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Campus Event Management System

Wan Yong Qian

(0125810)

*A project submitted in partial fulfilment of the award of the <<
Bachelor in Software Engineering >>*

Supervised by << Siti Fazilah Binti Shamsudin >>

UOW Malaysia KDU University College

YEAR 2023

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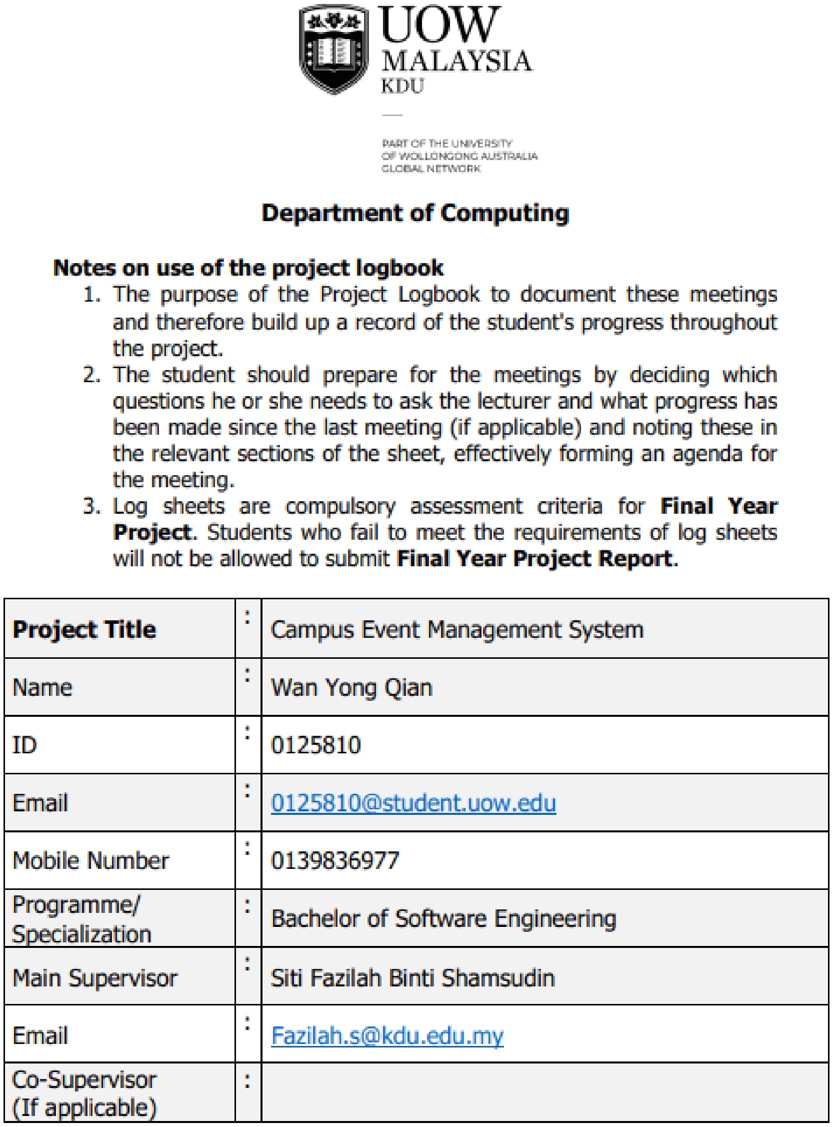
Appendix D: LogBook



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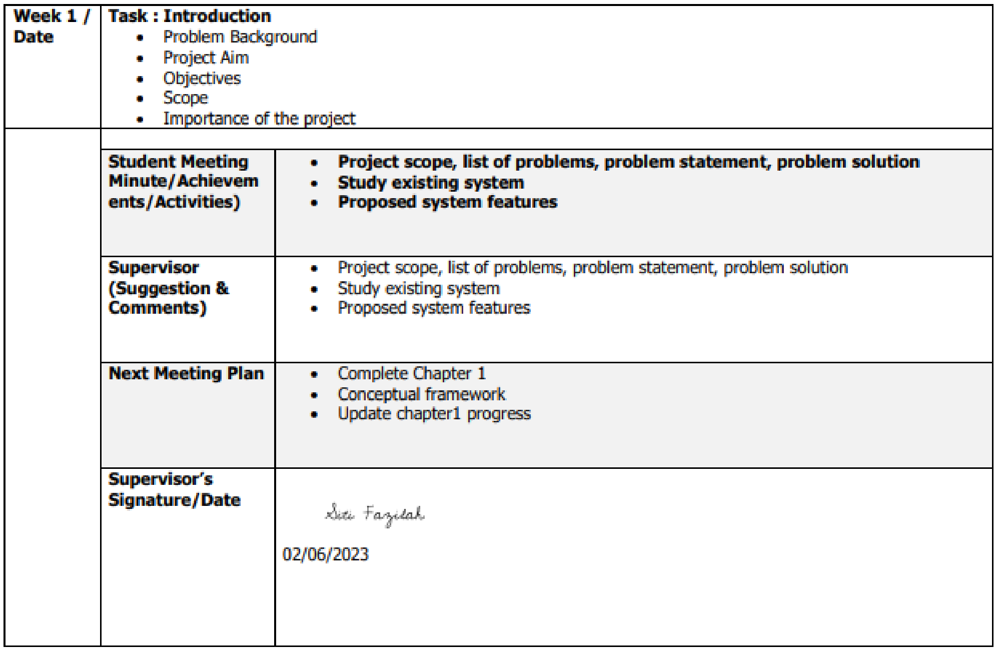
Department of Computing

Notes on use of the project logbook

1. The purpose of the Project Logbook to document these meetings and therefore build up a record of the student's progress throughout the project.
2. The student should prepare for the meetings by deciding which questions he or she needs to ask the lecturer and what progress has been made since the last meeting (if applicable) and noting these in the relevant sections of the sheet, effectively forming an agenda for the meeting.
3. Log sheets are compulsory assessment criteria for **Final Year Project**. Students who fail to meet the requirements of log sheets will not be allowed to submit **Final Year Project Report**.

Project Title	:	Campus Event Management System
Name	:	Wan Yong Qian
ID	:	0125810
Email	:	0125810@student.uow.edu
Mobile Number	:	0139836977
Programme/ Specialization	:	Bachelor of Software Engineering
Main Supervisor	:	Siti Fazilah Binti Shamsudin
Email	:	Fazilah.s@kdu.edu.my
Co-Supervisor (If applicable)	:	



Week 1 / Date	**Task : Introduction** • Problem Background • Project Aim • Objectives • Scope • Importance of the project	
	Student Meeting Minute/Achievements/Activities)	• **Project scope, list of problems, problem statement, problem solution** • **Study existing system** • **Proposed system features**
	Supervisor (Suggestion & Comments)	• Project scope, list of problems, problem statement, problem solution • Study existing system • Proposed system features
	Next Meeting Plan	• Complete Chapter 1 • Conceptual framework • Update chapter1 progress
	Supervisor's Signature/Date	Siti Fazidah 02/06/2023

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Chapter 1: Introduction

1.1 Research Background

In recent years, there has been a growing demand for efficient and effective event management systems in educational institutions such as campuses. Traditional methods of organizing and promoting campus events often involve manual processes and rely heavily on paper-based communication, leading to inefficiencies and difficulties in reaching a wide audience. To address these challenges, researchers have turned their attention to developing web-based systems specifically designed for managing campus events.

The emergence of web-based systems offers numerous advantages in terms of accessibility, scalability, and real-time communication. These systems leverage the power of the internet to streamline event planning, coordination, and promotion processes. Through a centralized platform, organizers can create event listings, manage registrations, send automated reminders, and communicate important updates to participants. Additionally, attendees can conveniently browse and RSVP to events, access event details, and receive personalized notifications.

Research in the field of campus event web-based systems has focused on various aspects, including user experience, system architecture, data security, and integration with existing campus infrastructure. Studies have explored the effectiveness of different design elements, such as intuitive interfaces, mobile responsiveness, and social media integration, in enhancing user engagement and participation. Furthermore, researchers have examined the technical requirements and challenges associated with integrating these systems with legacy campus systems, such as student information systems and facility management systems.

One study by Johnson et al. (2020) investigated the impact of a web-based event management system on student engagement and event attendance in a university setting. The researchers found that the implementation of the system significantly increased student participation in campus events, leading to a more vibrant and connected campus community. They also highlighted the importance of user-friendly interfaces and proactive communication features in driving user adoption and satisfaction.

1.2 List of Problem(s)

i. Limited awareness and engagement of students. Without effective promotion and communication strategies, students may remain unaware of upcoming events, leading to lower participation and reduced campus community involvement (Rodriguez et al., 2020).
ii. Ensuring accessibility and device compatibility is crucial to reach a wide range of users. The campus event web-based system should be compatible with various devices, operating systems, and screen sizes to accommodate different user preferences and ensure seamless access for all participants (Lee and Smith, 2023).
iii. Difficulty in event registration, which is often done manually. Manual registration processes can be time-consuming, prone to errors, and may result in inefficiencies in managing event attendance and participant information (Johnson et al., 2020).

1.3 Problem Statement

The management and promotion of campus events in educational institutions often face challenges due to outdated and inefficient methods. Manual processes and reliance on traditional communication channels hinder effective event planning, coordination, and participation. There is a need for a comprehensive web-based system specifically designed for managing campus events, addressing the limitations of the existing approaches. A study by Lee and Johnson (2022) highlighted the problem of fragmented event information and limited student engagement due to the absence of a centralized web-based system. The researchers found that the lack of a comprehensive platform hindered students' awareness of campus events and resulted in decreased participation. Perhaps a study on event management in creating and developing event able to stimulate student engagement and foster a dynamic campus community.

1.4 Problem Solution

To address the challenges of traditional campus event management, the implementation of a web-based system is proposed as a solution. Web-based systems offer numerous advantages, such as improved accessibility, scalability, and real-time communication. By adopting a user-friendly and integrated web-based system, event organizers can centralize event information, streamline registration processes, and enhance communication channels. The solution involves developing a comprehensive platform that allows organizers to create event listings, manage registrations, and communicate with participants. This web-based system aims to increase student awareness, engagement, and participation in campus events, ultimately fostering a vibrant and connected campus community.

1.5 Research Question(s)

i. What are the key features and functionalities of an effective campus event web-based system？

ii. How do they contribute to enhancing event management, student engagement, and the overall campus community?

iii. Will the system be able to attract the students to join the events?

1.6 Research Objective(s)

i. To investigate the existing techniques and systems of campus event management in higher learning education.

ii. To design and develop a web-based system for campus event management.

iii. To validate the reliability and usability of the newly developed campus event web-based management system.

1.7 Project Scope

Level	Function	Description
Basic	The system shall allow the user to make event listing and registration.	The system shall allow the user to view upcoming events, and event registration, allowing users to sign up for events of interest.

Intermediate	The system shall be able to manage and categorization event.	The system shall be able to sort the events into different categories or tags for easy navigation.
Advanced	The system shall be able to provide communication.	The system shall be able to make communication between event organizers and participants, enabling event announcements and updates.

Table 1.1: Project Scope

1.8 Project Significance

i. University Students

A campus event web-based system provides a user-friendly interface that enables students to easily explore and participate in various campus events. It increases event visibility and accessibility, allowing students to stay informed about upcoming activities, register for events, and receive personalized notifications. This fosters greater student engagement, encourages participation, and creates a vibrant and inclusive campus environment.

ii. Event Organizers

For event organizers, the web-based system streamlines event management processes by automating tasks such as organizing events, scheduling, and communication. It improves efficiency, reduces administrative workload, and provides real-time data and analytics for better decision-making and event planning.

iii. Campus

The campus event web-based system promotes collaboration and networking among students, faculty, and staff. It serves as a platform for connecting individuals with similar interests, encouraging interdisciplinary interactions, promoting campus community, and fostering a sense of community and belonging.

iv. IR 4.0 Community

The campus event web-based system aligns with the principles of the Fourth Industrial Revolution (IR 4.0) community by leveraging technology to streamline event management, enhance communication, and promote student engagement. It embraces digital transformation and integrates advanced technologies such as cloud computing and data analytics to optimize event processes and foster a vibrant campus community. By promoting collaboration and innovation, the system aligns with the goals of the IR 4.0 community, which emphasizes the integration of technology for efficiency, connectivity, and knowledge sharing.

1.9 Conceptual Framework

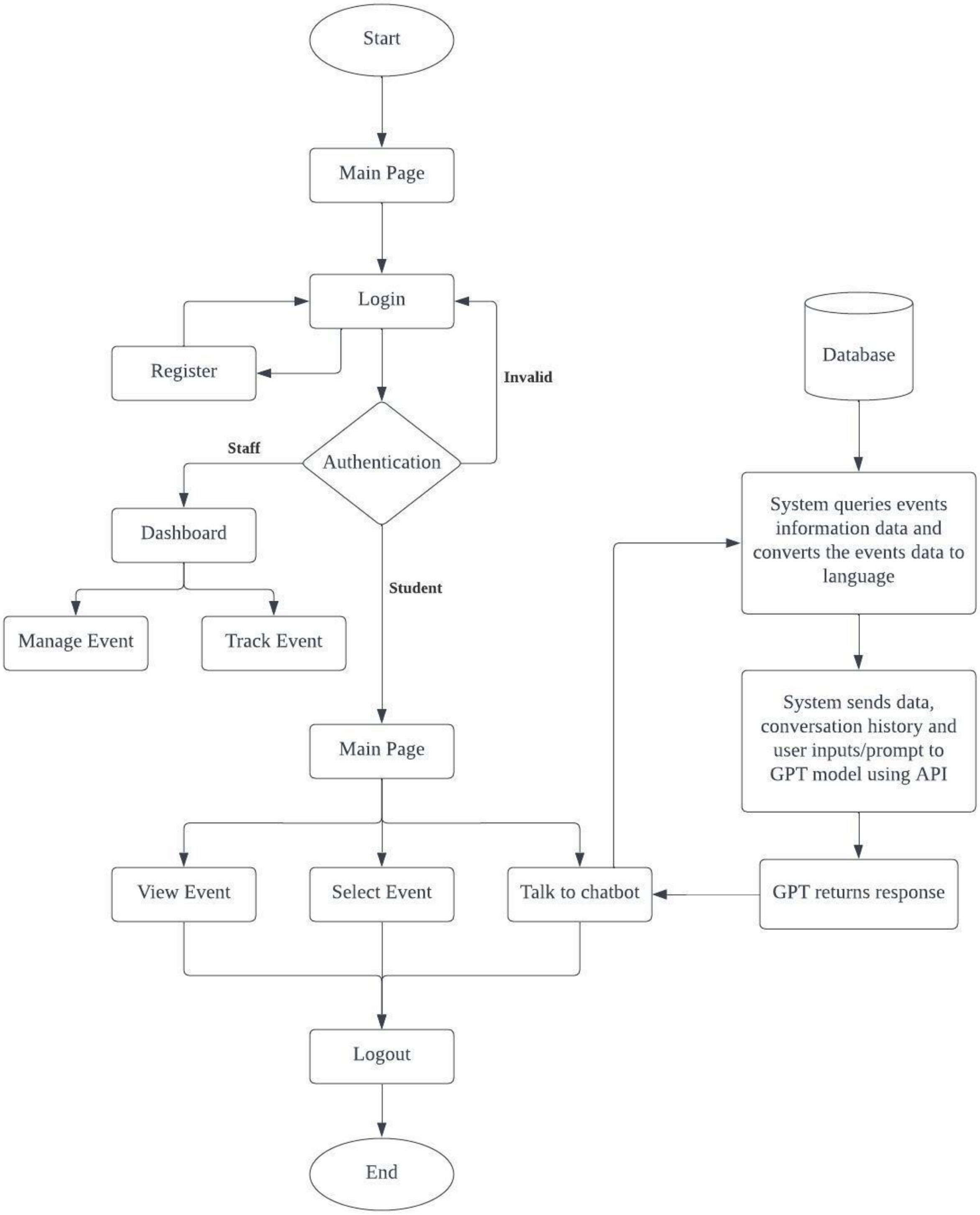


Figure1.1 Flowchart

1.10 Knowledge

i. Technique to create events that benefit university students.

ii. Mechanism of delivering the appropriate events to the university students.

Chapter 2: Literature Review

This literature review will discuss the major topics that are related in the development of this project.

2.1 Abstract

This literature review examines the role of campus events in fostering student engagement and building community within higher education institutions. Drawing from a wide range of scholarly research and literature, this review synthesizes key findings, identifies critical themes, and examines the impact of campus events on student outcomes. The review highlights the importance of strategic event planning, effective marketing strategies, collaboration, and the incorporation of diverse event formats. The findings provide valuable insights for event organizers, administrators, and researchers seeking to enhance the design and impact of campus events.

According to Johnson and Thompson (2019), campus events have a positive impact on student engagement and social integration. They provide opportunities for students to connect with peers, faculty, and staff, fostering a sense of belonging within the campus community.

2.2 Background

2.2.1 What is a Campus Event?

Campus events refer to organized activities, programs, or gatherings that take place within a college or university campus. These events are designed to engage and enrich the campus community, including students, faculty, staff, and sometimes external guests. Campus events serve various purposes such as academic, cultural, social, and recreational. They aim to provide opportunities for learning, networking, entertainment, and community-building within the campus environment.

According to research conducted by Valdes (2022), campus events play a crucial role in creating a positive campus atmosphere and promoting student engagement. They contribute to students' personal and professional development by offering opportunities for networking, learning outside the classroom, and exploring new interests.

2.3 Campus Event Purposes

The purposes of campus events are to enhance the educational experience, promote cultural and social engagement, support personal and professional development, provide entertainment and recreation, and foster community building within the college or university campus.

2.3.1 Income and Expenditure Forecast

Income and expenditure forecasting in the context of campus events involves estimating the financial resources and expenses associated with organizing and hosting these events. It aims to provide an overview of the expected income sources, such as ticket sales, sponsorships, and donations, as well as the anticipated expenditure items, including venue rental, equipment, marketing, and staffing costs. The forecasting process helps event organizers plan and allocate resources effectively.

2.3.2 Measure Performance

Measuring the performance of campus events involves evaluating the success and effectiveness of these events in achieving their intended objectives. This can be done through various methods such as collecting attendance data, conducting participant surveys, analyzing feedback and testimonials, and assessing the impact on student engagement and satisfaction.

Based on the campus event purposes outlined in section 2.3, it is important to consider these purposes and how they can be incorporated into the design of the web application. For example, the application could include features that allow users to view the events, register and login and how to join the events. By measuring event performance, organizers can identify areas of improvement, make informed decisions, and enhance the overall quality and impact of future campus events.

2.4 Types of Campus Event Methods

2.4.1 Workshops and Seminars

These events focus on specific topics or skills and provide participants with interactive learning experiences, often featuring guest speakers, experts, or faculty members.

Advantages of Workshops and Seminars

- Provide opportunities for participants to acquire new knowledge, skills, and competencies relevant to their academic or professional pursuits.
- Facilitate active learning through discussions, Q&A sessions, and hands-on activities, promoting participant engagement and collaboration.
- Feature subject matter experts who share their expertise and offer valuable insights to participants.

Disadvantages of Workshops and Seminars

- Limited capacity
- Time constraints
- Potential cost

2.4.2 Social and Cultural Events

These events celebrate diversity, culture, and social interactions on campus. They can include cultural festivals, music concerts, dance performances, art exhibitions, and theatrical productions.

Advantages of Social and Cultural Events

- Cultural appreciation which promotes cultural awareness
- Community building
- Showcase artistic talents and creative expressions, allowing individuals to share their cultural heritage, music, art, and performances.

Disadvantages of Social and Cultural Events

- Organizing large-scale social and cultural events can be resource intensive.
- Diversity considerations
- Attendance and interest

2.4.3 Sports Tournaments and Competitions

These events involve various sporting activities, ranging from intramural competitions among students to intercollegiate tournaments with other institutions.

Advantages of Sports Tournaments and Competitions

- Promote physical fitness, healthy lifestyles, and overall well-being among participants.
- Foster teamwork, cooperation, and sportsmanship, encouraging positive relationships.
- Campus spirit and pride

Disadvantages of Sports Tournaments and Competitions

- Space and equipment requirements
- Limited participation
- Safety considerations

2.4.4 Orientation and Welcome Events

These events are designed to familiarize new students with campus life, resources, and support services. They include campus tours, information sessions, and social activities to help students integrate into the college community.

Advantages of Orientation and Welcome Events

- Reduced stress and increased confidence
- Networking and relationship building
- Information and familiarity

Disadvantages of Orientation and Welcome Events

- Time constraints

- Information overload
- Limited to follow up support.

2.4.5 Alumni Events

These events aim to connect current students with alumni, providing networking opportunities, mentorship, and insights into career paths and post-graduation experiences.

Advantages of Alumni Events

- Networking opportunities
- Strengthening alumni relations
- Knowledge sharing and mentoring

Disadvantages of Alumni Events

- Limited attendance
- Cost and resource requirements
- Alumni engagement challenges

2.4.6 Career Fairs and Networking Events

These events provide opportunities for students to connect with employers, explore career options, and learn about internship or job opportunities in various industries.

Advantages of Career Fairs and Networking Events

- Networking opportunities
- Access to job opportunities
- Industry insights and learning

Disadvantages of Career Fairs and Networking Events

- Competition and crowds
- Time constraints

- Limited relevance

2.4.7 Community Service and Volunteer Events

These events engage students in community service activities, such as charity drives, environmental clean-ups, or volunteering at local organizations.

Advantages of Community Service and Volunteer Events

- Social impact.
- Personal development
- Skill enhancement

Disadvantages of Community Service and Volunteer Events

- Time commitment.
- Limited resources.
- Emotional toll.

The review of different types of campus events methods can be useful in understanding how events work in campus. However, when it comes to developing a campus event web app for students, it is essential to consider their unique needs and challenges.

2.5 What is Artificial Intelligence

Artificial Intelligence (AI) refers to the development of computer systems that can perform tasks requiring human-like intelligence. It involves creating algorithms and models that enable machines to perceive, reason, learn, and make decisions. AI encompasses subfields like machine learning, natural language processing, and computer vision. It finds applications in various domains, automating tasks, improving efficiency, and enabling intelligent decision-making. AI aims to create intelligent machines that simulate human intelligence to enhance human capabilities and solve complex problems.

2.6 Types of Artificial Intelligence

2.6.1 Natural Language Processing (NLP)

NLP techniques enable the system to understand and process user queries, feedback, and event descriptions. This can enhance search functionality, chatbots, and user interaction.

2.6.2 Artificial General Intelligence (AGI)

Artificial general intelligence, also known as strong AI or deep AI, is the concept of a machine with general intelligence that replicates human intelligence and/or behaviors and has the ability to learn and use its intelligence to solve any problem. In any given context, AGI can think, understand, and act indistinguishably from that of a person.

2.6.3 Artificial Super Intelligence (ASI)

Artificial super intelligence is the hypothetical AI that d does not just mimic or understand human intelligence and behavior. ASI is the point at which computers become self-aware and outperform human intelligence and abilities.

2.6.4 Reactive Machines

Reactive Machines carry out simple tasks. This is the most basic level of artificial intelligence. These types respond to some input by producing some output. There is no learning taking place. This is the first stage of any artificial intelligence system A simple, reactive machine is one that takes a human face as input and outputs a box around the face to identify it as a face. The model saves no inputs and learns nothing.

2.6.5 Limited Memory

The capacity of an A.I. to keep past data and/or predictions and use that data to create better predictions is referred to as limited memory types. Machine learning architecture becomes slightly more difficult with limited memory. Every machine learning model requires a small amount of memory to develop, but the model can be deployed as a reactive machine type.

2.6.6 Theory of Mind

These are still in their early stages and can be observed in self-driving cars. A.I. begins to engage with human thoughts and emotions in this sort of A.I. Now, machine learning models can help a person accomplish a task a lot. Current models have a one-way relationship with artificial intelligence.

2.6.7 Self-awareness

Possibly in the far future, A.I. will achieve nirvana. It develops self-awareness. This type of A.I. exists only in stories, and as stories frequently do, it instils viewers with both hope and fear. A self-aware intellect beyond human intelligence has an independent intelligence, and individuals will most likely have to negotiate terms with the creature it creates. What occurs, for better or worse, is anyone's guess.

The different types of AI can assist in a budgeting app in various ways. Reactive machines can be used to identify expenses and categorize them, while limited memory types can use past data to make predictions and suggest budgeting strategies. Theory of mind AI can engage with human thoughts and emotions to provide personalized recommendations, and self-aware AI, while still in its early stages, could potentially provide even more advanced insights and suggestions.

2.7 Methodologies

2.7.1 Waterfall Model

The waterfall model is the fundamental life cycle paradigm for software development. It is straightforward but idealistic. The waterfall model categorizes the life cycle into segments. One phase can begin after the previous phase is completed. As a result, the development process can be viewed as a sequential flow in a waterfall.

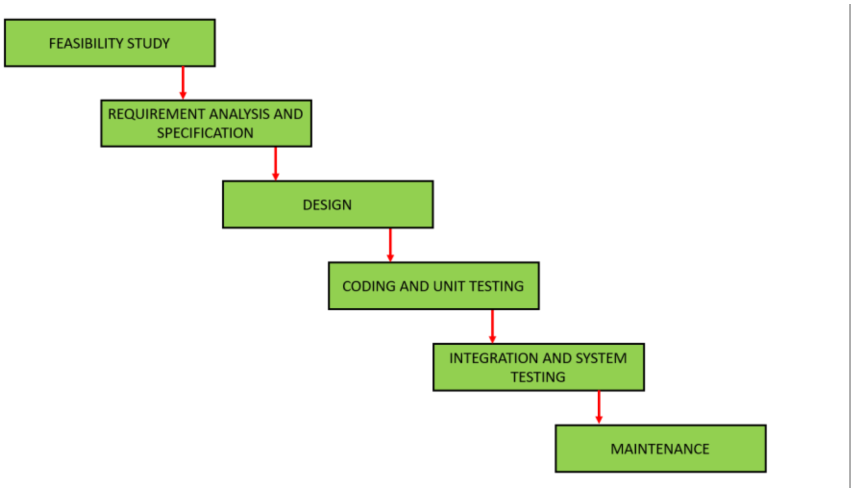

FEASIBILITY STUDY
REQUIREMENT ANALYSIS AND SPECIFICATION
DESIGN
CODING AND UNIT TESTING
INTEGRATION AND SYSTEM TESTING
MAINTENANCE

Figure 2.1: Waterfall Model

Advantages of Waterfall Model

- This model is really simple and straightforward
- Each stage is clearly described

Disadvantages of Waterfall Model

- No feedback paths
- Change requests are difficult to accommodate
- There is no phase overlap

2.7.2 Iterative model

Iterative model is a software development life cycle model in which the initial development begins based on the first requirements. Iterative model divides the software development process for a large application into smaller components.

