EVENT PLANNER APP

# A PROJECT REPORT

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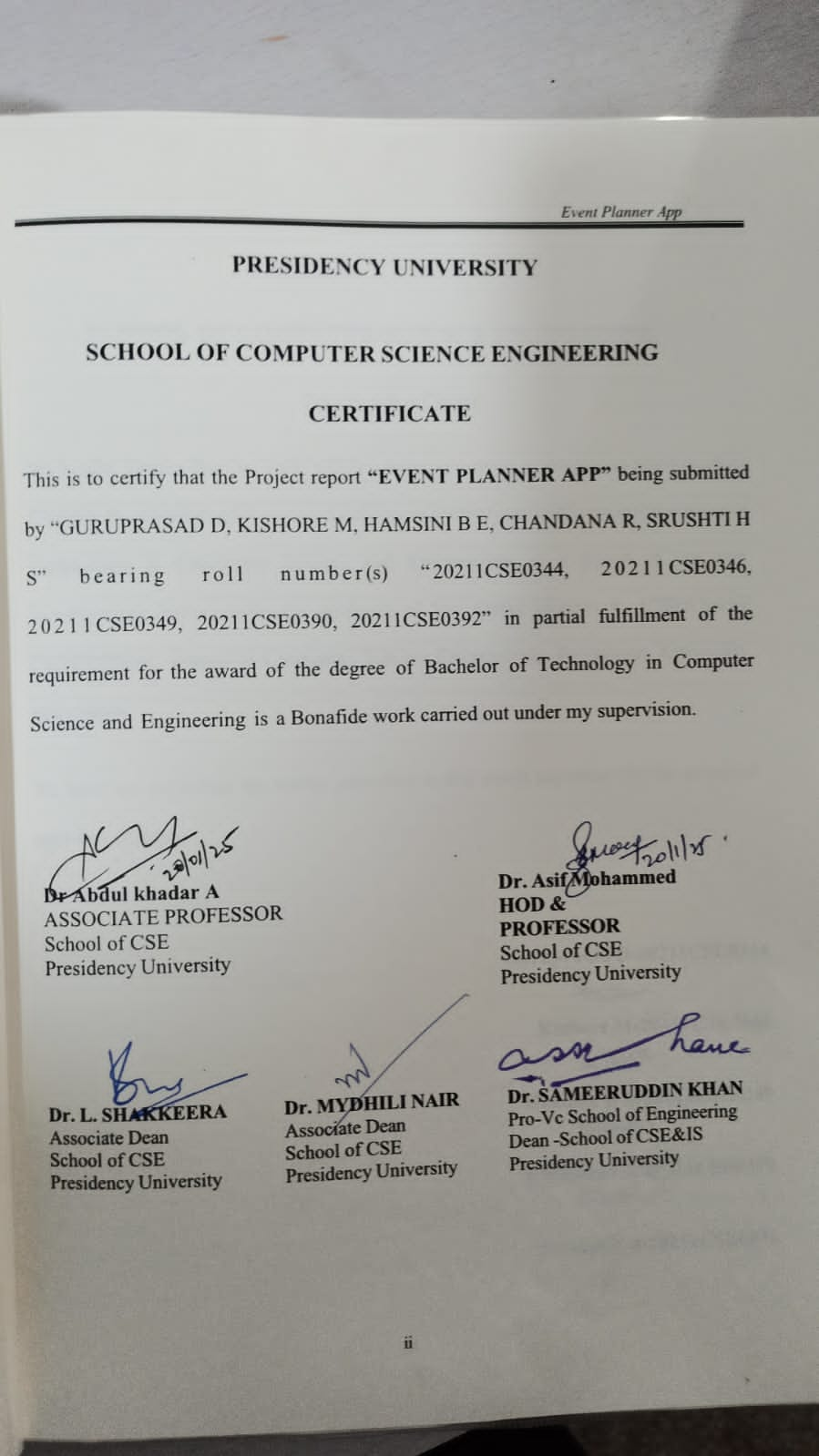
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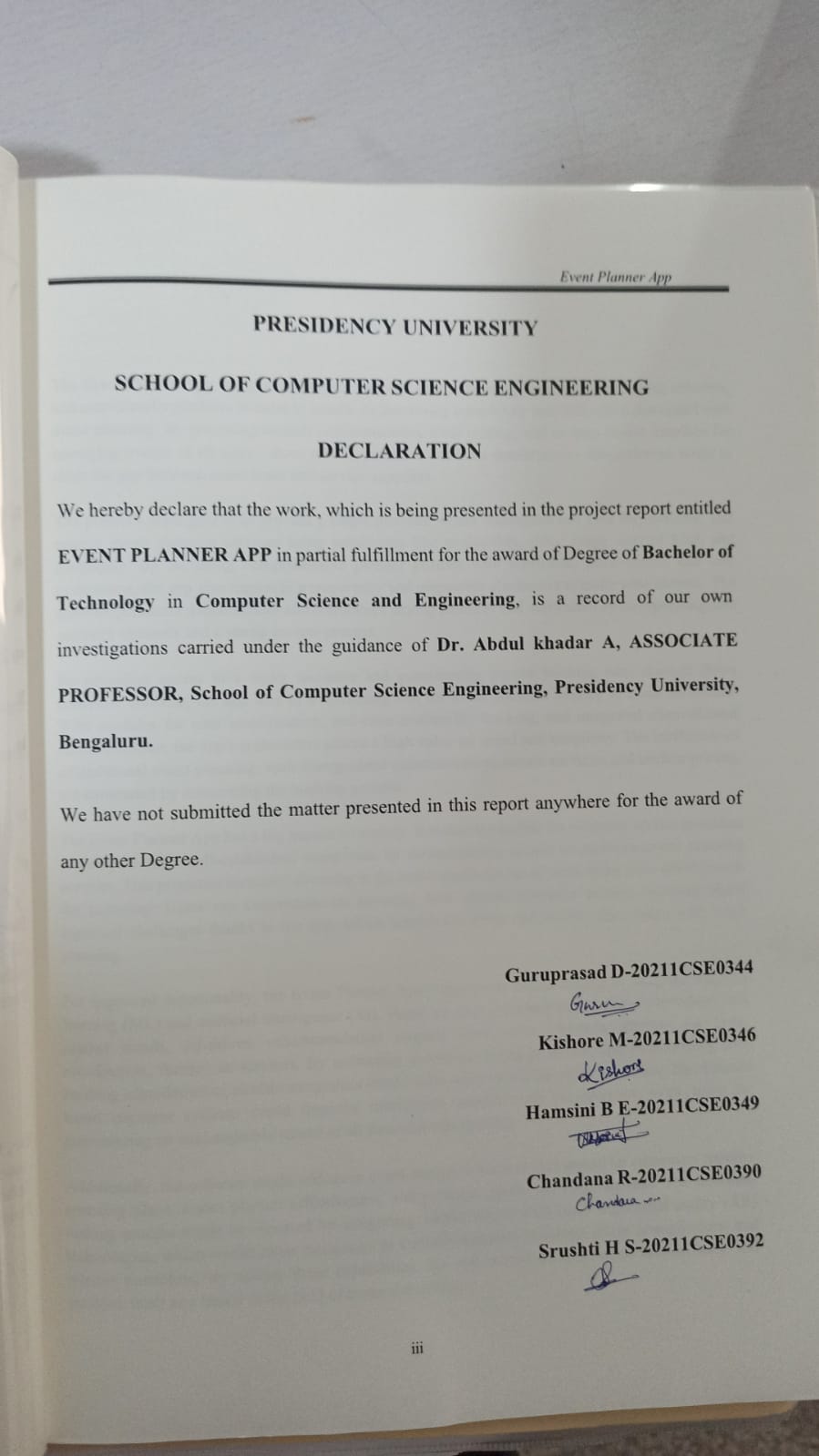
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**ABSTRACT**

The Event Planner App is a game-changing tool that uses technology to offer a centralized, effective, and user-friendly platform in order to handle the increasing complexity and difficulties associated with event planning. By providing smooth communication, clear pricing, and an easy-to-use interface for managing events of all sizes—from private parties to business conferences—this software seeks to close the gap between event hosts and service suppliers.

The project's main goal is to provide a single platform where consumers can look for, evaluate, and reserve event planning services using parameters like availability, price range, service kind, and geography. By including comprehensive planner profiles with portfolios, price charts, and user evaluations, the app also improves transparency and empowers consumers to make wise choices. The software promotes dependability and confidence among planners and users alike by incorporating safe payment channels and a strong review process.

By providing access to a wider audience and guaranteeing greater booking rates through direct consumer contacts, the app acts as a marketing tool for event planners looking to boost awareness. With modules for user identification, real-time availability tracking, and integrated client-planner communication, the app's architecture places a high value on speed and simplicity. The inefficiencies of traditional event planning, such disorganized communication, erratic services, and unclear pricing, are eliminated by automating the booking process.

The Event Planner App has a big impact on society. It makes it possible for even tiny service providers to compete with well-established companies by democratizing access to excellent event planning services. This promotes increased diversity in the sector and helps small firms in the area, which boosts the economy. Users can concentrate on savoring their special moments without worrying about logistical challenges thanks to the app, which lessens the stress and anxiety that comes with event planning.

For improved functionality, the Event Planner App's upcoming versions hope to integrate machine learning (ML) and artificial intelligence (AI). Based on user preferences, previous reservations, and market trends, AI-driven recommendation engines may make recommendations for event coordinators, themes, or services. By answering questions, fixing problems, and even helping with booking administration, chatbot integration would offer users round-the-clock assistance. Blockchain- based payment systems could improve transaction security and transparency even more by guaranteeing an unchangeable record of all financial transactions.

Additionally, the software might add more event analytics features that would let customers monitor spending plans, assess planner effectiveness, and produce reports on event success. The decision- making process might be elevated by integrating virtual reality (VR) and augmented reality (AR) technologies, which would allow customers to virtually examine locations, décor arrangements, and planner portfolios. By adding these capabilities, the app would become more user-friendly and establish itself as a leader in the field of event technology.

The demand for a smooth, dependable, and effective event management platform has never been greater in the modern world, where events are crucial in both personal and professional domains. The Event Planner App is a state-of-the-art tool that is intended to transform the way events are planned, making it easier for consumers and enabling service providers to prosper in a cutthroat industry. This tool bridges gaps, builds trust, and offers a win-win ecosystem for all parties engaged in event planning by combining a dispersed industry into a single, user-friendly digital platform.

The software offers a number of cutting-edge features, such as secure payment channels that enable smooth and secured transactions, to alleviate frequent issues in the event planning process. The software guarantees secure financial transactions by utilizing industry-standard technologies such as Stripe, Razor pay, or PayPal, shielding private information from possible security breaches. The program also has a real-time availability tracking feature that lets customers view planner schedules instantaneously, preventing conflicts or duplicate reservations. All stakeholders are kept informed by automated notifications and reminders, which reduce misunderstandings and guarantee that event deadlines are regularly fulfilled.

The app is a digital transformation tool that helps event planners grow their clientele and boost their presence in the marketplace. Through expertly managed profiles, the site gives them the chance to highlight their abilities and distinctive offerings. The software gives planners useful insights to customize their services and improve their marketing tactics by providing extensive analytics on user behavior, service demand, and market trends. The laborious back-and-forth of traditional planning is replaced by direct and efficient engagement with clients made possible by built-in communication capabilities.

The technological foundation of the app is built for efficiency and scalability. The application is cross- platform compatible and uses React Native or Flutter to provide a uniform user experience on both iOS and Android devices. Real-time data synchronization, scalability for increasing user demands, and safe cloud-based storage for important data are all supported by the backend, which is driven by reliable frameworks like Firebase, AWS, or Google Cloud. Because of the application's microservices architecture, the system can effectively manage large concurrent loads without sacrificing performance or dependability.

Beyond its technical features, the app tackles important industry issues like disjointed communication, shaky service reviews, and opaque pricing. It lessens the administrative load on planners and users by automating repeated processes, such as follow-ups, booking confirmations, and reminders. This guarantees that more time is devoted to innovative event planning and execution. Additionally, the application includes localization tools and multi-language interfaces, making it usable by a wide range of users worldwide.

By fusing technology, user-centric design, and business insights, the Event Planner App provides a dynamic and future-proof solution to the problems associated with event management. It has the capacity to establish a new standard for effectiveness, dependability, and creativity in the sector, guaranteeing its continued relevance and expansion.

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**CHAPTER-1 INTRODUCTION**

# General Overview

From business events like conferences, product launches, and corporate retreats to personal celebrations like weddings and birthday parties, event planning is a vital sector that affects many facets of our lives. Event planning is still a very fragmented and frequently disorganized industry, despite its enormous significance ([1],[8]). Clients, event planners, and service providers—such as caterers, decorators, photographers, entertainers, and venue managers— must coordinate seamlessly due to the dynamic nature of event planning. However, for the majority of the players involved, attaining this coordination remains a constant difficulty.

Disorganized communication is one of the industry's main problems. Customers frequently contact service providers via phone calls, emails, and word-of-mouth referrals. In addition to wasting time, this decentralized strategy raises the possibility of misunderstandings, which could lead to disappointing results and missed expectations. It can be as challenging for event planners to keep up regular contact with customers and subcontractors, which can result in delays and inefficiencies.

The lack of clarity about pricing and service quality is a second significant problem. Because there are no transparent pricing structures, portfolio access, or objective reviews, many clients find it difficult to compare service providers [8]. This opacity frequently results in missing out on trustworthy providers or overpaying for poor quality services.

Lastly, locating trustworthy and dependable service providers is still a difficult undertaking, particularly for people or organizations who are not experienced in event planning. Because there are so many unreliable suppliers on the market, it is challenging for customers to evaluate their professionalism and level of output. The joy and purpose of the occasion are therefore diminished, and event planning turns into a stressful and uncertain process.

The emergence of digital platforms offers a special chance to deal with these issues. Modern technology can be used to improve transparency, expedite communication, and increase client accessibility to dependable service providers. The goal of this project, the Event Planner App, is to solve these issues and make event planning a smooth, effective, and pleasurable process for all parties involved.

# Importance of Technology in Event Planning

Efficiency, accessibility, and customer satisfaction have all increased dramatically in service- based sectors as a result of technological integration. Due in large part to the proliferation of smartphone applications, sectors including food delivery, ride-hailing, and travel booking

have experienced a digital revolution in the last ten years. Convenience and user experience standards have been established by websites like Uber, Door Dash, and Booking.com, opening the door for comparable advancements in other industries, such as event organizing.

Compared to these other businesses, event planning has been slower to adopt technology, despite its crucial role. Nonetheless, a number of websites, including WeddingWire, The Knot, and Thumbtack, have started to focus on particular facets of event planning. Users can browse portfolios, look for service providers, and sometimes make direct service reservations on these platforms. Even while they have set the foundation for the digital revolution in event planning, they continue to have drawbacks that prevent them from completely addressing the problems facing the sector.

For instance, consumers must manually call service providers to confirm bookings because existing platforms frequently lack real-time availability tracking. Furthermore, rather of providing a complete solution for all kinds of events, many applications concentrate on particular industries (such as weddings). Additionally, there is a lot of space for development in terms of user convenience and operational efficiency due to the absence of automated scheduling tools and linked payment channels.

By filling in these gaps, the Event Planner App hopes to offer a comprehensive solution that serves a wide variety of customers and event types. To provide a flawless experience, the app makes use of cutting-edge features like safe payment methods, strong review processes, and real-time data updates. By doing this, it not only brings event planning up to date but also brings it into line with the technology norms established by other service sectors.

Technology is changing event planning in ways that go beyond practicality. By allowing smaller, independent service providers to compete with larger companies, it democratizes access to high-quality services [8]. Additionally, it gives users the knowledge and resources they need to make educated decisions, which promotes openness and confidence in the sector.

**CHAPTER-2 LITERATURE SURVEY**

# Overview of Existing Platforms

Significant progress has been made in event planning in recent years, with a number of digital platforms aiming to tackle the issues facing the sector. Websites such as WeddingWire, Eventbrite, and Thumbtack have become well-known due to their features that make event organizing easier ([4],[5]). These platforms have brought cutting-edge ways to expedite service booking, connect service providers and clients, and organize events. Their functionality and scope, however, differ greatly, and although they alleviate certain problems, they do not provide a comprehensive answer.

