SAVEETHA SCHOOL OF ENGINEERING

SAVEETHA INSTITUTE OF MEDICAL AND TECHNICAL SCIENCES

CHENNAI-602105

TRAVEL BOOKING SYSTEM

A CAPSTONE PROJECT REPORT

Submitted in the partial fulfillment for the completion of the course

CSA4317-INTERNET PROGRAMMING WITH MOBILE APP INTEGRATION

COMPUTER SCIENCE AND ENGINEERING

Submitted by

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Under the Supervision of

Ms. L. Reetha

SIMATS ENGINEERING

NOVEMBER 2024

DECLARATION

We, D. **Teja**, K. **Ganesh,** students of **Bachelor of Engineering in the Department** of Computer Science and Engineering, Saveetha Institute of Medical and Technical Sciences, Saveetha School of Engineering, Chennai, hereby declare that the work presented in this Capstone Project Work entitled "**Travel Booking System"** is the outcome of our own Bonafide work and is correct to the best of our knowledge and this work has been undertaken taking care of Engineering Ethics.

(D. Teja-192210626)

(K. Ganesh -192210041)

Date:25/11/2024

Place: Chennai

CERTIFICATE

This is to certify that the project entitled **"Travel Booking System"** submitted by D. **Teja, K. Ganesh,** has been carried out under my supervision. The project has been submitted as per the requirements in the current semester of B.E. Computer Science and Engineering.

Supervisor:

Ms. L. Reetha

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ABSTRACT:

The primary goal of a travel booking system is to simplify the complexities of travel planning. By integrating various components of travel, such as transportation, accommodation, and activities, the system allows users to create a complete travel itinerary with minimal effort. Furthermore, it addresses the need for efficiency and transparency in the booking process. Users can compare options, access real-time availability, and make informed decisions all within a matter of minutes. From the perspective of businesses, such as airlines, hotels, and travel agencies, the travel booking system acts as a powerful tool to manage inventory, track bookings, and analyze customer behavior. It enhances operational efficiency by automating routine tasks and reducing the reliance on manual intervention. For service providers, this translates into better resource utilization and increased profitability.

A travel booking system is a comprehensive software solution designed to simplify and automate the process of planning, booking, and managing travel-related activities. The system integrates various functionalities, including flight, hotel, car rental, and tour package reservations, providing users with a seamless and user-friendly experience. By leveraging advanced search algorithms, real-time data updates, and secure payment gateways, the system ensures efficiency, accuracy, and security. Features such as personalized recommendations, multi-language support, and mobile compatibility cater to diverse user needs. This system not only enhances customer satisfaction but also empowers travel agencies and service providers with analytics, inventory management, and streamlined operations.

The significance of a travel booking system cannot be overstated, especially in an era where convenience and efficiency are paramount. It caters to the needs of both the traveler and the service provider, bridging the gap between demand and supply. For travelers, it offers the convenience of planning their trips from the comfort of their homes. For businesses, it provides an avenue to reach a wider audience and optimize their offerings. Another essential component is secure payment gateways, which facilitate safe and reliable transactions. By incorporating encryption technologies and adhering to global standards like PCI DSS, the system protects sensitive user data, ensuring trust and confidence among users. Moreover, advancements in mobile technology have made it possible for users to access the system on-the-go, with responsive designs and dedicated mobile applications enhancing accessibility.

INTRODUCTION:

In today's digital era, an intuitive and visually engaging website is essential for any travel booking system. A well-designed travel website not only attracts users but also provides a seamless experience in browsing destinations, comparing prices, and booking itineraries. This project focuses on designing a user-centered travel booking platform that integrates modern design principles with robust functionality to enhance usability, responsiveness, and accessibility. By prioritizing aesthetic appeal and ease of navigation, the platform ensures that users can easily interact with features like destination filters, trip packages, and secure payment options.

The proposed design incorporates advanced search and filtering options, personalized recommendations, and interactive elements such as maps, reviews, and real-time booking availability. User experience (UX) and user interface (UI) components are carefully crafted to provide a streamlined journey from initial search to final booking. Additionally, mobile optimization is emphasized to cater to on-the-go travelers, allowing them to book their trips seamlessly across devices. By employing responsive web design techniques, the platform ensures a consistent and intuitive experience on both desktop and mobile screens.

