Railway Reservation System

A PROJECT REPORT

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18CSC303J Database Management System

Under the Guidance of

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BONAFIDE CERTIFICATE

Certified that this project report titled "**Railway Reservation System"** is the bonafide work of **"Aman Patel [Reg No: RA1911029010021], Om Anand Pandey [Reg No: RA1911029010026, Taha Baba [Reg No: RA1911029010029]** who carried out the project work under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion for this or any other candidate.

DR. R. Naresh

GUIDE

Professor

Abstract

The Indian Railways carries about 5.5 lakhs passengers in reserved accommodation every day. The Computerised Passenger Reservation System facilates the booking and cancellation of tickets from any of the 4000 terminals. PRS booking window all over the countries). These tickets can be booked or cancelled for journeys commencing in any part of India and ending in any other part, with travel time as long as 72hours and distance up to several thousand km. In the given project we will be developing a website which will help users to find train details, book and cancel tickets and the exact rates of their tickets to the desired destination. With the help of online booking people can book their tickets online through internet, sitting in their home by a single click of mouse. Using their credit cards people can easily get their tickets done within minutes.

ACKNOWLEDGEMENT

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INTRODCUTION

Our website has various kinds of information that helps regarding booking of tickets via railways. Users will be able to search the train availability, the exact fare, the arrival and departure time of the train and they can also book the ticket by using the debit, credit or master card and after booking the ticket if the user want to cancel it then they can easily do it also. Each zone should have same functionalities. Each zone will store the information about train name, train schedules, availability. The administrator should be able to enter any change related to the train information like change in train name, number etc. The system should be able to reserve seat in a train for a passenger. First the clerk will check for availability for the seats in a particular train on a specified date of journey. If it is available the clerk will reserve seats. The passenger will be given a unique PNR no. The system should be able to cancel a reservation. The clerk will delete the entries in the system. The passenger can check their reservation status online by entering their PNR no. The system will display his current status like confirmed, RAC or waiting list. They are also able to see information related to the train schedules.

SYSTEM REQUIREMENTS

Brief overview of the technology:

Front end: HTML, CSS, JavaScript

1. HTML: HTML is used to create and save web document. E.g. Notepad/Notepad++
2. CSS : (Cascading Style Sheets) Create attractive Layout
3. Bootstrap : responsive design mobile freindly site
4. JavaScript: it is a programming language, commonly use with web browsers.

Back end: PHP, MySQL

1. PHP: Hypertext Pre processor (PHP) is a technology that allows software developers to create dynamically generated web pages, in HTML, XML, or other document types, as per client request. PHP is open source software.
2. MySQL: My-Sql is a database, widely used for accessing querying, updating, and managing data in databases.

Software Requirement(any one)

- WAMP Server
- XAMPP Server
- MAMP Server
- LAMP Server

MySQL

MySQL server: -

MySQL server is basically a database server which is mostly used for storing user data into the required database in a specific table for easy access of these data in the future. The database server works when a local application invokes it. Before storing data into a database with the help of database server, PHP sends a SQL query to MySQL database server for establishing a connection to the server by using the loopback address, i.e., 127.0.0.1 along with the user name and password for getting authentication from the database server. Since connection is established locally with the database server by PHP, so there is no chance of getting access to database server for modifying database by the client.

Also , when PHP request for information retrieval from the database server by sending SQL query then the database server sends back the result of query after executing it by the database server. Another method of accessing database server is only possible by locally, i.e., only administrator of that particular computer can get all the access facilities of the database server as well as all the database which are not available to restricted users. PHP can update information in the database server if it has the administrator username and password to access thespecific database, otherwise connection will be rejected by MySQL server and the database cannot be updated. Since before the dawn of the computer age , people have been using databases. Before computers, a database may have been a Rolodex containing phone numbers of the important people you knew, or it was a filing cabinet that contained all the personnel records for the company. Today, databases are computer-based and are found virtually everywhere. From desktop databases of your record collection to Web-enabled databases that run large corporations. 4.1.1.2 EVOLUTION OF ASP.NET The first beta version of ASP was code named denali. Denali allowed the developer to execute code within a web page. Advanced functions could be performed using ActiveX Data Objects. The next version of ASP was ASP 1.0, WHICH WAS available as an add-on IIS 3.0.In this version of ASP, ADO had had become faster and effective as compared with the previous version. The next version ASP 2.0, came as a part of windows NT 4.0. Now components were easier to build because of the introduction of Microsoft Transaction Server, which allowed the components to be a part of transaction. Then, ASP 3.0 was introduced which came along with windows 2000. In this version, Microsoft combined MTS with core COM into COM+ and included it as a part of windows 2000 itself. The latest version, of ASP is ASP.NET. ASP.NET has come to us along with the .NET framework. ASP.NET is an object oriented server side scripting tool. Hence, it facilitates easy development of object oriented and granularized code.

