

# **Railway Management System**

*Project Synopsis Submitted*

*to*

**MANIPAL ACADEMY OF HIGHER EDUCATION**

*For Partial Fulfillment of the Requirement for the*

*Award of the Degree*

*Of*

**Bachelor of Technology**

*in*

**Information Technology**

*by*

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**MANIPAL INSTITUTE OF TECHNOLOGY**

**MANIPAL**

*A Constituent Unit of MAHE, Manipal*

**March 2023**

## **Objective:**

The objective of this ambitious project is to develop a cutting-edge Railway Reservation System that serves as a vital support to the existing infrastructure, which is currently strained under the weight of a burgeoning population. This innovative system will introduce a two-tiered approach, dividing roles into Administrator and User, each endowed with distinct rights and functionalities tailored to their needs. By implementing this sophisticated system, we aim to streamline the management of train schedules, passenger bookings, and cancellations, ensuring a smoother and more efficient travel experience for passengers. Emphasizing user convenience and system reliability, this Railway Reservation System promises to be a transformative solution for modern railway operations.

## **Scope:**

The scope of the Railway Reservation System includes:

Implementation of a two-level system: Administrator and User.

### Administrator Rights:

- Addition of trains to the database based on the running schedule.
- Inclusion of train information such as route, classes, fares, ticket availability, departure dates, etc.
- Storage and retrieval of booking information.
- Passenger tracking for scheduling purposes.
- Maintenance of records for passengers traveling on different trains, dates, and destinations.

### User Rights:

- Access to view all trains in the database.
- Booking of tickets based on Boarding Point and Destination Point.
- Receipt of confirmed tickets with essential details (PNR, passenger names, ages, travel dates, etc.).
- Option for concession based on age criteria.
- Ability to cancel a ticket and claim the refund amount.

### Constraints & Limitations:

#### Administrator Level:

- Only the addition of trains is permitted; deletion or modification is not possible.
- Each train route consists of only two stations: Boarding Point and Destination Point.

#### User Level:

- Cancellation results in the entire PNR being canceled.
- All passengers on a PNR must travel in the same class.
- No reservation available for any specific category.
- Only one booking allowed per user for a particular journey.

## **Project Description:**

The Railway Reservation System aims to revolutionize the management of train schedules, passenger bookings, cancellations, and refunds. Administrators will wield the power to seamlessly add new trains to the system, updating vital information on routes, available classes, fares, and departure dates. These crucial functionalities are designed to enhance efficiency and accuracy in the system's operation. Meanwhile, users will enjoy a user-friendly interface that empowers them to effortlessly browse through a plethora of

available trains, make reservations based on their desired boarding and destination points, and even apply concessions according to age criteria. Furthermore, the system ensures a hassle-free cancellation process, where users can easily cancel bookings and claim refunds, all within a secure and intuitive platform. With a focus on simplicity and functionality, this Railway Reservation System promises a seamless and enjoyable experience for passengers, ushering in a new era of railway travel convenience.

### **Hardware Requirements:**

Processor: Intel dual core or above  
Processor Speed: 1.0GHZ or above  
RAM: 1 GB RAM or above  
Hard Disk: 20 GB hard disk or above

### **Software Requirements:**

Language: html,css,php  
Database: Oracle  
(Mention any other software if you are using)

### **Submitted by**

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### **Specifications to be followed:**

- 1. Font size: 12 for regular text, font size: 14 for side headings and font size: 16/18/20 for title**
- 2. Font Type: Times New Roman**
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