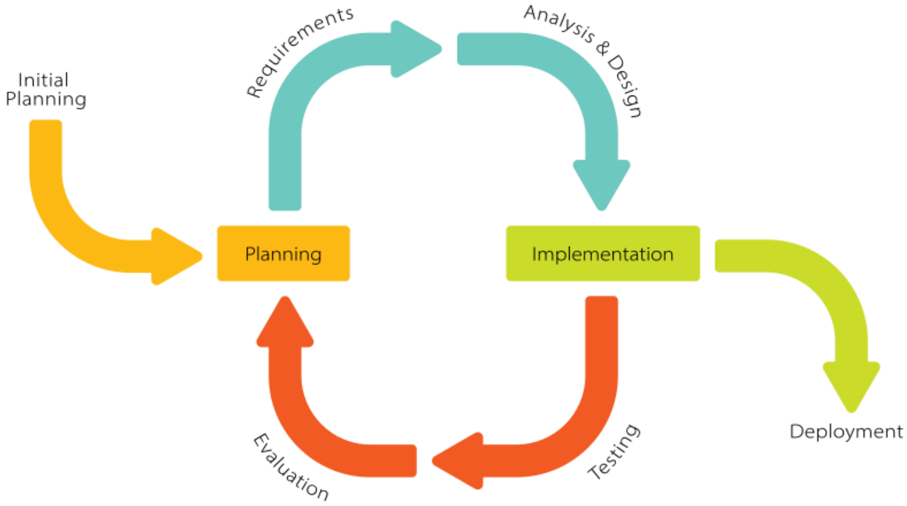


Figure 2.2: Iterative Model

Advantages of Iterative Model

- Simple
- Cost-Effective
- Well-organized

Disadvantages of Iterative Model

- Change requests are difficult to incorporate
- No support for incremental delivery
- Phase overlap is not permitted
- Limited customer interactions

2.7.3 Spiral model

Spiral model combines the iterative development process model with waterfall model. It is useful for large and complex projects. Spiral model has many cycles and loops. Each spiral cycle is a stage in the software development process.

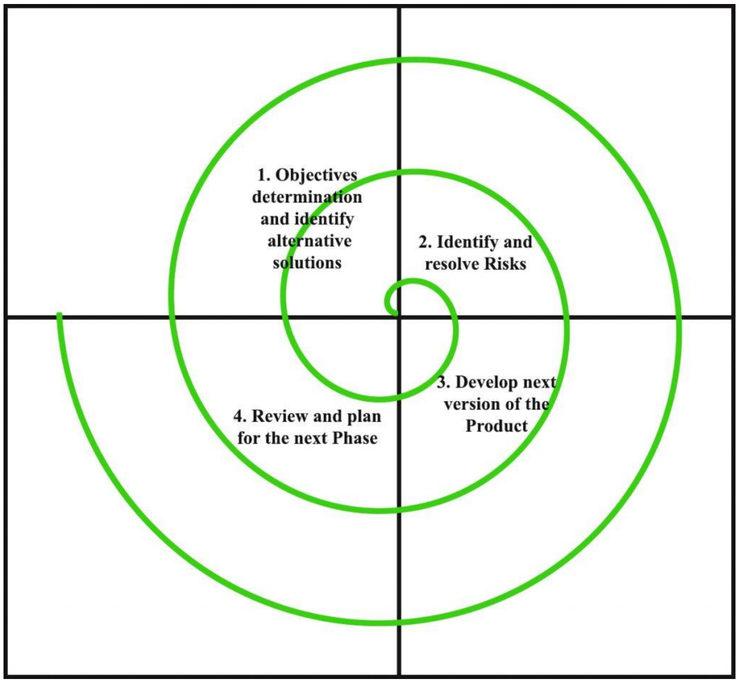

1. Objectives determination and identify alternative solutions
2. Identify and resolve Risks
3. Develop next version of the Product
4. Review and plan for the next Phase

Figure 2.3: Spiral Model

Advantages of Spiral Model

- Risk handling
- Excellent for huge project.
- Requirement flexibility

Disadvantages of Spiral Model

- Complex

- Expensive
- Difficulty in time management

2.7.4 Prototyping model

Prototyping is the process of generating a working replica of a product or system that must be engineered. It is used to gather client input by providing a small-scale duplicate of the finished product. The prototype model is one of the most commonly used software development life cycle models. This model is used when customers do not know the exact project needs ahead of time. In this methodology, an ultimate product prototype is built, tested, and refined depending on consumer feedback until a final acceptable prototype is reached, which acts as the foundation for producing the actual product.

Advantages of Prototyping Model

- Able to view the prototype early in the development
- Missing features are simple to implement
- Errors can be discovered much earlier

Disadvantages of Prototyping Model

- Requirements may vary too much.
- Poor documentation
- Difficult for engineers to incorporate all of the customer-requested changes

2.7.5 V-model

V-model is a type of SDLC model. It is known as the Verification and Validation model. The processes are executed in a V-shape consecutively.

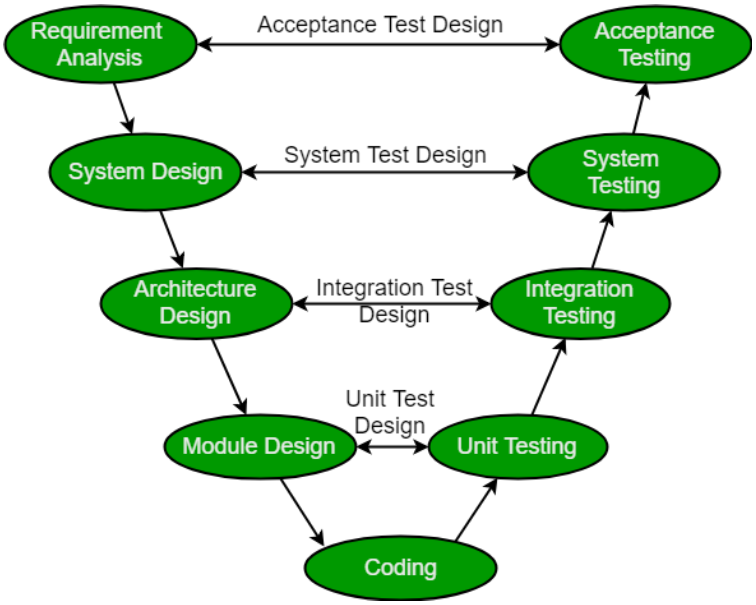


Figure 2.4: V-Model

Advantages of V-Model

- Highly disciplined model
- Used for small projects
- Focus on verification and validation activities early in the life cycle

Disadvantages of V-Model

- High risk and uncertainty
- Not suitable for large and complex projects
- Does not allow for phase iteration

2.7.6 RAD model

RAD Model is also known as the Rapid Application Development Model. RAD model is a software development process based on rapid prototyping with little preparation.

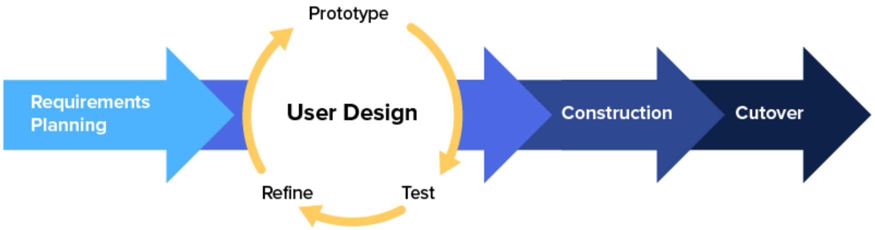


Figure 2.5: RAD Model

Advantages of RAD Model

- The usage of reusable components contributes to a shorter project cycle time
- Customer feedback is available in the early phases
- Costs are reduced since fewer developers are required

Disadvantages of RAD Model

- The employment of powerful and effective instruments necessitates the usage of highly skilled professionals
- The lack of reusable components might contribute to project failure
- To complete the project on time, the team leader must collaborate closely with the developers and clients

2.7.7 Agile Model

The agile model is a hybrid of iterative and incremental approaches. The agile methodology divides tasks into smaller iterations.

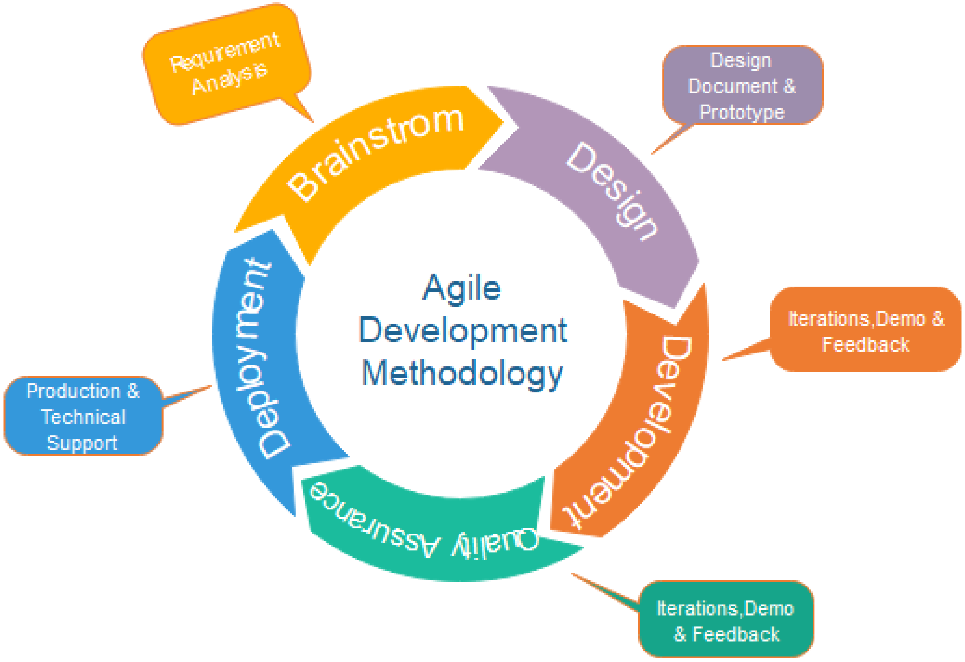

Requirement Analysis
Brainstrom
Design Document & Prototype
Design
Agile Development Methodology
Iterations,Demo & Feedback
Development
Production & Technical Support
Deployment
Quality Assurance
Iterations,Demo & Feedback

Figure 2.6: Agile Model

Advantages of Agile Model:

- Software has minimal defects due to the iterative effort in testing and fine-tuning
- Changes in project needs are easily handled and implemented with minimal disruption to the timeframe
- An overall improvement in the quality of the deliverable.

Disadvantages of Agile Model:

- High risks for maintenance
- Not suitable for complex and core projects.
- Depends heavily on business users’ feedback.

- Project may delay if business users don’t know what they want

2.7.8 Rational Unified Process (RUP)

Rational Unified Process is a method for developing object-oriented software. It is also named as Unified Process Model.

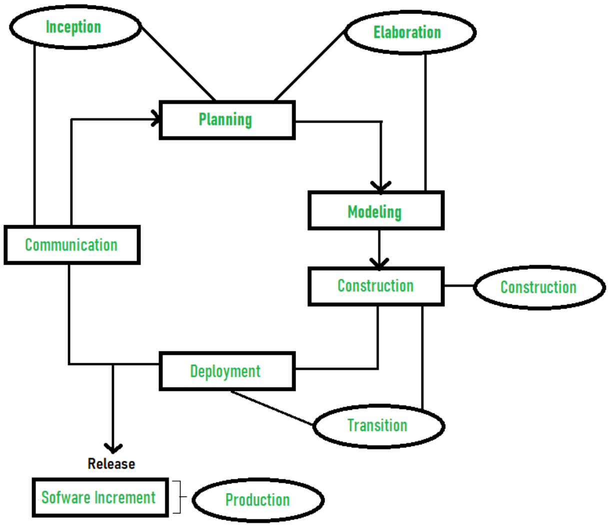


Figure 2.7: RUP Model

Advantages of Rational Unified Process:

- Good for risk management

Disadvantages of Rational Unified Process:

- Required a team of specialized professionals
- Difficult to integrate again and again

Methodologies play a crucial role in the development of any software application, including an event management web based system. Choosing the right methodology can help ensure that the system is developed efficiently and effectively, with a focus on meeting user requirements and delivering value. Each methodology has its own strengths and weaknesses, and the choice of methodology depends on factors such as the project scope, budget, timeline, and available resources.

2.8 Technical Review

2.8.1 Visual Studio Code

Visual Studio Code (VS Code) is a popular source code editor developed by Microsoft. It provides a lightweight and versatile development environment with a user-friendly interface. It supports multiple programming languages and offers features such as syntax highlighting, code completion, debugging, and Git integration. With a wide range of extensions available, developers can customize and enhance their coding experience. VS Code is known for its ease of use, extensibility, and support for collaboration, making it a popular choice among developers for various programming tasks.

2.8.2 Laravel

A well-liked and frequently used open-source PHP web application framework is Laravel. It offers a complete set of tools and functionality for developing cutting-edge web applications and adheres to the MVC (Model-View-Controller) architectural paradigm. Through its expressive vocabulary and thorough documentation, Laravel makes standard web development tasks—such as routing, database access, caching, and authentication—easier to complete. It supports code reuse, scaling, and maintainability as well, making it a top option for developers looking for a sophisticated and effective framework for PHP application development.

2.8.3 CodeIgniter 3

CodeIgniter 3 is a lightweight and powerful PHP web application framework. It follows the MVC (Model-View-Controller) architectural pattern, providing developers with a structured approach for building web applications. CodeIgniter 3 offers a rich set of libraries, helpers, and features that simplify common development tasks, such as database access, form validation, session management, and caching. It emphasizes simplicity, speed, and ease of use, making it popular among developers for developing robust and efficient PHP applications.

2.8.4 HTML

HTML (Hypertext Markup Language) is the standard markup language used for creating and structuring web pages. It forms the backbone of the content and layout of web documents. HTML uses tags to define the structure and elements of a webpage, such as headings, paragraphs, images, links, forms, and more. These tags provide a standardized way to format and present content on the internet. HTML documents are interpreted by web browsers, which render them into visually appealing and interactive web pages. It works in conjunction with CSS (Cascading Style Sheets) and JavaScript to enhance the presentation and functionality of web pages. HTML is fundamental to web development and provides a basic understanding of how web content is structured.

2.8.5 CSS

CSS (Cascading Style Sheets) is a style sheet language used to describe the visual appearance and formatting of HTML (Hypertext Markup Language) and XML (eXtensible Markup Language) documents. It provides a set of rules and properties that define how elements on a web page should be displayed. With CSS, developers can control aspects such as colors, fonts, layouts, spacing, and animations. CSS allows for the separation of style and content, making it easier to maintain and update the appearance of a website or application across multiple pages. By applying CSS styles, web designers can create visually appealing and consistent designs while improving the overall user experience. CSS is supported by all modern web browsers and is a crucial technology for web development.

2.8.6 JavaScript

JavaScript is a versatile and widely used programming language primarily used for creating interactive and dynamic web content. It is a client-side scripting language, meaning it runs on the user's web browser rather than the server. JavaScript allows developers to add functionality, manipulate webpage elements, handle user interactions, and perform various tasks in real-time. It is supported by all modern web browsers and has a vast ecosystem of libraries and frameworks that extend its capabilities. JavaScript is also increasingly used for server-side development with platforms like Node.js. Its flexibility, ease of use, and wide adoption make it a fundamental tool for web development.

2.8.7 PHP

PHP (Hypertext Preprocessor) is a popular and widely used server-side scripting language for web development. It is embedded within HTML code and executed on the server, generating dynamic web content that can be sent to the user's browser. PHP is known for its simplicity, flexibility, and ease of integration with various databases and web frameworks. It provides a wide range of features and functions for tasks such as form handling, file manipulation, database connectivity, and session management. PHP powers millions of websites and web applications, and its large community and extensive documentation make it a popular choice for building dynamic and interactive web pages.

2.8.8 MySQL

MySQL is a popular and widely used open-source relational database management system (RDBMS). It is commonly used for storing, managing, and retrieving data in various applications, particularly web-based ones. MySQL follows a client-server architecture, where clients can interact with the database server to perform operations such as querying, updating, and modifying data. It supports the SQL (Structured Query Language) language for defining database structures, manipulating data, and performing complex queries. MySQL is known for its reliability, scalability, and performance, making it a preferred choice for organizations of all sizes. It is compatible with multiple operating systems and is widely supported by different programming languages and frameworks.

2.8.9 API

API stands for Application Programming Interface. It is a set of rules and protocols that allow different software applications to communicate and interact with each other. APIs enable developers to access the functionality or data of a particular software system or service without understanding its internal workings. They facilitate integration between different systems and help build more powerful and interconnected applications. The OpenAI API is a tool that allows developers to integrate and utilize OpenAI's advanced language models and AI capabilities in their applications. It enables access to powerful text generation, translation, and conversation simulation features, among others, opening up new possibilities for natural language processing.

2.8.9.1 Open AI

The OpenAI API is a tool that allows developers to integrate and utilize OpenAI's advanced language models and AI capabilities in their applications. It enables access to powerful text generation, translation, and conversation simulation features, among others, opening new possibilities for natural language processing.

The technical review provides an overview of the tools, frameworks, and technologies that can be used to develop a web application, including Visual Studio Code, Laravel, CodeIgniter 3, Html, CSS, JavaScript, PHP, MySQL, and API. This information can assist in developing a Campus Event Management System by providing insights into the cost of development, as well as the time and resources required for each option. In this project, the choice of Visual Studio Code as the software to develop the proposed system is a wise decision because it is the official development tool for website, providing a wide range of features and tools for building, testing, and deploying apps. PHP is chosen as the main programming language for this project because it is a popular and widely used programming language that has been used to build countless web-based applications. OpenAI API is an excellent choice for the AI chatbot because it is very easy to manage and understand and provides fast and efficient responses.

2.9 Research Instrument

2.9.1 Interview

An interview is a research method used to collect data from individuals by asking them a series of questions. Interviews can be conducted in various ways, including face-to-face, over the phone, or through video conferencing. Interviews can be used in various fields, including psychology, sociology, market research, and journalism.

There are several types of interviews:

Structured Interviews: In structured interviews, the questions are predetermined, and the interviewer asks the same questions to all participants. Structured interviews allow for standardized data collection and comparison across participants.

Unstructured Interviews: In unstructured interviews, the questions are open-ended, allowing the interviewer to explore participants' experiences and opinions in depth. Unstructured interviews allow for more flexibility and spontaneity but can be less standardized and more time-consuming.

Semi-Structured Interviews: In semi-structured interviews, the questions are a combination of structured and unstructured questions. Semi-structured interviews allow for both specific information and detailed responses from participants while maintaining some standardization.

Group Interviews: Group interviews, also known as focus groups, involve a small group of participants who discuss a specific topic or issue. Group interviews allow for the exchange of ideas and perspectives among participants and can provide rich data on group dynamics and interactions.

Interviews have several advantages as a research method. They allow researchers to collect data in real-time, allowing for clarification and follow-up questions. Interviews also allow for in-depth exploration of participants' experiences, attitudes, and opinions. However, interviews also have some limitations, including potential interviewer biases, where the interviewer may influence participants' responses, and potential response biases, where participants may not respond truthfully.

2.9.2 Survey

A survey is a research method used to collect data from a sample of individuals by asking them a series of questions. Surveys can be conducted in various ways, including online, by phone, through mail, or in person. Surveys can be used in various fields, including psychology, sociology, market research, and healthcare. Surveys typically consist of a set of questions designed to collect information on a specific topic or issue. The questions can be open-ended or closed-ended and can be administered in various formats, such as multiple-choice, ranking, or rating scales.

Surveys have several advantages as a research method. They allow researchers to collect data from many participants efficiently and quickly. They are also easy to administer and can be standardized, ensuring consistency across participants. Surveys can provide valuable data on participants' attitudes, opinions, and experiences and can be used to assess changes in these variables over time.

However, surveys also have some limitations. Potential response biases can occur, where participants may not respond truthfully or may not understand the questions. Sampling biases can also occur, where the sample may not represent the population of interest accurately. Surveys can also be limited in depth, where researchers may not obtain detailed information on participants' experiences or opinions.

2.9.3 Survey/ Questionnaire

A questionnaire is a research tool used to collect data from individuals by asking them a series of questions. Questionnaires can be used in various fields, including psychology, sociology, market research, and healthcare. Questionnaires can be administered in various ways, including paper and pencil, online, or through interviews.

There are several types of questionnaires:

Structured Questionnaires: In structured questionnaires, the questions are predetermined, and the responses are usually closed-ended, such as yes or no, multiple-choice, or Likert scales. Structured questionnaires are useful when the researcher wants to obtain specific information from the participants, such as demographics or attitudes.

Unstructured Questionnaires: In unstructured questionnaires, the questions are open-ended, allowing participants to provide detailed responses. Unstructured questionnaires are useful when the researcher wants to obtain more in-depth information from the participants, such as their experiences or opinions.

Semi-Structured Questionnaires: In semi-structured questionnaires, the questions are a combination of structured and unstructured questions. Semi-structured questionnaires allow for both specific information and detailed responses from participants.

Questionnaires have several advantages as a research tool. They allow researchers to collect data from many participants efficiently and quickly. They are also easy to administer and can be standardized, ensuring consistency across participants. However, questionnaires also have some limitations, including potential response biases, where participants may not respond truthfully, and limited depth of information, where researchers may not obtain detailed information on participants' experiences or opinions.

2.9.4 Observation

Observation is a research method used in various fields, including social sciences, psychology, education, and anthropology. It involves systematically observing and recording the behavior, actions, or events of people or objects in their natural setting. Observations can be conducted in a variety of settings, including schools, homes, workplaces, public spaces, and research labs.

There are several types of observations:

Naturalistic Observation: In naturalistic observation, researchers observe people or events in their natural setting without any manipulation or intervention. For example, a researcher may observe children at a playground to understand their social behavior and interactions.

Participant Observation: In participant observation, the researcher actively participates in the setting being observed. This type of observation is commonly used in anthropology and ethnography. For example, a researcher studying a particular culture may live with the people they are studying and observe their customs and behaviors.

Structured Observation: In structured observation, researchers design a specific protocol for observing and recording specific behaviors or events. This type of observation is often used in experimental research to ensure that all participants are observed in the same way. For example, researchers may use a structured observation protocol to observe how infants respond to different stimuli.

Unstructured Observation: In unstructured observation, the researcher has a general idea of what they want to observe, but they do not have a specific protocol for observing and recording behavior. This type of observation is often used in exploratory research to generate hypotheses and ideas.

Observation can be conducted using various techniques, including direct observation, indirect observation, and systematic sampling. Direct observation involves observing the behavior or event directly, while indirect observation involves observing the effects of the behavior or event. Systematic sampling involves observing a sample of the behavior or event at regular intervals.

Observation has several advantages as a research method. It provides researchers with a rich source of data on behavior and events in natural settings, allowing them to study complex social interactions and behaviors. It also allows for the collection of data that cannot be obtained through other research methods, such as surveys or experiments. However, observation also has some limitations, including the potential for observer bias, difficulties in establishing causality, and ethical concerns related to invading people's privacy.

2.9.5 Experiment

Experimentation is a research method used to investigate cause-and-effect relationships between variables. In an experiment, the researcher manipulates one or more independent variables and observes the effect on one or more dependent variables while controlling for other factors that may influence the results. Experiments are commonly used in fields such as psychology, sociology, education, and natural sciences.

There are several types of experiments:

Laboratory Experiments: In laboratory experiments, the researcher manipulates the independent variable(s) in a controlled environment, such as a research lab, to observe the effect on the dependent variable(s). Laboratory experiments allow researchers to control extraneous variables that may influence the results, but they may lack ecological validity as the results may not generalize to real-world settings.

Field Experiments: In field experiments, the researcher manipulates the independent variable(s) in a real-world setting, such as a school or workplace, to observe the effect on the dependent variable(s). Field experiments are often more ecologically valid than laboratory experiments, but they may be more difficult to control for extraneous variables.

Natural Experiments: In natural experiments, the researcher observes the effect of a naturally occurring manipulation of the independent variable(s) on the dependent variable(s). For example, a researcher may study the effect of a natural disaster on mental health outcomes. Natural experiments are useful when it is not ethical or practical to manipulate the independent variable(s).

Experiments have several advantages as a research method. They allow researchers to establish cause-and-effect relationships between variables, providing strong evidence for the effectiveness of interventions or treatments. They also allow for the control of extraneous variables, increasing the internal validity of the results. However, experiments also have some limitations, including ethical concerns related to the manipulation of variables, difficulties in generalizing the results to real-world settings, and potential demand characteristics, where participants may change their behavior based on their knowledge of the experiment.

In this study, surveys are used and can be designed to address specific research questions. Survey can be an effective way to collect data from a sample of participants. It can be used to obtain information on participants' views and interests on events. The results of the survey can provide insights into the research topic and help to support or refuse the research hypotheses.

Chapter 3: Preliminary Studies

The quantitative research methodology used in this study serves to support the conclusions drawn from the literature evaluation. The process of gathering and analyzing numerical data is known as quantitative research. It can be used to find trends and averages, formulate hypotheses, examine causality, and extrapolate findings to bigger populations.

There are two types of data collected: primary data and secondary data. For a particular study's goal, primary data is collected. Any public information that wasn't specifically obtained for the current research issues was considered secondary data. To better understand the study problem and prepare for gathering primary data, a literature review should be conducted.

Therefore, quantitative research method is applied to this study to acquire a better understanding of the social world.

3.1 Research Design

3.1.1 Design Science Research Methodology (DRSM)

Phase	**Details of Activities**
Phase 1	**Problem identification and motivation** • Based on the literature review, we highlight research needs in campus event management analysis using latest technologies such as artificial intelligence approaches. • We conducted a preliminary study to investigate if the proposed system can help users to create or join an event listing. • According to the literature review and findings from the preliminary study, we identified initial flaws with the campus event management system that will help improve the campus university industry.
Phase 2	**Define objectives of a solution**

	• The insights from my literature review have given me a deeper knowledge of the problems that users experience. • Participants also informed me about current concerns encountered during the process in enrolling for an event and recommended potential methods to improve the enroll process. • Elements and functional components of the campus event management system were discovered and translated into a conceptual model as a reference for the design phase.
Phase 3	**Design and development** • A survey study is undertaken to ensure that the system satisfies the needs of the users. • The proposed campus event management system will be developed with the goal of replicating the application's desired design qualities.
Phase 4	**Demonstration** • An evaluation criteria is developed to validate the artifact. • To obtain user feedback on the artifact.
Phase 5	**Evaluation** • An experiment will be carried out among users to validate the model. • Performance measures include learning effectiveness and participant’s satisfaction.
Phase 6	**Communication** • All results and findings from prior literature review, preliminary study, data analysis, artifact design, evaluation reports, model validation report were combined and written into a full comprehensive report.