Drawbacks of ASP

- VBScripts and JavaScript are the only two scripting languages available in ASP. These are basic non-typed languages. You cannot use strongly typed languages like Visual Basic or c++.

- ASP pages are interpreted. This makes their execution slower.

- ASP pages are very untidy. They are a spaghetti-like mixture of code. HTML and text.

- While creating a web application using ASP pages, the programmers and the designer had to work on the same life. The programmers had to write the code to provide required functionality and the designers too had to create the graphics and content, and all this had to be combined into a single file.

- In ASP, you have to write code to provide any functionality you require. For example, if you required any validations to be performed you had to write code for it to occur. A huge numbers of lines of code had to be written.

- Re-use of code was not given much focus in ASP. You could do it only by using the include statement.

- There was no debugging mechanism in ASP. You could debug ASP application only by using the response.write. This is very tedious and not very effective.

- In ASP, you had to stop the web server to install a new version of a DLL. DLL'S had to be registered in the registry to be available for usein an application. Moreover, the DLL registration process is a very complex one.

Advantage of ASP.NET

- ASP.NET supports strongly typed languages like VB, c#,and much more.

- ASP.NET pages get compiled instead of being interpreted, thus their execution speed is faster than ASP pages.

- ASP.NET pages are tidier than ASP pages. The code can be separated from the HTML design and text. Thus, programmers can work separately from the designers.

- ASP.NET provides server controls that are declarative. You just have to declare them and you can use them. Thus, the number of lines of code to be written is reused.

- ASP.NET supports re-use of code by the mechanism of inheritance. For example, you can inherit c# classes and use them to provide the required functionality.

• ASP.NET can recognize the type of browser the client is using and accordingly display the content to the client. For example, if the client uses an uplevel browser (ie> 4.0 version), then the validation is performed on the client –side and on the server-side. However, if the client is using a downlevel browser, then the validation is performed only on the server-side.

• ASP.NET improves performance by using server-side caching. It allows you to cache the entire output of a page for re-use by other clients.

• ASP.NET functionality can be coded using different languages like C# or VB.NET. However, only one language can be used for coding in a single page.

• ASP.NET ships with many built –in server controls that have the common required functionalities. For example, the developer need not create a control for accepting data; the textbox control is provided for this purpose. Thus, the developer need not to recreate these controls to obtain the required functionality.

• A web service can be described as a function that can be deployed over the web and can be called by any application or other services. It can be a business application or a system function. ASP.NET allows you to create such web services.

Minimum Requirements

The software requirements to successfully run all the programs are

• Operating System - Windows 7, Windows XP.

