

SRIDEVI WOMEN'S ENGINEERING COLLEGE

Department of Computer Science and Engineering (AIML)



TRIPEASE

(Turning your dreams into reality)

Under the guidance of internal guide

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ABSTRACT :

- A user-friendly travel website that helps plan trips by booking flights, hotels, and discovering activities with personalized suggestions and real-time data.
- Allows users to create and customize itineraries with budget-friendly recommendations for a smooth and enjoyable travel experience.
- Designed for all types of travelers to ensure a seamless, enjoyable, and stress-free travel experience.

INTRODUCTION :

- **Modern Travel Challenges:** Travelers seek hassle-free, personalized planning without switching between multiple sites or accepting rigid packages.
- **Trip Ease Solution:** Trip Ease offers an all-in-one platform with AI-based suggestions, real-time data, and interactive tools to create customized, budget-friendly travel plans effortlessly.

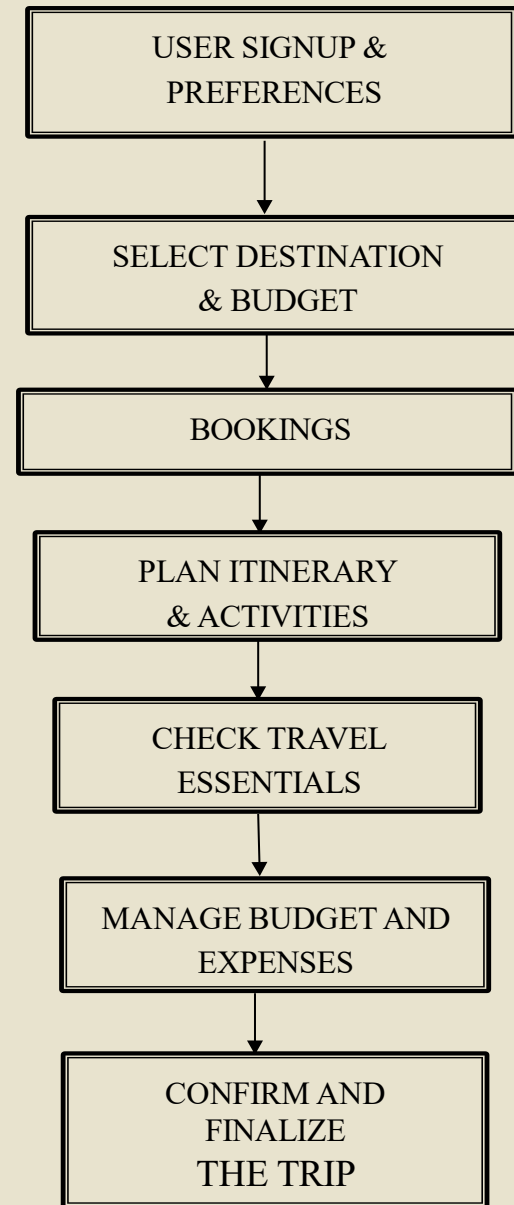
PURPOSE :

- Trip Ease aims to simplify trip planning by offering a user-friendly and customized platform that eliminates common travel hassles.
- It supports all kinds of travelers by providing budget-based plans, personalized destination suggestions, and helpful travel guidance.
- Unlike traditional booking sites, it serves as a smart travel assistant that creates tailored itineraries, budget recommendations, and a full travel planner to ensure a smooth and prepared journey.

SCOPE :

- The website transforms travel planning into a smart and personalized experience by creating itineraries based on individual budgets, interests, and travel styles.
- By serving as a one-stop solution for bookings, itinerary creation, and guidance, it simplifies the process for all types of travelers, making every trip organized, stress-free, and memorable.

MODEL DIAGRAM :



OVERVIEW :

- The website helps users create personalized travel plans by offering destination suggestions, budget estimates, hotel and activity options, and instant itinerary generation based on their preferences.
- It uses technologies like HTML, CSS, JavaScript, Java, and MySQL to deliver a seamless and user-friendly experience that simplifies and enhances travel planning.

LITERATURE SURVEY :

- 1. Personalized Recommendations:** Travel recommender systems use algorithms like collaborative filtering, content-based filtering, and hybrid models to offer personalized suggestions based on user preferences, location, budget, and travel history.
- 2. Smart Itinerary Generation:** Automated itinerary planners create customized travel schedules by considering user budgets, trip duration, preferences, and practical constraints like opening hours and transport availability, ensuring time-efficient and enjoyable plans.
- 3. Service Aggregation and Hyperlinking:** Modern platforms integrate third-party services (e.g., Kayak, Trivago) through hyperlinking, enabling users to compare and access various bookings in one place without managing transactions internally, making systems scalable and flexible.

4. **User-Friendly Onboarding:** Efficient authentication systems, including social logins and guest access, improve user engagement by simplifying sign-up and login processes, which in turn supports better personalization from the start.
5. **Mobile Responsiveness:** With most users accessing travel websites via smartphones, responsive design ensures smooth experiences across all devices and browsers, allowing users to plan, modify, and book trips easily on the go.

SYSTEM ANALYSIS :

EXISTING SYSTEM & DISADVANTAGES :

- **Fragmented System:** Users must switch between multiple platforms to book flights, accommodations, and activities.
- **Limited Functionality:** Existing apps act mainly as booking engines, not complete trip planners.
- **Lack of Personalization:** No support for fully customized, budget-based travel planning.
- **Missing Travel Essentials Guide:** No packing checklists, document reminders, or safety tips provided.
- **Poor Budget Management:** Intelligent budget tracking and optimization features are absent.
- **No Real-Time Assistance:** Lack of real-time support during the travel process makes planning stressful.

DISADVANTAGES :

- 1. No Customized Budget Planning** – Existing platforms do not tailor the trip to the user's budget, making financial management difficult.
- 2. Lack of Personalization** – Recommendations are generic and do not consider user preferences, travel style, or past experiences.
- 3. Multiple Platforms Required** – Users must switch between different websites and apps for bookings, itinerary planning, budgeting, and travel guidance.
- 4. Absence of Travel Essentials Guide** – Packing lists, documentation reminders, and important travel tips are not integrated, leaving travellers unprepared

PROBLEM STATEMENT :

- Traditional travel apps often miss out on personalized budget planning and essential travel guidance, making trip management harder.
- This app provides custom budget-based itineraries, cost estimates, and key travel resources for a smooth and hassle-free experience.

PROPOSED SYSTEM & ADVANTAGES :

- The app offers an intelligent, user-focused solution to overcome the inefficiencies of traditional travel platforms.
- It features personalized budget planning that adapts recommendations based on the user's financial limits and preferences.
- From destination to expense tracking, it delivers a complete and flexible travel experience for all types of travelers.

