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DESIGN AND DEVELOPMENT OF A WEB-BASED VIRTUAL EVENT MANAGEMENT PLATFORM FOR ENTREPRENEURS

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ABSTRACT

Entrepreneurs—individuals who establish and grow business ventures—and *virtual events*—digitally hosted gatherings conducted via online platforms—have become increasingly vital for networking, promotion, and engagement in the modern digital economy. Entrepreneurs face significant challenges in organising and participating in virtual events, including limited visibility, high costs, and the complexity of managing event logistics. The Virtual Event Management Platform for Entrepreneurs (VEMP) project addresses these issues by developing a comprehensive web-based application tailored to entrepreneurial needs. Employing a structured research and development approach, VEMP progresses through problem identification, design, development, and evaluation phases to streamline event management processes across event types such as conferences, webinars, and networking sessions. Key features of the platform include user-friendly interfaces, real-time communication tools, intuitive navigation, and robust data management capabilities. Methodologically, the platform’s usability was evaluated with 31 participants from diverse entrepreneurial backgrounds, focusing on interface design, usefulness, and user satisfaction. The findings reveal a high level of user acceptance, demonstrating that VEMP provides a cost-effective and efficient solution that enhances visibility, reduces logistical complexity, and expands business opportunities for entrepreneurs. Future work will focus on iterative feature enhancements and responsiveness to evolving user needs.

Keywords: Entrepreneurial Platform, Event Planning, Real-time communication tools, Virtual Event Management.

INTRODUCTION

Digital transformation has significantly altered the business landscape, encouraging entrepreneurs to adopt innovative channels to reach customers, expand networks, and scale operations. Within this context, virtual events—online gatherings delivered through web-based platforms—have emerged as attractive tools for entrepreneurs due to their cost-efficiency, accessibility, and flexibility (Gupta et al., 2022; Mair & Brown, 2023). These events facilitate activities such as product launches, knowledge sharing, and business networking while eliminating geographical and financial barriers (Bacq et al., 2020). Consequently, virtual events are increasingly viewed as vehicles for accelerating entrepreneurial growth in the digital economy (Linthicum, 2021).

However, despite the rapid adoption of virtual platforms, entrepreneurs continue to face substantial barriers to effective event management. Key challenges include fragmented logistics, limited visibility, constrained budgets, and the need to coordinate multiple stakeholders through a single interface (Perdana & Mokhtar, 2022). Existing solutions primarily emphasise immersive experiences or consumer engagement, offering features such as avatar-based interactions and customised 3D environments (Rauschnabel et al., 2018; Carvalho et al., 2021). However, these systems often overlook practical management functions vital to entrepreneurs—such as scheduling, budgeting, feedback collection, and attendee administration—and typically involve subscription costs that are burdensome for small enterprises and start-ups (Ton & Le, 2021; Petrosyan, 2023).

This disconnect between experiential design and operational functionality signals a clear technological and research gap. Accordingly, this study aims to develop and evaluate a Virtual Event Management Platform for Entrepreneurs (VEMP) that integrates essential event management tools into a cost-effective, user-friendly web-based system specifically tailored to entrepreneurial needs.

Events remain a cornerstone of business activities and are commonly classified into business-to-consumer (B2C), business-to-business (B2B), and business-to-employee (B2E) categories (Felicitta & Jayanthi, 2009). Regardless of category, effective event management—defined as coordinating objectives, logistics, promotion, and execution—is critical to ensuring successful outcomes (Allen et al., 2000). Recent studies emphasise that virtual events must create engaging and interactive experiences while minimising technical challenges (Gupta et al., 2022; Ton & Le, 2021; Bacq et al., 2020).

