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JNANA SANGAMA, BELAGAVI – 590018

A Mini Project Report on

Railway Reservation Management System

Submitted in partial fulfillment of the requirements as a part of the DBMS Lab for the award of degree of

Bachelor of Engineering
in
Information Science and Engineering

Submitted by

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CERTIFICATE

This is to certify that the mini project report entitled ***RAILWAY RESERVATION MANAGEMENT SYSTEM*** has been successfully completed by **CHAKKA SAI ABHISHEK** bearing USN **1RN16IS025**, presently V semester student of **RNS Institute of Technology** in partial fulfillment of the requirements as a part of the DBMS Laboratory for the award of the degree ***Bachelor of Engineering in Information Science and Engineering*** under **Visvesvaraya Technological University, Belagavi** during academic year 2018 – 2019. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The mini project report has been approved as it satisfies the academic requirements as a part of DBMS Laboratory for the said degree.

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External Viva

Name of the Examiners	**Signature with date**
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ABSTRACT

Indian Railways (**IR**) is India's national railway system operated by the Ministry of Railways. It manages the fourth-largest railway network in the world by size, with 121,407 kilometers (75,439 mi) of total track over a 67,368-kilometre (41,861 mi) route. Indian Railways runs more than 20,000 passenger trains daily, on both long-distance and suburban routes, from 7,349 stations across India. The trains have a five-digit numbering system which makes them easy to identify for managing different routes.

The "**Railway Reservation Management System**" has been developed to override the problems prevailing in the practicing manual system. The purpose of Railway Management System is to automate the existing manual system by the help of computerized equipment's and full-fledged computer software, fulfilling their requirements, so that their valuable data of the passengers can be stored for a longer period with easy accessing and manipulation. This system can lead to error free, secure, reliable and fast management system which gives a better interface for passengers to book their tickets in very less time. This system helps the Railways organization in better utilization of resources. They can maintain computerized records without redundant entries and store complete user information and travel records in a single application.

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CHAKKA SAI ABHISHEK

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INTRODUCTION

1.1 Background

1.1.1 Purpose

The project is named as Railway Reservation Management System which is an applicative based site which helps users to book their train tickets. The main aim of this project is to show complete information regarding train booking and user reservation interface. The main purpose of this railway reservation management system to eliminate error and manual reservations which creates a lot of errors and requires more man power to keep control of the data.

This system helps Indian Railways to eliminate redundant entries regarding the user helps managing the user's data in a more secure, easier way. It gives a new step to involve in the digitalization to reduce paper work.

1.1.2 Scope

This project aims at achieving computerized automation of all the functionalities of railway reservation and booking for users to give an easier graphical interface.
The various computerized processes include:
In computer system the person has to fill the various forms & number of copies of the forms that can be easily generated at a time.

The users can find the trains available between the source and destination in three different ways i.e. by giving the train no, or by giving the train name or by giving the names of the source and destination. The users can check the availability of seats in a train by in various classes available in a particular date. Users can fill up the passenger details and the tickets get booked. This reduces manual work and improves digitalization.

1.2 Introduction to Railways Reservation Management System

In this emerging world of computers, almost all-manual system has switched to automated and computerized system. Therefore, we are developing the software for "Railway Reservation Management System" to model the present system and to remove the drawbacks of the present system. This project explores how computer technology can be used to solve the problem of user's difficulty to book ticket manually.

This being a big step in terms of improvement in the railway system it is widely accepted across the country which is beneficial to the users. The use of computer has solved many problems, which are faced during manual calculation. Once the data are fed, it can perform accurate functions. Therefore, to reduce the complexity and efficiency a versatile and an outsourcing railway reservation management system has been developed.

The customers are required to register on the server for getting access to the database and query result retrieval. Upon registration, each user has an account that is essentially the 'view level' for the customer. The account contains comprehensive information of the user entered during registration and permits the customer to reserve tickets according to the source and destination stations, enquire about travel fare and availability of seats, and update his account details.
The passenger is allowed to print the ticket after the reservation is completed which gives a enhanced view for the user.

This project is dedicated to model the existing manual railway reservation system that aims at development of Railway Reservation Management System that facilitates the customers to manage their reservations and find trains and optimize their travel. Now one can easily plan the journey comfortably as the process is efficient and fast with being easy to access. The efficiency of the railways will increase the number of users travelling.