Table 3.1: Design Science Research Methodology

3.1.2 Research Design Table (RDT)

No	Research Question	Research Objective	Method	Expected Outcome
1	How will the event management results be during the management process?	To investigate the existing event management technologies and tools used to show the performance of management results.	• Literature review • Study existing campus event management system	List of existing event management technologies and tools that show the performance of management results.
2	What are the factors influencing the effectiveness of a campus event management system in enhancing user engagement and satisfaction?	To assess the impact of a campus event management system on user satisfaction and participation.	• Survey	To identify the key features and functionalities that positively influence attendee engagement and assess the impact of the system on attendee satisfaction to optimize user experiences.
3	How can the integration of AI technology enhance efficiency and attendee experience	To investigate the impact of AI integration on campus event management systems and assess its	• Experimental • Conduct user acceptance testing (UAT)	To enhance efficiency in event planning and execution, improved user

	in campus event management systems?	effectiveness in improving efficiency and enhancing user experience.		experience, and better overall event outcomes.

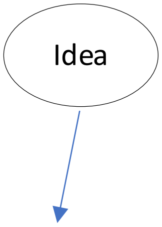
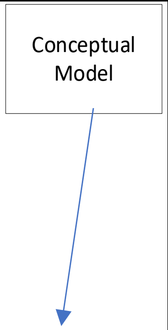
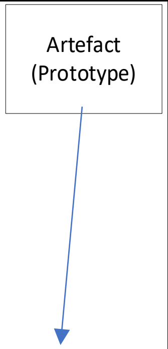
Table 3.2: Research Design Table

3.1.3 Evaluation Table

Campus Event Management System	
Participant	Users that are interested in participating in events.
Task	Registration, User Login, Home Page, View Events, View Organizer, Select Event, Track Event Approval, and chat with AI chatbot
Technique	Artificial Intelligence algorithm, online forms, brainstorming, pattern recognition
Measurement	Accuracy of detection, respond time,
Outline	• Explain the goal and objective of the survey to the participant. • Give a demonstration of the system to the participant. • Provide survey to participants for their views to analyze the system further. • Transcribe survey data into a summarized table. • Analyze the survey data.

Table 3.3: Evaluation Table

3.2 Operational Framework

Item	Phases	Activity Description	Output	Expected Contribution
	Phase 1: Problem Identification & Motivation	• To conduct literature search and review • Study existing system	• Conceptual model	• Knowledge
	Phase 2: Suggestion of Solutions	• Literature review • Survey	• Refined Conceptual Model • Artefact Design	• Artefact – Prototype of Campus Event Management System • Technique to detect/ capture the positions/ patterns of user activity • Mechanisms to provide punctual prompts for user activity
	Phase 3: Artefact Design & Development	• Develop reliability measures assessment. • Users use the artefact and give reliability measures	• Identified Reliability Measure	

Model	Phase 4: Artefact Evaluation	• To conduct experiment with and with artefact	• Validated Model	• Final Model of Campus Event Management System with Artificial Intelligence
	Phase 5: Documentation	• To combine all results from literature review, artefact design, artefact evaluation report	• Final thesis report	

Table 3.4: Operational Framework

3.3 Data Requirement (Instruments)

Data will be gathered through the distribution of surveys. The surveys will include questions about how campus event management system techniques can benefits the organizers and campus.

The survey format will consist of the following formats:

1. Likert scale questions
   - Likert scale questions provide respondents with multiple choices.
2. Rating scale questions
   - The question shows a range of answer options from any range.

3.4 Data Collection

3.4.1 Population and Sample

Participants aged 18 to 30 are the target demographic for this study. This sample population for this survey consisted of students. The target audience might be found among social media users, such as Instagram and Facebook. They can be obtained by distributing surveys to users who frequently use the social media.

1. Participants	Students
2. Technique	Survey
3. Representative Tasks	Collect the term frequency used by at risk users, analyse data and use chatbot to talk to these users
4. Measurements	Level of accuracy and ease of use
5. Outline Plan	Collect data from survey, allow users to test the system

Table 3.5: Population and Sample

3.5 Software Development Life Cycle (SDLC)

The research methodology used for this research is agile methodology. Agile methodologies are a software development methodology that are iterative and incremental in nature (Kumar & Kumar Bhatia, 2012). According to research from Sharma et al., the development of software involved several iterations in agile software development strategy (2012).

3.5.1 Advantages of Agile Model

i. Ensure customer satisfaction

The planning stage has been significantly improved because the customers directly participate in the development process. The deliverables created after each iteration are improved depending on customer feedback. So, it will result in a high-quality final product that ensures customer satisfaction as the software is developed based on the customer’s needs.

ii. Adaptive to changing environments

In agile software development strategy, the development of software involved several iterations. Each iteration includes analysis, design, implementation, and testing. The project is sent to the customers for their use and feedback after each iteration. Any updates that improve the software at any stage of development are implemented.

3.5.2 Proposed Agile Model

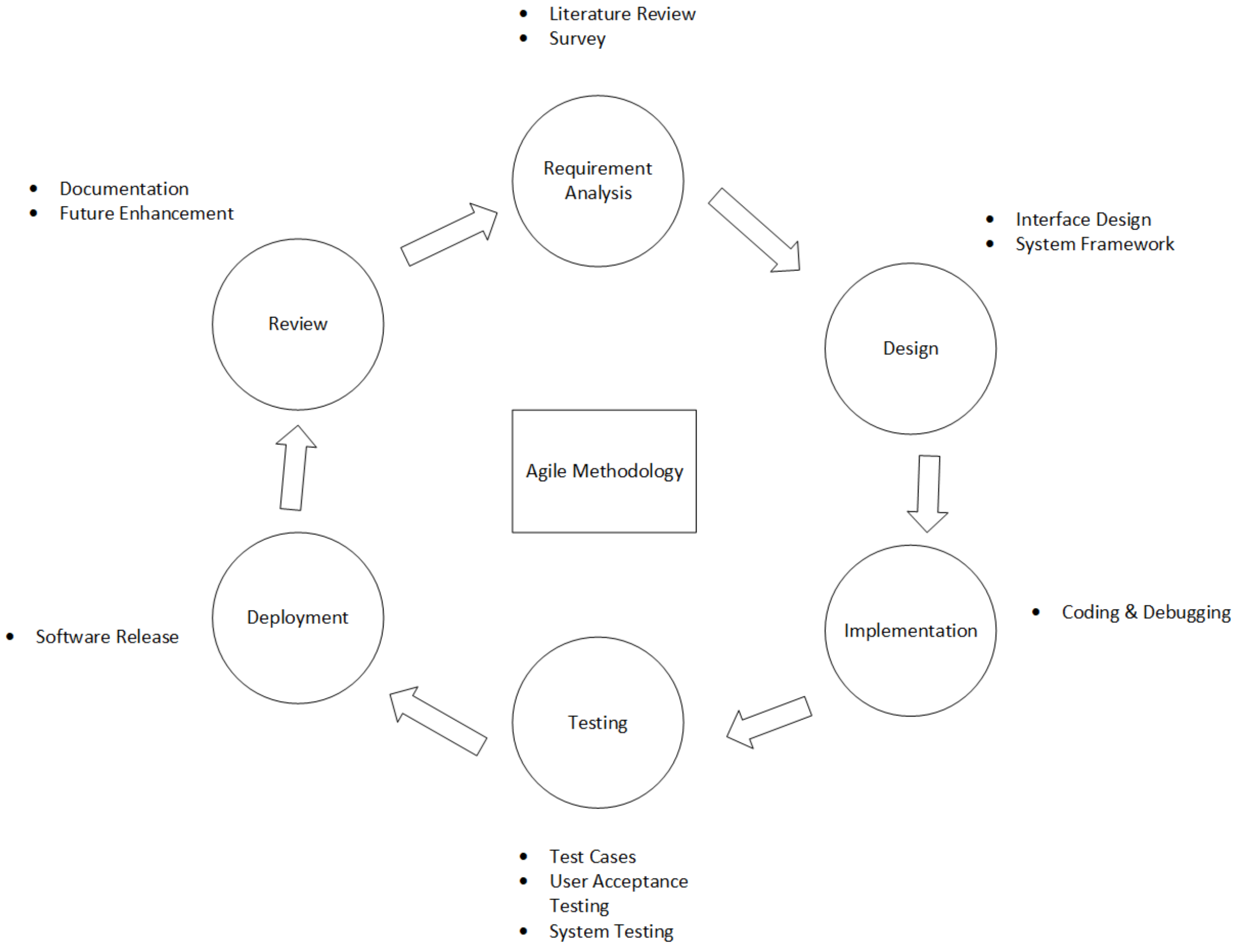


Figure 3.1: Proposed Agile Model

Chapter 4: Analysis

4.1 Introduction

This chapter basically presents the appropriate diagrams to describe the essential elements and behavior of the system design.

4.2 Instrument Question

4.2.1 Survey Question & Objective for University Campus Students

Questions	Objective
Demographic	
What is your gender? (Male, Female)	To provide insight into patterns among different gender categories.
What is your age group? (<18 years, 18-25 years, >25 years)	To determine the majority age group.
Interested Events	
How often do you attend an event? (Never, Sometimes, Often, Always)	To determine the frequency with which students are attending events.
What is the main reason you attend an event? (To gain experience, to spend time, to make more friends, to get more knowledge, Other)	To understand the primary motivations behind students' habits.
Have you ever think attending events is waste of time? (Yes, No)	To determine how frequently students are thinking events are waste of time.
Which platform do you prefer to use to attend or join an event? (Event website/apps, email, campus, Other)	To determine which platforms students are preferring to use to attend the events.

Table 4.1 Survey Question & Objective for University Students

4.2.2 Findings of Survey

4.2.2.1 Demographic

The purpose of this section in the questionnaire is to know the demographic of the potential users of the application so that sufficient information and knowledge are properly delivered through the application.

4.2.2.1.1 Gender *Survey not done yet

4.3 Use Case Diagram

A use case diagram is a visual representation that illustrates the functional requirements of a system or software application by depicting the interactions between actors (users or external systems) and the system itself. It shows the various use cases or functionalities of the system and how actors interact with them.

According to Ambler and Constantine (2021), use case diagrams provide a high-level overview of the system's behavior and help stakeholders understand the system's functionality and how it satisfies user requirements. They serve as a communication tool between stakeholders, developers, and designers, facilitating the discussion and analysis of system requirements.

Use case diagrams are widely used in software engineering and systems analysis. They are often used in the requirements gathering and analysis phase of software development, as they provide a visual representation of the system's behavior and help to identify the functional requirements of the system.

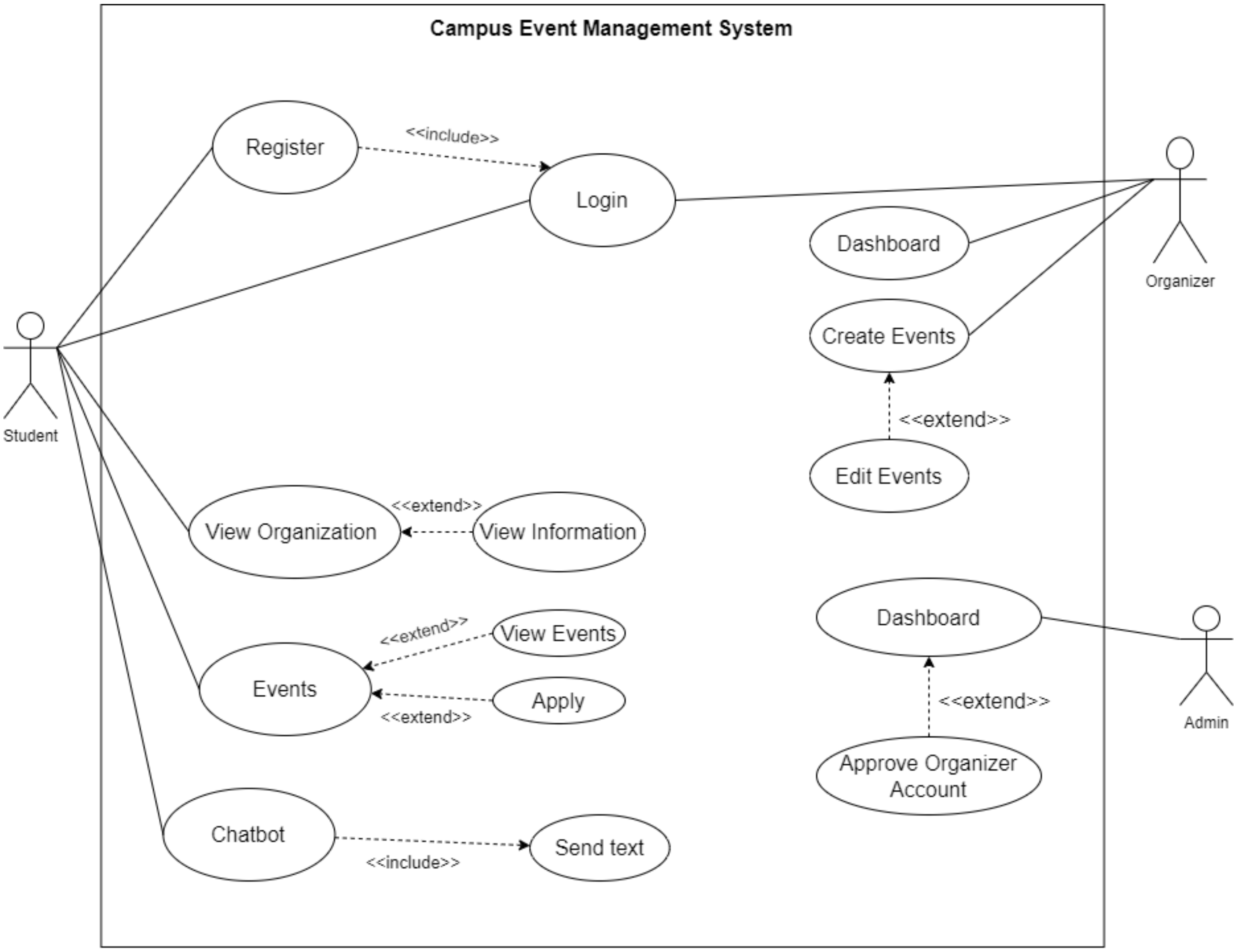


Figure 4.13: Use Case Diagram

4.4 Use Cases

4.4.1 Register

Use Case ID	UC001	**Version**	1.0
Feature	F001 Register		
Purpose	To allow student to register an account to use the system		
Actor	Student		
Trigger	Student clicks on register from main page or login page		
Precondition	• The user is on the register page. • The user is not logged in.		
Scenario Name	**Step**	**Action**	
Main Flow	1	Student enters their information (Full name, email address, Phone Number, Address, Country, Gender, Date of Birth, Password, Confirm Password).	
	2	Student clicks on the “Register” button.	
	3	Student details are validated.	
	4	System directs the student to their login page.	
Alternate Flow-Registration details are incorrect	3.1	Any input entered by the student is invalid.	
	3.2	System displays an error message for the respective input.	
	3.3	Repeat from step 1.	
Alternate Flow-Student ID already registered	3.1	Student ID is already registered.	
	3.2	System displays an error message stating that the student ID has been registered.	
	3.3	Repeat from step 1.	
Rules	• Full name, Email Address, Phone Number, Address, Country, Gender, Age, and Password must be valid. • Email and phone number must not be registered		
Author	Wan Yong Qian		

Table 4.2: Use Case Table Register

4.4.2 Login

Use Case ID	UC002	**Version**	1.0
Feature	F002 Login		

Purpose	To allow users to login to their account to use the system	
Actor	Admin, Organizer and Student	
Trigger	There are no triggers associated with this use case.	
Precondition	• The user is on the login page. • The user is not logged in.	
Scenario Name	**Step**	**Action**
Main Flow	1	User enters their login credentials
	2	User clicks on "Login" button
	3	System ensures the email address and password are valid and provide access if credentials are correct
	4	System brings user to the respective homepage
Alternate Flow- Username and/or Password is incorrect	3.1	Email address and/or password input is incorrect
	3.2	System displays error message "Login Failed! Invalid login details."
	3.3	Repeat from step 1.
Rules	Email address and password must be correct and the same as the details registered in the database.	
Author	Wan Yong Qian	

Table 4.3: Use Case Table Login

4.4.3 View Event

Use Case ID	UC003	**Version**	1.0
Feature	F003 View Event		
Purpose	To allow student to view events		
Actor	Student		
Trigger	Student clicks on 'Event' in the top navigation bar		
Precondition	The user is logged in.		
Scenario Name	**Step**	**Action**	
Main Flow	1	System displays the available events available in the list and current events that student can be applying and the information of the event	
	2	Student can scroll and look through available events	

Alternate Flow		-
Rules	-	
Author	Wan Yong Qian	

Table 4.4: Use Case Table View Event

4.4.4 Create Event

Use Case ID	UC004	**Version**	1.0
Feature	F004 Create Event		
Purpose	To allow organizer to create and edit events		
Actor	Organizer		
Trigger	Organizer clicks ‘Create Event’ on the Organizer page		
Precondition	• User is logged in. • Users need to wait for approval. • User is on the page		
Scenario Name	**Step**	**Action**	
Main Flow	1	Organizer clicks ‘Create Event’ on the Organizer Page	
	2	System add event from organizer’s account data to database	
Alternate Flow		-	
Rules	Event created can only be approved by admin		
Author	Wan Yong Qian		

Table 4.5: Use Case Table Create Event

4.4.5 Apply and Join Event Session

Use Case ID	UC005	**Version**	1.0
Feature	F005 Apply and Join Event Session		
Purpose	To allow student to apply or join events session if they have not joined one		
Actor	Student		
Trigger	Student clicks ‘Select’ on the event that they want to book		

Precondition	• User is logged in. • User hasn’t joined an event. • User is on the Event Session page	
Scenario Name	**Step**	**Action**
Main Flow	1	Student clicks ‘Select’ on the event that they want to view and apply
	2	System enters event applied into student account information in database
Alternate Flow-		-
Rules	-	
Author	Wan Yong Qian	

Table 4.6: Use Case Table Apply and Join Event Session

4.4.6 Update and Approve Event and Organizer Account

Use Case ID	UC006	**Version**	**1.0**
Feature	F006 Update and Approve Event and Organizer Account		
Purpose	To allow admin to update organizer event and account approval status		
Actor	Admin		
Trigger	Access Event Approve page and Organizer Approval Page		
Precondition	The admin is logged in.		
Scenario Name	**Step**	**Action**	
Main Flow	1	Admin search user’s information by clicking the “User Accounts”.	
	2	System displays the user’s details and prompt admin for confirmation	
	3	Admin clicks on the “Approve” button.	
	4	System updates the database with the new account of organizer and new event for new approval record.	
Alternate Flow- Account details	1.1	System will detect email address or phone number is not in database	
	1.2	Repeat from step 1.	

Alternate Flow- View Organizer Information	1.1	View organizer information
	1.2	System displays organizer information
Alternate Flow- Approve Organizer Account and Event	3.1	Admin clicks on the “Approve” button.
	3.2	System alerts the confirmation
	3.3	System display “Approved”
Rules	Only Admin can approve the organizer’s account and event	
Author	Wan Yong Qian	

Table 4.7: Use Case Table Update and Approve Event and Organizer Account

4.4.7 Chatbot

Use Case ID	UC007	**Version**	**1.0**
Feature	F006 Chatbot		
Purpose	To allow users to engage in conversations about the event information or issues and receive appropriate responses and resources.		
Actor	Student		
Trigger	User click “chatbot” on the top and make conversation		
Precondition	The user must be logged into the application and have the necessary permissions.		
Scenario Name	**Step**	**Action**	
Main Flow	1	User initiates a conversation with the chatbot.	
	2	Chatbot welcomes the user and prompts them to share the events information.	
	3	User ask about the event information.	
	4	Chatbot responds with empathy and understanding, acknowledging the user's emotions.	
	5	Chatbot offers appropriate organization resources, such as organizer numbers, self-help articles, or advice.	
	6	User may ask follow-up questions or seek further assistance.	

	7	Chatbot continues the conversation based on the user's responses and provides relevant support.
Alternate Flow- Wipe Out or Clean the Chat	2.1	User requests to wipe out or clean the chat history
	2.2	Chatbot prompts the user to confirm the deletion of the chat history.
	2.3	Chatbot clears the chat history and confirms the action to the user.
Rules	The chatbot only provide organizers and events information	
Author	Wan Yong Qian	

Table 4.8: Use Case Table Chatbot

4.4.8 Forgot Password

Use Case ID	UC008	**Version**	1.0
Feature	F008 Forgot Password		
Purpose	To allow users to reset their password through an email link		
Actor	Organizer and Student		
Trigger	There are no triggers associated with this use case.		
Precondition	• The user is on the login page. • The user is not logged in.		
Scenario Name	**Step**	**Action**	
Main Flow	1	User clicks on “Forgot Password” button	
	2	Users insert their email address and click “Reset Password”	
	3	System ensures the email address is valid and provide access if credential is correct	
	4	System will send an email verification link to the user	
	5	System brings user to the respective reset password page	
Alternate Flow- Email is incorrect/ not registered	2.1	Email address input is incorrect	
	2.2	System displays error message “Email is not registered or activated.”	
	2.3	Repeat from step 1.	

Rules	Email address must be correct and the same as the details registered in the database.
Author	Wan Yong Qian

Table 4.9: Use Case Table Forgot Password

4.5 Hardware and Software Specification

Hardware Specification	Software Specification
• PC	Web-based Software Platforms • Google Chrome • Microsoft Edge • Mozilla Firefox • Opera Programming Language • HTML • PHP • CSS • JavaScript

Table 4.10: Hardware and Software Specification

4.6 Functional Requirements

FR-01 Register

REQ_F101	System shall be able to check if the registration details entered by the user is valid
REQ_F102	System shall be able to direct the student to the main page upon successful registration
REQ_F103	System shall display an error message if any of the details entered are invalid.
REQ_F104	System shall display an error message if the same email and phone number has already been registered.

Table 4.11: FR-01 Register

FR-02 Login	
REQ_F201	System shall be able to check the login credentials entered by the user.
REQ_F202	System shall be able to identify if the user logging in is a student, organizer or an admin.
REQ_F203	System shall be able to direct the user to the main page if the user is a student, and able to direct user to the organizer page if the user is an organizer, and admin will be directed to the admin page if the user is an admin upon successful login.
REQ_F204	System shall display error message if the email address and/or password is incorrectly keyed in.

Table 4.12: FR-02 Login

FR-03 View Event

REQ_F301	System shall be able to display sessions in Event page that have not reached full capacity
REQ_F302	System shall be able to display an interface to view the event listed
REQ_F303	System shall not display any available event if the event has over or not approved

Table 4.13: FR-03 View Event

FR-04 Create Event	
REQ_F401	System shall be able to manage event details.
REQ_F402	System shall be able to let organizer to create events

Table 4.14 FR-04: Create Event

FR-05 Apply and Join Event Session	
REQ_F501	System shall be able to let student to apply or join their event session if they have not joined one
REQ_F502	System will let user known the events have been applied

Table 4.15: FR-05 Apply and Join Event Session

FR-06 Update and Approve Event and Organizers Account	
REQ_F601	System shall only allow admin to update and approve event and account
REQ_F602	System shall be able to update event and account status in the database according to the admin’s input

REQ_F603	System shall be able to display error message when any input is invalid
REQ_F604	System shall be able to display the details of the event and organizer information and request for confirmation from the admin before updating the database
REQ_F605	System shall be able to display the student and organizer’s details, session applied, information and previous applying records of the student
REQ_F606	System shall allow admin to access the update event and account information functionality of the respective student and organizer

Table 4.16: FR-06 Update and Approve Event and Organizers Account

FR-07 Chatbot	
REQ_F701	System shall allow students to communicate and make conversation with chatbot
REQ_F702	System shall be able to read the chat according to the user’s input
REQ_F703	System shall be able to display error message when any input is invalid
REQ_F704	System shall be able to display the details of the event and organizer information

Table 4.17: FR-07 Chatbot

FR-08 Forgot Password	
REQ_F801	System shall be able to send reset password verification to the user through email.
REQ_F802	System shall be able to display the reset password page for the user

Table 4.18: FR-08 Forgot Password

4.7 Non-Functional Requirements

NFR-01 Reliability	
NFR-01-001	Fault-Tolerance
NFR-01-001-001	In the event of no Internet connection, the system shall restore to the previously stored checkpoint rather than starting it from the beginning.
NFR-01-002	Recoverability
NFR-01-002-001	The system will try to back up data once every 5 days.
NFR-01-003	Compliance
NFR-01-003-001	The system records all records from people who have logged in.

Table 4.19: NFR-01 Reliability

NFR-02 Usability	
NFR-02-001	Operability
NFR-02-001-001	The system shall be designed with a simple user interface which consists of a navigation panel at the top of the screen
NFR-02-002	Understandability
NFR-02-002-001	The system shall use simpler vocabulary and clearer instructions.
NFR-02-002-002	The system shall organise card view, list view or recycle view in an orderly manner for easy reference for the user.

NFR-02-003	Attractiveness
NFR-01-003-001	The design should be user friendly so anyone who is not familiar with it, can be easy to understand.

Table 4.20: NFR-02 Usability

NFR-03 Efficiency	
NFR-03-001	Time Saving
NFR-03-001-001	The system shall perform registration in just one click button away.
NFR-03-001-002	The system shall perform login and logout in 5 seconds or less.
NFR-03-001-003	The system shall smooth navigation from one page to another within seconds.
NFR-03-002	Capacity
NFR-03-002-001	The system shall be able to support 10 million users’ data
NFR-03-003	Resource Utilization
NFR-03-003-001	The server shall be able to support more than 500 users.
NFR-03-004	Compliance (performance standards)
NFR-03-004-001	The system shall comply with the performance standard which is required by the user.

Table 4.21: NFR-03 Efficiency

NFR-04 Functionality/Operability

NFR-04-001	Security
NFR-04-001-001	The system shall ensure that only relevant authenticated users are allowed to operate the functionalities of the system.
NFR-04-001-002	The system shall sure the encryption of passwords that are stored and used within the system.
NFR-04-002	Accuracy
NFR-04-002-001	The system shall be able to display the correct user interface for each component of the system.
NFR-04-002-002	The system shall validate all the text fields to ensure correct input format and mandatory fields are filled.
NFR-04-003	Suitability
NFR-04-003-001	The system shall use English as the language and can be easily understood by most users.

Table 4.22: NFR-04 Functionality/Operability

NFR-05: Security	
NFR-05-001	Information Protection
NFR-05-001-001	The system shall perform user authentication during login and logout of the user.
NFR-05-001-002	The system shall sure the encryption of passwords that are stored and used within the system.
NFR-05-001-003	The system shall allow users to terminate sessions at any time by clicking the “Logout” button on the navigation bar.

Table 4.23: NFR-05 Security

NFR-06: Portability/Availability	
NFR-06-001	Portable
NFR-06-001-001	System shall be able to run on any modern browser for mobile or desktop devices such as Google Chrome and Microsoft Edge
NFR-06-002	Compliance
NFR-06-002-001	The server system shall be written using industry-standard database and programming language.

