



اَبُو سَيِّدِي تَكُونُ لَو كُنْ اَنَا
UNIVERSITI
TEKNOLOGI
MARA



PROCEEDINGS OF JOHOR INTERNATIONAL INNOVATION INVENTION COMPETITION AND SYMPOSIUM 2024 (JIIICaS 2024)



*"Flourish and Nurturing Sustainable
Innovation for a Prosperous Nation"*

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Preface

In the name of Allah, the Almighty who gives us the enlightenment, the truth, the knowledge and with regards to Prophet Muhammad (peace be upon him) for guiding us to the straight path. We thank to Allah for giving us guidance and strength to write this e-book.

This e-book compiles the extended abstracts that submitted to Johor International Innovation Invention Competition and Symposium 2024 (JIIICaS2024), where JIIICaS2024 is a virtual platform for all creative minds to share and present their invention and innovation. Each abstract gives a brief background on the innovation or project.

We hope that this e-book will help the readers to get to know the innovation done by the students and get some ideas to develop future innovation products.

Foreword Rector



Assalamualaikum warahmatullahi Wabarakatuh,
Salam Sejahtera, Salam Malaysia MADANI and
Salam UiTM Dihatiku.

In the name of Allah, the Most Gracious, the Most
Merciful.

It is a great honor to welcome you to the Johor
International Innovation, Invention, Competition, and
Symposium 2024 (JIIICaS 2024). This event

connects various disciplines, focusing on education and engaging educators,
students, researchers, and innovators from all walks of life.

Innovation is not just about ideas; it demands perseverance, creativity, and
determination to turn those ideas into reality. The remarkable projects
showcased today highlight the dedication and spirit of all participants.
Initiatives like this not only explore new technologies but also cultivate skills
and leadership among our youth. At Universiti Teknologi MARA (UiTM) Johor
Branch, we are fully committed to fostering a dynamic culture of innovation,
promoting the commercialization of new products, and encouraging
meaningful collaborations with industry and society.

As we celebrate this event, I would like to extend my heartfelt gratitude to all
sponsors, judges, the College of Computing, Informatics and Mathematics,
UiTM Pasir Gudang Campus as the event organizer, as well as to the
researchers and participants for their hard work in making this event a
success. Let us continue striving for innovation and excellence. May the
ideas presented today inspire us and lay the groundwork for future
achievements.

Thank you.

Associate Professor Dr. Saunah Zainon
Rector
Universiti Teknologi MARA (UiTM)
Johor Branch

(A-PP014) BIZZCOM EVENT MANAGEMENT SYSTEM

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ABSTRACT

An Event Management System (EMS) assists organizers in planning, executing, and reporting on events. BIZZCOM, a faculty club at UiTM Terengganu's Kuala Terengganu Campus, currently faces challenges in event management, including disorganized record-keeping, difficulty accessing past event data, and redundant tasks. This paper introduces the BIZZCOM Event Management System (BEMS), a web-based platform designed to improve event administration within the club. BEMS is tailored for use by club advisors, committees, and members, offering streamlined management processes and integrated document storage to address organizational issues. Developed using User-Centered Design (UCD) principles, BEMS emphasizes usability and employs heuristic evaluation to assess its user interface. Testing yielded highly positive feedback, with average ratings of 4.70 for Interface, 4.76 for Effectiveness, 4.79 for Efficiency, 4.85 for Satisfaction, and 4.85 for User-Centered Design.

Keywords: Event Management, Event Management System, Web-based, Events

1.0 INTRODUCTION

University clubs are essential for student growth, skill development, and social engagement. They organize events that engage members, raise awareness, and foster community, providing platforms for students to showcase their talents.

Event management involves planning and executing various events, such as festivals and social gatherings, following a series of progressive stages regardless of complexity (Getz, 2004). Technology significantly enhances this process by improving time management, cost-effectiveness, and work quality (Klerk, 2013). Event management systems are software tools that assist in planning, executing, and reporting on events, connecting different components to help managers understand interdependencies and external impacts (Getz, 2004).

User-Centered Design (UCD), introduced by Donald Norman in the 1980s, is a theory in human-computer interaction (HCI) focused on designing systems that are intuitive

and user-friendly. Norman's (1988) principles guide system design to help users understand functionality and interface status. Nielsen's heuristic evaluation is one method developed to support UCD principles (Abrams et al., 2004).

