2022TMID43101 |
| Project Name | Project – 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 | Install the app.  Signing up with Gmail or phone number  Creating a profile.  Understand the guidelines. |
| FR-2 | User Confirmation | Email or phone number verification required via OTP. |
| FR-3 | Accessing datasets | Data’s are obtained by cloudant DB. |
| FR-4 | Interface sensor | Connect the sensor and the application  When animals enter the field , the alarm is generated. |
| FR-5 | Mobile application | It is used to control motors and field sprinklers. |

**Non-functional Requirements:**

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

|  |  |  |
| --- | --- | --- |
| **FR No.** | **Non-Functional Requirement** | **Description** |
| NFR-1 | **Usability** | This project’s contributes the farm protection through the smart protection system. |
| NFR-2 | **Security** | It was created to protect the crops from animals. |
| NFR-3 | **Reliability** | Farmers are able to safeguard their lands by help of this technology. They will also benefits from higher crop yields, which will improve our economic situation. |
| NFR-4 | **Performance** | When animals attempt to enter the field, IOT devices and sensors alert the farmer via message. |
| 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. |