Entity- Relation Diagram

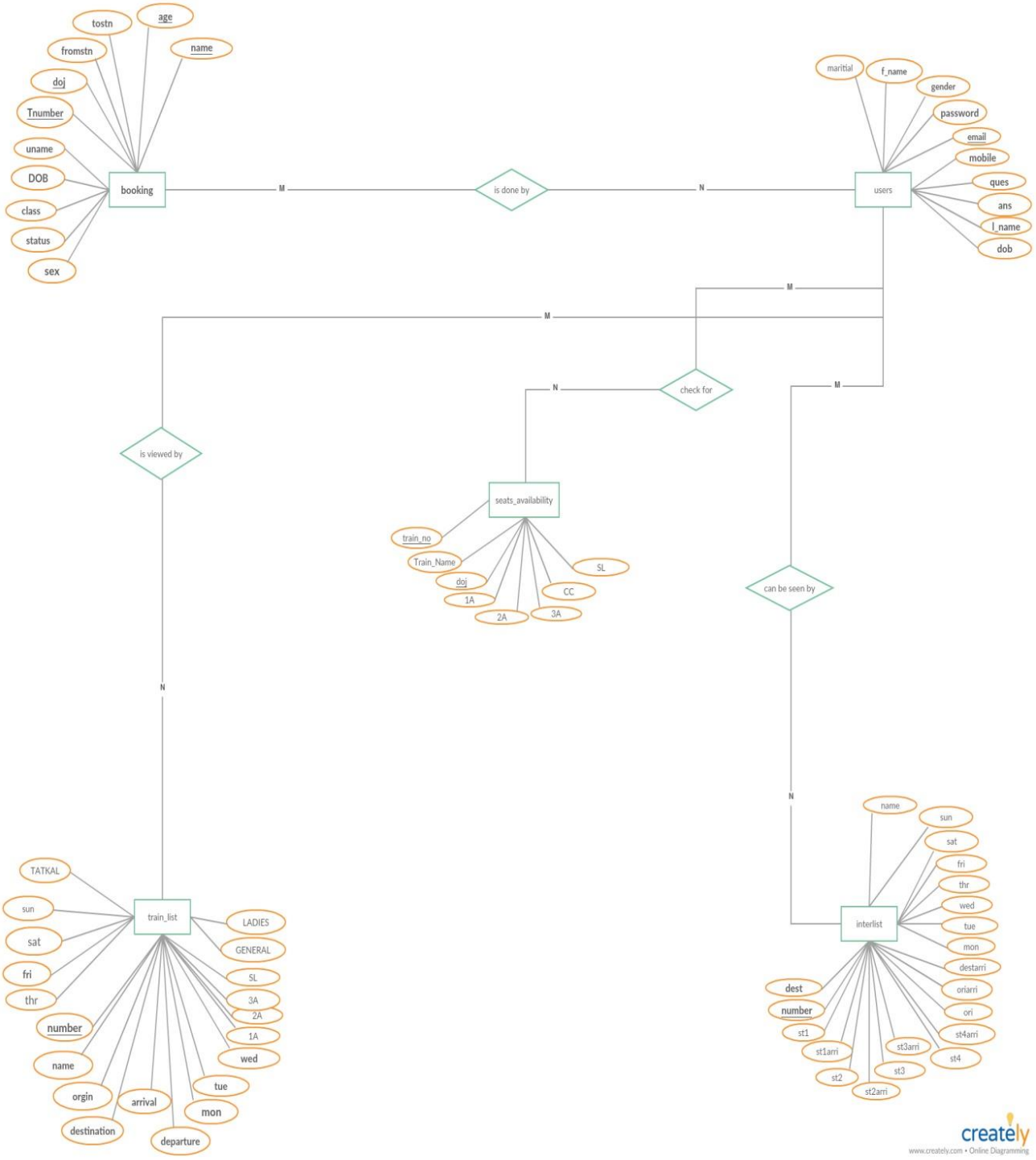

Fig – 2.3 ER Diagram for Railway Reservation Management System

2.2 RELATIONAL SCHEMA

Description

A database schema is the skeleton structure that represents the logical view of the entire database. It defines how the data is organized and how the relations among them are associated. It formulates all the constraints that are to be applied on the data.

A database schema defines its entities and the relationship among them. It contains a descriptive detail of the database, which can be depicted by means of schema diagrams. It's the database designers who design the schema to help programmers understand the database and make it useful.

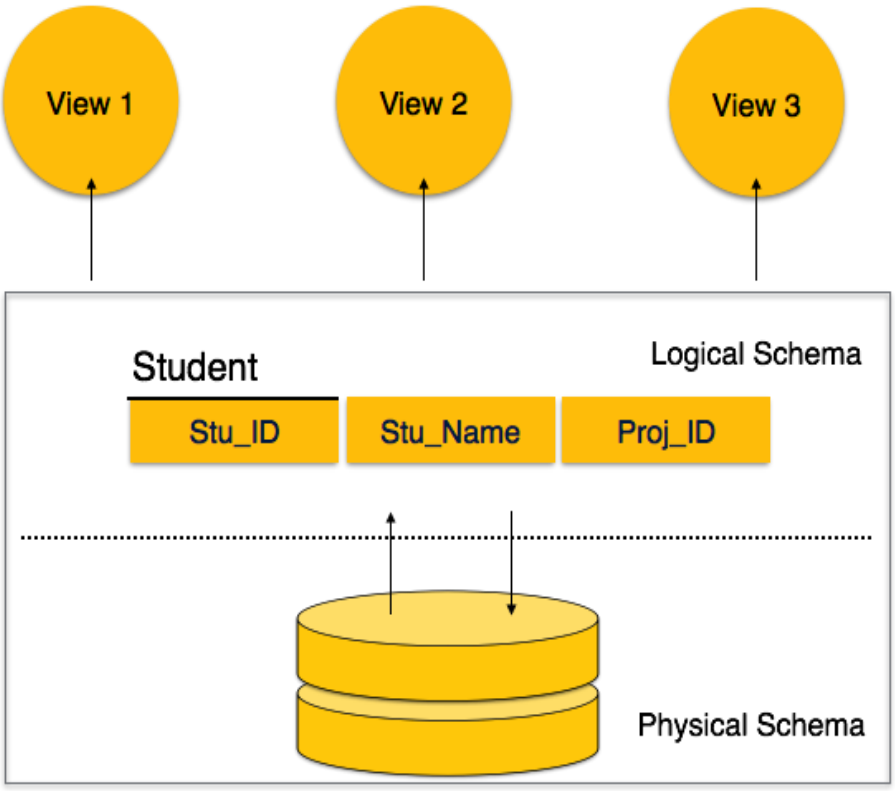

Fig - 2.4 Different Categories Of Schema

A database schema can be divided broadly into two categories −

- **Physical Database Schema** − This schema pertains to the actual storage of data and its form of storage like files, indices, etc. It defines how the data will be stored in a secondary storage.
- **Logical Database Schema** − This schema defines all the logical constraints that need to be applied on the data stored. It defines tables, views, and integrity constraints.