BIZZCOM, a faculty club at UiTM Terengganu, manages events manually, leading to issues with disorganized record-keeping and repetitive processes. Event reports are scattered between physical files and Google Drive, making it difficult to locate past records. The club also faces inefficiency in event registration and attendance tracking, requiring new Google Forms for each event and forcing members to repeatedly enter the same personal details.

2.0 OBJECTIVE

Currently, the BIZZCOM club faces a few challenges in handling event-related paperwork, record-keeping, and registration process. Therefore, the primary objectives of this project are:

- i. To identify and gain comprehensive understand of the existing event management process in BIZZCOM club
- ii. To design and develop an event management system for BIZZCOM that allows club committee to create, update and store data related to its club events
- iii. To test and evaluate the usability of the system to accurately display details of the events held by BIZZCOM

3.0 METHODOLOGY

The project development methodology for BIZZCOM Event Management System adapts the Waterfall Model, as depicted in the figure 1 below.

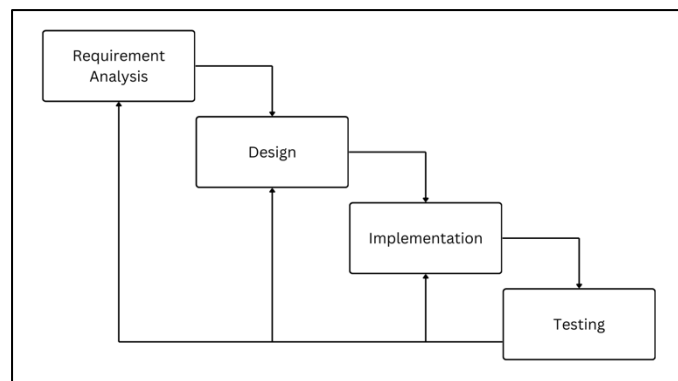


Figure 1: Waterfall Model

A. Requirement Analysis

The requirements of the event management system are thoroughly examined to ensure its successful implementation. This project prioritizes the stakeholder's needs, aiming to simplify their operations within event management. The main users for this system are club advisors, club committees and club members. There are two types of system requirements gatherings which are functional requirements and non-functional requirements.

B. Design

In this phase, the main focus is on visualizing the system's architecture and functionalities. To achieve this, quick design techniques are employed to effectively help in transforming the system processed and specifications into a complete system. The major entities involved are club advisor, committees and members. Figure 2 below illustrates the context diagram for the BEMS, providing an overview of the systems flow and interactions.

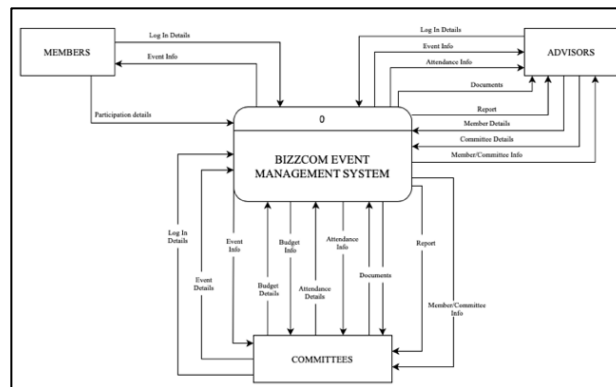


Figure 2: Context Diagram

C. Implementation

This phase involves carrying out the coding and development of the system. The system is crafted using several programming languages such as HTML, CSS, JavaScript and PHP. The database management tool that was used is PHPMyAdmin. MAMP was also utilized to set up a local server environment on a local machine which allows the web server and database server to run locally. Example of the screenshots of the event management system shown as below in Figure 3, 4, 5 and 6.



