**Railway Reservation System**

# Introduction

Railway Reservation System is a ticketing system which provides facility to the railway administration of booking the tickets for passengers digitally, using our system. Passengers who want to travel will come to railway station for booking and the facilitator at the desk there will use our system to check available trains and seats according to the passenger’s need. The passenger will be given a ticket for a particular seat. And the fare for the acquired ticket will be collected by the facilitator at that desk. The record of each train, each coach of train, each seat of coach and all the passengers who have travelled, who are travelling and who will travel (reserved seats) will be stored by our system.

# Modules and classes of our software system

There will be several classes in this software like Train, Passenger, Employee, Seats, Ticket and etc. Every class will have some attributes and methods in it and there will be relations between different classes and modules. The detail of classes will be covered in the designing process.

We will have to verify correctness of our system mathematically. Verification of available seats after reservations. Fair collection according to booking. Refund amount after ticket cancelation, are some numbers that needs to be corrected mathematically.

Our system will have different modules like searching for available seats, booking a seat, billing procedure and etc. After ticket cancelation process we will have to refund the money and increment available seats. We will make searching and booking modules separately to make our program more cohesive and we will merge the booking and payment modules in same function as they are strongly bound to each other.

Moreover, the project will have some other modules like booking system, cancelation system, displaying information, confirmation of booking and ticket printing.

We will make this project in anticipation of the future increments. At first, we will make a simple system which will have basic functionality for one train and we will only implement booking module. Then in next step we will add ticket cancelation module. Then we will scale our system for multiple trains. Then we will add proper GUI into the system and so on.

After every update, we will have to go through testing process to make sure our system is working correctly.

This project is being made for one station only. In future, we would want our system to connect different stations and store data in a central database. This system is only for railway staff but we may want to make a mobile app in future for passengers so that they may book their own tickets.