

Visvesvaraya Technological University, Belagavi – 590010



**DBMS MINI PROJECT REPORT
ON
RAILWAY RESERVATION SYSTEM**

Submitted by

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Deena Marina Dsouza

4SO20CS032
4SO20CS037

**Under the guidance of
Ms Aparna Krishnan
(Assistant Professor, CSE Department)**



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

**ST JOSEPH ENGINEERING COLLEGE
Vamanjoor, Mangaluru -575028, Karnataka
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CERTIFICATE

This is to certify that the Mini project entitled “Railway Reservation System” is a bonafide work carried out by

Chandini R

4SO20CS032

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Students of fifth semester B.E. Computer Science & Engineering, and submitted as a part of the course DBMS Laboratory with Mini Project (18CSL58), during the academic year 2022-2023.

Ms Aparna Krishnan

Project Guide

Dr Sridevi Saralaya

Head of the Department

Name of the Examiners

Signature with Date

1. -----

1. -----

2. -----

2. -----

ABSTRACT

Railway Reservation System is a web-based application used for booking tickets online. The aim of this project is to design and develop a database maintaining the records of different trains, train status, passengers, employees and admin. It integrates a database and simpler user interface to effectively manage and store the data about railways.

This web-based application for railway reservation can be accessed by both railway department and general public. It facilitates the passengers to enquire about the train, booking and cancellation of ticket, check status of booked ticket and also print ticket. It also has admin and employee login facility which enables the department officers to manage the train and passenger details.

On-line reservation has made the process for the reservation of seats very much easier than ever before. The required software and hardware are easily available and easy to work with.

ACKNOWLEDGEMENT

We dedicate this page to acknowledge and thank those responsible for the shaping of the project. Without their guidance and help, the experience while constructing the dissertation would not have been so smooth and efficient.

We sincerely thank **Ms Aparna Krishnan, Assistant Professor**, Department of Computer Science and Engineering for her guidance and valuable suggestions which helped us to complete the project.

We owe our profound gratitude to **Dr Sridevi Saralaya, Head of the Department**, Computer Science and Engineering, whose kind consent and guidance helped us to complete this work successfully.

We are extremely thankful to our **Director, Rev. Fr Wilfred Prakash D'Souza**, our **Principal, Dr Rio D'Souza**, and **Assistant Director, Rev. Fr Alwyn Richard D'Souza** for their support and encouragement.

We would like to thank all our Computer Science and Engineering staff members who have always been with us extending their support, precious suggestions, guidance and encouragement throughout in all possible ways.

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CHAPTER 1: INTRODUCTION

1.1. Introduction

Railway Reservation system is web-based application to book tickets. It can be accessed by both passengers as well as railway department. It allows passengers to book or cancel ticket, check ticket status and print ticket. It allows department people to add, update, delete train information and also to book, approve tickets for passengers.

1.2. Problem Definition

With the ever-increasing population and the not so fast-growing infrastructure, the railway reservation system needs a supporting portal to manage the physical rush. The aim of this project is to design and develop a database maintaining the records of different trains, train status, passengers, admin and employee details of railway department with different log in credentials for each of them. The main purpose of maintaining database for Railway Reservation System is to reduce the manual errors involved in the booking and cancelling of tickets and make it convenient for the customers and providers to maintain the data about their customers and also about the seats available at them.

1.3. Purpose

- To provide friendly environment to passengers while booking ticket.
- Provide flexible functions regarding booking and cancellation of ticket.
- Enable employees and admin to book and cancel ticket for passengers.
- Enable employees and admin to add, update and delete train information.
- It provides admin with an additional feature to add or delete employees.
- Also has accounting feature for admin only.

1.4. Scope and Importance

- This project is an attempt to simulate the basic concepts of a present online reservation system.
- Comparing to present online reservation system, the system we developed is very simple in terms of booking or cancelling ticket with refund and also provides with easy print option.
- Currently there are only few systems that provides with employee login facility but does not allow admin login who controls the employees. So, we developed a system with the admin login feature who can manage passengers, employees, trains and also accounts section.
- The other advantages include rapid response, saving the time, low cost and best results, well planned and accurate.
- Hence, this is an easily accessible and very helpful system for both passengers and railway department.

CHAPTER 2: SOFTWARE REQUIREMENTS SPECIFICATIONS

2.1. Functional Requirement Specification

- Railway Reservation System contains login information of user, employee and admin.

User Login

- New users should be able to create their account in the portal.
- Enables the user to login into the system using email and password.
- After successful login user can view available trains, search trains, book or cancel train.
- User should be able to checkout, confirm payment and print ticket and also logout.

Employee Login

- Employee has to login using email and password.
- Employee can add, update, delete train information.
- Should be able to book tickets for passengers.
- View pending and approved tickets and also has logout option.

Admin Login

- Admin has to login using email and password.
- Admin should be able to add, update, delete train information.
- Book tickets for passengers.
- Able to add or remove employee information.
- Approve password request by user or employee.
- Able to view the accounts section.

2.2. Hardware Requirements

- Processor - Intel 486/Pentium processor or better
- Processor Speed - 500 MHz or above
- Hard Disk - 10GB (approx.)
- RAM - 512MB or above
- Storage Space - Approx. 2MB

2.3. Software Requirements

- Front end: PHP, HTML, JavaScript
- Back end: PHP
- Database System: MySQL database
- Operating System: Windows
- Software: XAMPP Control
- Web browser: Chrome, Microsoft Edge, FireFox