Relational Schema Diagram

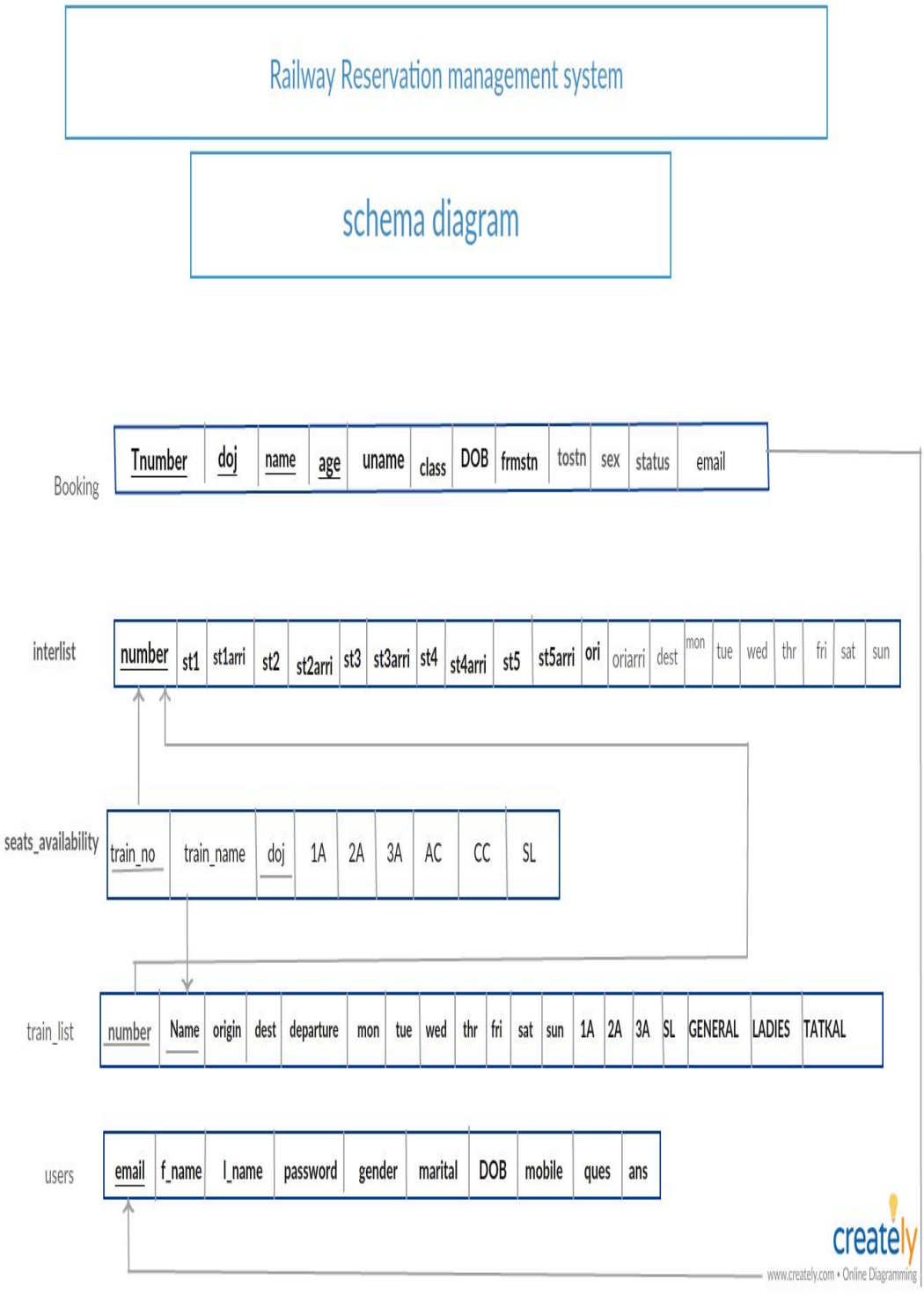

Fig – 2.5 Relational Schema Diagram of Railway Reservation System Management

3.2 Tables

The tables considered in the backend database of this project are:

Booking table:

#	Name	Type	Collation	Attributes	Null	Default
1	uname	varchar(15)	latin1_swedish_ci		No	None
2	Tnumber	int(11)			No	None
3	class	varchar(2)	latin1_swedish_ci		No	None
4	doj	date			No	None
5	DOB	date			No	None
6	fromstn	varchar(15)	latin1_swedish_ci		No	None
7	tostn	varchar(15)	latin1_swedish_ci		No	None
8	Name	varchar(15)	latin1_swedish_ci		No	None
9	Age	int(11)			No	None
10	sex	varchar(10)	latin1_swedish_ci		No	None
11	Status	varchar(20)	latin1_swedish_ci		No	None

Fig –3.1 Booking Table For Reservation Management

This table in Fig 3.1 includes all the booking information for a train, it includes various details of the user's journey, passenger's source and destination station and the age of the passenger and the train number, class in which the user is travelling is being stored.

Here uname specifies the username which is the name of the account holder under whose the further tickets are being reservation of the tickets will take place.

All the user information can be obtained from the above booking table by specifying the primary keys. The type of data used in this table is varchar, date, integer.

Interlist table:

#	Name	Type	Collation	Attributes	Null	Default
1	Number	int(6)			No	0
2	st1	varchar(10)	latin1_swedish_ci		Yes	NULL
3	st1arri	varchar(10)	latin1_swedish_ci		Yes	NULL
4	st2	varchar(10)	latin1_swedish_ci		Yes	NULL
5	st2arri	varchar(10)	latin1_swedish_ci		Yes	NULL
6	st3	varchar(10)	latin1_swedish_ci		Yes	NULL
7	st3arri	varchar(10)	latin1_swedish_ci		Yes	NULL
8	st4	varchar(10)	latin1_swedish_ci		Yes	NULL
9	st4arri	varchar(10)	latin1_swedish_ci		Yes	NULL
10	st5	varchar(10)	latin1_swedish_ci		Yes	NULL
11	st5arri	varchar(10)	latin1_swedish_ci		Yes	NULL
12	Ori	varchar(20)	latin1_swedish_ci		No	None
13	Oriarri	varchar(10)	latin1_swedish_ci		No	None
14	Dest	varchar(20)	latin1_swedish_ci		No	None
15	Desarri	varchar(10)	latin1_swedish_ci		No	None
16	Name	varchar(20)	latin1_swedish_ci		No	None
17	Mon	varchar(2)	latin1_swedish_ci		No	None
18	Tue	varchar(2)	latin1_swedish_ci		No	None
19	Wed	varchar(2)	latin1_swedish_ci		No	None
20	Thu	varchar(2)	latin1_swedish_ci		No	None
21	Fri	varchar(2)	latin1_swedish_ci		No	None
22	Sat	varchar(2)	latin1_swedish_ci		No	None
23	Sun	varchar(2)	latin1_swedish_ci		No	None

Fig–3.2 Interlist Table for Reservation Management

This table in Fig 3.2 includes the route of the train and its various timings and the information when the train will be operated in a week. Every train contains 5 intermediate stations in between and their arrival timings are also mentioned in the table, here the number of the train will be considered as the primary key.

The data types included in this table are varchar, integer.

seats_available table:

#	Name	Type	Collation	Attributes	Null	Default
1	Train_No	int(11)			No	None
2	Train_Name	varchar(20)	latin1_swedish_ci		No	None
3	doj	date			No	None
4	1A	int(11)			No	None
5	2A	int(11)			No	None
6	3A	int(11)			No	None
7	AC	int(11)			No	None
8	CC	int(11)			No	None
9	SL	int(11)			No	None

Fig –3.3 Seat Availability Table To Check Seats Available

In this table which is mentioned in the figure 3.3 it includes the number of seats available according to the selected date, this table also includes the name of the train.

The seats availability will be shown according to the various classes like

3 AC , 2 AC,1 AC , sleeper class in the specified date .

The data types used in this table are integer, date, varchar.

Various trains have been included in this project like SHATABDI express, DURRUNTO expresses ,RAJADHANI expresses , DOUBLE DECKER trains, all the various expresses trains and super fast trains have been clearly included for users booking.

Train_list table:

#	Name	Type	Collation	Attributes	Null	Default
1	Number	int(6)			No	None
2	Name	varchar(20)	latin1_swedish_ci		No	None
3	Origin	varchar(20)	latin1_swedish_ci		No	None
4	Destination	varchar(20)	latin1_swedish_ci		No	None
5	Arrival	varchar(10)	latin1_swedish_ci		No	None
6	Departure	varchar(10)	latin1_swedish_ci		No	None
7	Mon	varchar(2)	latin1_swedish_ci		No	None
8	Tue	varchar(2)	latin1_swedish_ci		No	None
9	Wed	varchar(2)	latin1_swedish_ci		No	None
10	Thu	varchar(2)	latin1_swedish_ci		No	None
11	Fri	varchar(2)	latin1_swedish_ci		No	None
12	Sat	varchar(2)	latin1_swedish_ci		No	None
13	Sun	varchar(2)	latin1_swedish_ci		No	None
14	1A	int(11)			No	None
15	2A	int(11)			No	None
16	3A	int(11)			No	None
17	SL	int(11)			No	None
18	General	int(11)			No	None
19	Ladies	int(11)			No	None
20	Tatkal	int(11)			No	None

Fig –3.4 Train List Table To Display List Of All Available Trains

In this table in Fig 3.4 the overall information of the train will be stored with the origin stations and the destination station. There are three different classes for travelling that is tatkal, general and ladies quota where user can select one of his choice

The type of data being used here is integer, varchar.

