

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

Date	14 October 2022
Team ID	PNT2022TMID06880
Project Name	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 Registration	Registration through Gmail Registration through google
FR-2	Account creation	Email and password for account creation
FR-3	User Confirmation	Confirmation via Email Confirmation via OTP
FR-4	Give the required data	Take the data given by the user as the input for the analysis
FR-5	Analysis	Analyse the yield of crop from the data given by the user
FR-6	Estimation or predicting the yield	Estimate the crop yield from the analysis and creating interactive dashboard.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Good mobile navigation will boost the usability of the entire product, helping users to enjoy all the features offered. Bad navigation will make it difficult to find things, making it less likely that users will ever experience the product the way the design team had envisioned. Our solution has better features in navigation such as hamburger menu, Bottom navigation, Top navigation, Cards, Tabs, Gesture-Based Navigation, Full-screen navigation, 3D touch. In our app, we're using general language English to make the app user-friendly .Crop recommendation are given and solutions are given by the experts.

Non-functional Requirements:

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

NFR-2	Security	<ol style="list-style-type: none"> 1. Provide the right permissions- Request only the minimum number of permissions necessary for your app to function properly. When possible, relinquish permissions when your app no longer needs them. 2. Store data safely- Store private data within internal storage 3. Ask for credentials before showing sensitive information 4. Keep services and dependencies up to date 5. Apply network security measures such as Add a network security configuration 6. Use WebView objects carefully- WebView objects in your app shouldn't let users navigate to sites that are outside of your control. Whenever possible, use an allow list to restrict the content loaded by your app's WebView objects. 7. Disallow access to your app's content providers-Unless you intend to send data from your app to a different app that you don't own, explicitly disallow other developers' apps from accessing your app's Content Provider objects.
NFR-3	Reliability	<ol style="list-style-type: none"> 1. Our app is made accessible whenever needed. 2. It Responds within the time frame needed 3. It is regularly updated or modified as needed by the user. 4. Provide security and privacy to the extent needed by the user. 5. Provide bug free operation that is simple and easily predictable 6. the interactive dashboards will be easy to understand and useful for the farmers.
NFR-4	Performance	<ol style="list-style-type: none"> 1. Our app responds quickly by making application size small, using CDN & app bundles and produces the output and it takes lesser session length 2. Our app provides unique solution than the present system in the software 3. Special team is formed to reply queries of the users 24/7 4. Our app provides real time notifications about the user condition.

NFR-5	Availability	<p>By setting up An Application Performance Monitoring (APM) system that helps to monitor the availability of application.</p> <p>Consistent performance monitoring and optimization help you to tackle issues as quickly as they show up.</p>
NFR-6	Scalability	<p>A scalable app can easily accommodate double, triple, or even ten times its current amount of users by withstanding no crashes, no downtime, Fast loading speeds, Top-notch security. We're gonna make our app more scalable by using right Tech stack & Infrastructure scaling to process millions of data with bug free , multiple database servers that accommodate millions of user to secure our app's fail-safe performance, using caching and stateless approach to reduce the load, Content Delivery Networks (CDN) to minimal response time.</p>