

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

<b>Project Name:</b>	<b>Smart Solutions For Railways</b>
<b>TeamID:</b>	<b>PNT2022TMID24298</b>
<b>Maximum Marks</b>	<b>4 Marks</b>

SUBMITTED BY :  
**TEAM LEADER :CHAITHANYA M C**

TEAM MEMBER 1: ARIVUKKARASI B  
TEAM MEMBER 2: KANCHANA K  
TEAM MEMBER 3: AISHWARYA V

Functional Requirements:

Following are the functional requirements of the proposed solution.

<b>FR No.</b>	<b>Functional Requirement (Epic)</b>	<b>Sub Requirement (Story / Sub-Task)</b>
FR-1	User Registration	Registration through Gmail Registration through Mobile number
FR-2	User Confirmation	Confirmation via EmailConfirmation via OTP Confirmation via call
FR-3	Journey details	Provides From and To information and date of travel.

FR-4	Select Trains	Select the appropriate trains among the list and also based on the seat availability.
FR-5	Book and add passenger	Fill the essential details such as name, contact details age, sex.
FR-6	Proceed to pay	Select an appropriate payment options among UPI, Internet banking, credit card, debit card.
FR-7	Ticket confirmation and Invoices	Ticket confirmation status is send to their registered email id.
FR-8	GPS	Tracking the live location and the status will be updated to the passengers.
FR-9	PIR	To get the information of detecting the motions in Railway Track.
FR-10	Database management	Entire Journey details will be stored in the server.
FR-11	E-catering	Foods are available for the registered passengers in an effective manner.
FR-12	Health monitoring	Monitor the health of the loco pilot and alert when any emergency.
FR-13	Ultrasonic Sensor	To calculate the distance between the Train and Station.

**Non-functional Requirements:**

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

FR No.	Non-Functional Requirement	Description
NFR-1	<b>Usability</b>	Availability of e-tickets with QR generation instead of physical one.
NFR-2	<b>Security</b>	It protects the details of a passenger against eavesdropping and denial of service attacks.

NFR-3	<b>Reliability</b>	It enables the user to securely use the app which provides maximum trust to the user.
NFR-4	<b>Performance</b>	No server down problems, many user can access at same the same time. Better performance is provided.
NFR-5	<b>Availability</b>	Accessibility through website or application anytime and from anywhere.
NFR-6	<b>Scalability</b>	No of users concurrently interacting with our web application with higher reliability.