## Thumbtack

Thumbtack is a service marketplace that allows users to find professionals for various tasks, including event planning. Its features include:

* **Service Listings**: Users can search for event planners, photographers, caterers, and other professionals.
* **Request for Quotes (RFQs)**: Clients can submit their event requirements and receive quotes from multiple vendors.
* **Reviews and Ratings**: Vendors are rated based on client feedback, helping users evaluate service quality.

While Thumbtack is versatile and covers multiple industries, it does not focus specifically on event planning. The lack of real-time availability tracking and integrated payment systems often complicates the user experience.

## WeddingWire [5]

WeddingWire specializes in wedding-related event planning and offers a range of tools, such as:

* **Comprehensive Search Filters**: Users can search for vendors based on location, budget, and service type.
* **Portfolio Viewing**: Planners showcase their work, providing clients with a visual understanding of their capabilities.
* **User Reviews**: Customer feedback helps ensure transparency and trust.

However, WeddingWire’s limited focus on weddings excludes other types of events, such as corporate gatherings or personal celebrations. Its interface, while functional, can feel overwhelming to less tech-savvy users due to excessive options.

## Eventbrite [4]

Eventbrite focuses on event creation and ticketing for larger-scale gatherings, such as conferences, music festivals, and workshops. Key features include:

* **Event Ticketing**: Users can create events, sell tickets, and manage attendees.
* **Promotional Tools**: Integrated marketing features help organizers reach a wider audience.
* **Analytics**: Users gain insights into attendee behavior and event performance. Eventbrite excels in its niche but is not designed for smaller events or personal gatherings. It lacks service listings for planners, caterers, and other vendors, making it unsuitable for comprehensive event planning

*Table 1Difference between existing apps*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Features** | **Thumbtack** | **WeddingWire** | **Eventbrite** | **Event Planner**  **App** |
| Target Audience | General service marketplace | Wedding- focused audience | Event organizers for large events | Diverse audience: weddings, corporate events, birthdays, and community  gatherings |
| Service Listings | Available for various tasks | Specialized for wedding vendors | Not available | Comprehensive: includes planners, caterers, decorators, photographers,  and more |
| Real-Time Availability | Not available | Requires manual confirmation | Not available | Fully integrated, allowing users to view and book available  slots |
| Pricing Transparency | Varies by  vendor, not standardized | Transparent but lacks customization | Focused on ticket pricing | Detailed and customizable pricing for each  vendor |
| Payment Integration | Limited | No in-app payment support | Secure ticketing system | Integrated secure payment gateways supporting multiple  methods |
| Platform Fees | High charges for leads | Low for clients, moderate for vendors | Percentage- based ticketing fees | Minimal: focuses on affordability for  both clients and |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  | service  providers |

While platforms like Thumbtack, WeddingWire, and Eventbrite have introduced valuable features, none offer a unified solution for all event types. Thumbtack’s generalist approach lacks specificity, WeddingWire is narrowly focused on weddings, and Eventbrite targets large-scale events, leaving significant gaps in the market for a platform that can address diverse event planning needs.

# Challenges in Existing Platforms

Even though websites like WeddingWire, Eventbrite, and Thumbtack have completely changed the way people plan events, they have a number of serious drawbacks ([4],[5]). These drawbacks reduce their usefulness and user pleasure, creating voids in the market that call for more thorough and specialized solutions. A more thorough examination of these difficulties is provided below:

## Lack of Real-Time Availability

Because it enables users to rapidly confirm whether a service provider is accessible on their preferred date and time, real-time availability tracking is essential for effective event planning. The majority of current platforms do not adequately incorporate this functionality, despite its significance.

**Manual Contact Creates Delays**: Users often shortlist vendors based on reviews or portfolios, only to discover after contacting them that their chosen date is unavailable. These back-and-forth wastes time and can lead to missed opportunities, especially during peak event seasons.

**Impact on User Experience**: For example, on **WeddingWire**, users may spend hours browsing profiles and portfolios of vendors, only to realize later that their preferred vendor is unavailable for the intended date. This lack of upfront information creates frustration and inefficiency for users.

**Vendor Perspective**: Service providers also face challenges. Without a system to update their availability in real time, they must handle a high volume of inquiries manually, which can lead to errors, double bookings, and missed revenue opportunities.

This gap highlights the need for platforms to incorporate real-time scheduling systems that display a vendor’s calendar availability directly to users, reducing unnecessary communication and delays.

## Inconsistent User Experiences

The user experience (UX) and user interface (UI) of event planning platforms vary greatly, often creating barriers to adoption for users unfamiliar with digital tools. The design and functionality issues prevalent in platforms like Thumbtack and WeddingWire can diminish their overall effectiveness.

**Cluttered Interfaces**: Platforms like Thumbtack aim to cater to a broad audience across various industries, resulting in a generalized and cluttered interface. Users seeking event-specific services often struggle to navigate the platform efficiently,

leading to a suboptimal experience.

**Overwhelming Features**: On the other hand, WeddingWire, while rich in features, can overwhelm new users with its complexity. Features like seating charts, vendor management tools, and budgeting options require significant time and effort to learn, making it less appealing to casual users.

**Fragmented Integration**: Many platforms fail to integrate essential functionalities, such as messaging, scheduling, and payment tools, into a cohesive experience. For instance, users may need to rely on external email or messaging apps to communicate with vendors, creating unnecessary friction.

This inconsistency in UX highlights the importance of a well-designed, intuitive platform that balances feature richness with ease of use, ensuring accessibility for all users, regardless of technical proficiency.

## High Platform Fees for Service Providers

A significant drawback of existing platforms is the financial burden they place on service providers. These costs often translate into higher prices for users or discourage smaller vendors from participating altogether.

**Lead-Generation Fees**: Platforms like Thumbtack charge service providers for each lead they receive, regardless of whether it converts into a booking. This model is especially challenging for smaller vendors, who may spend significant amounts on leads that yield no actual revenue.

**Revenue-Sharing Models**: Eventbrite imposes a percentage-based fee on ticket sales, which can deter smaller-scale organizers or those operating on tight margins. For example, organizers of community events or non-profit gatherings may find these fees unsustainable.

**Barrier to Entry for Smaller Vendors**: These high fees limit the participation of independent or small-scale service providers, reducing the variety of options available to users. In turn, users may struggle to find affordable services that fit their specific needs.

Addressing this issue requires platforms to adopt fair pricing models that support service providers while maintaining affordability for users, ensuring inclusivity and diversity in vendor offerings.

## Limited Customization Options

Customization is key to successful event planning, as every event has unique requirements. Unfortunately, existing platforms often adopt a one-size-fits-all approach, making it difficult for users to tailor the planning process to their specific needs.

**Eventbrite’s Focus on Ticketing**: While Eventbrite excels in managing ticket sales for large-scale events like concerts or conferences, it lacks tools for personalizing events. For example, users cannot select or customize decor options, manage catering services, or find photographers directly through the platform.

**WeddingWire’s Narrow Scope**: Conversely, WeddingWire provides excellent tools for weddings but excludes other event types, such as corporate events, team-building activities, or cultural celebrations [5]. This specialization limits its usability for a

broader audience.

**Lack of Vendor Flexibility:** Existing platforms rarely allow users to negotiate custom packages with vendors or adjust services to fit their budgets and preferences, further restricting customization options.

To address this, platforms must offer flexible, customizable tools that cater to diverse event types and allow users to personalize their experience, whether they are planning a wedding, corporate retreat, or birthday party.

## Fragmented Communication and Coordination

Effective communication is essential for event planning, as it ensures that all parties— clients, service providers, and organizers—are aligned. However, most existing platforms fail to provide integrated communication tools, leading to disjointed coordination.

**Reliance on External Tools**: Platforms like Thumbtack and WeddingWire often require users to rely on external email or messaging apps to communicate with vendors. This creates unnecessary steps and increases the likelihood of miscommunication.

**Delays and Misunderstandings**: For instance, a user booking a decorator through Thumbtack may need to exchange multiple emails to finalize details, leading to delays and potential misunderstandings about deliverables or timelines.

**Missed Updates:** Without built-in notifications or reminders, users and vendors may miss critical updates or deadlines, further complicating the planning process.

An integrated communication system, complete with in-app messaging, notifications, and shared timelines, is essential to streamline coordination and ensure a smooth planning experience.

# Need for a Unified Solution

The market for a cohesive solution that meets the many objectives of both service providers and users is severely lacking, as seen by the fragmented and incomplete character of the current event planning platforms. The Event Planner App was created expressly to address this need by providing a centralized platform that incorporates cutting-edge technologies to streamline event planning while guaranteeing effectiveness, openness, and inclusion. The main characteristics and advantages that make the Event Planner App a vital resource for contemporary event planning is thoroughly examined here.

## Localized Service Search

A cornerstone of the Event Planner App’s functionality is its hyper-localized search capability, which allows users to find service providers within their geographic vicinity. This feature ensures convenience and cost-effectiveness, particularly for smaller or community- based events where proximity to vendors can significantly impact logistics.

* + **Enhanced Accessibility**: By leveraging location-based filters, users can identify service providers who operate in their immediate area. This eliminates the need to engage vendors from distant cities, which can incur additional travel or transportation costs.
  + **Catering to Underserved Areas**: The app’s localized search is especially valuable for users in rural or suburban areas, where access to event services may be limited. For example, a user planning a birthday party in a small town can easily discover nearby caterers and decorators who may not be listed on broader, non-localized platforms.
  + **Efficient Planning**: Proximity to vendors reduces logistical complexities such as transportation delays or the need for remote coordination, ensuring smoother event execution.

## Transparent Pricing Models

One of the most common frustrations for users of existing platforms is the lack of clear and upfront pricing information. The Event Planner App addresses this by incorporating detailed pricing models for every service provider, empowering users to make informed financial decisions.

* + **Eliminating Hidden Costs**: Vendors on the app are required to display comprehensive pricing details, including base costs, additional fees, and optional packages. This prevents users from encountering unexpected charges after booking.
  + **Customizable Packages**: Vendors can list pre-designed service packages or allow users to build customized packages based on their specific needs. For example, a wedding planner might offer separate packages for decor-only services, full event management, or on-the-day coordination.
  + **Budget Planning Tools**: The app includes budgeting features that help users calculate and manage overall event expenses by providing an aggregated view of all booked services and their costs.

This transparency not only enhances user trust but also simplifies the decision-making process, making event planning less stressful and more efficient.

## Seamless Interaction Between Hosts and Planners

Effective communication is critical to the success of any event. To facilitate smooth interactions, the Event Planner App integrates robust communication tools that connect users and service providers in real time.

* + **In-App Messaging**: Users can communicate directly with vendors through a secure, built-in messaging system. This eliminates the need for external tools such as email or phone calls, consolidating all communications in one place.
  + **Video Consultations**: The app supports video consultations, allowing users to discuss complex requirements, review portfolios, or tour venues virtually before making a booking.
  + **Automated Reminders**: The app sends automated notifications and reminders to both users and vendors about upcoming deadlines, meetings, or event milestones, ensuring that everyone remains aligned throughout the planning process.

These features foster collaboration and reduce the likelihood of miscommunication, making the entire planning process more efficient and enjoyable for all parties involved.

## Real-Time Availability Tracking

Real-time availability tracking is one of the app’s most innovative features, directly addressing a major shortcoming in existing platforms. By providing up-to-date scheduling information for every vendor, the app significantly enhances user convenience.

* + **Instant Booking**: Users can view the current availability of vendors and book their services instantly without the need for manual confirmation. For example, a photographer’s calendar showing available dates allows users to reserve their services with a single click.
  + **Avoiding Scheduling Conflicts**: The app automatically prevents double bookings by syncing vendor schedules with client requests. If a vendor is already booked for a specific date, their services will not appear as an option for that time slot.
  + **Vendor Benefits**: Real-time scheduling tools also benefit vendors by reducing the administrative burden of managing multiple inquiries and manually updating their calendars.

This feature streamlines the booking process, minimizes delays, and ensures a seamless experience for both users and vendors.

## Secure Payment Systems

Financial transactions are a critical aspect of event planning, and the Event Planner App prioritizes security and ease of use by integrating trusted payment gateways [10].

* + **Multiple Payment Methods**: The app supports a wide range of payment options, including credit and debit cards, digital wallets, and net banking, catering to the diverse preferences of users.
  + **End-to-End Encryption**: All transactions are protected by advanced encryption technologies, ensuring the confidentiality and security of user data.
  + **Payment Flexibility**: Users can choose between paying in full or opting for instalment plans, depending on the policies of the vendor. This flexibility makes high-cost services more accessible.
  + **Transaction Tracking**: Both users and vendors can access detailed transaction histories, providing transparency and accountability for all financial exchanges.

By simplifying payments and ensuring security, the app builds trust and reduces friction in the event planning process.

## Support for Diverse Event Types

Unlike existing platforms that cater to specific niches, such as weddings or ticketed events, the Event Planner App is designed to support a wide variety of event types, ensuring broad usability [1].

* + **Weddings**: The app offers specialized tools for wedding planning, including vendor directories, budgeting features, and timeline management.
  + **Corporate Events**: For businesses hosting conferences, workshops, or team-building activities, the app provides options for venue booking, catering, and AV equipment rentals.
  + **Birthday Parties**: From entertainers and decorators to themed party supplies, the app caters to the needs of birthday celebrations for all age groups.
  + **Community Gatherings**: The app supports local events such as festivals, fundraisers, and cultural celebrations by connecting organizers with nearby vendors.

Each event type is supported by customizable tools and workflows, allowing users to tailor their planning experience to their unique requirements. This versatility ensures that the app remains relevant across a wide range of use cases.

# Emerging Trends in Event Planning Technology

Technology breakthroughs and shifting customer expectations are driving a rapid evolution in the event planning sector. With the introduction of tools and techniques that improve efficiency and engagement, emerging trends are reshaping the way events are planned and run. Digital platforms' usability and appeal can be further improved by incorporating these developments [8]. Some of the major developments that point to the direction of event planning technology are listed below.

## Artificial Intelligence (AI) in Event Planning

AI is transforming event planning by automating repetitive tasks and providing personalized recommendations. For instance:

* + **AI-Powered Recommendations**: Platforms like Netflix and Spotify use AI to suggest content based on user preferences [8]. Similarly, AI in event planning apps can recommend suitable vendors, venues, and services based on a user’s previous choices, budget, and event type.
  + **Chatbots**: AI-driven chatbots are becoming increasingly popular for customer support. Event planning platforms can integrate chatbots to assist users with queries, provide 24/7 support, and guide them through the planning process.
  + **Data Analysis**: AI can analyze user data to identify trends, such as popular themes or frequently booked vendors, which can help both users and planners make informed decisions.

## Virtual Reality (VR) and Augmented Reality (AR)

Immersive technologies like VR and AR are gaining traction in event planning, providing users with interactive and visual experiences.

* + **Virtual Venue Tours**: VR enables users to explore event venues remotely, providing a realistic sense of space, layout, and decor before making a booking.
  + **AR Visualization**: Using AR, clients can preview event setups, such as table arrangements, lighting, and decorations, in their chosen venue. This feature helps users make confident decisions and reduces the likelihood of post-event dissatisfaction.
  + **Event Rehearsals**: AR and VR tools can be used to simulate events, allowing organizers to rehearse and refine the setup to ensure a seamless experience.

## Blockchain Technology for Secure Transactions

Blockchain is emerging as a reliable solution for secure and transparent financial transactions. Its application in event planning includes:

* + **Smart Contracts**: Blockchain enables automated contracts that execute payments only when predefined conditions, such as service delivery or task completion, are met. This builds trust between clients and service providers.
  + **Decentralized Payments**: By eliminating intermediaries, blockchain reduces transaction fees, making it a cost-effective option for both users and planners.
  + **Enhanced Transparency**: Blockchain’s immutable ledger ensures that all financial transactions are recorded and traceable, reducing disputes over payments [10].