Table 4.24: NFR-06 Portability/Availability

Chapter 5: Design

5.1 Introduction

This chapter will consist of technical drawings, system framework and design principles of this project.

5.2 Technical Drawings

5.2.1 Entity Relationship Diagram

An Entity-Relationship Diagram (ERD) is a visual representation used in database design to illustrate the relationships between entities (objects) within a system or application. It helps to model the data structure and interactions between different entities in a clear and organized manner. According to Elmasri, R., & Navathe, S. B. (2019), an ERD consists of entities represented as rectangles, attributes shown as ovals, and relationships depicted with lines connecting entities. The diagram helps in understanding the data requirements and defining the logical schema of a database.

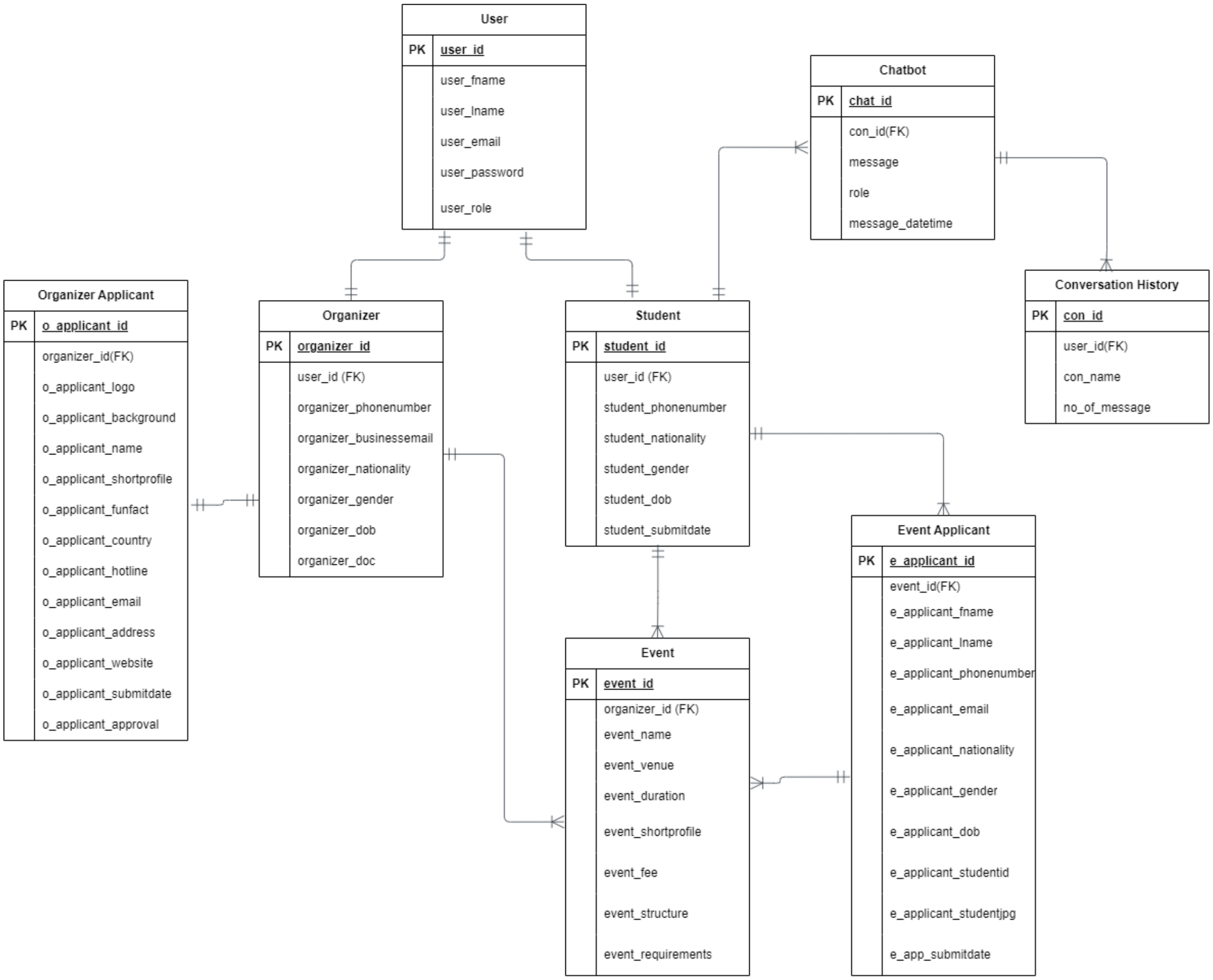


Figure 5.1: Entity Relationship Diagram

In this proposed project, the main entities include user, organizer, student, chatbot, conversation history, organizer applicant, event applicant, and event.

The user entity has attributes such as user_id, user_fname, user_lname, user_email, user_password, and user_role. The user entity included two roles, which is organizer and student. Each user can register one role, so the relationship between user to organizer and student are one-to-one.

The organizer entity has attributes such as organizer_id, organizer_phonenumber, organizer_businessemail, organizer_nationality, organizer_gender, organizer_dob, organizer_doc. Each organizer can only apply one account, so the relationship between organizer and organizer applicant is one-to-one. The organizer entity has attributes such as organizer_id and user_id. Each organizer can create multiple events, so the relationship between organizer and event is one-to-many.

The student entity has attributes such as student_id, student_phonenumber, student_nationality, student_gender, student_dob, and student_submitdate. Each student can apply to many events, so the relationship between student and event is one-to-many. Each student can have multiple chat communication with chatbot, so the relationship between student and chatbot is one-to-many. Each student can register or apply for an event, so the relationship between student and event applicant is one-to-many.

The event entity has attributes such as event_id, organizer_id, event_name, event_venue, event_duration, event_shortprofile, event_fee, event_structure and event_requirements. Each event is created by the organizer, so the relationship between event and organizer is many-to-one. Each event can be viewed and applied by a student, so the relationship between event and student is many-to-one. Each event can be applied by a student, so the relationship between event and event applicant is many-to-one.

The organizer applicant entity has attributes such as o_applicant_id, organizer_id, o_applicant_logo, o_applicant_background, o_applicant_name, o_applicant_shortprofile, o_applicant_funfact, o_applicant_country, o_applicant_hotline, o_applicant_email, o_applicant_address, o_applicant_website, o_applicant_submitdate and o_applicant_approval. The organizer applicant can only be applied by each organizer, so the relationship between organizer applicant and organizer is one-to-one.

The event applicant entity has attributes such as e_applicant_id, event_id, e_applicant_fname, e_applicant_lname, e_applicant_phonenumber, e_applicant_email, e_applicant_nationality, e_applicant_gender, e_applicant_dob, e_applicant_studentid, e_applicant_studentjpg, e_app_submitdate. The event applicant can only be applied by each student, so the relationship between event applicant and student is many-to-one. Only one applicant for each event, so the relationship between event applicant to event is one-to-many.

The chatbot entity has chat_id, con_id, message, role and message_datetime. Each chatbot can generate many messages for each student, so the relationship between chatbot and student is many-to-one. The chatbot store the conversation history, so the relationship between chatbot and conversation history is one-to-many.

The conversation history entity has con_id, user_id, con_name, role and no_of_message. Conversation history can store many messages from each chat, so the relationship between conversation history and chatbot is many-to-one.

5.2.1.1 Data Dictionary

A data dictionary is a centralized repository of metadata that provides a detailed description of the data elements and structures used in a database or information system. It serves as a reference guide that defines the meaning, characteristics, relationships, and constraints of each data element, helping users, developers, and administrators to understand the data model and its usage within the system.

According to Connolly, T., & Begg, C. (2014), a data dictionary typically includes information such as data element names, data types, lengths, allowable values, descriptions, and any relationship constraints between data elements. It acts as a valuable resource for ensuring data consistency, integrity, and accuracy throughout the database lifecycle.

The purpose of a data dictionary is to serve as a comprehensive reference guide that provides detailed information about the data elements and structures used in a database or information system. It defines the meaning, characteristics, relationships, and constraints of each data element, enabling users, developers, and administrators to understand and effectively work with the data. The data dictionary helps ensure data consistency, integrity, and accuracy throughout the database lifecycle, facilitating better data management and system understanding.

The data dictionary describes eight database tables in this proposed project. The following is the data dictionary for this system.

User		
Field Name	Description	Example

user_id	Primary key	1
user_fname	User first name	User
user_lname	User last name	User test
user_email	Email	user@gmail.com
user_password	Password	user@1
user_role	Role	Student

Table 5.1: User Data Dictionary

Organizer		
Field Name	Description	Example
organizer_id	Primary key	1
organizer_phonenumber	Phone number	0123456789
organizer_businessemail	Business email	businessemail@gmail.com
organizer_nationality	Nationality	Malaysia
organizer_gender	Gender	Male
organizer_dob	Date of Birth	04/09/2000
organizer_doc	Document	Organizer_sdnbhd.pdf
user_id	Foreign key	1

Table 5.2: Organizer Data Dictionary

Student		
Field Name	Description	Example
<u>student_id</u>	Primary key	1
student_phonenumber	Phone number	0134444556
student_nationality	Nationality	Malaysia
student_gender	Gender	Male
student_dob	Date of Birth	07/09/2000
student_submitdate	Submit date	01/08/2023
user_id	Foreign key	1

Table 5.3: Student Data Dictionary

Organizer Applicant		
Field Name	Description	Example
<u>o_applicant_id</u>	Primary key	1
o_applicant_logo	Logo	

o_applicant_background	Background	
o_applicant_name	Name	Sport Badminton Organizer
o_applicant_shortprofile	Short profile	We are organizer from example…
o_applicant_funfact	Funfact	This is an example of funfact.
o_applicant_country	Country	Malaysia
o_applicant_hotline	Hotline	090403020
o_applicant_email	Email	organizer@gmail.com
o_applicant_address	Address	Example, organizer, Pahang, Kuantan, Malaysia.
o_applicant_website	Website	www.organizer.com
o_applicant_submitdate	Submit date	01/08/2023
o_applicant_approval	Approval	Approve
organizer_id	Foreign key	1

Table 5.4: Organizer Applicant Data Dictionary

Event		
Field Name	Description	Example
event_id	Primary key	1
event_name	Name	Badminton Event
event_venue	Date issued	Campus Hall
event_duration	Duration	4 hours
event_shortprofile	Short Profile	This badminton event is an exhilarating sport.
event_structure	Structure	Event: Badminton Date: 01/08/2023 Venue: Campus Hall
event_requirements	Requirements	Bring yourself a badminton racket
event_fee	Fee	Free
organizer_id	Foreign key	1

Table 5.5: Event Data Dictionary

Event Applicant		
Field Name	Description	Example
e_applicant_id	Primary key	1
e_applicant_fname	First name	User

e_applicant_lname	Last name	Example
e_applicant_phonenumber	Phone Number	0123456789
e_applicant_email	Email	user@gmail.com
e_applicant_nationality	Nationality	Malaysia
e_applicant_gender	Gender	Male
e_applicant_dob	Date of Birth	04/09/2000
e_applicant_studentid	Student id	0125810
e_applicant_studentjpg	Student card image	KDU UNIVERSITY COLLEGE Wan Yong Qian Student SCCM 0125810
e_app_submitdate	Submit date	01/08/2023
user_id	Foreign key	1

Table 5.6: Event Applicant Data Dictionary

Chatbot		
Field Name	Description	Example
chat_id	Primary key	1

message	Message	What is this badminton event about?
role	role	Ai
Message_datetime	Message date time	2023-08-01 01:10:58
con_id	Foreign key	1

Table 5.7: Chatbot Data Dictionary

Conversation History		
Field Name	Description	Example
con_id	Primary key	1
con_name	Conversation Name	What is this badminton event about?
no_of_message	Number of messages	1
user_id	Foreign key	1

Table 5.8: Conversation History Data Dictionary

5.2.2 Activity Diagram

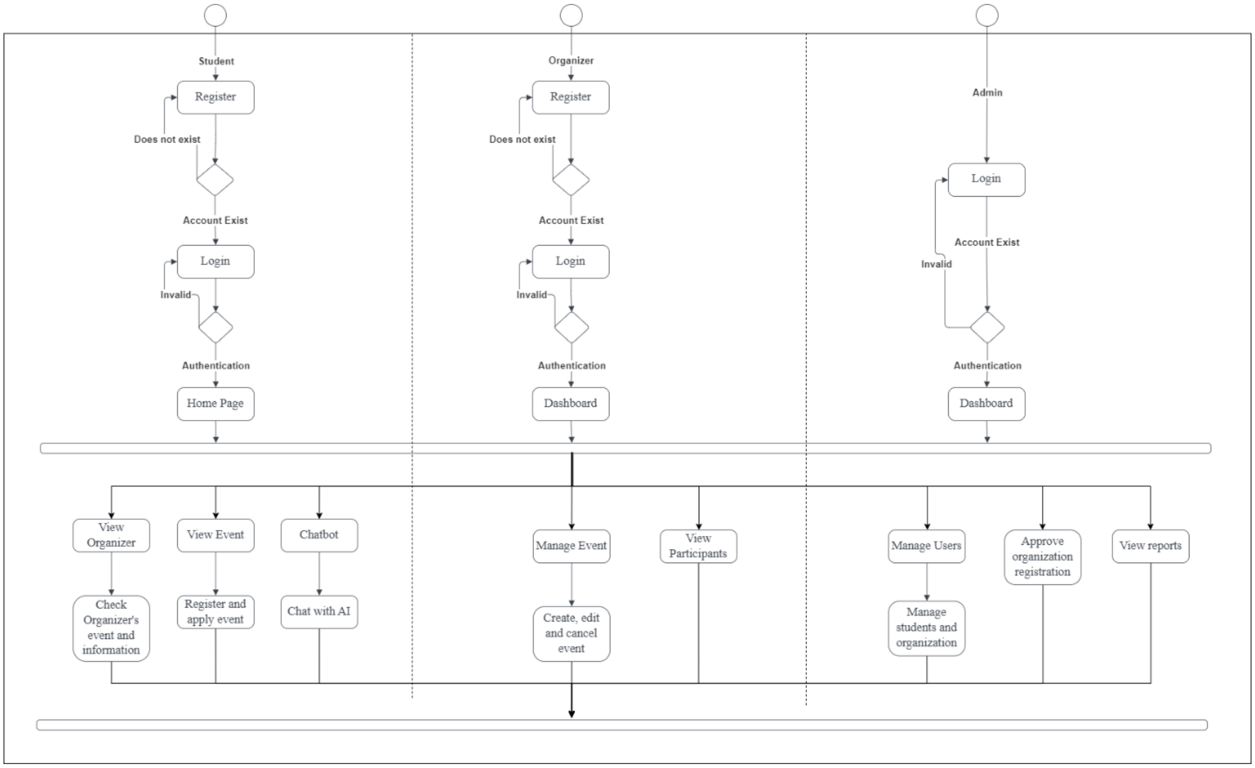


Figure 5.2: Activity Diagram

It starts with an initial node, which represents the starting point of the system. The first action for student and organizer is "Register", where the user provides a valid email and password to create a new account. If the email and password are valid, the system will proceed to the next activity. If not, the user will need to repeat the registration process. If the user already has an account, they will proceed with the "Login" process. The user will need to enter their respective username and password to log in to their account. Only valid credentials will proceed to the next action, while invalid authentication will require the user to repeat the login process. Successful login will lead the student to the homepage, while organizer and admin will be led to the dashboard where they can select their desired activity in the system.

In the homepage, the student can select different activities such as "View Event", "View Organizer", and "Chatbot". Each activity has its own set of functionalities and actions that the student can perform. For the "View Event" activity, the student can view, register, and apply for the event. Similarly, for the "Manage Event" activity, the organizer can create, edit, and delete the events in the system. The "View Participants" activity allows the organizer to track their events growth and participants. In the "Manage User" activity, the admin can manage and keep track of users such as students and organizer in the system. The "Approve Organizer Registration" activity allows the admin to approve the organizers account by viewing their registration information. Meanwhile, the "View Reports" activity can see the users and events activity and admin can select the desired activity in the system.

All the activities are joined with a join node before the logout process, indicating that the user needs to complete all the selected activities before logging out. The activity diagram then flows to the final node, which represents the end of the system's operation or activity.

5.3 System Architecture

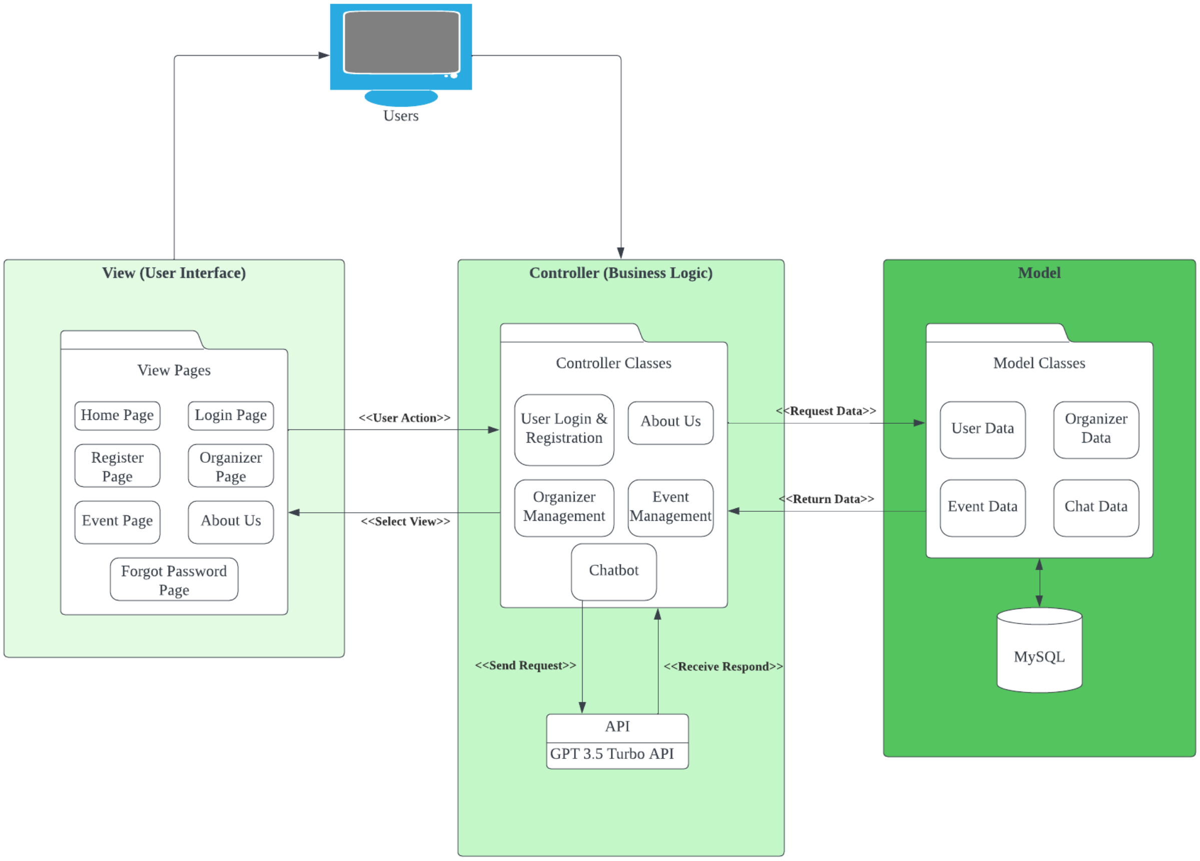


Figure 5.3: System Architecture

According to the system architecture depicted in Figure 5.3, the design pattern for this Campus Event Management System(C-EMS) is Model View Controller (MVC). It provides three main layers: model, view, and controller. Many developers use MVC as a standard design pattern. It is a complete framework. MVC provide three types of classes:

A. Model- Model classes are used to implement the logic of data domains. These classes are used to retrieve, insert, or update the data into the database associated with our application.

B. View- Views are used to prepare the interface of our application. By using that interface users interact with our application.

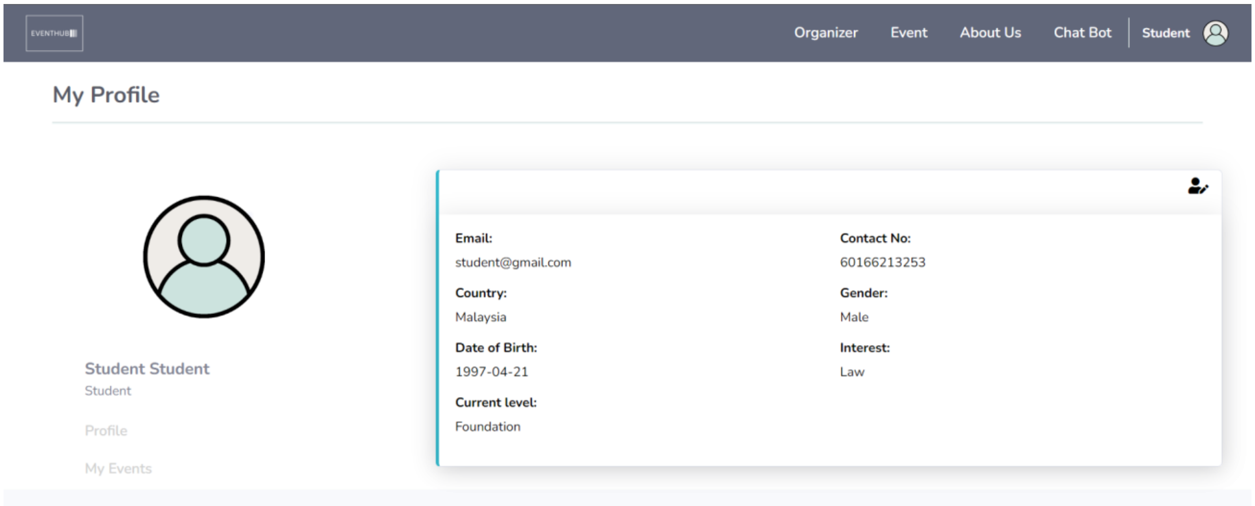
C. Controller- Controller classes are used to respond to the user's requests. Controller classes perform the users' requested actions. These classes work with model classes and select the appropriate view that should be displayed to the user according to user requests.

MVC pattern architecture is basically a three-layered architecture. It separates the characteristics of application. Its first layer is related to the user input logic, second layer is related to the business logic and third layer is used to implement user interface logic. MVC architecture helps the system to control the complexity of application by dividing it into three components i.e. model, view and controller. MVC does not use server-based forms, that's why it is ideal for those developers who want full control over their application behavior. Also, the Test-driven development approach is supported by MVC architecture. Besides that, the front controller supports rich routing communications to design our web application. MVC is making the development process faster, returns data without formatting, easy planning, and maintenance in the future.

A major advantage of the MVC pattern is that it simplifies the testing process by a great deal. It makes it easier to debug large-scale applications as multiple levels are structurally defined and properly written in the application. Thus, making it trouble-free to develop an application with unit tests.

5.4 Design Principles

5.4.1 Visibility



My Profile

Student Student

Student

Email:
student@gmail.com

Contact No:
60166213253

Country:
Malaysia

Gender:
Male

Date of Birth:
1997-04-21

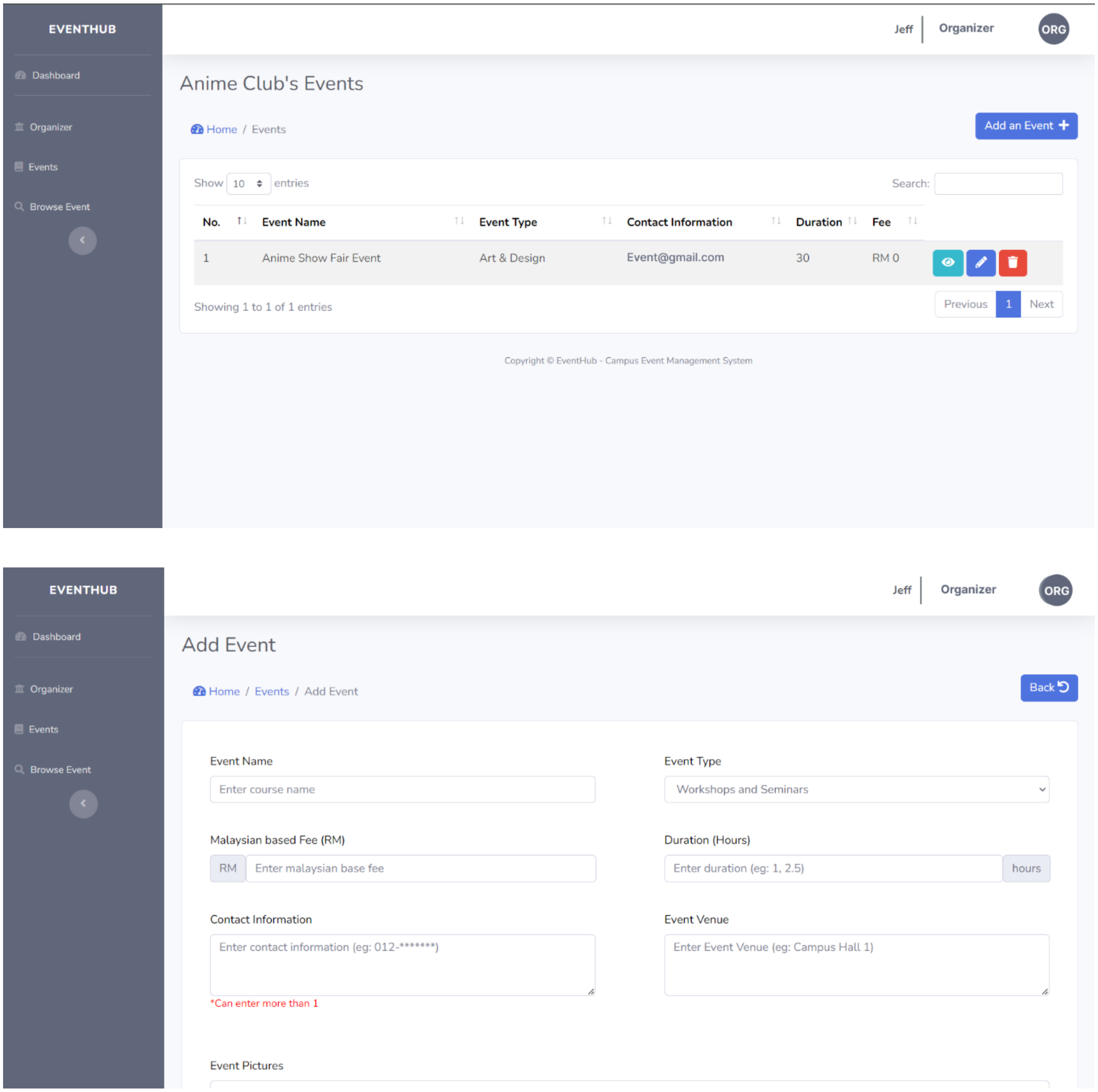
Interest:
Law

Current level:
Foundation

Figure 5.4: Interface of Profile

Visibility is a design principle that refers to the ability of a user to perceive and understand the state and functionality of a design at any given moment. For example, in Figure 5.4, visibility can be enhanced by using clear and concise labels for buttons, text view, and other interactive elements. Users should be able to easily identify the purpose of each element and know what will happen when they interact with it.