Web-based platforms provide scalable, accessible environments for hosting, managing, and analysing virtual events (W3 Lab, 2021). With over 5.3 billion internet users globally in 2022 (Petrosyan, 2023), entrepreneurs increasingly rely on such platforms for communication and brand engagement (Gupta et al., 2022). These systems offer advantages such as cost-efficiency, flexibility, and real-time data access. Leveraging a virtual event management platform, therefore, allows entrepreneurs to optimise time, reduce costs, and strengthen market presence, offering significant potential to enhance success within the entrepreneurial ecosystem (Ton & Le, 2021).

This project aims to develop a user-friendly virtual event management platform tailored for entrepreneurs. Recognising their diverse needs and constraints in organising events, we aim to create an intuitive, accessible platform that simplifies tasks and streamlines operations. To achieve this, we focus on three key objectives: investigating the event management process to understand the requirements and challenges, developing a platform prototype with essential functionalities, and thoroughly evaluating the system before public release to ensure usability and effectiveness. By prioritising ease of use and accessibility, we aim to empower entrepreneurs to manage their events

efficiently, optimise resources, and enhance productivity. Through continuous feedback and user collaboration, we are committed to delivering a solution that meets the unique needs of entrepreneurs and contributes to the success of their event management endeavours.

BACKGROUND AND RELATED STUDIES

In recent years, the landscape of event management has dramatically evolved with the advent of digital technology. Entrepreneurs face unique challenges when organising events, including limited resources, tight budgets, and the need for efficient coordination (Linthicum, 2021). Traditional event management methods, often reliant on manual processes and physical logistics, are increasingly seen as outdated and inefficient in this fast-paced digital era (Perdana & Mokhtar, 2022). Virtual event management platforms have emerged as a transformative solution to these challenges. These platforms leverage digital tools to streamline the entire event management process, from planning and promotion to execution and post-event analysis. For entrepreneurs, such platforms offer a cost-effective and efficient means to organise webinars, product launches, networking events, and conferences without the geographical and logistical constraints of physical events.

The global shift towards remote work and online collaboration has further accelerated the rise of virtual events. Entrepreneurs can now reach a global audience, engage with participants in real-time, and gather valuable data to refine their strategies. By reducing the overhead costs associated with physical venues, travel, and accommodation, virtual event management platforms provide a scalable and sustainable solution for entrepreneurs looking to maximise their impact and return on investment (Mair & Brown, 2023). In this context, developing a specialised virtual event management platform tailored for entrepreneurs is not only timely but also essential. Such a platform can empower entrepreneurs to manage their events efficiently, enhance participant engagement, and drive business growth through innovative digital solutions.

Several studies have explored virtual event management systems and their applications in supporting entrepreneurial activities. Blancaflor et al. (2022) developed a web-based customer relationship management system designed for event services in a B2C e-commerce environment, offering features such as profile management, booking services, and dashboard monitoring. Despite its functional strengths, the system was limited by a restricted service area, a basic user interface, and a lack of interactive capabilities.

Jauhiainen (2021) examined user preferences when participating in virtual events using a 3D immersive platform during the COVID-19 pandemic. The platform enabled interactive sessions and enhanced engagement through virtual avatars and customizable environments. However, the system was designed primarily for immersive experiences, which may not align with the specific needs of entrepreneurs seeking streamlined event management features.

Carvalho et al. (2021) investigated the use of mixed technologies, including videoconferencing and virtual world tools, to simulate physical entrepreneurial events such as startup fairs and hackathons. Their findings emphasised the feasibility of online platforms in maintaining entrepreneurial networking and business development activities. While virtual platforms can improve accessibility and collaboration, challenges remain in the suitability of user interfaces, the cost of scalable features, and the lack of dedicated tools for managing event logistics.

Collectively, past research highlights both the potential and limitations of digital platforms in enabling virtual events. The absence of tailored features to support entrepreneurial event management — such as user-friendly customisation, cost-efficient hosting, and real-time interaction — signals a practical gap that this study aims to address through an optimised virtual event management platform.

