Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	03October 2022
Team ID	PNT2022TMID50307
Project Name	Project – Estimate the crop yield using data analytics.
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 login	Login through internet or app
FR-2	Update profile	User can update their profile with name ,mobile number and password
FR-3	Analyse the dataset	Analyse the dataset and process data preprocessing to avoid noise data.
FR-4	Choose the crop	Through which the user can choose particular crop for their convenience.
FR-5	Predict result	The result will be predicted based on the previous year data in the way of production per hectare for particular rainfall measure in that area.
FR-6	Estimation of the result	The graphical representation shown the estimation analysis of the crop to increase more yield.

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Contains easy user interface in order to use by uneducated people also.
NFR-2	**Security**	Information of the personal data are kept secure. By using data analytics, no loss or corruption of the data in data set. The structure

		of the system is kept feasible enough so that there should not be any problem from the users' point of view.
NFR-3	**Reliability**	The best technique for rainfall is Simple RNN with a mean absolute error of 22.14mm.After applying various techniques we found out that in Crop Yield annd Crop Name . Random Forest yields the best result with minimum mean absolute error.
NFR-4	**Performance**	Performance analysis is done to find out whether the proposed system is time efficient and accurate. It is essential that the process of performance analysis and definition must be conducted in parallel.The application's load time should not be more than one second for users.
NFR-5	**Availability**	User can predict and estimate the crop yield throughout the period at any time.Platforms & tools used in this project are widely used. So the skilled manpower is readily available in the industry.
NFR-6	**Scalability**	It can also work with an large data set without performance degradation. All changes should be in positive direction, there will be increased level of efficiency and better customer service