5.4.2 Consistency



Anime Club's Events

Home / Events

Add an Event +

Show 10 entries

Search:

No.	Event Name	Event Type	Contact Information	Duration	Fee
1	Anime Show Fair Event	Art & Design	Event@gmail.com	30	RM 0

Showing 1 to 1 of 1 entries

Previous 1 Next

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Add Event

Home / Events / Add Event

Back

Event Name: Enter course name

Event Type: Workshops and Seminars

Malaysian based Fee (RM): RM Enter malaysian base fee

Duration (Hours): Enter duration (eg: 1, 2.5) hours

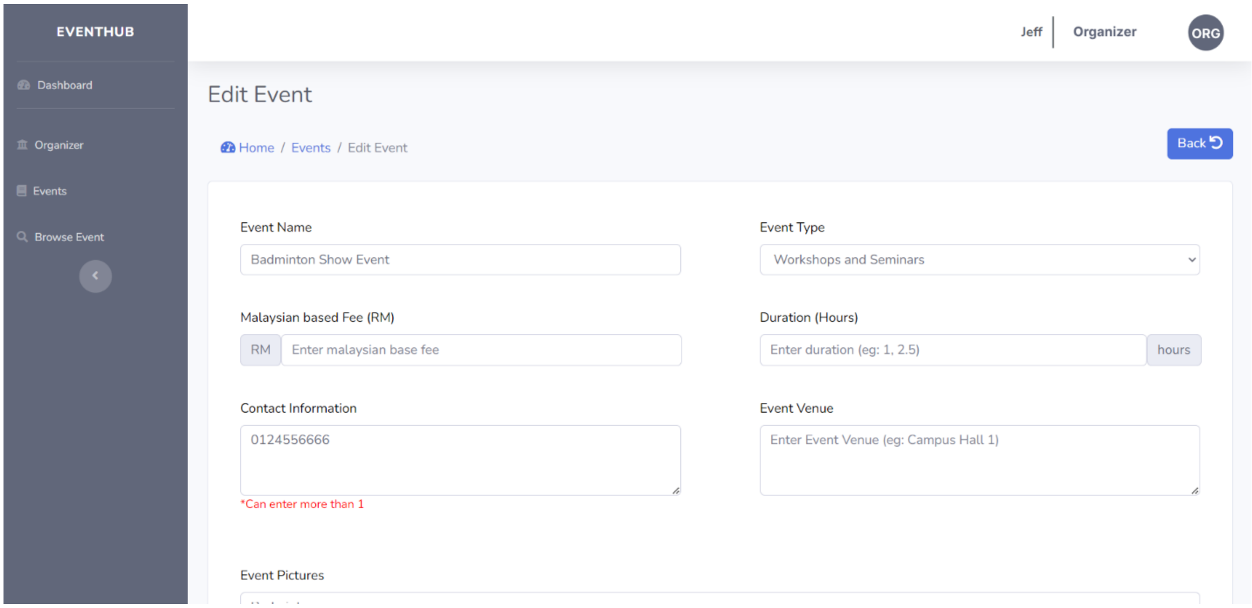
Contact Information: Enter contact information (eg: 012-*******)

*Can enter more than 1

Event Venue: Enter Event Venue (eg: Campus Hall 1)

Event Pictures

Figure 5.5: Interface of Add Event



Edit Event

Event Name: Badminton Show Event

Event Type: Workshops and Seminars

Malaysian based Fee (RM): RM Enter malaysian base fee

Duration (Hours): Enter duration (eg: 1, 2.5) hours

Contact Information: 0124556666

*Can enter more than 1

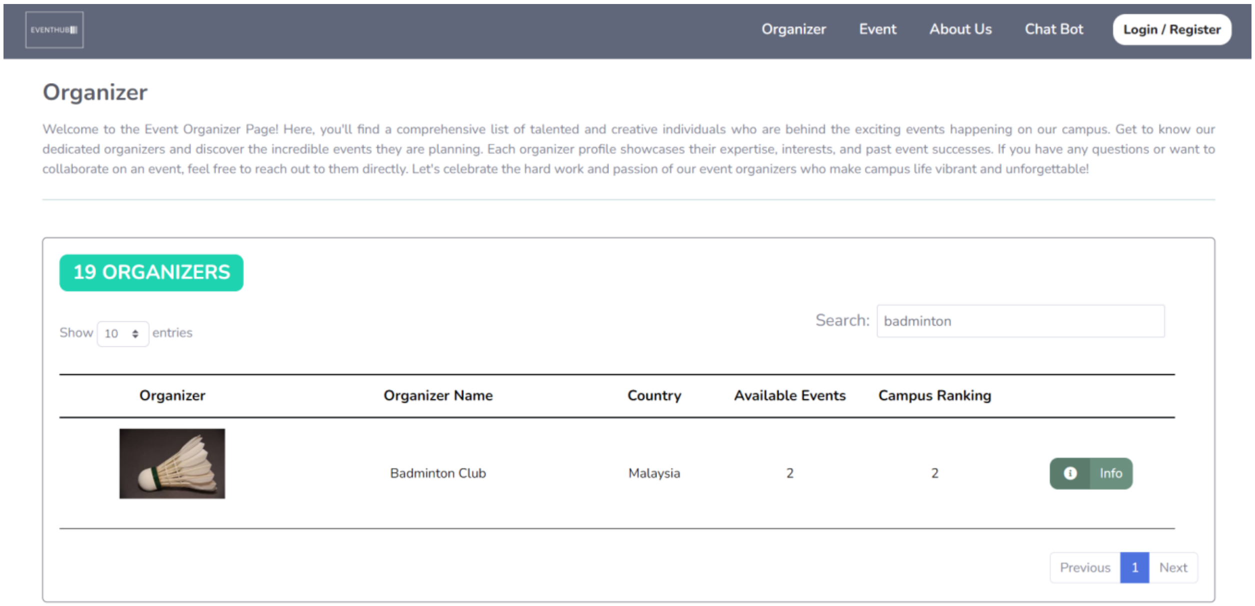
Event Venue: Enter Event Venue (eg: Campus Hall 1)

Event Pictures

Figure 5.6: Interface of Edit Event

Consistency refers to the use of a unified visual language and user experience across an app's various screens and features. Figures 5.5 and 5.6 showcase the examples of consistent layout, where buttons and other UI elements are positioned in the same place and retain a consistent appearance throughout the app.

5.4.3 Constraint



Organizer

Welcome to the Event Organizer Page! Here, you'll find a comprehensive list of talented and creative individuals who are behind the exciting events happening on our campus. Get to know our dedicated organizers and discover the incredible events they are planning. Each organizer profile showcases their expertise, interests, and past event successes. If you have any questions or want to collaborate on an event, feel free to reach out to them directly. Let's celebrate the hard work and passion of our event organizers who make campus life vibrant and unforgettable!

Show 10 entries

Search: badminton

Organizer	Organizer Name	Country	Available Events	Campus Ranking	
	Badminton Club	Malaysia	2	2	Info

Figure 5.7: Interface of Event List

Constraint is design principle that refers to any limitation or restriction placed on a design. Figure 5.7 shows the use of appropriate font sizes that help draw attention to the events, making it easier for users to quickly identify and understand the information presented.

5.4.4 Feedback

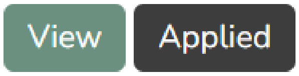
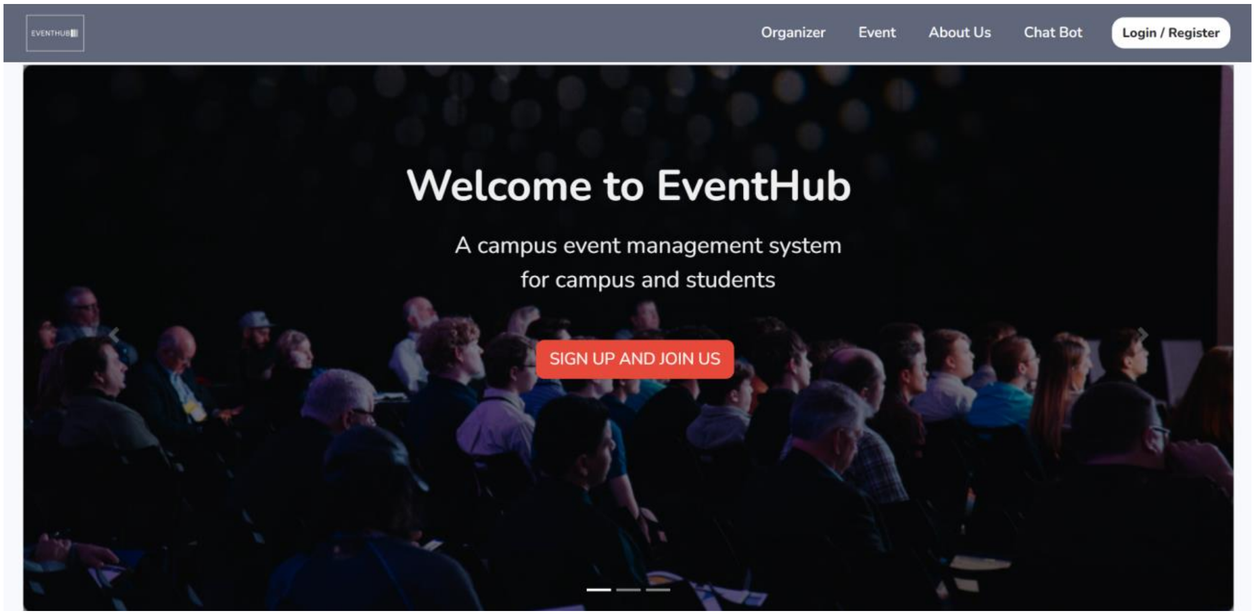


Figure 5.8: Interface of Successfully Applied

Feedback is a design principle that refers to the process of gathering and incorporating feedback from users throughout the design process. For example, figure 5.8 clearly depicts a successful application of the event.

5.6.5 Affordance



Welcome to EventHub

A campus event management system for campus and students

Figure 5.9: Interface of Welcome

Affordance is a design principle that refers to the perception of a user that suggests the potential actions or interactions available to them based on the design of an object or interface. For example, the affordance of a button in Figure 5.9 is its visual and tactile cues that suggest that it can be pressed. The button's shape, color, and texture communicate to the user that pressing it will initiate a specific action.

5.6.6 Humanize Elements

5.6.6.1 Container components – Cards

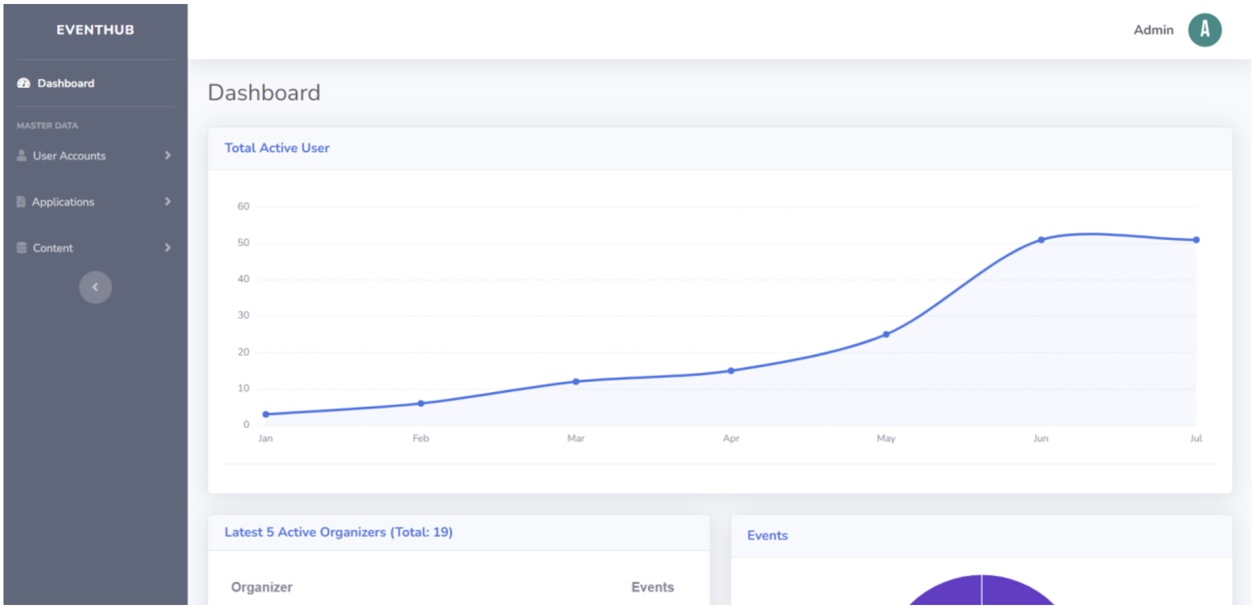


Figure 5.10: Interface of Dashboard

Container components like cards are used to group related information or content together in a visually appealing way. Figure 5.12 presents a card view that offers a comprehensive overview of total active user through a line chart.

5.7 UI Flow of Control

5.7.1 Home Page

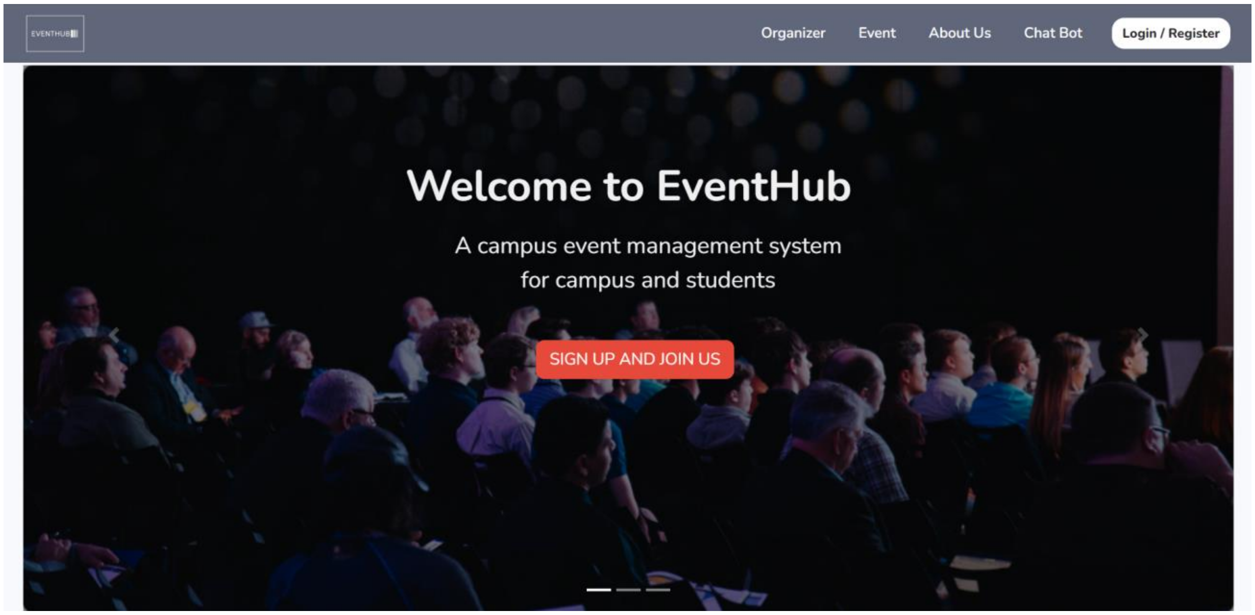


Figure 5.11 Interface of Home Page

In Figure 5.13, the home page appears as the first screen upon opening the website. This screen revealing the as the main page and consists of a sign-up and join us button.

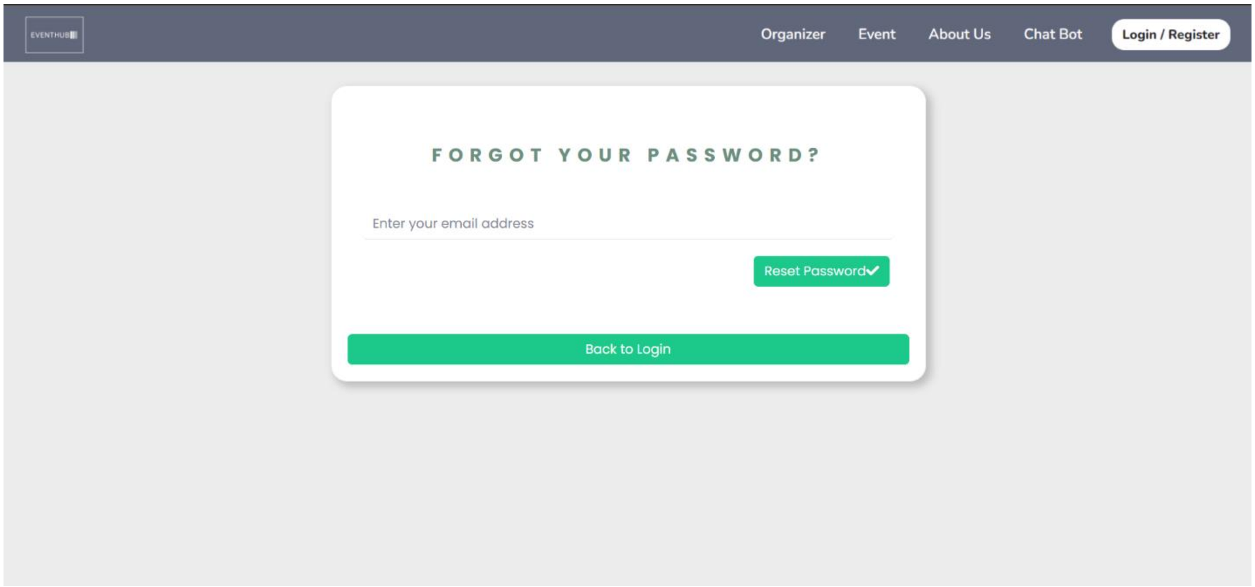
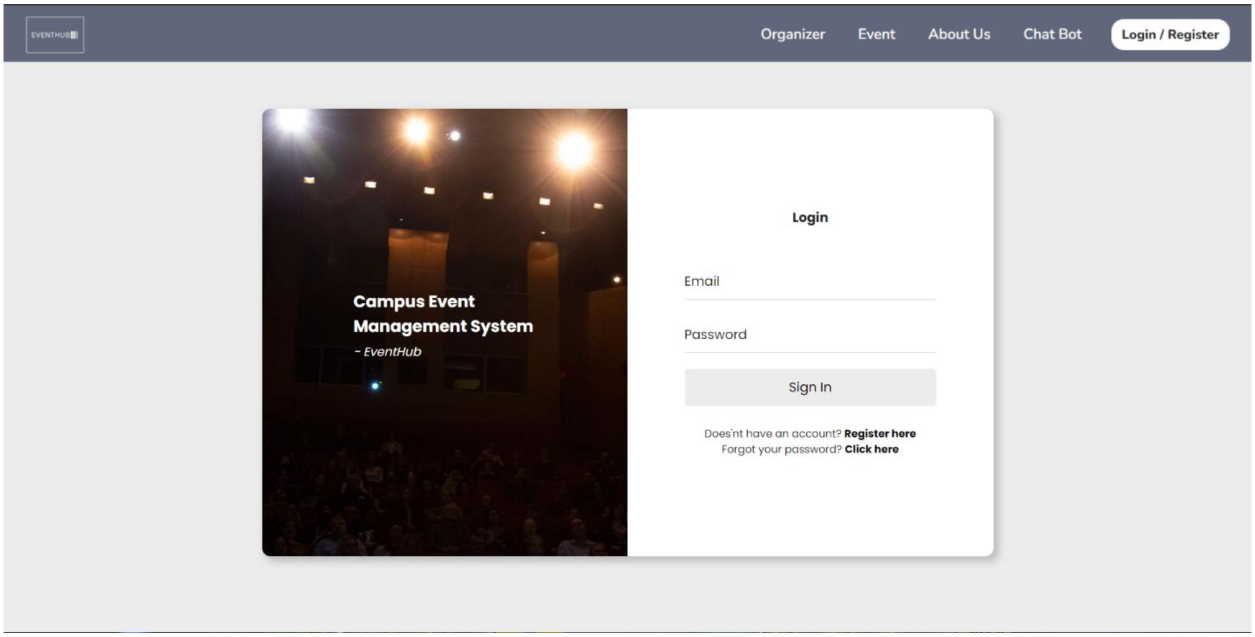


Figure 5.12: Interface of Forgot Password

The forget password interface, displayed in Figure 5.14, enables users to input their email address and reset their password. Upon entering their credentials in the designated text fields, users may receive an email notification from the system to reset their password.

5.7.2 Login



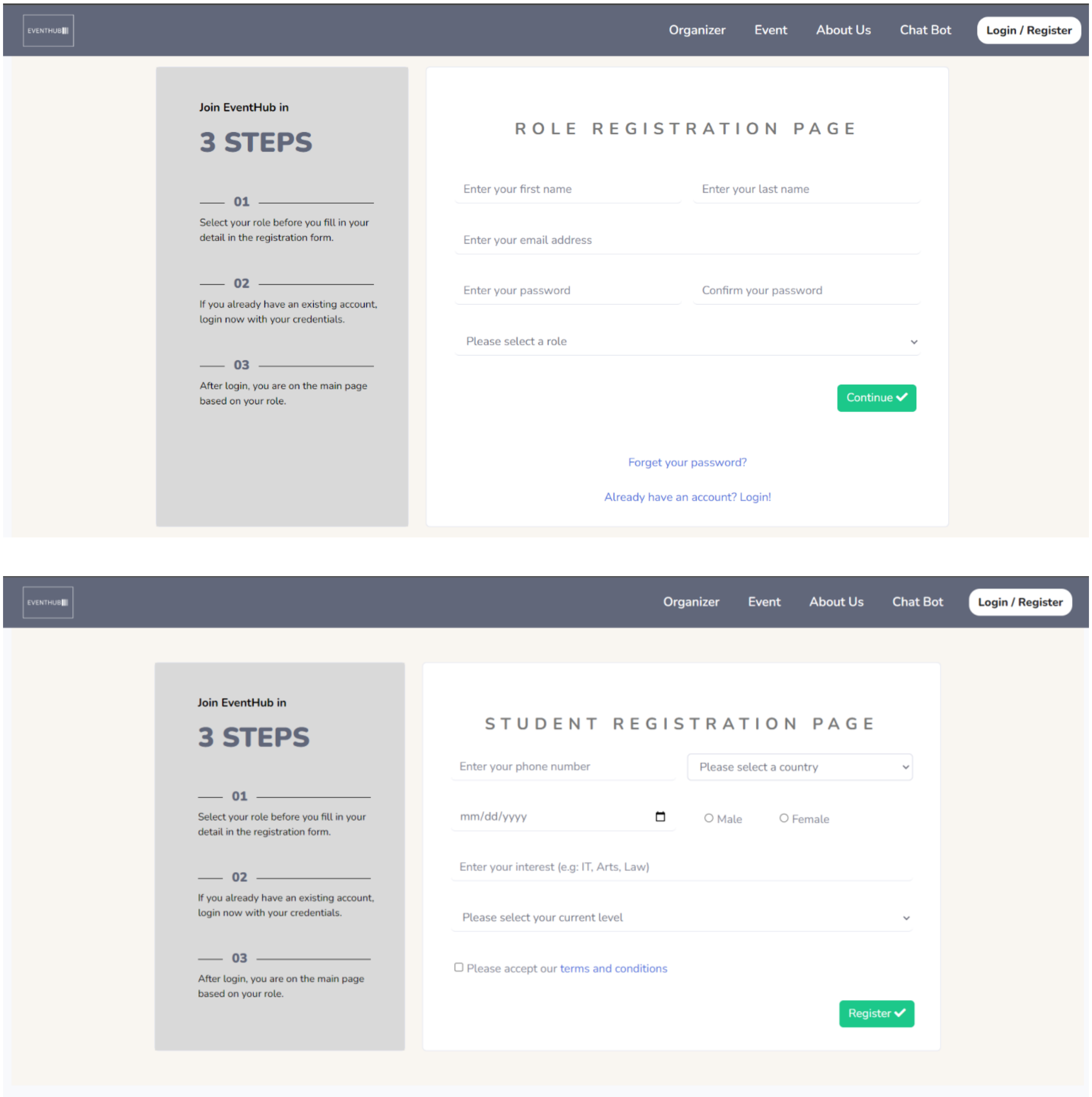
Campus Event Management System
- EventHub

Does'nt have an account? **Register here**
Forgot your password? **Click here**

Figure 5.13: Interface of Sign In

The sign in interface, displayed in Figure 5.15, enables users to input their username and password credentials. Upon entering their login credentials in the designated text fields, users can initiate the sign-in process by clicking the "Sign in" button.

5.7.3 Account registration



EVENTHUB
Organizer Event About Us Chat Bot Login / Register

Join EventHub in

3 STEPS

01
Select your role before you fill in your detail in the registration form.

02
If you already have an existing account, login now with your credentials.

03
After login, you are on the main page based on your role.

ROLE REGISTRATION PAGE

Enter your first name
Enter your last name
Enter your email address
Enter your password
Confirm your password
Please select a role

Continue ✓

Forget your password?

Already have an account? Login!

