EasyBus.com
Online Bus Ticket Booking Application

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1.Project Overview : EasyBus.com

Introduction

EasyBus.com is a comprehensive online bus ticket booking application designed to simplify the process of finding and booking bus tickets. The application provides a user-friendly interface for passengers to search for available buses, view bus details, book tickets, and manage their profiles. The system supports functionalities such as user registration, profile management, bus search, booking management, and feedback collection.

Key Features

- User Registration and Authentication: Users can create accounts, log in, and manage their profiles. Authentication is secured using JSON Web Tokens (JWT).
- Bus Search and Booking: Passengers can search for buses based on departure and destination cities, view available options, and book tickets. Booking details include date, time, and seat selection.
- Profile Management: Users can view and update their profile information, including name, age, and date of birth.
- Booking Management: Users can view their booking history, including upcoming and past trips.
- Passenger Details: During the booking process, users can enter passenger details such as name, age, phone number, and payment information.
- Feedback Collection: After booking, users can provide feedback on their booking experience, website experience, and service quality.

Technologies Used

- Backend: Spring Boot 3.3.1 for building the RESTful API and handling business logic.
- Frontend: Thymeleaf for server-side rendering of HTML templates.
- Database: MySQL for storing user, bus, booking, and feedback data.
- Security: JWT for secure user authentication and authorization.
- Testing: JUnit and Mockito for unit testing to ensure code reliability.

Architecture

- MVC Pattern: The application follows the Model-View-Controller (MVC) pattern to separate concerns and improve maintainability.
- Database: Relational database schema with tables for users, buses, bookings, and feedback, implemented with a one-to-many relationship from User to Bus and a many-to-many relationship between Bus and User.
- Service Layer: Business logic is encapsulated in service classes, avoiding interfaces as per project requirements.

Deployment

- Build Tool: Maven is used for dependency management and building the application.

User Flow

- Registration/Login: Users create an account or log in to access the application.
- Bus Search: Users enter departure and destination cities to search for available buses.
- View Bus Details: Users view details of buses matching their search criteria.
- Booking: Users select a bus, enter booking date, and complete the reservation.
- Passenger Details: Users provide passenger information and payment details.
- Feedback: After booking, users can provide feedback on their experience.
- Profile Management: Users can view and update their profile information and booking history.

2.Setup and Configuration

Prerequisites

- JDK 17
- Maven 3.8.6
- MySQL 8.0
- An IDE like IntelliJ or Eclipse

Clone the Repository

Github link for project repository

https:// github.com/Azhar- Ajum/guvi_project

MySQL Configuration

- Create a database named "bus_ticket_booking" in MySQL workspace

Update application properties

- Update src/main/resources/application.properties with your MySQL database details in project

spring.datasource.url=jdbc:mysql://localhost:3306/bus_ticket_booking

spring.datasource.username=root

spring.datasource.password=your_password

spring.jpa.hibernate.ddl-auto=update

spring.jpa.show-sql=true

Build and Run the application

The application will be available at http://localhost:8080

3.Functionality Overview :EsyBus.com

Home Page
- User Authentication:
  - Login: Users can log in using their registered email and password.
  - Register: New users can register by providing their personal information.
  - Forgot Password: Users can reset their password by verifying their email and date of birth.
- Offers: Displays current promotions and special offers available to users.
- Bus Gallery: Showcases images and information about different buses.
- About: Provides information about EasyBus.com, including its mission, services, and contact details.

Login Page
- Register Link: Redirects to the registration page for new users.
- Forgot Password Link: Allows users to reset their password by verifying their email and date of birth

Forgot Password
- Email and Date of Birth Verification: Users enter their registered email and date of birth to verify their identity.
- Reset Password: After verification, users can set a new password.

Profile Page
- Sidebar Navigation:
  - Profile Info: Users can view and update their personal information, including name, age, and date of birth.
  - Booking History: Users can view their past and upcoming booking details.
  - Logout: Logs the user out and redirects to the home page.

Profile Info
- View Personal Information: Displays user's name, age, date of birth, email, and other details.
- Edit and Update: Users can edit and update their personal information, which is saved to the database.