CHAPTER 3: DESIGN

3.1. ER Diagram

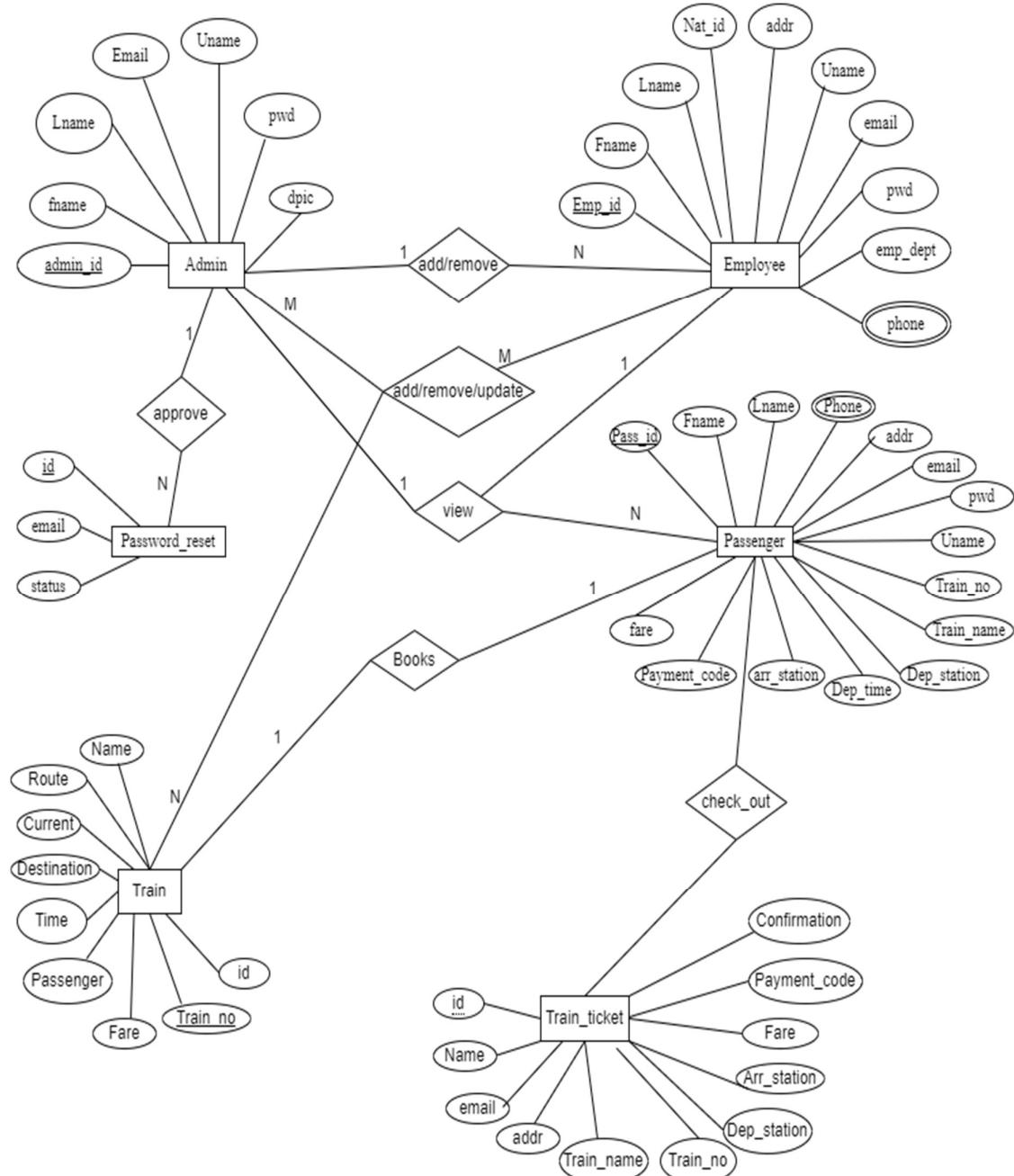


Fig 3.1 ER diagram

3.2. Schema Diagram

ADMIN

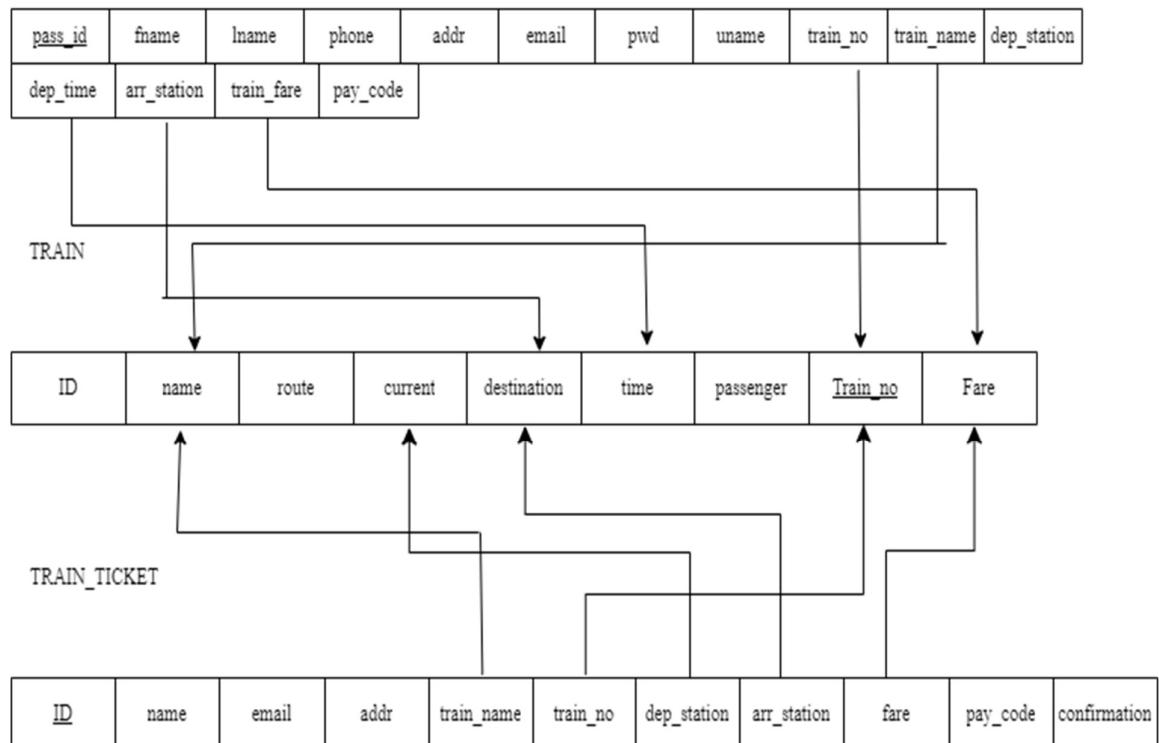
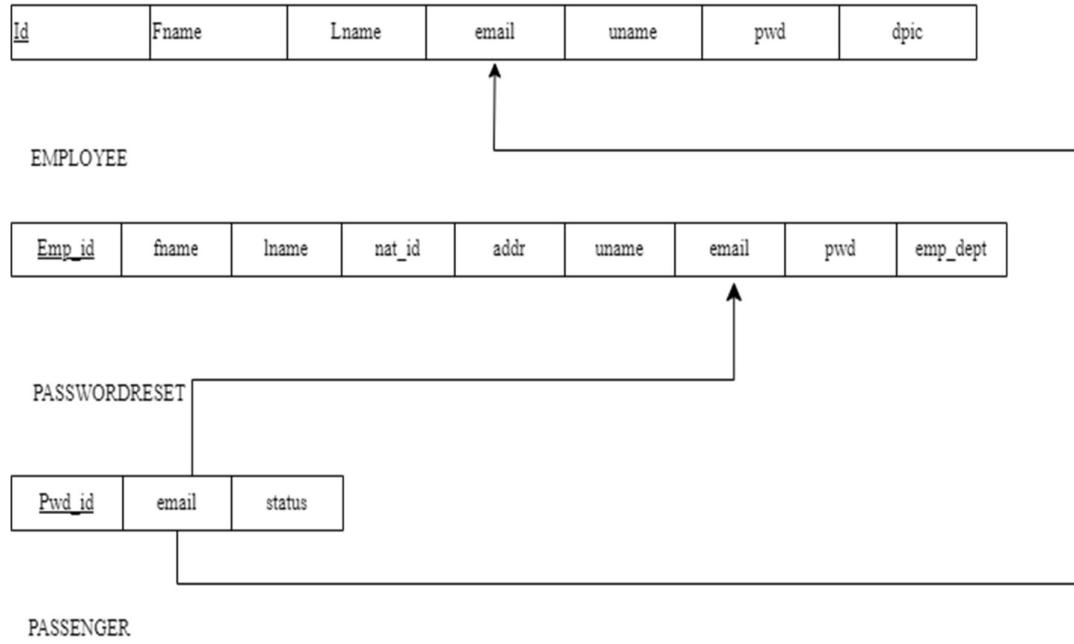


Fig 3.2 Schema Diagram

3.3. Table Descriptions

Table	Action	Rows	Type	Collation	Size	Overhead
orrs_admin		1	InnoDB	latin1_swedish_ci	16.0 KiB	-
orrs_employee		2	InnoDB	latin1_swedish_ci	16.0 KiB	-
orrs_passenger		10	InnoDB	latin1_swedish_ci	16.0 KiB	-
orrs_passwordresets		2	InnoDB	latin1_swedish_ci	16.0 KiB	-
orrs_train		8	InnoDB	latin1_swedish_ci	16.0 KiB	-
orrs_train_tickets		7	InnoDB	latin1_swedish_ci	16.0 KiB	-

3.3.1 orrs_admin table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	admin_id	int(20)			No	<i>None</i>		AUTO_INCREMENT
2	admin_fname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
3	admin_lname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
4	admin_email	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
5	admin_uname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
6	admin_pwd	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
7	admin_dplic	varchar(60)	latin1_swedish_ci		No	<i>None</i>		

3.3.2 orrs_employee table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	emp_id 📃	int(20)			No	<i>None</i>		AUTO_INCREMENT
2	emp_fname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
3	emp_lname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
4	emp_nat_idno	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
5	emp_phone	varchar(10)	latin1_swedish_ci		No	<i>None</i>		
6	emp_addr	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
7	emp_uname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
8	emp_email	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
9	emp_pwd	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
10	emp_dept	varchar(200)	latin1_swedish_ci		No	<i>None</i>		

3.3.3 orrs_passenger table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	pass_id 📃	int(20)			No	<i>None</i>		AUTO_INCREMENT
2	pass_fname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
3	pass_lname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
4	pass_phone	varchar(10)	latin1_swedish_ci		No	<i>None</i>		
5	pass_addr	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
6	pass_email	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
7	pass_pwd	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
8	pass_uname	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
9	pass_train_number	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
10	pass_train_name	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
11	pass_dep_station	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
12	pass_dep_time	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
13	pass_arr_station	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
14	pass_train_fare	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
15	pass_fare_payment_code	varchar(200)	latin1_swedish_ci		No	<i>None</i>		

3.3.4 orrs_passwordresets table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	pwd_id 	int(20)			No	<i>None</i>		AUTO_INCREMENT
2	email	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
3	status	varchar(200)	latin1_swedish_ci		No	<i>None</i>		

3.3.5 orrs_train table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	id 	int(20)			No	<i>None</i>		AUTO_INCREMENT
2	name	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
3	route	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
4	current	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
5	destination	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
6	time	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
7	passengers	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
8	number	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
9	fare	varchar(2000)	latin1_swedish_ci		No	<i>None</i>		

3.3.6 orrs_train_tickets table

#	Name	Type	Collation	Attributes	Null	Default	Comments	Extra
1	ticket_id 🛡	int(20)			No	<i>None</i>		AUTO_INCREMENT
2	pass_name	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
3	pass_email	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
4	pass_addr	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
5	train_name	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
6	train_no	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
7	train_dep_stat	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
8	train_arr_stat	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
9	train_fare	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
10	fare_payment_code	varchar(200)	latin1_swedish_ci		No	<i>None</i>		
11	confirmation	varchar(200)	latin1_swedish_ci		No	<i>None</i>		

CHAPTER 4: IMPLEMENTATION

4.1 Triggers

Name	Time	Event
<input type="checkbox"/> trigger1	BEFORE	INSERT

Trigger name: trigger1

Table: orrs_passenger

Time: BEFORE

Event: INSERT

Definition:

```
1 if NEW.pass_fname= NEW.pass_lname
2 THEN SET NEW.pass_lname='-';
3 END IF
```

- Trigger is defined in orrs_passenger table.
- When the passenger enters his/her first name and last name same, trigger is called and the last name is set as '-'.