To ensure security and trustworthiness, the system integrates secure payment gateways and complies with industry standards for data protection. Visual hierarchy, call-to-action buttons, and feedback mechanisms are implemented strategically to guide users through the booking process smoothly. The result is a user-friendly, secure, and visually appealing travel booking website that meets the evolving needs of modern travelers, helping them book their dream vacations with confidence and ease.

A Travel Booking System is a comprehensive digital platform designed to facilitate the end-to-end process of booking travel services. It addresses the needs of both individual travelers and businesses in the travel and tourism industry. By integrating multiple functionalities, the system provides a centralized and seamless approach to organizing travel, thereby reducing complexity and enhancing efficiency. Travel is more than just moving from one place to another; it is a transformative experience that impacts individuals, societies, and economies profoundly. In the modern world, travel plays a crucial role in fostering global connections, cultural exchange, economic growth, personal enrichment, and societal development. Below are some key areas where travel significantly contributes to our world.

OBJECTIVES:

Our project involves creating an engaging and user-friendly website design for a travel booking system that serves as a comprehensive platform for users to explore, compare, and book travel accommodations and activities seamlessly. This website aims to offer a visually appealing interface that encourages users to delve into travel possibilities, with organized layouts for flights, hotels, car rentals, and excursions, all accessible from one place. With a focus on ease of navigation, the design will cater to both seasoned travelers and first-time users, offering intuitive search filters, stunning visuals, and clear information to make travel planning a breeze.

The core of this travel booking system lies in its intelligent design and responsiveness, catering to diverse device users by offering a consistent experience across desktops, tablets, and mobile devices. Enhanced search and sorting features will help users find options based on budget, location, dates, and preferences, all displayed in a streamlined, uncluttered manner. Visuals will be carefully chosen to evoke a sense of wanderlust, showcasing destination highlights, popular tourist spots, and user-generated content such as reviews and photos. Integrated customer support options, such as live chat or a help center, will ensure that users have quick access to assistance when needed, boosting trust and convenience.

Furthermore, the website will incorporate secure booking and payment options, assuring users of their data privacy and making transactions seamless. This project is designed to inspire confidence and excitement around travel, using a combination of practical tools and engaging content to assist users at every step of the booking process. In addition, the design will include personalized recommendations, based on past bookings or stated preferences, experience that transforms travel booking from a task into an enjoyable, immersive journey. The rapid advancement of technology has significantly influenced the travel industry, making online booking systems a vital part of the ecosystem. Traditional methods of booking through travel agents or over-the-counter services are becoming less relevant as digital solutions take center stage. With the advent of the internet, mobile devices, and cloud computing, travel booking systems have evolved to provide real-time access to travel services, giving users the flexibility to plan their trips anytime and anywhere.

PROBLEM DESCRIPTION:

1. Global Distribution Systems (GDS):

Amadeus: A leading GDS that provides technology solutions to travel agents, airlines, and other travel businesses worldwide, offering flight, hotel, and car rental bookings.

Sabre: A GDS widely used by travel agencies and airlines for booking flights, hotels, and other travel services.

Travelport (Galileo, World span, and Apollo): Offers integrated travel commerce solutions for travel agencies and travel service providers.

2. Online Travel Agencies (OTAs):

Booking.com: An online platform that allows users to search and book hotels, flights, rental cars, and other travel services.

Expedia: Offers a wide range of travel services, including flights, hotels, car rentals, and vacation packages.

TripAdvisor: Provides travel planning and booking services for hotels, restaurants, flights, and attractions, including reviews and recommendations.

Kayak: A travel search engine that aggregates results from multiple OTAs and travel providers.

3. Airline and Hotel Booking Systems:

Many airlines and hotels have their own proprietary booking systems to manage direct reservations and customer services.

Examples include airline systems like Delta's SkyMiles or hotel chains like Marriott Bonvoy.

4. Corporate Travel Booking Platforms:

Concur (SAP Concur): Provides travel and expense management solutions tailored for businesses to help manage corporate travel bookings and track expenses.

Egencia: A travel management solution focused on business travel that provides booking, policy management, and reporting services.