Users table:

#	Name	Type	Collation	Attributes	Null	Default
1	f_name	varchar(50)	latin1_swedish_ci		No	None
2	l_name	varchar(50)	latin1_swedish_ci		No	None
3	email	varchar(50)	latin1_swedish_ci		No	None
4	password	varchar(20)	latin1_swedish_ci		No	None
5	gender	varchar(10)	latin1_swedish_ci		No	None
6	marital	varchar(10)	latin1_swedish_ci		No	None
7	dob	varchar(20)	latin1_swedish_ci		No	None
8	mobile	bigint(10)			No	None
9	ques	varchar(100)	latin1_swedish_ci		No	None
10	ans	varchar(100)	latin1_swedish_ci		No	None

.

Fig –3.5 Users Table To Fetch User Information

This table mainly focuses us on the registration of the user and the details will be stored in the database.

Here the data types used are varchar, bigint.

4.2 Hardware required

The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware, A hardware requirements list is often accompanied by a hardware compatibility list (HCL), especially in case of operating systems. An HCL lists tested, compatible, and sometimes incompatible hardware devices for a particular operating system or application.

Processing power

The power of the central processing unit (CPU) is a fundamental system requirement for any software. Most software running on x86 architecture define processing power as the model and the clock speed of the CPU. Many other features of a CPU that influence its speed and power, like bus speed, cache, and MIPS are often ignored. Intel Pentium CPUs have enjoyed a considerable degree of popularity, and are often mentioned in this category.

Memory

All software, when run, resides in the random access memory (RAM) of a computer. Memory requirements are defined after considering demands of the application, operating system, supporting software and files, and other running processes.

MINIMUM HARDWARE REQUIREMENT		
	Processor	Pentium Processor @ 1-GHz or higher
	RAM	512MB or Higher
	Disk Space	60GB or higher
	Input Devices	Mouse and Keyboard or Touch Screen
	Output Devices	LCD monitors or Surface Screen, No printer
	Graphics Hardware	VGA

Fig 4.1 Hardware Requirement

4.3 SOFTWARE REQUIREMENTS

These are the software resource requirements and prerequisites that need to be installed on a computer to provide optimal functioning of application. These requirements or prerequisites are generally not included in the software installation package and need to be installed separately before the software is installed

4.3.1 FRONT END

The components used in Front End are:

HTML 5

HTML5 is a markup language used for structuring and presenting content on the World Wide Web. It is the fifth and current major version of the HTML standard, and subsumes XHTML. HTML 5 includes detailed processing models to encourage more interoperable implementations; it extends, improves and rationalizes the markup available for documents, and introduces markup and application programming interfaces (APIs) for complex web applications. For the same reasons, HTML 5 is also a candidate for cross-platform mobile applications, because it includes features designed with low-powered devices in mind.

Its goals are to improve the language with support for the latest multimedia and other new features; to keep the language both easily readable by humans and consistently understood by computers and devices such as Web browsers, parsers, etc., without XHTML's rigidity; and to remain backward-compatible with older software.HTML 5 introduces elements and attributes that reflect typical usage on modern websites. HTML 5 cannot provide animation within web pages. Additional JavaScript or CSS3 is necessary for animating HTML elements.

CSS

Cascading Style Sheets (**CSS**) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript. CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts.

This separation can improve content accessibility provide more flexibility and control the specification of presentation, characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate CSS file.

It reduces complexity and repetition in the structure content. Separation of formatting and content also makes it feasible to present the same mark up page in different styles for different rendering methods. CSS has a simple syntax and uses a number of English keywords to specify the names of various style properties. Style sheet consists of list of rules. Each rule set consists of one or more selector and a declaration block.

Before CSS, nearly all presentational attributes of HTML documents were contained within the HTML markup. All font colors, background styles, element alignments, borders and sizes had to be explicitly described, often repeatedly, within the HTML. CSS lets authors move much of that information to another file, the style sheet, resulting in considerably simpler HTML.

4.3.2 Back End

PHP

Originally stood for Personal Home Page but now **Hypertext Preprocessor** (or simply **PHP**) is a server-side scripting language designed for Web development, and also used as a general-purpose programming language. PHP code may be embedded into HTML code, or it can be used in combination with various web template systems. PHP code may also be executed with a command-line interface (CLI) and can be used to implement standalone graphical applications.

The PHP interpreter only executes PHP code within its delimiters. Anything outside its delimiters is not processed by PHP, although non-PHP text is still subject to control structures described in PHP code. The most common delimiters are <?php to open and ?> to close PHP sections. In terms of keywords and language syntax, PHP is similar to the C style syntax.

PHP is a general-purpose scripting language that is especially suited to server-side web development, in which case PHP generally runs on a web server. Any PHP code in a requested file is executed by the PHP runtime, usually to create dynamic web page content or dynamic images used on websites or elsewhere. It can also be used for command-line scripting and client-side graphical user interface (GUI) applications.

PHP can be deployed on most web servers, many operating systems and platforms, and can be used with many relational database management systems (RDBMS). Most web hosting providers support PHP for use by their clients.

MYSQL

Is an open-source relational database management system (RDBMS).
Is a free and open source tool written in PHP intended to handle the administration of MySQL with the use of a web browser. MySQL is written in C and C++. It can perform various tasks such as creating, modifying or deleting databases, tables, fields or rows; executing SQL statements; or managing users and permissions. The software, which is available in 78 languages, is maintained by the phpMyAdmin Project. MySQL is a central component of the LAMP open-source web application software stack (and other "AMP" stacks). LAMP is an acronym for "Linux, Apache, MySQL, Perl/PHP/Python".

It can import data from CSV and SQL, and transform stored data into any format using a set of predefined functions, like displaying BLOB-data as images or download links

4.4 Discussion of the code segments

4.4.1 Pseudo code for Login

1. Set the table to “users”.

2. Allow the user to enter username and the password in encrypted format.

3. compare the entered user credentials to the backend database with prestored values in the table “users”.

4. If the user entered values are correct then redirect the page to the index page i.e the homepage of the user

5. If the user entered values are incorrect then output the error message and redisplay the login page.

6. Login query is successfully processed.

4.4.2 Pseudo code for finding trains available

1. Set the table to “train_list”.

2. Allow the user to select the mode, three modes are available that is finding by “name”, by “train _no”, by “train_name”.

3. After selecting the mode allow the user to enter the desired input to find.

4. Compare the entered value with the values present in the database.

5. If the values compared are present in the database go to step 7.

6. If the values are’nt available in the database then output the error as incorrect input given.

7. Display the train details with the from station and to station and the departure time and the days of running as fetched from the database.

8. The query is successfully processed and the necessary output is generated.

4.4.3 Pseudo code for reservation of trains

1.Set the table to “interlist”

2.Allow the user to enter the from_station, destination_station, quota of booking, and the date of journey.

3. Compare the “from_station” with the values prestored in the database with the five different values of from_station in the database of the table “interlist”.

a. If the value is present go to step b or else output the error message

b. Compare the value of “to_station” with the values prestored in database of the table “interlist” with the five different values of “to_station” in the database,

If the value is present go to step 4 OR

If the value is not present output the error message.

4. With the quota selected and the date of journey mentioned compare the values in the database and present the total seats available in various classes available.

5. If no trains are present in the selected date of journey then output the error message.

6. the query is successfully computed.

