

Rail-Road Reservation System Using VB.NET and MS SQL

K Yogesh¹, Karthik P², Manoj Maharrshi R M³, Shilpa V⁴

¹Student, department of Computer Science and Information Technology,
yogeshkannan556@gmail.com

²Student, department of Computer Science and Information Technology, karthikp840@gmail.com

³Student, department of Computer Science and information Technology, asalpha774@gmail.com

⁴Assistant Professor, Department of Computer Science and Information Technology, REVA University, shilpa.v@reva.edu.in

Article Info

Volume 83

Page Number: 4895-4899

Publication Issue:

May-June 2020

Abstract

Rail-Road Reservation System contains the small print concerning train calendar and passenger reservations and price ticket records. A Railway's Data base contains all trains with their out there. Data base's data is imported and maintained through a Schedule Distribution System over standardized interfaces. One of the core functions of the index management of railway reservations is that the internal control. Internal control steers what percentage seats area unit out there for the various Booking Categories purchasable together the expense and booking conditions stored in the System with the price for each sold seat is determined.

Keywords: Expense, Data base, Reservation.

Article History

Article Received: 19 November 2019

Revised: 27 January 2020

Accepted: 24 February 2020

Publication: 16 May 2020

1. Introduction

Development of various applications made reduction of task for human as the technology developed it lead to development of new application with their own significance. They made use of new technologies and tools for this development.

This project deals with booking tickets for railway transportation from a source point to destination point. This web application is developed by Vb.net and Ms sql. Visual basics 2017 has many advantages in developing the front end and user friendly interface and mssql which gives access to store data and retrieving it whenever it is necessary by using some quires, commands etc.

This web application helps the user to book tickets selecting the required number of seats date of journey and if required food of their wish. The user has to first register to this application with a unique Id and Password. Once after registering to this app he/she can login to this and have the access to use this. This application has the feature of selecting tickets and cancellation of tickets and the train route system by which the passenger is travelling^[1], it also contains a separate section for the resetting of password with their email address and their unique ID provided.

This Application goes with various forms which we will discuss in the implementation part and has some required system configuration shown in system over view.

Organization of Paper

This paper follows this format. It starts with Introduction as part 1, Literature survey as part 2, System overview as part 3, Methodology as part 4, working as part 5 .Results as part 6, The Conclusion and future enhancements, Acknowledgement and References are in part 7, 8 and 9.

2. Literature Survey

There are different web applications developed for reservation purpose the main theme is to develop a user friendly application for train reservation

Analysis of dishonorable behavior on railway online ticketing system

This paper relies on reservation of tickets for travelling passengers. This paper was published on the year 2017 by Lipeng yang, Fuzhangwang. The algorithm used for the design is k-maps algorithm.

^[2]Disadvantages: Cancellation of tickets section was not provided. It wasn't user friendly to access the app.

Advanced train reservation and passengers interaction with safety system.

This paper depicts on the seat reservation for trains. This paper was distributed in the year 2015 by the authors B.T Tnarani, Jessen joseph. ^[3]Disadvantages: There are no more options for the reservation of trains. It absolutely was created solely to advanced system like railroad line trains.

Intelligent transportation

This paper elucidates concerned safety and reservations. This paper came in the year 2017 and was written by the author S Tripathi. This deals with reserving tickets and other means such as RITS. ^[4]Disadvantages: The application doesn't have any tracking system of train. It doesn't give the routes of train.

Archives of Transport

This deals with the security of Railway by electronic systems

This came into existence in the year 2016 by A.Potapovs, M.Gorobet. ^[5]Disadvantages: This system was designed for only reservation of tickets. Cancellation of tickets was difficult.

3. System Overview

We have made use of vb.net and sql for the development of this system. Vb.net as a front end for the design purpose^[2] and The sql server as back end for storage purpose^[13]. Visual studio 2017 has as a easy way to develop object required for this system and sql quires is used to retrieve the data.

Hardware

- PROCESSOR – Intel i3 or above
- RAM – 4GB
- HDD – 500GB Software
- CLIENTSIDE TECHNOLOGIES- VB.net
- DATABASE - MS SQL Server
- IDE – MS Visual Studio 2017
- Connection Technology – ADO.NET

4. Methodology

To develop thisProject we have made use of tools such as Vb.net and Ms sql.