ADVANTAGES :

- Personalized Budget Planning – Users can set a budget, and the system provides tailored recommendations to maximize their experience within their financial limits
- One-Stop Solution – Instead of using multiple platforms for bookings, itinerary creation, and travel guides, everything is possible in one app.
- Smart Itinerary Generation – Automatically suggests optimized travel plans based on user preferences and real-time availability.
- Comprehensive Travel Guide – Provides essential travel tips, packing checklists, and must-know information to ensure users are well-prepared.
- Expense Management – Tracks expenses throughout the trip to help users stay within their budget.
- Enhanced User Experience – A simple, intuitive interface makes trip planning stress-free and efficient.

FUNCTIONAL REQUIREMENTS :

- **User Authentication & Profile Management** : Enables secure registration and login via email/phone.
Destination & Budget Selection : Allows users to search and select travel destinations.
- **Personalized Itinerary Generation** : Generates structured travel plans based on user preferences, budgets, and activities.
- **Multi-User Collaboration** : Enables group travelers to collaborate on the same itinerary, vote on activities, and share expenses.
- **Offline Access** : Allows users to download their itineraries and essential documents for offline use in areas with limited internet connectivity.
- **Reviews & Ratings** : Users can give feedback on application to help other travellers make informed decisions.

NON FUNCTIONAL REQUIREMENTS :

- **User Access:** Register/login via email or phone.
- **Itinerary Optimization:** Real-time, budget-aware, interest-based plans.
- **Offline Access:** Auto-updates when reconnected to the internet.
- **Feedback:** Logged-in users can rate and review travel services.
- **Usability:** Supports multiple languages for global use.
- **Data Handling:** Custom travel suggestions and itineraries.
- **Maintenance:** Easy updates, debugging, and performance tuning.
- **Compatibility:** Works across all major devices and systems.

HARDWARE REQUIREMENTS :

- Processor : Intel i3
- Storage : 500GB SSD High-speed fiber internet External HDD/SSD or DR Machine
- Network : High-speed fiber internet External HDD/SSD or DR Machine
- Backup Storage : External HDD/SSD or DR Machine

SOFTWARE REQUIREMENTS :

- Operating System : Windows 10/11, macOS
- Database : RDMS (My SQL, Oracle)
- Backend Framework : Python/Java
- Frontend Framework : HTML/CSS/JavaScript, Bootstrap
- Server Services : Tomcat 9.x
- Version Control : Git/GitHub/GitLab/ Bitbucket
- IDE & Code Editors : Visual Studio Code/ Eclipse

SYSTEM COMPONENTS :

- **User Sign-Up & Account System:** Secure account with email login, password protection, profile settings, and saved trip data across devices.
- **Destination Selector:** Recommends destinations based on budget and interests, showing costs, travel time, and attractions.
- **Budget Planner:** Breaks down total budget into transport, stay, food, and activity categories, with real-time adjustments.
- **Accommodation Finder:** Shows lodging options matching budget and preferences, with ratings and booking links.
- **Food and Dining Explorer:** Lists local food spots within budget based on preferences, with external review and booking links.
- **Smart Travel Tools:** Offers cheap transport options and a tailored packing list.

UML DIAGRAMS :

Usecase Diagram (Booking Section) :

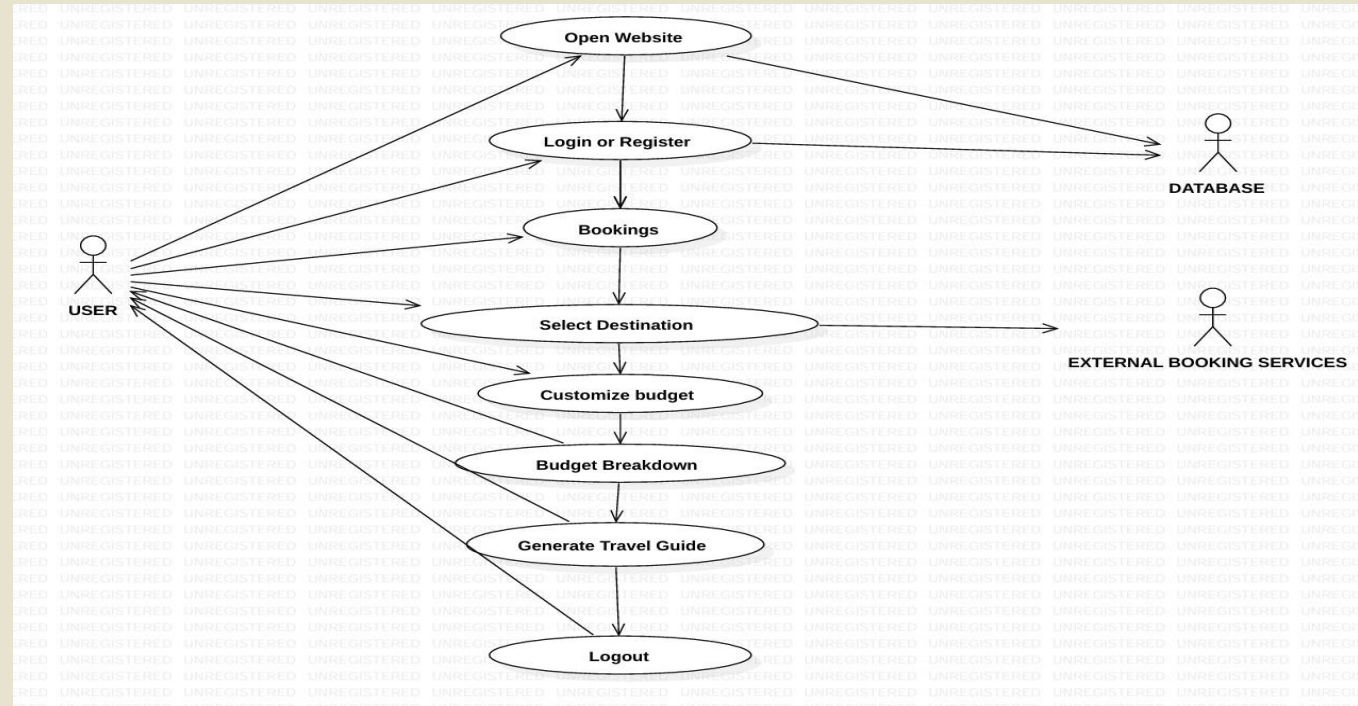


Figure 1: Usecase Diagram (Booking Section)

- Users log in, set budgets, choose destinations, and manage bookings.
- Generates personalized guides and confirms bookings via external services.