EVENTHUB
Organizer Event About Us Chat Bot Login / Register

Join EventHub in

3 STEPS

01
Select your role before you fill in your detail in the registration form.

02
If you already have an existing account, login now with your credentials.

03
After login, you are on the main page based on your role.

STUDENT REGISTRATION PAGE

Enter your phone number
Please select a country
mm/dd/yyyy
○ Male ○ Female
Enter your interest (e.g: IT, Arts, Law)
Please select your current level

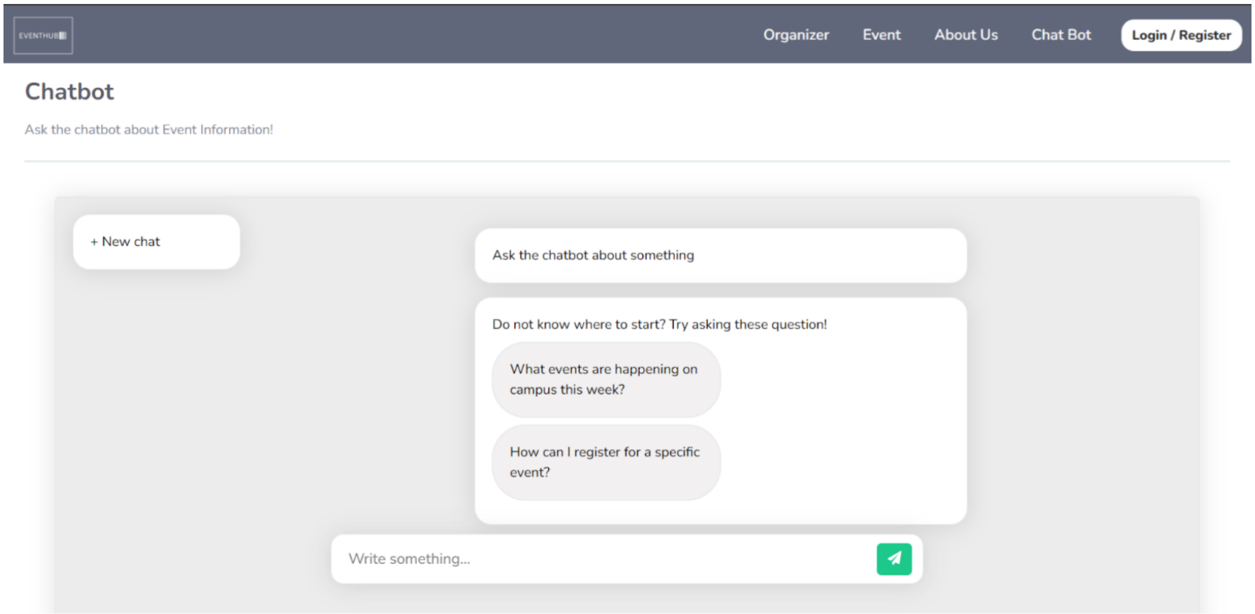
□ Please accept our terms and conditions

Register ✓

Figure 5.14: Interface of Sign Up

Figure 5.16 showcases the sign-up interface, which allows users to input their desired email and password credentials for account creation. After filling in the necessary information in the designated text fields, users can initiate the sign-up process by clicking the "Continue" button and then after filling in the details, users may click “Register” button. Once the user credentials are successfully stored in the database, users can proceed to the sign-in interface for subsequent logins.

5.7.4 Chatbot



Chatbot

Ask the chatbot about Event Information!

Ask the chatbot about something

Do not know where to start? Try asking these question!

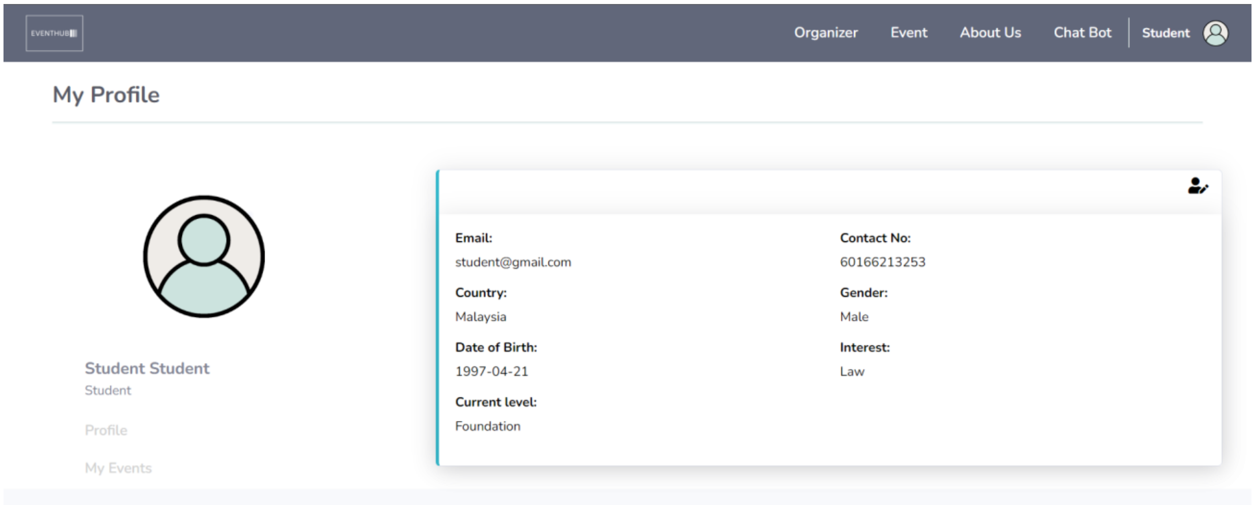
What events are happening on campus this week?

How can I register for a specific event?

Figure 5.15: Interface of Chatbot

Figure 5.17 showcases the dashboard interface, which features a top navigation bar consisting of a hamburger menu and profile picture, providing users with easy access to various application features. When users select a specific month from the drop-down menu, a card view containing a pie chart will show an overview of overall expenses for the selected month. The bottom section of the dashboard displays the budget list, which indicates the remaining budget for the current month.

5.7.5 User Profile



My Profile

Student Student
Student

Email:
student@gmail.com

Contact No:
60166213253

Country:
Malaysia

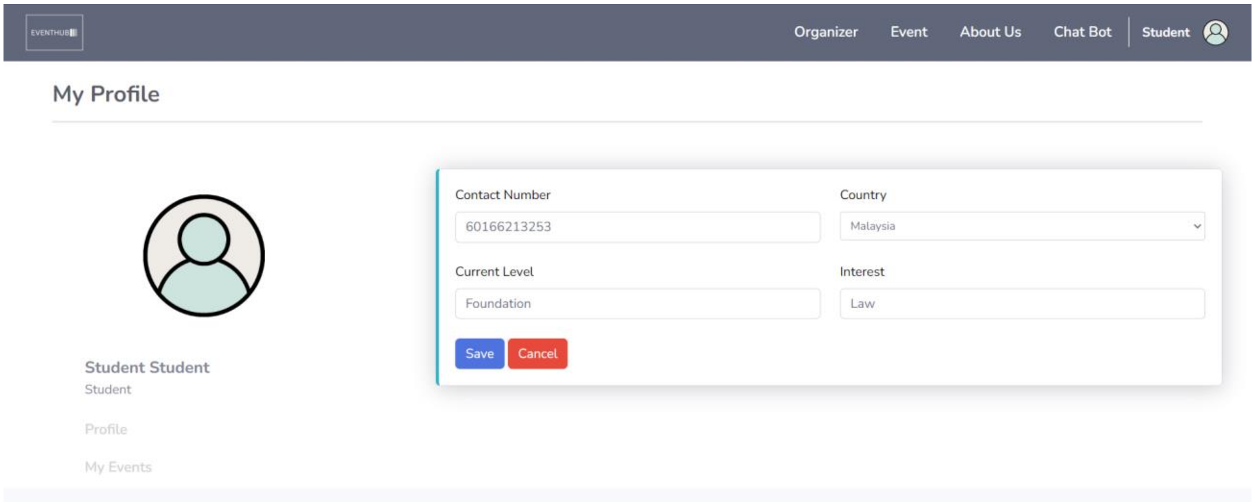
Gender:
Male

Date of Birth:
1997-04-21

Interest:
Law

Current level:
Foundation

Figure 5.16: Interface of Profile



My Profile

Student Student
Student

Contact Number: 60166213253

Country: Malaysia

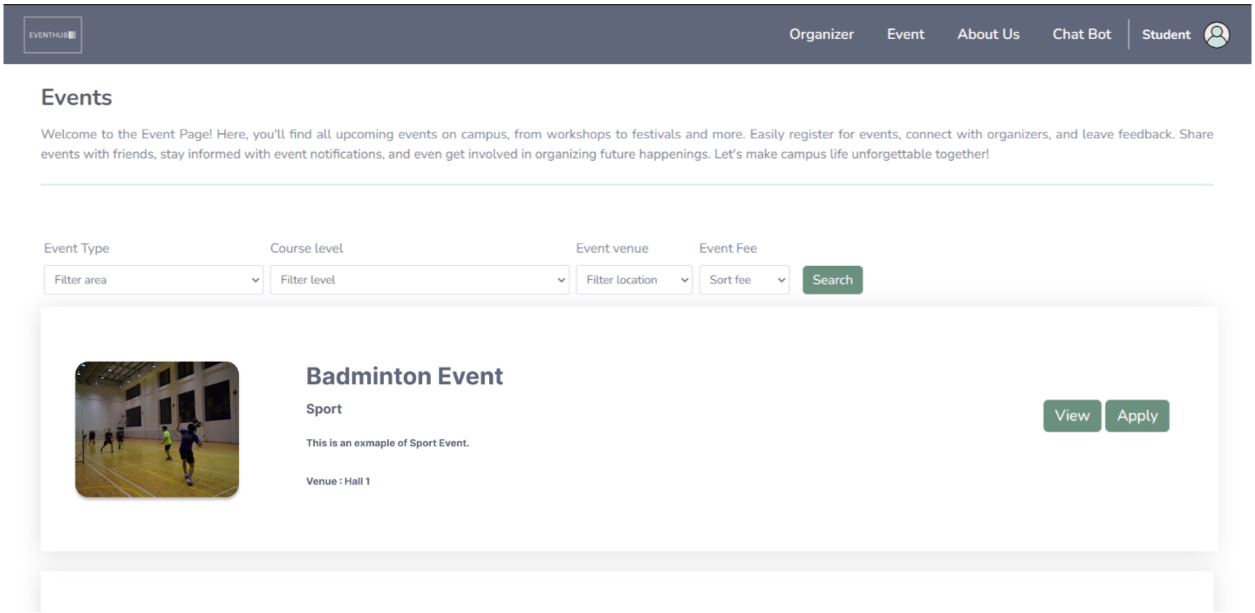
Current Level: Foundation

Interest: Law

Figure 5.17: Interface of Edit Profile

Figure 5.19 illustrates the profile interface, which can be accessed by clicking on the person icon in the top-right navigation bar. The profile interface displays the user's logo, email, first name, last name, contact number, interest, and current levels. In the edit profile interface, shown in Figure 5.20, users can update their profile picture and modify their contact number, country, current level, and interest.

5.7.6 Event Page



Events

Welcome to the Event Page! Here, you'll find all upcoming events on campus, from workshops to festivals and more. Easily register for events, connect with organizers, and leave feedback. Share events with friends, stay informed with event notifications, and even get involved in organizing future happenings. Let's make campus life unforgettable together!

Event Type: Filter area

Course level: Filter level

Event venue: Filter location

Event Fee: Sort fee

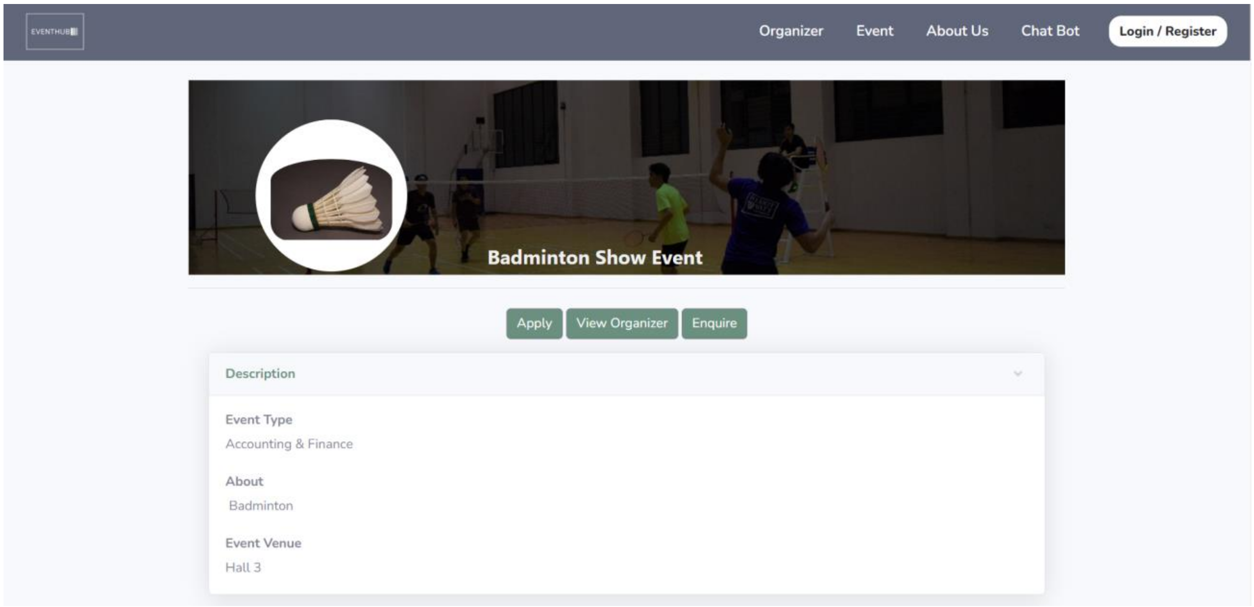
Badminton Event

Sport

This is an exmaple of Sport Event.

Venue : Hall 1

Figure 5.18: Interface of Event Page



Description

Event Type

Accounting & Finance

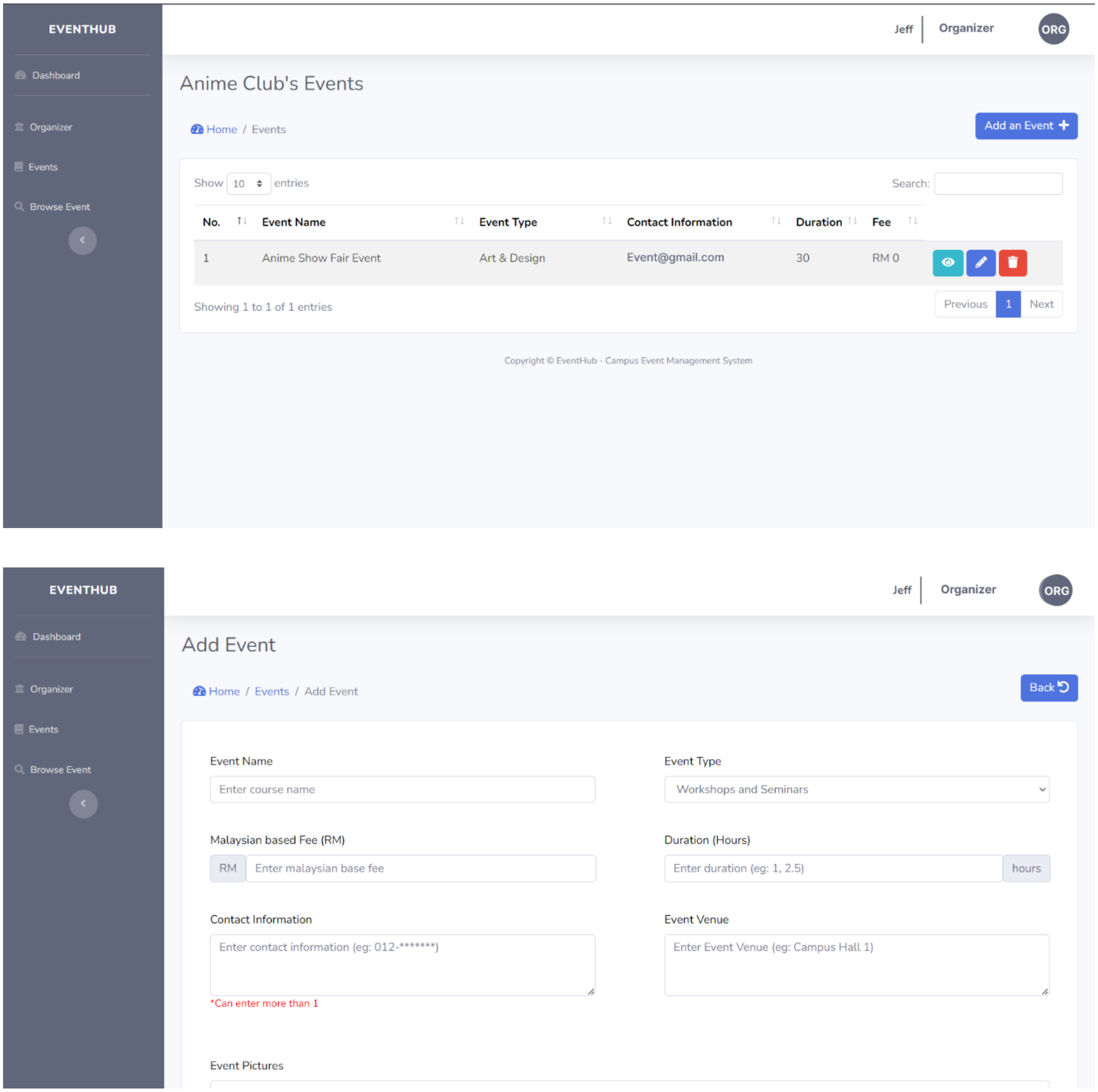
About

Badminton

Event Venue

Hall 3

Figure 5.19: Interface of Event Detail



Anime Club's Events

No.	Event Name	Event Type	Contact Information	Duration	Fee
1	Anime Show Fair Event	Art & Design	Event@gmail.com	30	RM 0

Showing 1 to 1 of 1 entries

Add Event

Event Name: Enter course name

Event Type: Workshops and Seminars

Malaysian based Fee (RM): RM Enter malaysian base fee

Duration (Hours): Enter duration (eg: 1, 2.5) hours

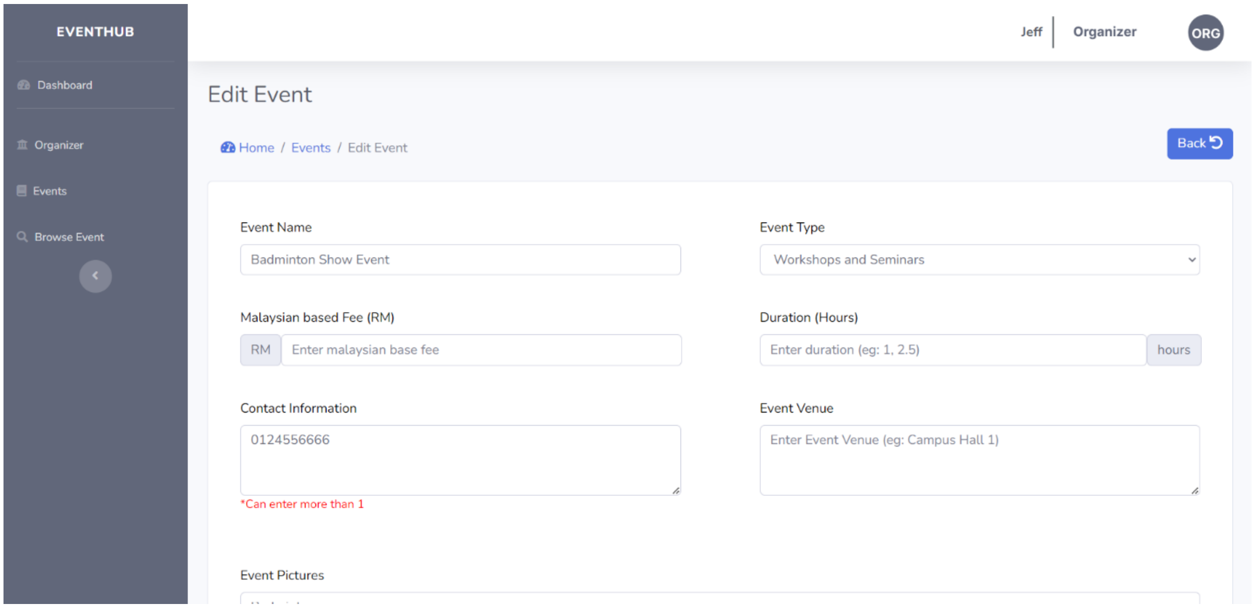
Contact Information: Enter contact information (eg: 012-*******)

*Can enter more than 1

Event Venue: Enter Event Venue (eg: Campus Hall 1)

Event Pictures

Figure 5.20: Interface of Add Event



Edit Event

Event Name
Badminton Show Event

Event Type
Workshops and Seminars

Malaysian based Fee (RM)
RM Enter malaysian base fee

Duration (Hours)
Enter duration (eg: 1, 2.5) hours

Contact Information
0124556666
*Can enter more than 1

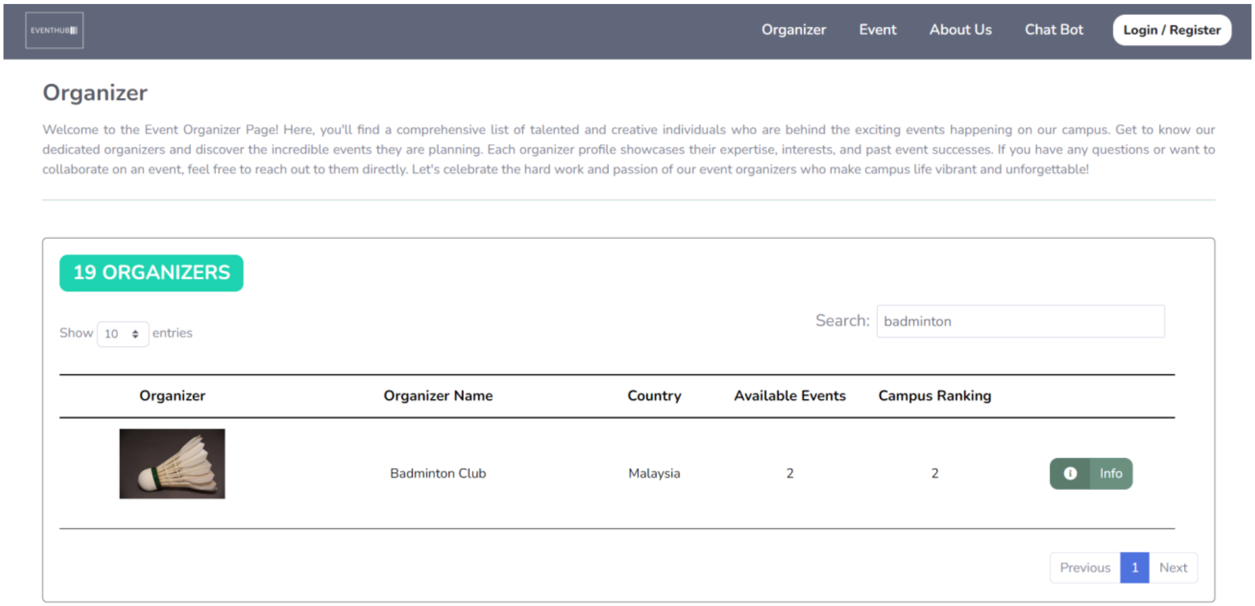
Event Venue
Enter Event Venue (eg: Campus Hall 1)

Event Pictures

Figure 5.21: Interface of Edit Event

Figure 5.21 depicts the event interface, which displays all the events created in this system. By clicking on the button view, students can view the event details, as shown in Figure 5.22. Additionally, the organizer can edit or delete the event by selecting the respective button. The floating action button in Figure 5.23 allows organizer to create a new event. Upon clicking the add event button, organizers are presented with a form, as illustrated in Figure 5.23. This form enables the organizer to create new events in the system. The edit event interface, depicted in Figure 5.24, allows organizer to modify the event details, including the event name, description, duration, event type, contact information and event venue.

5.7.7 Organizer Page



Organizer

Welcome to the Event Organizer Page! Here, you'll find a comprehensive list of talented and creative individuals who are behind the exciting events happening on our campus. Get to know our dedicated organizers and discover the incredible events they are planning. Each organizer profile showcases their expertise, interests, and past event successes. If you have any questions or want to collaborate on an event, feel free to reach out to them directly. Let's celebrate the hard work and passion of our event organizers who make campus life vibrant and unforgettable!

