

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

Date	04 November 2022
Team ID	PNT2022TMID27787
Project Name	Smart Solutions for Railways
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 Facebook Registration through Gmail Registration through google
FR-2	Account creation	Gmail and password for account creation
FR-3	User Confirmation	Confirmation via Email Confirmation via OTP
FR-4	Personal details for account	Name, age, sex, login credentials, Ticket reservation, refund rule, train fare, Train, Seat availability, Class, Zone, station, pay info., etc for basic travelling details
FR-5	Regular Status updation in app	Entry The detail of passenger for further use, track the live location of train ,etc

Non-functional Requirements:

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

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

NFR-2	Security	<p>To preserve user trust and device integrity is done by making your app more secure. Our solution proposes</p> <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
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. Consistent performance monitoring and optimization help you to tackle issues as quickly as they show up. Our app is designed in such a way that to emphasize availability</p>

		by spreading data across clusters so that if one fails the entirety of the data is not lost.
NFR-6	Scalability	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.