Usecase Diagram (Accommodation Section) :

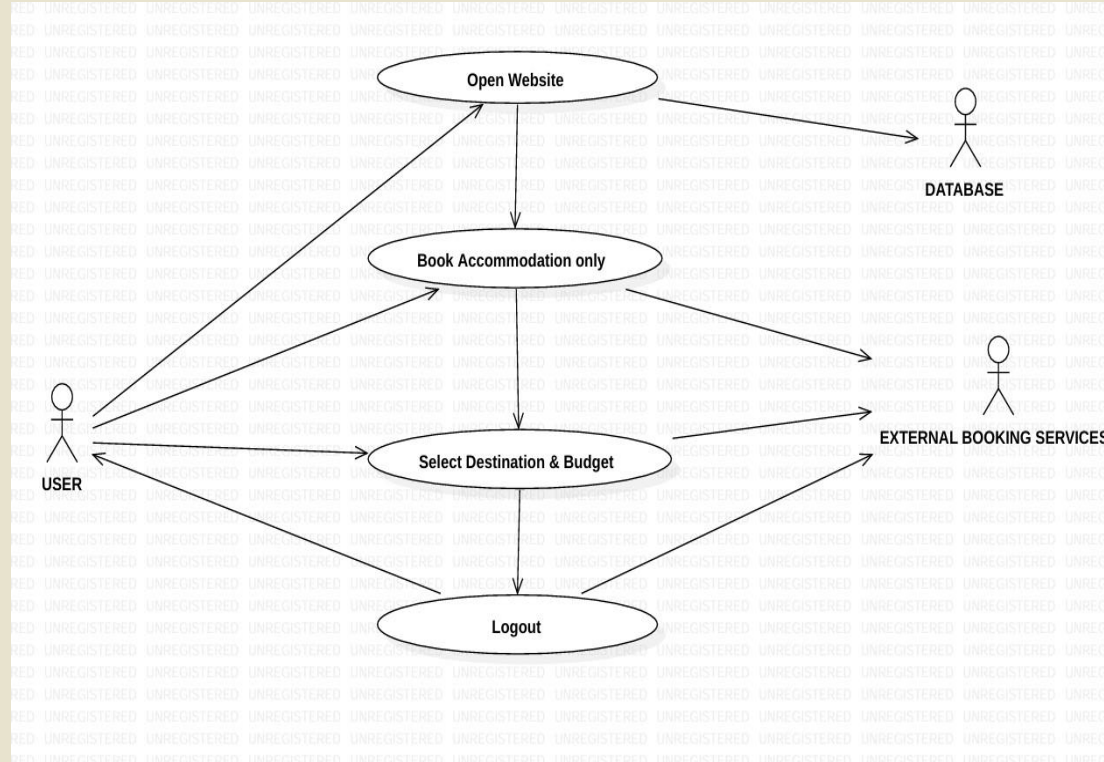


Figure 2: Usecase Diagram (Accommodation Section)

- Register/login, book stays, or plan full trips by setting destination and budget.
- Connects to a database and external services to finalize bookings.

Class Diagram :

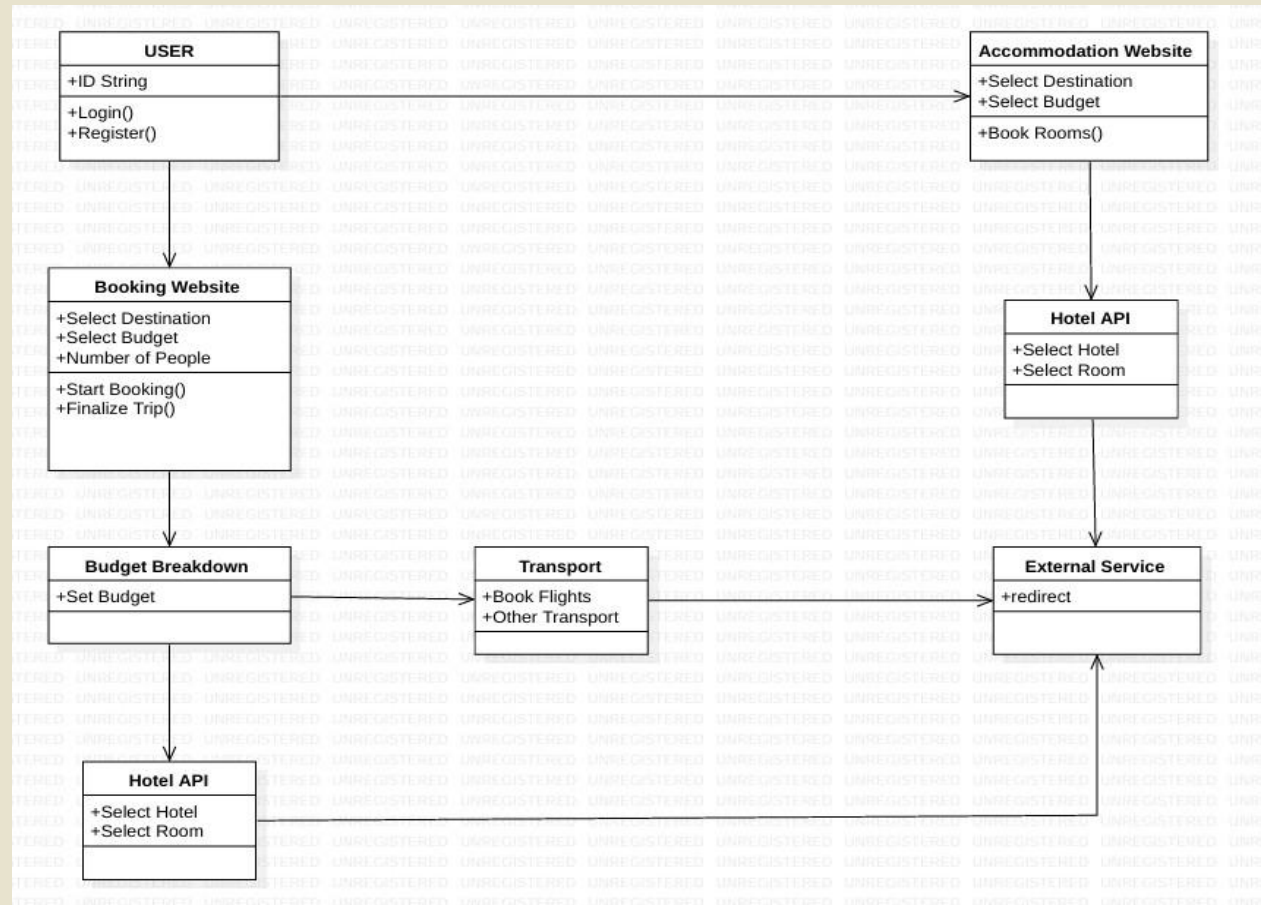


Figure 3: Class Diagram

- Log in, choose destinations, set budgets, and finalize trips.
- Manages budgets, bookings, and generates custom guides using external services.