CHAPTER 5: SCREENSHOTS

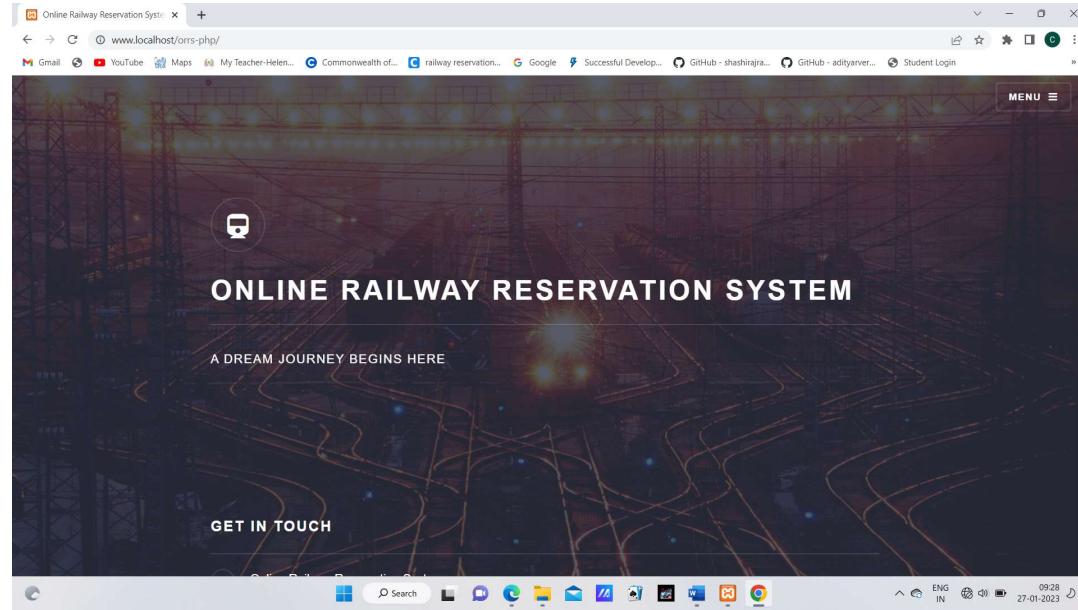


Fig 5.1 Home Page

A screenshot of the user login page for the Online Railway Reservation System (ORRS). The page has a light gray background with a central white login form. At the top of the form is the ORRS logo, which consists of a blue train icon followed by the letters "ORRS". Below the logo, a placeholder text "Please enter your user information." is displayed. The login form contains two input fields: one for "Email" and one for "Password", both with black outlines. To the right of the "Email" field is a small checkbox labeled "Remember Me" and a link "Forgot Password?". At the bottom of the form are two buttons: a red "Register" button on the left and a green "Log In" button on the right. At the very bottom of the page, there is a footer with links to "Home", "About Us", "Contact Us", and "FAQs", along with copyright information: "Online Railway Reservation System | Developed By Chandini R | Deena Marina D'souza".

Fig 5.2 User Login

RAILWAY RESERVATION SYSTEM

The screenshot shows a web browser window titled "Online Railway Reservation System". The URL in the address bar is "www.localhost/orrs-php/pass-signup.php". The page itself is titled "Passenger Registration Form" and contains fields for "Enter Your First Name", "Enter Your Last Name", "Enter Your Phone Number", "Enter Your Address", "Enter Your Username", "Enter Your Email Address", and "Password". Below these fields are two buttons: "Login" (green) and "Register" (red).

Fig 5.2.1 User Registration Page

The screenshot shows a web browser window titled "Online Railway Reservation System". The URL in the address bar is "www.localhost/orrs-php/pass-dashboard.php". The page displays a "Good Morning! cr09" message. On the left, there is a sidebar with a "MENU" section containing links for "Dashboard", "cr09's Profile", "Trains", "Book Train", "Tickets", and "Logout". The main content area shows a table titled "Available Trains" with columns: Train Number, Train, Route, Departure, Arrival, Dep. Time, Total Seat, and Fare. The table lists several train routes and their details.

Train Number	Train	Route	Departure	Arrival	Dep. Time	Total Seat	Fare
CA556680	ZX Express	Hyderabad-Jharkhand	Hyderabad	Jharkhand	7:00 PM	200	₹700
CA-777	Corridor Express	Kashmir-Kanyakumari	Kashmir	Kanyakumari	1:00 PM	330	₹2754
CA-707	Silver Meteor	Bombay-Goa	Bombay	Goa	10:00 AM	200	₹300
CA-778	Adirondack	Kerala-Goa	Kerala	Goa	6:00 AM	210	₹500
CA-107	Silver Star	Bangalore-Mangalore	Bangalore	Mangalore	8:45 AM	190	₹180.40
CA-107	Colonial	Mangalore-Bombay	Mangalore	Bombay	10:45 AM	255	₹279.43
CA-797	Corridor Express	Chennai-Delhi	Chennai	Delhi	12:45 PM	195	₹600
CA-697	Iron Range Express	Mangalore-Kochi	Mangalore	Kochi	9:00 AM	185	₹200