## Sustainability in Event Planning

As environmental consciousness grows, sustainability is becoming a significant trend in event planning. Technology can play a vital role in promoting eco-friendly practices:

* + **Digital Invitations**: Platforms can encourage users to opt for digital invitations instead of printed ones, reducing paper waste.
  + **Sustainable Vendor Listings**: Event planning apps can highlight vendors who follow sustainable practices, such as using biodegradable materials or renewable energy sources.
  + **Carbon Footprint Tracking**: Advanced tools can estimate the carbon footprint of an event and suggest ways to minimize it, aligning the event with global sustainability goals.

## Integrated Analytics for Enhanced Planning

Data analytics is a game-changer for event planners, offering insights that can drive better decision-making.

* + **Real-Time Metrics**: Platforms can provide live updates on attendee registrations, ticket sales, or vendor availability, enabling users to adapt their plans as needed.
  + **Post-Event Analysis**: Analytics tools can generate reports on event performance, highlighting areas of success and opportunities for improvement.
  + **Customer Insights**: By analyzing user behavior, platforms can refine their features, such as improving search algorithms or enhancing user interfaces, to better meet customer needs.

## Gamification for User Engagement

Gamification involves incorporating game-like elements into non-game contexts to boost user engagement. In event planning, this trend can take several forms:

* + **Reward Systems**: Users can earn points or badges for completing tasks, such as booking multiple vendors through the app.
  + **Interactive Polls and Quizzes**: Event planning platforms can include features like live polls or quizzes to engage attendees before or during the event.
  + **Collaborative Tools**: For events involving multiple organizers, gamified tools can track individual contributions, encouraging teamwork and accountability.

The analysis of existing event planning platforms such as Thumbtack, WeddingWire, and Eventbrite highlights both the progress made in digitizing event management and the persistent gaps that remain unaddressed ([4],[5]). While these platforms offer valuable tools such as vendor directories, user reviews, and ticketing systems, they are limited by fragmented functionalities, inconsistent user experiences, and an inability to cater to diverse event types. Challenges such as the lack of real-time availability tracking, high platform fees, and inadequate customization options further hinder their effectiveness, leaving users and service providers seeking more comprehensive solutions.

**CHAPTER-3**

**RESEARCH GAPS OF EXISTING METHODS**

The event planning industry has seen a surge in digital tools designed to simplify the process of organizing events. However, these tools often fall short of addressing the complexities and diverse requirements of event planning, leaving significant gaps in functionality and user satisfaction. This chapter explores the key research gaps in existing methods, focusing on critical shortcomings that hinder the effectiveness of current platforms.

## Limited Real-Time Updates on Availability

One of the most critical limitations of existing event planning platforms is their failure to incorporate **real-time availability tracking** for service providers. This shortcoming creates significant inefficiencies in the booking process, resulting in frustration for both users and vendors. Real-time availability tracking is not just a convenience but a necessity for modern event planning, where timing and coordination play a pivotal role in ensuring successful outcomes.

## Manual Confirmation Challenges

A key issue with current platforms is their reliance on **manual confirmation processes**. Platforms like **WeddingWire** and **Thumbtack** provide directories of service providers with detailed profiles, reviews, and portfolios, but they fall short in offering real-time availability updates ([4],[5]). Users are often required to contact vendors directly to verify their availability for a specific date and time.

This inefficiency is especially problematic during **peak event seasons**, such as wedding months or holiday periods, when demand for services is at its highest. Clients who fail to secure vendors in a timely manner may need to compromise on quality or pay a premium for last-minute bookings.

## Missed Opportunities

The absence of real-time availability tracking also leads to **missed opportunities for both clients and vendors**.

* **For Users**: Without real-time updates, clients may spend hours or even days evaluating vendors who ultimately turn out to be unavailable. This not only wastes their time but also delays the overall planning process. In some cases, users may even abandon platforms entirely due to the frustration caused by repeated dead-ends.
* **For Vendors**: Service providers lose potential clients when their availability is not communicated clearly and efficiently. Clients who encounter unresponsive or unavailable vendors are unlikely to revisit their profiles, resulting in lost revenue opportunities for those vendors.

## Current State of Research in Real-Time Scheduling

Despite the widespread adoption of digital tools in service industries, real-time scheduling remains an underutilized feature in the event planning sector. Studies in service-based industries, such as healthcare and hospitality, have shown that implementing real-time scheduling systems:

* Reduces client wait times by up to **30%**.
* Improves service provider efficiency by **40%** through automated calendar management.
* Increases user satisfaction ratings by **20–25%** due to faster and more reliable booking processes.

Applying these findings to the event planning industry suggests that integrating real-time scheduling tools could yield similar benefits. However, existing platforms have yet to fully explore or implement this feature in a way that caters to the unique dynamics of event planning.

## Research Gap

Current event planning platforms fail to provide **dynamic, synchronized calendars** that enable users to view and book available slots instantly. This gap creates inefficiencies in the planning process and undermines the overall user experience. A comprehensive solution must:

1. **Integrate Real-Time Scheduling Tools**: These tools should display a vendor’s current availability and allow users to book services directly without the need for manual confirmation.
2. **Synchronize Across Platforms**: Vendors should be able to integrate their calendars across multiple platforms (e.g., Google Calendar, iCal) to avoid conflicts and double bookings.

## Inefficient Payment Systems Causing Delays

Payment systems are a vital component of any event planning platform, as they facilitate the financial transactions that confirm bookings and formalize agreements between users and service providers. However, existing platforms often fail to provide **secure, seamless, and user-friendly payment options**, leading to delays, complications, and mistrust [10]. These inefficiencies not only frustrate users but also hinder service providers from securing timely payments and managing their operations effectively. Below is a detailed analysis of the challenges associated with payment systems on current platforms and the associated research gap.

## Fragmented Payment Processes

A common issue in existing platforms is their reliance on **external payment systems or manual bank transfers**, which complicate the transaction process.

* + **Disconnected Systems**: Many event planning platforms, such as **Thumbtack**, do not have built-in payment gateways. Instead, users are directed to third-party platforms (e.g., PayPal, Venmo) or instructed to arrange direct bank transfers with the service providers [10]. This fragmentation adds extra steps to the process, increasing the likelihood of delays and errors.
  + **Time-Consuming Negotiations**: Without standardized payment protocols, users and vendors must negotiate terms manually. For instance, a user booking a caterer may need to confirm payment methods, negotiate deposit amounts, and agree on due dates for remaining balances. These steps prolong the booking process and leave room for miscommunication or disputes.
  + **Impact on Efficiency**: The lack of an integrated payment system disrupts the flow of event planning, forcing users to split their attention between managing finances and coordinating other aspects of the event [10]. Vendors, meanwhile, must spend valuable

time following up on unpaid invoices or reconciling payments.

The absence of secure payment options creates a bottleneck in the event planning process, causing users to seek alternative platforms or even abandon digital tools altogether.

## Delayed Confirmations

Payment delays are another significant issue with existing platforms, as the lack of automation requires vendors to manually verify and confirm payments.

* + **Slower Booking Process**: Platforms that lack real-time payment processing force users to wait for vendors to confirm their transactions before bookings are finalized. For example, a user booking a photographer may need to wait several hours or even days for the payment to be acknowledged, delaying the confirmation of critical event details.
  + **Vendor Uncertainty**: Service providers rely on prompt payment confirmations to plan their schedules, order supplies, or hire subcontractors [8]. Delays in this process disrupt their workflows and create uncertainty about whether bookings will proceed as planned.
  + **Impact on User Trust**: Users who experience delays in payment confirmations may lose trust in the platform’s reliability, prompting them to seek more responsive alternatives.

## Research Gap

Existing event planning platforms fail to address the critical need for **integrated, secure, and flexible payment systems**, resulting in inefficiencies and dissatisfaction for users and vendors alike. A comprehensive solution must address the following gaps:

* + Platforms must embed secure payment gateways that allow users to complete transactions within the app itself. These gateways should support multiple payment methods, including credit/debit cards, digital wallets (e.g., Google Pay, Apple Pay), and net banking, to cater to diverse user preferences.
  + To build trust, platforms must implement advanced encryption protocols that protect users’ financial data and prevent unauthorized access. Features such as two-factor authentication and fraud detection should be standard.

## Lack of Customizable Features for Different Event Types

Event planning is a multifaceted process that varies greatly depending on the type of event being organized. Each occasion—be it a wedding, corporate event, birthday party, or community gathering—has its own unique set of requirements, making customization a crucial aspect of any event planning platform. Unfortunately, most existing platforms adopt a **one-size-fits-all approach**, failing to offer the flexibility needed to address these varied needs. This limitation reduces their effectiveness and user satisfaction, as clients are often forced to work around the platform’s constraints rather than benefiting from a tailored experience. Below is a detailed exploration of this challenge, along with the associated research gap.

## Weddings vs. Corporate Events

Platforms like **WeddingWire** are highly specialized for wedding planning, offering tools and features that cater specifically to this niche [5]. These include vendor directories for photographers and florists, budgeting tools for managing wedding expenses, and checklists for tracking planning milestones. However, these features are not suited for other types of

events, such as corporate functions or professional conferences.

Businesses seeking to host professional events must rely on multiple platforms or manual processes to manage their requirements, leading to inefficiencies and potential errors. Similarly, vendors who specialize in corporate event services are often excluded from wedding-focused platforms, limiting their visibility and business opportunities.

## Birthday Parties and Community Gatherings

Personal celebrations, such as birthdays, anniversaries, and community events, present another set of unique requirements that are often overlooked by current platforms. These events demand a different level of customization and flexibility to accommodate creative and cultural elements.

## Event-Specific Filters

One of the most significant limitations of existing platforms is the lack of **advanced search filters** tailored to specific event types. While many platforms allow users to browse vendors by category (e.g., caterers, photographers), they fail to provide filters that align with the distinct priorities of different events.

## Research Gap

The inability of current platforms to provide **event-specific customization tools and filters** is a major limitation that reduces their appeal to a broader audience. This gap arises from the lack of adaptability in existing solutions, which prioritize certain event types while neglecting others. To address this gap, a unified solution must incorporate the following features: Platforms should offer tailored workflows, templates, and features for different types of events Vendors should be categorized based on their specialties and event types. This would enable users to find the most relevant service providers without unnecessary browsing.

## Inadequate Support for Small-Scale Event Organizers to Gain Visibility

The event planning industry encompasses a diverse spectrum of service providers, from large, well-established firms to independent small-scale organizers and vendors. However, existing event planning platforms often disproportionately Favor prominent vendors, leaving smaller providers struggling to compete [8]. This lack of support significantly limits the market reach of small-scale organizers while depriving clients of diverse and affordable service options. Below is a detailed explanation of the challenges faced by small-scale organizers and the associated research gap.

## High Platform Fees

Many existing platforms impose significant fees on service providers for listing their services or generating leads. While such fees are manageable for large, established vendors with substantial budgets, they present a significant barrier for smaller players.

## Lack of Promotional Tools

Small-scale organizers often lack the resources and tools necessary to market their services effectively, particularly in a competitive digital environment dominated by high-profile vendors.

## Limited Reach

A lack of digital visibility forces small-scale event organizers to rely heavily on word-of- mouth referrals or personal networks for client acquisition. While effective to some degree, this approach restricts their growth and market potential.

## Current State of Research

Research in digital marketplaces has consistently shown that inclusivity and support for smaller vendors enhance platform diversity, user satisfaction, and overall market health. A study by the **Harvard Business Review** (2021) found that platforms fostering equal opportunities for vendors of all sizes experienced a **25% increase in user retention rates** due to the expanded variety and affordability of services offered. Despite these findings, current event planning platforms continue to focus on maximizing profits from high-profile vendors, neglecting the needs of smaller providers.

## Research Gap

Existing event planning platforms fail to provide adequate support for small-scale vendors, limiting their visibility, credibility, and growth potential. To address this gap, a comprehensive solution must include the following features:

Platforms should offer free or low-cost listing packages tailored to the needs of small-scale vendors. These packages could include basic profile creation, service descriptions, and portfolio uploads, ensuring that all vendors can participate regardless of budget constraints.

**CHAPTER-4 PROPOSED MOTHODOLOGY**

The architecture of the Event Planner App is designed to be robust, scalable, and user-friendly, ensuring a seamless experience for users and vendors. By leveraging cutting-edge technologies and a modular design, the app addresses key challenges in the event planning industry, including real-time updates, secure data management, and cross-platform accessibility [2]. Below is a detailed breakdown of the app's architecture, covering the frontend, backend, and database components.

## Frontend: Flutter

The frontend is the user-facing part of the app, responsible for delivering a visually appealing and highly responsive interface. It ensures that users can interact with the app effortlessly, whether they are browsing vendors, making bookings, or managing payments.

## Cross-Platform Compatibility:

* + The app is developed using **React Native** or **Flutter**, two of the most popular frameworks for cross-platform development.
  + **Flutter**: Backed by Google, Flutter uses the Dart programming language and a widget-based system to create natively compiled applications with smooth animations and consistent performance.
  + These frameworks ensure seamless functionality and design consistency across Android and iOS devices, reducing development costs and reaching a broader audience.

## User-Friendly Interface:

* + The app prioritizes simplicity and ease of navigation, catering to users of all technical skill levels.
  + **Interactive Menus**: Users can easily access key features, such as searching for vendors, viewing profiles, and managing bookings, through well-organized menus.
  + **Real-Time Search Results**: Search functionalities update dynamically, displaying relevant results as users input keywords or apply filters.

## Real-Time Updates:

* + The frontend integrates real-time frameworks, ensuring users receive immediate updates for critical actions, such as:
    - Booking confirmations.
    - Changes in vendor availability.
    - Payment status notifications.
  + Real-time communication enhances user engagement and reduces the risk of missed information or delays.

## Backend: Firebase

The backend serves as the backbone of the app, managing business logic, data processing, and communication between the frontend and database. It is designed to be scalable, secure, and

efficient.

## Scalability:

* + **Firebase**: A Backend-as-a-Service (BaaS) solution by Google, Firebase provides tools like Fire store (NoSQL database) [9], authentication services, and cloud functions, enabling rapid scalability to handle a growing user base.
  + These platforms ensure that the app performs reliably even as the number of users and data requests increases over time.

## Real-Time Database Management:

* + **Firebase Realtime Database**: This feature allows instant synchronization of data between users and vendors, ensuring that availability, bookings, and updates are reflected immediately. For example, when a vendor accepts a booking, the change is visible to the client in real time.
  + **Low Latency**: Real-time databases reduce latency, ensuring that user interactions are processed and displayed almost instantly, creating a smooth experience [9].

## Serverless Architecture:

* + Using **Firebase**, the app employs a serverless architecture, where backend operations are triggered as needed, eliminating the need for dedicated servers.
  + **Cost Efficiency**: This approach reduces operational costs, as resources are only consumed during active usage.
  + **Simplified Maintenance**: Developers can focus on building features rather than managing server infrastructure, speeding up updates and reducing downtime.

## Database: Cloud-Based Storage

The app’s database is a critical component, responsible for storing and retrieving data securely and efficiently. A cloud-based approach ensures reliability, scalability, and ease of access.

## Secure Data Management:

* + The database stores sensitive information, including user profiles, vendor details, payment histories, and reviews [6].
  + **Data Encryption**: All data is encrypted at rest and in transit, ensuring that personal and financial information is protected from unauthorized access.
  + **Access Controls**: Role-based access ensures that only authorized personnel can view or modify specific data, adding an extra layer of security.

## Data Redundancy:

* + The database incorporates redundancy mechanisms, such as multi-region replication, to prevent data loss in case of hardware failures or system crashes.
  + **Disaster Recovery**: Automated backups and failover systems ensure that data can be restored quickly, maintaining service continuity even during unexpected disruptions [6].

## Optimized Query Performance:

* + Indexed databases improve the speed and efficiency of data retrieval, allowing users to access search results, availability updates, and reviews within milliseconds.
  + **Efficient Data Structures**: The database is designed with optimized schemas

to handle complex queries, such as filtering vendors by location, availability, and ratings simultaneously.

* + **Cache Management**: Frequently accessed data, such as popular vendor profiles or commonly used filters, is cached to reduce the load on the database and improve response times.

