GALAGRID

A PROJECT REPORT

submitted by

MINHAJ PK (KMC21CS030)

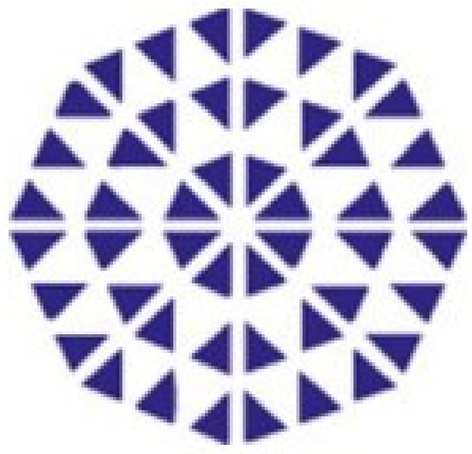
to

The APJ Abdul Kalam Technological University

in partial fulfillment of the requirements for the award of the Degree

of

Bachelor of Technology
in
Computer Science



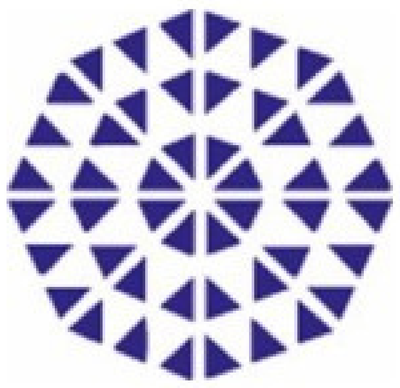
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
KMCT COLLEGE OF ENGINEERING KOZHIKODE
NOVEMBER 2024

DECLARATION

I undersigned hereby declare that the project report "**GalaGrid**", submitted for partial fulfillment of requirements for the award of degree of Bachelor of Technology of the APJ Abdul Kalam Technological University, Kerala is a bonafide work done by me under supervision of **Mrs. Nishidha T,** Assistant Professor,Computer Science and Engineering, KMCT College of Engineering . This submission represents my ideas in my own words and where ideas or words of others have been included, I have adequately and accurately cited and referenced the original sources. I also declare that I have adhered to ethics of academic honesty and integrity and have not misrepresented or fabricated any data or idea or fact or source in my submission. I understand that any violation of the above will be a cause for disciplinary action by the institute and/or the University and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been obtained. This report has not been previously formed the basis for the award of any degree, diploma or similar title of any other University.

Place: **MINHAJ PK**
Date:

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
KMCT COLLEGE OF ENGINEERING, KOZHIKODE



CERTIFICATE

This is to certify that the report entitled "**GALAGRID**" Submitted by **MINHAJ PK (KMC21CS030)** to the APJ Abdul Kalam Technological University in partial fulfillment of the requirements for the award of the Degree of Bachelor of Technology in Computer Science and Engineering is a bonafide record of the project work carried out by him under our guidance and supervision. This report in any form has not been submitted to any other University or Institute for any purpose.

Project Guide:	Project Coordinator:	Head Of the Department:
Mrs Majida Chettiyam Veettil	**Mrs Nishidha T**	**Dr. Sreekesh Namboodiri**
Assistant Prof	Assistant Prof	Associate Professor
Dept. of CSE	Dept. of CSE	Dept. of CSE

ACKNOWLEDGEMENT

Firstly, I would like to express my sincere gratitude to my principal **Dr. Sabiq P V** for providing such quality facilities in my esteemed institution for my project work.

I would like to express my sincere gratitude to **Dr Sreekesh Namboothiri**, Head of the Department, Computer Science and Engineering, KMCT College of Engineering for being a great force behind all our efforts through timely advice, guidance, and words of encouragement.

I extend my sincere gratitude to my internal guide **Ms. Majida Chettiyam Veettil**, Assistant Professor, Computer Science and Engineering, KMCT College of Engineering for all kinds of cooperation, guidance and help rendered throughout my project. And I also express my thanks to all teaching and non teaching staff for their valuable advice and help to move forward with the project work.

I express my heartfelt gratitude to the project coordinator**, Mrs. Nishidha T** Assistant Professor, Computer Science and Engineering, KMCT College of Engineering for her valuable direction and constant motivation which helped in doing the seminar with utmost dedication and presence of mind.

Above all, we thank the Almighty without whose grace our endeavors would not have been a success.

MINHAJ PK

ABSTRACT

The increasing complexity of event management, coupled with the growing need for digital solutions, has prompted the development of comprehensive platforms that streamline event planning. GalaGrid is a unified event management platform designed to simplify the organization of events by consolidating essential services like venue booking, catering, and entertainment arrangements into a single interface. The platform's architecture is designed for scalability and flexibility, supporting a growing user base and an expanding catalog of service providers. GalaGrid incorporates robust data processing capabilities, which enable it to dynamically update service availability, filter options by user-defined criteria, and offer real-time booking management.Through an accessible, user-centered design, GalaGrid enables efficient booking and management, reducing the time and effort required for organizing successful events. This report explores GalaGrid's key modules, including user and vendor management, service booking, event customization, and feedback systems. It also discusses the innovative use of collaborative and content-based filtering algorithms to provide tailored recommendations, as well as the architecture and development environment that supports these functionalities. GalaGrid aims to transform event management by making it more accessible, efficient, and adaptable to diverse user needs. Through continuous updates and a commitment to user satisfaction, GalaGrid is positioned to become a leading solution in the event management industry, empowering users to create memorable events with ease and confidence.

CONTENTS

LIST OF FIGURES

CHAPTER 1
INTRODUCTION

1.1 GENERAL BACKGROUND

The event management industry has experienced transformative changes driven by advancements in technology and shifting consumer expectations. Traditional planning methods, often cumbersome and disjointed, are increasingly being replaced by streamlined digital solutions that prioritize efficiency and convenience [1]. GalaGrid emerges as a cutting-edge platform that integrates all essential aspects of event planning into a single, user-friendly interface.

At the heart of GalaGrid's mission is accessibility. By creating a centralized marketplace for services such as venue rental, catering, and entertainment, GalaGrid democratizes access to vital resources, enabling users from various backgrounds to orchestrate exceptional events with ease. This approach empowers individuals regardless of their budget or experience level, allowing them to create memorable experiences seamlessly.

GalaGrid is not just a transactional platform; it fosters a collaborative community that connects event organizers with service providers. By promoting networking and partnerships, it enhances the event planning process while encouraging innovation and creativity. Furthermore, GalaGrid continuously evolves by incorporating user feedback and staying aligned with industry trends, ensuring it meets the needs of its users.

The platform also offers a wealth of educational resources, including articles and vendor reviews, that help users make informed decisions throughout their planning journey. By prioritizing customer satisfaction and reliability, GalaGrid aims to provide a consistent and rewarding user experience. As it grows, GalaGrid stands as a beacon of progress in the event management landscape, reshaping how people connect and celebrate. Its commitment to quality service and user satisfaction positions GalaGrid as a leader in transforming the event planning experience for the better. Ultimately, GalaGrid is not just about planning events; it’s about fostering connections, celebrating milestones, and creating lasting memories for all involved.