• Microsoft IIS WEB server 5.0

• SQL Server 2005

• Visual Studio 200

3. DESIGN

3.1 Detailed design specification:

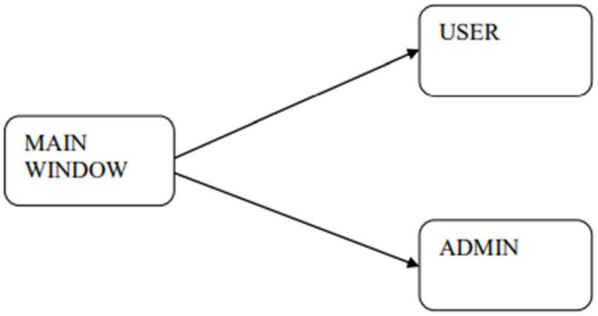


Fig: Homepage

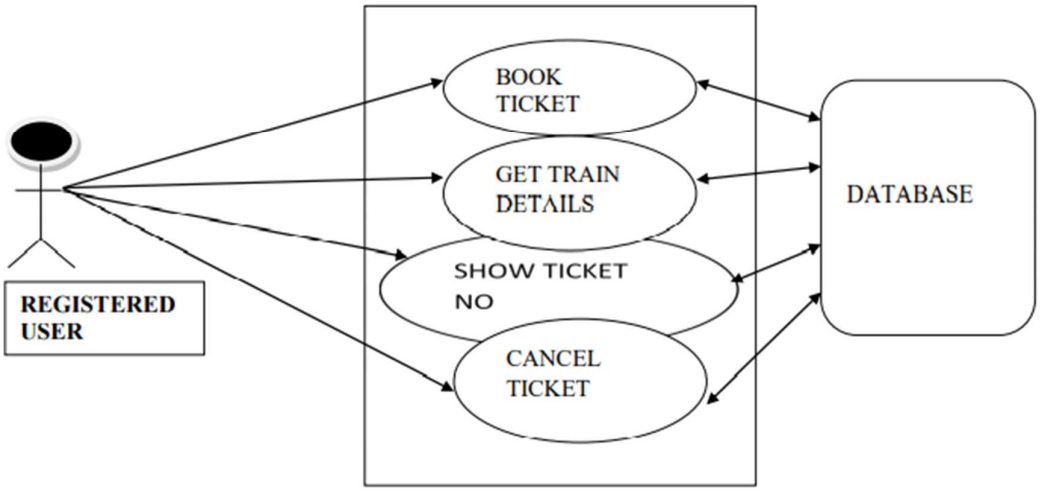
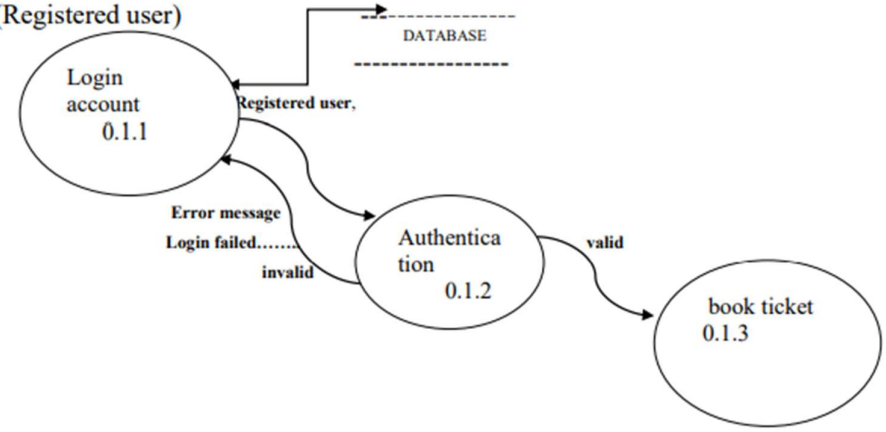


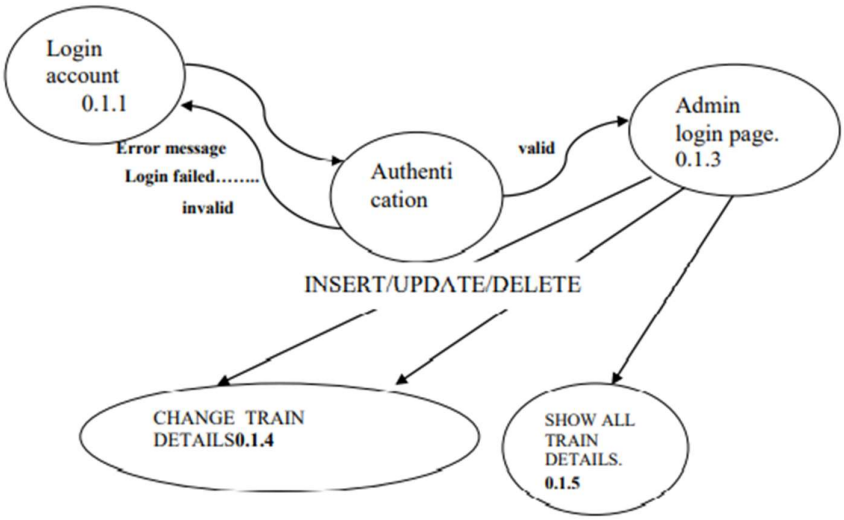
Fig: User's booking window

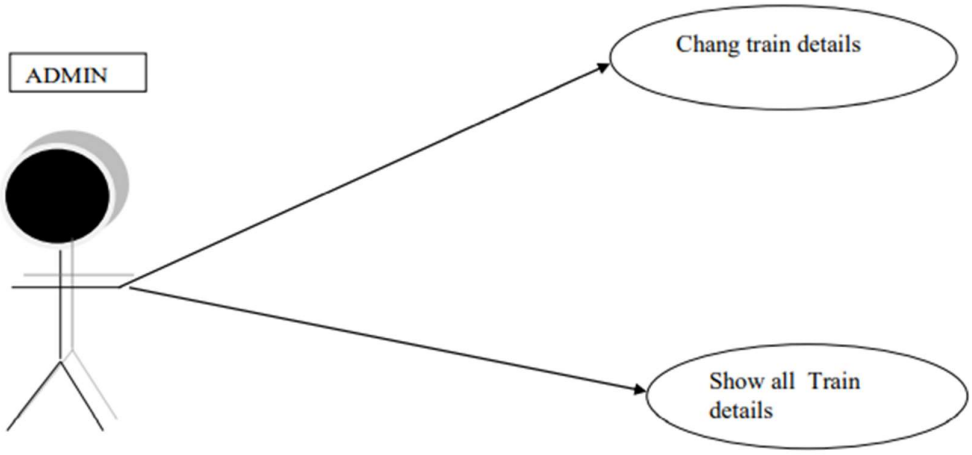
3.2.3 Level 2 DFD

For 0.1(Registered user)



