**Project Design Phase-I**

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| Date | 24 September 2022 |
| Team ID | PNT2022TMID35843 |
| Project Name | Smart Solutions For Railways |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

| S.No. | Parameter | Description |
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| 1. | Problem Statement (Problem to be solved) | • Counter ticket booking system consumes a lot of manpower, resources and time.<br>• Paper wastage for printing tickets must be reduced.<br>• Passengers are not aware of delays in train timings and climatic conditions of the destination.<br>• Smart facilities must be incorporated to provide a smooth and comfortable travel experience. |
| 2. | Idea / Solution description | • A Web page must be designed for the public where they can book tickets by seeing the available seats so that there is no need for them to stand in queues of reservation counters.<br>• After booking the ticket, the passenger will get a QR code that serves as proof of his reservation which serves as a better alternative in place of printed tickets.<br>• This QR code can be used by ticket collectors to identify the personal details of the passenger.<br>• Using a GPS module we can track the train and its live status is updated in the Web app continuously.<br>• Before the train reaches the destination the passenger must be notified so that he won't miss his destination.<br>• A reminder message with booking details must be sent to the passenger prior to his journey.<br>• After the journey feedback can be collected from the passengers so that the service provided can be further improved.<br>• The lighting systems inside the train can be controlled automatically based |

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| | | on the light intensity and also a manual control will also be given in case of any need. This can help us to reduce power consumption.<br>• Automated doors can be employed to avoid footboards. |
| 3. | Novelty / Uniqueness | • Passenger is notified before the arrival of the destination and the climatic conditions of the destination is also updated.<br>• A reminder sent to the passenger prior to his journey.<br>• After the journey feedback can be collected from the passengers so that the service provided can be further improved.<br>• Automatic and manual control of lighting system.<br>• Automated doors to avoid footboards. |
| 4. | Social Impact / Customer Satisfaction | • Accidents due to footboards can be avoided.<br>• Wastage of paper is reduced.<br>• Passengers can ready themselves in case of delay or before the arrival of the destination and also prepare themselves depending on the climatic conditions this provides a hassle-free experience.<br>• Manpower in reservation counters can be totally eliminated.<br>• Power consumption in railways can be reduced. |
| 5. | Business Model (Revenue Model) | **Freemium model**<br>a user can book ticket online just by paying the ticket fee alone, but will be charged extra for additional functions such as train tracking, climate conditions updates, and notification alert. |
| 6. | Scalability of the Solution | This solution can be extended all over the country, connecting all railway booking systems through the internet. |