1.2 EXISTING SYSTEM

The existing systems that inform GalaGrid's development include OLX and Facebook Marketplace, both of which serve as online platforms for buying and selling a wide variety of goods and services. OLX allows users to post ads, conduct local searches, and communicate through an in-app messaging system, while also enabling user ratings to foster community trust. Facebook Marketplace, integrated into the Facebook ecosystem, provides personalized recommendations and facilitates easy visibility through sharing among friends. Despite their popularity, both platforms lack specialized services for event rentals, which is a significant gap that GalaGrid seeks to fill. Analyzing these platforms enables GalaGrid to identify opportunities for innovation, ultimately enhancing user experience and market competitiveness [2].

Disadvantages of Existing Systems

1. Lack of Rental Services: Both OLX and Facebook Marketplace do not offer dedicated rental options, limiting choices for users looking to rent rather than purchase items.
2. Potential for Scams: The absence of rigorous seller verification processes can lead to scams or fraudulent transactions, compromising user trust and safety.
3. Limited Customer Support: Users may find it difficult to resolve issues or disputes due to insufficient customer support options available on these platforms.
4. High Competition: The vast number of listings can make it challenging for individual sellers to gain visibility, potentially affecting sales and user engagement.

1.3 OBJECTIVES

GalaGrid aims to provide a comprehensive event management solution that encompasses all aspects of event planning, including venue rental, catering, and entertainment booking, ensuring users have a one-stop solution for their needs. The platform seeks to foster collaboration by creating a vibrant community of event organizers and service providers, encouraging networking and partnerships that facilitate mutually beneficial opportunities within the event industry. Enhancing accessibility to event-related resources is another key objective, connecting users with a diverse marketplace of vendors to streamline the sourcing process.

Prioritizing user satisfaction is fundamental, with a focus on delivering high-quality services and implementing user feedback mechanisms to continuously refine the platform. GalaGrid is dedicated to developing an intuitive, visually appealing user interface for seamless navigation, thus enhancing the overall user experience. Additionally, the platform intends to provide educational resources, including articles and vendor reviews, empowering users with knowledge for informed decision-making while promoting trust through robust vendor verification processes. By continuously introducing innovative features and ensuring regular updates, GalaGrid aims to redefine the event planning landscape, making it more efficient, accessible, and enjoyable for all users. Ultimately, the platform is committed to supporting a wide range of events, from intimate gatherings to large-scale celebrations, while fostering sustainable practices by encouraging eco-friendly solutions that benefit both users and the environment. Through these objectives, GalaGrid seeks to lead the way in transforming how events are planned and executed, ultimately enriching the experiences of all participants involved.

1.4 SCOPE

The scope of GalaGrid encompasses a wide range of functionalities designed to streamline the event planning process for users. It includes features for venue rental, catering services, and entertainment booking, providing a comprehensive solution for various event types. The platform targets both individual event organizers and businesses, facilitating access to a diverse marketplace of vendors tailored to their specific needs. Additionally, GalaGrid will support user-generated content such as reviews and feedback, fostering a community-driven approach to event planning.

The mobile application will be developed for both Android and iOS platforms, ensuring broad accessibility across devices. Regular updates will enhance the platform's functionality, incorporating user suggestions and adapting to industry trends. Moreover, GalaGrid will implement robust security measures to protect user information and build trust among users and service providers. The project will also explore partnerships with local vendors to offer exclusive deals and promotions, enhancing value for users. Through this comprehensive scope, GalaGrid aims to revolutionize the event planning landscape, making it more efficient, user-friendly, and accessible to everyone involved.

CHAPTER 2
LITERATURE REVIEW

2.1 TECHNOLOGICAL ADVANCEMENTS IN EVENT MANAGEMENT

García Revilla et al. (2023) provide an in-depth look at how advancements in digital platforms and mobile applications are reshaping the field of event management. Their study focuses on the integration of mobile compatibility, which enhances accessibility and supports on-the-go planning, making it easier for organizers to manage logistics from a single platform. Key innovations discussed include automated scheduling systems, vendor coordination tools, and real-time communication features that allow event organizers to respond to issues as they arise. By consolidating these functions, the technology reduces the complexity associated with traditional event planning. GalaGrid aligns with these technological advancements by offering a centralized, user-friendly app that provides organizers and attendees with a seamless experience, covering everything from booking services to receiving updates in real time.

2.2 TRENDS IN COLLEGE EVENT MANAGEMENT

Bhawanani et al.(2024) focus on the evolving needs in college event management, particularly the demand for adaptable and easy-to-use digital solutions that cater to high engagement levels. This study highlights the unique requirements of college events, where simplicity, interactivity, and accessibility are crucial [3]. Through a survey of students and event organizers, the authors find that features like gamification, social media integration, and user-friendly interfaces are essential for encouraging student participation. This aligns with GalaGrid's mission to create a comprehensive and accessible event management system. By incorporating user-friendly designs and engagement features, GalaGrid appeals to a younger demographic and ensures that event planning is straightforward, intuitive, and adaptable to various event formats and needs. Also emphasize the importance of digital event management systems in fostering community and networking among students, helping them connect and collaborate more effectively.

2.3 DIGITAL ERA IN EVENT MANAGEMENT CHALLENGES

Farayola et al. (2022) explore the dual facets of digital transformation in event management —both its challenges and its far-reaching benefits. The authors emphasize that while digital tools enhance operational efficiency, they also introduce significant challenges, such as the need for robust cybersecurity frameworks to safeguard sensitive data [3]. This is particularly crucial given the rise in cyber threats targeting digital platforms. Additionally, they highlight that digital tools can be complex and may require specialized training, making it difficult for event planners to adopt these technologies seamlessly. However, the paper underscores the opportunity these tools present, enabling organizers to streamline operations, reach larger audiences, and enhance overall event accessibility [4]. By addressing these challenges, GalaGrid creates a platform that combines the power of digital accessibility with user-friendly design, mitigating technical barriers and providing secure, intuitive solutions that encourage widespread adoption among organizers.

2.4 AI AND ENHANCED ENGAGEMENT

Khanal (2023) provides a comprehensive look at how artificial intelligence can be leveraged to create highly personalized and responsive event experiences. The paper examines various AI applications, such as personalized recommendation engines that suggest relevant sessions, activities, or networking opportunities tailored to individual preferences. This AI-driven personalization fosters deeper attendee engagement and satisfaction by making the event experience feel unique to each participant. Furthermore, Khanal discusses how AI can enable real-time engagement through features like chatbots, which provide instant assistance to attendees, and sentiment analysis tools, which assess attendee reactions to adjust content or event flow dynamically. By using these AI capabilities, GalaGrid can proactively cater to user needs and preferences, enhancing the overall event experience and reinforcing its goal to provide a high level of adaptability and responsiveness to user feedback [5].

2.5 DIGITAL TRANSFORMATION AND USER EXPERIENCE

Manikandan et al. (2021) analyze the impact of digital transformation on enhancing user

experience in event management, highlighting how digital tools streamline complex tasks and improve overall event planning efficiency. The study points out that mobile-first design is a cornerstone of modern event platforms, enabling users to access features effortlessly on smartphones and tablets, which are increasingly preferred by users for their convenience and portability. Additionally, the authors emphasize the role of real-time updates and notifications, allowing organizers and attendees to stay informed about changes in schedules, venue details, or last-minute adjustments—crucial for a smooth event experience [6].