(Administrator)

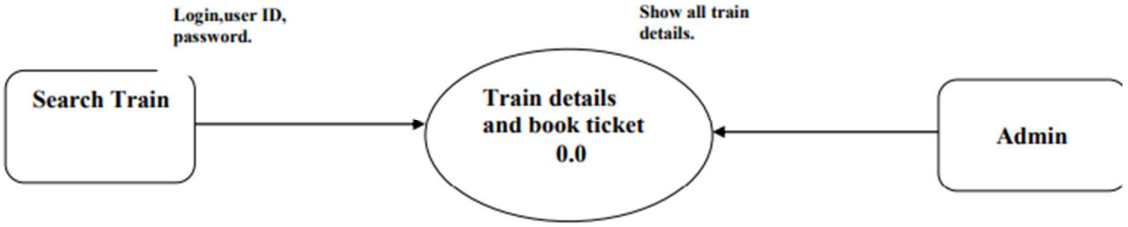




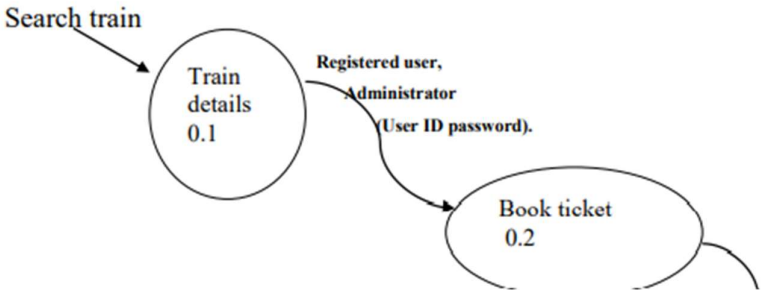
3.2 Data Flow Diagram

3.2.1 Level 0:

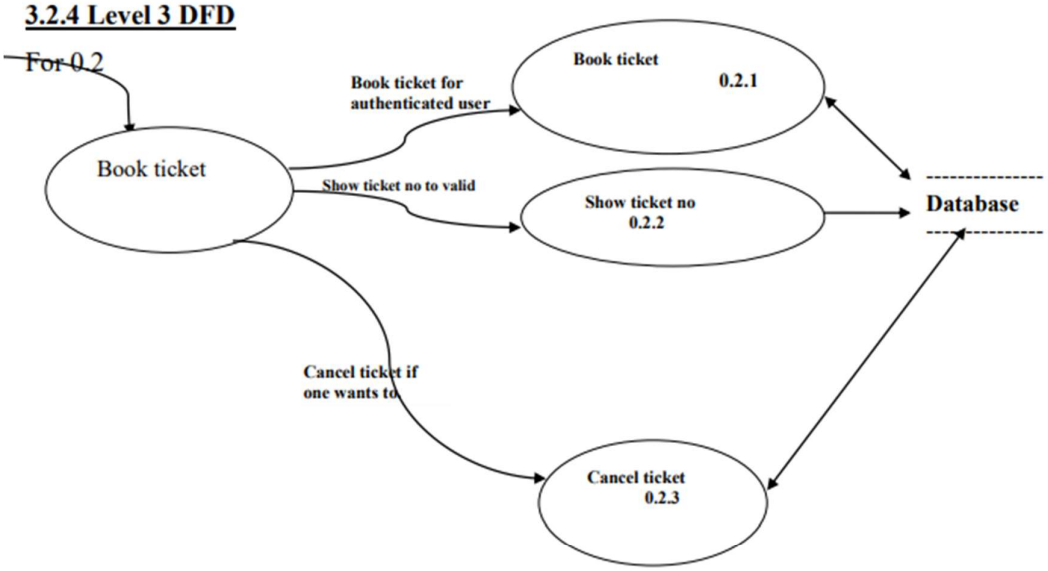