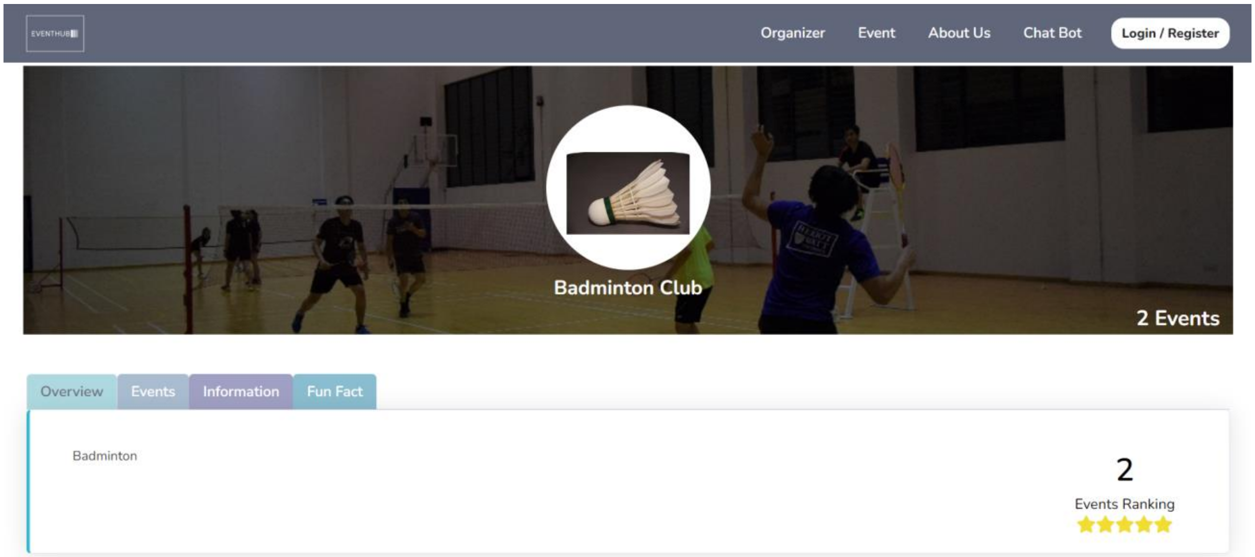
19 ORGANIZERS

Show 10 entries

Search: badminton

Organizer	Organizer Name	Country	Available Events	Campus Ranking	
	Badminton Club	Malaysia	2	2	Info

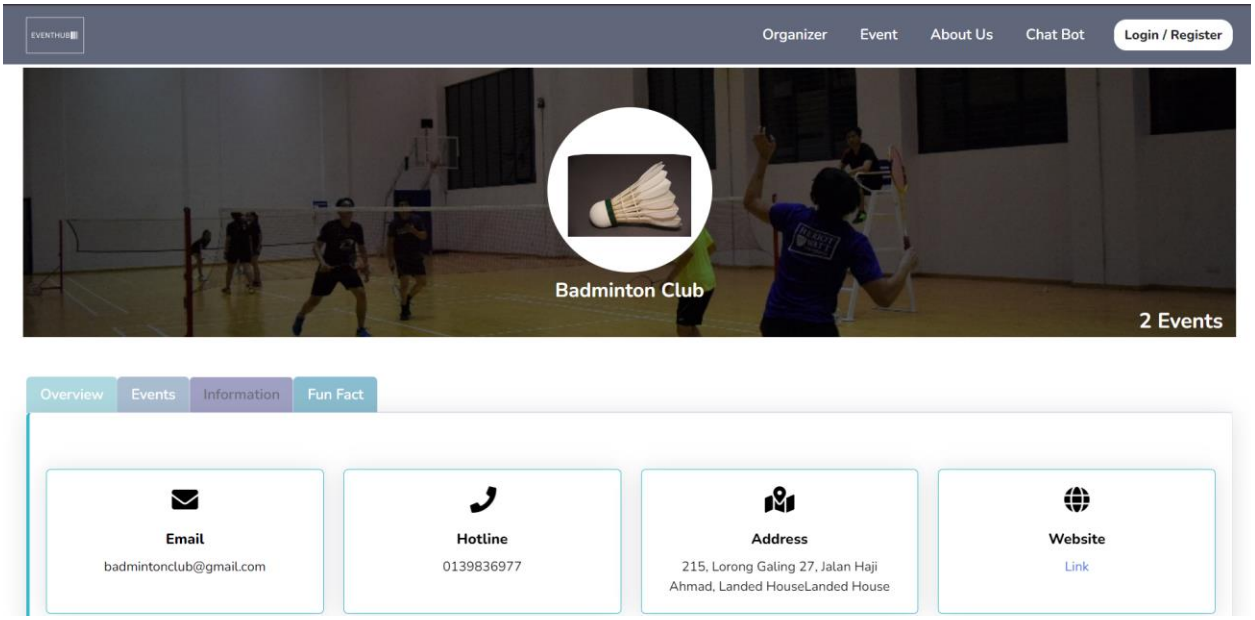
Figure 5.22: Interface of Organizer



Badminton

2
Events Ranking
★★★★★

Figure 5.23: Interface of Organizer Detail



Badminton Club

2 Events

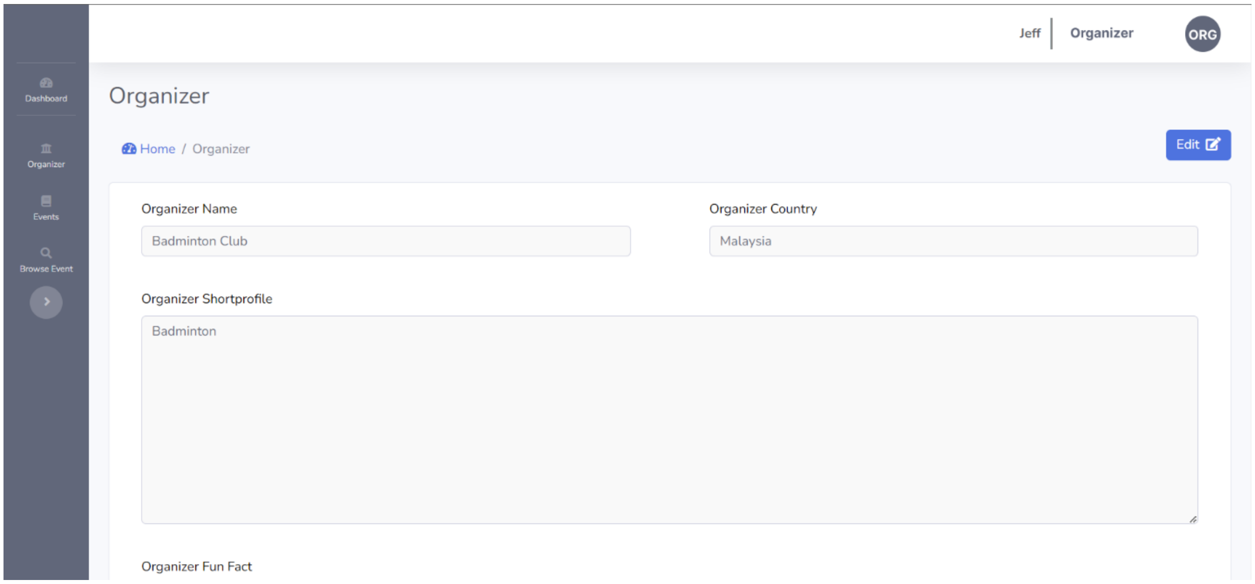
Email
badmintonclub@gmail.com

Hotline
0139836977

Address
215, Lorong Galing 27, Jalan Haji Ahmad, Landed HouseLanded House

Website
Link

Figure 5.24: Interface of Organizer Information



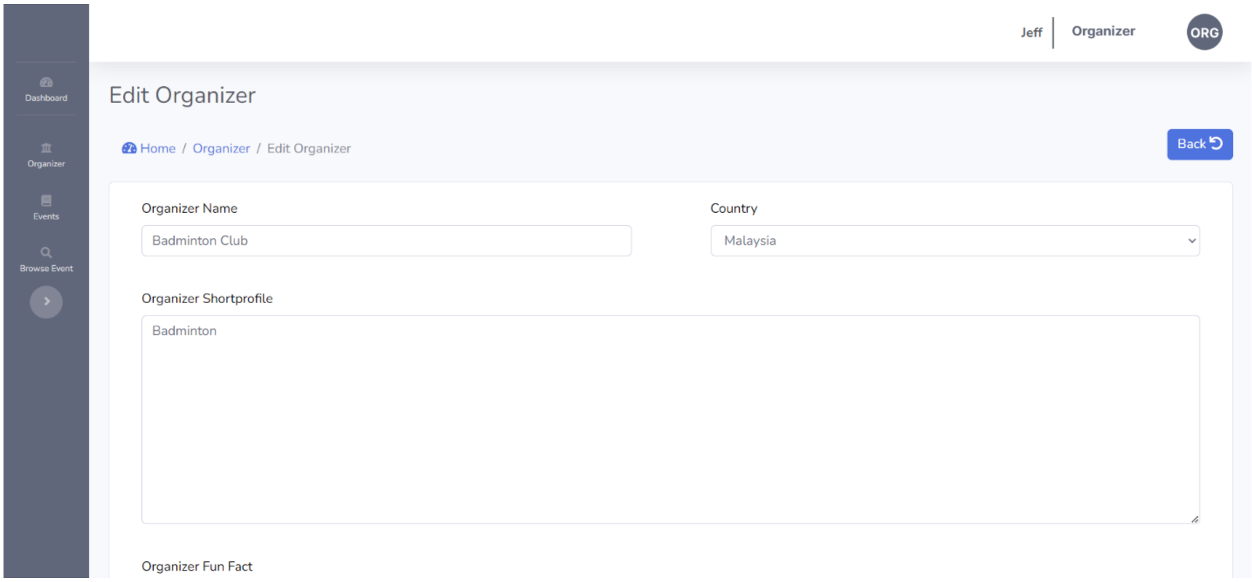
Organizer

Organizer Name: Badminton Club

Organizer Country: Malaysia

Organizer Shortprofile: Badminton

Organizer Fun Fact



Edit Organizer

Organizer Name: Badminton Club

Country: Malaysia

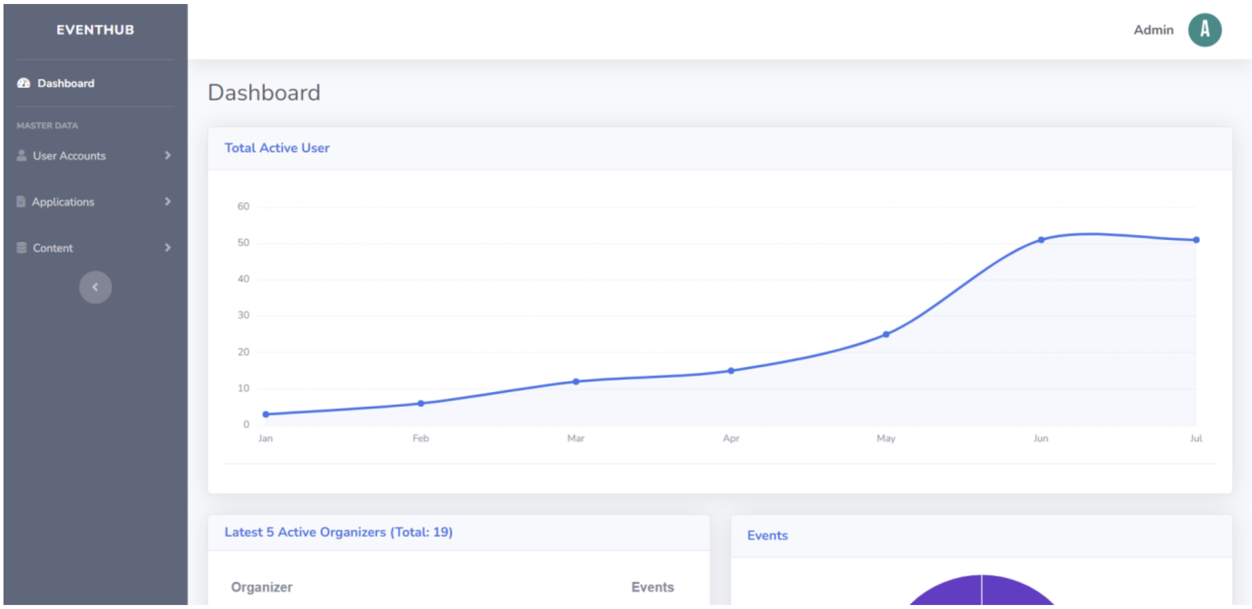
Organizer Shortprofile: Badminton

Organizer Fun Fact

Figure 5.25: Interface of Edit Organizer

Figure 5.25 illustrates the organizer interface, which provides an overview of the organizer created. Clicking on a specific category will display the organizer details, as shown in Figure 5.26. Organizers can edit their profile by selecting the corresponding buttons. The floating action button, depicted in Figure 5.25, enables students to view the organizer information including organizer name, address, email, hotline, and website, as shown in Figure 5.27. The edit category interface, illustrated in Figure 5.28, allows organizer to modify the category details, including the name, country, and description.

5.7.8 Organizer and Events Approval Page

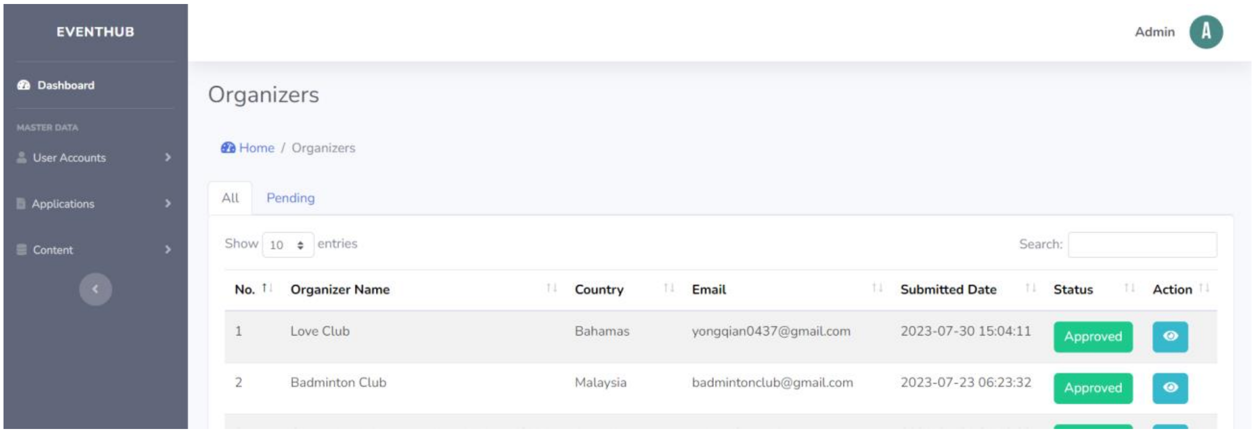


Dashboard

Latest 5 Active Organizers (Total: 19)

Organizer	Events

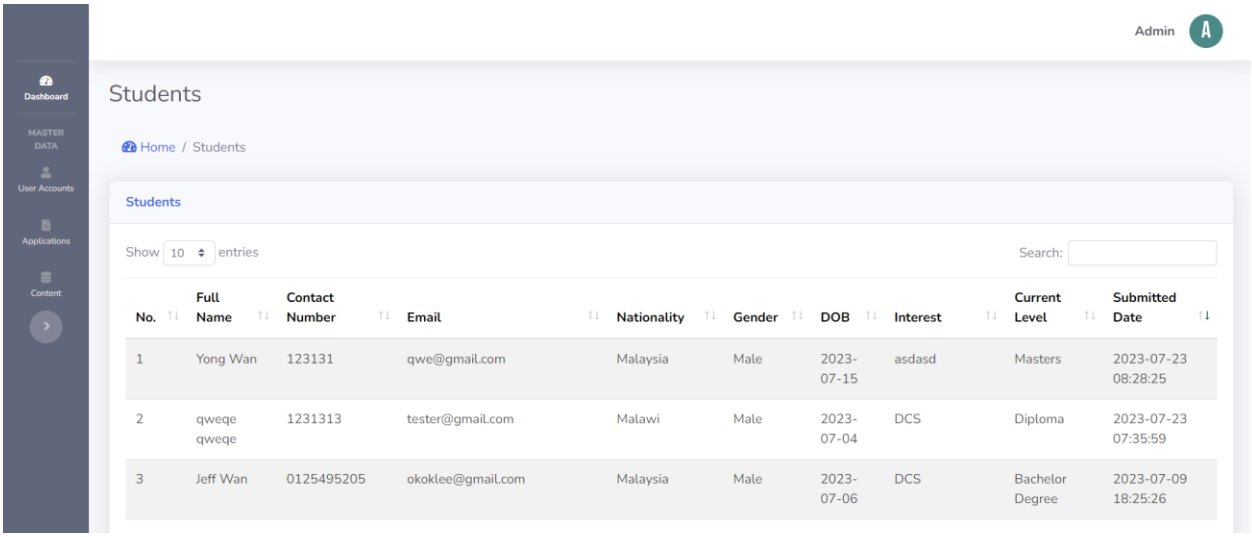
Figure 5.26: Interface of Admin Dashboard



Organizers

No.	Organizer Name	Country	Email	Submitted Date	Status	Action
1	Love Club	Bahamas	yongqian0437@gmail.com	2023-07-30 15:04:11	Approved	👁
2	Badminton Club	Malaysia	badmintonclub@gmail.com	2023-07-23 06:23:32	Approved	👁

Figure 5.27: Interface of Approval Organizer Page



Students

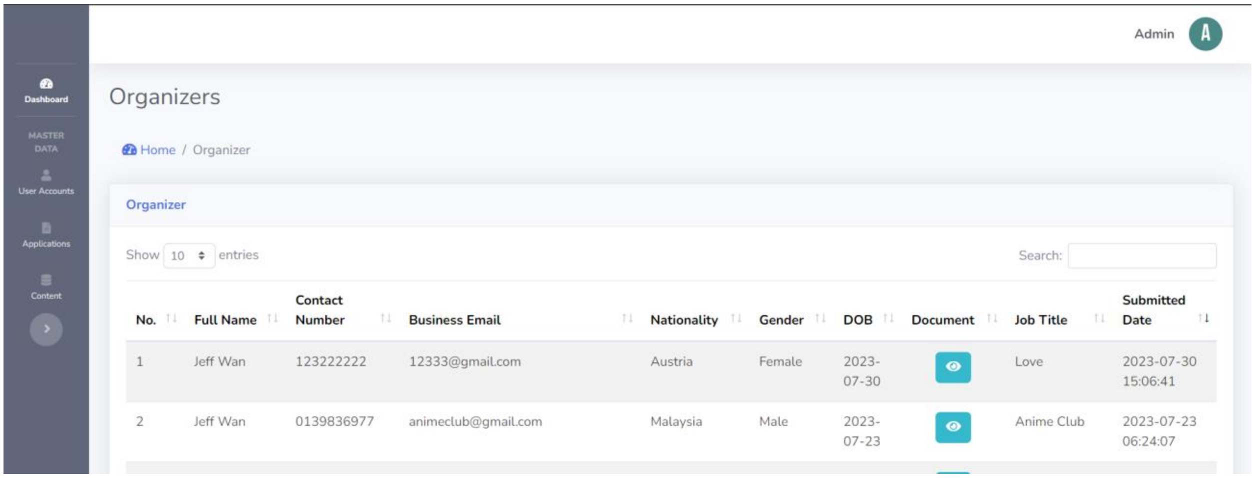
Home / Students

Students

Show 10 entries

Search:

No.	Full Name	Contact Number	Email	Nationality	Gender	DOB	Interest	Current Level	Submitted Date
1	Yong Wan	123131	qwe@gmail.com	Malaysia	Male	2023-07-15	asdasd	Masters	2023-07-23 08:28:25
2	qweqe qweqe	1231313	tester@gmail.com	Malawi	Male	2023-07-04	DCS	Diploma	2023-07-23 07:35:59
3	Jeff Wan	0125495205	okoklee@gmail.com	Malaysia	Male	2023-07-06	DCS	Bachelor Degree	2023-07-09 18:25:26



Organizers

Home / Organizer

Organizer

Show 10 entries

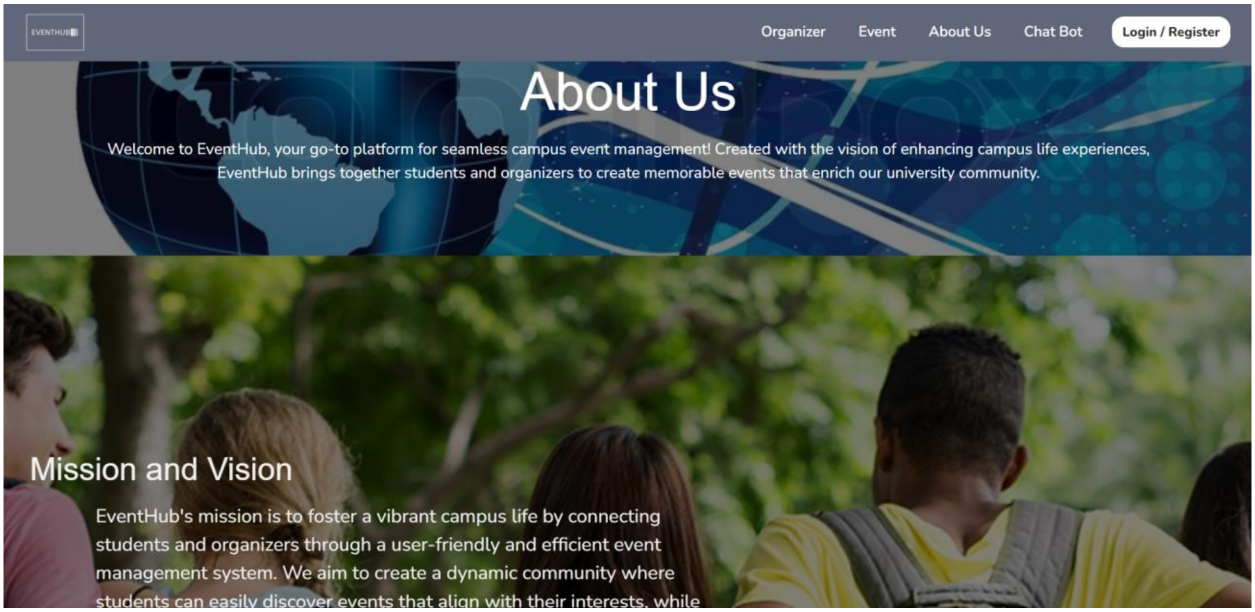
Search:

No.	Full Name	Contact Number	Business Email	Nationality	Gender	DOB	Document	Job Title	Submitted Date
1	Jeff Wan	123222222	12333@gmail.com	Austria	Female	2023-07-30	👁	Love	2023-07-30 15:06:41
2	Jeff Wan	0139836977	animeclub@gmail.com	Malaysia	Male	2023-07-23	👁	Anime Club	2023-07-23 06:24:07

Figure 5.28: Interface of Students and Organizers

Figure 5.29 showcases the admin page, which provides an dashboard overview of the total of the active users including students and organizers. Organizers approval page is shown in Figure 5.30, displays its details and information. The floating action button, present in both Figure 5.29 and 5.30, allows users to create a new expense. Students and organizers are presented with a list, as illustrated in Figure 5.31. This list enables admin to check the user details and information.

5.7.9 About Us Page



About Us

Welcome to EventHub, your go-to platform for seamless campus event management! Created with the vision of enhancing campus life experiences, EventHub brings together students and organizers to create memorable events that enrich our university community.

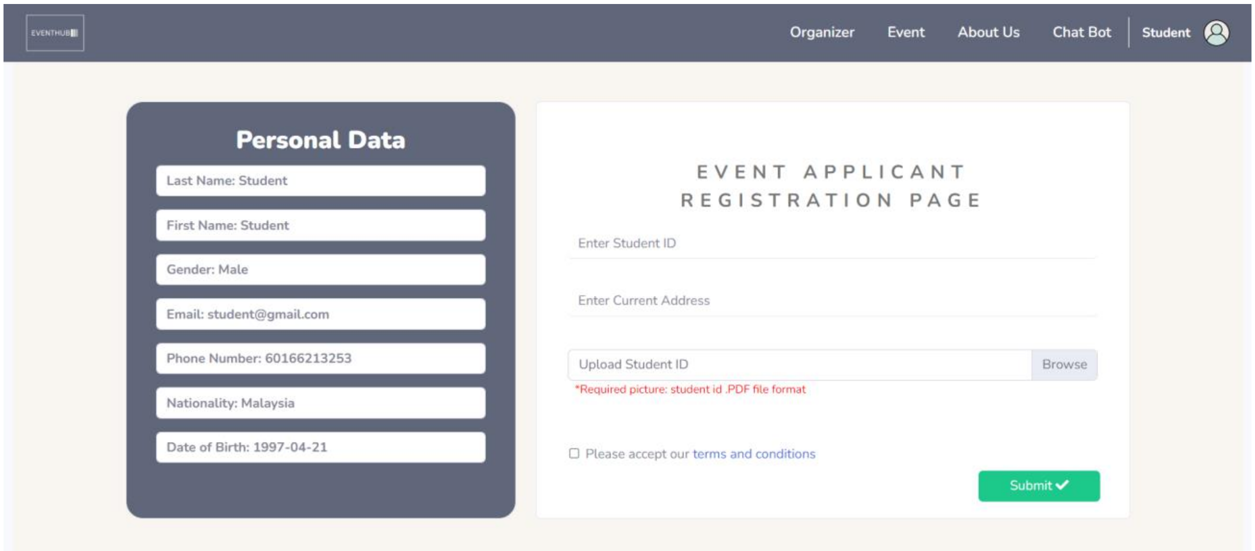
Mission and Vision

EventHub's mission is to foster a vibrant campus life by connecting students and organizers through a user-friendly and efficient event management system. We aim to create a dynamic community where students can easily discover events that align with their interests, while

Figure 5.29: Interface of About Us Page

Figure 5.32 displays the description and information about EventHub. It shows the description, mission, and vision.

5.7.9 Event Registration Page



Personal Data

Last Name: Student

First Name: Student

Gender: Male

Email: student@gmail.com

Phone Number: 60166213253

Nationality: Malaysia

Date of Birth: 1997-04-21

EVENT APPLICANT REGISTRATION PAGE

Enter Student ID

Enter Current Address

Upload Student ID

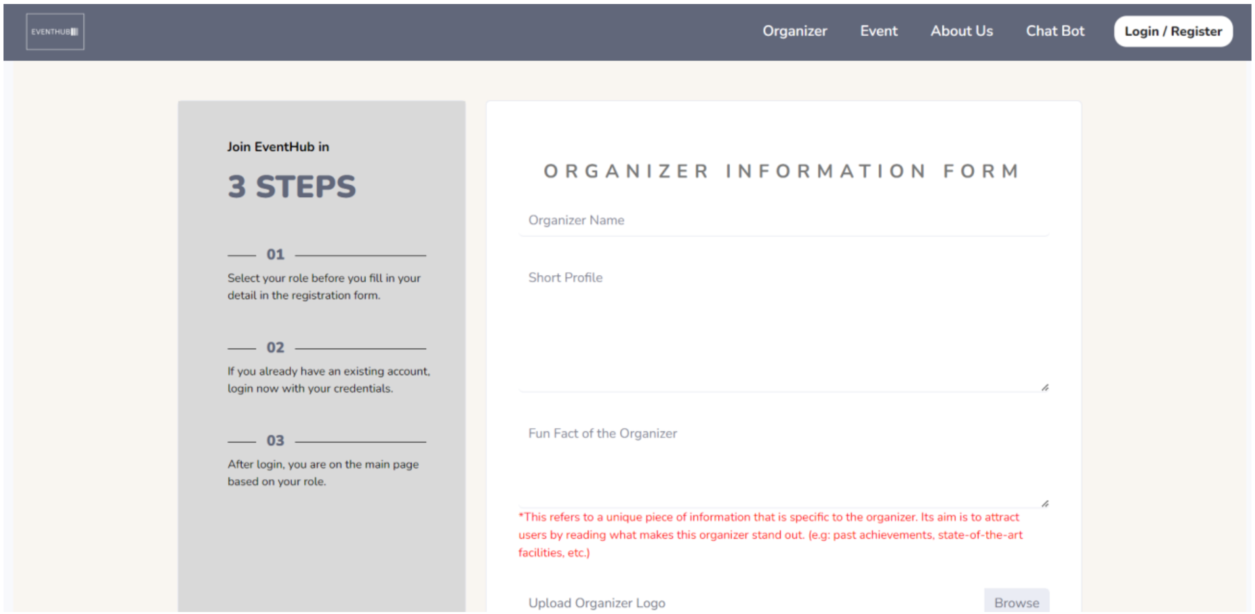
*Required picture: student id .PDF file format

□ Please accept our terms and conditions

Figure 5.30: Interface of Event Registration Page

Figure 5.33 displays the event applicant registration, which allows students to fill in their information such as student id, current address, and a student id pdf.

5.7.10 Organizer Registration Page



Join EventHub in

3 STEPS

01

Select your role before you fill in your detail in the registration form.

02

If you already have an existing account, login now with your credentials.

03

After login, you are on the main page based on your role.

ORGANIZER INFORMATION FORM

*This refers to a unique piece of information that is specific to the organizer. Its aim is to attract users by reading what makes this organizer stand out. (e.g: past achievements, state-of-the-art facilities, etc.)

Figure 5.31: Interface of Organizer Registration

Figure 5.34 represents the information of organizer registration. Organizers have to fill in all the details to successfully register.

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Elmasri, R., & Navathe, S. B. (2019). Fundamentals of database systems (7th ed.). Pearson.

Connolly, T., & Begg, C. (2014). Database Systems: A Practical Approach to Design, Implementation, and Management (6th ed.). Pearson.

