**Project Design Phase-I**

**Proposed Solution**

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| Date | 22 October 2022 |
| Team ID | PNT2022TMID51722 |
| Project Name | Project – Smart Solutions for Railways |
| Maximum Marks | 2 Marks |

**Proposed Solution:**

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Standing in a queue for a while to book railway tickets without knowing about the availability of tickets. |
|  | Idea / Solution description | IoT based smart railways in Online reservation is highly recommended to overcome the above mentioned problems.   * Using Python Code, create a Web UI. * Register as a passenger by providing certain personal details in the Web UI. * Search trains between a pair of stations, check seat availability and get the fare details. * Make fresh reservations and book one or more seats. |
|  | Novelty / Uniqueness | * The personal details of the passenger gets stored in Cloudant DB and a unique QR code gets generated with the help of Node-Red and displayed to the Web UI. * To track the live location of the passenger while travelling, IoT device is used. * Live location also gets displayed in the Web UI. * Ticket Collector can able to identify whether the passenger’s ticket is valid or not by scanning the generated QR Code. |
|  | Social Impact / Customer Satisfaction | * It doesn’t affects the daily routine. * No need to do paper work. * Management of online database. * Increase payment speed and security. * Ticket cancelling & refunding process are occurred. |
|  | Business Model (Revenue Model) | Key activities:   * Networking * Problem solving   Key resources:   * Sensors * Cloud service * IoT dedicated network   Cost structure:   * Maintenance * Digital infrastructure   Value preposition:   * Convenience * Preference * Marketing the service   Revenue Stream:   * Reservation fees * Advertising |
|  | Scalability of the Solution | * Effectiveness * Adjustment value needed to achieve the maximum capacity which depends on the reconfiguration of time and cost. * Increase in number of users |