**Project Design Phase-II**

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

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID23457 |
| 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.

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| **FR No.** | **Functional Requirement (Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration with a gmail account which also collects basic details of Farmer name and Land details. |
| FR-2 | User Accessing device | Application is mobile friendly and does not need any additional devices for the interaction with the system |
| FR-3 | User Proper network connection | Internet connection is a primary requirement for the right time of message delivery |
| FR-4 | User Proper Understanding | Farmers should be clear on how to use the application  and also understand the messages properly |
| FR-5 | Continuous observation of messages | Farmers should be careful in following the messages given by the system because immediate action is required for some cases such as weather changes |
| FR-6 | User Action | Required actions to be taken by the farmers to their fields on abnormal conditions which affect the proper growth of the 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** | The project is user friendly to all the farmers as it uses new technology and does not need much practice. |
| NFR-2 | **Security** | Every farmers as to create a separate registration and login credentials will be provided individually so data stored will be secured |
| NFR-3 | **Reliability** | The proposed system uses clarifi for visual recognition and weather API resources which tends to give messages to farmers accurately and keep the system reliable. |
| NFR-4 | **Performance** | Long life performance which will not disappoint users because, developed system is built using new and growing technology which is trustable . |
| NFR-5 | **Availability** | As the system is to be delivered as software can be made available all the time .The thing needed is only internet access. |
| NFR-6 | **Scalability** | The IBM cloudant services makes it more efficient to store and retrieve images which can identify vast types of pest and infection in crop and also to be designed in such a way where it can do one or more operations at the same time results in high scalability of the system. |