5. Mobile Apps for Travel Booking:

Skyscanner: A mobile app and website that allows users to compare and book flights, hotels, and car rentals.

TOOLS DESCRIPTION:

1. User-Friendly Interface and Personalized Experience:

Enhanced UI/UX Design: Intuitive, easy-to-navigate user interface for both desktop and mobile applications to improve user engagement.

Personalized Recommendations: Use AI-driven algorithms to suggest personalized travel options, destinations, accommodations, and activities based on user preferences, previous bookings, and search history.

Multi-Language and Multi-Currency Support: Ensure accessibility for a global audience with support for multiple languages and currencies.

2. Comprehensive Search and Filter Capabilities:

Advanced Search Options: Allow users to filter travel options by price range, travel duration, amenities, layovers, cancellation policies, etc.

Real-Time Availability: Provide real-time data on the availability of flights, hotels, rental cars, and other travel services, minimizing booking failures.

3. Integrated Booking Platform:

Multi-Modal Travel Integration: Combine multiple travel modes (e.g., flights, trains, buses) into a single itinerary.

Dynamic Packaging: Enable users to bundle and customize travel components (e.g., flight + hotel + car rental) to build cost-effective travel packages.

API Integration: Seamless integration with external travel service providers (airlines, hotels, rental car agencies) via APIs for a wider range of options.

4. AI and Machine Learning Capabilities:

Price Prediction and Alerts: Predict price trends for flights and hotels and notify users of optimal booking times for better deals.

Chatbots for Customer Support: AI-powered chatbots to provide instant assistance, answer common queries, and offer support for modifications or cancellations.

5. Secure and Flexible Payment Options:

Multiple Payment Gateways: Offer integration with various payment methods, including credit/debit cards, digital wallets, and bank transfers.

Split Payments and Installments: Allow group travelers to split payments among themselves or provide installment options for high-value bookings**.**

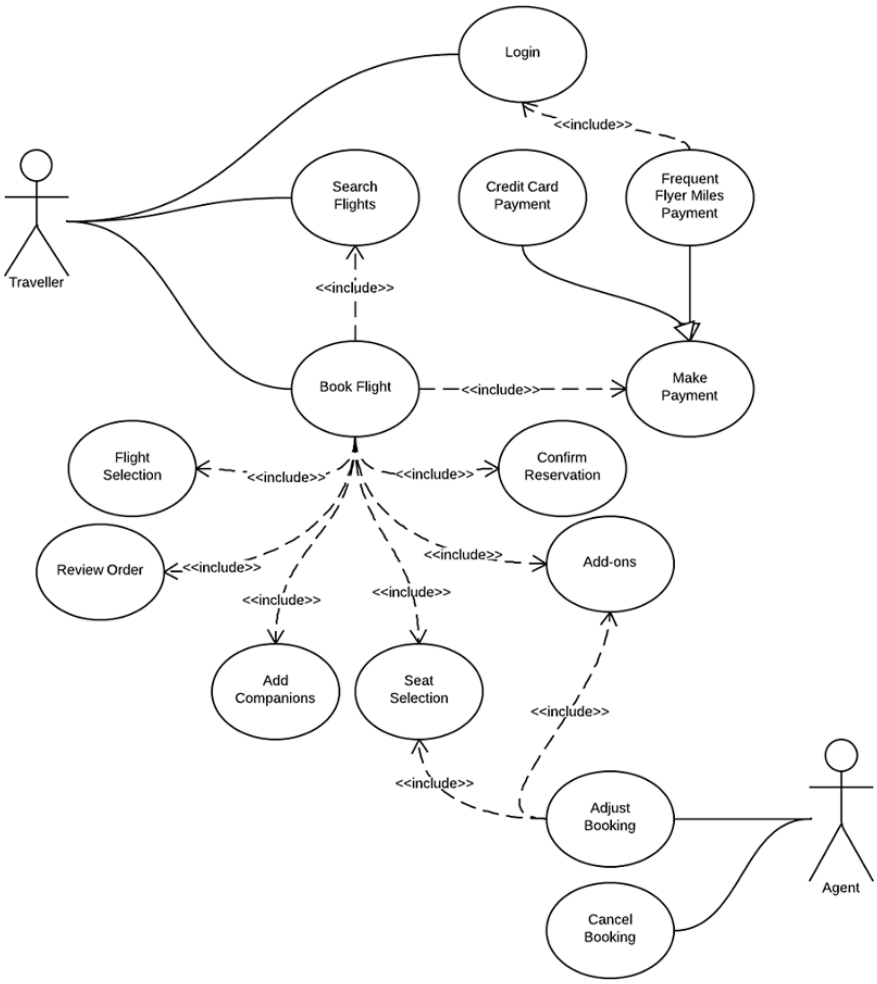
OPERATIONS:

Website Design for Travel Booking System

1.User-Centric Navigation and Layout: The website design for a travel booking system should prioritize a user-centric navigation and layout, making it easy for travelers to find and book services efficiently.

2.Visual Appeal and Engaging Elements: The travel booking website should prioritize visual appeal and interactive design elements to captivate users and enhance their experience. Featuring high-quality images of destinations, interactive maps, and virtual tours can inspire users to explore and book. Showcasing customer reviews, travel tips, and real-time updates such as flight availability and discounts helps users make informed choices.

BLOCK DIAGRAM



MODULE DESCRIPTION:

“Frontend and Backend” are the two primary parts of web development, each with distinct roles in building a web application.

Frontend:

The frontend is the user-facing part of a web application—the part that users directly interact with, also known as the "client-side." It involves the layout, design, and interactivity of the application. Key aspects are:

Languages:

I. **HTML (Hyper-Text Markup Language)**: Defines the structure of the webpage.

II. **CSS (Cascading Style Sheets)**: Styles the HTML elements, controlling layout, colors, fonts, etc.

III. **JavaScript**: Adds interactivity, like form validation, animations, and responsive elements.

Backend:

The backend is the server-side part of the application, responsible for handling data, business logic, and server-related operations.

Languages:

I. Common backend languages include Java, Python, PHP, Ruby, Node.js.

II. **Frameworks:** Backend frameworks streamline development. Examples include Django for Python, Express.js for Node.js, and Spring Boot for Java.

III. **Databases:** Databases store and manage application data, such as user profiles and content. Examples include MySQL, PostgreSQL, MongoDB, and SQLite.

IMPLEMENTATION:

Index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Travel Website - Sign Up</title>
    <link rel="preconnect" href="https://fonts.gstatic.com">
    <link
href="https://fonts.googleapis.com/css2?family=Poppins:wght@300;400;500&display=swap
" rel="stylesheet">
    <style>
        * {
            margin: 0;
            padding: 0;
            box-sizing: border-box;
            font-family: 'Poppins', Arial, sans-serif;
        }

        body {
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
            background-color: #f3f4f6;
            background: url(v.jpg) no-repeat center center/cover;
        }

        .signup-container {
            padding: 2rem;
            border-radius: 12px;
```

```
    width: 90%;
    max-width: 400px;
    text-align: center;
}

.signup-container h2 {
    margin-bottom: 1.5rem;
    font-size: 2rem;
    color: black;
}

.signup-form .form-group {
    margin-bottom: 1.5rem;
    text-align: left;
}

.signup-form label {
    display: block;
    margin-bottom: 0.5rem;
    font-weight: 500;
    color:black;
}

.signup-form input {
    width: 100%;
    padding: 0.8rem;
    border: 1px solid #ccc;
    border-radius: 8px;
    font-size: 1rem;
```

```
    color: #333;
    transition: border-color 0.3s, box-shadow 0.3s;
}

.signup-form input:focus {
    border-color: #007bff;
    outline: none;
    box-shadow: 0 0 8px rgba(0, 123, 255, 0.3);
}

.btn {
    width: 100%;
    padding: 0.9rem;
    background-color: #007bff;
    border: none;
    border-radius: 8px;
    font-size: 1rem;
    color: #fff;
    cursor: pointer;
    transition: background-color 0.3s;
}

.btn:hover {
    background-color: #0056b3;
}

.signup-container p {
    margin-top: 1rem;
    font-size: 0.95rem;
```

```
            color: #555;
        }

        .signup-container a {
            color: #007bff;
            text-decoration: none;
            transition: color 0.3s;
        }