The paper also discusses the use of interactive features, such as virtual tours and 3D venue previews, which allow users to explore spaces and visualize setups remotely, saving time and enhancing the decision-making process. Such tools add a layer of engagement and reduce the guesswork often involved in venue selection. Moreover, the research underscores the significance of feedback systems integrated into event platforms, enabling users to share their experiences and insights in real time [7]. These elements are shown to not only improve the operational side of events but also elevate attendee satisfaction by creating a more immersive and responsive experience. GalaGrid applies these principles by prioritizing seamless navigation, mobile accessibility, and interactive elements in its platform, ensuring that users have a smooth, engaging experience from planning to post-event feedback. Through this digital-first approach, GalaGrid supports both organizers and attendees, making the event process intuitive, connected, and highly user-centric.

CHAPTER 3
REQUIREMENT STUDY AND ANALYSIS

The requirement analysis for GalaGrid aims to define the essential functionalities, quality standards, and technical specifications needed to create an efficient and user-friendly event management platform. Key functional requirements include secure user registration, seamless event booking, vendor management, and integrated payment processing, which collectively facilitate the planning and coordination of events. Additionally, features like a review system, notifications, and real-time chat enhance user interaction and engagement. Non-functional requirements emphasize scalability, usability, security, and reliability to ensure that GalaGrid provides a stable and accessible experience for all users. The system is designed to be compatible across Android and iOS devices, with minimal hardware demands and optimized performance to meet the expectations of a diverse user base. This comprehensive requirement analysis supports the development of a scalable, adaptable platform that meets modern event planning needs [8].

3.1 FEASIBILITY STUDY

The feasibility study examines various aspects of the project to determine its viability and ensure successful implementation. The following types of feasibility analyses were conducted for the project:

3.1.1 Operational Feasibility

Operational feasibility assesses how well GalaGrid meets the practical needs of users, event organizers, and vendors while ensuring smooth day-to-day operations. The focus is on user adoption, functionality, and the system's ability to integrate into the daily workflow of event planning.

- **User Adoption:** GalaGrid prioritizes user experience, ensuring an intuitive interface accessible to users of all skill levels. Usability testing, onboarding tutorials, and help resources will support a seamless user experience. Features like real-time notifications, vendor reviews, and an easy booking system aim to drive high adoption rates among event planners and vendors.

- **Vendor Onboarding and Engagement:** Success relies on a strong network of vendors offering diverse services. A simplified registration process and a user-friendly dashboard for managing listings, bookings, and payments will encourage vendor participation. Messaging tools, booking calendars, and performance insights further support vendor engagement.
- **Integration into Event Planning:** GalaGrid integrates smoothly into typical event planning workflows. By consolidating venue searches, vendor bookings, communication, and payments into one platform, it streamlines operations and reduces complexity for users.
- **Customer Support and Reliability:** High user satisfaction is ensured with real-time chat, an FAQ section, and ongoing system maintenance. A feedback system allows users to report issues and suggest improvements, driving continuous platform enhancement.

3.1.2 Technical Feasibility

The technical feasibility of GalaGrid evaluates the platform's capability to be developed, deployed, and maintained with the available technologies, skills, and resources. The core elements assessed under technical feasibility include platform compatibility, scalability, integration capabilities, and data security.

- **Platform Compatibility:** GalaGrid will be developed as a cross-platform app, compatible with Android and iOS. Using frameworks like React Native or Flutter enables efficient, simultaneous development, ensuring a uniform experience across devices.
- **Scalability:** Built for growth, GalaGrid's architecture will utilize cloud infrastructure (e.g., AWS or Google Cloud) to support an expanding user base, flexible storage, and load balancing, ensuring reliable performance even during peak usage.
- **Integration Capabilities:** The platform will integrate with third-party services, including payment gateways, location services, and messaging APIs. Using RESTful APIs, GalaGrid ensures smooth, modular functionality, enabling easy updates and new features.
- **Data Security and Privacy:** GalaGrid will implement robust security, including data encryption, secure logins, and compliance with GDPR. Regular security audits will help protect user data and transactions.

3.1.3 Economic Feasibility

A cost-benefit analysis projects a positive return on investment (ROI) through revenue from

advertising and potential premium features. The initial development, marketing, and infrastructure setup costs will be weighed against expected revenue, with a focus on sustainable growth and market penetration.

3.1.4 Behavioural Feasibility

The behavioral feasibility of GalaGrid considers how effectively the platform can be adopted and used by target users, including event organizers, vendors, and attendees. GalaGrid's design focuses on user-centered features that prioritize ease of use and intuitive navigation, making it appealing to both novice and experienced event planners. By integrating a streamlined interface and personalized recommendations, GalaGrid aims to reduce the complexity of event planning, encouraging users to adopt the platform quickly.

3.2 PROJECT PLAN

Title	-	GalaGrid: An Integrated Platform for Event Planning and Vendor Collaboration
Project Start Date	-	February 6, 2024
Project End Date	-	May 16, 2024
Objective	-	To provide a unified platform for event planning, rental services, and bookings.
Project Coordinator	-	Mrs. Majida Chettiyam Veettil
Project Team	-	Hanan Mohammed Nasseer, Lukumanul Hakeem, Minhaj PK, Niba Jasmin.

3.3 PROPOSED SYSTEM

The proposed GalaGrid system aims to revolutionize event planning by providing a comprehensive, all-in-one platform that simplifies and enhances the entire event management process. Designed for both event organizers and vendors, GalaGrid consolidates essential event planning components—such as venue booking, vendor coordination, and service management—into a single, easy-to-navigate interface. This system will allow users to search for and book services based on specific needs, preferences , and locations, offering a wide variety of options from catering and decor to entertainment and equipment rentals. By

streamlining these diverse elements, GalaGrid reduces the complexity of managing multiple vendors and tasks, empowering users to coordinate events with efficiency and ease. The platform will feature user-friendly tools, including a personalized dashboard, booking calendar, and real-time notifications, ensuring that organizers stay on top of every detail throughout the planning and execution phases [9].

In addition to offering essential event services, GalaGrid is designed to foster a sense of community within the event industry by connecting users and vendors in a collaborative, interactive space. The platform will include features that enable user feedback, such as rating and review systems, to help users make informed choices and vendors build credibility. Vendor profiles and listings will showcase services, while advanced communication tools, like in-app messaging, will allow organizers and vendors to interact directly, discuss details, and negotiate terms. Furthermore, data-driven recommendations based on user preferences and past bookings will enhance the user experience, helping organizers find the best-suited services for their events. Overall, GalaGrid combines technology, convenience, and community-building to create a modern, adaptable event management solution that caters to the needs of organizers and service providers alike.

3.4 SPECIFICATION AND REQUIREMENTS

The specifications and requirements for GalaGrid are designed to ensure a comprehensive, user-friendly, and scalable event management platform. This section outlines the functional, non-functional, system, user, and software requirements necessary for the successful implementation and operation of the platform.

3.4.1 Functional Requirements

Functional requirements define the core features and operations that GalaGrid must support to meet user needs effectively:

- **User Registration and Authentication:** Users and vendors must be able to create accounts, log in securely, and manage their profiles.