Activity Diagram :

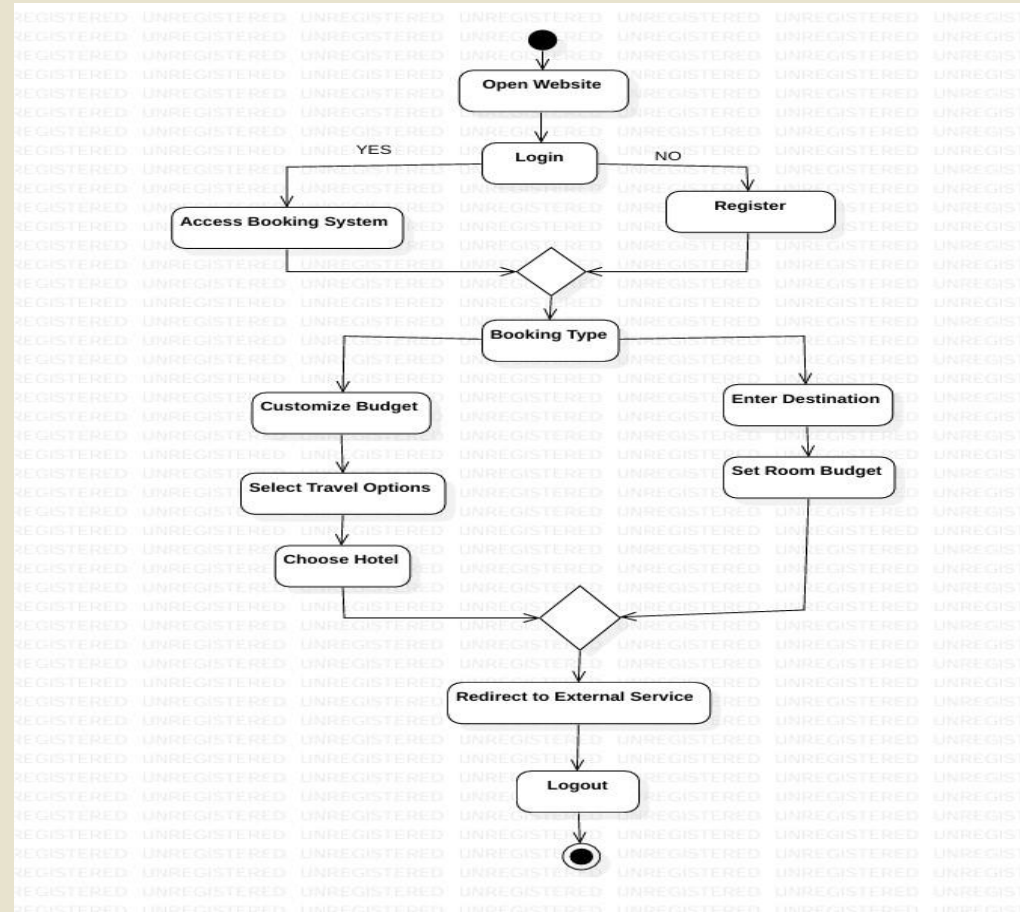


Figure 4: Activity Diagram

- Open app, log in/register, access booking, and customize trip.
- Select options, use external links if needed, and finalize the trip smoothly.

Sequence Diagram (Accommodation Section) :

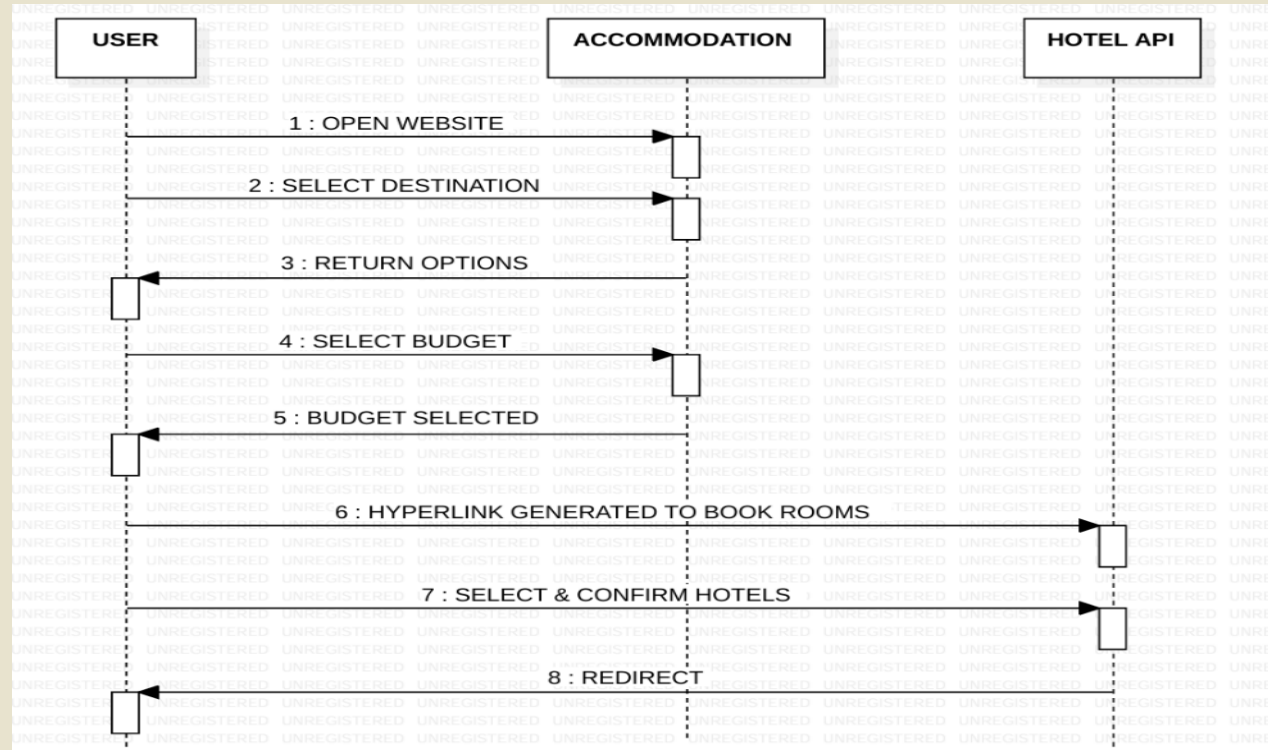


Figure 5: Sequence Diagram (Accommodation Section)

- User selects a destination and budget to view accommodation options.
- System generates a booking link, connects to the Hotel API, and redirects the user to complete the booking.