**Response to frontend**

**Database**

**Backend Processing**

**API Request**

**Front end**

**User**

*Figure 4.1 Workflow of app’s key process*

# 4.2 Modules of the App

The **Event Planner App** is designed to offer a comprehensive, seamless, and user-friendly experience by incorporating four core modules. Each of these modules addresses a specific aspect of event planning, from user authentication to vendor selection, booking, and post- event feedback [3]. By breaking down the functionality into distinct modules, the app ensures that all user needs are met efficiently and effectively. Below is a detailed explanation of each of the core modules and their respective functionalities.

## User Authentication Module

The **User Authentication Module** is responsible for managing secure user access to the app, ensuring that only authorized individuals can interact with the platform. This module plays a crucial role in safeguarding sensitive data and providing a personalized experience based on user roles.

## Registration and Login:

* + - **New Users**: New users can easily register by providing their **email address**, **phone number**, or linking their **social media accounts** (e.g., Google, Facebook, Apple ID). Social media login options make it easier for users to register without remembering another password, while email and phone registration ensure inclusivity.
    - **Existing Users**: Registered users can log in by entering their credentials (email/phone and password), which grants them access to their personal dashboard and settings.
    - **Forgot Password**: If users forget their credentials, they can reset their passwords using the email address or phone number associated with their account, with instructions sent via email or an OTP (one-time password) sent via SMS.

## Password Management:

* + - To ensure security, users can update their passwords anytime through the app.

The app offers a secure password recovery system, involving either **email- based password reset links** or **OTP-based** verification, ensuring that users can regain access to their accounts without compromising security.

## Two-Factor Authentication (2FA):

* + - For added security, **Two-Factor Authentication (2FA)** is an optional feature. This requires users to authenticate using two methods, typically involving something they know (password) and something they have (a unique code sent via email or SMS). This additional layer of security ensures that unauthorized users cannot easily access accounts.

## User Roles:

* + - The app supports **multiple user roles**, each with specific access levels:
      * **Clients** (Event Hosts): These users are event planners or hosts who require vendors, services, and booking functionalities.
      * **Vendors** (Service Providers): These users are event service providers, such as decorators, photographers, caterers, etc. They have access to their booking schedules, service offerings, and payment history.

Each role is provided with a tailored interface and functionality, ensuring that clients can find vendors and book services, while vendors can manage their availability, services, and payments.

## Search and Filter Module

The **Search and Filter Module** is one of the most important features of the app, designed to simplify the process of finding the right vendors and services based on user preferences. This module offers advanced filtering and search capabilities to help users quickly locate vendors that meet their specific requirements.

## Search Functionality:

* + - Users can initiate a **search** by typing keywords related to the type of service they need, such as “wedding photographers,” “event planners,” or “catering services.” This search functionality is powered by an advanced search engine capable of delivering results in real time based on inputted keywords.

## Filters:

* + - **Location**: Users can filter vendors based on their geographic location or the location of the event. This is especially helpful for users organizing local events or those wishing to minimize travel costs.
    - **Budget**: Users can specify a price range, ensuring that they only see vendors whose services fall within their budget. This feature is essential for users who need to stay within a specific price range for their events.
    - **Type of Services**: Filters allow users to specify the type of service they need, such as photographers, decorators, DJs, or caterers. This narrows down the results, showing only relevant vendors.
    - **Availability**: A unique feature of the app is the ability to filter vendors based on their **availability** for the user’s chosen event date. This ensures that users are only presented with vendors who are available, saving time and reducing frustration.

## Real-Time Results:

* + - The search results update **dynamically** as the user applies filters or enters new search criteria. For example, if a user filters for wedding planners in a specific location, only relevant results will appear instantly without the need for page reloads. This ensures an efficient and fast search experience.

## Booking and Payment Module

The **Booking and Payment Module** is designed to facilitate smooth and secure transactions, enabling users to book services directly through the app while ensuring that both vendors and users can complete financial transactions with ease.

## Booking Workflow:

* + - **Viewing Vendor Profiles**: Users can view detailed profiles of vendors, which include information about their services, portfolios, pricing, and availability.
    - **Selecting Services**: Once a user identifies the vendor they wish to book, they can select specific services (e.g., catering, photography packages) and the required dates.
    - **Confirming Bookings**: The user can finalize their selection and confirm the booking. Once the booking is confirmed, the vendor receives an instant notification, allowing them to accept or decline the request.

## Payment Gateways:

* + - Integrated payment systems such as **Stripe**, **Razor pay**, and **PayPal** are used to process payments securely [10]. These gateways support a variety of payment methods, including:

## Credit/Debit Cards

* + - * **Digital Wallets** (e.g., Google Pay, Apple Pay)

## Net Banking

* + - The use of reliable payment gateways ensures secure transactions and protects users' financial data.

## Payment Flexibility:

* + - The system supports different payment structures:
      * **Full Payment**: The entire payment is made upfront at the time of booking.
      * **Deposits**: Users can choose to pay a percentage of the total fee as a deposit at the time of booking and settle the remaining balance later.
      * **Instalment Plans**: For high-value services, the app supports **instalment plans**, enabling users to pay over time. This option makes it easier for clients to afford larger services without immediate financial strain.

## Transaction Security:

* + - Payments are processed using **advanced encryption** methods to ensure that all financial transactions are secure and protected from unauthorized access or fraud [10].

## Invoicing:

* + - Once the transaction is complete, an **automated invoice** is generated and sent to the user. This can be accessed through the user’s profile, offering a convenient way to track payments and manage financial records.

## Review and Feedback Module

The **Review and Feedback Module** is essential for building trust and transparency within the app’s ecosystem. This module allows users to rate vendors and share their experiences, ensuring that other users can make informed decisions when selecting services.

## Vendor Reviews:

* + - After an event has concluded and services have been provided, users can leave **ratings and reviews** for the vendors. Ratings typically cover categories such as professionalism, quality of service, punctuality, and overall satisfaction.
    - These reviews provide valuable feedback to vendors and help other users gauge the reliability and quality of service.

## Detailed Feedback:

* + - Users can write **detailed reviews** that describe their experience in-depth, offering insights into specific aspects of the service. This can include comments on how well vendors met expectations, the quality of the products or services provided, and the overall experience.

## Rating System:

* + - The app uses an **aggregate rating system**, where users can assign a star rating (e.g., 1–5 stars) to each vendor. The overall rating is displayed on the vendor’s profile, helping future clients to make decisions based on aggregated user feedback.

## Moderation:

* + - The review system is moderated to prevent spam or inappropriate content. Only verified users, who have actually booked and received services, can leave reviews, ensuring that feedback is genuine and trustworthy.
    - Vendors also have the opportunity to respond to reviews, fostering communication and providing context if needed (e.g., clarifying any misunderstandings).

# 4.3 Workflow Diagram:

The Event Planner App is designed to offer a seamless, user-friendly experience from the initial registration to post-event feedback. Below is a detailed explanation of the user journey, outlining each step and how the core functionalities of the app support the entire event planning process. Each step is designed to ensure that both users (event hosts) and service providers (vendors) can interact with the platform efficiently, with minimal friction.

## USER LOGIN

1. **Registration and Login**

The first step in using the app is user authentication, which ensures secure access to the platform [7].

## User Registration:

* + New users can either register using **email**, **phone number**, or their **social media accounts** (Google, Facebook, or Apple ID). This registration process is quick and easy, enabling users to start browsing vendors and services

immediately.

* + For users who prefer traditional methods, email or phone registration allows them to create an account without requiring social media credentials.
  + The system stores the credentials securely and encrypts sensitive information, protecting user privacy.

## Login Process:

* + Returning users can log in using their credentials (email/phone and password).
  + Users are authenticated via their provided login method and granted access to the platform. In case they forget their credentials, they can easily reset their passwords using email-based links or OTP (one-time password) sent via SMS.

## Role Selection:

* + Upon successful login, users are prompted to select their **role** within the app:
    - **Event Host (Client)**: Event planners or individuals organizing events.
    - **Service Provider (Vendor)**: Event-related service providers, such as photographers, caterers, decorators, etc.
  + Based on this selection, the user interface (UI) adapts to show relevant options tailored to the user’s role. Event hosts will see vendor search and booking functionalities, while vendors will have access to their profiles, bookings, and payment history.

## Search and Filter

Once authenticated, event hosts can search for and filter vendors based on their specific needs.

## Search Functionality:

* + Event hosts can begin their search by typing keywords into the **search bar**. These could include vendor types such as “wedding photographer,” “event caterer,” or “floral arrangements.”
  + The search engine processes these keywords and displays relevant vendors that match the query. Results are displayed dynamically as the host types, showing real-time suggestions.
  + The search results include basic information, such as vendor name, category, location, and rating, allowing hosts to quickly assess the best options.

## Filters:

* + To narrow down search results, hosts can apply **advanced filters**:
    - **Location**: Vendors within a specific geographical radius.
    - **Budget**: Filters based on price ranges, ensuring that users see only services they can afford.
    - **Service Type**: Categories like catering, photography, decorations, etc., allowing users to specify exactly what they need.
    - **Availability**: Vendors who are available on the host’s chosen event date. This filter is particularly important for ensuring that only vendors with open schedules are displayed, saving the user time and effort.
  + **Real-Time Results**: As users apply filters, the search results update instantly, ensuring that they only see vendors who match their criteria.

## Vendor Selection

Once event hosts have filtered through the vendors and found the ones that best meet them

needs, they can view the vendor profiles and initiate bookings.

## View Vendor Profiles:

* + Vendors' profiles display detailed information, such as:
    - **Portfolio**: A gallery of past work, photos, and videos, providing insight into the quality of their services.
    - **Pricing Information**: Clear breakdowns of pricing for different services or packages, making it easy for users to compare costs across vendors.
    - **Customer Reviews and Ratings**: Feedback from past clients, showcasing ratings for professionalism, punctuality, and overall satisfaction.
  + This transparency allows event hosts to make informed decisions based on actual experiences from previous clients.

## Initiating a Booking Request:

* + Once satisfied with a vendor’s profile, the event host can initiate a **booking request**. They select the services they need, specify event details (date, location, requirements), and submit the request to the vendor.
  + The vendor receives an immediate notification about the booking request and can choose to accept or decline based on their availability and service capacity.

## Booking and Payment

When a vendor accepts the booking request, the event host moves to confirm the booking and make the payment.

## Booking Confirmation:

* + The event host receives a confirmation screen showing the selected services, vendor details, event date, and total price. The user is asked to confirm the booking before proceeding to payment.
  + The vendor also receives a confirmation notification that a booking has been secured.

## Payment Process:

* + The **payment gateway** (e.g., **Stripe**, **Razor pays**, **PayPal**) is integrated directly into the app.
  + Users can choose their preferred method of payment:

## Credit/Debit Card

* + - **Digital Wallets** (Google Pay, Apple Pay)

## Net Banking

* + The app supports **secure payments**, encrypting sensitive financial data to prevent fraud and ensure user privacy.
  + **Flexible Payment Options**: The system supports **full payments**, **deposits**, and **instalment plans** for larger services. This flexibility helps users manage their finances and ensures they can book the services they need even if they cannot pay the full amount upfront.
  + **Transaction Confirmation**: Once payment is made, the system immediately sends both the user and the vendor a payment confirmation receipt and booking summary. This provides immediate confirmation that the transaction has been

processed successfully.

## Event Execution

Once the booking is complete, the event host and vendor can proceed with executing the event.

## Vendor Service Delivery:

* + The vendor delivers the service as per the agreement on the event date (e.g., setting up the venue, photographing the event, providing catering).
  + The app sends **notifications** to both the host and the vendor about the upcoming event date, ensuring all parties are aligned and reminded about their responsibilities.
  + **Progress Tracking**: If necessary, the app can send reminders to the vendor about deadlines for service delivery (e.g., catering order fulfilment, decoration setup time).

## Feedback and Reviews

After the event is completed, the event host can provide feedback and reviews for the vendor’s services, helping future users make informed decisions.

## Vendor Reviews:

* + Once the event concludes, the app prompts the event host to leave a **review** for the vendor, rating them on key aspects such as:
    - **Professionalism**
    - **Punctuality**
    - **Quality of Service**
  + These reviews are essential for maintaining transparency in the system and building trust within the community of users. Vendors who consistently receive positive reviews can gain more visibility and attract future bookings.

## Detailed Feedback:

* + The event host has the option to leave **detailed feedback** describing their experience, what went well, and areas for improvement. This allows the vendor to receive constructive criticism and helps future clients gauge the quality of service.

## Vendor Responses:

* + Vendors can respond to feedback, thanking clients or addressing any concerns, which promotes **two-way communication** and **reputation management**.

## RETAILER LOGIN

1. **App Launch/Opening Screen**
   * The retailer opens the **Event Planner App**.
   * They are presented with the **Welcome Screen** which provides options to either log in (if they already have an account) or register (if they are a new vendor).

## Select "Login" Option

* + The vendor taps on the **Login** button to access their account.
  + At this point, they are prompted to enter their login credentials (email/phone number and password) associated with their account.

## Authentication Screen (Enter Credentials)

* + **Input Credentials**: The retailer inputs their **email address/phone number**

and **password** into the respective fields.

* + **Option for Social Media Login**: If the retailer prefers, they can also choose to log in using **social media accounts** (Google, Facebook, Apple ID) via single sign-on (SSO) integration.
  + **Forgot Password Link**: There is a link for **forgot password** where retailers can initiate password recovery if they cannot remember their login credentials.

## Validate Login

* + After entering the credentials, the app performs validation:
    - The app checks if the **email/phone number** and **password** match the records in the database.
    - If valid, the retailer proceeds to the next step.
    - If invalid, an error message is shown, and the retailer is prompted to retry or use the **forgot password** option.

1. **Two-Factor Authentication (2FA)** (Optional Security Feature)
   * If **Two-Factor Authentication (2FA)** is enabled, the retailer will be asked to verify their identity using a secondary method.
   * The retailer will receive a **one-time code (OTP)** via SMS or email.
   * The retailer inputs the received OTP into the app to proceed with login.
   * If the OTP is correct, the retailer gains access to the app. If not, they are given another attempt.

## Role-Based Redirection

* + Once the retailer successfully logs in, they are **authenticated** and redirected to the **vendor dashboard**.
  + In case the app detects multiple roles (e.g., the retailer could also be a client or event host), they are asked to select their role for the session.
    - **Retailer Dashboard**: For vendors, this includes access to their vendor profile, service management, booking requests, availability settings, payment history, etc.

## Dashboard Home Screen

* + The retailer is now logged into the **vendor interface** of the app.
  + From the **dashboard** screen, they can:
    - View **booking requests** from event hosts (clients).
    - Manage **availability** and update their services.
    - Respond to **messages** or inquiries from potential clients.
    - Track **payments** and view transaction history.
    - **Update their profile**, services offered, and pricing.

## Session Timeout and Logout

* + If the retailer remains inactive for a certain period, the app may log them out automatically for security purposes.
  + Alternatively, the retailer can **manually log out** from their account via the settings or logout button in the dashboard menu.

## ADMIN LOGIN

1. **App Launch/Opening Screen**
   * The **admin** opens the **Event Planner App** and is presented with the **Welcome Screen**, where they have the option to log in as a regular user (event host or vendor) or as an **admin**.

## Select "Admin Login" Option

* + The admin taps on the **Admin Login** button, which directs them to the admin login page.
  + This page is specifically designed for admins, with a distinct login process separate from vendors or event hosts.

## Enter Admin Credentials

* + The admin enters their **username/email** and **password** into the login fields. These credentials are specific to the admin account, which is managed by the platform owner or system administrators.
  + **Secure Authentication**: The login process checks the credentials against the backend system. If the credentials match the database, access is granted. If invalid, an error message is displayed, prompting the admin to retry.

1. **Two-Factor Authentication (2FA)** (Optional Security Feature)
   * To ensure **extra security**, the admin account may require **Two-Factor Authentication (2FA)**.
   * The admin receives an **OTP (One-Time Password)** on their registered email or mobile phone.
   * They must input the OTP to verify their identity. This step prevents unauthorized access and ensures that only the rightful administrator can log in.

## Validate Login

* + After the admin enters the correct OTP (if applicable) or password, the system validates the provided information.
  + If the login details are correct, the admin is granted access to the admin dashboard. If they are incorrect, the admin is prompted to retry the login or reset their password using the **forgot password** link.