- **Event Planning and Booking:** Users should have the ability to search for venues, services, and products, and make bookings based on availability, location, and budget.
- **Vendor Management:** Vendors can list their services, manage bookings, and interact with clients through in-app messaging.
- **Payment Processing**: Secure payment gateway integration allows users to make payments directly on the platform, supporting various methods such as credit/debit cards, digital wallets, and bank transfers.
- **Review and Rating System:** A feedback system for users to rate and review vendors, helping others make informed decisions.
- **Notifications:** Real-time notifications inform users of booking confirmations, reminders, updates, and promotional offers.

3.4.2 Non Functional Requirements

- **Performance:**The platform should load pages within 2 seconds under normal load conditions.It should support simultaneous access for up to 1,000 active users without performance degradation.
- **Usability:**The interface must be intuitive and easy to navigate for users with minimal technical skills.
- **Reliability:**The platform should have an uptime of 99.9%, ensuring minimal downtime.
- **Scalability:**The platform must be designed to scale, allowing additional vendors and users to join without affecting performance.
- **Security:**User data must be protected with encryption protocols, especially for payment and personal information.

3.4.3 System Requirements

System requirements cover the hardware, network, and infrastructure specifications necessary for GalaGrid to function effectively:

- Hardware: GalaGrid should be compatible with standard smartphones, tablets, and web browsers, requiring minimal storage space (around 50MB) for mobile app installations.

- **Network:** A stable internet connection is necessary for accessing the platform, making bookings, and processing payments.
- **Cloud Infrastructure:** Cloud-based storage and server support (e.g., AWS or Google Cloud) are recommended for scalability, data storage, and load balancing

3.4.4 User Requirements

User requirements define what end-users (event organizers and vendors) expect from GalaGrid in terms of usability and accessibility:

- **Accessibility:** The platform should be accessible on both mobile (Android and iOS) and web platforms, with a responsive design suitable for all device sizes.
- **Ease of Use:** Users expect a seamless experience, with clear instructions, a straightforward interface, and readily available help resources for onboarding and support.
- **Personalization:** Event organizers should receive personalized recommendations based on their event preferences and past interactions.
- **Vendor Features:** Vendors require tools for managing bookings, showcasing services, communicating with clients, and receiving performance insights.

3.4.5 Software Requirements

Software requirements outline the necessary development and operational tools, as well as compatibility specifications:

- **Development Framework:** Cross-platform frameworks like React Native or Flutter for mobile app development to ensure compatibility with Android and iOS.
- **Backend:** A robust backend, potentially using Node.js or Django, to manage data, API integration, and real-time updates.
- **Database:** A scalable database solution, such as PostgreSQL or MongoDB, for efficient data storage and retrieval.
- **Payment Integration:** Secure payment gateway solutions like Stripe or PayPal for processing transactions.
- **APIs:** RESTful APIs to support third-party integrations (payment, location, and notification services).
- **Security Tools:** SSL/TLS encryption, OAuth for secure logins, and regular security audits to ensure compliance with privacy regulations.

CHAPTER 4

SYSTEM DESIGN AND DEVELOPMENT

4.1 SYSTEM ARCHITECTURE

The system architecture for the GalaGrid Event Management Application is designed to streamline and enhance the event planning and management process by integrating essential services, a user-friendly frontend, and robust backend functionalities. Based on the provided architectural layout, the application is divided into three core components: Frontend, Backend, and Vendor Management System. Here's a breakdown of each component:

1. Frontend

- **User Interface:** The UI encompasses essential modules, such as the Dashboard, Vendor List View, and Booking Process. These elements ensure that users have easy access to the main functionalities, allowing for quick navigation, vendor selection, and booking.
- **User Experience:** The UX design focuses on creating an Interactive Design to provide a seamless and engaging user experience. This ensures that users can interact with the application efficiently and intuitively, supporting tasks such as browsing vendors, viewing event details, and making bookings.

2. Backend

- **Database Management:** This section manages User Data, which includes storing and processing information for Event Organizers and Vendors. The database component ensures data integrity, security, and accessibility, making it easy for users to find event resources.
- **Integration of Essential Services:** Key services, such as Venue Booking API Integration, Catering Service API Integration, and Entertainment Management API Integration, are incorporated to provide a comprehensive marketplace. These integrations allow users to access a variety of event services in one platform, eliminating the need for external bookings.
- **Marketplace Functionality:** The backend supports core marketplace features, enabling users to search, filter, and interact with various event resources. This functionality is central to GalaGrid's aim to serve as a one-stop-shop for event management

3. Vendor Management System

- **Vendor Registration Process:** This component supports a streamlined onboarding process for new vendors, allowing them to easily register, list their services, and reach potential customers. This functionality promotes a collaborative community by bringing more vendors onto the platform.

The architecture of GalaGrid is designed to deliver a highly interactive, efficient, and comprehensive solution for event organizers and vendors, fostering a collaborative environment. With its well-structured frontend and backend, along with API integrations and a dedicated vendor management system, GalaGrid is positioned as a robust platform for modern event management needs.