Sequence Diagram (Booking Section) :

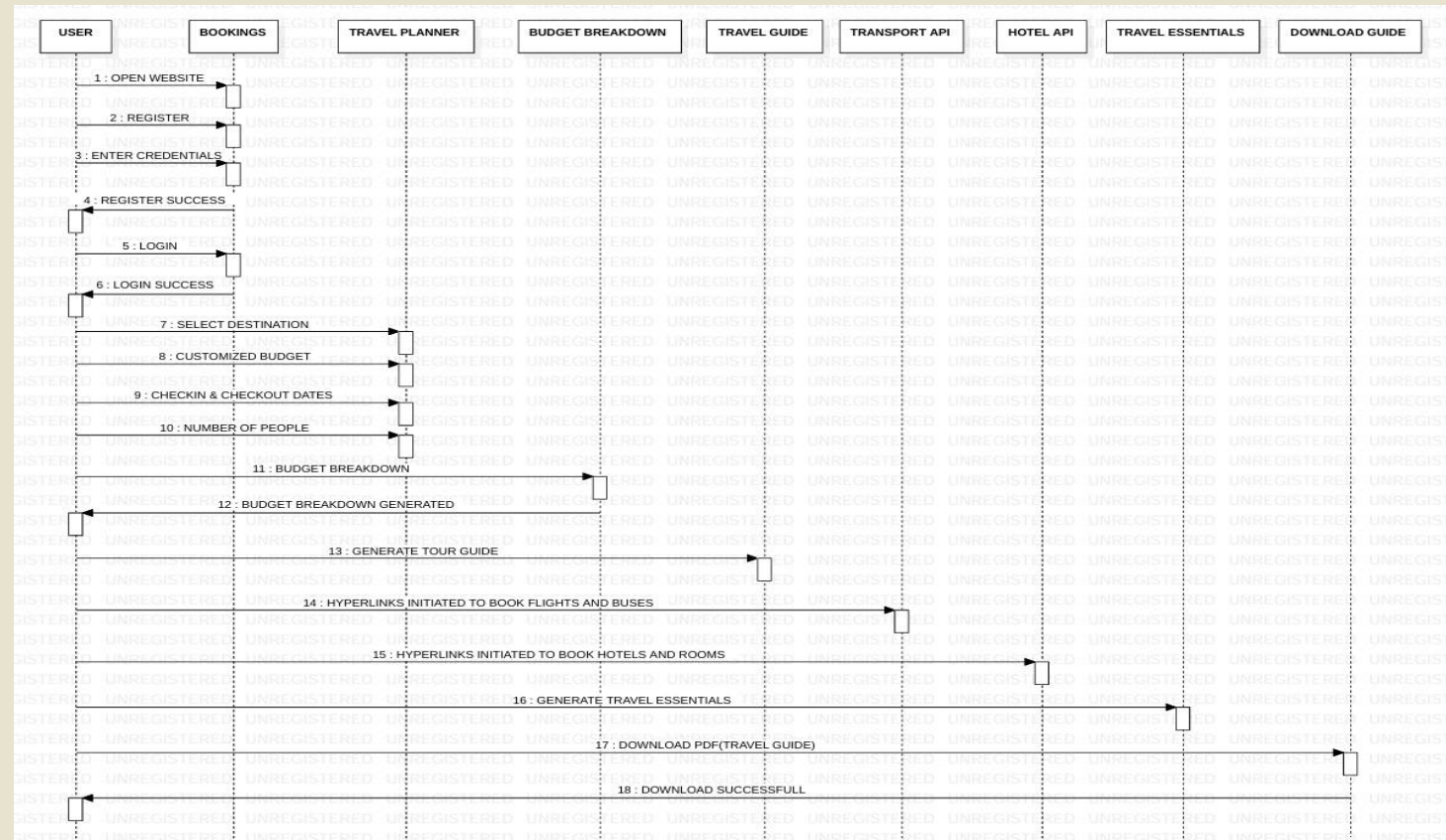


Figure 6: Sequence Diagram (Booking Section)

- User registers or logs in, selects a destination, and enters trip details.
- System shows budget breakdown, booking links via APIs, and generates a travel guide PDF with essentials.

Component Diagram :

