**Railway Reservation System**

# **Software Requirement Specification(SRS)**

# **Introduction**:

## **Purpose of this Document:** The purpose of this document is to outline the requirements and constraints for the development of the railway reservation system to ensure efficient and effective functioning of the system.

## **Scope of this document** – This document covers functional and interface requirements, performance requirements, design constraints, and preliminary schedule and budget for the railway reservation system development.

## **Overview** – The railway reservation system is designed to provide a user-friendly experience for passengers to book, cancel, and check train tickets’ availability. The system will also allow administrators to manage and monitor reservations and train schedules.

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# **General description:** The railway reservation system will be an online application accessible via a web browser or mobile application. Passengers can log in to the system, create an account, and search for a train ticket using various criteria like train number, source, destination, date, and class of travel. The system will display available trains, fares, and the number of seats available. Passengers can make reservations online by paying through different payment options like debit/credit card, net banking, and digital wallets. The system will send an e-ticket to the passenger’s email, and passengers can print the ticket or show the e-ticket on their mobile device.

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# **Functional Requirements:**

# User registration and login

# Train search and availability

# Ticket booking and cancellation

# Payment gateway integration

# E-ticket generation and email notifications

# Admin panel for managing reservations and train schedules

# Reporting and analytics

# **Interface Requirements:**

1. Web-based interface accessible through a web browser or mobile application.
2. Intuitive and user-friendly interface for passengers to view train availability, fares, and make reservations.
3. Simple and efficient admin panel for managing reservations and train schedules.

# **Performance Requirements:**

1. The system should be able to handle a large number of users concurrently.
2. The system should be reliable and available round the clock.
3. The system should generate e-tickets and send email notifications instantly.
4. The system should be responsive and load quickly.

# **Design Constraints:**

# The system should comply with industry standards and regulations.

# The system should be scalable to accommodate future requirements.

# The system should be secure and protect user data.

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# **Non-Functional Attributes:**

# Usability: The system should be easy to use and navigate for users of all technical levels. It should have a clear and simple interface that requires minimal training for users to understand the process of booking, canceling, and checking train tickets.

# Accessibility: The system should be accessible for users with disabilities or special needs. The system design should follow accessibility guidelines to ensure that all users can access it.

# Security: The system should provide secure communication between the client and the server to protect users’ data and privacy. It should implement measures to prevent unauthorized access, data breaches, or cyber-attacks.

# Performance: The system should be designed to handle high volumes of traffic and concurrent users without slowing down or crashing. The response time should be optimized to ensure that users can book tickets quickly.

# **Preliminary Schedule and Budget:**

The development of the railway reservation system is expected to take six months and cost $100,000. The breakdown of the budget is as follows:

1. Development team - $50,000
2. Infrastructure - $20,000
3. Testing and deployment - $20,000
4. Contingency - $10,000.