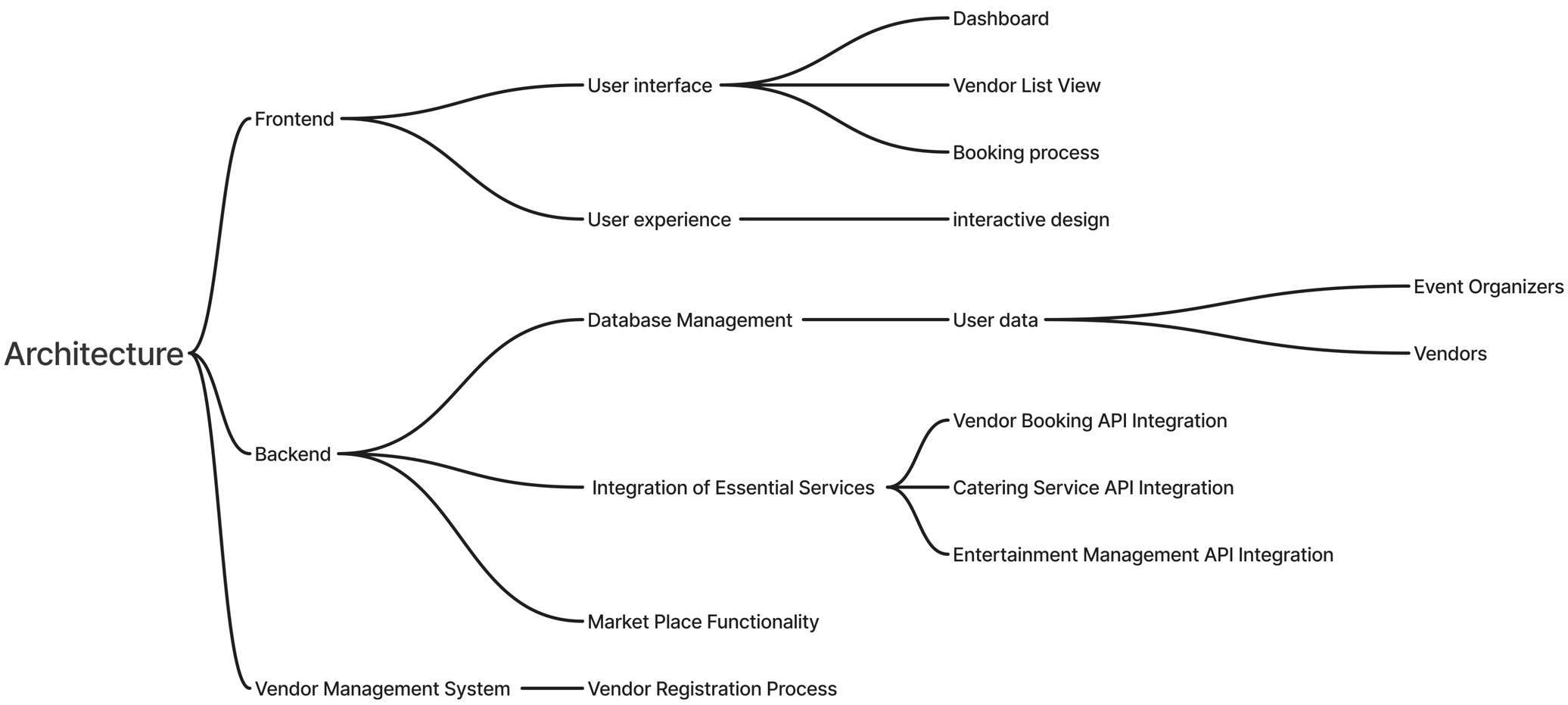


Fig 4.1.1 System Architecture

4.2 USE CASE DIAGRAM

Use cases specify the expected behavior, and not the exact method of making it happen. It summarizes some of the relationships between use cases, actors, and systems. It is an effective technique for communicating system behavior in the user's terms by specifying all externally visible system behavior. Here there is three actor - user, clients and the admin.

Actors and Use Cases

1.User:

- **Browse Event:** Users can search and explore events available on the platform.

- **View Profile:** Users have the option to view vendor profiles, gaining insight into the services offered.
- **Rate Product:** Users can rate services or products they have used, providing feedback to vendors and the community.
- **Plan Event:** Users can organize and plan their events by booking services from various vendors.

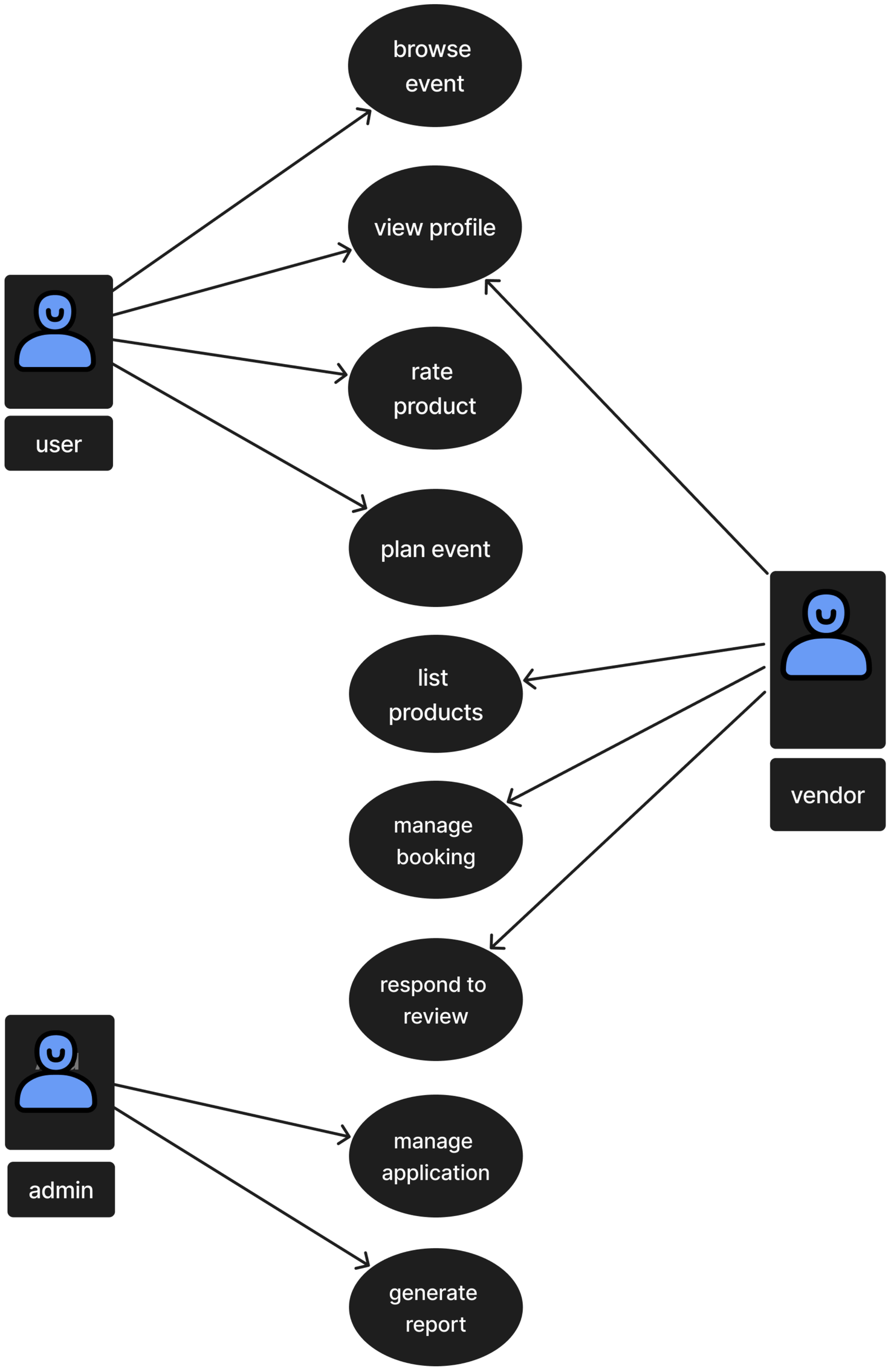


Fig 4.2.1 Use Cse Diagram

2.Vendor

- **List Products:** Vendors can display their services/products on the platform, making them accessible to potential customers.
- **Manage Booking:** Vendors handle incoming bookings, confirming or modifying them as needed.
- **Respond to Review:** Vendors can respond to user reviews, engaging with customers and managing feedback.

3.Admin

- **Manage Application:** The admin oversees the overall functionality of the application, ensuring smooth operation and resolving any issues.
- **Generate Report:** Admins have access to reporting tools, which help in analyzing platform usage, vendor performance, and user satisfaction.

4.3 CLASS DIAGRAM

Class diagram is a static diagram which describes the attributes and operations of a class and also the constraints imposed on the system. The class diagrams are widely used in the modeling of object-oriented systems because they are the only UML diagrams, which can be mapped directly with object-oriented languages. It shows a collection of classes, interfaces, associations, collaborations, and constraints. It is also known as a structural diagram.