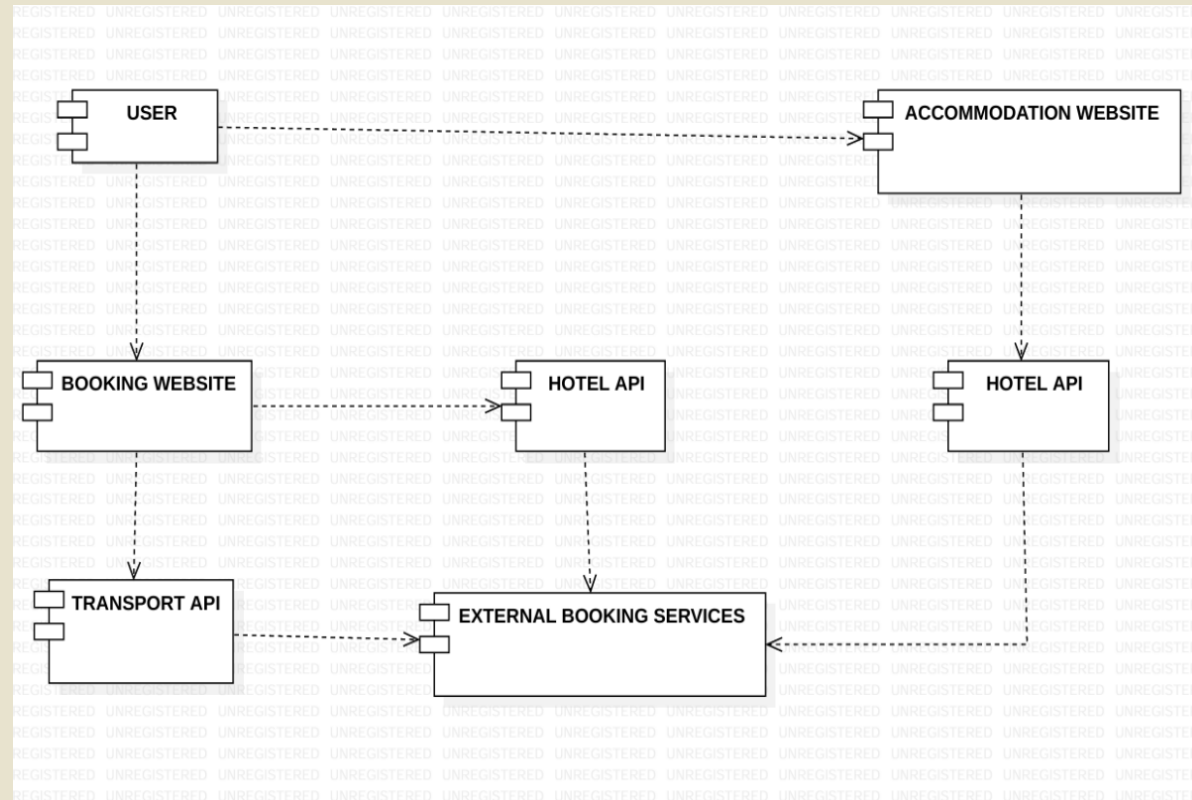


Figure 7: Component Diagram

- User interacts with the app to manage plans, book hotels and flights, and explore activities.
- The system connects all components to provide a complete travel experience.

Deployment Diagram :

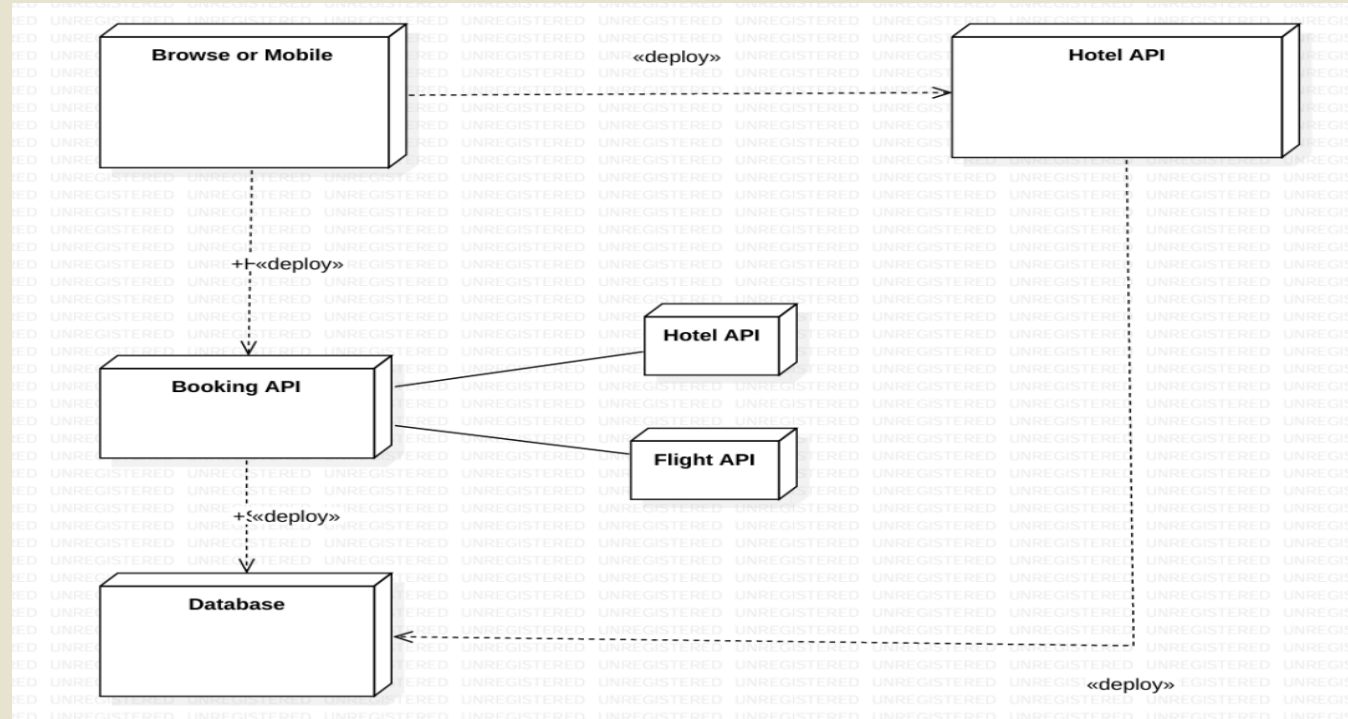


Figure 8: Deployment Diagram

- The app runs on browser or mobile and communicates with the booking API and database.
- The API integrates with external hotel and flight services to manage reservations smoothly.

SAMPLE CODE :

```
!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1.0">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<title>Trip Ease- Home</title>
<link rel="icon" href="img/Favicon.png" type="image/png">
<link rel="stylesheet" href="vendors/bootstrap/bootstrap.min.css">
<link rel="stylesheet" href="vendors/fontawesome/css/all.min.css">
<link rel="stylesheet" href="vendors/themify-icons/themify-icons.css">
<link rel="stylesheet" href="vendors/linericon/style.css">
<link rel="stylesheet" href="vendors/owl-carousel/owl.theme.default.min.css">
<link rel="stylesheet" href="vendors/owl-carousel/owl.carousel.min.css">
<link rel="stylesheet" href="css/style.css">
</head>
<body>
<!--=====Header Menu Area=====-->
```

TEST CASES :

