PREMIER UNIVERSITY, CHATTOGRAM

Department of Computer Science & Engineering

Project Report

On

"Event Planner"

SUBMITTED BY

Name: Sohela Showrin

ID: 2104010202199

Name: Rahin Toshmi Ohee

ID: 2104010202204

Name: Tahsina Tanvin

ID: 2104010202226

In partial fulfillment for the degree of

Bachelor of Science in Computer Science & Engineering under the Supervision of

Dhrubajyoti Das

Assistant Professor

Department of Computer Science & Engineering

Premier University, Chattogram

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1 Introduction

1.1 Overview of the System

The Event Planner project is designed to help people and organizations manage their events more effectively. It uses Laravel 10 for the backend, which is a strong and secure framework, and Bootstrap 4 for the frontend, which makes the website look good and work well on any device. By using the latest web technologies, the Event Planner project aims to make event planning simpler and more efficient, while also being easy to use and secure. The project will create a platform where users can register, choose events, make payments, and manage their details. It will also make sure that data is secure and the system works well with other tools. The goal of this project is to improve how events are planned and managed. As more people and organizations look for digital solutions, the Event Planner project will help make the process easier and more effective.

Security is a priority, with built-in features such as data encryption and user authentication. The system will connect with other tools, like email services, to make sure users have a smooth experience without needing to switch between different platforms. The platform will also be customizable, allowing event organizers to adjust features to fit their specific needs. For example, they can set up different event types or change the layout to match their event's requirements. This flexibility makes the platform suitable for a wide range of events, from small gatherings to large functions.

1.2 Significance and Motivation

Event planning is important for both personal and professional events, whether it's a wedding, a conference, or a community event. With busy lives and increasing expectations, having a smooth and reliable way to manage these events is essential. Online tools have changed how we plan events, making it easier to organize and manage them.

This project is motivated by the need for a better solution. Its motives to create a platform that combines all necessary features into one easy-to-use tool. By using modern technology, it will handle registrations, scheduling, mailing, and review in a streamlined way. The goal is to provide a flexible and user-friendly system that meets various event planning needs. This will help individuals and organizations manage their events more efficiently and effectively, making event planning less stressful and more enjoyable.

2 Problem Statement

2.1 Addressing Key System Gaps

The Event Planner project addresses a significant gap in the current event management systems. Many existing platforms for event planning either lack user-friendliness, are expensive, or are not customizable enough for different types of events. Additionally, smaller organizations and individuals often struggle to find tools that are both affordable and comprehensive, forcing them to use multiple platforms for various aspects of event management, such as registrations, payments, and feedback collection.

2.2 Challenges in Existing Event Planning Tools

Current event management systems often face several problems:

1. **Complex User Interfaces:** Some systems have complicated interfaces that can be difficult for users to navigate,leading frustration and wasted time.

2. **Poor Customization:** Existing platforms often don't allow much customization. Many tools don't offer the flexibility to meet different needs.

3. **Limited Features:** Many tools only cover one part of event management.

4. **Inadequate Review System:** Some platforms fail to offer comprehensive reporting and analytics features, making it hard to track event performance.

2.3 Efficient Event Planning with a Modern Touch

Our project aims to solve these problems by creating a simple, all-in-one event planning system using Laravel 10 and Bootstrap 4. Our project includes the below parts-

a. **Be Easy to Use:** Provides a user-friendly interface for both organizers and attendees.

b. **Handle Everything:** Manage all aspects of an event from start to finish, including registration, scheduling, and communication.

c. **Offer Customization:** Provide options to customize the event setup to fit different types of events, like weddings or corporate functions.

d. **Mailing System:** Booked events are sent to the customer via email.

e. **Package Customization:** Customers can book basic, medium, and premium services as per their requirements.

We make our event planning project easier and more affordable. It will provide a complete solution for managing events by handling everything from registration and scheduling to communication. The platform will be easy to use for both organizers and guests. It will also offer customization options to suit different types of events, and features like email updates and various service packages. By addressing common issues with current systems, this project will help people organize and manage their events more effectively .

3 Objectives

The objectives of the Event Planner project are as follows:

1. To develop an integrated event management system that allows users to plan, organize, and execute events efficiently.
2. To create a well-built event creation and management system, allowing users to add, edit, and delete events.
3. To implement secure user authentication and authorization with Laravel 10 to manage different user roles.
4. To design an interactive dashboard for administrators to monitor event statistics, registrations, and review.
5. To allow participants to register for events and receive email notifications upon successful booking.
6. To enable event organizers to upload media, such as images.

4 Methodology

4.1 Requirement Identification

4.1.1 Literature review

Many existing event planning and management systems address only specific aspects of event management. Effective event planning involves managing numerous resources over an extended period, including budgeting, venue booking, decoration, catering, and more. Coordination between the event manager, clients, service providers, and contractors is crucial and often involves extensive communication, which can lead to confusion, errors, delays, and budget adjustments.Currently, there is no comprehensive portal in Nigeria that integrates all steps of event planning into a single platform. Existing systems lack the flexibility and integration necessary for efficient management [1]. To address these issues, a new framework for an integrated event planning and management system is proposed, dividing the system into an event webpage and an administration section. This framework is evaluated for speed, performance, and user interface consistency across major web browsers [1].

The Event Organization and Job Portal System offers a comprehensive solution for planning and managing various events, including festivals, weddings, and family gatherings. This system simplifies the process of booking venues such as restaurants and convention halls through an online platform, allowing users to view services, schedules, and make

reservations efficiently. Additionally, it provides a job placement service tailored to individual preferences for part-time or full-time work, benefiting both event organizers and job seekers. This dual-functionality supports small events and assists students and unemployed individuals in finding suitable employment opportunities [2].

Event management, from a project management perspective, requires effective tools to ensure successful outcomes. This thesis focuses on developing a web-based solution to streamline event management processes. The system, built using HTML5, CSS, and the Laravel framework, incorporates the Bootstrap framework to ensure mobile compatibility. The application offers functionalities for creating events, managing attendees, and processing ticket sales, with various payment options available. This online tool aims to enhance the efficiency of event organizers and improve user experience [3].

Event management has evolved significantly with the advent of digital tools designed to streamline planning and execution processes. Effective management of events, from conceptualization to execution, is crucial for success. Recent studies have shown that web-based event management systems offer substantial improvements in handling complex event logistics.A notable development in this area is the use of comprehensive online platforms that integrate various functionalities into a single system[4].

The integration of various modules within event management systems to address challenges such as scheduling conflicts and resource allocation. The study emphasizes the importance of seamless communication between different stakeholders and the benefits of a centralized platform in reducing errors and delays [5].

The development of a multi-functional event management system that includes features for small and large events, such as venue booking, catering services, and job placement for event staff, highlights the growing trend of combining event planning with job management. This approach not only aids in organizing events but also supports employment opportunities, particularly for part-time roles[6].

4.1.2 Requirement Analysis

To be able to run and develop the system or project, the minimum requirements for the system are:

- Operating system: Windows / macOS
- Internet browser: Mozilla Firefox / Google Chrome
- Web Server : Apache
- Programming Language : PHP 8.2 or later
- Backend Database : My SQL.
- Server Stack : XAMPP.
- Framework : Laravel 10.
- CSS Framework : Bootstrap 4
- PHP Package Manager: Composer
- IDE/Text Editor : Visual Studio Code (VsCode)
- Email Service : SMTP server configuration (for sending email notifications)

4.2 Design Diagram

Here,we present the design diagrams that form the architectural foundation of the Event Planner system. These diagrams provide a visual representation of system components, their interactions and workflows.

4.2.1 UML Clas Diagram

The class diagram describes the static structure of the event planner system, showcasing the system's various entities and their relationships. The key entities include User, Category, Service, ServiceRequest and Review.

