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

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|---------------|-------------------------------------------------------|
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| Team ID       | PNT2022TMID32983                                      |
| Project Name  | Project - Smart Solutions For Railways                |
| Maximum Marks | 4 Marks                                               |

## **Functional Requirements:**

Following are the functional requirements of the proposed solution.

| FR<br>No. | Functional Requirement (Epic) | Sub Requirement (Story / Sub-Task)                                                                    |
|-----------|-------------------------------|-------------------------------------------------------------------------------------------------------|
| FR-1      | User Registration             | Registration through Official website<br>Registration through Form<br>Registration through App        |
| FR-2      | User Confirmation             | Confirmation via QR code<br>Confirmation via message                                                  |
| FR-3      | Ticket Verification           | Ticket collector check the tickets using the QR code which is generated during ticket booking.        |
| FR-4      | TTE work load reduction       | TTE can simply scan the QR code to identify the personal details and also to reduce the use of paper. |

| FR-5 | Database Storage | All the booking details of the customer is stored in the database with unique ID which can retrieved back when the ticket collector scans the QR code. |
|------|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| FR-6 | Train Tracking   | The live status of the journey is updated in the web continuously                                                                                      |

## **Non-functional Requirements:**

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

| FR<br>No. | Non-Functional<br>Requirement | Description                                                                                                                      |  |  |
|-----------|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------|--|--|
| NFR-1     | Usability                     | The user can easily book the tickets at their own pace based on the availability of seats without waiting in the ticket counter. |  |  |
| NFR-2     | Security                      | User's personal details are safely stored in the Cloud. QR code reduces the duplicate train tickets.                             |  |  |
| NFR-3     | Reliability                   | As IBM cloud is used to store the information about the customers this product is highly reliable.                               |  |  |
| NFR-4     | Performance                   | The Web UI provides smooth user experience and improves the performance of this solution.                                        |  |  |
| NFR-5     | Availability                  | App is readily available on play store for mobile phone users or user can access the website using web browser.                  |  |  |
| NFR-6     | Scalability                   | This solution can be easily scaled up based on the customer demand.                                                              |  |  |