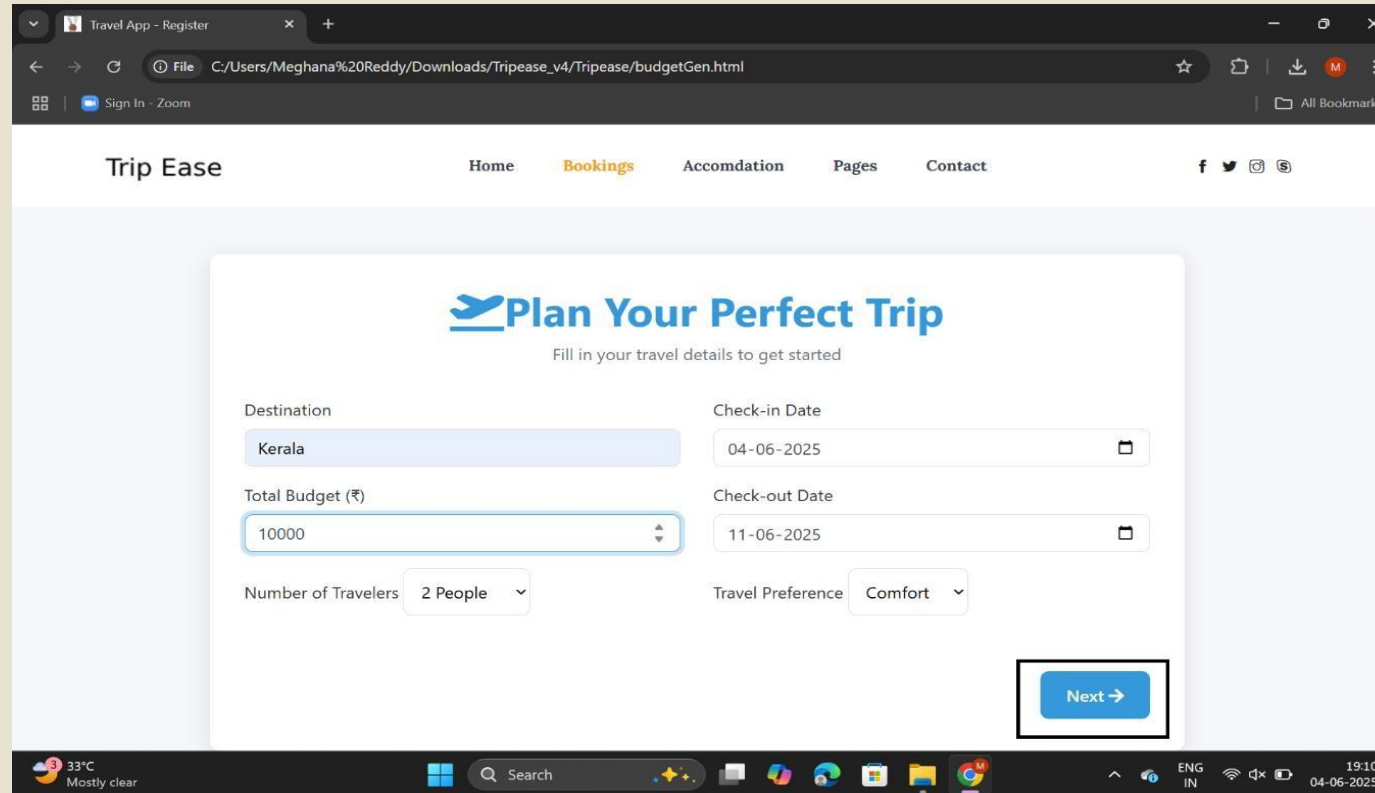
Table 1 : Test Case for Destination, Budget, Check-in, and Check-out Selection

Test Cases Status	Priority (H,L): High	
Test Objective	Verify combined form for destination, budget, and travel dates	
Test Description	Ensure system captures all fields correctly and handles missing inputs	
Requirements Verified	All fields must be validated before proceeding	
Test Environment	Trip Ease UI on Chrome	
Test Setup	Navigate to travel details input form	
Inputs	Expected Result	Actual Result
Leave destination empty	Destination required	Error displayed correctly
Enter invalid budget: 0	Budget must be positive	Error displayed
Enter check-in before check-out	Check-in must be after check-out	Handled correctly
All valid inputs	Form submitted and user redirected to next step	Form processed successfully
Pass: Yes	Conditional Pass: No	Fail: No

Table 2: Test Case for Accommodation Finder

Test Cases Status	Priority (H,L): High	
Test Objective	Verify the accommodation suggestions work based on user inputs	
Test Description	Ensure system lists available accommodation based on selected location and data range	
Requirements Verified	Accommodation should match user's destination and travel period	
Test Environment	Web Website, Trip Ease	
Test Setup	User has entered valid travel data and accesses accommodation section	
Inputs	Expected Result	Actual Result
Invalid Inputs	Please enter valid details	Error shown
Valid Inputs	Accommodation options displayed	Suggestions loaded correctly
Pass: Yes	Conditional Pass: No	Fail: No

DISCUSSION OF RESULTS :



The screenshot displays a web browser window with the address bar showing a local file path. The website, "Trip Ease", has a navigation menu with links to Home, Bookings, Accommodation, Pages, and Contact. The main content area features a form titled "Plan Your Perfect Trip" with the subtitle "Fill in your travel details to get started". The form includes the following fields and values:

Field	Value
Destination	Kerala
Check-in Date	04-06-2025
Total Budget (₹)	10000
Check-out Date	11-06-2025
Number of Travelers	2 People
Travel Preference	Comfort

A blue "Next →" button is located at the bottom right of the form, highlighted by a red rectangle. The browser's taskbar at the bottom shows the system date and time as 19:10 on 04-06-2025.

Figure 1: Trip Planning Form

Example: A Kerala trip form (04-06-2025 to 11-06-2025) for 2 people with a ₹10,000 budget, comfort travel preference selected, and a "Next" button to continue.