CONTEXT DIAGRAM



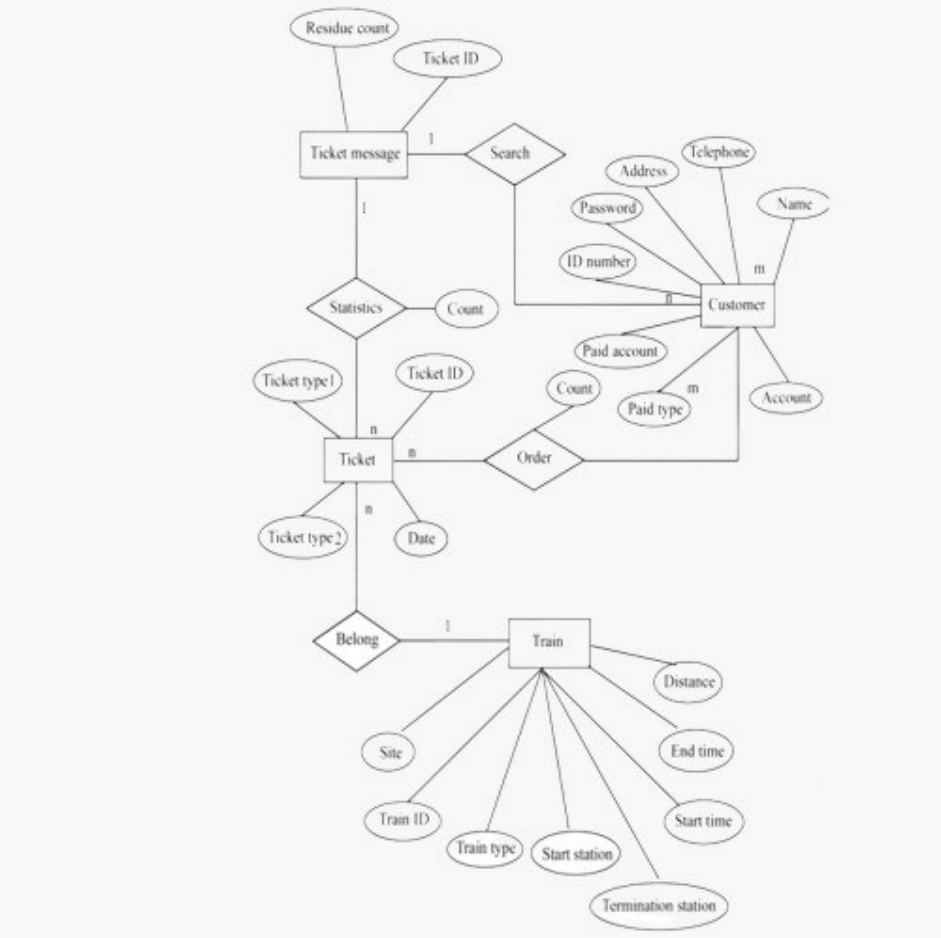
3.2.2 Level 1 DFD



3.2.4 Level 3 DFD



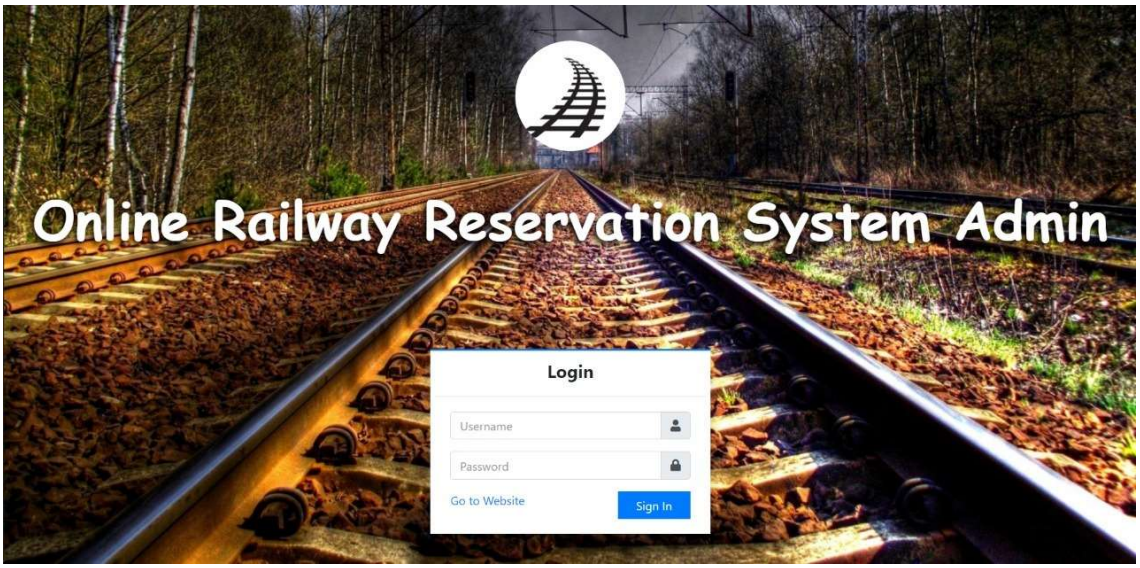
ER diagram



Modules:

