Project Design Phase-II

Solution Requirements (Functional & Non-functional)

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| Date | 03 October 2022 |
| Team ID | PNT2022TMID42593 |
| Project Name | Estimation of crop yield and data analytics. |
| 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 Requirement | Knowledge of seeds , crops ,mechanism ,soil ,climate & agriculture science. Right use of resources like soil andwater. Time management .Market demand drive  production. |
| FR-2 | User Business rules | Three laws - the farmers produce trade and commerce(promotion and facilitation)act ,the farmers agreement of price assurance and farm services act and  the essential commodities act |
| FR-3 | User Factors | Crop prediction is highly sensitive to climate. It is affected by long-term trend in average rainfall and temperature, interannual climate variability, shocks during specific phonological stages and extreme  weather events. |
| FR-4 | User Importance | Crop yield estimates constituted a particular importantproductivity metric, both an aggregate level as well asin plot-level productivity analysis and impact evaluations of new technologies and policy  interventions. |
| FR-5 | User Objectives | Formulation and implementation of policies and programmed aimed at achieving rapid agricultural growth through optimum utilization of land, water, soil  and plant resources of the state. |
| FR-6 | User Improvement | It becomes necessary to increase the crop variety to produce disease-resistance offspring of the crops. It also helps in providing better and superior varieties  based on the quality and quantity of the yield. |

# 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** | To empower farmers and to increase the  productivity there is need to provide the best dissemination tool for their farming activities. |
| NFR-2 | **Security** | The developed ICT agriculture tools focus on very  important agricultural services such as crop |
|  |  | detection ,crop predictor will help farmers to make  decision in future. |
| NFR-3 | **Reliability** | This will remove multilingual issues and bridge the gap between farmers and technology.Effective tool that all farmers can use for management of all kind  of crops |
| NFR-4 | **Performance** | Multiple technologies and services that will improve  the usability in agricultural activities. |
| NFR-5 | **Availability** | Both website and mobile application interface and  developed in local language and the content is available in localized language |
| NFR-6 | **Scalability** | 1. Increased productivity from warm temperature 2. Decreased moisture stress iii)Possibility of growing new crops   iv)Productivity of soil and water |