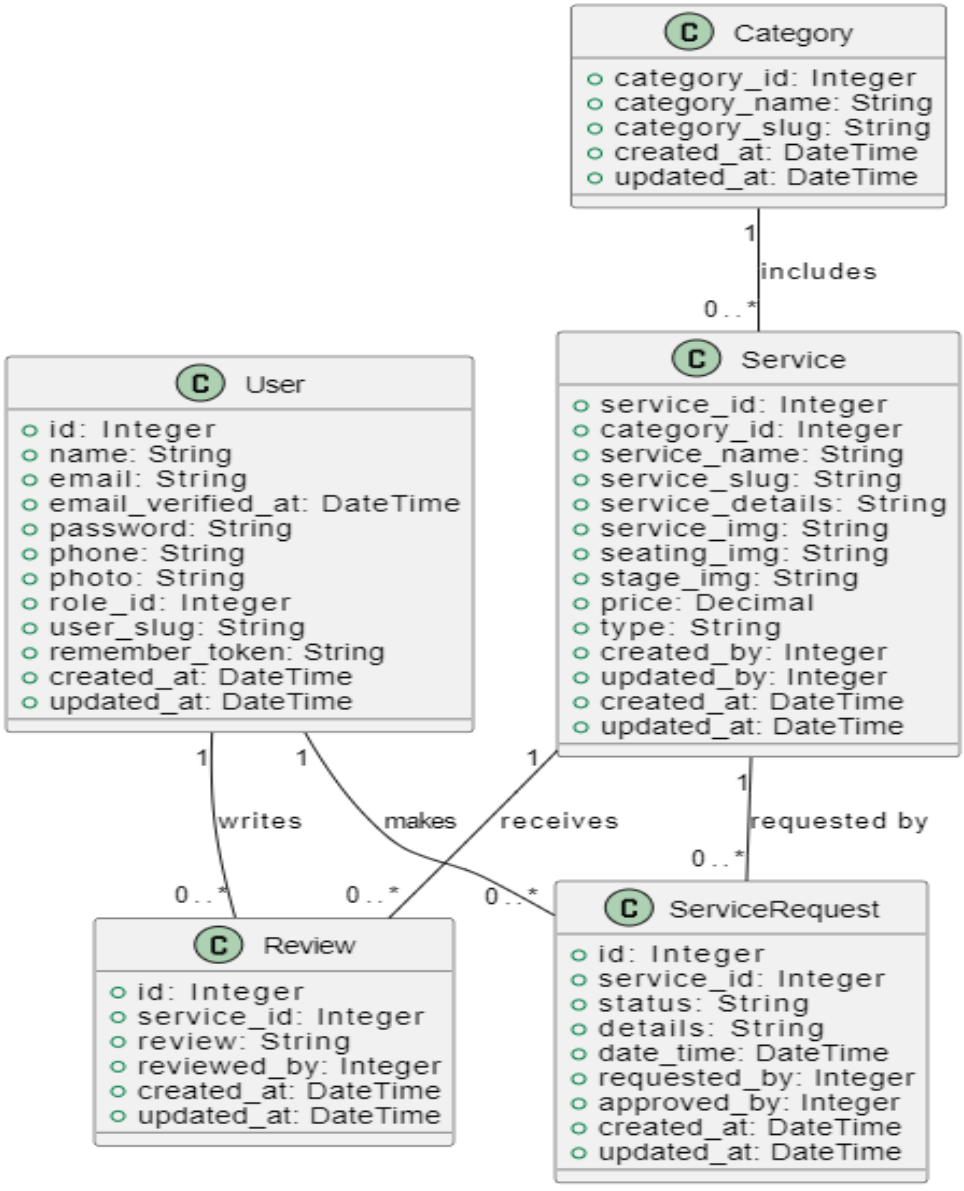

Figure 4.1: UML Class Diagram

The class diagram clearly demonstrates how different entities interact, making it easier to understand the data flow and relationships within the system.

4.2.2 Use Case Diagram

The Use Case Diagram outlines all possible actions that Customers and Admins can perform within the system. It visually represents the available features and interactions that users can have with the event planning platform.

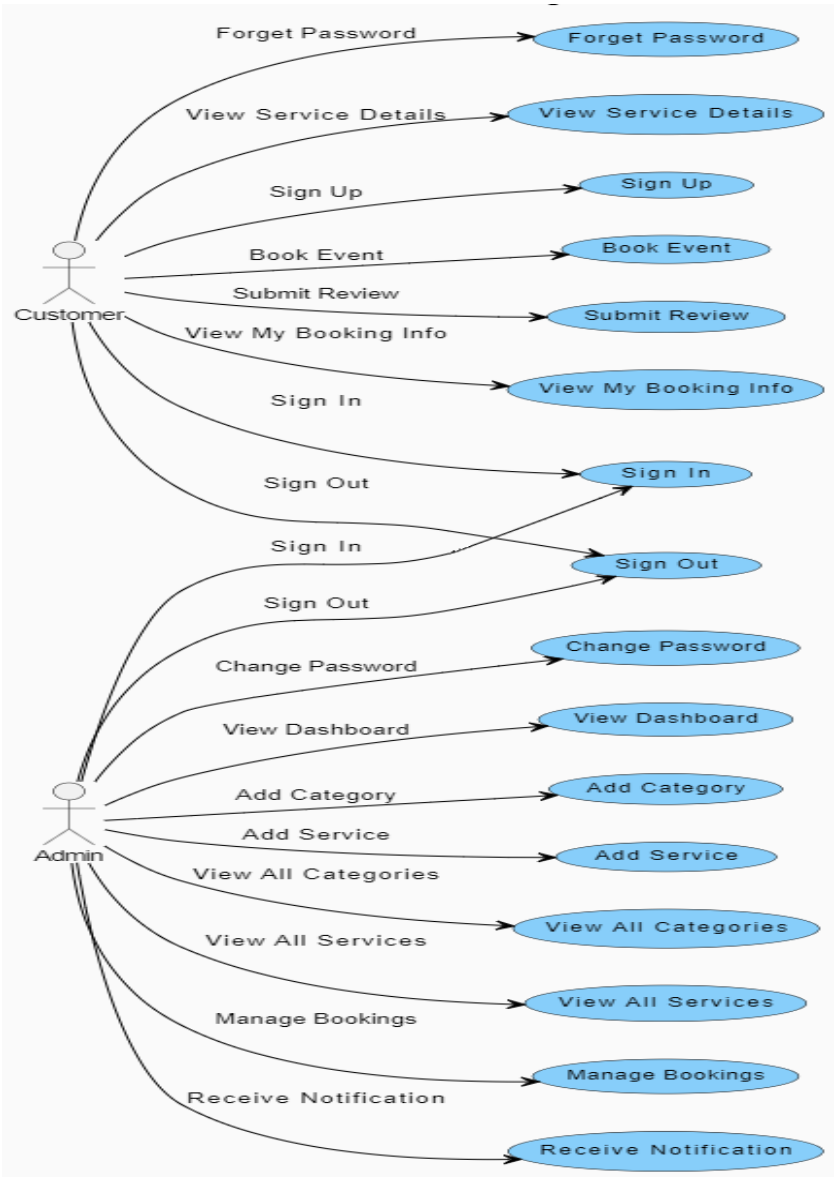

Figure 4.2: Use Case Diagram

Customer Use Cases focus on self-service features such as booking events, reviewing services and account management. Admin Use Cases are centered around system management, including adding services and handling bookings. Both users can perform actions related to account security and user interaction.

4.2.3 Entity Relationship Diagram

The ERD showcases the data model structure of an event planning and service booking system. It outlines the relationships between users, services, categories, reviews, and service requests, which are fundamental for an event planning platform.

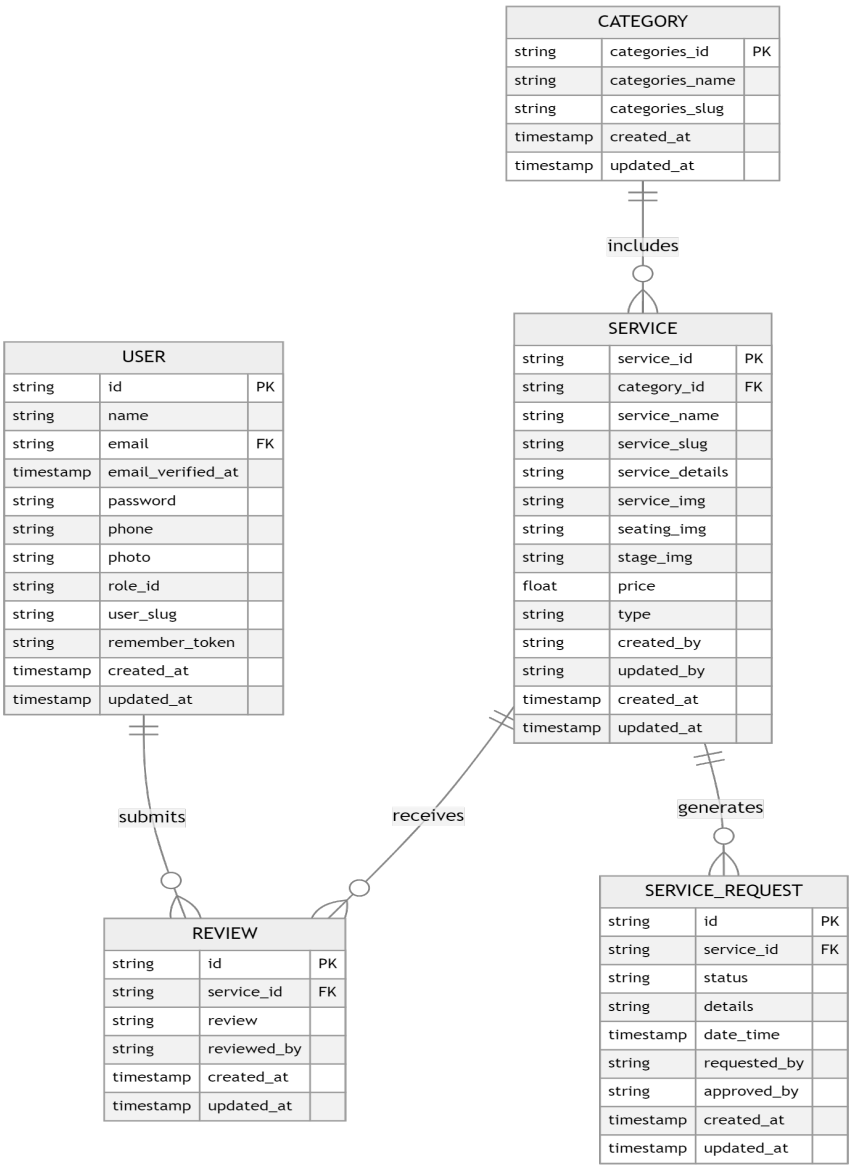

Figure 4.3: Entity Relationship Diagram

The User Entity represents individuals on the platform, either customers or admins. Key attributes include id, name, email, email_verified_at, password, and role_id, with users able to submit reviews and make service requests.