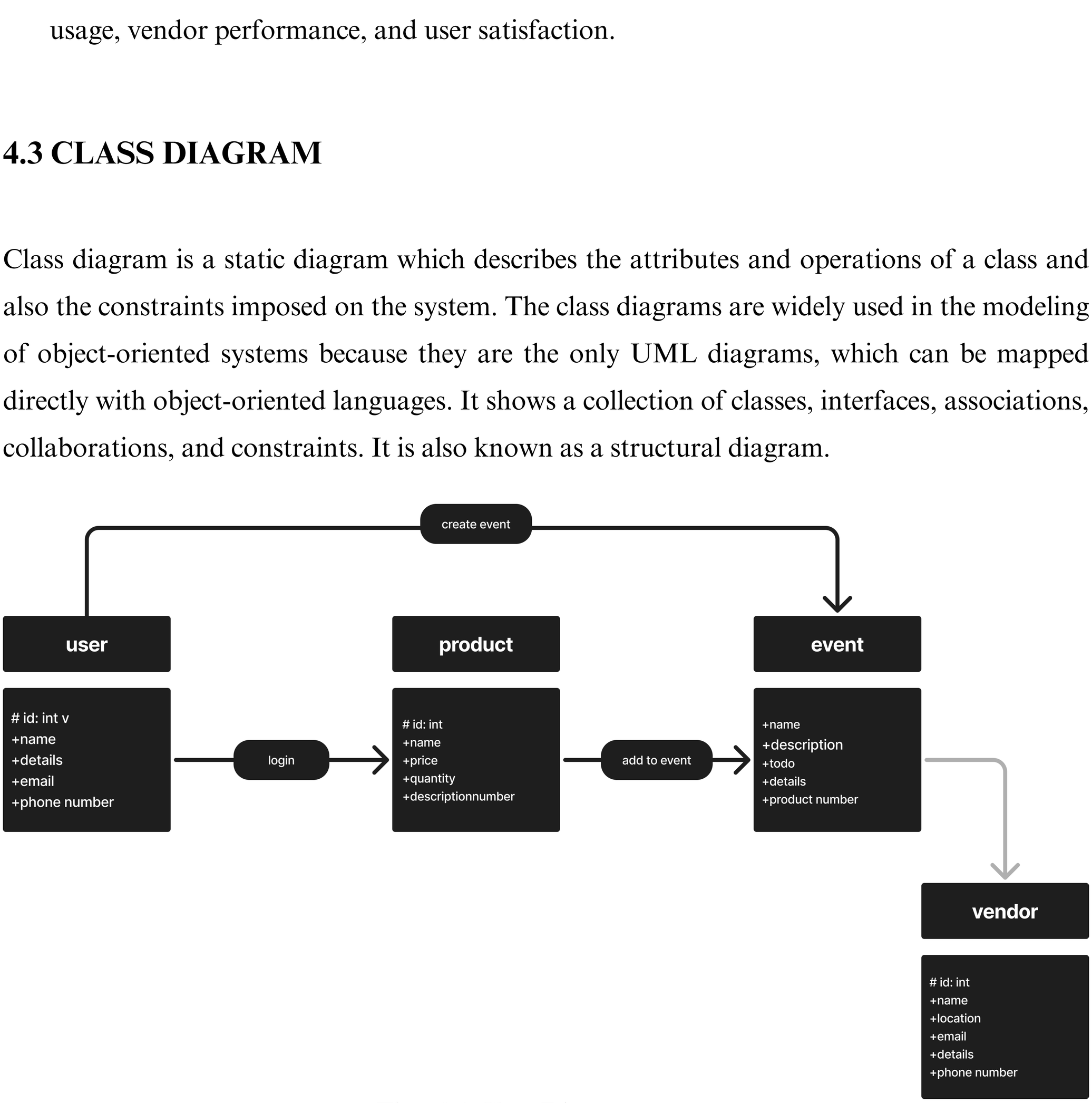


Fig 4.3.1 Class Diagram

4.4 ACTIVITY DIAGRAM

Activity diagrams are graphical representations of workflows of stepwise activities and actions with support for choice, iteration and concurrency. An activity diagram is a type of diagram used in Unified Modeling Language (UML).In the Unified Modeling Language, activity diagrams are intended to model both computational and organizational processes, as well as the data flows intersecting with the related activities. Although activity diagrams primarily show the overall flow of control, they can also include elements showing the flow of more data stores.

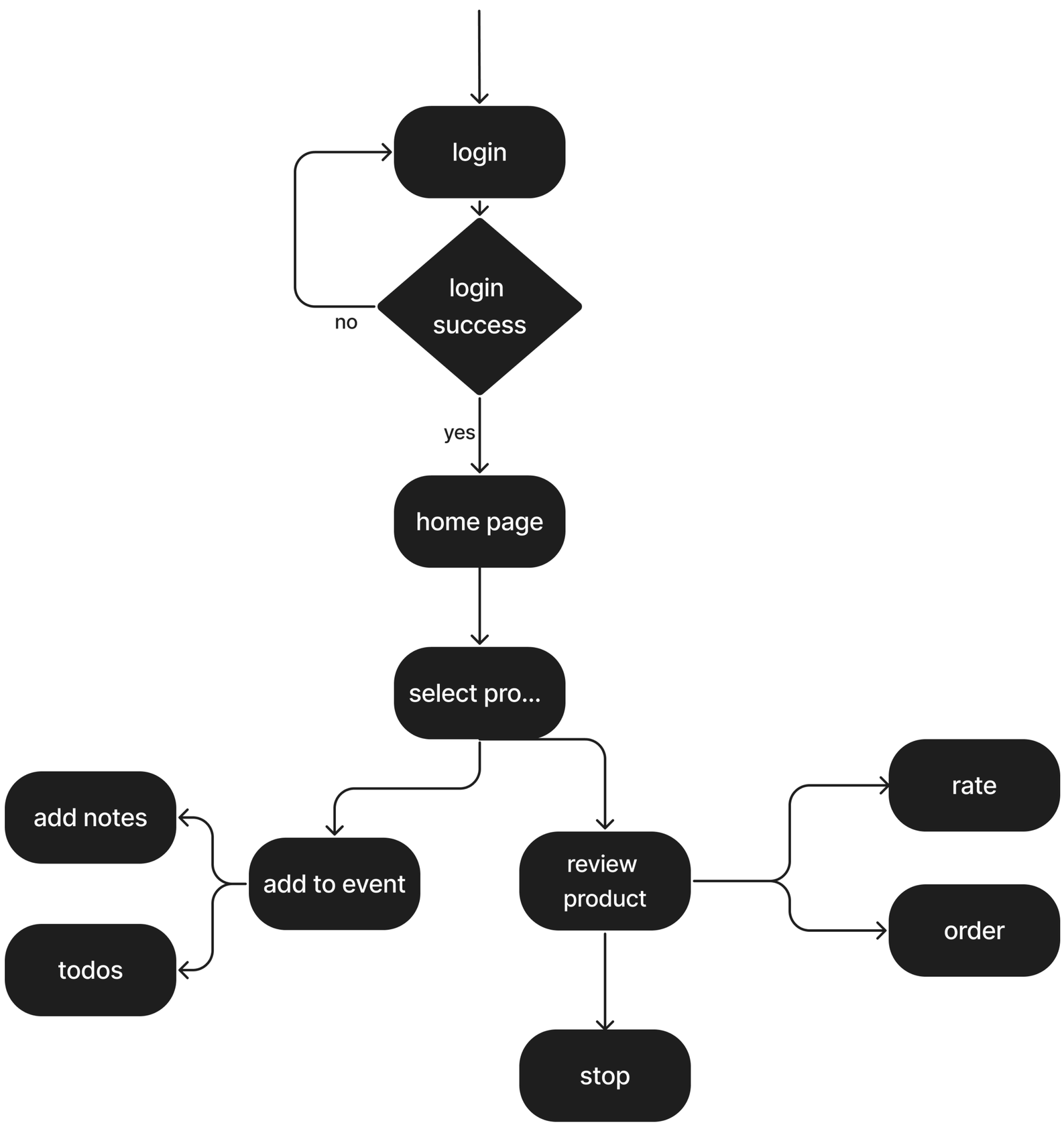


Fig 4.4.1 Activity Diagram

4.5 SEQUENCE DIAGRAM

Sequence Diagrams are interaction diagrams that detail how operations are carried out. They capture the interaction between objects in the context of a collaboration. Sequence Diagrams are time focused and they show the order of the interaction visually by using the vertical axis. simply depicts interaction between objects in a sequential order i.e. the order in which these interactions take place.