        .signup-container a:hover {
            color: #0056b3;
            text-decoration: underline;
        }
    </style>
</head>
<body>
    <div class="signup-container">
        <h2>Create an Account</h2>
        <form action="su.php" method="POST" class="signup-form">
            <div class="form-group">
                <label for="name">Full Name</label>
                <input type="text" id="name" name="name" required>
            </div>
            <div class="form-group">
                <label for="username">Username</label>
                <input type="text" id="username" name="username" required>
            </div>
            <div class="form-group">
                <label for="password">Create Password</label>
```

```
            <input type="password" id="password" name="password" required>
        </div>
        <div class="form-group">
            <label for="confirm-password">Confirm Password</label>
            <input type="password" id="confirm-password" name="confirm-password"
required>
        </div>
        <button type="submit" class="btn">Sign Up</button>
    </form>
    <p style="color:black;">Already have an account? <a href="login.html">Login
here</a></p>
  </div>
</body>
</html>
```

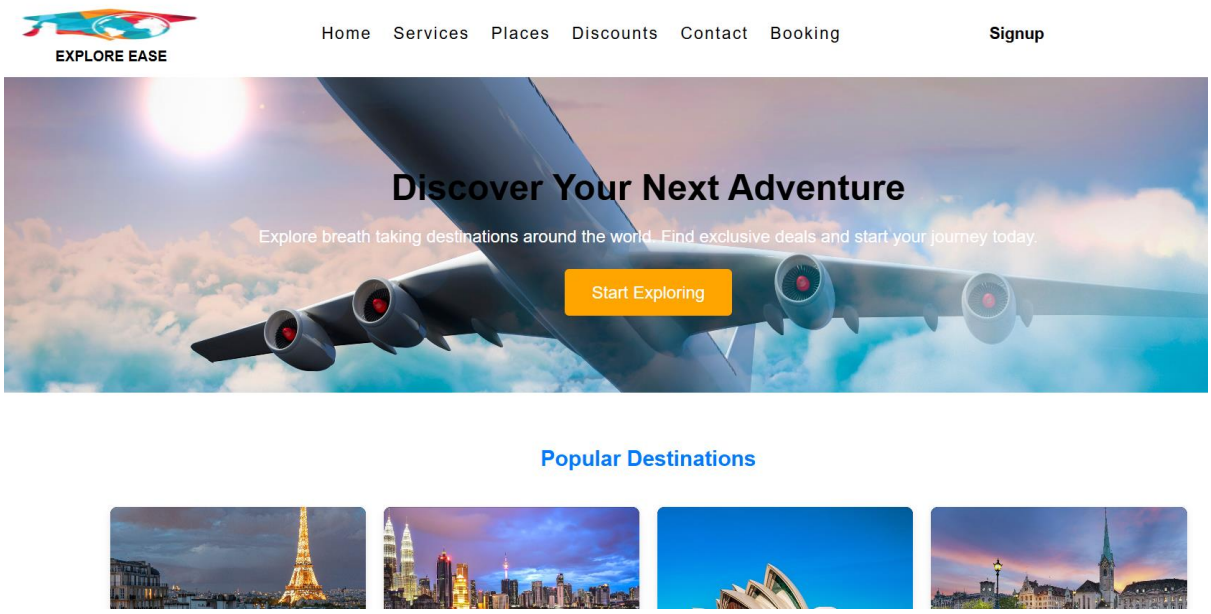
SU.PHP

```
<?php
$name = filter_input(INPUT_POST, 'name');
$username = filter_input(INPUT_POST, 'username');
$password = filter_input(INPUT_POST, 'password');
$confirm_password = filter_input(INPUT_POST, 'confirm-password');