HOME PAGE-

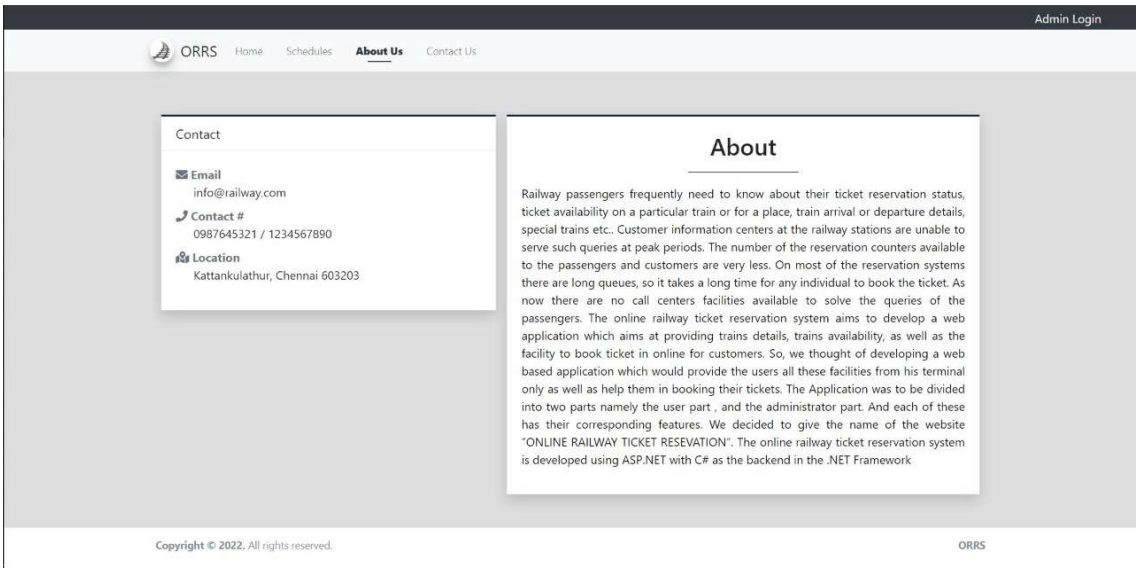
A welcome homepage is designed containing a navigation bar which along with other options shows the email you have logged in through. This navbar remains same for the entire website. It contains the PNR status, ticket booking menu and an email address/Login option in the menu. This home directly leads you to book tickets given if you are registered.



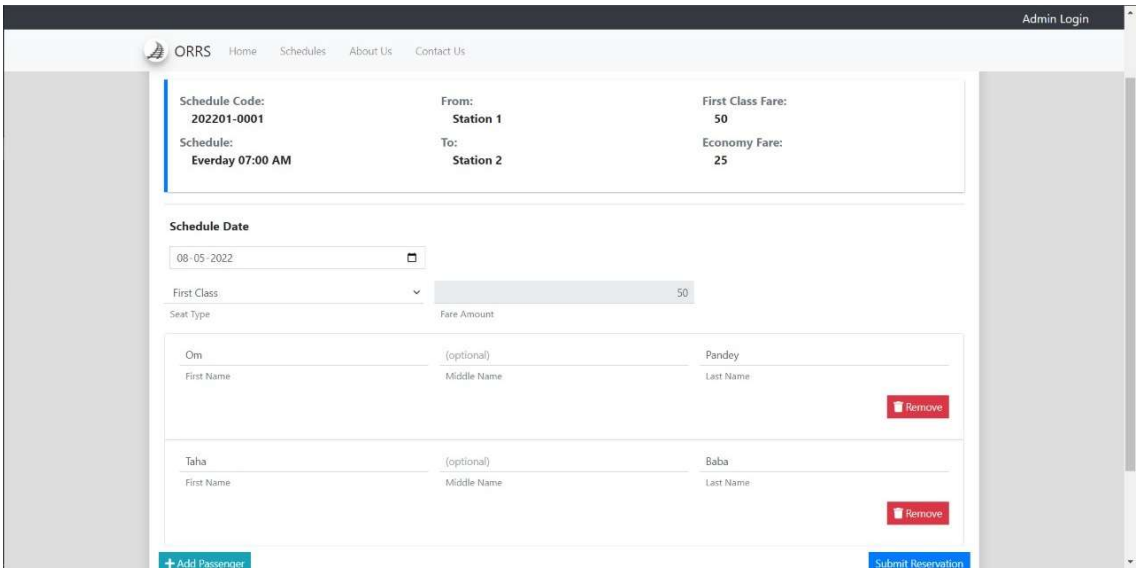
The step after the successfully registering is to look for the trains and get the tickets. In this menu you can see different trains and their routes and go with the suitable train that can take you to your destination.