The Category Entity organizes services (e.g., catering or venue booking) and has at-

tributes like categories_id, categories_name, and categories_slug.

The Service Entity represents services offered within categories, with attributes such as service_id, service_name, and price. Services can be reviewed and booked.

The Review Entity stores user feedback with key attributes like id, review, and reviewed_by.

The Service Request Entity manages service bookings, with attributes like id, service_id, and status. Multiple one-to-many relationships exist between users, categories, services, reviews, and service requests.

4.2.4 Activity Diagram

The activity diagram outlines the flow of actions for both administrators and customers in the event planner system. It starts with the front page display, where users must choose to either sign in or sign up. If the user decides to sign in, they are prompted to enter their email and password. The system authenticates the user and determines whether the user is an admin or a regular customer. Based on this, different dashboards are displayed.

For Admins:

- Admins are directed to the Admin Dashboard after authentication.
- They can manage categories, services, and booking information.
- Once tasks are completed, admins can log out.

For Customers:

- Customers who sign in or sign up are taken to the Customer Dashboard.
- They can view services, book events, and submit reviews.
- After finishing these tasks, they have the option to log out.

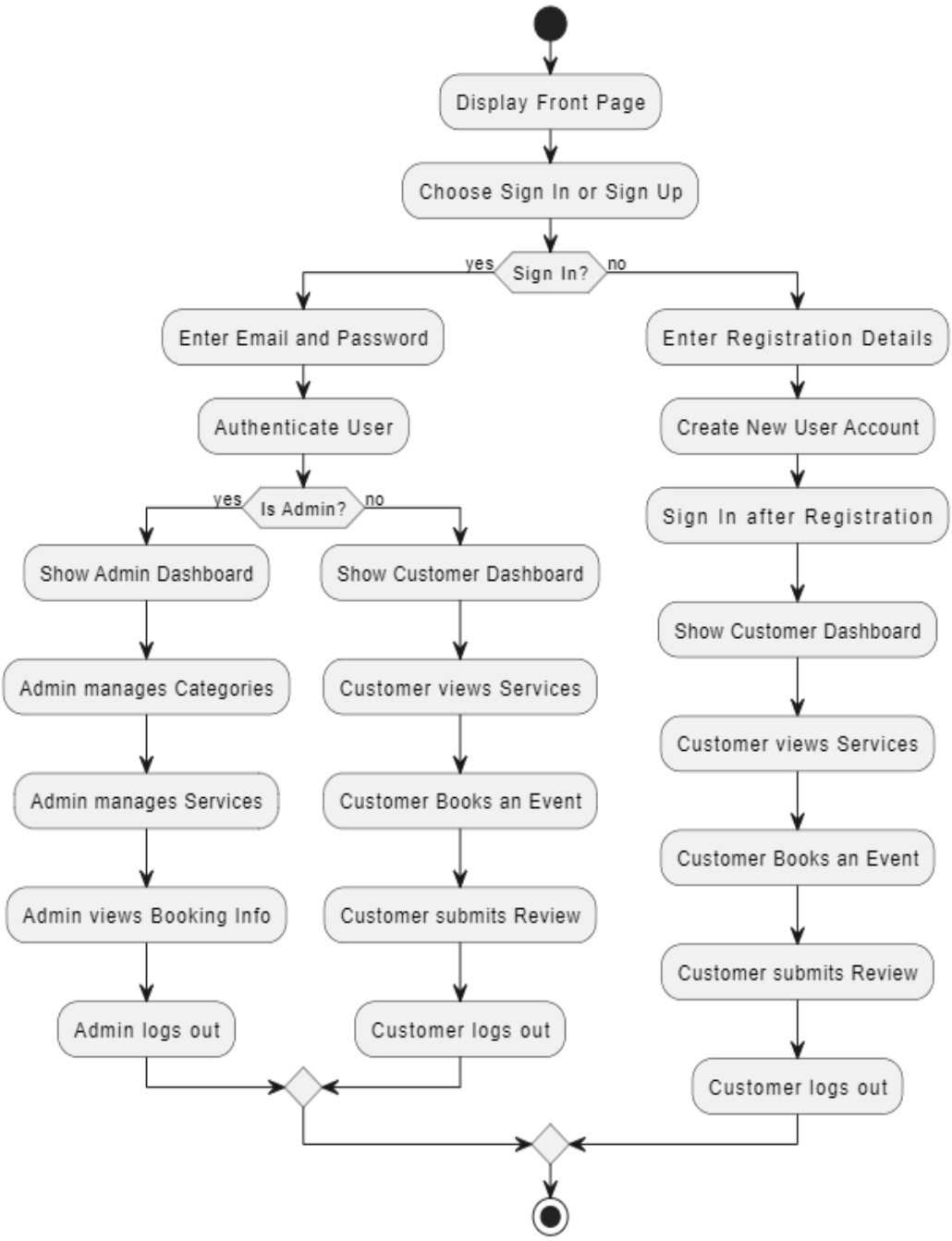

Figure 4.4: Activity Diagram

4.2.5 Sequence Diagram

The Sequence Diagram explains the interaction flow between the Customer, Admin, Website, and Database. It covers how users interact with the system, from signing up to booking services and how the system responds at each step.

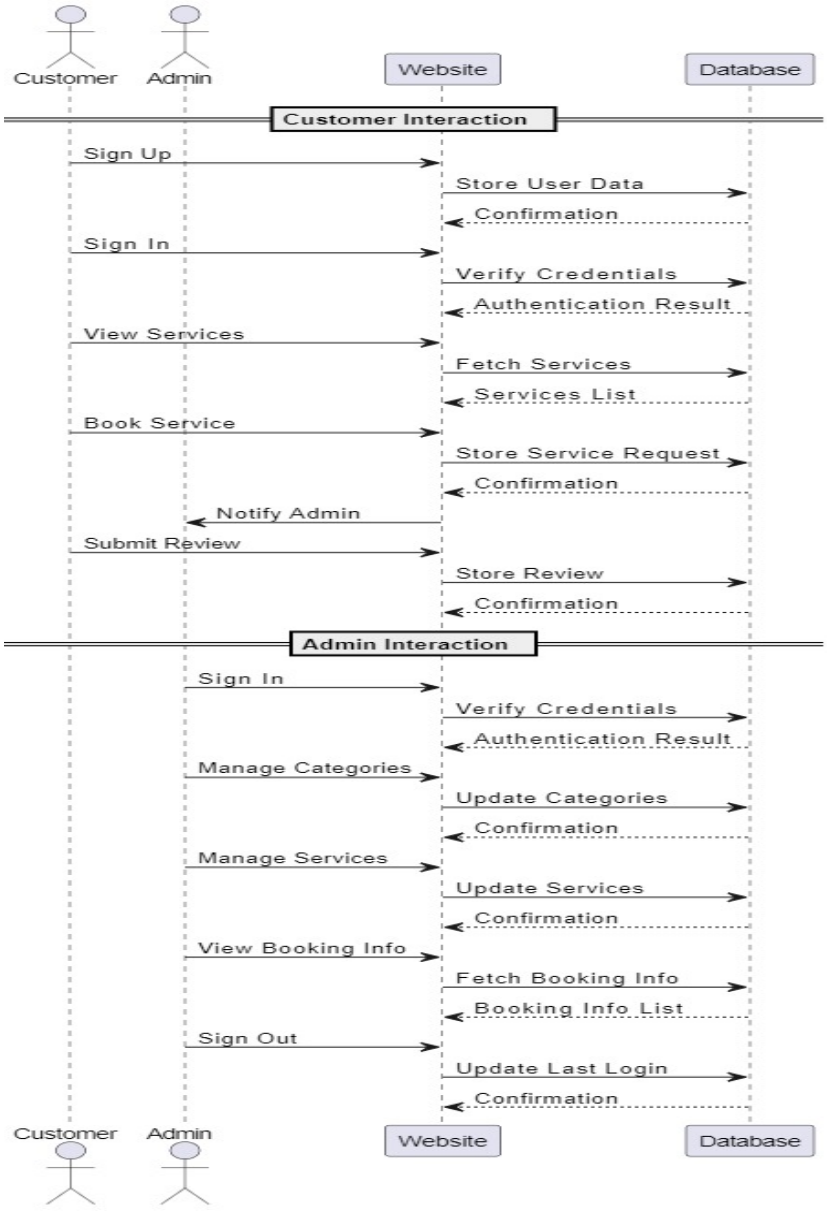

Figure 4.5: Sequence Diagram

4.2.6 Data Flow Diagram

This DFD focuses on the movement of data between users, the database, and system components. It shows how information flows between different actors (admin and customer)

and the central database that stores all critical information.