4.4.4 Pseudo code for Updation of Password

1. Set the table to “users”.

2. Allow the user to login with successful credentials.

3. Allow the user to enter the new values of new password in “profile” page. This allows the user to change the values which the user had entered during the registration.

4. With “f_name” as the reference update the newly entered password value in the database for the table “users”.

5. The user values are successfully updated in the back end.

4.5 Applications of the project

Railway reservation management system has introduced the reservation in computerized version it includes a innovative approach to the existing system which gives a better interface to the users in all the functionalities of planning a travel.

The various applications of the project are:

- Provides a user-friendly graphical interface for easy booking of the trains
- Users can optimize their searching process in a more accurate way and desired way by either specifying the train no or name or the source and final destination.
- This project helps to preserve all the records of the user to eliminate redundancy values and to improve the backend database management
- This system can easily replace the manual reservation system which helps to book tickets in a very faster rate than the troublesome manual procedure.
- This project can be further used for all the jones which shows all the trains and you can optimize your booking by considering all the trains.
- The same management system can be used for booking the metro rail and various other local trains.
- This computerized system can generate the ticket in few simple clicks
- This system will help users to book the tickets in all types of modes (general, tatkal, ladies) under a single application which is an innovative approach towards booking in a easier way.
- This system helps user book multiple tickets in one account and keep track of all the tickets
- This system helps IR to manage the user's data effectively and in a secured way.
- This system can also be helpful for tourism trains and holiday packages like "holiday on wheels"

4.6 Discussion of the result

Fig 4.1 Home Page Of The Railway Management System

The Fig 4.1 Home page of the Railway Management System as viewed by a user is as seen above. This page provides the user with a login button and a sign-up button. A user must first login in to use the services of this system. Any new user can register himself by clicking the “Sign up” button which provide the user with a registration form. It consists of certain personal details to be filled like the name, emailed, password, gender, date of birth and a security question. Once the user clicks submit, the data gets added to the database.

Fig 4.2 Sign Up Page for new Users

Once the user registered himself, he can login in to his account by using his name and password so that he can avail the services of the system.as shown in the fig 4.2, After submitting the form the user is redirected to the home page from where he can login. The login page looks like:

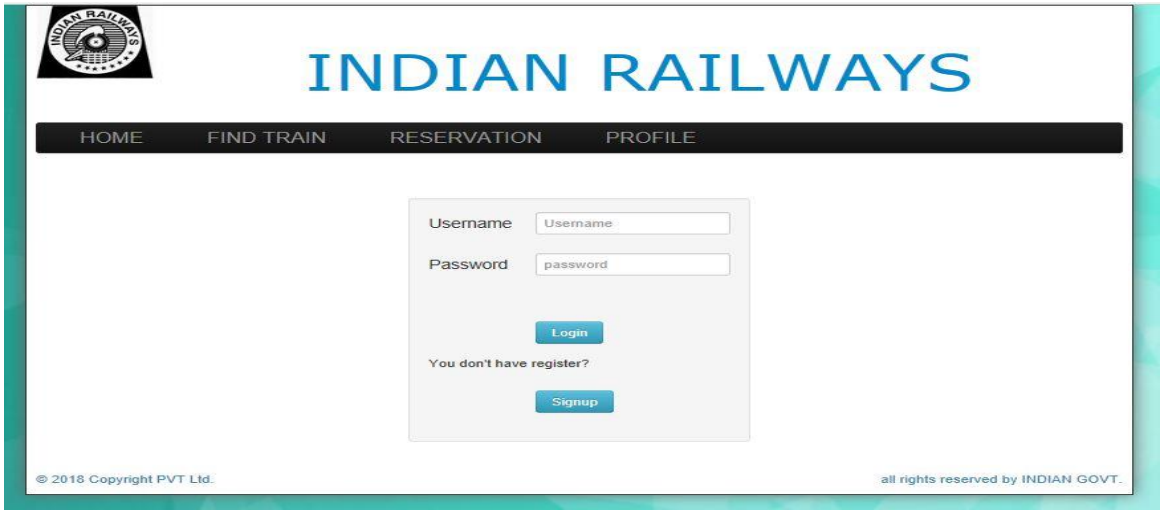

Fig 4.3 Login Page

After login as shown in the image Fig 4.3 the user may find a train suitable for his travel by choosing the “Find Train “option. It allows the user to find a train either by Name, by Number or by Station. Depending on these values after clicking on “Find”, a list of trains is displayed, which gives a complete description of the Train no, Name, Origin and Destination Station, Days of run, Arrival time, and Departure time which makes it easier for the user to find their best suited train.

Fig 4.4 Search for Trains

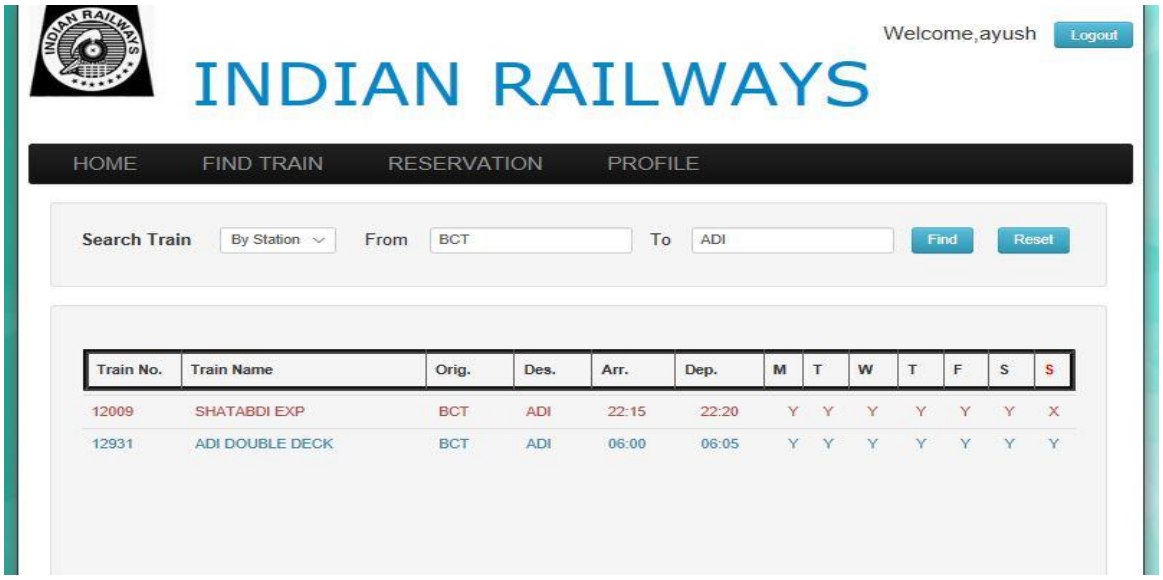

Fig 4.5 Train Availability Search based On Station

A user may then use the reservation services by clicking the “Reservation” link on the Home page. A form appears on the left which asks for the details like Boarding station, Destination station, the Reservation Quota and the preferred date of journey as in 4.6 .