Appendixes

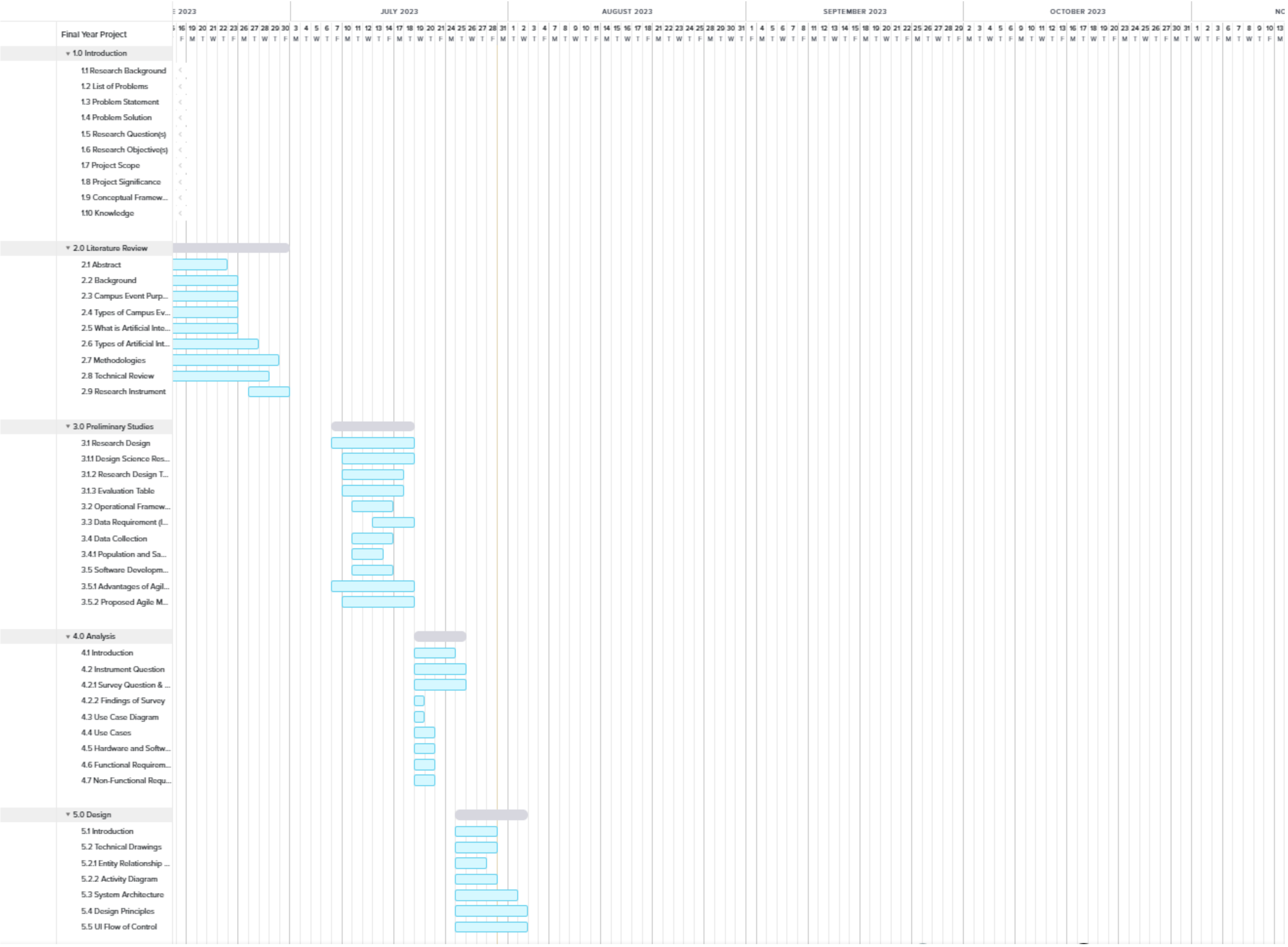
Appendix A: Work Breakdown Structure

Phases, Activities, and Task	Duration in Days
1.0 Introduction	
1.1 Research Background	2
1.2 List of Problem(s)	2
1.3 Problem Statement	2
1.4 Problem Solution	2
1.5 Research Question(s)	2
1.6 Research Objective(s)	2
1.7 Project Scope	3
1.8 Project Significance	1
1.9 Conceptual Framework	1
1.10 Knowledge	1
2.0 Literature Review	
2.1 Abstract	2
2.2 Background	2
2.3 Campus Event Purposes	2
2.4 Types of Campus Event Methods	2
2.5 What is Artificial Intelligence	1

2.6 Types of Artificial Intelligence	2
2.7 Methodologies	1
2.8 Technical Review	1
2.9 Research Instrument	1
3.0 Preliminary Studies	
3.1 Research Design	
3.1.1 Design Science Research Methodology (DRSM)	2
3.1.2 Research Design Table (RDT)	2
3.1.3 Evaluation Table	2
3.2 Operational Framework	2
3.3 Data Requirement (Instruments)	2
3.4 Data Collection	
3.4.1 Population and Sample	5
3.5 Software Development Life Cycle (SDLC)	
3.5.1 Advantages of Agile Model	2
3.5.2 Proposed Agile Model	2
4.0 Analysis	
4.1 Introduction	1
4.2 Instrument Question	
4.2.1 Survey Question & Objective for University Students	5

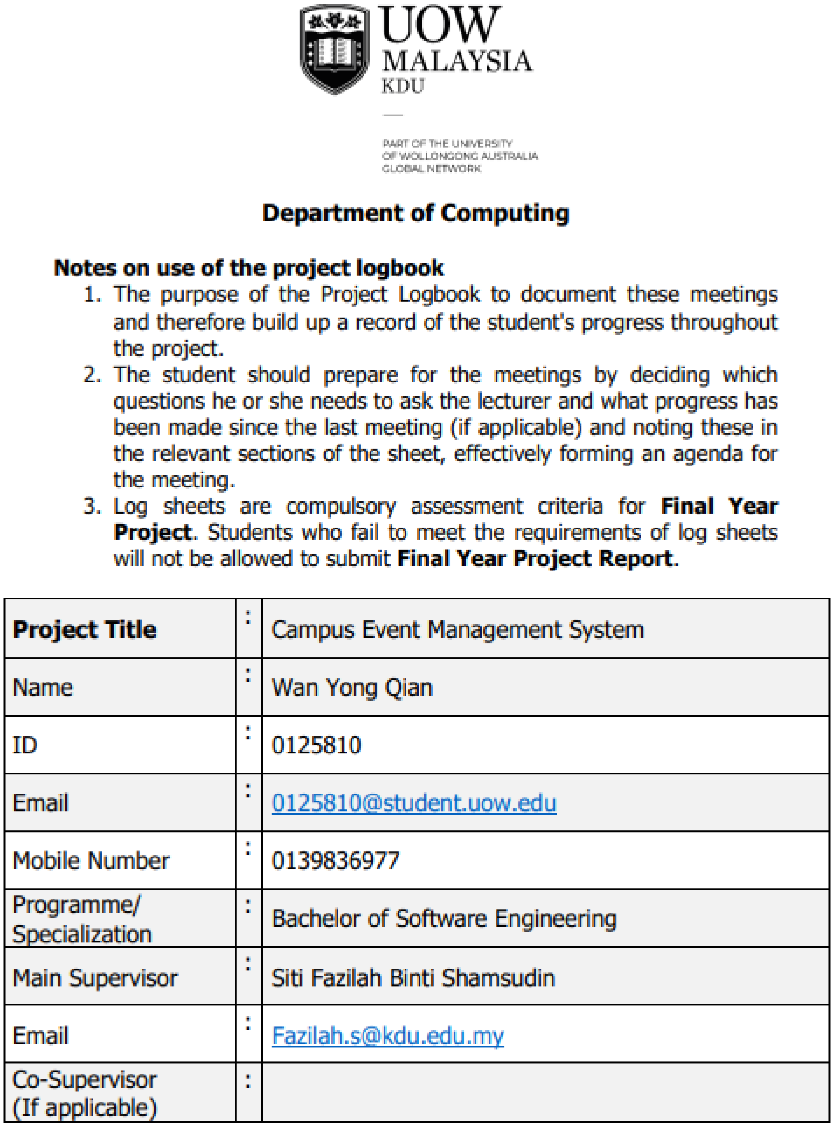
4.2.2 Findings of Survey	4
4.3 Use Case Diagram	3
4.4 Use Cases	4
4.5 Hardware and Software Specification	1
4.6 Functional Requirements	1
4.7 Non-Functional Requirements	1
5.0 Design	
5.1 Introduction	1
5.2 Technical Drawings	
5.2.1 Entity Relationship Diagram	1
5.2.2 Activity Diagram	3
5.3 System Architecture	2
5.4 Design Principles	3
5.5 UI Flow of Control	3

Appendix B: Gantt Chart



Appendix C: Survey

Appendix D: LogBook



UOW
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OF WOLLONGONG AUSTRALIA
GLOBAL NETWORK

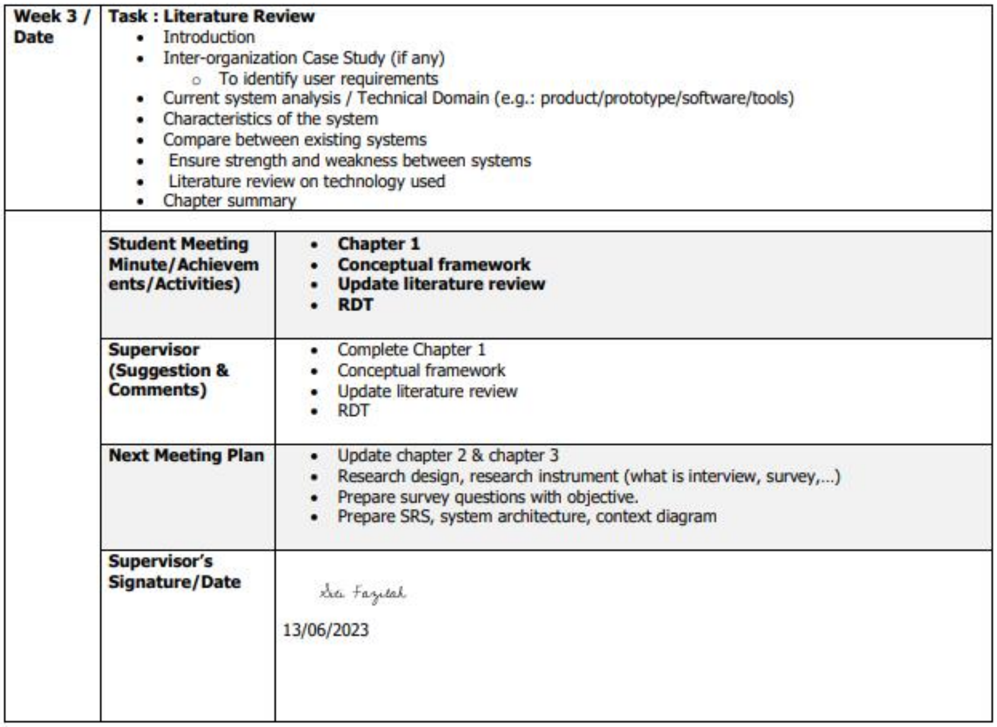
Department of Computing

Notes on use of the project logbook

1. The purpose of the Project Logbook to document these meetings and therefore build up a record of the student's progress throughout the project.
2. The student should prepare for the meetings by deciding which questions he or she needs to ask the lecturer and what progress has been made since the last meeting (if applicable) and noting these in the relevant sections of the sheet, effectively forming an agenda for the meeting.
3. Log sheets are compulsory assessment criteria for **Final Year Project**. Students who fail to meet the requirements of log sheets will not be allowed to submit **Final Year Project Report**.

Project Title	:	Campus Event Management System
Name	:	Wan Yong Qian
ID	:	0125810
Email	:	0125810@student.uow.edu
Mobile Number	:	0139836977
Programme/ Specialization	:	Bachelor of Software Engineering
Main Supervisor	:	Siti Fazilah Binti Shamsudin
Email	:	Fazilah.s@kdu.edu.my
Co-Supervisor (If applicable)	:	

Week 1 / Date	**Task : Introduction** - Problem Background - Project Aim - Objectives - Scope - Importance of the project	
	Student Meeting Minute/Achievements/Activities)	- **Project scope, list of problems, problem statement, problem solution** - **Study existing system** - **Proposed system features**
	Supervisor (Suggestion & Comments)	- Project scope, list of problems, problem statement, problem solution - Study existing system - Proposed system features
	Next Meeting Plan	- Complete Chapter 1 - Conceptual framework - Update chapter1 progress
	Supervisor's Signature/Date	Siti Fazilah 02/06/2023

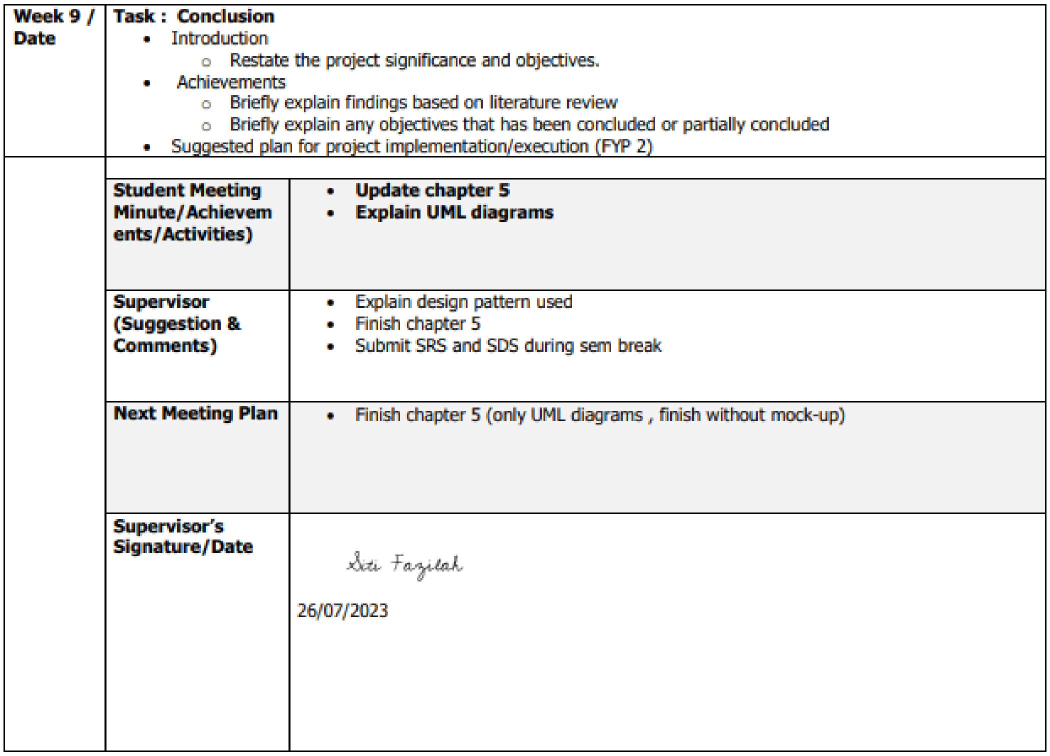


Week 3 / Date	**Task : Literature Review** • Introduction • Inter-organization Case Study (if any) o To identify user requirements • Current system analysis / Technical Domain (e.g.: product/prototype/software/tools) • Characteristics of the system • Compare between existing systems • Ensure strength and weakness between systems • Literature review on technology used • Chapter summary	
	Student Meeting Minute/Achievements/Activities)	• **Chapter 1** • **Conceptual framework** • **Update literature review** • **RDT**
	Supervisor (Suggestion & Comments)	• Complete Chapter 1 • Conceptual framework • Update literature review • RDT
	Next Meeting Plan	• Update chapter 2 & chapter 3 • Research design, research instrument (what is interview, survey,...) • Prepare survey questions with objective. • Prepare SRS, system architecture, context diagram
	Supervisor's Signature/Date	Siti Fazilah 13/06/2023

Week 4 / Date	**Task : System Development Methodology** • Introduction • Methodology choice and justification. • Phases within the chosen methodology (traditional or modern) ○ Describes activities and process in each phase ○ Design modelling (e.g. using UML) ○ Design tools (e.g. Star UML) ○ Gantt Chart for FYP 1 and FYP 2 • Describe briefly the technology or tools used to develop the system. • System requirement analysis: hardware and software • List and justify • Chapter summary	
	Student Meeting Minute/Achievements/Activities)	• **Finish update chapter 2 & 3** • **Survey question with objective** • **Finish SRS, system architecture, context diagram**
	Supervisor (Suggestion & Comments)	• Update chapter 2 & chapter 3 • Research design, research instrument (what is interview, survey,...) • Prepare survey questions with objective. • Prepare SRS, system architecture, context diagram
	Next Meeting Plan	• Update chapter 3 & 4 • Prepare functional requirements and non-functional requirements • System requirement analysis
	Supervisor's Signature/Date	Siti Fazilah 20/06/2023

Week 5 / Date	**Task : Requirement Analysis and Design** • Introduction • Requirement analysis ○ OOP (use case, sequence, and activity diagrams) or ○ Traditional (Software Development Life Cycle) • Design ○ OOP class diagram, overall system architecture or Traditional (DFD) • Database design (if any) ○ ERD (for traditional methodology) ○ Normalized tables (to include primary key, foreign key, etc.) • Interface design ○ Menu and screen design ○ System navigation and content design ○ For web page project to include page navigation • Chapter summary	
	Student Meeting Minute/Achievements/Activities)	• Complete chapter 3 & 4 • Prepare functional requirements and non-functional requirements • System requirement analysis
	Supervisor (Suggestion & Comments)	• Complete functional requirements and non-functional requirements • Complete system requirement analysis • Complete survey
	Next Meeting Plan	• Explain design pattern used • Update chapter 5
	Supervisor's Signature/Date	Siti Fazilah 27/06/2023

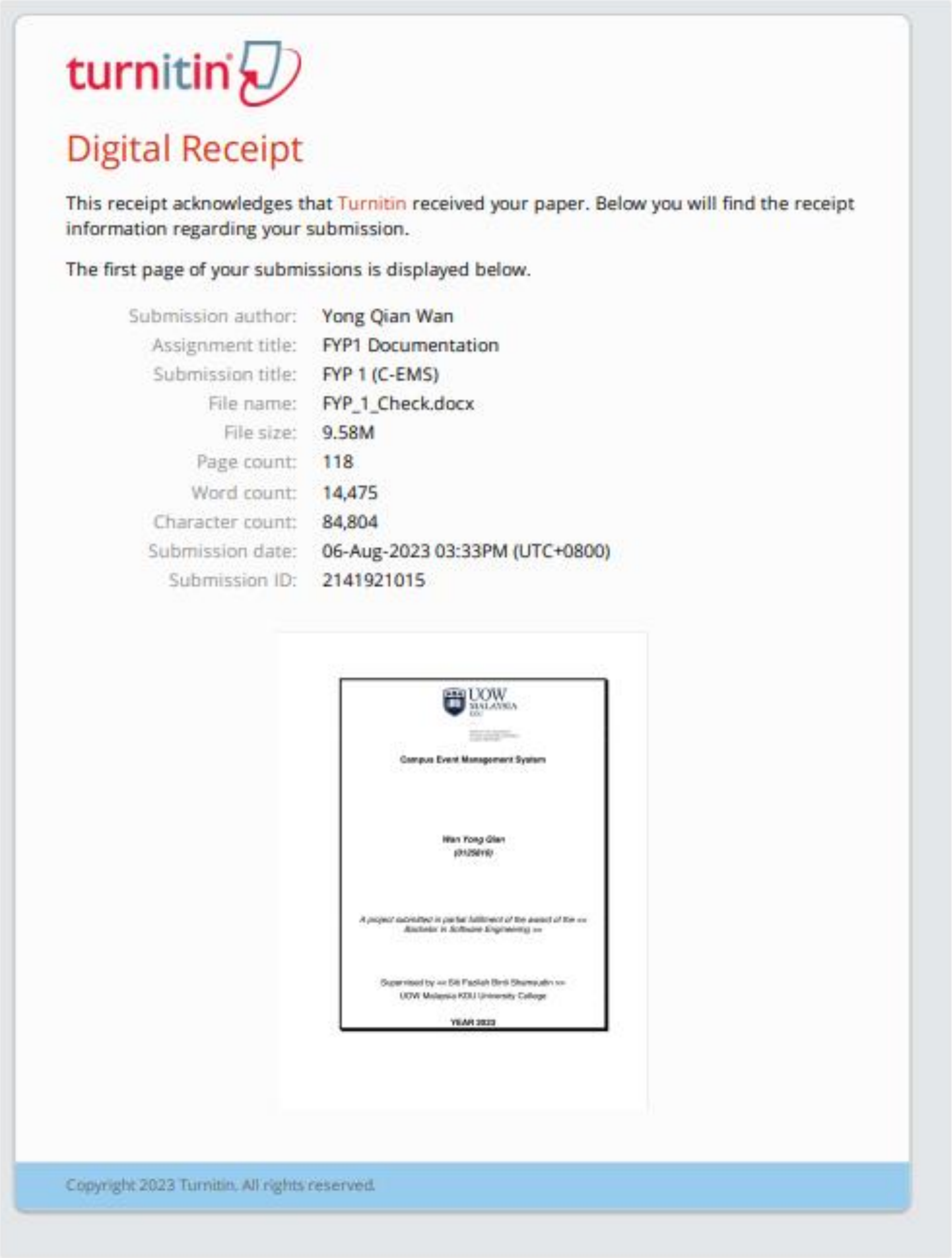
Week 7 / Date	**Task : Results, Testing and Discussion** • Introduction • Coding of system's main functions • Essential interfaces that show system's results and achievements • Testing ○ Black box testing ▪ System flow, input/output, error messages ○ White box testing ○ User testing • Chapter summary	
	Student Meeting Minute/Achievements/Activities)	• **Survey analysis**
	Supervisor (Suggestion & Comments)	• Start to work on chapter 5
	Next Meeting Plan	• Update chapter 5 • Explain UML diagrams
	Supervisor's Signature/Date	Siti Fazilah 11/07/2023



Week 9 / Date	**Task : Conclusion** • Introduction ○ Restate the project significance and objectives. • Achievements ○ Briefly explain findings based on literature review ○ Briefly explain any objectives that has been concluded or partially concluded • Suggested plan for project implementation/execution (FYP 2)	
	Student Meeting Minute/Achievements/Activities)	• **Update chapter 5** • **Explain UML diagrams**
	Supervisor (Suggestion & Comments)	• Explain design pattern used • Finish chapter 5 • Submit SRS and SDS during sem break
	Next Meeting Plan	• Finish chapter 5 (only UML diagrams , finish without mock-up)
	Supervisor's Signature/Date	Siti Fazilah 26/07/2023

Appendix E: Turnitin Digital Receipt

This appendix shares the Turnitin Digital Receipt which shows that I have submitted the report to Turnitin and the similarity index from Turnitin which is %.



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File size:	9.58M
Page count:	118
Word count:	14,475
Character count:	84,804
Submission date:	06-Aug-2023 03:33PM (UTC+0800)
Submission ID:	2141921015

UOW MALAYSIA KDU

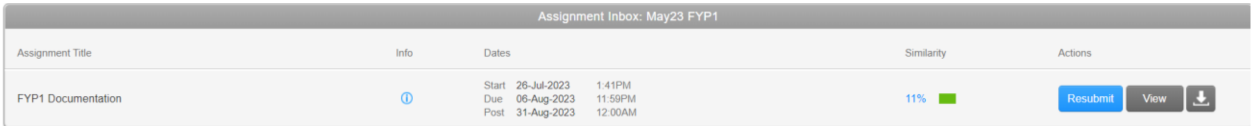
Campus Event Management System

Wan Yong Qian
([illegible])

A project submitted in partial fulfilment of the award of the << Bachelor in Software Engineering >>

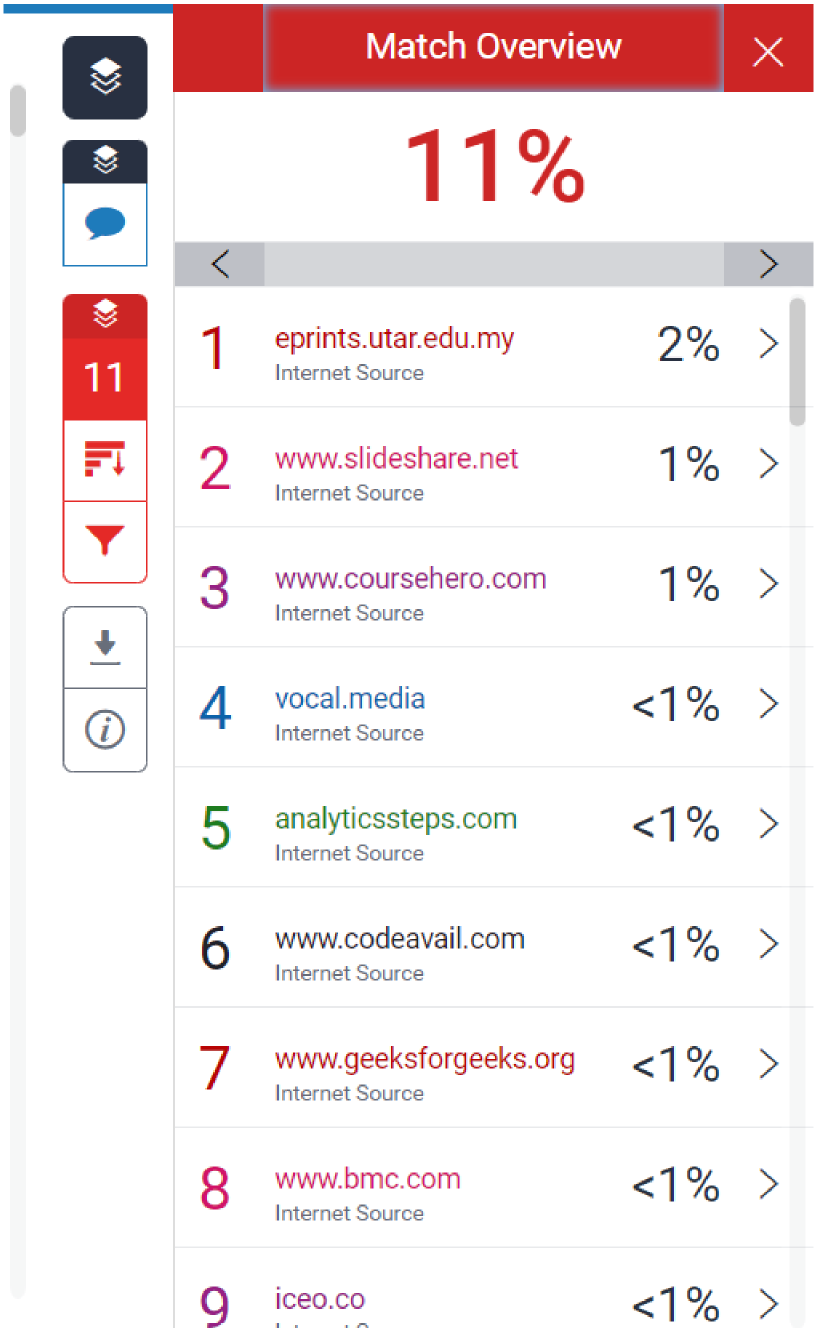
Supervised by << Siti Fadilah Binti Shamsudin >>
UOW Malaysia KDU University College

YEAR 2023



Assignment Inbox: May23 FYP1

Assignment Title	Info	Dates	Similarity	Actions
FYP1 Documentation	ⓘ	Start 26-Jul-2023 1:41PM Due 06-Aug-2023 11:59PM Post 31-Aug-2023 12:00AM	11% 🟩	Resubmit View ⬇



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