Figure 4.6: Data Flow Diagram

There are 3 interactions-

- Customer Interaction
- Admin Interaction
- Database

The dfd diagram efficiently portrays the dynamic data flow within the system, showing how different user actions affect the data stored in the system's database. It highlights the system's reliance on data transactions for smooth operation.

4.3 Feasibility Study

We have developed a PC-based system to manage event details and operations.Here is the estimated feasibility-

4.3.1 Technical

The technical feasibility of PC-based system of our project is given below-

- **Availability:** The required technology is widely accessible and works well with the existing infrastructure.
- **Integration:** It can be smoothly incorporated into the current systems with minimal complications.

4.3.2 Operational

The operational feasibility of PC-based system of our project is given below-

- **Training:** Staff will need training, but it is manageable.
- **Integration:** Can be smoothly integrated into existing operations with proper planning.

4.3.3 Economic

The economic feasibility analysis for the project evaluates the costs associated with the implementation and the potential benefits. Below is a detailed breakdown of the costs and benefits, followed by a payback period analysis.

Direct Costs

- **Capital Costs:**
  - **Hardware:** RS 50,000 (for development machines and infrastructure)

  - **Software Development and Licensing:** RS 40,000 (for development and licenses)
  - **Training and Onboarding:** RS 10,000 (for user training)
  - **Total Capital Cost:** RS 1,00,000

- **Recurring Costs:**
  - **Maintenance and Support:** RS 2,000 per month

Indirect Costs

- **Implementation Time:** Time and effort required for system transition.
- **Disruption:** Possible short-term disruptions during implementation.

Benefits

- **Tangible Benefits:**
  - **Efficiency Gains:** Estimated monthly savings of RS 15,000 from improved efficiency.
  - **Cost Reduction:** Additional savings of RS 20,000 per month through reduced operational costs.
- **Intangible Benefits:**
  - **Improved Accuracy:** Enhanced data reliability and accuracy.
  - **Enhanced User Experience:** Better user interface and increased satisfaction.

Payback Period Analysis:

- **Monthly Savings:** RS (15,000 + 20,000) = 35,000 (from efficiency and cost reductions).

- **Net Savings After Recurring Costs:** RS 35,000 - RS 2,000 = RS 33,000 per month.
- **Simple Payback:** RS 1,00,000 / RS 33,000 = 3.03 months.

Payback with Interest:

- **Monthly Interest on Capital:** 1.2% * RS 1,00,000 = RS 1,200
- **Net Savings After Interest:** RS 33,000 - RS 1,200 = RS 31,800
- **Adjusted Payback Period:** RS 1,00,000 / RS 31,800 = 3.14 months.

Cost-Benefit Analysis

• Present Value Method

Considering an interest rate of 1.2%

Assuming an interest rate of 1.2% per month, the present value of benefits accruing n months later is calculated using the formula:

$$\text{Present Value} = \frac{x}{(1+r)^n}$$

where:

x is the benefit,

r is the interest rate, and

n is the number of months.

Results

Month	Cost	Net Benefit	Present Value	Cumulative Benefit
0	Rs. 1,00,000	Rs. 0	Rs. 0	Rs. 0
1		Rs. 31,800	Rs. 31,422	Rs. 31,422
2		Rs. 31,800	Rs. 31,050	Rs. 62,472
3		Rs. 31,800	Rs. 30,682	Rs. 93,154
4		Rs. 31,800	Rs. 30,318	Rs. 1,23,472
5		Rs. 31,800	Rs. 29,958	Rs. 1,53,430

Table 4.1: Cost-Benefit Analysis

The analysis reveals that the cumulative benefits of the Event Planner exceed the costs in under 4 months. This Cost-Benefit Analysis demonstrates that investing in the platform is financially sound, with a swift payback period, ensuring cost recovery in a relatively short time frame. Both tangible and intangible benefits contribute significantly to:

1. Enhanced operational efficiency.
2. Improved user satisfaction.
3. Streamlined event management processes.
4. Higher return on investment.

4.4 Higher Level Design of System

4.4.1 Working Mechanism of Proposed System

It shows the paths for both admin and customers, including actions like login, registration, managing services, booking events, and submitting reviews. The decision points guide users based on their role and the status of actions (bookings or reviews etc).