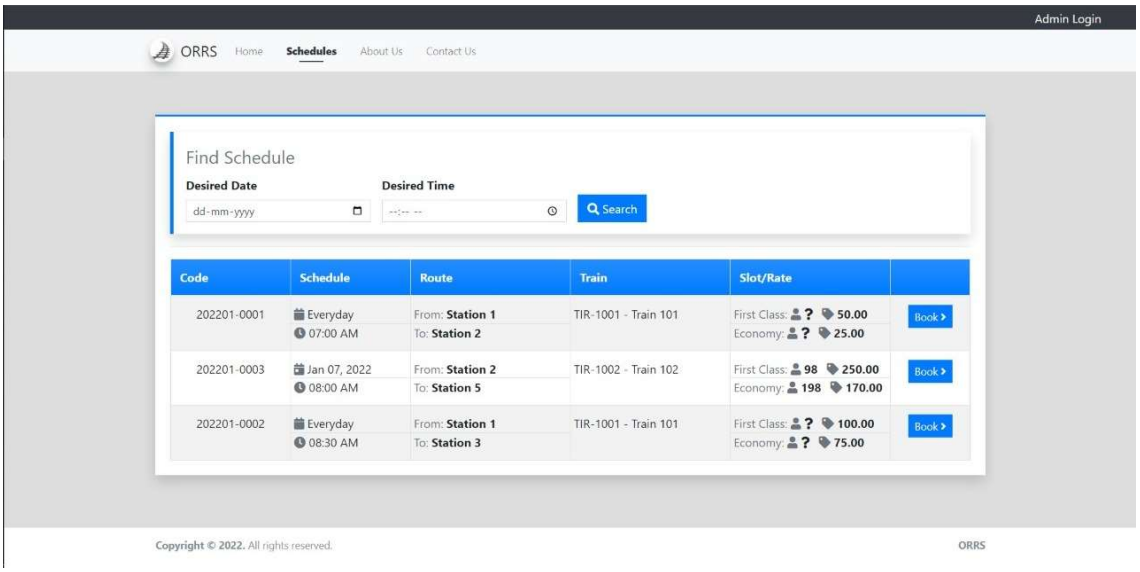
PNR status -

The PNR status page lets you check the train timings and allows you to cancel your ticket. Once you are done registering and booking your tickets, you can check the schedule of the trains in this menu. Alongside that if you wish to cancel the tickets, you can do that too.



Sample output -

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About Us
Contact Us
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Everyday
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From: Station 1
To: Station 2
TIR-1001 - Train 101
First Class: ? 50.00
Economy: ? 25.00
Book
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Jan 07, 2022
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Book
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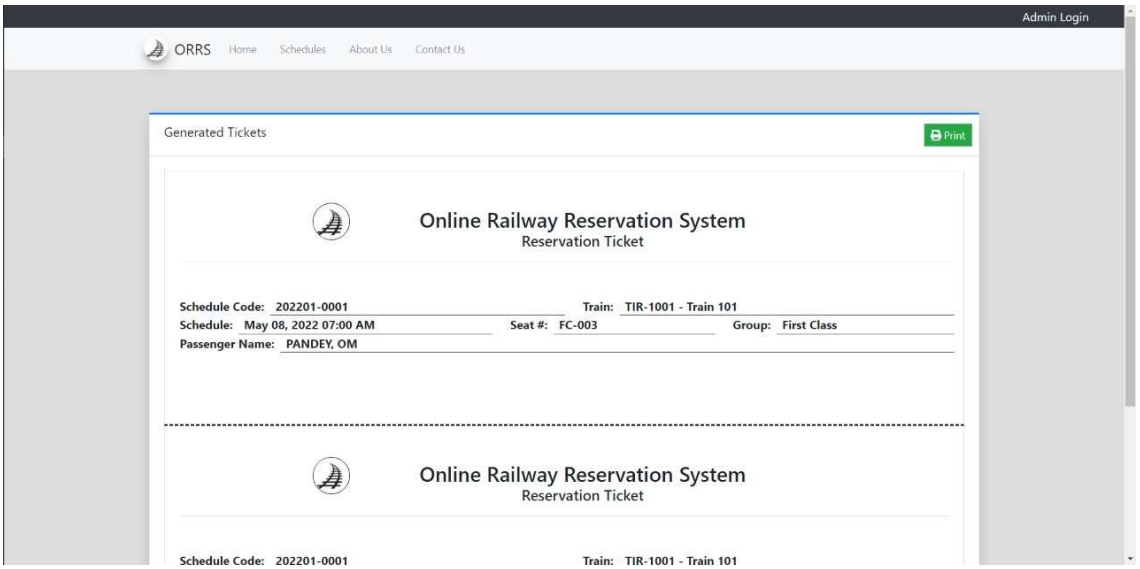
ORRS


