# Project Design Phase-II

**Solution Requirements (Functional & Nonfunctional)**

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| **Date** | 21 October 2022 |
| **Team ID** | PNT2022TMID23850 |
| **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.

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| **FR No.** | **Non-Functional Requirement** | **Description** |
| 1 | Usability | This project is used protect the farm from wild animals as well as from human beings. |
| 2 | Security | It was created to protect the crops from animals and human beings. |
| 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. |
| 4 | Performance | When animals or human beings try to enter into the farm, the Sd card module produce some sound that will give fear to the animals and when human beings try to enter into the farm the PIR sensor detect it and the buzzer will make sound. |

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| 1 | User Registration | Install the app.  Signing up with Gmail or phone number  Creating a profile.  Understand the guidelines. |
| 2 | User Confirmation | Email or phone number verification required via OTP. |
| 3 | Accessing datasets | Data are obtained by cloud DB. |
| 4 | SD card module | It is used to store sound which gives fear to animals when they enter into the field. |
| 5 | Mobile application | Sensor details are stored in cloud and those details will be send to the farmer’s mobile. |

# Non-functional Requirements

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

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| 5 | Availability | Here we use most commonly available components and it is cost effective. |
| 6 | Scalability | This system integration of computer vision algorithms with IBM cloud services makes it more efficient to retrieve photos at scale, enhancing scalability. |