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

| Date          | 15 October 2022              |
|---------------|------------------------------|
| Team ID       | PNT2022TMID35843             |
| 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 Gmail                                 |
|        |                               | Registration through Mobile number                         |
| FR-2   | User Confirmation             | Confirmation via Gmail                                     |
|        |                               | Confirmation via the Phone number                          |
|        |                               | Confirmation via mobile app                                |
| FR-3   | Details available             | Provide details such as the availability of trains on a    |
|        |                               | particular date and time.                                  |
| FR-4   | Details required              | For booking tickets it should ask user details such as     |
|        |                               | age,sex, etc   |
| FR-5   | Payment                       | Select appropriate payment options among UPI,              |
|        |                               | Internet banking, credit card, and debit card.             |
| FR-6   | The booking                   | Booking confirmation is sent to registered Gmail           |
| FR-7   | QR Code                       | QR Code must be generated which helps in verification      |
|        |                               | of our booking.  |
| FR-8   | Weather condition             | The weather condition at the destination must be           |
|        |                               | displayed in the UI.                                       |
| FR-9   | Live location (GPS)           | The live location of the train must be displayed in the UI |
| FR-10  | Database management           | The entered user details must be securely stored in a      |
|        |                               | Database.  |
| FR-11  | GSM                           | To alert the passenger before the destination is           |
|        |                               | reached.   |

## **Non-functional Requirements:**

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

| FR No. | Non-Functional Requirement | Description   |
|--------|----------------------------|---|
| NFR-1  | Usability                  | <ul> <li>Users can avoid counter ticket Bookings.</li> <li>The user interface of the product will be easy to use, so that people can easily book tickets.</li> <li>QR Code can be used instead of printing tickets.</li> </ul>                    |
| Qr     | Security                   | It stores the user information in a secure Database and will prevent unauthorized access to information.  |
| NFR-3  | Reliability                | <ul> <li>Provides no false information.</li> <li>QR Code can be relied upon for ticket verification and, will not fail anytime.</li> <li>User data is stored securely.</li> <li>Upon Transaction failure, your money will be refunded.</li> </ul> |
| NFR-4  | Performance                | <ul> <li>Tracks the train location as accurately as<br/>possible, and updates the weather condition<br/>continuously.</li> </ul>  |
| NFR-5  | Availability               | <ul> <li>You can access it through website or mobile<br/>application anytime and from anywhere, the<br/>only necessity is internet availability.</li> </ul>   |
| NFR-6  | Scalability                | The website traffic limit will be scalable enough to support large number of users at a time.   |