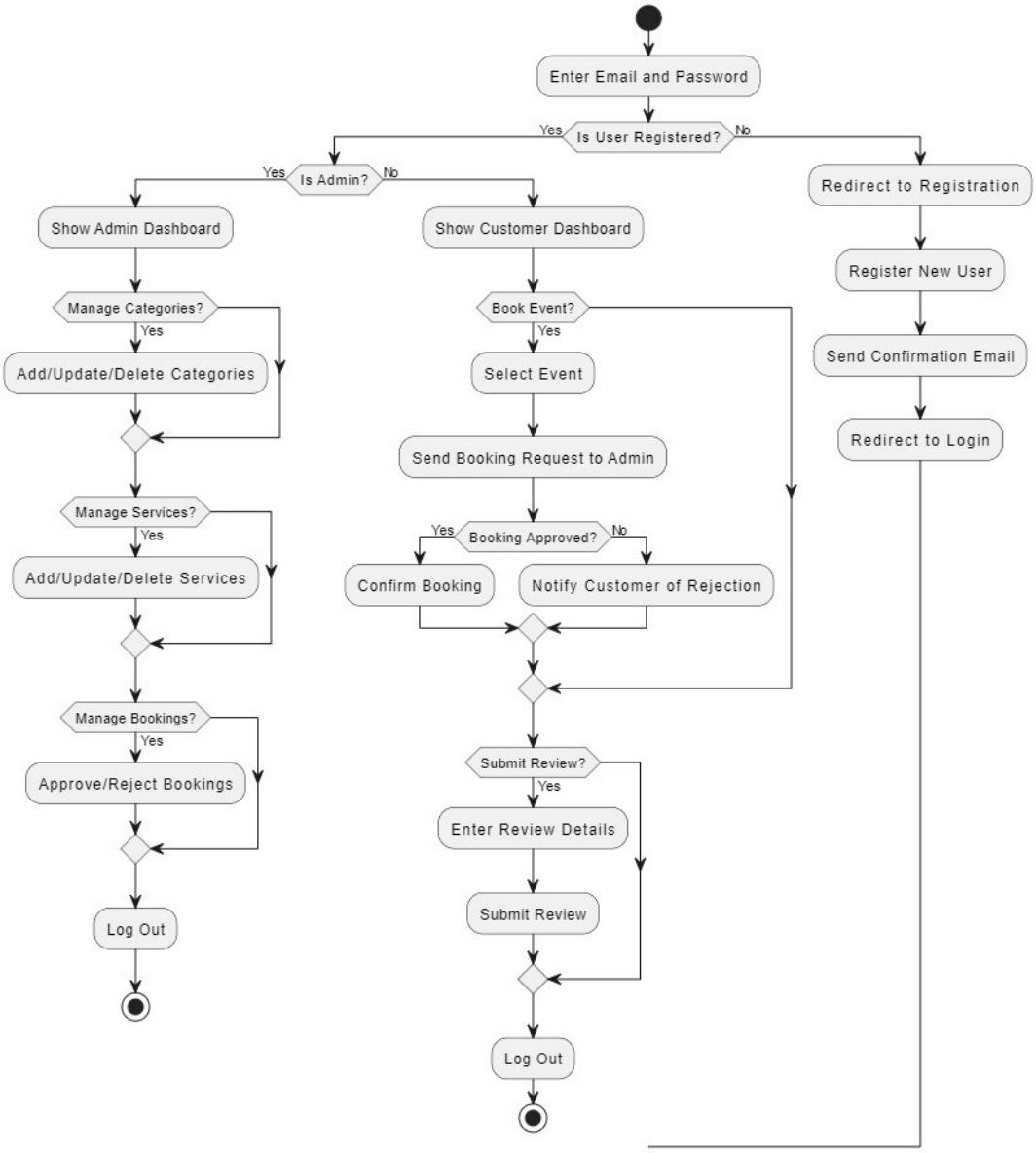

Figure 4.7: Flow Chart

5 Implementation

Main Dashboard

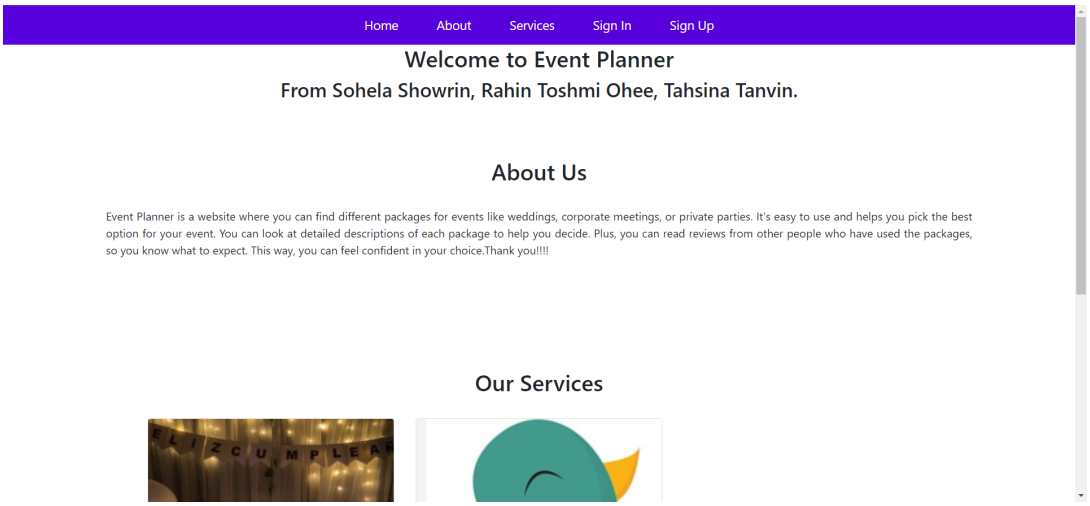

Figure 5.1: Event Home

It showcases the main dashboard of our event planning platform. It highlights the user-friendly interface. The dashboard is designed for intuitive navigation, with clear sections for **sign in, sign up, home, services, about**.

AccessHub

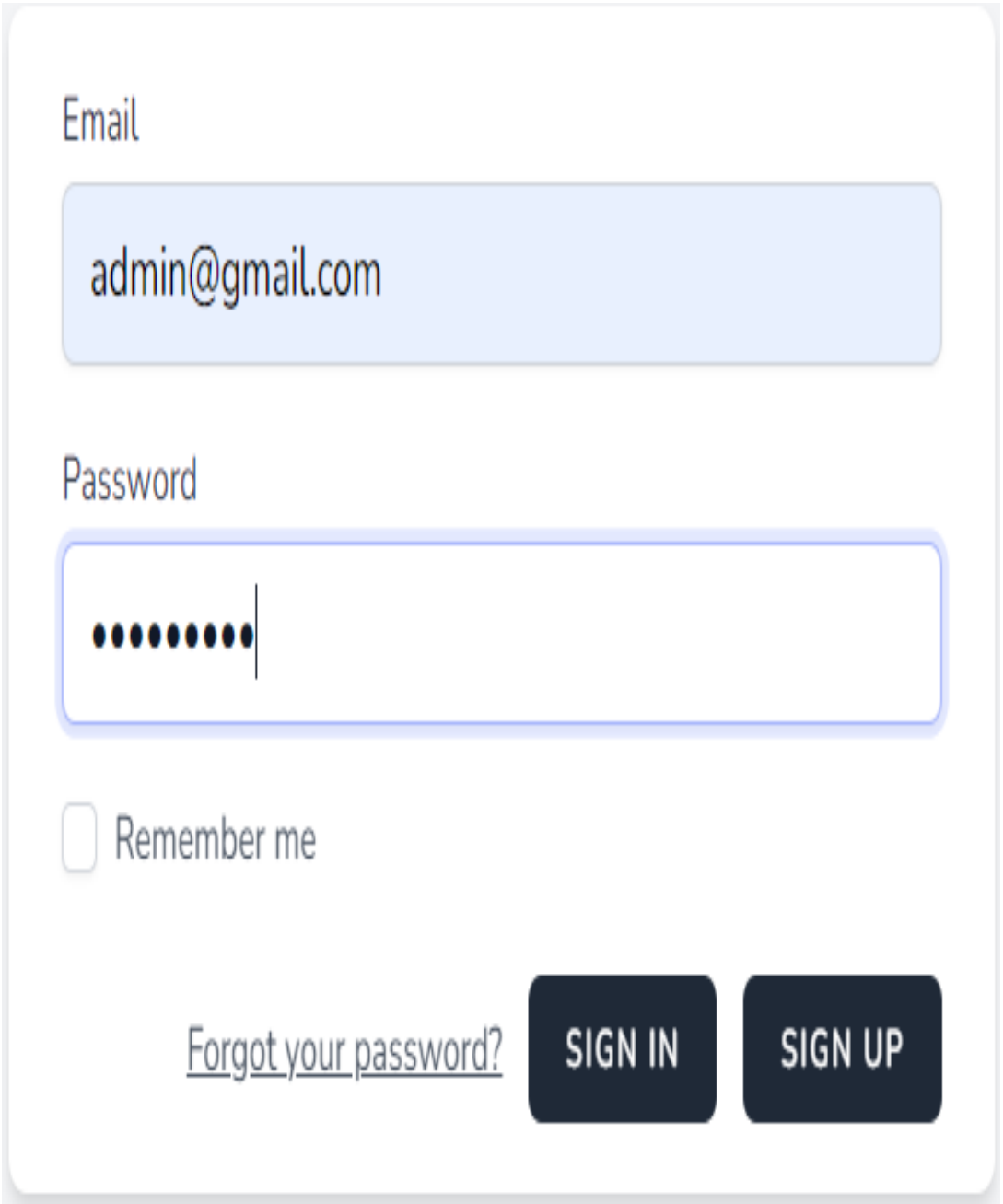

Figure 5.2: Login

The login feature allows users to securely access their accounts using their registered email and password. It ensures data protection through encryption and supports password recovery in case of forgotten credentials. Users are redirected to their personalized dashboard after successful login for a smooth event management experience.

Registration

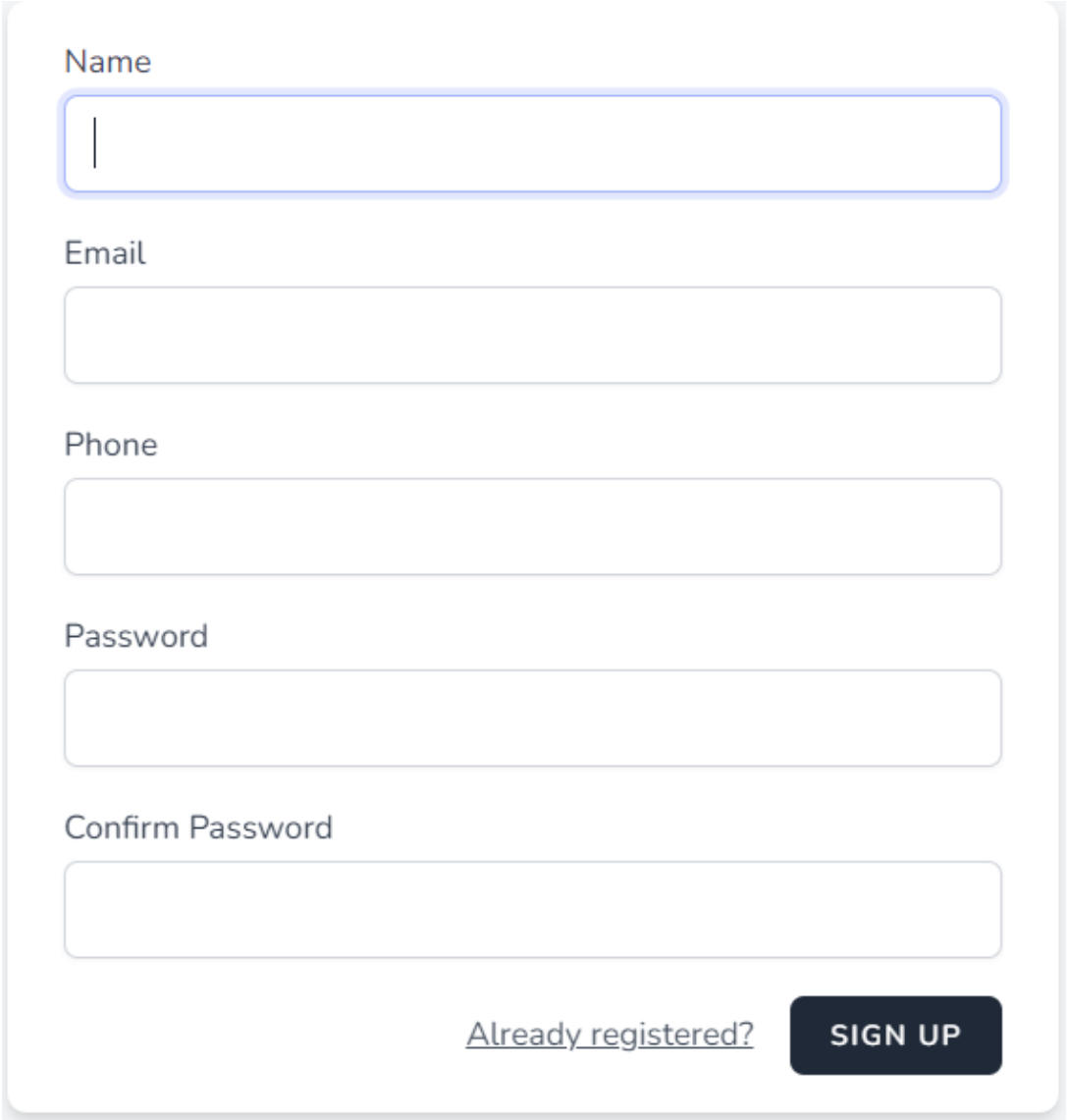

Figure 5.3: Register

The registration feature enables new users to create an account by providing their basic details, such as name, email, phone number and password. After register, they can log in and access the platform's event management tools.