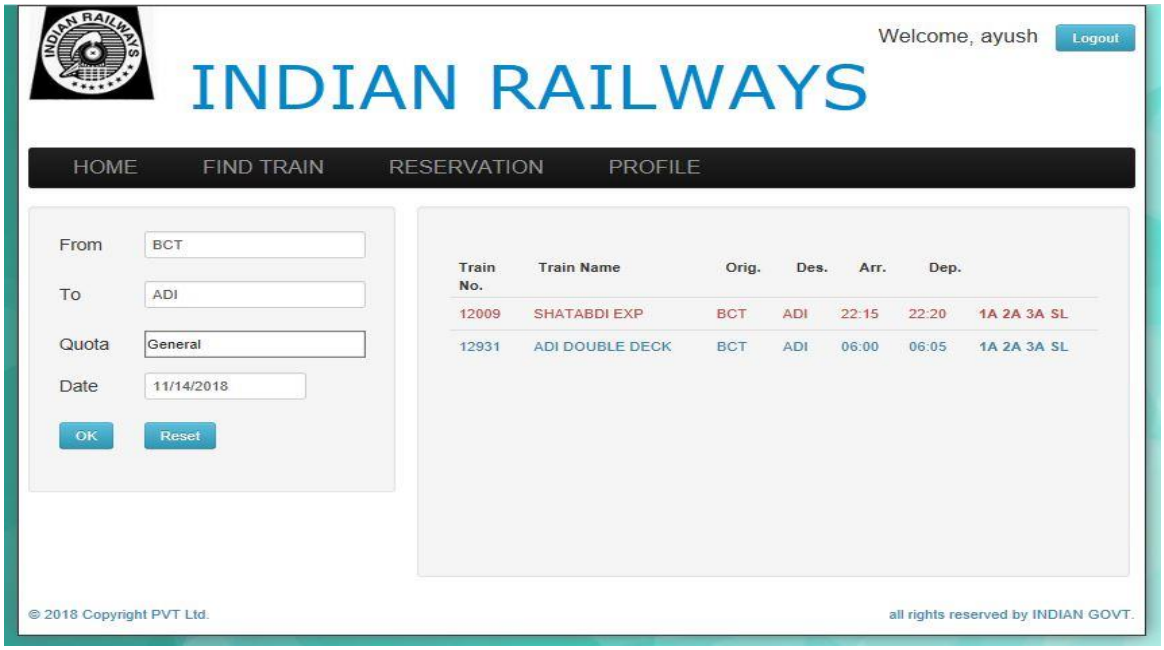

Fig 4.6 Search for Train Availability

To proceed with the reservation, the user must select the from the available classes (1A, 2A, 3A, SL) to book their seat. A reservation form then appears on the user screen where the user enters the passenger details. The form is as shown in Fig 4.7 .

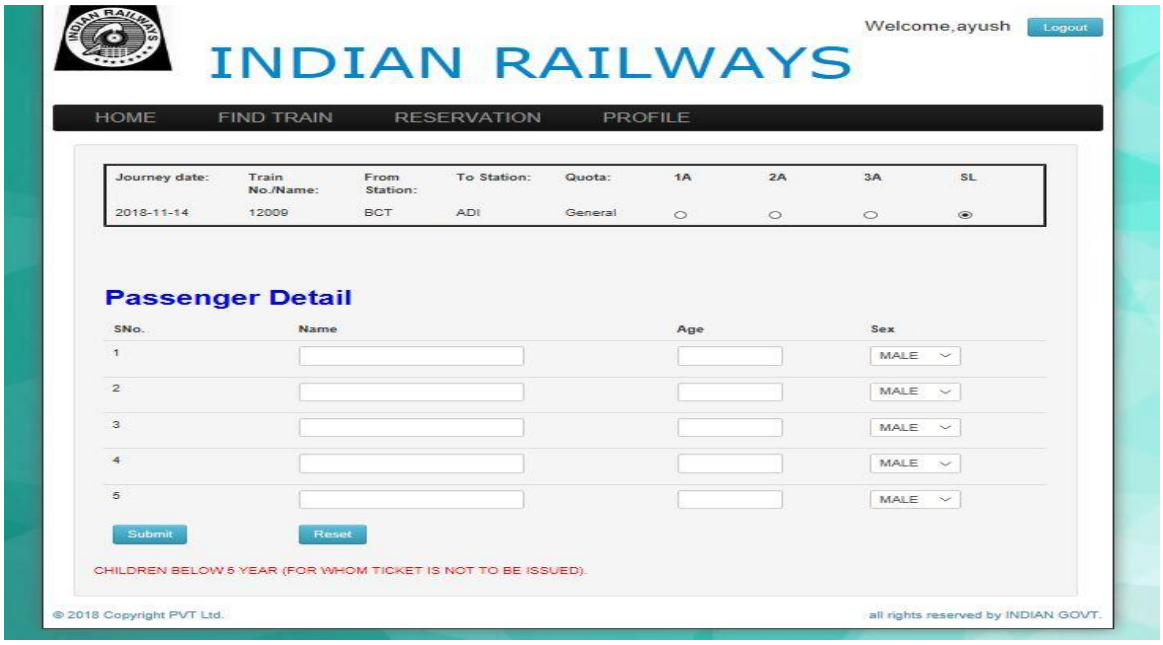

Fig 4.7 Reservation Form For Users

Once the user submits the reservation form, the booking history is automatically generated and displayed to the user. This page contains the details of all the bookings previously done by the user which include the train number, DOJ, Source, Destination, DOB, current status.

