Smart Railway Reservation System using Python

Rushikesh Deshpande 1, Khushi Shende 2, Samruddhi Dhumal 3,Abhaykumar Vishwakarma 4
[1,2,3,4] *Department of Computer Technology, Ekalavya Shikshan Sanstha's Polytechnic Pune, Maharashtra, India*

Abstract

The railway reservation system facilitates the passengers to enquiry about the trains available on the basis of source and destination, booking and cancellation of tickets, enquiry about the status of the booked ticket, etc. The aim of case study is to design and develop a data base maintaining records of different trains, train status and passengers. This project contains introduction to the railways reservation system. It is the computerized system of reserving the seats of train seats in advance. It is mainly used for a long route. Online reservation has made the process for the reservation of seats very much easier than ever before.

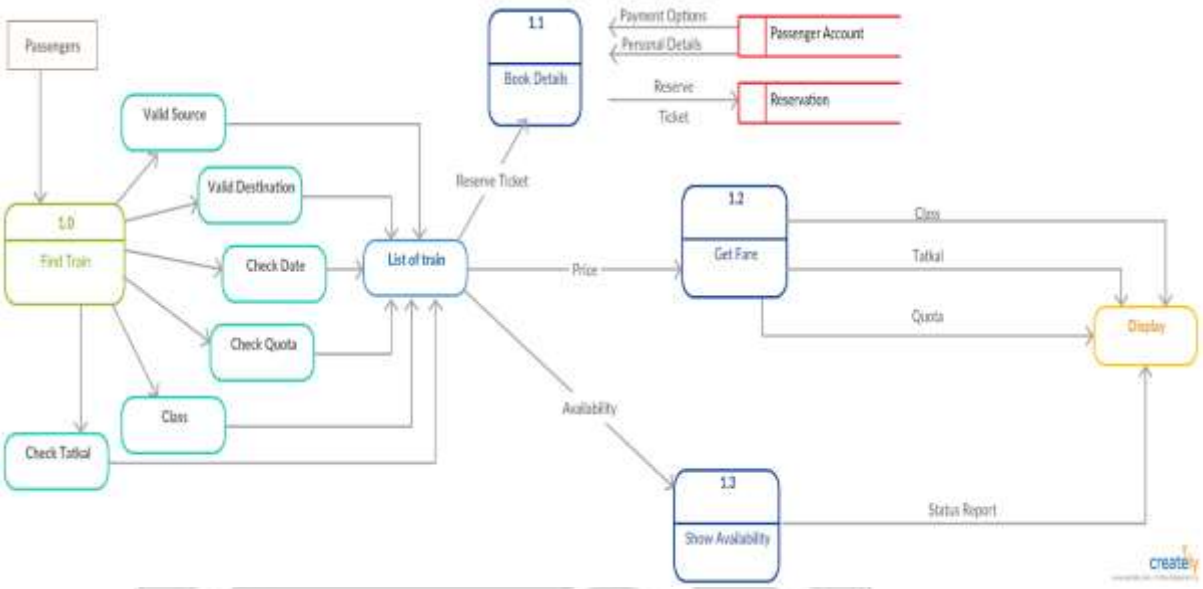
In our country India, there are number of counters for the reservation of the seats and one can easily make reservations and get tickets. Railway reservation system, has described above, can lead to error free, secure, reliable and fast management system. It can assist the user to concentrate on their other activities rather to concentrate on the record keeping. Thus it will help organization it better utilization of resources. Administrator of the project, with the help of a password, can enter new train record, display all train records, modify train records and delete train records. The record of train includes its number, name, source, destination, and days on which it is available, whereas record of train status includes dates for which tickets can be booked, total number of seats available, and number of seats already booked.

Keywords- *Reliable, enquiry, tatkal booking, automation, covid pass, user-friendly*

1. Introduction

Railway reservation system is developed for to automate the railways reservation system. Itincludes modules required to successfully operate railways reversion process smoothly. It has train master to add modified train information, train schedule to enter train journey details include all the station name, arrival time and departure time. It includes automatic fair calculation as per the distance between two stations. Reservation module consists of automatic seat number and coaches noallocation system. Daily schedule for updating of not conform seat and coach no. All master like train master, Train schedule, reservation fees, cancellation fees, charges can be modified individually from front end and changes reflect in all modules immediately. Therefore proposed "Railway reservation system" has been designed to automate the process of railway for ticket reservation and back office activities.
System can make the daily activities efficient and provide the fast response.

The "Railway reservation system" has been developed to override the problems prevailing in the practicing manual system. This software is supported to eliminate and in some cases reduce the hardships faced by this existing system. Moreover this system is designed for a particular need of a company to carry out operations in a smooth and effective manner. The application is reduced has much as possible to avoid errors while entering the data. It also provides error messages while entering invalid data. No formal knowledge is needed for theuser to use this system. Thus by this all it proves it is user friendly. Railway reservation system, has described, can lead to error free, and secure, reliable and fast managing system. It can assist the user to concentrate on the other activities rather to concentrate on the record keeping. Thus it will help organization in better utilization of resources.



System Architecture

2.Purpose

The purpose of the source is to describe the railway reservation system which provides the train timing details, reservation, billing and cancellation on various types of reservation mainly,

- ✓ *Conform reservation for conform seat.*
- ✓ *Reservation against cancellation.*
- ✓ *Waiting list reservation.*
- ✓ *Online reservation.*
- ✓ *Tatkal reservation.*

3. Scope

It may help collecting perfect management in details. In a very short time, the collection will be obvious, simple and sensible. It will help a person to know the management of the past year perfectly and vividly. It also helps in current all works related to railway reservation system. It will be also reduced the cost of collecting the management and collection procedurewill go on smoothly.

4. Study Of Existing system

In the existing system the exams are done only manually but in proposed system we have tocomputerize the exams using this application.

- ✓ *Lack of security of Data.*
- ✓ *More man power.*
- ✓ *Time consuming.*

- ✓ *Consumes large volume of pare work*
- ✓ *Needs manual calculations.*
- ✓ *No direct role for the higher officials.*

5. Proposed System

The aim of the proposed system is to develop a system of improved facilities. The proposed system can overcome all the limitations of the existing system. The system provides proper security and reduces the manual work.

- ✓ *Security of data.*
- ✓ *Ensure data accuracy's*
- ✓ *Proper control of the higher officials.*
- ✓ *Minimize manual data entry.*
- ✓ *Minimum time needed for the various processing.*
- ✓ *Greater efficiency.*
- ✓ *Better service.*
- ✓ *User friendliness and interactive.*

6. Requirements

6.1 Software Requirement

Software	***Description***
Windows	*Operating System*
Python Editor – Jupyter Notebook	*For execution of the program*

6.2 Hardware Requirement

Hardware	*Description*
Ram	*256MB*
Hard Disk	*20 GB*
Processor	*Pentium III*
Monitor	*14.4”*
Keyboard	*104 Keys*

7. Conclusion

The main of developing reservation system is to provide all informationthat is required bythe users. User friendliness is a must that is the user must get the detailswithout complicated searching procedures .Other important requirements of software are data security, extensibility and maintainability.

8. References

8.1.1 http://www.google.com

8.1.2 http://en.wikipedia.org

8.1.3 http://tutorialspoint.com

8.1.4 http://javatpoint.com