- Vb.net is used for front end for design purpose as creating object for doing certain task like the required buttons such as login button sign up button are created.
- Mssql: Mssql is used in back end for storage purpose as they contain all the details as train details, and user data.

Major Modules

- Registration module
- Administrative module
- Passenger module

Functionalities of Modules:

Admin can perform the operation:

1. Create and maintain train schedules
2. Updating the contents at regular intervals
3. View of passenger's list
4. Cancel the ticket
5. Updating the train schedules and timings and fare

Users have the following privileges:

1. Look into timing of the Journey, Cost details and maximum number of tickets.
2. Reserving seats.
3. Feedback on available facilities
4. view and cancelling of the ticket

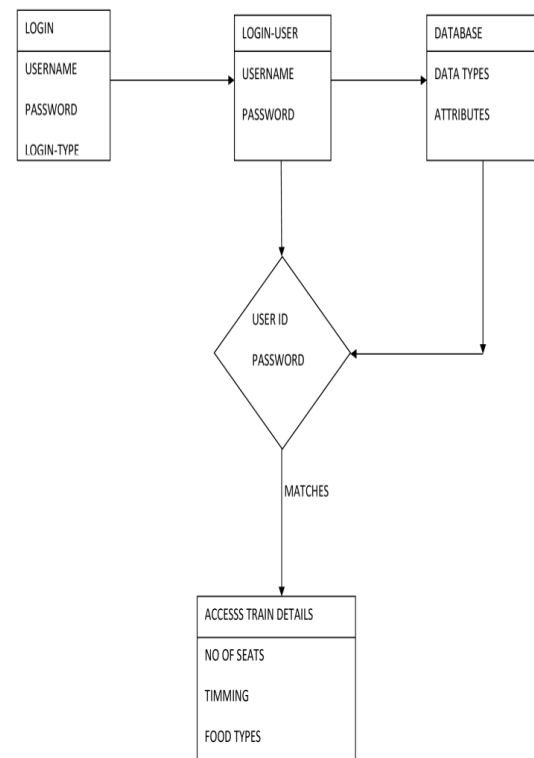


Figure 1: Architectural Design

5. Implementations

It has various forms included for the design of this web application those are as follows

Log-in form

It contains entity such as username password by which a user can login to the page if the user is new to the reservation he can sign up with sign-in option.

Figure 2: Log-in form

Sign-up form

New users can sign-up using this form it contains attributes such as name username address phone number Email id and a password

Figure 3: sign-up form

Search Form

It has various options such as PNR number starting point and destination point, date of journey.

Figure 4: Search Details

Admin Form

In this form admin can modify or add train details before start of booking

Figure 5: Admin form

Cancellation form

Whenever the user has to cancel the booking he/she can cancel the reservation using this form

Figure 6: Cancellation Form

Reset password form

If the user forgets the password wishes to reset user make it in an easy way

Figure 7: Reset Password Form

In the very beginning admin can login using the respective id and password and can add train details that are scheduled and can add routes of the respective train and there availability of seats. Users are logged in using their Ids and can

In the sign-up form the user have to input their data such as mail id password once after registering they can use same id and password for logging in into the application. Once after signing into the app the user has to input source and destination address. The passengers have to select the required seats and book the ticket. In any case if the passenger wishes to

cancel the tickets he can login to the app again and cancel the booked tickets in cancellation section

Flow Chart

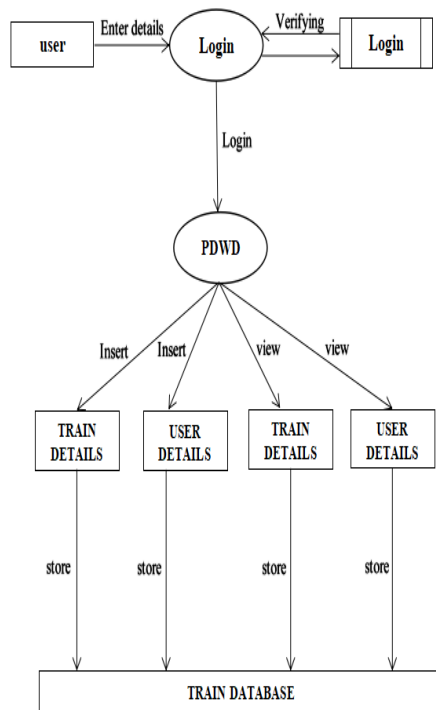


Figure 8: Flow Diagram of Data

When user enters his details it is stored in train data base for future steps. Train details and other required information are stored in database. After storing the information it can be retrieved by using sql commands for analysing and verifying them.