Admin Dashboard

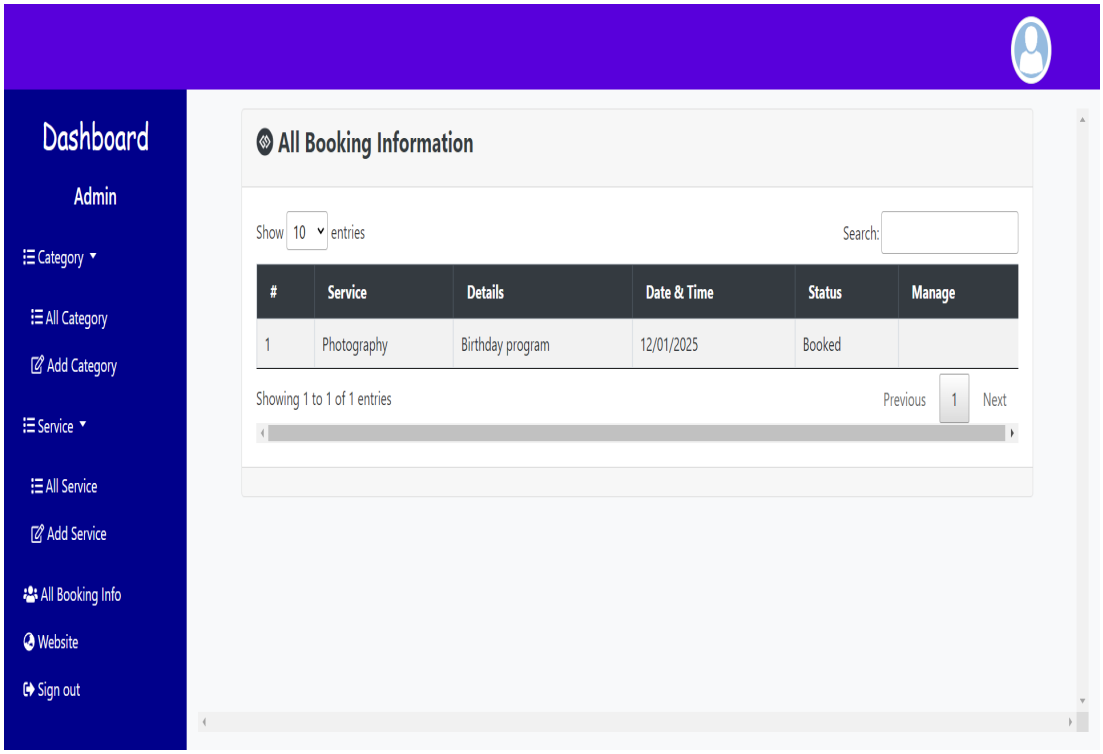

Figure 5.4: Admin

In the admin dashboard , admin can add category and services. Admin view all the services and categories as well as the booking information of the pending and booked events. Admin can view, update and delete events. In total, admin has all the capability to handle the system.

Customer Dashboard

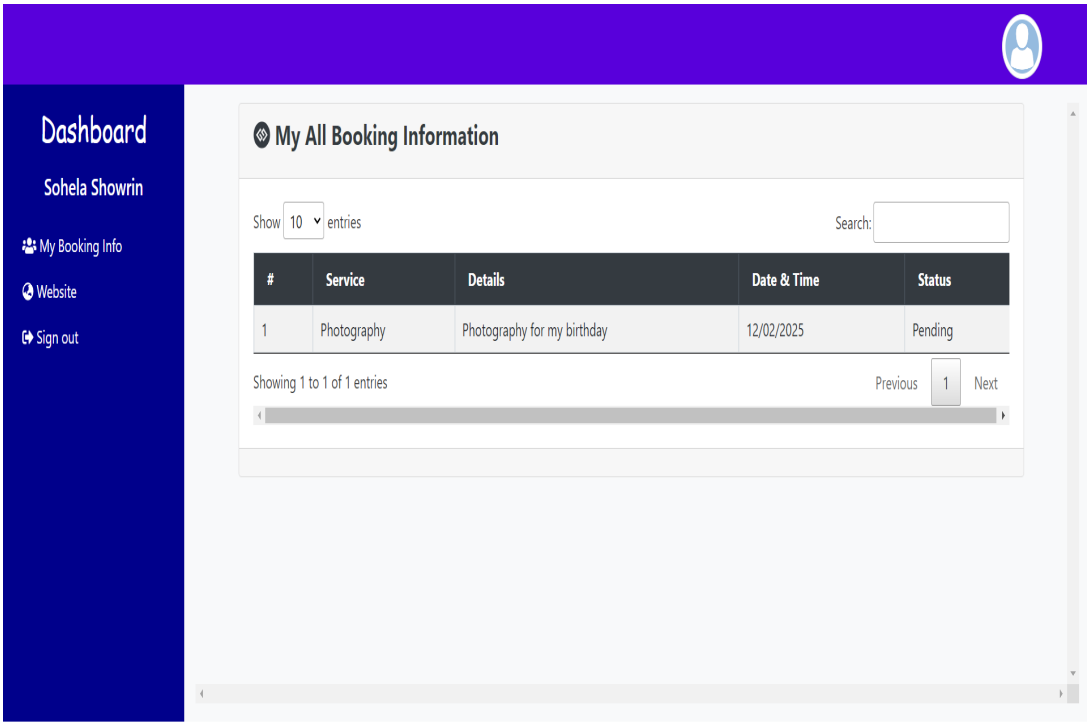

Figure 5.5: Customer

In the customer dahsboard , customer can book an event by adding the details of the events. Customer can book via the website directly also. Customer can show the booking is pending or booked via the booking information.

Add Category

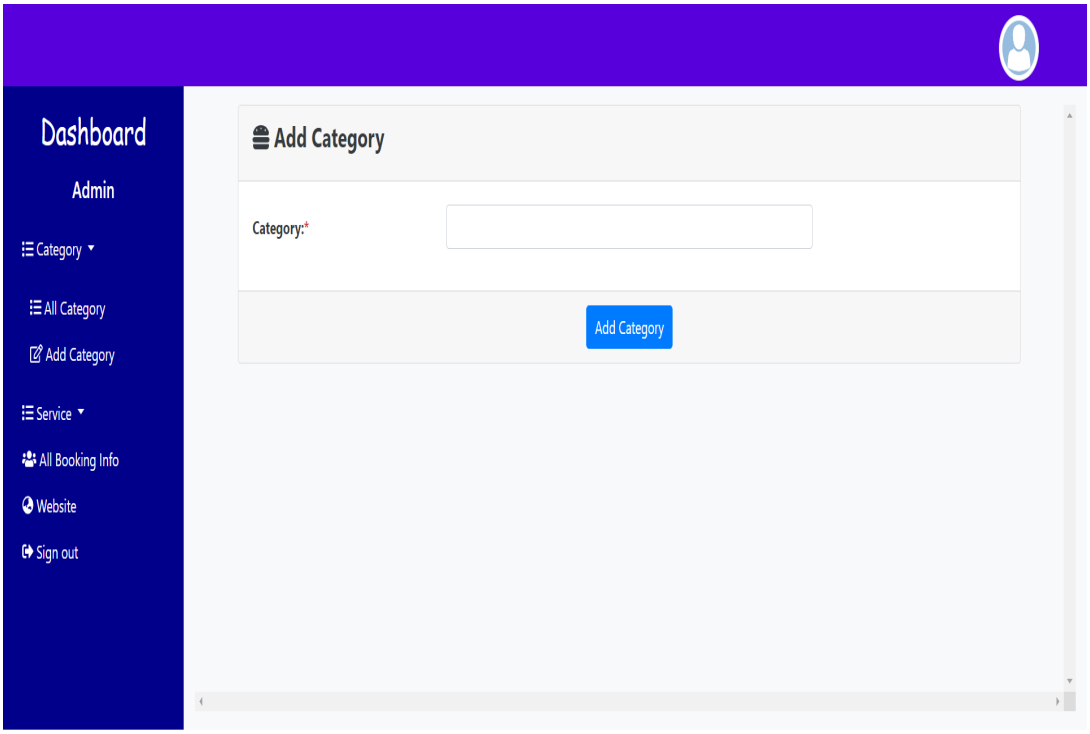

Figure 5.6: Category Add

Admin can add category depending on the admin choice. Once a category is created will be repeated to the category list.