Booking History
- View Booking Details: Users can see the details of all their bookings, both upcoming and past.

Bus Search and Booking
- City Selection: Users select the departure and destination cities from the profile page.
- Find Buses: Redirects to a page displaying available buses for the selected route.
- Bus Details: Users can view details such as bus type, departure time, and available seats.
- Enter Booking Date: Users select the date for their trip.
- Passenger Details: Redirects to a page where users enter passenger information such as name, age, and phone number.
- Confirm Booking: Users confirm the booking details and submit the form.

E-Ticket Generation
- E-Ticket: After confirming the booking, an electronic ticket (e-ticket) is generated for the user, summarizing the booking details and passenger information.

Feedback Form
- Provide Feedback: Users can fill out a feedback form after their trip, rating their booking experience, website experience, and service quality.
- Submit Feedback: The feedback is submitted and stored in the database.

4.Data Validation Rules

User Entity

Name:

- Not null
- Minimum length: 2 characters

Age:

- Not null
- Positive number

Date of Birth:

- Not null
- Past date

Email:

- Not null
- Valid email format
- Unique

Password:

- Not null
- Minimum length: 8 characters

Bus & City Entity

City Name:

- Not null
- Cannot select same cities in From and To

Bus Booking date:

- Not null
- For testing purpose I allow user to enter past date

Passenger Entity

Passenger Name:

- Not null

Age:

- Not null
- Positive number

Number of passenger:

- Not null
- Minimum one

Payment option :

- Not null

Error Handling

- The application handles validation errors and returns appropriate responses.

5.FrontEnd and overview of Application

index.html

- localhost:8080/   - home page of application

Welcome to EasyBus online ticket bookings

Login

Register

Offers

Bus	Bus	Bus	Bus
Save up to Rs 300 on Karnataka,Tamil ...	Save up to Rs 300 on AP, TS routes	Save upto Rs 500 with ICICI	Save Up to Rs 250 on APSRTC bus tickets
Valid till 01 Aug	Valid till 01 Aug	Valid till 19 Jul	Valid till 01 Aug
*Conditions Apply	*Conditions Apply	*Conditions Apply	*Conditions Apply
CASH300	SUPERHIT	ICICI500	APSRTCNEW

Bus gallery

Frequently Asked Questions

Q: What is EasyBus?

A: EasyBus is an online platform for booking bus tickets, providing a seamless experience for travelers.

Q: How do I book a ticket?

A: You can book a ticket by selecting your route, choosing a bus, and completing the payment process on our website.

Q: Can I cancel my booking?

A: Yes, you can cancel your booking through your account dashboard, but please check the cancellation policy for details.

Booking Policy

1. Booking Confirmation: - All bookings made through EasyBook are confirmed via email or SMS, containing a booking reference number and ticket details. It is essential to provide a valid email address or phone number during booking to receive confirmation and updates.

2. Payment Policy: - Full payment is required at the time of booking. EasyBook accepts various payment methods including credit/debit cards and online payment gateways. All transactions are processed securely to ensure the protection of your financial information.

3. Cancellation and Refunds: - Cancellations made within 24 hours of booking are eligible for a full refund. Cancellations made after this period may incur a fee, and the amount refunded will be based on the fare rules and timing of the cancellation. Please refer to our detailed cancellation policy for specific conditions and procedures.

4. Changes and Modifications: - Modifications to bookings, including changes in travel dates, times, or passenger details, can be made up to 24 hours before the scheduled departure time. Changes are subject to availability and may incur additional charges. Contact our customer support for assistance with modifications.

5. No-Show Policy: - In the event of a no-show, where the passenger does not board the bus as scheduled, the booking will be considered void and no refunds or rebookings will be provided. It is important to arrive at the departure point at least 15 minutes before the scheduled departure time to avoid missing your bus.

These policies ensure a clear understanding between EasyBook and our customers, facilitating a smooth booking experience and helping to manage expectations.