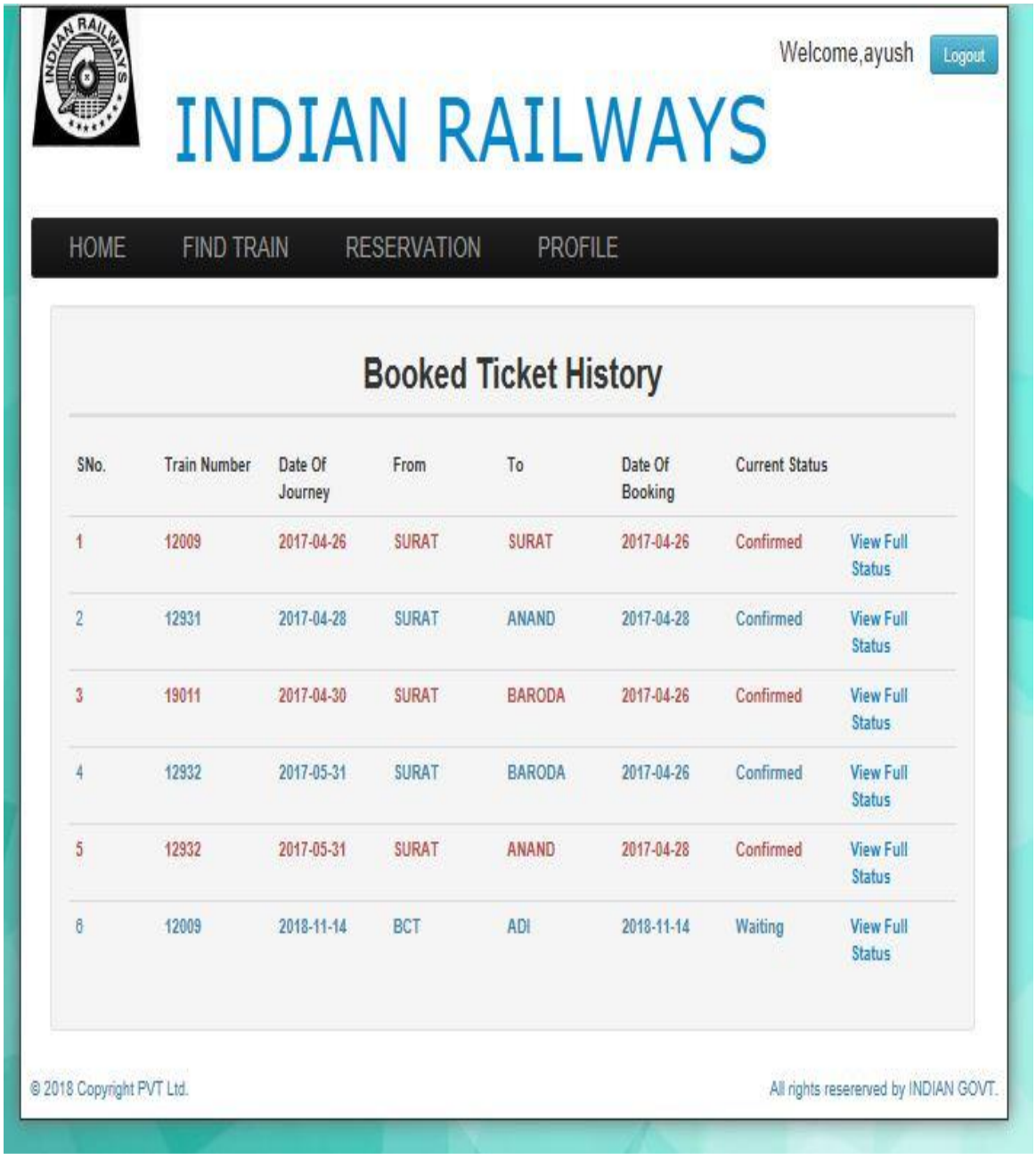

Fig 4.8 Ticket Booking History

Here, the user is provided with an option to view the complete details of every booking by selecting the "View Full Status" link. It gives the details of that reservation which includes the Train number, date of journey, name of the traveler, age, gender, status, date of booking, the class, and the amount payable. It also gives a print option for the user to retrieve a hardcopy of his E-Ticket. This window appears as shown in fig 4.9 .

Fig 4.9 Ticket Booking History

The user may also view and update his profile by clicking the profile option provided in the home page. While viewing the profile, the user details are fetched from the database and on any updation or alteration, the changed values are reflected and updated in the database. All the user details including the first name, last name, Email, dob, gender, marital status, mobile no., Security question and its answer are displayed.

To update the profile, one must select the “Edit Profile” option. The user is also provided with an option to modify or change his password. The profile displayed is seen in the figure 4.10.

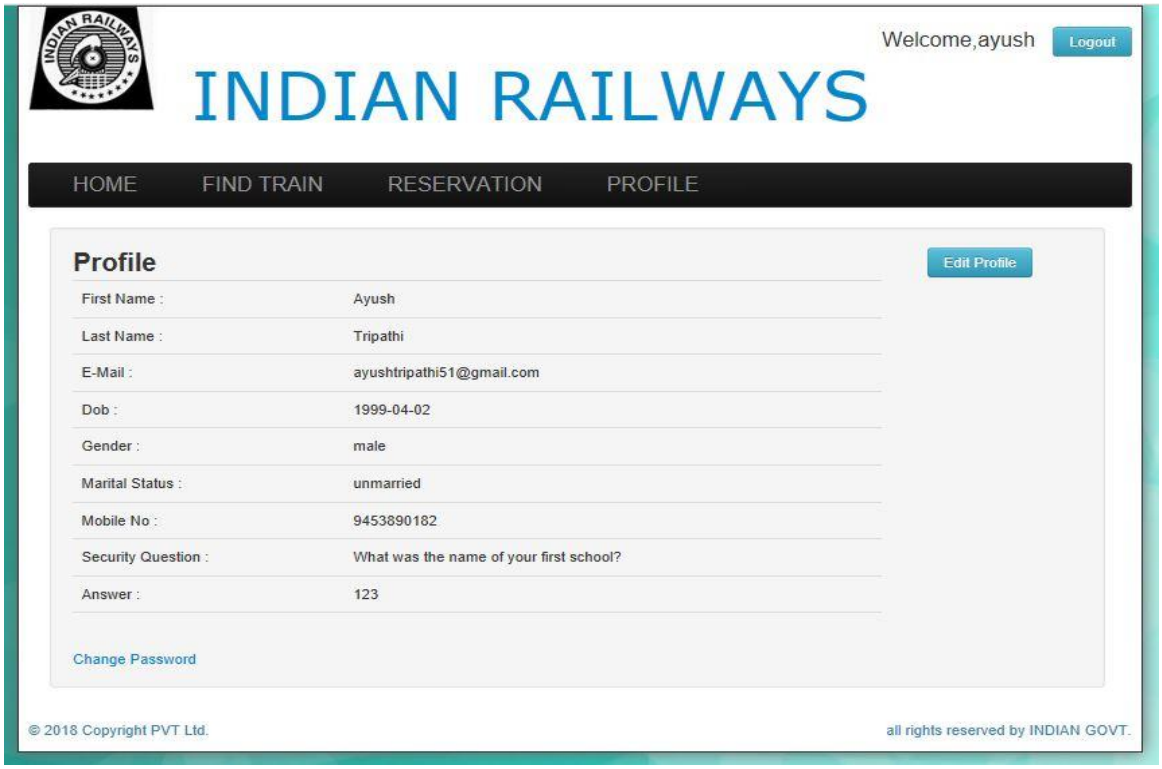

Fig 4.10 Profile Information

Once the user selects “Edit Profile”, he is directed to fill up a form containing his details where he can update or make changes it is shown in the Fig – 4.11.