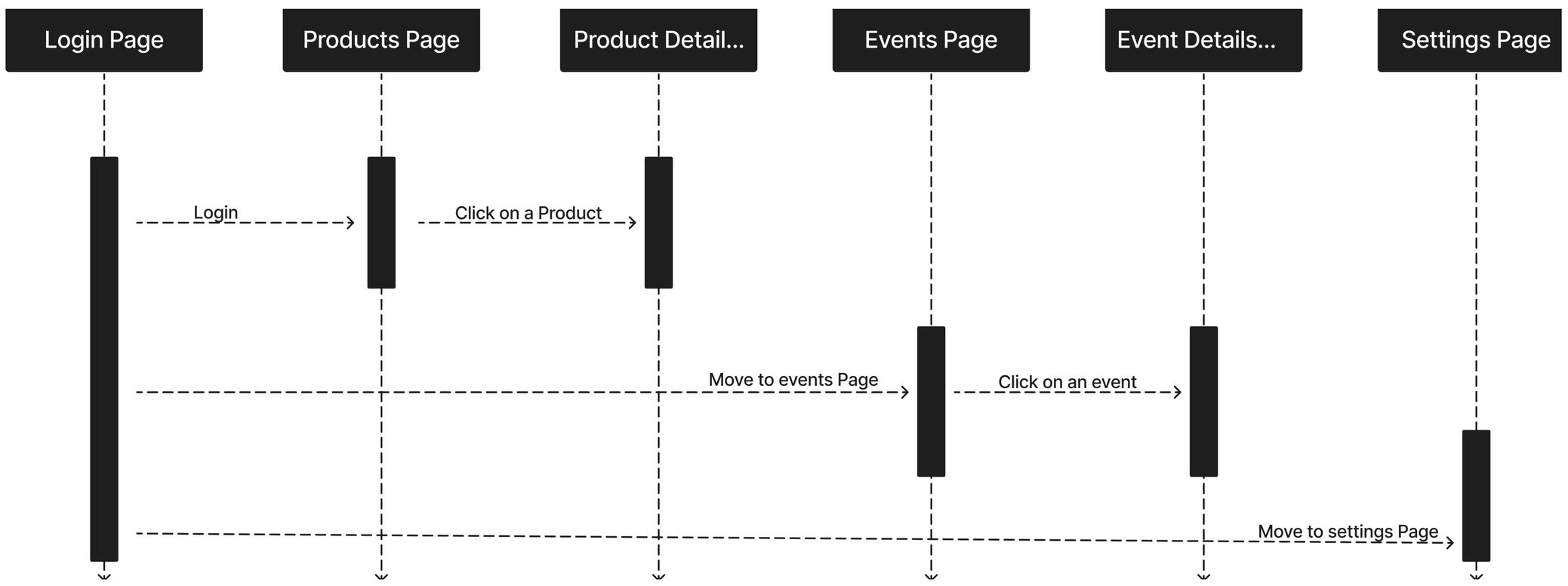


Fig 4.5.1 Sequence Diagram

4.6 DATA FLOW DIAGRAM

A data-flow diagram is a way of representing a flow of data through a process or system (usually an information system). The DFD also provides information about the outputs and inputs of each entity and the process itself. A data-flow diagram has no control flow there are no decision rules and no loops. Specific operations based on the data can be represented by a flowchart.