About EasyBus

EasyBook: Your Ultimate Online Ticket Booking Solution - At EasyBook, we transform the way you book your travel with our seamless and intuitive online ticket booking platform. Whether you're planning a quick getaway or a cross-country adventure, our user-friendly website is designed to make booking bus tickets as straightforward as possible. We understand that convenience is key. That's why EasyBook offers an extensive range of buses traveling to various destinations, ensuring you find the perfect option that fits your schedule and budget. Our platform allows you to search for buses based on your departure and arrival cities, view detailed bus schedules, and book your tickets in just a few clicks. With EasyBook, you can enjoy a hassle-free booking experience with real-time availability updates and instant confirmation. Our secure payment gateway ensures that your transactions are safe and your personal information is protected. Additionally, our dedicated customer support team is available to assist you with any inquiries or issues, ensuring you have a smooth and enjoyable journey from start to finish. Experience the ease of online ticket booking with EasyBook and let us make your travel plans simpler and more efficient. Book your next trip with us and travel with confidence, knowing you have the best in ticket booking technology at your fingertips.

Contact Details

Email: support@easybus.com

Phone: +1-234-567-890

Address: 123 Bus Lane, Chennai, Tamil Nadu, India

login.html : localhost:8080/login

Login

Email:

Password:

Login

New User? Register here

Forgot Password?

Offers

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Save up to Rs 300 on Karnataka,Tamil ...
Valid till 01 Aug
*Conditions Apply
CASH300

Bus
SUPERHIT
Save up to Rs 300 on AP, TS routes
Valid till 01 Aug
*Conditions Apply
SUPERHIT

Bus
ICICI Bank
Save upto Rs 500 with ICICI
Valid till 19 Jul
*Conditions Apply
ICICI500

Bus
Save Up to Rs 250 on APSRTC bus tickets
Valid till 01 Aug
*Conditions Apply
APSRTCNEW

Bus gallery

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Address: 123 Bus Lane, Chennai, Tamil Nadu, India

register.html : localhost:8080/register

Register

Name:

Email:

Age:

0

Date of Birth:

dd - mm - yyyy

Password:

Register

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Forgot-password.html : localhost:8080/forgot-password

Reset-password.html : localhost:8080/reset-password

profile.html : localhost:8080/profile?email=

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Making your online ticket booking experience easy

Mohamed Azharudeen M

Welcome, Azhar

Menu

Profile Info
Booking Details
FeedBack
Logout

Find Bus

From:

Chennai

To:

Coimbatore

Find Bus

Offers

Bus	Bus	Bus	Bus
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Bus-list.html :

Passenger-Deatils.html :

Success Html :

FeedBack.html :

Booking Details:

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Making your online ticket booking experience easy

Mohamed Azharudeen M

Booking Details for Azhar

Upcoming Bookings

no.	Name	Age	Phone Number	From City	To City	Bus Name	Route	E-Ticket	Seat Number	Arrival Time	Departure Time	Price	Booking Date
1	Ajum	30	9786918881	Chennai	Coimbatore	Parveen Travels	Normal route	ET53399	2	10:00 AM	12:00 PM	500.0	2024-07-31

Back to Profile

Booking History

no.	Name	Age	Phone Number	From City	To City	Bus Name	Route	E-Ticket	Seat Number	Arrival Time	Departure Time	Price	Booking Date
1	ajumeer	29	9786918881	Chennai	Tiruppur	KPN Travels	normal route	ET87669	4	01:00 PM	03:00 PM	600.0	2024-07-01

Back to Profile

Offers

Profile-info:

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Mohamed Azharudeen M

Profile Information

Menu
Profile
Booking Details
Logout

Name: Azhar

Age: 27

Date of Birth: 1997-11-22

Email: azhar@gmail.com

Edit

Back to Profile

Offers

Profile-edit:

6.Conclusion

EasyBus.com is designed to streamline the process of booking bus tickets, offering a seamless and user-friendly experience from registration to e-ticket generation. The application provides a comprehensive suite of features, including user authentication, profile management, bus search and booking, and feedback collection.

The detailed functionality overview provided here underscores EasyBus.com's commitment to making online bus ticket booking an effortless and enjoyable task. By leveraging modern technologies and maintaining a user-centric design, EasyBus.com aims to become the go-to platform for all bus travel needs.