Fig 5.2.2 User dashboard

RAILWAY RESERVATION SYSTEM

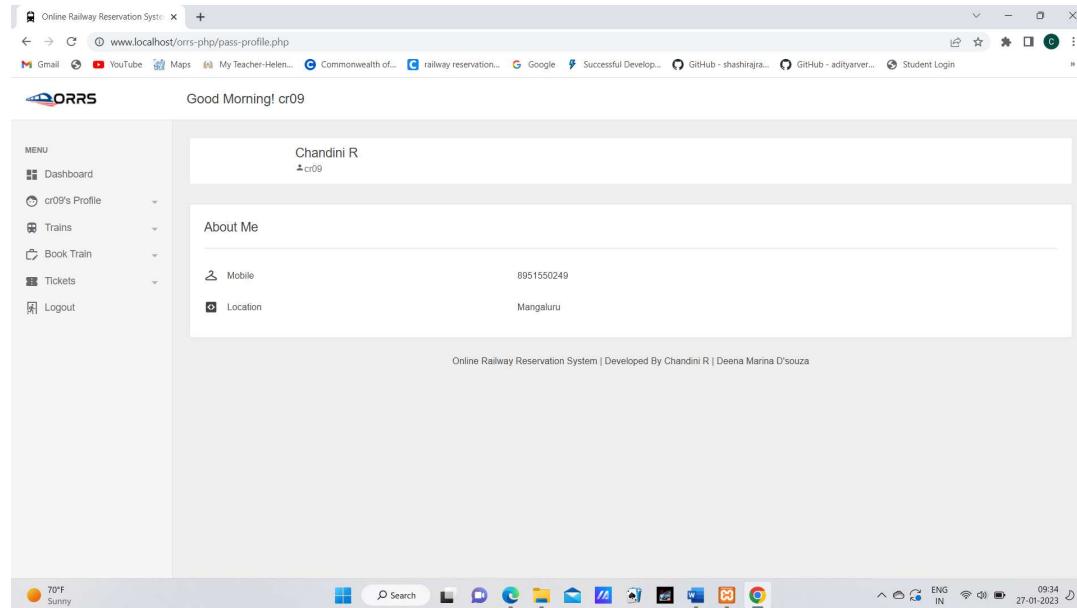


Fig 5.2.3 User Profile

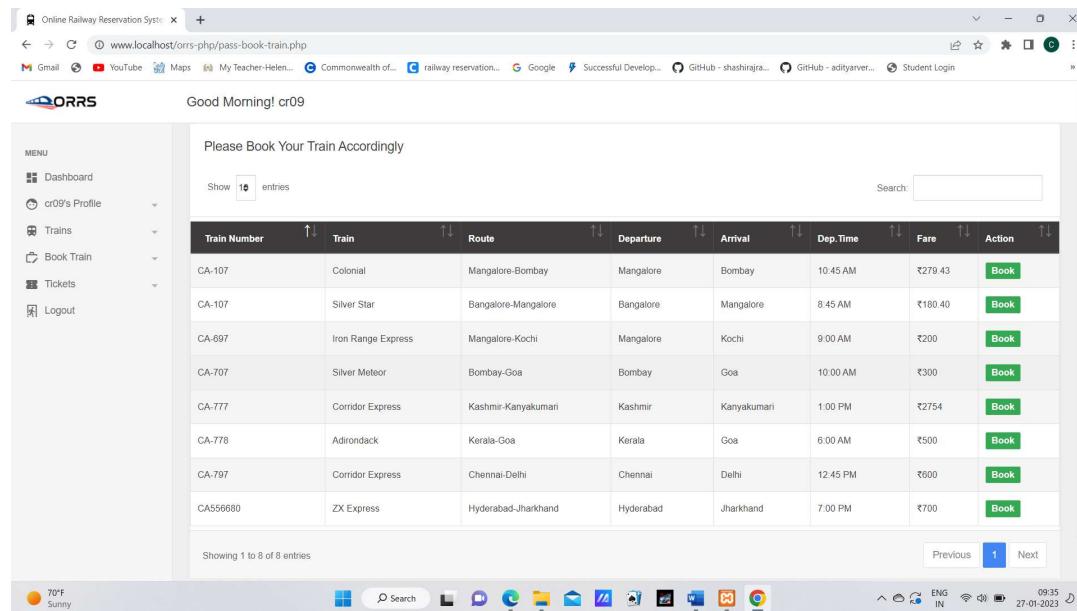


Fig 5.2.4 Train Booking page

RAILWAY RESERVATION SYSTEM

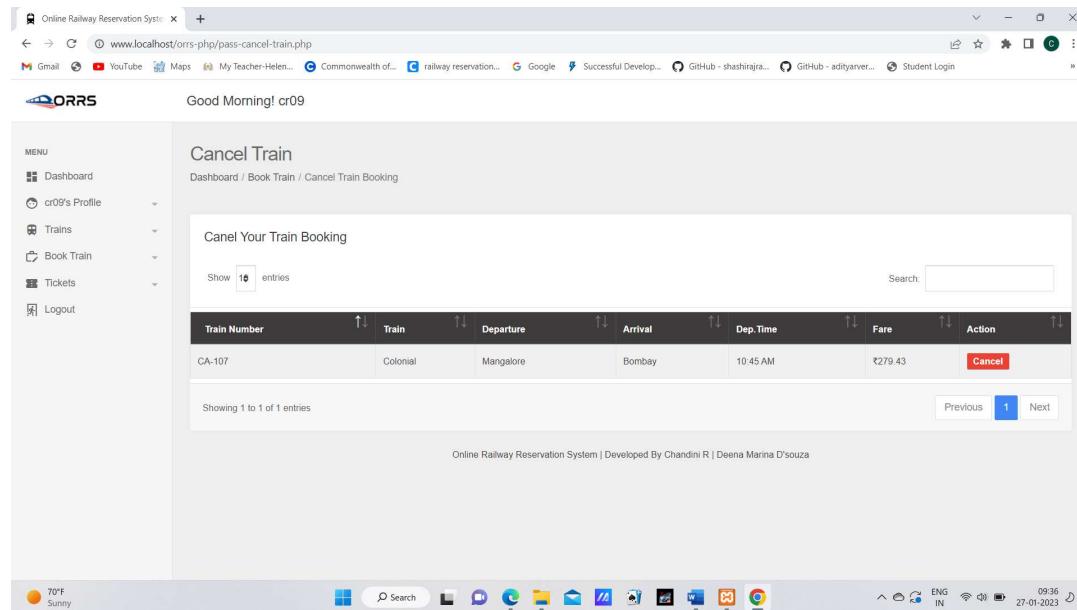


Fig 5.2.5 Cancel Booking page

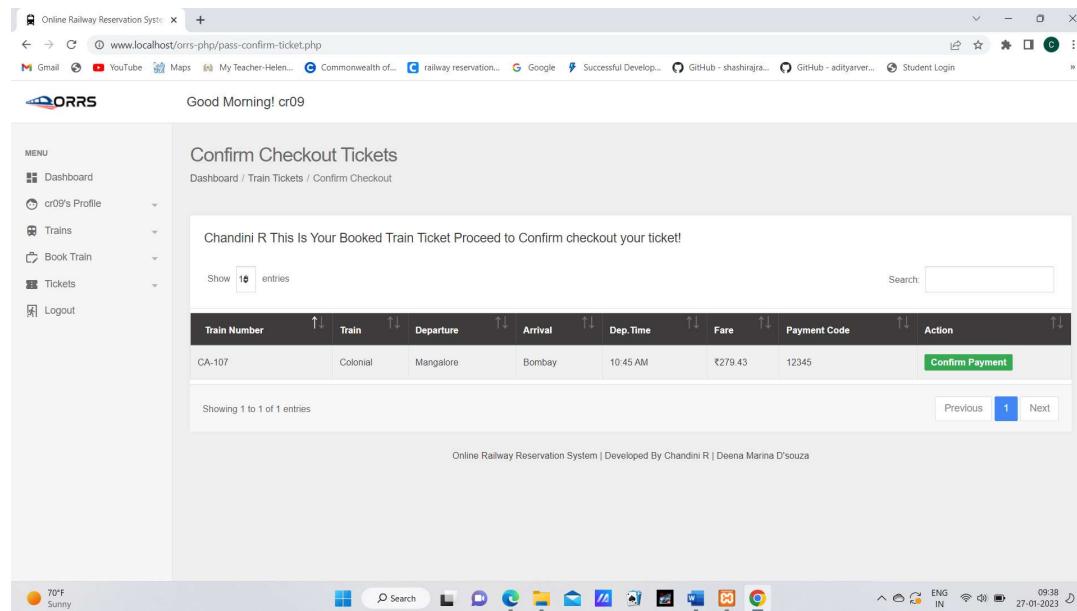


Fig 5.2.6 Confirm Checkout Ticket Page

RAILWAY RESERVATION SYSTEM

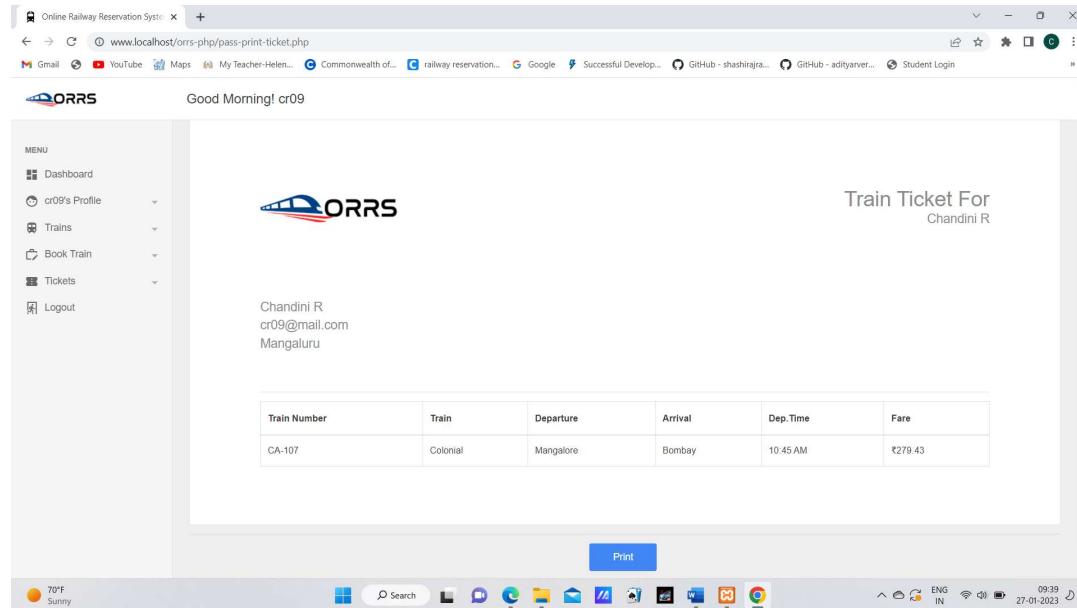


Fig 5.2.7 Print Ticket Page

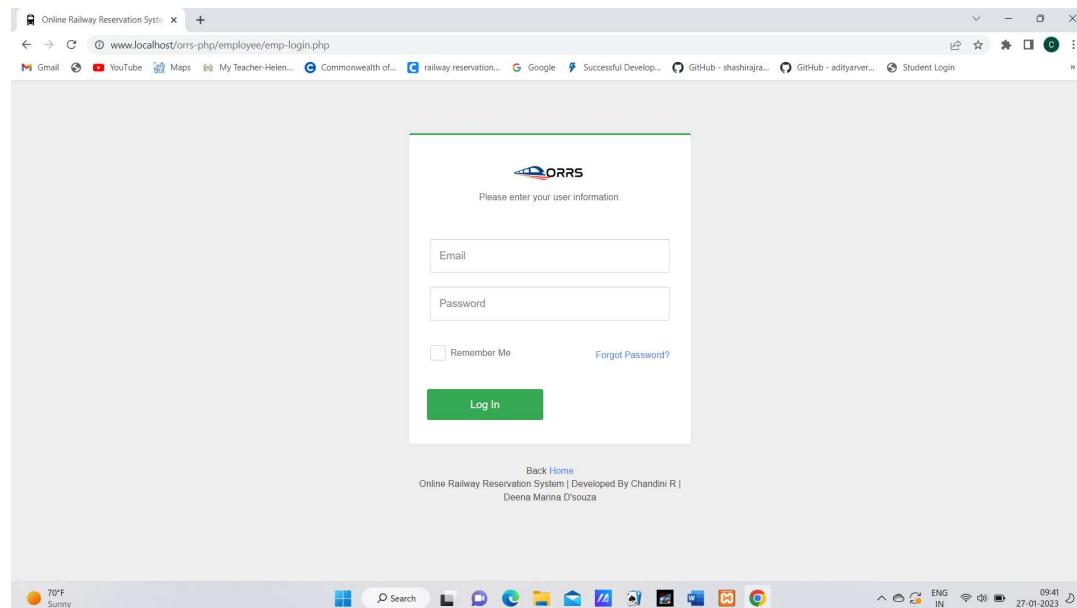


Fig 5.3 Employee Login Page

RAILWAY RESERVATION SYSTEM

The screenshot shows the Employee Dashboard of the Online Railway Reservation System (ORRS). The dashboard features a sidebar menu with options like Dashboard, deena123's Profile, Trains, Passengers, Tickets, and Logout. The main area displays a summary of passenger and train data, followed by a detailed list of trains. The train list includes:

Train Number	Train	Route	Departure	Arrival	Dep. Time	Total Passengers	Fare
CA-777	Corridor Express	Kashmir-Kanyakumari	Kashmir	Kanyakumari	1:00 PM	330	₹2754
CA-778	Adirondack	Kerala-Goa	Kerala	Goa	6:00 AM	210	₹500
CA-107	Colonial	Mangalore-Bombay	Mangalore	Bombay	10:45 AM	255	₹279.43
CA-107	Silver Star	Bangalore-Mangalore	Bangalore	Mangalore	8:45 AM	190	₹180.40
CA-697	Iron Range Express	Mangalore-Kochi	Mangalore	Kochi	9:00 AM	185	₹200
CA-707	Silver Meteor	Bombay-Goa	Bombay	Goa	10:00 AM	200	₹300
CA556680	ZX Express	Hyderabad-Jharkhand	Hyderabad	Jharkhand	7:00 PM	200	₹700
CA-797	Corridor Express	Chennai-Delhi	Chennai	Delhi	12:45 PM	195	₹600

Fig 5.3.1 Employee Dashboard

The screenshot shows the 'Add New Train' page. The sidebar menu is identical to the dashboard. The main area is titled 'Add New Train' and contains a form with the following fields:

- Train Name: Enter Train Name
- Train Number: Enter Train Number
- Train Route: Format: [Source] - [Destination]
- Departure: Enter Source/Departure
- Arrival: Enter Destination/Arrival
- Departure Time: Enter Train's Departure Time
- Number of passengers: Enter Total Number of Passengers
- Train Fare: ₹

Fig 5.3.2 Add Train Page

RAILWAY RESERVATION SYSTEM

The screenshot shows the 'Manage Trains' page of the ORRS (Online Railway Reservation System). The left sidebar has a 'Trains' section under 'Passengers'. The main area displays a table titled 'Trains' with the following data:

Train Number	Train	Route	Departure	Arrival	Dep. Time	Fare	Total Passengers	Actions
CA-107	Colonial	Mangalore-Bombay	Mangalore	Bombay	10:45 AM	₹279.43	255	<button>Update</button> <button>Delete</button> <button>View</button>
CA-107	Silver Star	Bangalore-Mangalore	Bangalore	Mangalore	8:45 AM	₹180.40	190	<button>Update</button> <button>Delete</button> <button>View</button> <button>Update</button>

Fig 5.3.3 Manage Train Page

The screenshot shows the 'Create Passenger Profile' page. The left sidebar has a 'Passenger' section under 'Passengers'. The main area has a form titled 'Fill All Details' with the following fields:

First Name	<input type="text"/>
Last Name	<input type="text"/>
Contact Number	<input type="text"/>
Address	<input type="text"/>
Email	<input type="text"/>
Username	<input type="text"/>
Password	<input type="text"/>

At the bottom are two buttons: 'Create Passenger' (green) and 'Cancel' (red).

Fig 5.3.4 Add Passenger Page

RAILWAY RESERVATION SYSTEM

The screenshot shows the 'Manage Passengers' page of the ORRS system. The page title is 'Manage Passengers' and the subtitle is 'Dashboard / Passengers / Manage'. A sidebar on the left lists 'Dashboard', 'deena123's Profile', 'Trains', 'Passengers' (selected), and 'Tickets'. The main content area displays a table titled 'Passengers' with columns: Name, Contact, Address, Email, and Actions. The table contains 8 rows of passenger data. Each row includes 'Update', 'Delete', and 'View' buttons in the Actions column.

Name	Contact	Address	Email	Actions
Chandini R	8951550249	Mangaluru	cr09@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>
Colin Christon Dcruz	4455887799	Kulshetra	colin15@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>
deepak -	1245786987	kunjathball	deepak@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>
deonne miranda	9900980787	bantwal	deonne@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>
Dhanyashree P	2233488666	Sringeri	danya21@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>
Divya Murthy	9988776655	Moodbidri	divya14@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>
Krishnaraj Rao	1122556644	Vamanjor	krishna11@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>
Iasya rai	9741817810	Ladyhill	lasya@mail.com	<button>Update</button> <button>Delete</button> <button>View</button>

5.3.5 Manage Passenger Page

The screenshot shows the 'Approved Tickets' page of the ORRS system. The page title is 'Approved Tickets' and the subtitle is 'Dashboard / Tickets / View'. A sidebar on the left lists 'Dashboard', 'deena123's Profile', 'Trains', 'Passengers', and 'Tickets' (selected). The main content area displays a table titled 'Tickets' with columns: Passenger, Email, Address, Train Number, Departure, Arrival, Fare, and Payment Code. The table contains 5 rows of ticket data. Each row includes 'Previous' and 'Next' navigation buttons at the bottom.

Passenger	Email	Address	Train Number	Departure	Arrival	Fare	Payment Code
aparna krishnan	aparna@mail.com	sjcc	CA-007	Mangalore	Bangalore	₹132.65	1234
Chandini R	cr09@mail.com	Kavoor	CA-007	Mangalore	Bangalore	₹132.65	12345
Colin Christon Dcruz	colin15@mail.com	Kulshetra	CA-107	Bangalore	Mangalore	₹180.40	789654
Dhanyashree P	danya21@mail.com	Sringeri	CA-707	Bombay	Goa	₹300	123456
Krishnaraj Rao	krishna11@mail.com	Vamanjor	CA55680	Hyderabad	Jharkhand	₹700	45678

5.3.6 Approved Tickets Page

RAILWAY RESERVATION SYSTEM

The screenshot shows a web browser window titled "Online Railway Reservation System". The URL is www.localhost/orrs-php/employee/emp-pending-tickets.php. The page header says "Good Morning! deena123". On the left, there's a sidebar with a "MENU" section containing links for Dashboard, deena123's Profile, Trains, Passengers, Tickets, and Logout. The main content area is titled "Pending Approval Tickets" and "Dashboard / Tickets / View Pending". It features a table titled "Tickets" with columns: Passenger, Email, Address, Train Number, Departure, Arrival, Fare, Payment Code, and Action. Two entries are listed:

Passenger	Email	Address	Train Number	Departure	Arrival	Fare	Payment Code	Action
Dhanyashree P	dhanya21@mail.com	Sringeri	CA-707	Bombay	Goa	₹300	123456	<button>Approve</button>
Iasy rai	Iasya@mail.com	Ladyhill	CA556680	Hyderabad	Jharkhand	₹700	123456	<button>Approve</button>

At the bottom, it says "Showing 1 to 2 of 2 entries" and has "Previous" and "Next" buttons. The footer of the page includes the text "Online Railway Reservation System | Developed By Chandini R| Deena Marina D'souza". The system tray at the bottom shows the date as 27-01-2023 and the time as 09:47.

5.3.7 Pending Approval Tickets Page

The screenshot shows a web browser window titled "Online Railway Reservation System". The URL is www.localhost/orrs-php/employee/emp-tickets.php. The page header says "Good Morning! deena123". The sidebar is identical to the previous screenshot. The main content area is titled "Manage Tickets" and "Dashboard / Tickets / Manage Tickets". It features a table titled "Tickets" with columns: Passenger, Email, Address, Train Number, Departure, Arrival, Fare, Payment Code, and Action. Five entries are listed, each with "Manage" and "Delete" buttons in the "Action" column:

Passenger	Email	Address	Train Number	Departure	Arrival	Fare	Payment Code	Action
aparna krishnan	aparna@mail.com	sjec	CA-007	Mangalore	Bangalore	₹132.65	1234	<button>Manage</button> <button>Delete</button>
Chandini R	cr09@mail.com	Kavoor	CA-007	Mangalore	Bangalore	₹132.65	12345	<button>Manage</button> <button>Delete</button>
Colin Christian Dcruz	colin15@mail.com	Kulshekar	CA-107	Bangalore	Mangalore	₹180.40	789654	<button>Manage</button> <button>Delete</button>
Dhanyashree P	dhanya21@mail.com	Sringeri	CA-707	Bombay	Goa	₹300	123456	<button>Manage</button> <button>Delete</button>

The system tray at the bottom shows the date as 27-01-2023 and the time as 09:47.