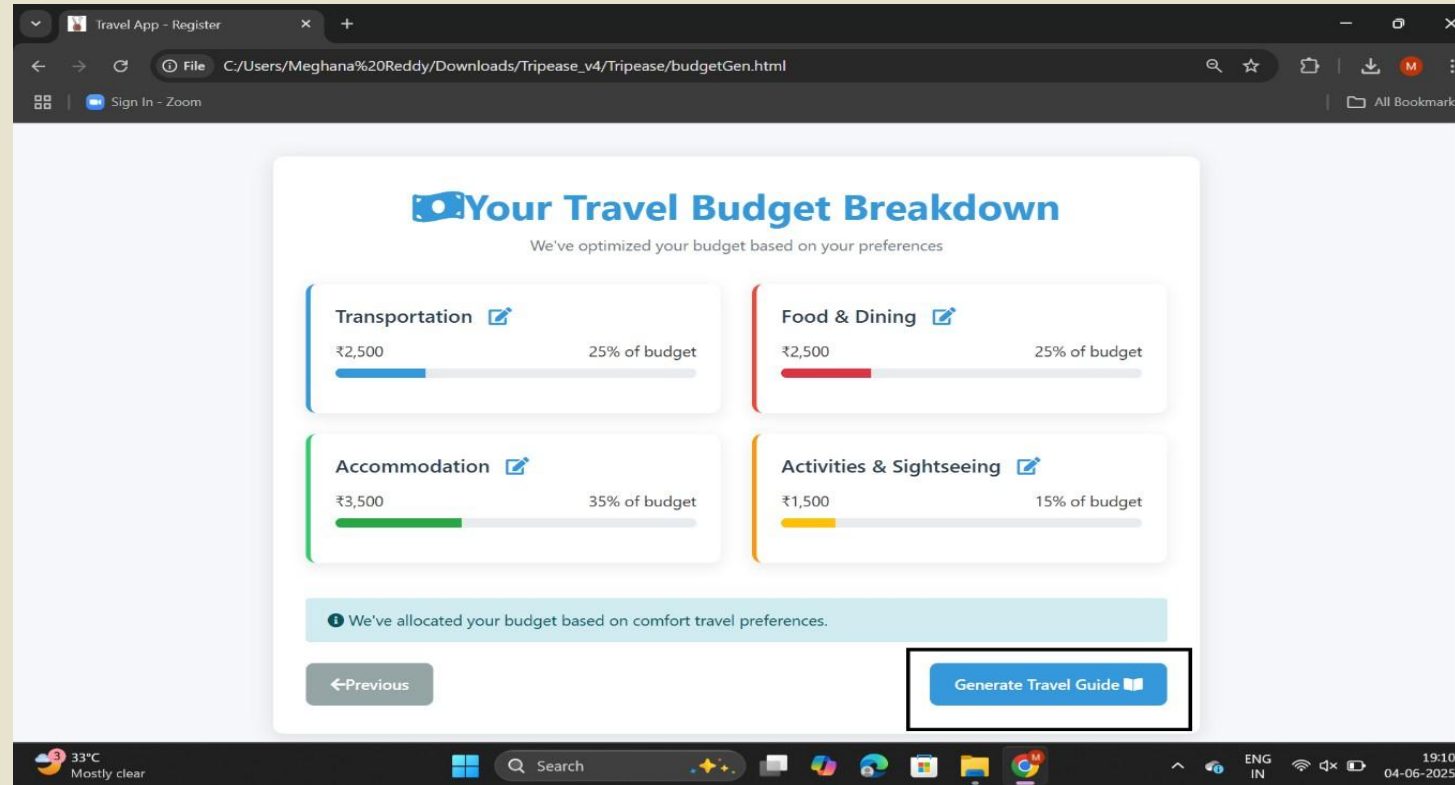


Figure 2: Budget Breakdown

A visual budget allocation displays four categories (e.g., Transportation 25%, Accommodation 35%, etc.), distributing the total budget in ₹2,500–₹3,500 ranges, with a "Generate Travel Guide" button to proceed.

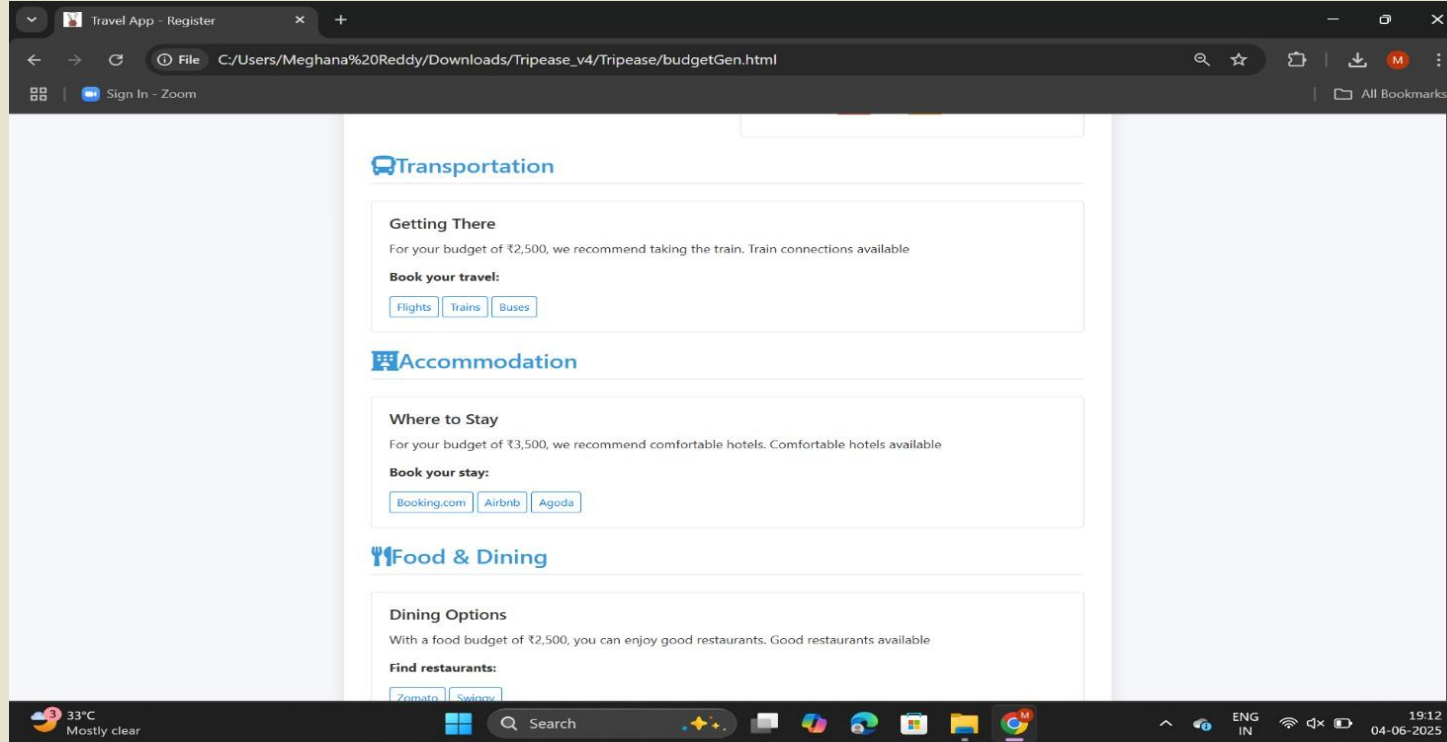


Figure 3: Transportation Section

Budget recommendations include ₹2,500 for transportation (train) and ₹3,500 for accommodation, with booking options available through platforms like Booking.com, Airbnb, and Agoda for transport and stay.

CONCLUSION :

1.User-Focused & Budget-Based: TRIPEASE tailors travel plans to user budgets and interests, making trips accessible for all.

2.All-in-One Modular System: Offers a complete, scalable solution from sign-up to checklist generation.

3.Strong Tech Stack:

Built with HTML, CSS, JS, Java Servlets, and MySQL for reliable performance and growth.

FUTURE ENHANCEMENTS :

- Real-Time Price Monitoring :** Alerts for price drops on travel bookings.
- AI-Powered Personalization :** Smart suggestions based on user behavior.
- Social Features Integration :** Share plans and connect with travelers.
- Mobile Website Development :** Access plans via iOS and Android sites.
- Multi-language and Currency Support :** Supports global languages and currencies.

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THANK
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