if (!empty($username)) {
  if (!empty($password)) {
    if (!empty($name)) {
      if ($password === $confirm_password) {
        $host = "localhost";
        $dbusername = "root";
        $dbpassword = "";
        $dbname = "travel";
```

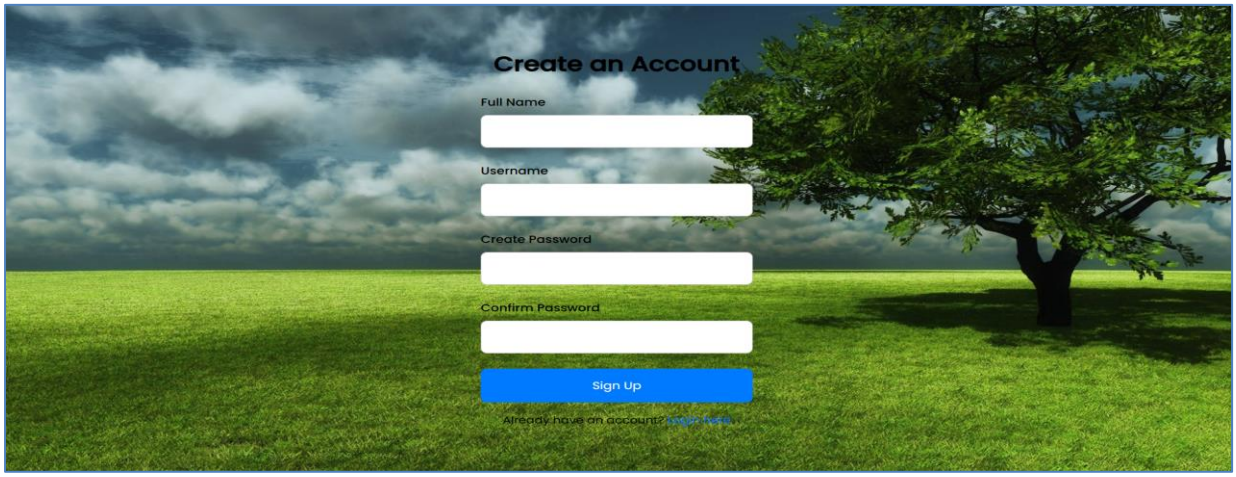
```
            $conn = new mysqli($host, $dbusername, $dbpassword, $dbname);


            if ($conn->connect_error) {
                die("Connection failed: " . $conn->connect_error);
            } else {
                $hashed_password = password_hash($password, PASSWORD_DEFAULT);
                $sql = "INSERT INTO users1 (name, username, password) VALUES ('$name',
'$username', '$hashed_password')";