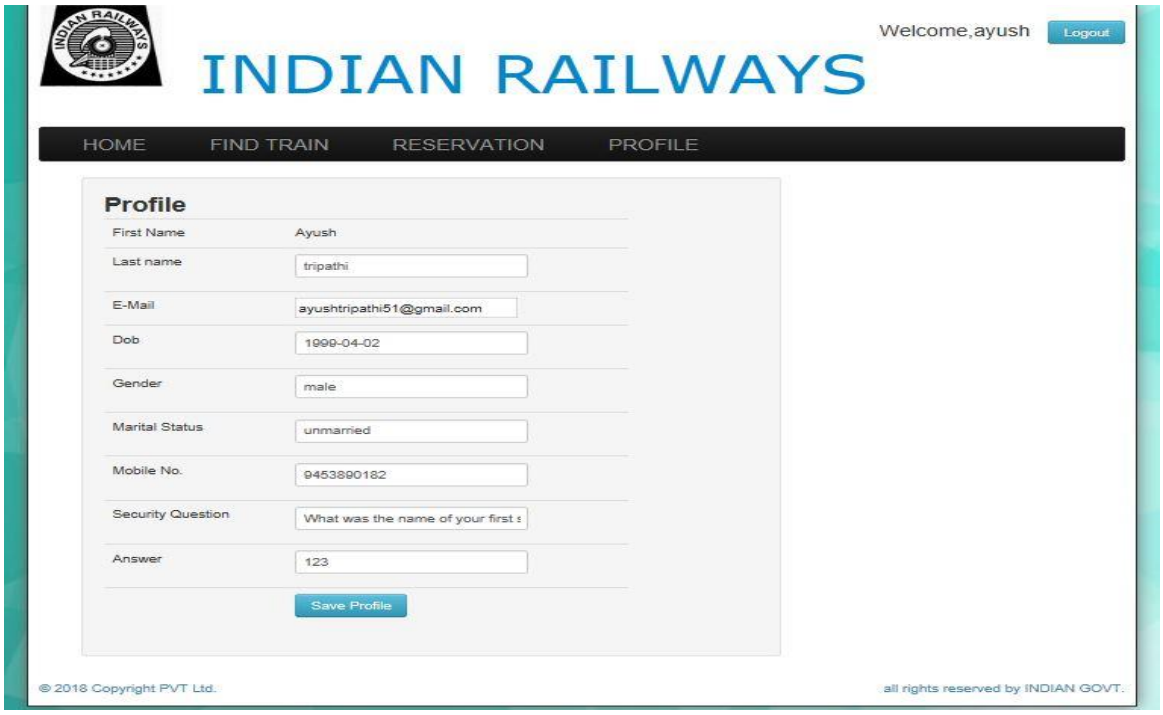

Fig 4.11 Profile Updation of a User

If a user wants to change password, by selecting the “Change password” option he may do so. The snapshot to change the password is as seen in fig 4.12 .

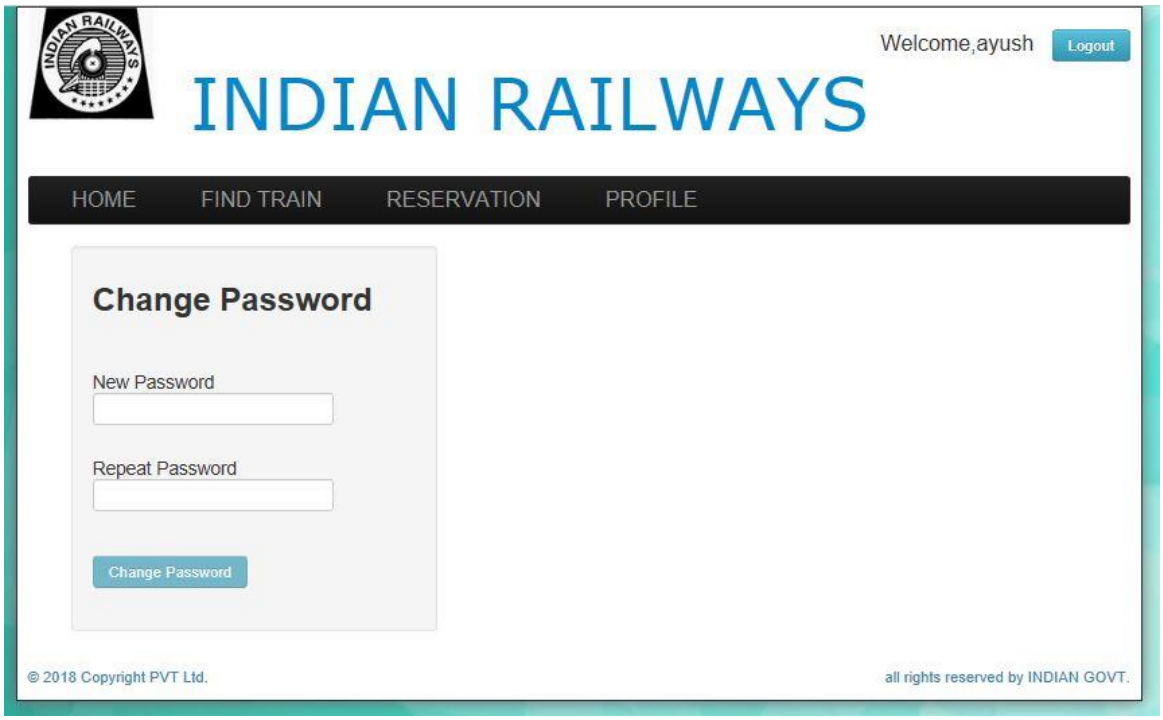

Fig 4.12 Change Password Page

Now the password of the user is successfully changed.

Chapter 5

CONCLUSIONAND FUTURE ENHANCEMENTS

5.1 Conclusion

Railway Reservation Management System possesses a number of new features which make it unique and different from the existing system. The following features are present in the computerized system are:

This System introduces a platform which put together different booking categories under one umbrella, which allows multiple users from different remote locations to simultaneously access it and be able to plan their travel to their concerned destinations. The users can register easily and sign in the portal with their unique username and password.

Railway Reservation Management System also gives the users an autonomy of voting, free from interference, which makes our project independent form any external influence or control which may lead to ridging.

This system introduces a very simple Graphical User Interface (GUI) which is simple, easy, friendly and easily learnable. This feature makes it easier for our users to access the portal with having to waste their time in queues, energy and resources.

The Railway Reservation Management System will manage the user's information by storing all his transaction details of travel history. The system will incorporate all the features of reservation system. It provides certain tools to optimize the user's travelling history and keeps a record of all the details safely. There's a database which is maintained by INDIAN GOVERNMENT in which all the users completely history will be stored. Here the users can login to the portal search different trains available between different routes and search the availability of the seats of the trains, the user can get to know the timings of the train and as the user selects the desired train, he/she can reserve the tickets and the final ticket can be printed accordingly. By this system it increases the percentage of users travelling in train, it is very easy to use and less time consuming.

5.2 FUTURE ENHANCEMENT

This project can be further developed to a better way by including the cancellation procedure which allows users to cancel the ticket and refund back the amount paid by the user, this improves the complete interface which gives more enhancement in user friendly approaches.

We can also try to modify the project in a more better way by optimizing the intermediate station booking console this helps the flexibility of the planning system which helps user in a more advanced way, if the user tries to search/book for the trains available in a particular route and if there's no trains available on that particular route and date this intermediate station booking will help the user in planning his travel in a more better way,

This approach shows all the trains available to certain station from the source and shows different train from that intermediate station to the destination station where the system shows all the connecting trains available in between the source station to the destination station this improves the reservation system to a next advanced level which uses artificial intelligence (AI) to calculate the intermediate stations to the destination station from the source station.

We can modify the system by sending the confirmed mail of the tickets booked by the user in mail which is not present in the existing system, this helps the user in receiving the tickets in a easier way in a computerized format.

We can further improve the project by including the online digital wallet which helps user to save money stored in the wallet which is used by the reservation system to directly debit the amount immediately, this improves the role of IR in the areas of digital currency module.

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