LEVEL 0

Fig 4.6.1 DFD Level 0

LEVEL 1

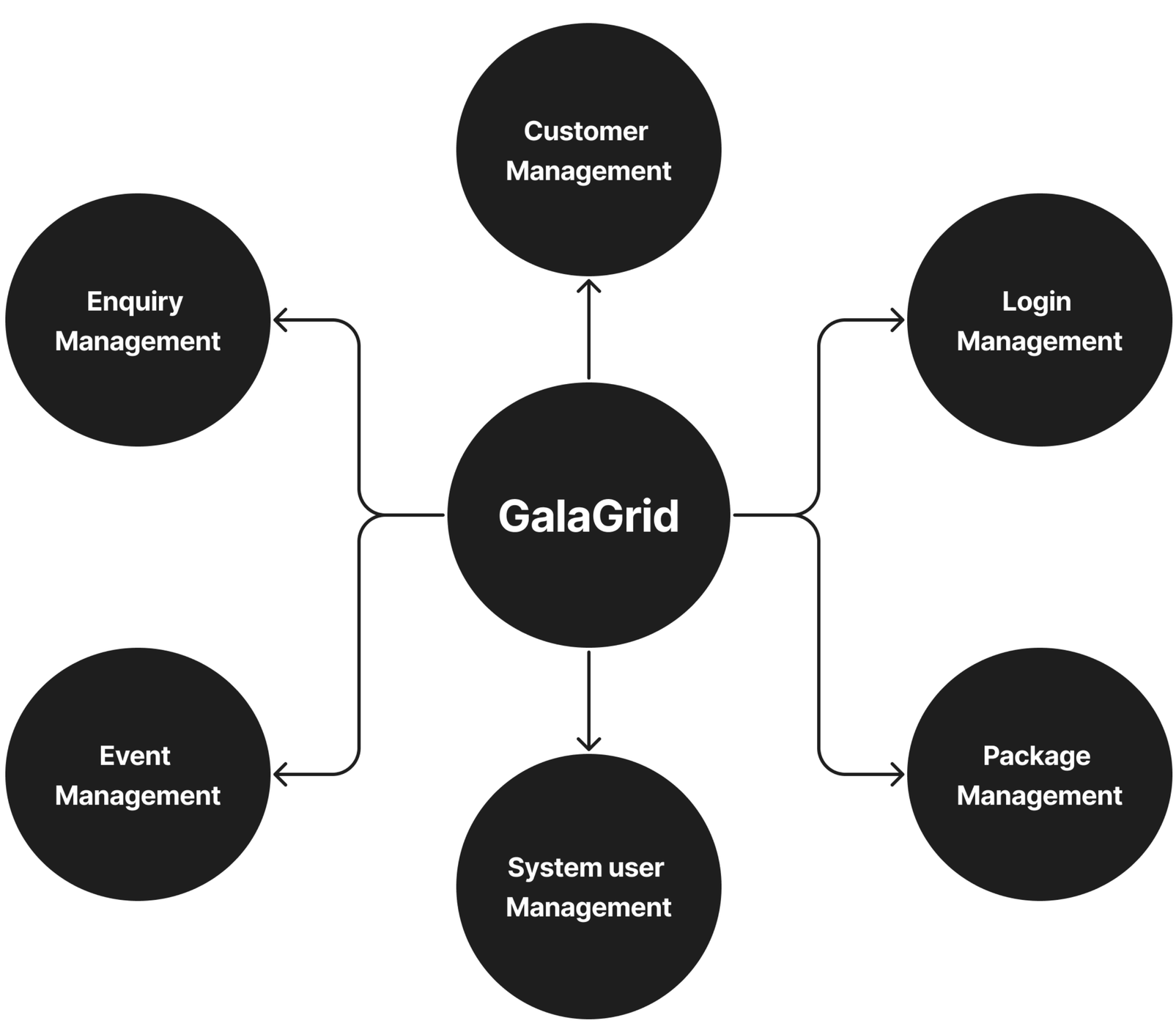


Fig 4.6.2 DFD Level 1

LEVEL 2

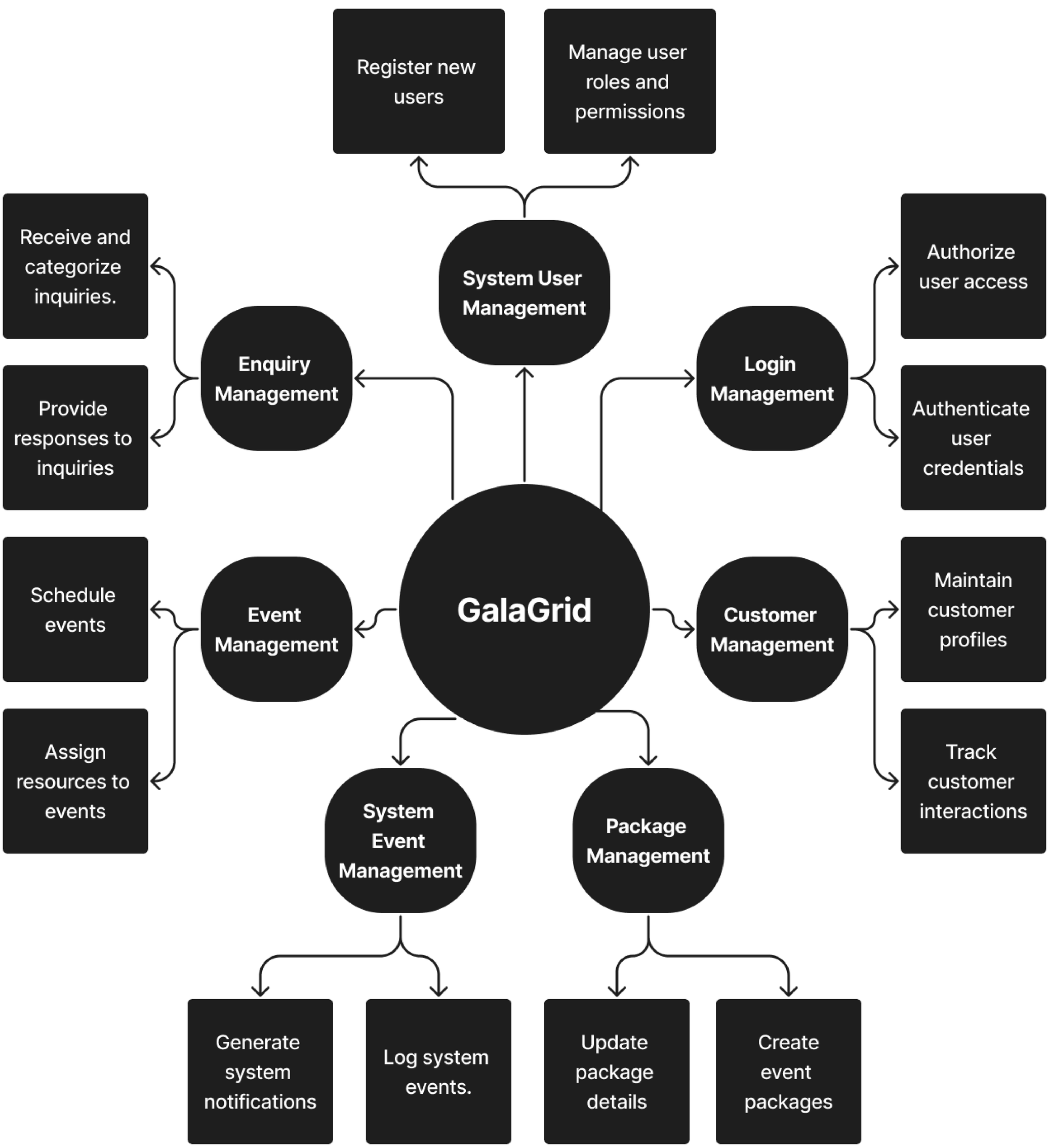


Fig 4.6.3 DFD Level 2

REFERENCES

[1] **García Revilla, R., Martinez Moure, O., & Einsle, C.S.** (2023). "*Advances in Event Management Using New Technologies and Mobile Applications.*" International Journal of Event and Festival Management, 14(1), pp.56–72. doi: https://doi.org/10.1108/IJEFM-05-2022-0039.

[2] **Bhawanani, M., Sachadeo, K., Meshram, K., Marsettiwar, R., & Rawat, M**. (2024). "*Evolving Trends in College Event Management: A Comprehensive Survey and Implementation Analysis.*" International Journal of Novel Research and Development, 9(10), pp.123–134. doi: https://doi.org/10.1110/ijnrd.2024.v09i10.1234.

[3] **Farayola, O.A., Olorunfemi, O.L., & Shoetan, P.O.** (2022). "*Bibliometrics Analysis of Event Management in the Digital Era: Challenges and Opportunities for Event Planners.*" Computer Science & IT Research Journal, 5(3), pp.606–615. doi: https://doi.org/10.1234/csitj.2022.05.0306.

[4] **Khanal, K.** (2023). "*Artificial Intelligence in Event Management: Enhancing Attendee Engagement.*" Journal of Event and Technology Management, 11(2), pp.45–58. doi: https://doi.org/10.5678/jetm.2023.11.2045.

[5] **Manikandan, G., Sam, R.S., Gilbert, S.F., & Srikanth, K**. (2021). "*Digital Transformation in Event Management: Leveraging Technology for Improved User Experience.*" Journal of Business and Digital Innovation, 18(5), pp.312–329. doi: https://doi.org/10.1056/jbdi.2021.18.5312.

[6] IEEE Conference Publication. (2022). "*Technology Driving Event Management Industry to the Next Level.*" IEEE Xplore. doi: https://doi.org/10.1109/9198025.

[7] Forum Magazine. (2023). "*Five Trends in Event Planning Taking Hold in 2023.*" Forum Magazine, [online]. Retrieved from https://forummagazine.org.

[8] **Dragin-Jensen, C., et al.** (2024). "*The Transformative Role of Artificial Intelligence in the Event Management Industry.*" Journal of International Business, Economics and Entrepreneurship, 8(2), pp.101–112.

[9] **Wang, Y., Li, C., Fu, Z., & Jin, P.** (2024). "*Artificial Intelligence for Event Personalization and Engagement.*" International Journal of Event Management, 15(3), pp.183–192. doi: https://doi.org/10.1098/ijem.2024.v15i03.183.