                if ($conn->query($sql)) {
                    echo "New record inserted successfully";
                } else {
                    echo "Error: " . $sql . "<br>" . $conn->error;
                }
                $conn->close();
            }
        } else {
            echo "Passwords do not match";
        }
    } else {
        echo "Name should not be empty";
    }
  } else {
    echo "Password should not be empty";
  }
} else {
  echo "Username should not be empty";
  die();
}
```

RESULTS:

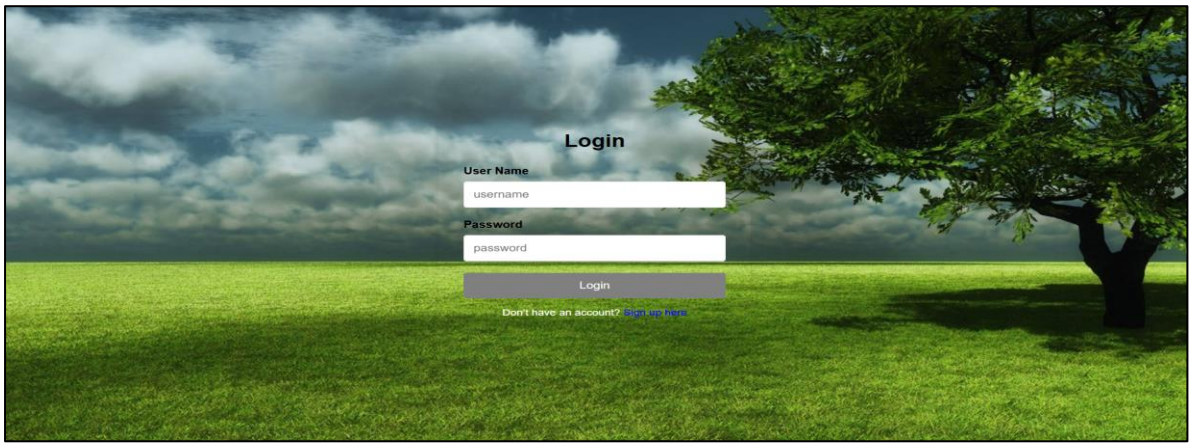
1.Home page:



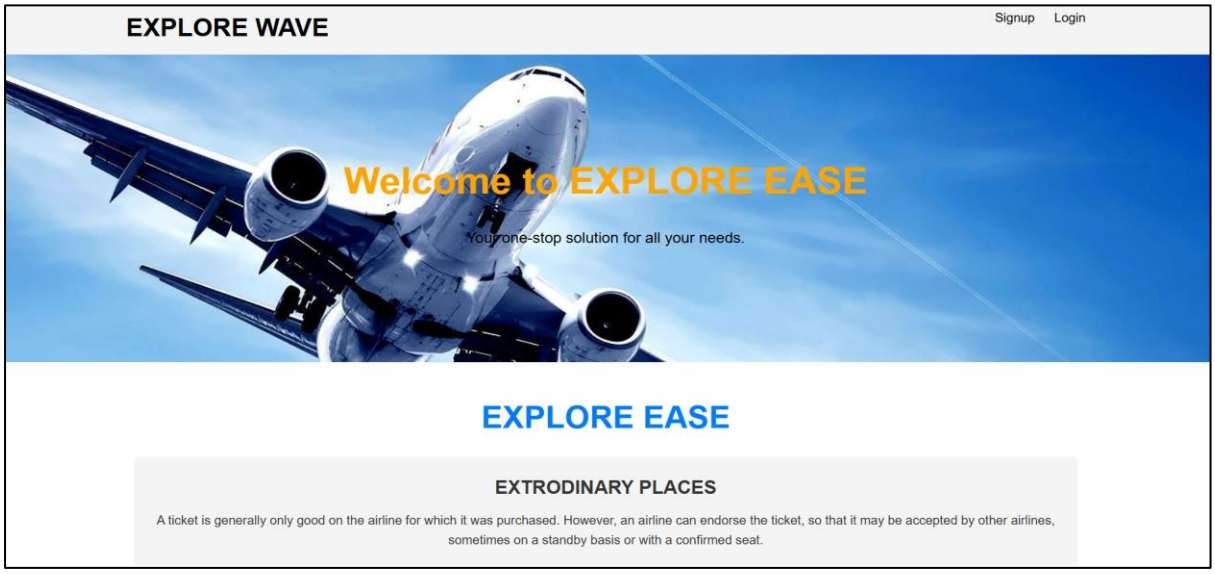
2.signup page:



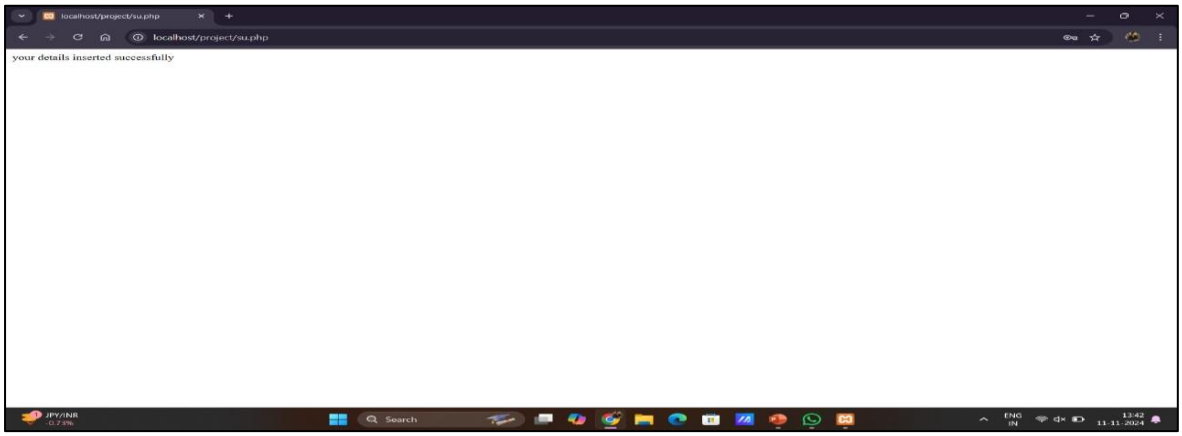
3.login page:



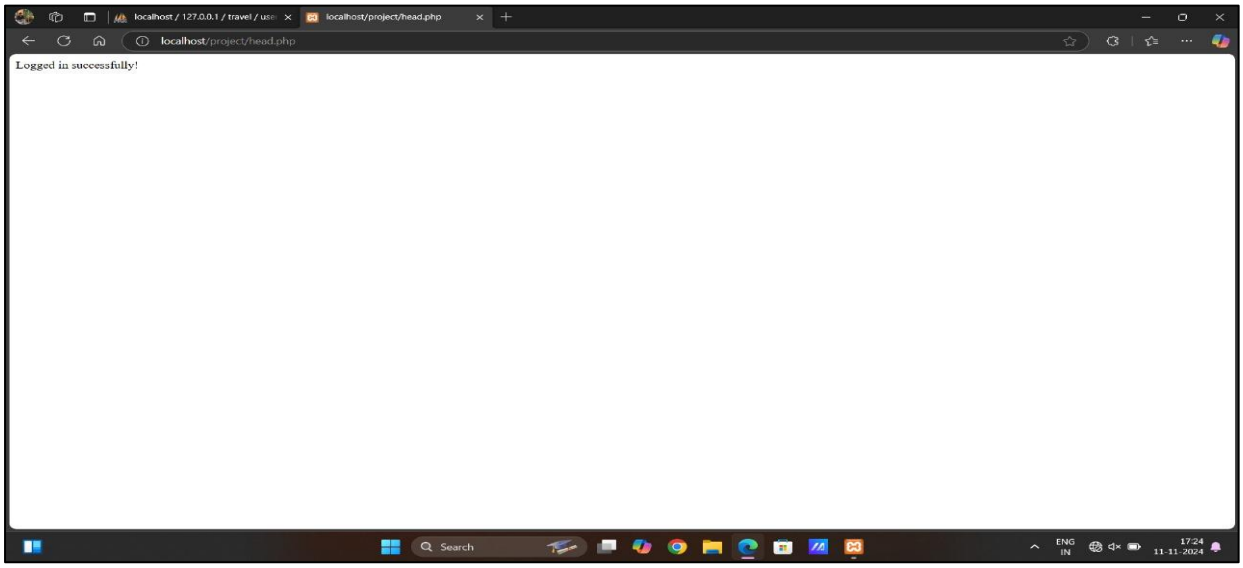
4.Demo page:



5.Inserting data successfully:



6.Logged Successfully:



CONCLUSION:

The travel booking system website provides a seamless and user-friendly platform for customers to book flights, hotels, and tours, ensuring a smooth travel experience. By integrating advanced features like real-time availability, secure payment processing, and personalized recommendations, the website aims to meet the diverse needs of travelers. The design focuses on simplicity and functionality, offering intuitive navigation that enhances user satisfaction. Overall, the platform is built to provide efficiency and convenience, positioning it as a trusted resource for both leisure and business travelers.

FUTURE ENHANCEMENT:

In the future, the travel booking system could be enhanced with AI-powered features like voice search, personalized travel itineraries, and predictive pricing algorithms to offer users better deals. Additionally, implementing a multi-language and multi-currency feature would cater to international users, expanding the website's global reach. Integration with social media for easy sharing of travel experiences and user-generated content would further increase engagement.

The future of travel booking systems lies in their ability to continuously evolve and adapt to emerging technologies and user expectations. Artificial intelligence (AI) and machine learning will play a pivotal role in enhancing personalization, offering tailored travel recommendations based on user preferences and behaviors. Predictive analytics will enable dynamic pricing, helping users secure the best deals while maximizing revenue for service providers. Integration of blockchain technology can revolutionize secure transactions, data transparency, and loyalty programs, creating trust and reducing fraud. Furthermore, augmented reality (AR) and virtual reality (VR) will transform how users explore destinations and accommodations, allowing virtual tours before making decisions. Enhanced mobile applications, equipped with offline capabilities and IoT integration, will offer seamless access and real-time updates during travel. Additionally, eco-conscious features, such as carbon footprint tracking and highlighting sustainable travel options, will align with the growing demand for environmentally responsible tourism. By embracing these advancements, travel booking systems will become more intuitive, efficient, and aligned with the needs of both travelers and service providers.

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