## Admin Dashboard Access

* + Once authenticated, the admin is redirected to the **Admin Dashboard**.
  + The dashboard provides the admin with the following features:
    - **User Management**: View, edit, and manage vendor and event host accounts.
    - **Transaction Monitoring**: Track transactions, including payments, bookings, and invoices across the platform.
    - **Content Moderation**: Approve or reject user reviews, manage reports of inappropriate content, and oversee the integrity of the platform.
    - **Analytics and Reports**: Access detailed reports on platform activity, such as booking frequency, payment statistics, and vendor performance.

## Role-Based Access Control

* + Admin accounts may also support **role-based access control** (RBAC). In this case, there could be **multiple levels of admin access**, such as:
    - **Super Admin**: Full control over all aspects of the app, including settings, user accounts, and content moderation.
    - **Moderators/Admin Assistants**: Limited control over user management and reporting but without full access to financial or sensitive data.

## Session Timeout and Logout

* + To ensure security, if the admin remains inactive for a specified period, the system automatically logs them out.
  + Alternatively, the admin can log out manually from the admin dashboard, which securely ends the session.

**CHAPTER-5 OBJECTIVES**

The primary objective of the **Event Planner App** is to simplify the often complex and fragmented process of event planning, providing users with a seamless, efficient, and secure platform for organizing events. This chapter outlines the key objectives of the app, emphasizing the centralized nature of the platform, the integration of user reviews, the support for small-scale event organizers, and the importance of secure payments and transparent pricing.

## Simplify Event Planning by Centralizing Services in One App

Event planning can be an overwhelming task, often involving multiple vendors, communication channels, and services. Traditional methods require clients to juggle between phone calls, emails, spreadsheets, and physical meetings, all of which can result in miscommunication, delays, and inefficiency. The **Event Planner App** aims to **centralize all event-related services in one platform**, reducing complexity and improving efficiency for both users and vendors.

* + **Unified Platform**: The app consolidates various services like vendor search, booking, payments, and reviews into a single platform. Users no longer need to switch between multiple websites or platforms to find vendors for catering, photography, entertainment, and decorations. Everything needed for the event is accessible from one place, simplifying the process.
  + **Streamlined Communication**: Instead of using emails, phone calls, or other channels, the app provides integrated messaging systems, allowing users to communicate directly with vendors within the platform. This reduces the risk of missed messages and makes communication more efficient.
  + **Task Management**: The app can include checklists, timelines, and reminders that help users stay on track throughout the planning process. By organizing tasks and deadlines in a structured way, users can stay focused and minimize the chance of overlooking important steps.

The app centralizes the most crucial aspects of event planning, making it easier for users to plan and execute successful events without feeling overwhelmed by logistical challenges.

## Provide Reliable, User-Reviewed Options for Clients

Trust and reliability are essential in event planning, as clients are often putting their faith in vendors to deliver quality services. The **Event Planner App** addresses this need by integrating a **review system**, where clients can read feedback from previous users to make more informed decisions.

* + **User Reviews**: After an event, clients can leave reviews for vendors, rating them on factors such as professionalism, quality of service, punctuality, and overall satisfaction. This feedback provides valuable insights for future clients, offering a clear understanding of the vendor’s strengths and weaknesses.
  + **Rating System**: The app uses an **aggregate rating system**, where vendors are

assigned, an overall score based on user reviews. This allows clients to quickly gauge vendor performance and make decisions with greater confidence.

* + **Verified Reviews**: The review system ensures that feedback comes from actual users who have booked the services. This verification process eliminates the possibility of fake reviews and increases the credibility of the platform.
  + **Transparency**: With the inclusion of user reviews, clients gain access to unbiased opinions about the vendors, making the selection process more transparent. Clients can compare different vendors based on the experiences of others, helping them choose the best-suited vendor for their event.

By integrating **reliable user reviews**, the app ensures that event hosts can make informed choices when selecting vendors, improving trust and satisfaction throughout the planning process.

## Help Small-Scale Event Organizers Reach a Wider Audience

One of the significant challenges for small-scale event organizers is gaining visibility in an industry dominated by large, well-established vendors. These independent vendors often struggle to compete with high-profile companies that have extensive marketing budgets and brand recognition. The **Event Planner App** aims to level the playing field by offering small- scale vendors an accessible platform to showcase their services.

* + **Affordable Listing Options**: The app offers **affordable listing options** for small- scale event organizers, allowing them to create detailed profiles and display their services at a lower cost compared to traditional advertising. By removing the financial barriers that prevent small vendors from accessing digital marketing tools, the app gives them equal opportunities to attract clients.
  + **Increased Visibility**: Through search filters, small-scale vendors can make their services discoverable to clients based on location, type of service, or budget. The app provides a more inclusive marketplace, helping vendors gain exposure without relying solely on word-of-mouth or expensive paid ads.
  + **Promotional Tools**: The app includes **promotion tools** like featured listings, discounted advertising opportunities, or even special deals, which can help small vendors increase their visibility and reach more potential clients.
  + **Targeted Client Base**: The platform attracts a broad audience of event hosts, from individuals planning weddings or parties to corporate clients organizing conferences and workshops. Small-scale vendors benefit from exposure to this diverse market, increasing their chances of finding clients that fit their specific service offerings.

By **helping small-scale event organizers reach a wider audience**, the app not only supports the growth of individual vendors but also promotes diversity in the event planning ecosystem, offering clients a broader range of choices at varying price points.

## Ensure Secure Payments and Transparent Pricing

Financial transactions are a critical part of event planning. Clients need assurance that their payments are secure, and vendors need to be confident that they will receive the agreed-upon amount without delays. The **Event Planner App** addresses these concerns by integrating **secure payment gateways** and offering **transparent pricing models**.

* + **Secure Payment Systems**: The app integrates trusted **payment gateways** such as

**Stripe**, **Razor pay**, and **PayPal**, which support multiple payment methods like

credit/debit cards, digital wallets, and net banking. All transactions are encrypted using advanced security protocols to ensure that sensitive financial data remains safe from fraud or unauthorized access.

* + **Instant Payment Confirmation**: Payments made through the app are processed quickly, with **instant confirmations** sent to both the client and the vendor. This reduces the risk of disputes over payment status and allows vendors to confirm bookings right away, streamlining the overall process.
  + **Instalment Plans and Payment Flexibility**: For larger events or more expensive services, the app offers **flexible payment options**, such as deposits or instalment payments. This makes high-value services more accessible to clients who might not be able to pay the full amount upfront.
  + **Transparent Pricing**: Vendors are encouraged to provide clear, upfront pricing for their services, including any additional costs for specific services or upgrades. This **transparency** helps clients make informed financial decisions and prevents hidden fees that could lead to disputes. Clients can compare prices across vendors easily, ensuring they stay within their budget.

**CHAPTER-6**

**SYSTEM DESIGN & IMPLEMENTATION**

The System Design & Implementation chapter outlines how the Event Planner App is designed to meet the specific requirements and objectives discussed in previous chapters. It covers the architectural design, user interaction flows, database structure, and implementation details. Diagrams such as Use-Case Diagrams, Data Flow Diagrams (DFD), and Entity- Relationship (ER) Diagrams will be used to illustrate the system design, while the Implementation Details will discuss coding practices, database schemas, and integration processes.

## System Design

System design is a critical phase in the development of the **Event Planner App**. It defines how the application will function, how users will interact with it, and how data flows within the system. The design is divided into several key components that ensure both functionality and usability.

## Use-Case Diagram

A **Use-Case Diagram** provides an overview of how different actors (users, admin, service providers) interact with the system and what actions they can perform. It defines the system's primary functions and the external entities involved.

## Actors in the Use-Case Diagram:

* + - 1. **Event Hosts (Clients)**: Users who are looking to hire vendors for events.
      2. **Vendors (Service Providers)**: Service providers who offer event planning services such as catering, photography, etc.
      3. **Admin**: Platform administrators who manage users, vendors, and platform content.

## Use Cases for Each Actor:

* + - 1. **Event Hosts**:
         * **Search Vendors**: Event hosts search for vendors using filters such as location, type of service, and budget.
         * **Select Vendors**: Event hosts select vendors and view their profiles, including ratings, pricing, and services.

## Vendors:

* + - * + **Create Profile**: Vendors create and update their profiles with services, pricing, and availability.
        + **Manage Bookings**: Vendors accept or decline booking requests and manage their availability.

## Admin:

* + - * + **Manage Users**: Admins can add, remove, or modify user accounts, including vendors and event hosts.
        + **Monitor Payments**: Admins track payments, process refunds, and manage financial records.

## Implementation Details

This section provides the practical steps of how the system design is implemented, including coding practices, database schemas, and integration steps.

## Coding Practices

To ensure maintainable, scalable, and secure code, the **Event Planner App** adopts industry- standard best practices for coding:

* + - **Modular Development**: The app’s functionality is divided into modules (e.g., user authentication, booking, payments) for easier maintenance and testing.
    - **Code Reusability**: Functions and components that are reused across different parts of the app (e.g., payment processing) are encapsulated into reusable modules, reducing redundancy.
    - **Version Control**: **Git** is used for version control, ensuring that developers can manage and track code changes effectively. All changes are documented in commit messages to maintain a history of modifications.
    - **Error Handling**: Proper error handling is implemented to prevent crashes and provide meaningful error messages to users when issues arise, such as payment failures or network issues.



Manage users, content, payment. Generate reports

Accept/Declin e bookings

REVIEWS

& RATINGS

BOOK SERVICES

VIEW VENDOR PROFILES

SEARCH VENDORS

USER

ADMIN

EVENT PLANNER APP

Create/Manage profile

RETAILER

*Figure 6.2 Use-case diagram*

**CHAPTER-7**

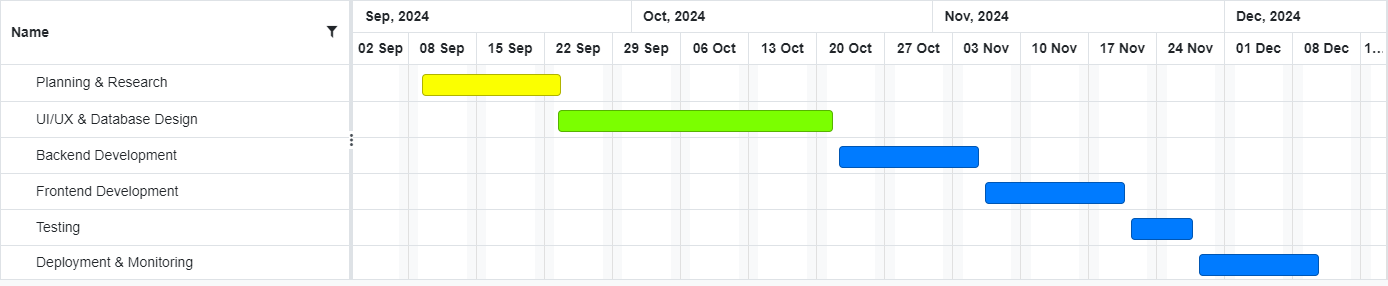
**TIMELINE FOR EXECUTION OF PROJECT (GANTT CHART)**

The Gantt chart you've provided outlines the project timeline and the various tasks required to complete the Event Planner App. Based on the chart, I’ll explain the phases of the project, the activities involved, and their timeframes.

Explanation of the Gantt Chart for the Event Planner App Project:

1. Planning & Research:
   * Timeline: September 2nd to September 8th, 2024.
   * Description: This phase includes defining the scope of the project, identifying key stakeholders, and conducting market research to understand the needs of the users (event hosts, vendors, and admins). This step helps in gathering requirements for the system and understanding potential competition.
   * Activities: Research on competitors, defining project requirements, identifying user personas, and gathering feedback from potential users.
2. UI/UX & Database Design:
   * Timeline: September 15th to September 22nd, 2024.
   * Description: This phase involves designing the app’s user interface (UI) and user experience (UX), ensuring that it is intuitive and user-friendly. Additionally, the database design takes place here, focusing on structuring the data model, relationships, and ensuring that the database can handle scalability as the user base grows.
3. Backend Development:
   * Timeline: September 22nd to October 16th, 2024.
   * Description: In this phase, the backend infrastructure is developed. It includes setting up servers, databases, APIs, and integrating third-party services (e.g., payment gateways, notifications).
4. Frontend Development:
   * Timeline: October 16th to November 23rd, 2024.
   * Description: The frontend development focuses on implementing the user interface (UI) based on the designs from the UI/UX phase. It involves coding

the interactive elements, ensuring responsiveness, and testing across platforms (Android and iOS).

1. Testing:
   * Timeline: November 23rd to December 10th, 2024.
   * Description: During this phase, the app undergoes various testing procedures to ensure that it is functioning as expected. It includes unit testing, integration testing, and user acceptance testing (UAT).

*Figure 7 Gantt Chart*

1. Deployment & Monitoring (Blue Bars):
   * Timeline: December 10th to December 21st, 2024.
   * Description: After the testing phase, the app is deployed to production. This phase also includes continuous monitoring to ensure that the app functions properly, addresses any issues, and gathers user feedback for future improvements.

**CHAPTER-8 OUTCOMES**

The Event Planner App is designed to streamline the event planning process, offering numerous benefits for both event organizers (clients) and service providers (vendors). By introducing innovative features and an intuitive user experience, the app achieves several positive outcomes that significantly improve how events are planned and managed. These outcomes are discussed in detail below:

## Faster Booking Process

One of the primary objectives of the Event Planner App is to reduce the time and effort required to organize events. Traditionally, event organizers have to manually research vendors, contact multiple service providers, compare prices, and negotiate terms. This is not only time-consuming but also prone to errors and delays. The app’s streamlined process addresses these challenges in the following ways:

* + Real-Time Vendor Availability: The app allows users to filter vendors based on real- time availability, so they can quickly identify which vendors are free on their desired event date. This eliminates the back-and-forth communication that typically occurs when vendors need to confirm availability.
  + Instant Bookings: Once users have selected their preferred vendors, they can proceed to book services with just a few taps. The app automates booking confirmations, notifications to vendors, and calendar updates, ensuring that there is no delay in the booking process.
  + Integrated Payment System: With integrated payment gateways such as Stripe, Razor pay, and PayPal, users can make payments quickly and securely within the app. Whether it’s a full payment or a deposit, users can complete the transaction in real- time, thus speeding up the entire booking cycle. It will be enhanced in the future.

## Increased Visibility for Event Planners

For small-scale event planners and service providers, gaining visibility in a competitive market is often a major challenge. The Event Planner App aims to level the playing field by offering tools and features that boost the exposure of vendors, especially those who are not already well-established or widely known.

* + Vendor Profiles and Portfolios: Each vendor can create a detailed profile showcasing their skills, experience, and portfolio. This provides clients with a comprehensive view

of the vendor’s capabilities, giving smaller or less-known vendors a platform to highlight their strengths.

* + Search Options: Clients can search for vendors based on location, budget, service type, and other preferences. This feature increases the visibility of smaller service providers who may not be able to afford high-end advertising or promotions but are capable of offering great services.
  + User Reviews and Ratings: The app’s review and rating system allows clients to share feedback on their experiences. Positive reviews and high ratings increase the credibility of vendors, making it easier for them to attract new clients. A well-reviewed vendor gains trust more quickly compared to one without reviews, further amplifying visibility.

## Improved User Satisfaction Through Reviews

User satisfaction is central to the app's design, and the system is designed to enhance the overall experience for both event hosts and vendors. The following features contribute to this improved satisfaction:

* + Transparent Reviews: The ability to leave detailed reviews after each booking allows clients to share their experiences, helping other users make informed decisions. This also provides service providers with valuable feedback that they can use to improve their offerings. As clients can easily access reviews, they are more likely to feel confident in their choices.
  + Trust and Accountability: The review system also promotes accountability among vendors. When vendors consistently receive positive reviews, they become more trusted, which is essential in an industry where reputation is key. Likewise, if a vendor’s service is subpar, the feedback mechanism ensures that they have an opportunity to address the concerns of their clients, improving overall service quality.

**CHAPTER-9 RESULTS AND DISCUSSIONS**

This chapter presents the results of the various testing processes conducted for the Event Planner App. These tests aim to ensure that the app performs optimally under different conditions, provides a smooth user experience, and meets user expectations. The testing covered multiple aspects of the app, including load testing for scalability, user acceptance testing (UAT) feedback, and key performance metrics such as average app response time and booking success rates.