Add Services

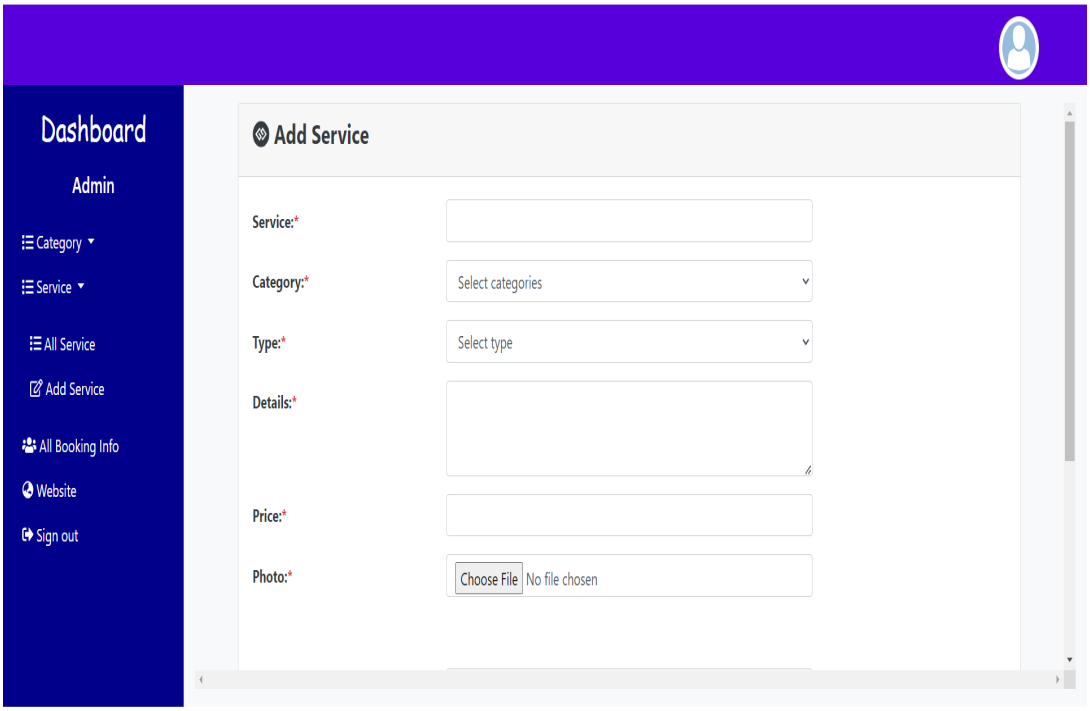

Figure 5.7: Service Add

Admin can add services adding details of the events which will be showing in the website dashboard later. Admin can add the images of the seating , stages and Photos of the specific panel via this panel.

All Category

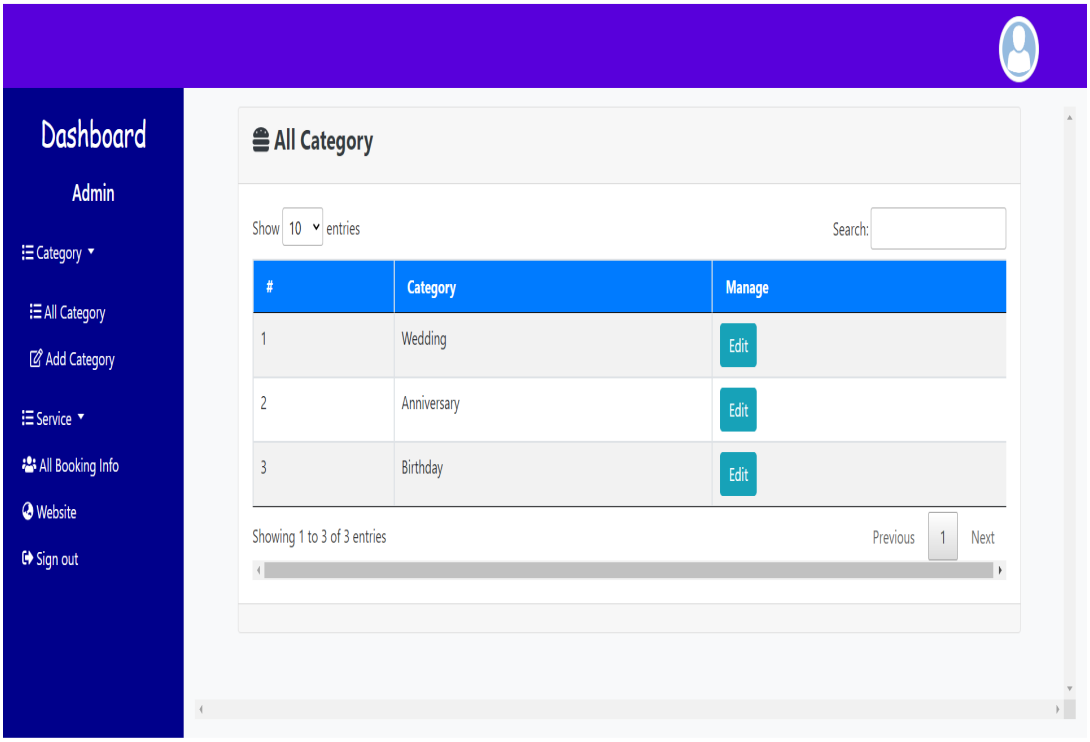

Figure 5.8: Category

Admin can show all the category listed here. He/She can edit the category name preferable to his/her choice.

All Services

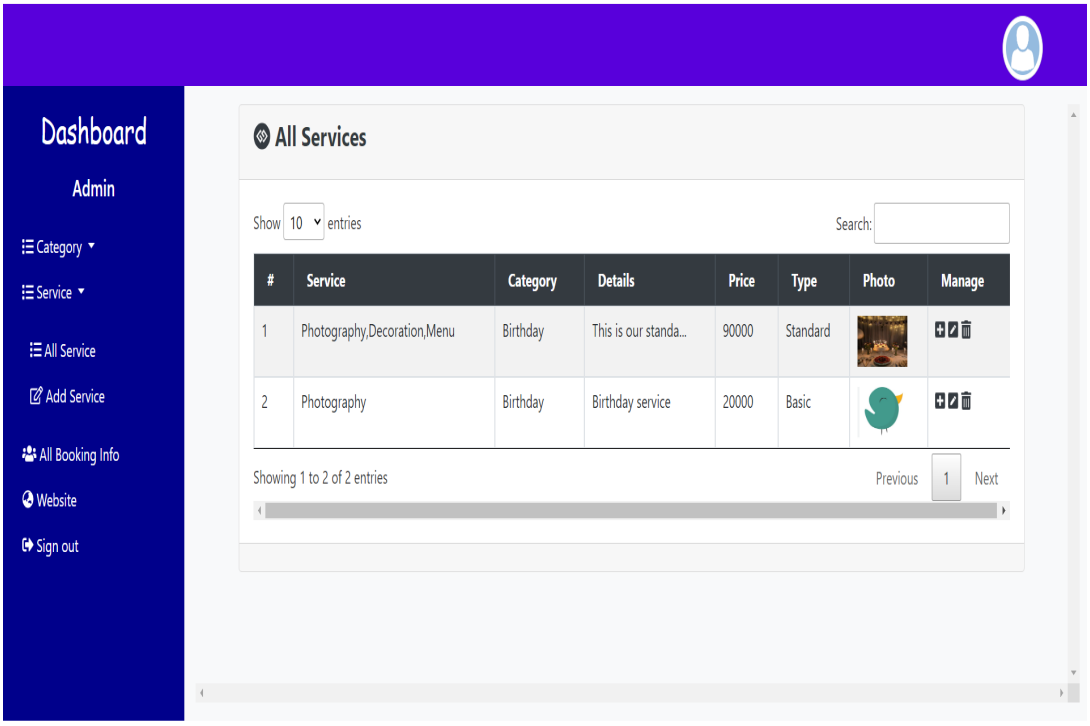

Figure 5.9: Services

Admin can see the services of the system. Admin can view, edit and delete an service. In this panel , there will be showing the details of an services such as category , price , photo and the type of the service.