6. Results

Hence this proposed work gives an easy way of booking tickets and Increase in efficiency of storage operations and revenue within company. It also provides safety and security. We have provided user-friendly interface to help the user to operate the system. This web application decreases the user work by making it simple.

7. Conclusion and Future Enhancements

The Proposed Project gives a easy way to book the tickets, generate PNR status, cancellation of seats. Considering from all the papers that have been proposed our project comes with an Additional feature of train routes, food accommodation cancellation of tickets in an easy way.

As per users needs new module can be integrated without any modification to the existing application and know it is maintaining only train details so next we try to include with some other details by giving online facility. We can also provide mobile facility to improve the satisfaction of users.

Acknowledgement

Working on this project was a source of immense knowledge to us. We wish to convey our sincere gratitude to prof. Shilpa.v, Department of Computer Science, Reva University for her guidance and encouragement throughout the course in carrying out this project which will help us reach our goal.

References

- [1] MahendraParihar, NagarajuDasari "Using Intelligent Communication System (ICT) to Solve a Problem of Enroute Confirmation of Wait Listed Tickets in Indian Railways", IEEE conference, 2019.
- [2] Lipeng yang, Fuzhangwang "Analysis of dishonorable behavior on railway online ticketing system", IEEE conference, 2017.
- [3] B.T Tnarani, Jessen Joseph "Advanced train reservation and passenger interaction with safety system", IEEE conference, 2015.
- [4] S.Tripathi "Intelligent Transportation", IEEE conference, 2017.
- [5] A.Potapovs, M.Gorobet "Archives of Transport", 2016.
- [6] Ryo Takagi "Required Characteristics of the Ticketing Systems for Reservation-Compulsory Commuting Railways", International Conference on Intelligent Rail Transportation (ICIRT), 14 February 2019.
- [7] Kama Azura Othman, Mohd A H Mohd Isa "Forest monitoring system implementation using Visual Basic and Android Application", IEEE conference, 2018.
- [8] VikramRavindra, "Virtual ticketing system", IEEE conference, 2017.
- [9] Nora YurisEugene J. Cekander "Self-service passenger ticketing system", Google scholar, 2010.
- [10] Yang.Lian-bao, "ES-based full text retrieval and", IEEE Conference, 2017
- [11] "Database System, Performance & Scalability, SQL Server 2012 Business Intelligence Editions". Microsoft.com, 2013.
- [12] Venugopal Prasanth, "Ticketing Solutions for Indian Railways Using RFID Technology", IEEE conference, 2010.
- [13] Laweb, "Central Reservation System Online Hotel Marketing Services, Hong Kong and Philippines Hotel, Spa and Restaurant Software". Iaweb.net, 2012.
- [14] Laweb, "Central Reservation System, Online Hotel Marketing Services, Hong Kong and Philippines Hotel, Spa and Restaurant Software". Iaweb.net, 2012.
- [15] IkennaAjere, "Online Bus Ticket Reservation System", Research gate, 2015.
- [16] MakeMyTrip. [Online] Available at <https://www.makemytrip.com/bus-ticket>, 2017.

- [17] Pat Brenner. "C99 library support in Visual Studio 2013". Visual C++ Team Blog. Microsoft, 2013.
- [18] "SQL Server Management Studio Express". Microsoft.com, 2011.
- [19] Hindustan Times, "Coupons with bar codes for train travel". 2012.
- [20] Gordon Fairchild, "Local Tickets of Global Lands" Barteld Publishing, 2008.
- [21] Matthew A. stocker, Steven j. stein ".NET FRAME WORK", 2007.