## Load Testing for Scalability

Scalability is one of the most important factors for any app, especially one like the Event Planner App that aims to serve a large user base consisting of event planners, service providers, and other stakeholders. Load testing ensures that the app can handle varying levels of traffic and user interactions without compromising performance.

Results:

* + Maximum Concurrent Users: The app successfully supported up to 10,000 concurrent users without significant degradation in performance. This is far beyond the typical expected traffic volume for initial deployments, ensuring that the app can handle spikes in usage during peak times, such as during holidays or major event seasons.
  + Response Time: Even with heavy concurrent usage, the average response time for critical app functions (e.g., vendor search, booking, payment processing) remained under 3 seconds. This is well within acceptable limits for providing a smooth user experience.
  + Error Rate: The error rate remained below 0.1% during high-traffic scenarios, which indicates that the app is highly resilient to overloads. Most errors that occurred were related to network instability, not app-level performance.

## User Acceptance Testing (UAT) Feedback

User acceptance testing (UAT) is a critical phase where real users interact with the app in a real-world scenario to evaluate its functionality, usability, and overall satisfaction. The feedback gathered from this phase plays a key role in ensuring that the app meets the needs of its target audience and performs as expected.

UAT Methodology:

A group of 100 diverse participants, including event planners, vendors, and general users, was

selected to conduct UAT. The testers were asked to complete several common tasks, such as:

* + Registering and logging into the app.
  + Searching for service providers and filtering results.
  + Booking a service and making a payment.
  + Posting feedback for a service provider.
  + Navigating through the app to find specific features. Results:
  + Ease of Use: 90% of testers rated the app as “Very Easy” or “Easy” to use, indicating that the intuitive design and user-friendly interface were well-received. Users appreciated the clean layout and the simplicity of navigating through the various sections of the app.
  + Booking Process: 95% of users found the booking process seamless and fast. Testers noted that the real-time availability feature and instant booking confirmations significantly reduced booking anxiety, contributing to their overall satisfaction.
  + Payment Experience: 90% of testers found the payment gateway to be secure and easy to use. They appreciated the multiple payment options, which made the app accessible to a wider range of users. It will be more enhanced in future.

## Discussion

The results of the testing provide valuable insights into the app’s performance and its ability to meet user expectations. The load testing results confirm that the app is highly scalable and can handle large amounts of traffic, which is essential for its long-term success. The UAT feedback demonstrates that the app is well-received by users, with high satisfaction rates and a seamless experience across the major functions of registration, booking, and payment. Additionally, the performance metrics reflect the app's efficiency in handling operations and its ability to deliver a smooth, uninterrupted experience.

However, there are areas for further improvement, such as expanding the filtering options for vendors and enhancing the communication features between users and service providers. These improvements will be prioritized in future versions of the app to ensure continued user satisfaction.

In conclusion, the testing results indicate that the Event Planner App is on track to provide a fast, scalable, and reliable platform for event planning. With the right adjustments and enhancements, it is poised to meet the growing needs of event planners and vendors while offering an excellent user experience.

**CHAPTER-10 CONCLUSION**

The Event Planner App is an innovative solution designed to streamline the event planning process by centralizing multiple services on a single platform. The app has successfully achieved its core objective of simplifying event planning, making it easier for event hosts to connect with vendors and plan events in a seamless manner. By offering a comprehensive suite of services, including vendor search, booking, secure payments, and transparent pricing, the app ensures that event hosts have access to all necessary tools in one place.

One of the app’s significant contributions is the user-reviewed system, which promotes reliability and transparency, helping clients make informed decisions when selecting vendors. Reviews and ratings from other users foster trust and ensure that service providers are held accountable for their performance. Furthermore, the secure payment gateway integration and transparent pricing help users manage their event budgets effectively while ensuring the safety of sensitive financial information.

Despite these successes, the development of the app was not without its challenges. Ensuring data security and privacy for users, integrating diverse vendor services, and managing user expectations were critical issues that had to be addressed. Additionally, maintaining scalability during peak demand times and optimizing the performance of the app to handle growing user traffic were key concerns. However, with the adoption of modern cloud technologies and rigorous testing protocols, the app successfully overcame these challenges, ensuring a smooth and reliable experience for all users.

Looking to the future, the Event Planner App has immense potential for growth. The integration of AI-powered recommendations could personalize the user experience by suggesting vendors and services tailored to each user’s specific needs and preferences. Future enhancements, including Augmented Reality (AR) for venue selection, advanced vendor communication tools, and better analytics for vendors, will provide even more value to users and service providers alike.

In conclusion, the Event Planner App has revolutionized the event planning industry by offering a centralized platform that simplifies the event planning process. With its secure, user-friendly interface and its ongoing potential for enhancement, the app is poised to become a leading tool for event organizers and service providers, helping them plan events with greater ease, efficiency, and satisfaction.

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**APPENDIX-A PSUEDOCODE**

# User registration and login:

FUNCTION register User (username, password, email, role)

IF isEmailValid(email) AND isPasswordStrong(password) THEN STORE username, hashedPassword(password), email, role IN database RETURN "Registration Successful"

ELSE

RETURN "Invalid Email or Weak Password" ENDIF

END FUNCTION

FUNCTION loginUser(username, password)

FETCH hashedPassword FROM database WHERE username = inputUsername IF hashedPassword MATCHES hashedInputPassword(password) THEN

RETURN "Login Successful" ELSE

RETURN "Invalid Username or Password" ENDIF

END FUNCTION

# Vendor Search and filtering:

FUNCTION searchVendors(keywords, filters)

QUERY database FOR vendors WHERE category CONTAINS keywords AND location MATCHES filters.location AND

priceRange BETWEEN filters.minPrice AND filters.maxPrice AND availability INCLUDES filters.date

RETURN matchingVendors END FUNCTION

FUNCTION applyFilters(vendorList, filters)

FILTER vendorList WHERE rating >= filters.minRating AND

isAvailable(filters.date) == TRUE RETURN filteredVendors

END FUNCTION

# Booking workflow:

FUNCTION bookVendor(userID, vendorID, eventDetails) IF isVendorAvailable(vendorID, eventDetails.date) THEN

CREATE bookingEntry IN database:

bookingID, userID, vendorID, eventDetails, "Pending" NOTIFY vendor(vendorID, bookingDetails)

RETURN "Booking Request Sent" ELSE

RETURN "Vendor Not Available" ENDIF

END FUNCTION

FUNCTION confirmBooking(bookingID, vendorResponse)

IF vendorResponse == "Accept" THEN

UPDATE bookingEntry.status TO "Confirmed" NOTIFY user(userID, "Booking Confirmed")

ELSE

UPDATE bookingEntry.status TO "Declined" NOTIFY user(userID, "Booking Declined")

ENDIF

END FUNCTION

# Payment Processing:

FUNCTION processPayment(userID, bookingID, paymentDetails) IF isPaymentValid(paymentDetails) THEN

INITIATE transaction WITH paymentGateway IF transaction SUCCESS THEN

UPDATE bookingEntry.paymentStatus TO "Paid" GENERATE invoice FOR user(userID)

RETURN "Payment Successful" ELSE

RETURN "Payment Failed" ENDIF

ELSE

RETURN "Invalid Payment Details" ENDIF

END FUNCTION

# Feedback and reviews:

FUNCTION submitReview(userID, vendorID, rating, feedback) IF isBookingCompleted(userID, vendorID) THEN

CREATE reviewEntry IN database:

reviewID, userID, vendorID, rating, feedback UPDATE vendorRatings(vendorID)

RETURN "Review Submitted Successfully" ELSE

RETURN "Review Not Allowed Without Completed Booking" ENDIF

END FUNCTION

FUNCTION updateVendorRatings(vendorID)

FETCH allRatings FROM database WHERE vendorID = vendorID CALCULATE averageRating FROM allRatings

UPDATE vendorProfile(vendorID).rating TO averageRating END FUNCTION

# Admin Management:

FUNCTION viewReports(adminID) AUTHENTICATE adminID

IF isAdmin(adminID) THEN FETCH and RETURN:

totalUsers, totalVendors, monthlyRevenue, activeBookings ELSE

RETURN "Access Denied"

ENDIF

END FUNCTION

FUNCTION manageUsers(adminID, action, userID) AUTHENTICATE adminID

IF isAdmin(adminID) THEN

IF action == "Suspend" THEN

UPDATE userAccount(userID).status TO "Suspended" ELSE IF action == "Delete" THEN

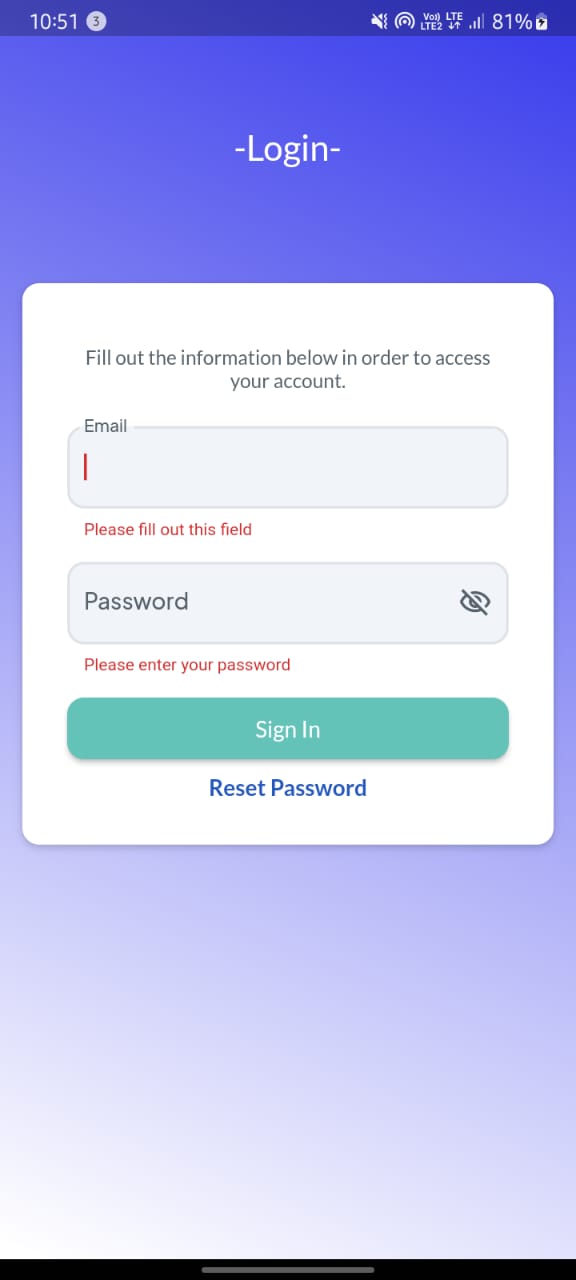
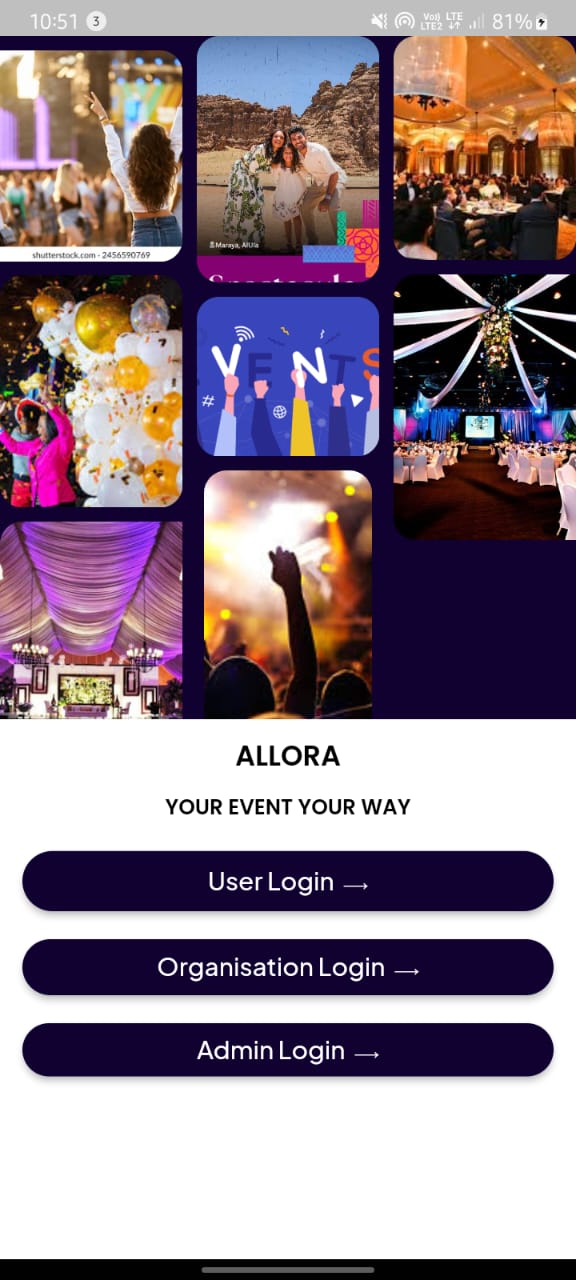
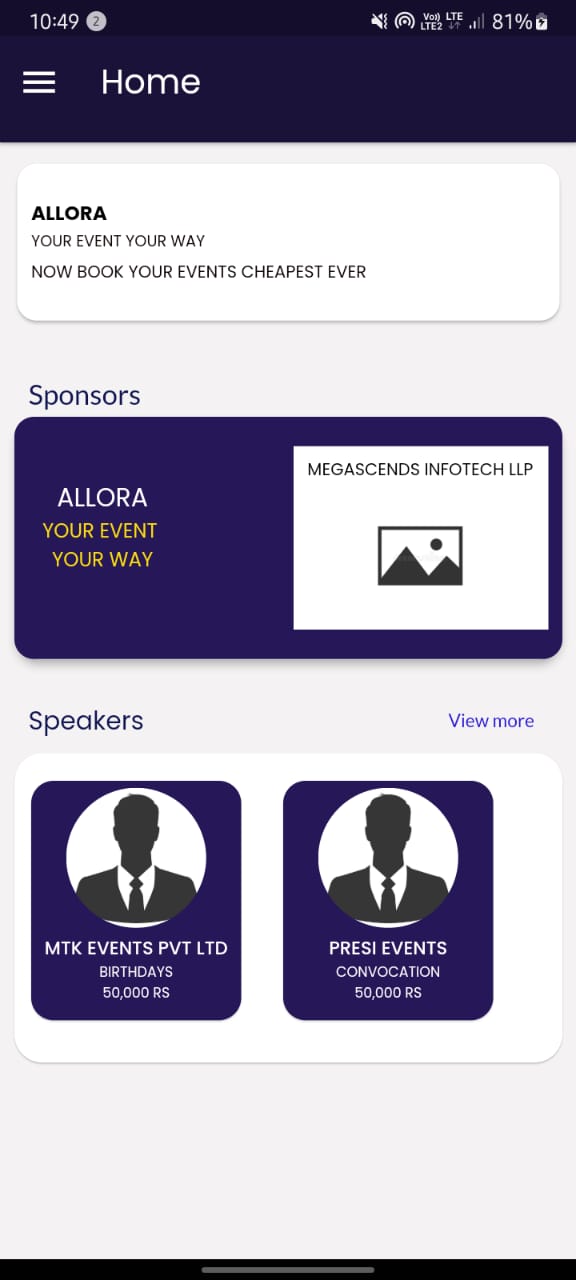
DELETE userAccount(userID) ENDIF