Services shows in websites

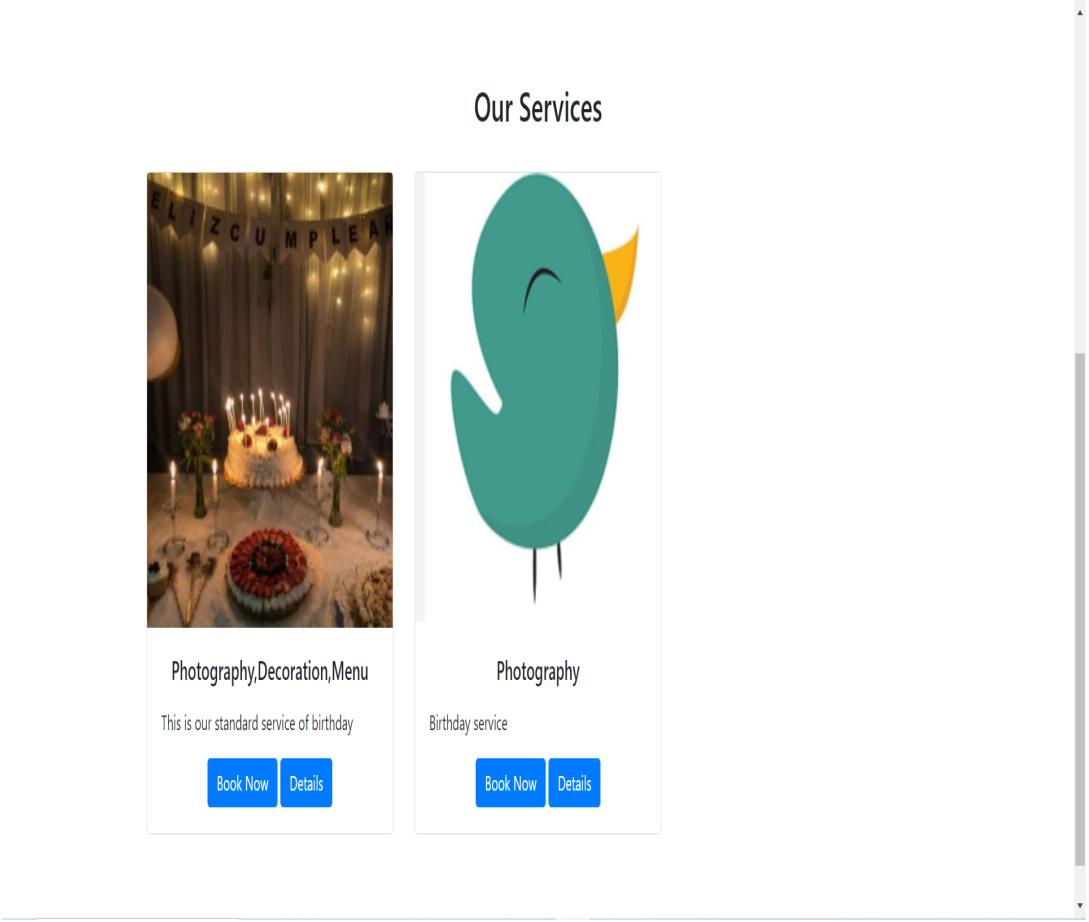

Figure 5.10: Website view of services

Services added by the admin will be showing in the website dashboard. Customer can see the details of the services . Any customer who are registered can also give feedback to the review section through the details of the services. They can also book any service directly through this panel.

Mailing System

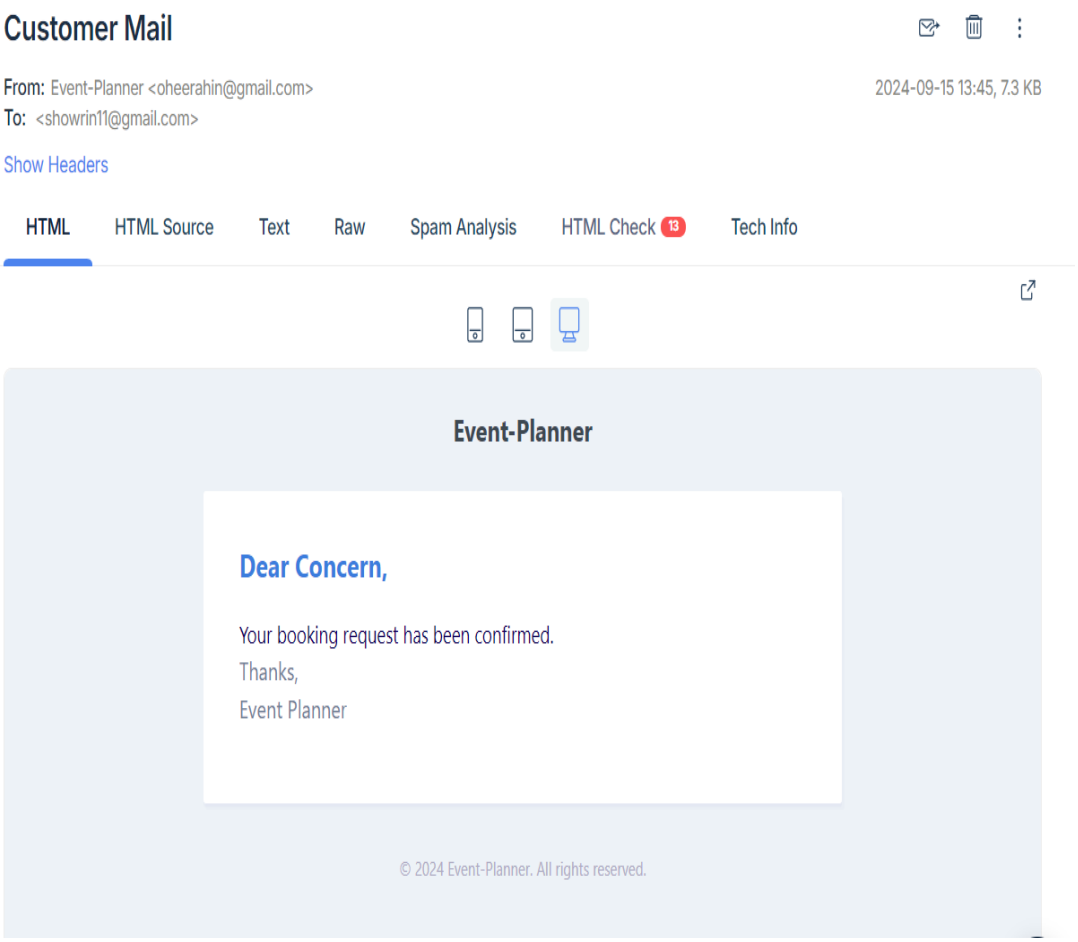

Figure 5.11: Mail

When a customer book an event which is approved by the admin will get an email notification via Mailtrap.

6 Conclusion

In summary, the ”Event Planner” project provides a comprehensive solution for managing event categories, services, and bookings. The system allows users to sign up, log in, and book services, while administrators can manage categories, services, and view booking information. The interface offers a clear distinction between customer and admin functionalities, ensuring a streamlined user experience. The project effectively handles core functionalities related to event management and user interaction.

6.1 Lackings of the Project

While the current implementation addresses the primary requirements, there are areas where the project could be enhanced:

1. Payment Integration: Currently, the system lacks payment processing capabilities. Integrating a payment gateway, such as Stripe, would enable users to make payments directly through the platform, improving the booking process and providing a seamless financial transaction experience.

2. Contact Us Feature: The system does not include a ”Contact Us” page or feature. Adding this functionality would allow users to reach out for support or inquiries, enhancing customer service and communication.

3. Enhanced User Profile Management: The user profile management could be expanded to include more customizable options, such as updating personal details, changing

passwords, and managing preferences.

6.2 Future Work

To further improve the ”Event Planner” project, the following future work is recommended:

1. Payment Gateway Integration: Implementing Stripe or a similar payment gateway to handle transactions securely. This integration will facilitate direct payments for service bookings, ensuring a smoother and more efficient payment process.

2. Contact Us Functionality: Adding a ”Contact Us” page with a form for users to submit inquiries, feedback, or support requests. This feature will help bridge the communication gap between users and the support team.

3. Mobile Responsiveness: Ensuring that the platform is fully responsive and accessible on mobile devices. This will improve the user experience for those accessing the system from smartphones or tablets.

4. Advanced Analytics and Reporting: Developing analytics and reporting tools to provide insights into service bookings, user behavior, and overall system performance. This will aid administrators in making data-driven decisions and improving the platform.

5. User Role Enhancements: Expanding user roles and permissions to allow for more granular control over access and functionality. This could include additional admin roles or different levels of access for various types of users.

6. Feedback and Rating System: Enhancing the review system to include star ratings, feedback categories, and more detailed review options. This will provide users with a more robust way to rate and review services.

7. Enhanced Security Measures: Implementing additional security features, such as multi-factor authentication and advanced encryption, to protect user data and ensure system security.

By addressing these areas, the ”Event Planner” project can be significantly enhanced, providing a more comprehensive and user-friendly platform for event management.

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