**Project Design Phase-II**

**Solution Requirements (Functional & Non-functional)**

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| Date | 07 November 2022 |
| 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.

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| **FR**  **No.** | **Functional Requirement**  **(Epic)** | **Sub Requirement (Story / Sub-Task)** |
| FR-1 | User Registration | Registration through Official website  Registration through Form  Registration through App |
| FR-2 | User Confirmation | Confirmation via QR code  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.

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| --- | --- | --- |
| **FR**  **No.** | **Non-Functional**  **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. |