**Project Design Phase-II**

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

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| **Team ID** | **PNT2022TMID20252** |
| **Project Name** | **IoT based smart crop protection system for agriculture** |
| **Maximum Mark** | **4 Marks** |

**Functional Requirements:**

**Following are the functional requirements of the proposed solution.**

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| **FR No** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration through Form  Registration through Gmail |
| FR-2 | User Confirmation | Confirmation via Email |
| FR-3 | User Visibility | Senses animal intrusion near the crop field and sounds alarm to threaten them and sends alerts to farmer through notification |
| FR-4 | User Reception | The sensor data like values of Temperature, Humidity, Soil moisture sensors are received in the application |
| FR-5 | User Understanding | Based on the sensor data, the information about the farming land can be obtained |
| FR-6 | User Action | The user needs take action like destruction of pests, crop rotation, fertilizers, strip cropping, scheduled planting of crops. |

**Non-functional Requirements:**

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

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| **FR No** | **Non-Functional Requirement** | **Description** |
| NFR-1 | Usability | Farmers must possess mobile to get alerts and also to access the sensed values. |
| NFR-2 | Security | Users have to register themselves so that the information shared would be secured and no exchange of data could be done |
| NFR-3 | Reliability | It can recognize the exact intrusion near the field and provide accurate data |
| NFR-4 | Performance | Provides accurate response to users regardless of the volume of data that is stored. |
| NFR-5 | Availability | This system is available for 24x7 operations. There will be no lag in transmission of data |
| NFR-6 | Scalability | System must handle expanding load and data retention needs a large database |