Admin Login
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Home
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About Us
Contact Us
Generated Tickets
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Schedule: May 08, 2022 07:00 AM
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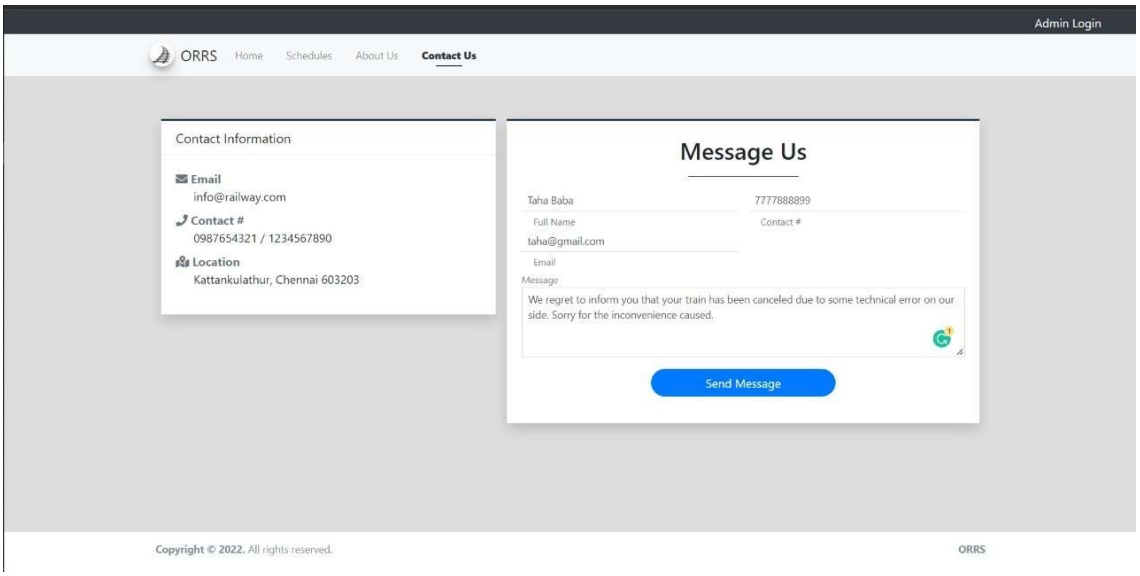

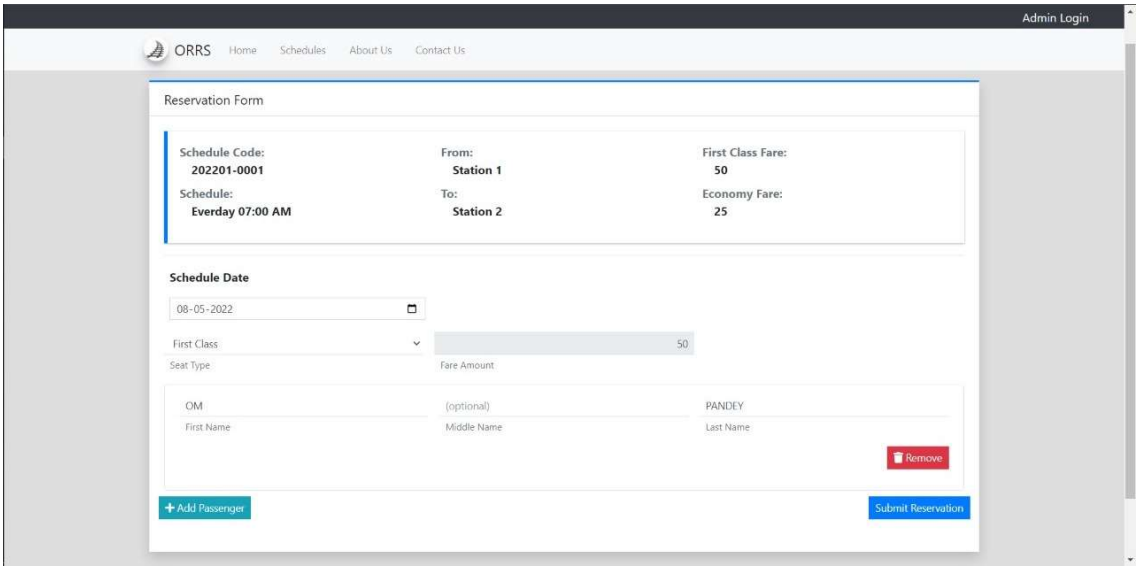

Result:

Online railway ticket reservation system was successfully designed and developed as per the specifications. It was extensively tested using a database which contains data similar to what can be expected in an actual database. The system was found to work satisfactorily without any errors under all conditions.

Summary and Conclusions

Summary of Achievements - The following achievements were made during the project:

- We had the opportunity to learn a new technology ASP.net
- Learned to work in visual studio 2010.
- We learned to handle a project efficiently and correctly.
- Learned to tackle various adverse situations while managing and developing software.
- Learning about the functioning of the IT industry and work ethics in the corporate world.
- Learning to work with C#.NET and MS SQL Server 2005.