5.3.8 Manage Tickets Page

RAILWAY RESERVATION SYSTEM

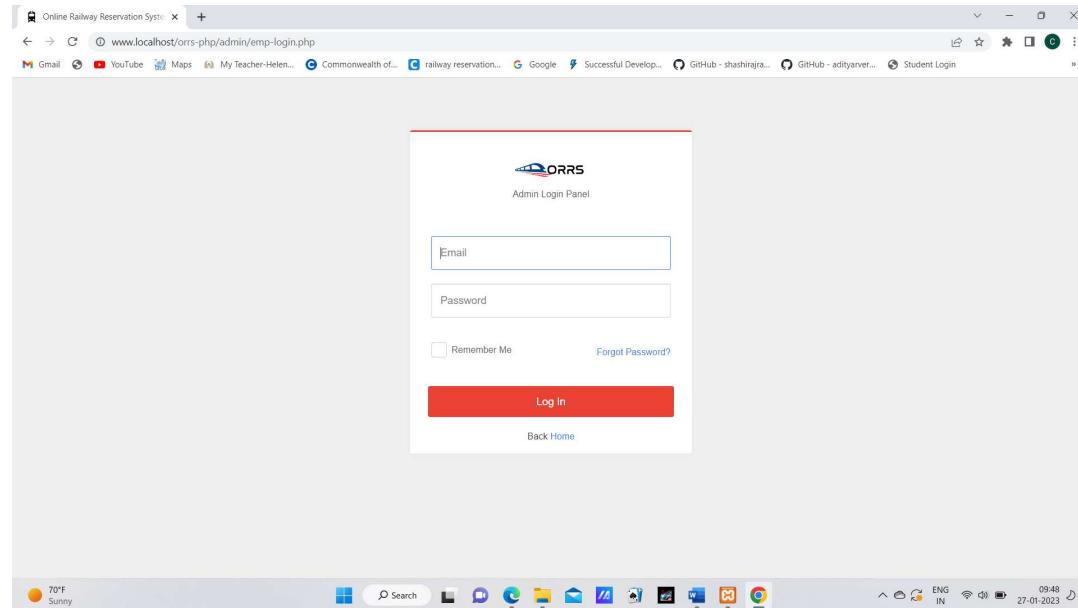


Fig 5.4 Admin Login Page

A screenshot of the 'Good Morning! Administrator1' dashboard. On the left, there is a sidebar with a 'MENU' section containing links for Dashboard, Administrator1's Profile, Trains, Passengers, Employees, Tickets, Password Resets, Accounting, and Logout. The main area has several cards: 'Passengers > 10', 'Trains > 8', 'Reservations > 7', 'Employees > 2', 'Administrators > 1', 'Approved Tickets > 5', and 'Pending Tickets > 2'. Below these is a table titled 'Trains' with columns: #, Train Number, Train, Route, Departure, Arrival, Dep. Time, Total Passengers, and Fare. The table contains 7 rows of train information. The browser's address bar shows the URL 'www.localhost/orrs-php/admin/emp-dashboard.php'. The operating system taskbar at the bottom displays various icons and the date '27-01-2023'.

Fig 5.4.1 Admin Dashboard

RAILWAY RESERVATION SYSTEM

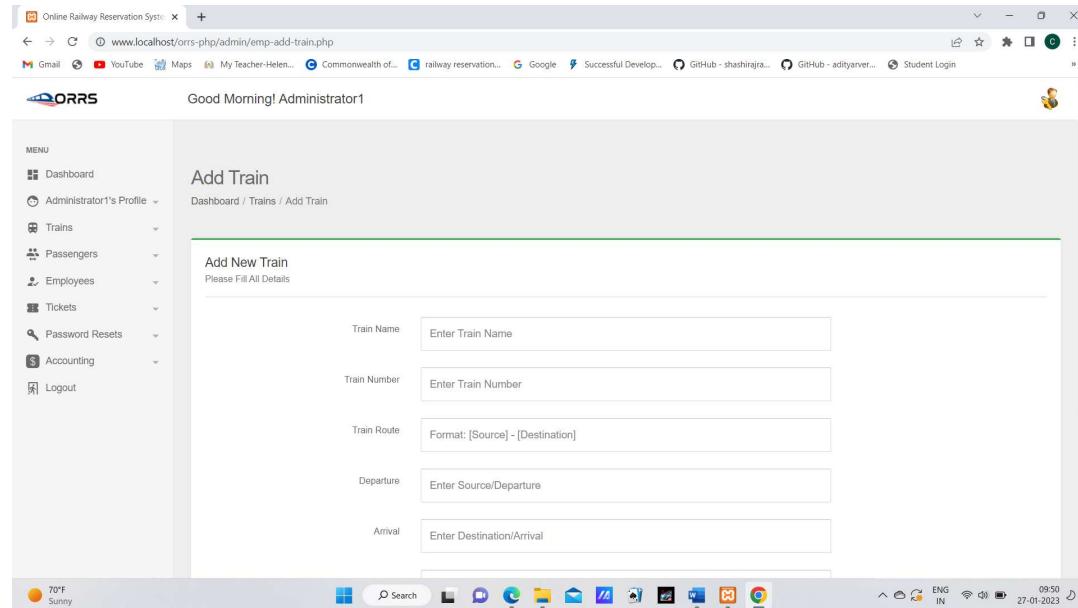


Fig 5.4.2 Add Train Page

Train Number	Train	Route	Departure	Arrival	Dep.Time	Fare	Total Passengers	Actions
CA-107	Colonial	Mangalore-Bombay	Mangalore	Bombay	10:45 AM	₹279.43	255	<button>Update</button> <button>Delete</button> <button>View</button> <button>Update</button> <button>Delete</button> <button>View</button> <button>Update</button>
CA-107	Silver Star	Bangalore-Mangalore	Bangalore	Mangalore	8:45 AM	₹180.40	190	<button>Update</button> <button>Delete</button> <button>View</button> <button>Update</button>

Fig 5.4.3 Manage Trains Page

RAILWAY RESERVATION SYSTEM

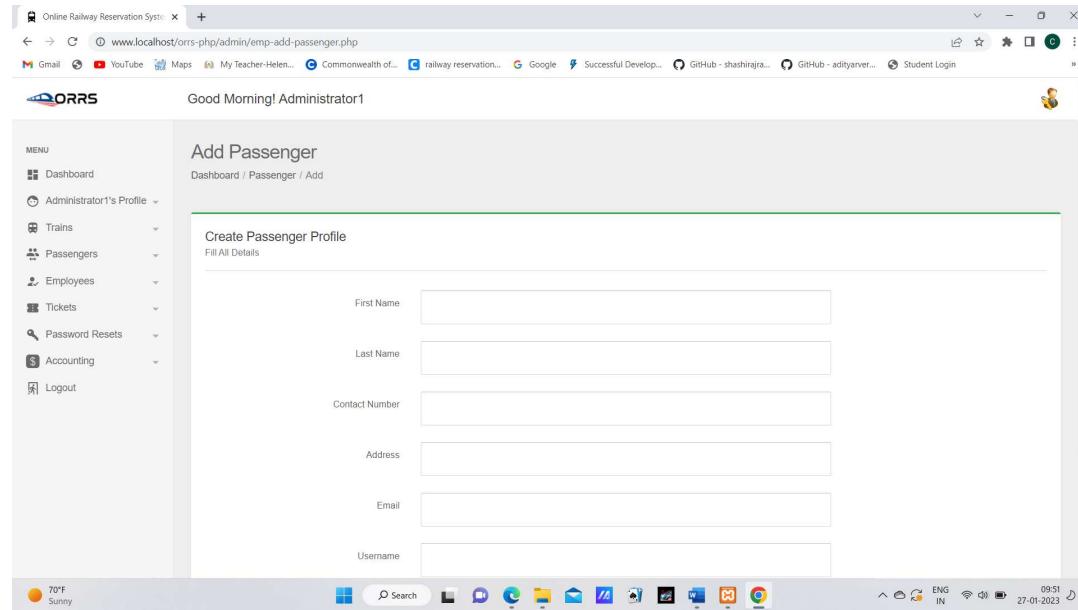


Fig 5.4.4 Add Passenger Page

A screenshot of the 'Manage Passengers' page. The left sidebar is identical to Fig 5.4.4. The main content area is titled 'Manage Passengers' and shows a table of passenger data. The table has columns for Name, Contact, Address, Email, and Actions (with buttons for Update, Delete, and View). The data includes entries for Chandini R, Colin Christian Doruz, deepak -, deonne miranda, Dhanyashree P, Divya Murthy, and Krishnarao Rao. The browser address bar shows 'www.localhost/orrs-php/admin/emp-manage-passengers.php'. The system status bar at the bottom indicates it's 09:52 on 27-01-2023.