Figure 3: Log In Page

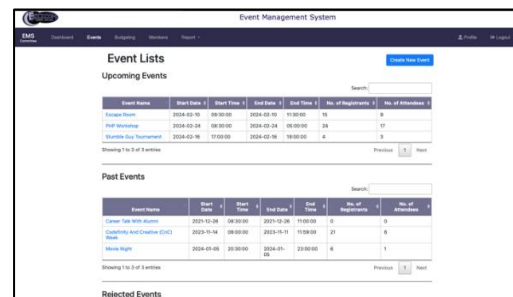


Figure 4: Event List Page

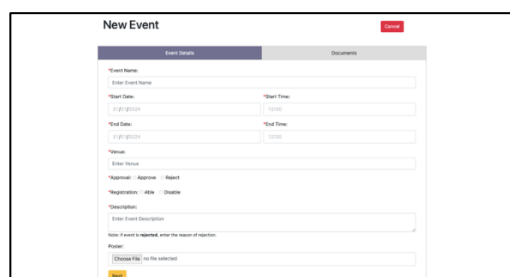


Figure 5: Create New Event Page (Event Details Section)

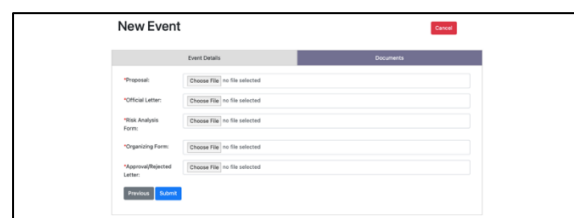


Figure 6: Create New Event Page (Document Section)

The theory of User-Centred Design (UCD) was applied to create a system that is easy to use and it's also an approach that raises the likelihood of user satisfaction and adoption. Some of the featured implemented in the system based on the UCD principles are visibility of system status, match between system and the real world, user control and freedom, error prevention, help users recognize, diagnose and recover from errors, recognition rather than recall, and lastly, aesthetic and minimalist design.

D. Testing

As the system aims to provide a user-friendly platform for the BIZZCOM stakeholders, two type of testing was done to provide insights into the overall stability of the system. The two testing techniques includes expert evaluation and user evaluation. With that being said, it helps to identify the contrasts between its actual behaviour and the desired behaviour as specified by the requirements.

4.0 RESULTS

The project's key components include the creation of user-friendly and simplifies the event management tasks within BIZZCOM stakeholders. Table 1 below provides an overview of the improvement in BIZZCOM's event management process flow.

Table 1: Business Process Flow Improvement

Process	Before the System	After the System
Registration & Attendance Management Process	Google Forms are used to separately create registration and attendance form, involving repetitive data entry.	Club members can register with a click, as the system stores their details. Club committees can view registrants and efficiently manage registrants' attendance with a click as well.
Documentation Management Process	Documents are stored physically or in Google Drive which lacks structure and consistency.	Club committees is required to upload relevant documents during event creation, ensuring strategic storage.

The system had undergone an expert evaluation with input from two professionals with IT and Computing background, as well as user evaluation with total of 33 respondents. The result are as shown in the table 2 below.

Table 2: Testing Result

Category	Expert Evaluation		User Evaluation	
	Mean	Standard Deviation	Mean	Standard Deviation
A: Interface	4.50	0.547	4.70	0.47
B: Effectiveness	4.50	0.55	4.76	0.50
C: Efficiency	4.333	0.516	4.79	0.42
D: Satisfaction	4	1.095	4.85	0.36
E: User-Centered Design	4.429	0.514	4.85	0.36

The system's interface, effectiveness, efficiency, satisfaction and application of UCD in the system were among the many topics assessed in both expert and user evaluations. As a result, feedbacks gathered are fairly positive, driven by high ratings and low standard deviation.

5.0 CONCLUSION

BIZZCOM Event Management System (BEMS) is a web-based platform designed to simplify and automate various aspects of event management within the BIZZCOM club. It transitions the manual, paper-based and third-party dependent event management to an automated and efficient system. BEMS offers significant advantages, one of it being automating event creation, participant registration, and attendance management, which simplifies the process for the club committees and members by eliminating the need for repetitive tasks. It also makes accessing past events, attendance records and storing documents easy through its centralized record-keeping. All in all, the project manages to achieve its objectives and resulted with an overwhelming positive attitude.

References

- Abras, C., Maloney-Krichmar, D., & Preece, J. (2004). *User-Centered Design*. Sage Publications.
- Getz, D. (2004). *Event Management and Event Tourism*. *Cognizant* 1997, 1-61
- Klerk, A. De. (2013). *The Impact of Event Management Software On The Standards of Practice Within The Event Management Sector In Cape Town*.
- Norman, D. A. (1998). *The Design of Everyday Things*. Physics.