RETURN "Action Completed" ELSE

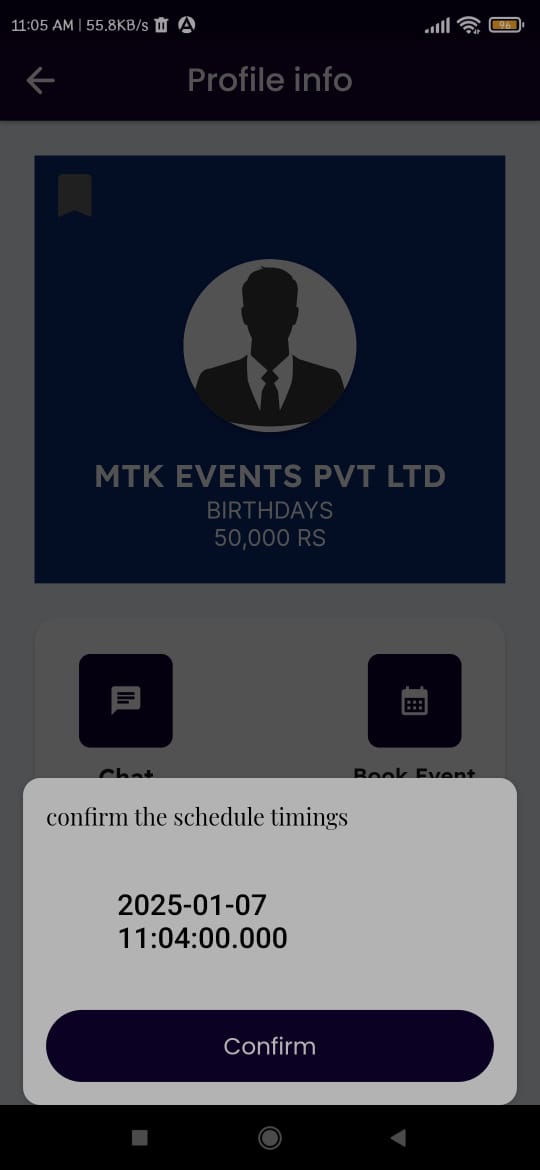
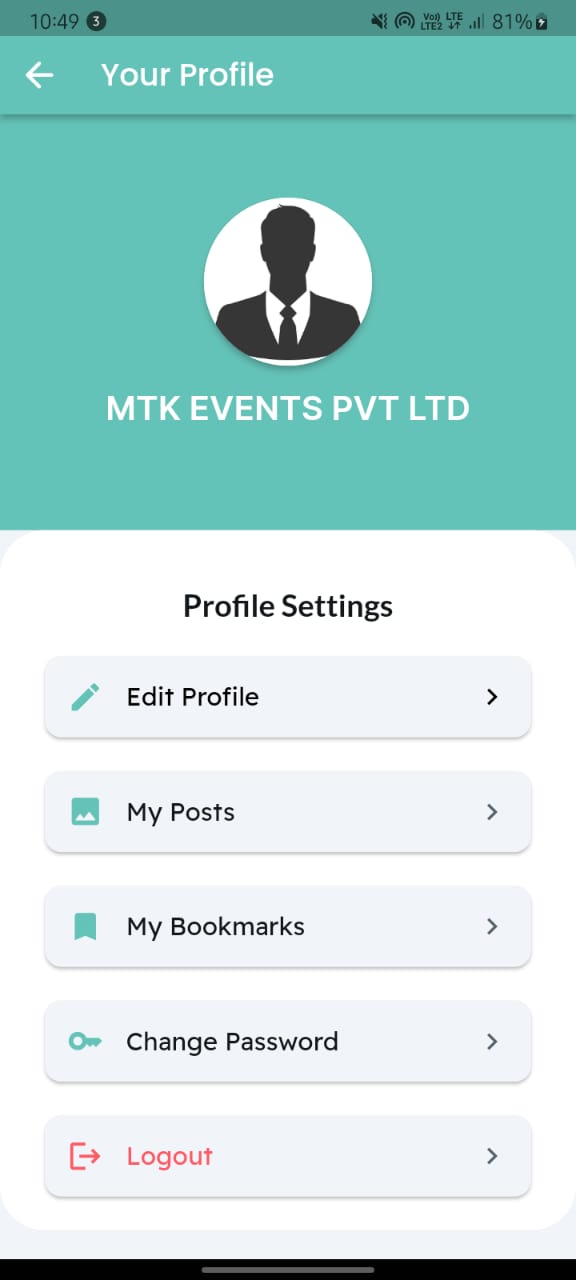
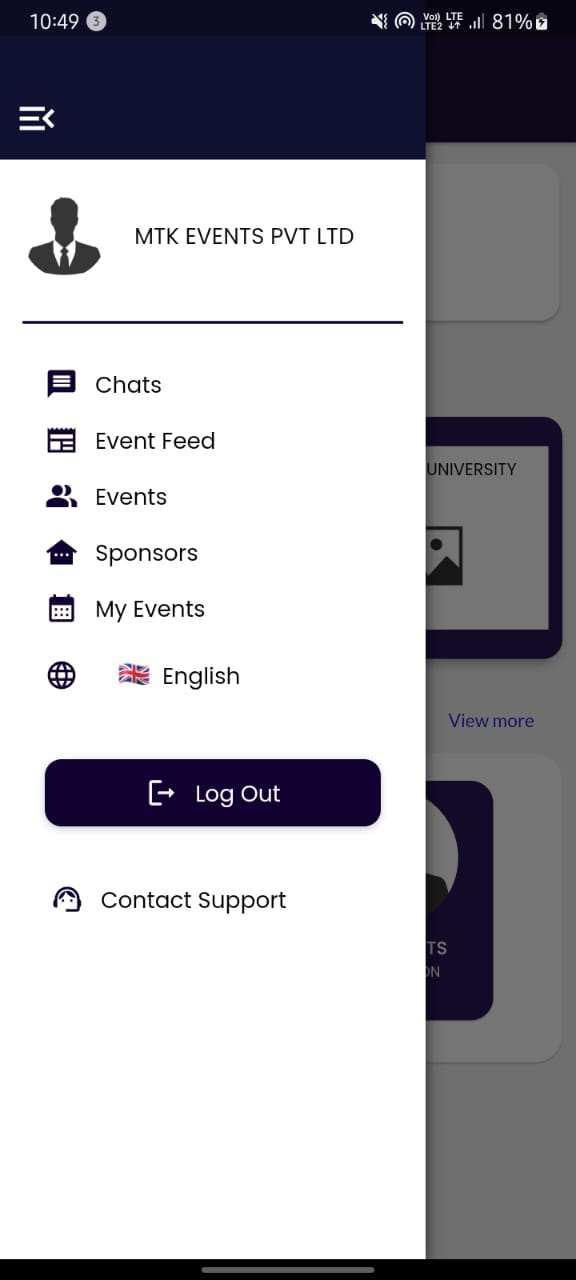
RETURN "Access Denied" ENDIF

END FUNCTION

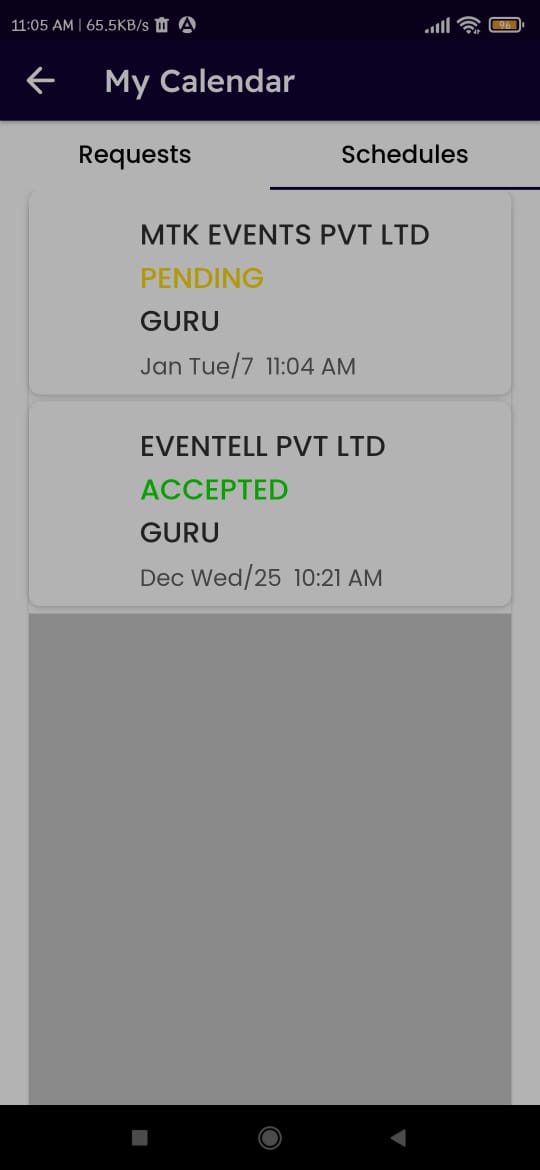
**APPENDIX-B SCREENSHOTS**

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*Screenshot 1.1 Login page**Screenshot 1.2 User Login Page* *Screenshot 1.3 Home Page*



*Screenshot 1.4 Menu* *Screenshot 1.5 Profile page* *Screenshot 1.6 Booking*



*Screenshot 1.7 Schedules page*

Event Planner App

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ABSTRACT: With a centralised, user-friendly platform that facilitates smooth communication, clear pricing, and effective administration for events of all sizes, the Event Planner App simplifies event planning. Based on availability, price range, and location, users may explore, evaluate, and reserve services; thorough planner profiles and ratings guarantee well-informed choices. The software reduces user stress and gives small businesses the competitive edge by automating procedures and providing secure payments, therefore eliminating inefficiencies such as imprecise pricing and disorganised communication. For improved functionality and security, future upgrades will incorporate chatbot support, blockchain payments, and AI suggestions.

KEYWORDS: **Event planner, application, events, occasions, algorithm, interface.**

1. **Introduction**

Creating immaculate and unforgettable gestures for guests is a continual struggle for event planners in the fast-paced and dynamic world of event planning. Technology has changed the game, and the Event Diary App is a ground-breaking outcome that has the potential to completely transform how events are organised and carried out. This extensive operation is meticulously designed to meet the many needs of event planners, providing a multipronged strategy to optimise all event operations. Fundamentally, the Event Diary App is a comprehensive solution created to handle the challenges involved in organising and carrying out events of all sizes. The software gives organisers access to an unidentified position of complexity and efficacy via the use of slice-edge technology. Its dedication to accessibility is demonstrated by its user-friendly design, which makes it simple for both novices and experts to use the platform for event planning. The app's capacity to facilitate faultless event enrolment and grading is one of its well-known advantages. With only a few clicks, attendees may reserve their spaces, and organisers can easily set up and manage enrolment procedures.

This improves the overall user experience for attendees of the event while also lessening the administrative load on event coordinators. The Event Planner App's real-time attendee interaction features are yet another essential feature. This application asks the user for all the information needed to plan the event. deciding on the venue, the kind of event, and the prerequisites. Additionally, it offers the customer other services based on their needs. In the end, the Android app serves as an organizer's strategic ally, enabling them to skilfully plan and execute events. By utilising its intuitive interface, note-saving capabilities, and expenditure management skills, organisers can optimise their workflow, provide customers with exceptional services, and guarantee that every event is a success.

1. **Related work**

A Survey on event planner apps reveals a growing body of research and publications that explore various aspects of these applications. Researchers and practitioners have delved into topics ranging from the impact of technology on event planning to the user experience of event management apps.

In [1], the development and operation of an Android application designed to simplify event management are examined. It all comes down to overcoming the typical obstacles that event planners encounter in an effort to streamline and improve productivity. The software prioritises security and individualised access, requiring users to create and validate their accounts. [2] This creative program makes use of state-of-the-art technology to provide users a variety of potent features and an intuitive user interface. The software gives event planners a one-stop platform to handle all part of their events, from easy ticketing and registration to real-time capabilities for engaging attendees. [3] The purpose of this article is to create an application for an event management system. Events like weddings and festivals have become an integral part of modern life, which has led to the growth of event management and planning companies. Using a standard system to manage the growing number of clients and events is challenging. A new Smart Event Planner System, which makes use of contemporary technology to manage numerous duties and plan for staff, customers, locations, transportation, and more, may be implemented in order to address the shortcomings of the conventional event managing system. With the aid of this technology, the management team and customers are now closer thanks to mobile and smart web access. [4] Understanding how crucial it is to create a feeling of community among guests, the app offers interactive elements that let users communicate and connect with one another. The app turns events into immersive experiences that go beyond the actual confines of the venue, offering discussion boards, live polls, and networking possibilities. The app's dedication to using strong analytics to support data-driven decision making is one of its most notable features. By learning about the tastes and behaviour of attendees, event planners may make ongoing improvements. By knowing what appeals to their audience, event planners may adjust subsequent events to fit changing demands and provide guests a more unique and fulfilling experience. In the field of event planning, the Event Management App is a shining example of innovation. [5] a complete stack project that establishes the framework for all our objectives, with a primary focus on the suggested recommendation algorithms that allow its users to find events that are likely to catch their attention. Our recommendation algorithms were developed with inspiration from pre-existing implementations, including those at Netflix, YouTube, and Amazon, and the outcome was an innovative fusion.[6] Our project's main goal is to create a mobile application and use contemporary technology to simplify the intricate process of conventional event management techniques, turning them into intelligent event management systems. Our study specifically focusses on events held by several colleges and institutions that adhere to conventional event management techniques.

Every time a college or university hosts an event, there are additional tasks that must be completed, such as organising the event, monitoring the plan, adhering to a strict budget, providing students with clear information about the event, sending out invitations, conducting registration, advertising among other colleges, and occasionally even lacking in-person audience interaction. This specific project is the subject of additional study, which improves the model's properties.

1. **Proposed algorithm**

Frontend: Flutter

In order to ensure smooth interaction for all users, whether they are exploring vendors, making reservations, or handling payments, the Event Planner App's frontend is made to have an aesthetically pleasing, responsive, and user-friendly interface.

Key Features:

* Cross-platform compatability
* User-friendly interface
* Real time update

Backend: Firebase

The backend of the Event Planner App is built on Firebase, offering a robust foundation for managing data processing, business logic, and seamless communication between the frontend and database. It ensures scalability, security, and operational efficiency, aligning with the app's dynamic requirements.

Key features:

* Scalability
* Real-time database management
* Serverless architecture

1. **Pseudo code**

**1. User Authentication**

1. User enters email and password.
2. The app checks if the email exists in the database.
3. If the email exists, the password is verified.
4. On successful verification, the user is logged in, and a session or token is generated.
5. If verification fails, an error message is displayed.

**2. User Registration**

1. User provides their name, email, and password.
2. The app checks if the email is already registered.
3. If not, the user details are saved to the database, and an account is created.
4. A confirmation message is sent to the user.

**3. Vendor Search**

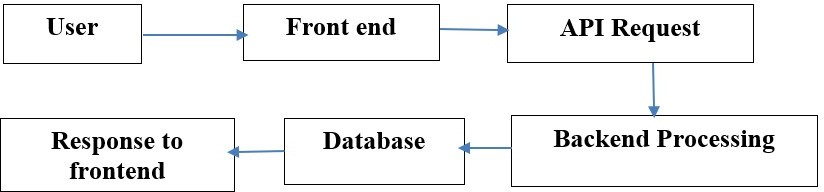
1. User applies filters such as location, service type, price range, or availability.
2. The app queries the database using the provided filters.
3. Matching vendors are displayed in a list with details like ratings, reviews, and availability.

**4. Booking Management**

1. User selects a vendor and specifies event details (date, time, requirements).
2. The app checks the vendor’s availability for the selected date and time.
3. If available, a booking is created and saved in the database.
4. The vendor is notified of the new booking.
5. The user receives a confirmation of the booking

**5. Vendor Profile Management (Admin Dashboard)**

1. Vendors log in to access their dashboard.
2. They can update their profile details, such as services offered, pricing, and availability.
3. Vendors can view all their bookings and manage them (e.g., accept or decline).
4. Vendors can access analytics on their bookings and customer reviews.