Fig 5.4.5 Manage Passengers Page

RAILWAY RESERVATION SYSTEM

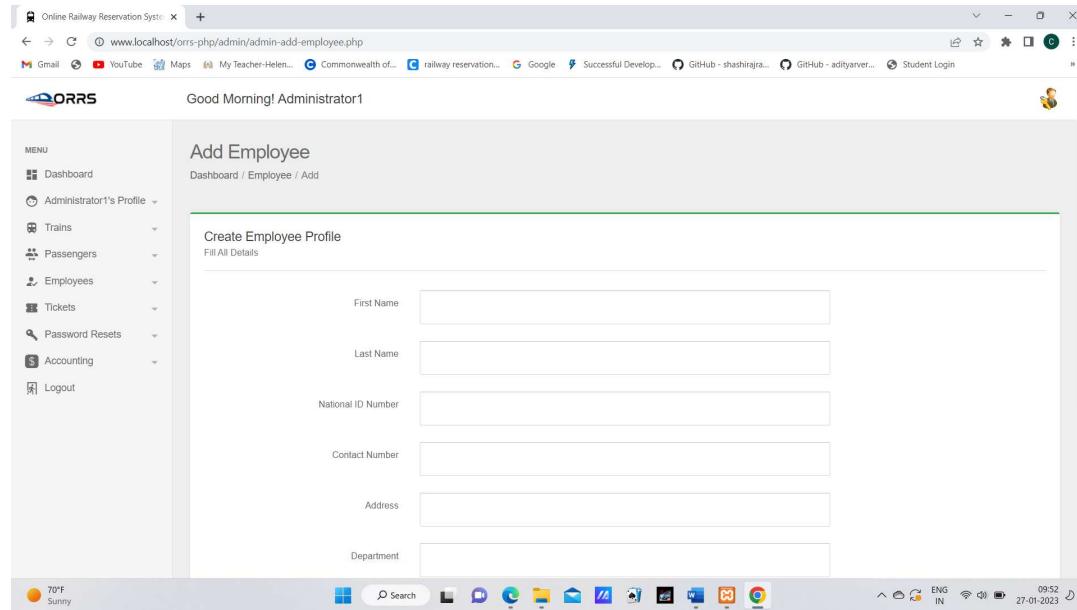


Fig 5.4.6 Add Employee Page

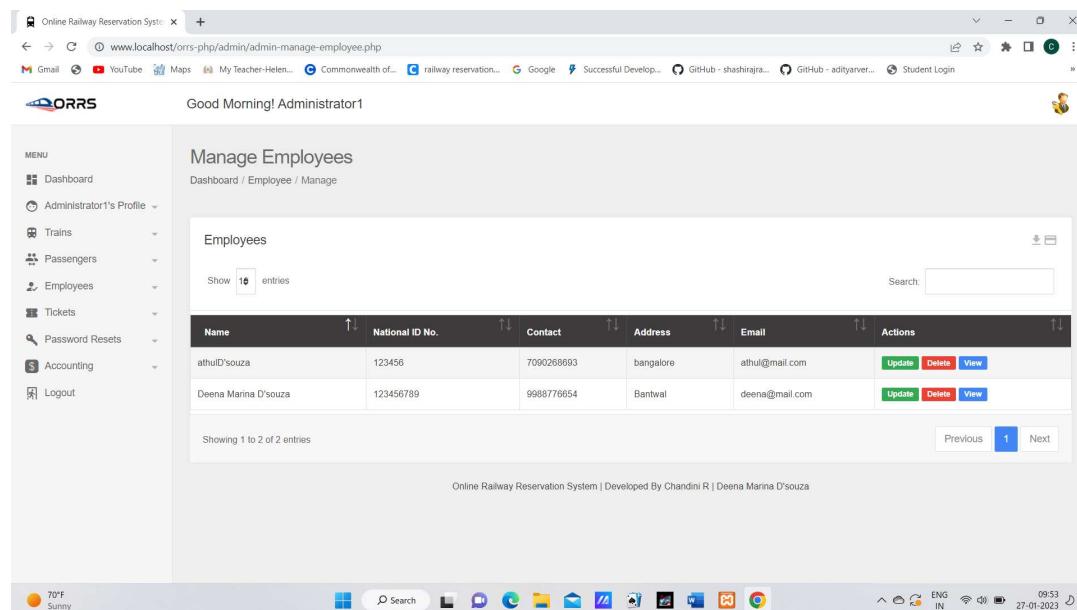
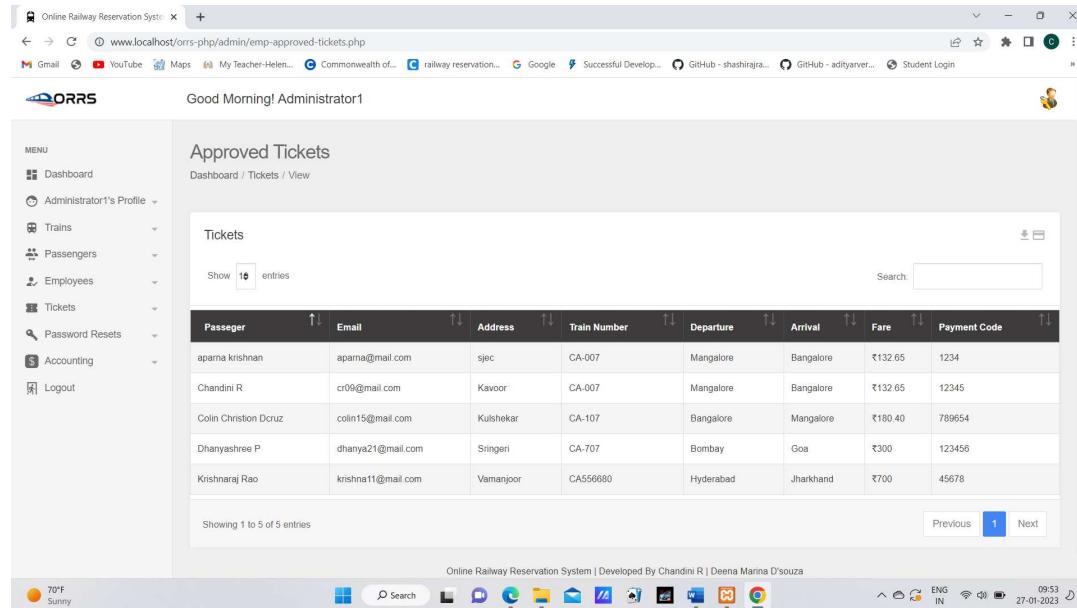


Fig 5.4.7 Manage Employees Page

RAILWAY RESERVATION SYSTEM

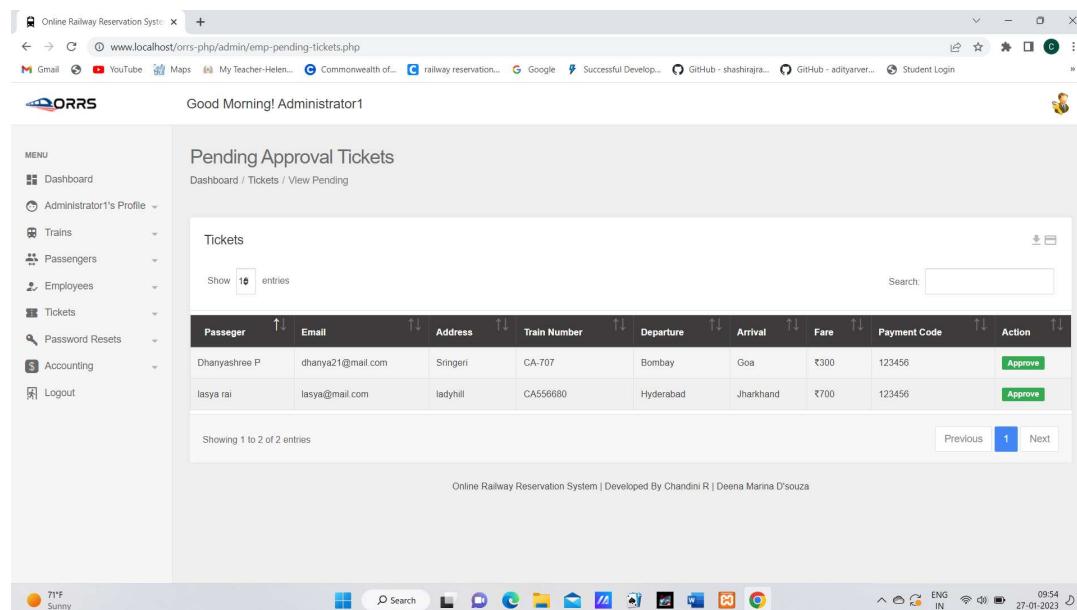


The screenshot shows the 'Approved Tickets' page of the ORRS (Online Railway Reservation System) for an administrator. The page title is 'Good Morning! Administrator1'. On the left, there's a sidebar with a 'MENU' section containing links for Dashboard, Administrator's Profile, Trains, Passengers, Employees, Tickets, Password Resets, Accounting, and Logout. The main content area is titled 'Approved Tickets' and shows a table of 'Tickets'. The table has columns for Passenger, Email, Address, Train Number, Departure, Arrival, Fare, Payment Code, and Action. The data in the table is as follows:

Passenger	Email	Address	Train Number	Departure	Arrival	Fare	Payment Code	Action
aparna krishnan	aparna@mail.com	sjec	CA-007	Mangalore	Bangalore	₹132.65	1234	
Chandini R	cr09@mail.com	Kavoor	CA-007	Mangalore	Bangalore	₹132.65	12345	
Colin Christian Dcruz	colin15@mail.com	Kulshetra	CA-107	Bangalore	Mangalore	₹180.40	789654	
Dhanyashree P	dhanya21@mail.com	Singeri	CA-707	Bombay	Goa	₹300	123456	
Krishnaraj Rao	krishna11@mail.com	Vamanjoor	CA556680	Hyderabad	Jharkhand	₹700	45678	

At the bottom of the table, it says 'Showing 1 to 5 of 5 entries'. There are 'Previous' and 'Next' buttons. The status bar at the bottom right shows '09:53 27-01-2023'.