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*fig 1. workflow*

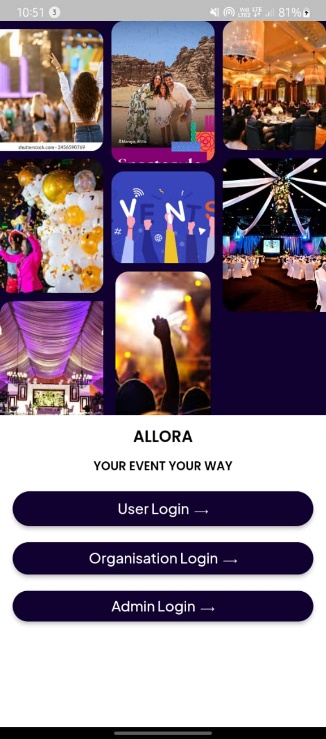
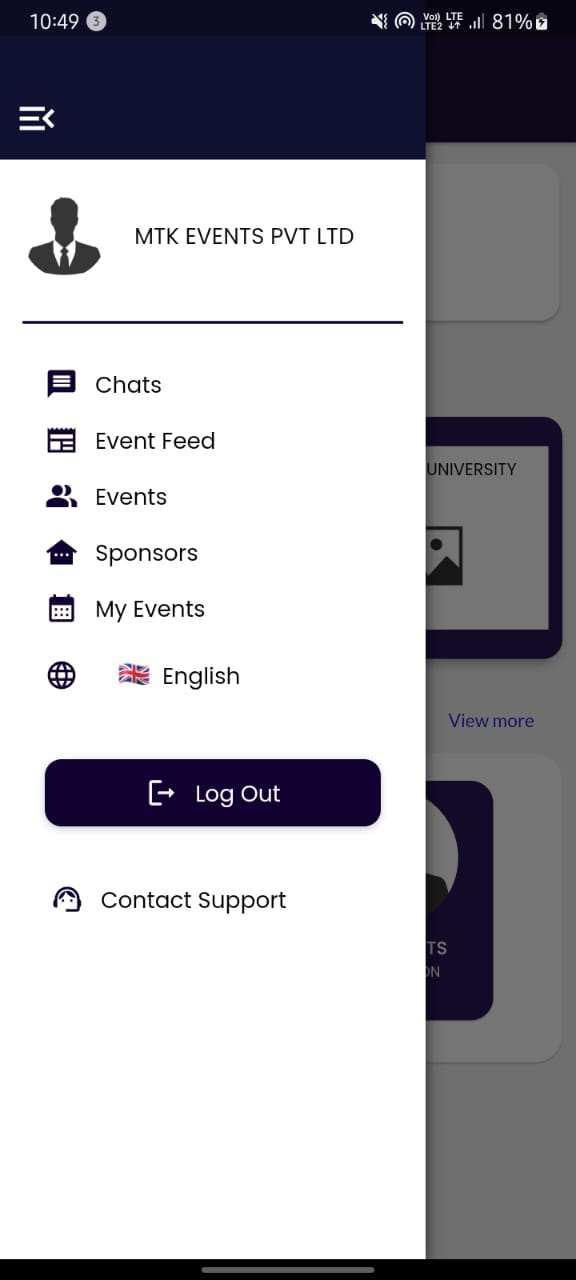
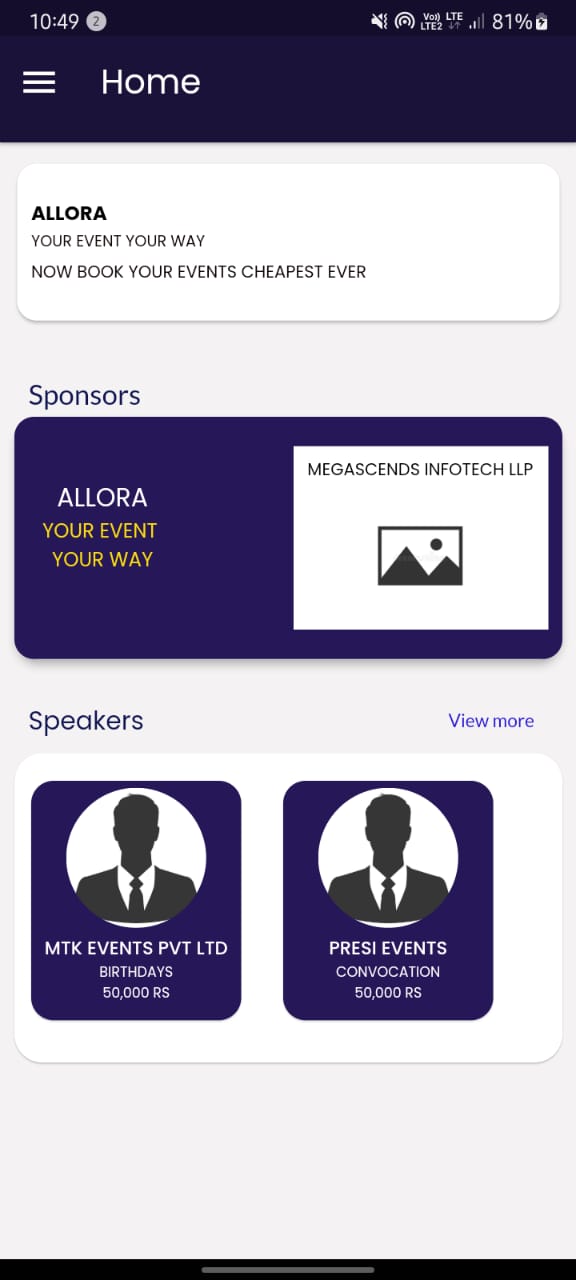
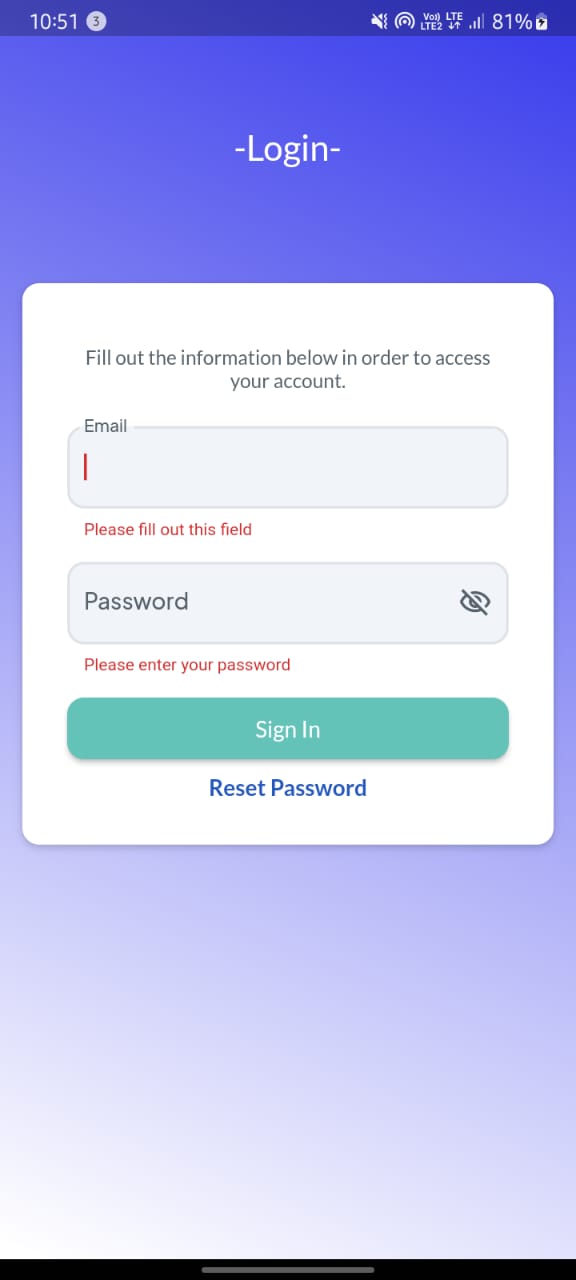
**V. Simulation Results**

It presents the results of the various testing processes conducted for the Event Planner App. These tests aim to ensure that the app performs optimally under different conditions, provides a smooth user experience, and meets user expectations. The testing covered multiple aspects of the app, including load testing for scalability, user acceptance testing (UAT) feedback, and key performance metrics such as average app response time and booking success rates.

1. Load Testing for Scalability Scalability is one of the most important factors for any app, especially one like the Event Planner App that aims to serve a large user base consisting of event planners, service providers, and other stakeholders. Load testing ensures that the app can handle varying levels of traffic and user interactions without compromising performance.
2. User Acceptance Testing (UAT) Feedback User acceptance testing (UAT) is a critical phase where real users interact with the app in a real-world scenario to evaluate its functionality, usability, and overall satisfaction. The feedback gathered from this phase plays a key role in ensuring that the app meets the needs of its target audience and performs as expected.
3. Discussion The results of the testing provide valuable insights into the app’s performance and its ability to meet user expectations. The load testing results confirm that the app is highly scalable and can handle large amounts of traffic, which is essential for its long-term success. The UAT feedback demonstrates that the app is well-received by users, with high satisfaction rates and a seamless experience across the major functions of registration, booking, and payment. Additionally, the performance metrics reflect the app's efficiency in handling operations and its ability to deliver a smooth, uninterrupted experience.

In conclusion, the testing results indicate that the Event Planner App is on track to provide a fast, scalable, and reliable platform for event planning. With the right adjustments and enhancements, it is poised to meet the growing needs of event planners and vendors while offering an excellent user experience.

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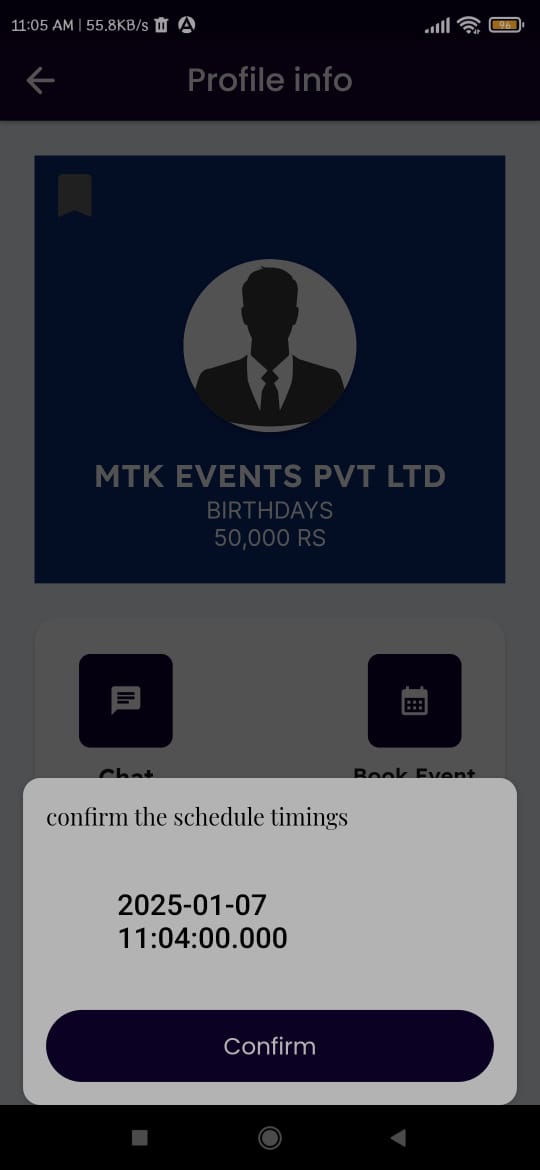
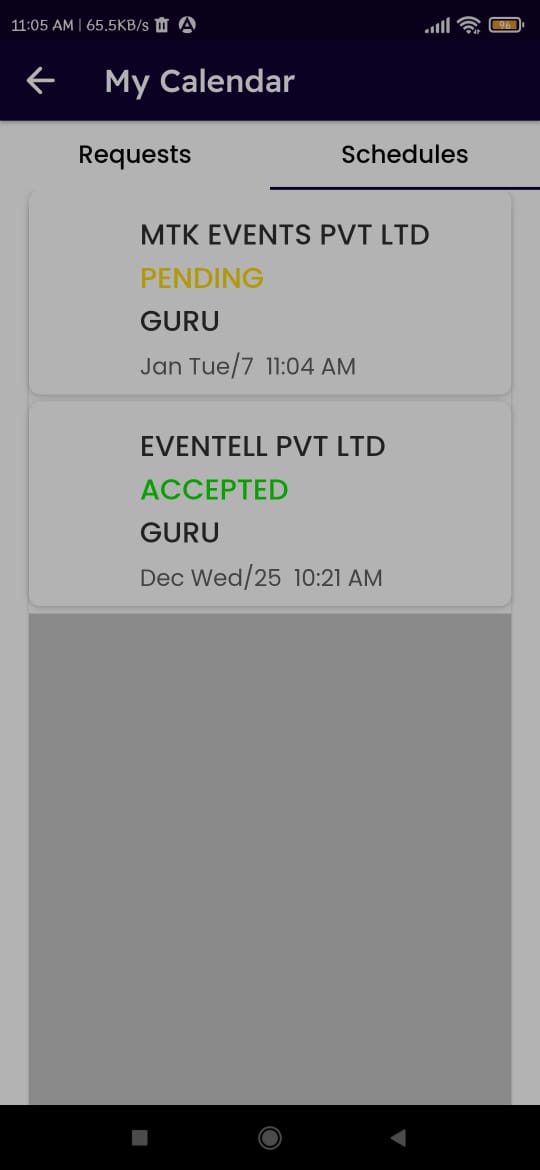
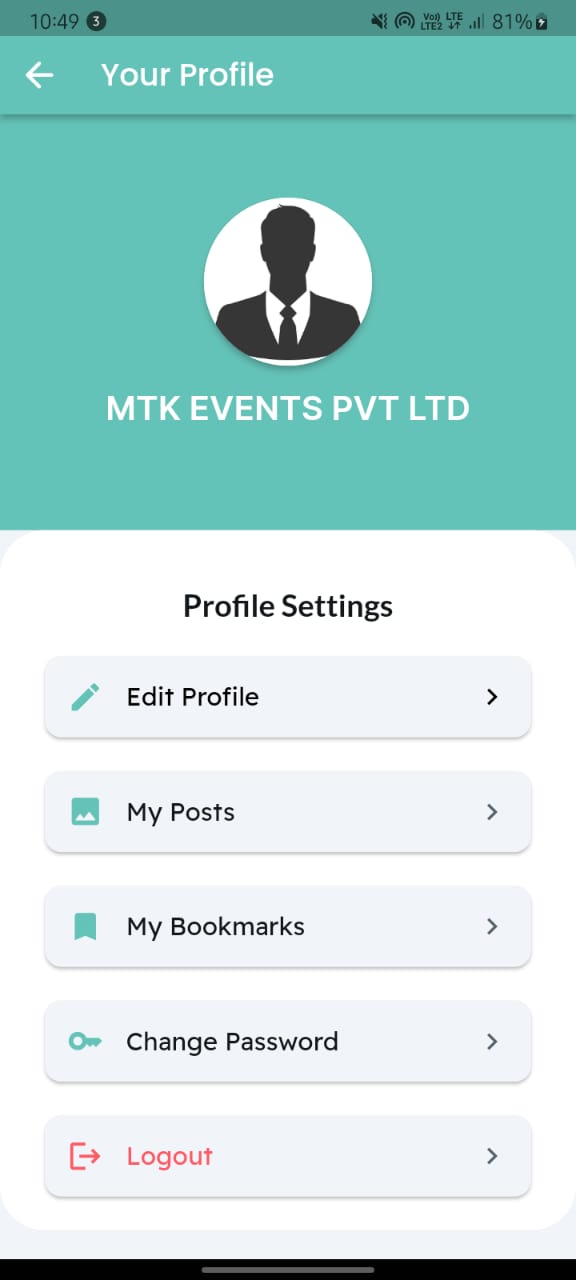
 Fig 2 Login page Fig 3 Users Login page Fig 4 Home page Fig 5 Menu page

Fig 6 Schedules page Fig 7 Profile Page Fig 8 Booking page Fig 9 Chat page

1. **Conclusion and Future Work**

By centralising vendor services, facilitating smooth communication, and guaranteeing safe transactions, the Event Planner App has effectively solved the difficulties associated with traditional event planning. For both event hosts and service suppliers, the app promotes efficiency, dependability, and trust by integrating features like user ratings, clear pricing, and real-time availability. By ensuring scalability, data security, and optimal performance via the use of cloud-based technology and rigorous testing methods, the app has established itself as a game-changing tool in the event planning sector. By providing a centralised platform that streamlines the event planning process, the Event Planner App has completely transformed the event planning sector. Future updates will try to improve the app's functionality and user experience even further.

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