Fig 5.4.8 Approved Tickets Page



The screenshot shows the 'Pending Approval Tickets' page of the ORRS for an administrator. The page title is 'Good Morning! Administrator1'. The sidebar and main content area are similar to the 'Approved Tickets' page, but the table has two entries:

Passenger	Email	Address	Train Number	Departure	Arrival	Fare	Payment Code	Action
Dhanyashree P	dhanya21@mail.com	Singeri	CA-707	Bombay	Goa	₹300	123456	<button>Approve</button>
Iasya rai	Iasya@mail.com	Ladyhill	CA556680	Hyderabad	Jharkhand	₹700	123456	<button>Approve</button>

At the bottom of the table, it says 'Showing 1 to 2 of 2 entries'. There are 'Previous' and 'Next' buttons. The status bar at the bottom right shows '09:54 27-01-2023'.

Fig 5.4.9 Pending Approved Tickets Page

RAILWAY RESERVATION SYSTEM

The screenshot shows the 'Manage Tickets' page of the ORRS. The left sidebar has a 'Tickets' section under 'Passengers'. The main area displays a table of ticket records:

Name	Email	Address	Train Number	Departure	Arrival	Fare	Payment Code	Actions
aparna krishnan	aparna@mail.com	sjec	CA-007	Mangalore	Bangalore	₹132.65	1234	<button>Manage</button> <button>Delete</button>
Chandini R	cr09@mail.com	Kavoor	CA-007	Mangalore	Bangalore	₹132.65	12345	<button>Manage</button> <button>Delete</button>
Colin Christon Dcruz	colin15@gmail.com	Kulshetra	CA-107	Bangalore	Mangalore	₹180.40	789054	<button>Manage</button> <button>Delete</button>
Dhanyashree P	dhanya21@mail.com	Sringeri	CA-707	Bombay	Goa	₹300	123456	<button>Manage</button> <button>Delete</button>

Fig 5.4.10 Manage Tickets Page

The screenshot shows the 'Approved Password Resets' page of the ORRS. The left sidebar has a 'Password Resets' section under 'Passengers'. The main area displays a table of password reset requests:

#	User Email
1	employee@mail.com

Fig 5.4.11 Approved Password Resets Page

RAILWAY RESERVATION SYSTEM

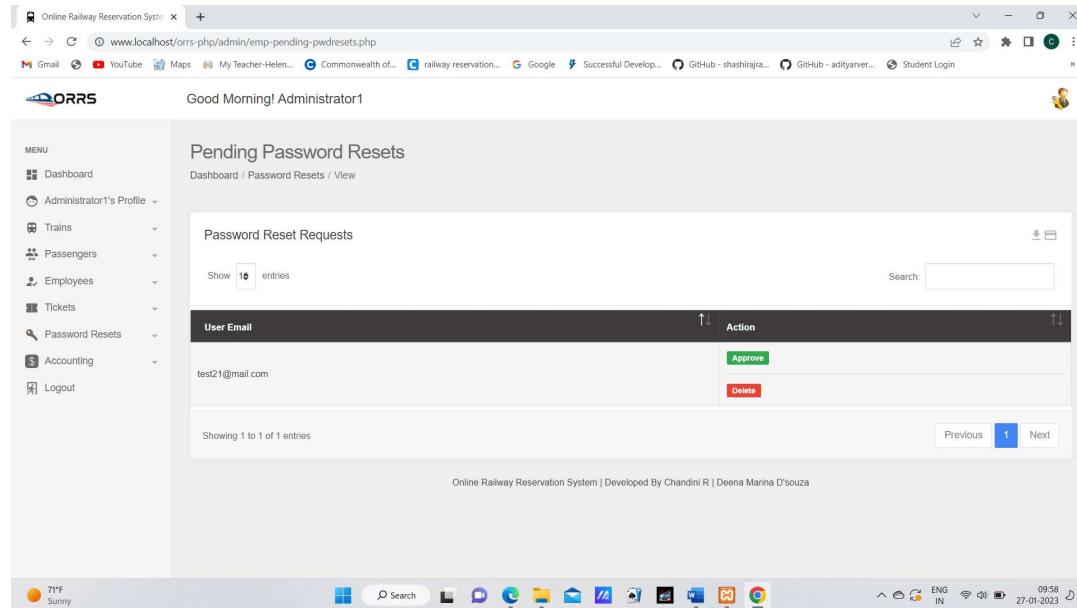


Fig 5.4.12 Pending Password Resets Page

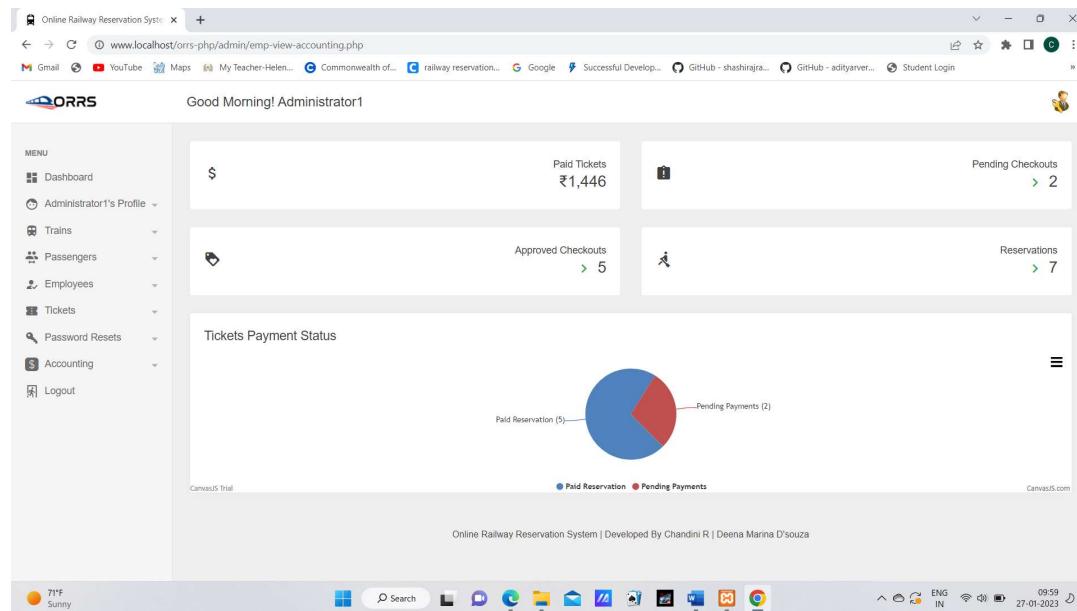


Fig 5.4.13 Total Accounting Page

CHAPTER 6: CONCLUSION AND FUTURE WORK

Conclusion:

The management and optimization of train operations require the use of a railway reservation system. It makes it possible to efficiently and conveniently purchase rail tickets, track train availability and schedules in real-time, and manage train capacity more effectively. The use of such a technology can enhance the entire customer experience significantly and boost income for the railroad firm. To fully reap the system's potential advantages, it is crucial to make sure it is secure, dependable, and user-friendly.

Future Works:

- Implement a more user-friendly interface: Customers will find it easy to navigate and book tickets with an easy-to-use interface.
- Introduce mobile compatibility: Giving customers the option to use a mobile application to make reservations and access information while on the go will significantly improve their experience.
- Integrate real-time data: Customers' experiences would be enhanced and their ability to plan their travels more effectively would be enabled by real-time data on train schedules, availability, and delays.
- Boost security: To prevent data breaches, the system must be safe and protect important consumer information.
- Integrate with other transportation systems: Customers would enjoy a seamless travel experience if the reservation system for trains were integrated with those for buses and metros.
- Give customers more booking options: Increasing convenience would mean allowing customers to order tickets through a wider range of channels, including call centers, self-service kiosks, and travel agencies.

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5. <https://www.tutorialspoint.com>
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