The objectives of Mozilla Hubs include providing a user-friendly, web-based VR experience accessible through a standard web browser. The platform's significance lies in democratising virtual reality and making it accessible to a wide audience. Mozilla Hubs has won praise for its user-friendly interface and accessibility, making it a reference point for user experience design and accessibility in the virtual event space. In terms of methodology, it relies on network technology and WebVR for system development. Key features include room creation, avatar customisation, and real-time interaction in 3D environments. Nevertheless, Mozilla Hubs has limitations concerning its suitability for entrepreneurs. Its user interface may not align with the specific needs of entrepreneurs engaged in event management. Additionally, unlocking advanced features in Mozilla Hubs may come at a cost that exceeds an entrepreneur's budget. Most critically, Mozilla Hubs lacks dedicated event-management features and focuses primarily on customisation.

The review of existing projects provides valuable insights into virtual event management and the unique challenges and opportunities entrepreneurs face when hosting virtual events. By understanding the strengths, limitations, and features of these platforms, we can design a virtual event management platform tailored to entrepreneurs' specific needs. The proposed project, “Virtual Event Management Platform for Entrepreneurs,” aims to overcome the limitations observed in existing platforms and provide a user-friendly, cost-effective, and efficient platform that enables entrepreneurs to host and manage successful virtual events.

Existing virtual event systems tend to prioritise immersive experiences or consumer engagement over providing holistic management tools tailored to entrepreneurs' operational needs. Platforms such as VirBELA and Mozilla Hubs offer customisable, interactive environments but lack comprehensive features, including scheduling, budgeting, and client coordination—capabilities that are essential for entrepreneurial event management. Moreover, access to advanced functions in these platforms often incurs high costs, creating barriers for small businesses and start-ups. These limitations underscore the need for an integrated, cost-effective virtual event management platform designed expressly for entrepreneurs, thus forming the foundation of the problem this research seeks to address.

METHODOLOGY OF STUDY

This study adopted a research and development (R&D) approach to design, develop, and evaluate a Virtual Event Management Platform for Entrepreneurs (VEMP). The methodology was guided by five core stages of a systematic research process: (1) problem identification, (2) formulation of research objectives, (3) research design, (4) solution development and implementation, and (5) evaluation.

Problem Identification

Preliminary literature review and stakeholder observations revealed that existing virtual event systems emphasise immersive experiences and consumer interaction, yet lack integrated management tools required by entrepreneurs (e.g., budgeting, scheduling, and client coordination). This situation restricts usability, especially among small businesses with limited resources.

Research Design

A qualitative–quantitative mixed design was used. Requirements gathering relied on secondary data review and informal interviews with ten entrepreneurs actively involved in event organisation. The development of the platform followed a design science approach, with iterative improvement guided by user-centred principles. The evaluation employed quantitative usability testing through structured questionnaires and descriptive statistical analysis.

Development and Implementation

Based on the requirements analysis, the VEMP prototype was designed and implemented as a web-based system to enable entrepreneurs to create and manage virtual events. The development used the Scrum framework as an internal strategy across multiple sprints, covering requirements refinement, interface design, coding, system integration, and feature testing. Core functions included account registration, event creation, attendee management, customised virtual rooms, and hosting capabilities with real-time communication support.

Evaluation

The completed prototype was evaluated for usability, usefulness, and user satisfaction. 31 participants with entrepreneurial backgrounds were recruited through convenience and snowball sampling. A structured questionnaire comprising demographic items and 17 Likert-scale items was administered online. Descriptive statistics (mean and percentage) were used to assess perceived usability and system effectiveness.

In the final phases of the project, the focus will be on deployment, system improvement, and preparing for the project exhibition. The Virtual Event Management Platform for Entrepreneurs will be deployed on a live server to make it accessible to users for practical use and evaluation. Concurrently, based on feedback from field tests and usability tests, necessary system improvements will be identified and implemented to enhance functionality, usability, and overall user experience. Additionally, significant effort will be devoted to designing and preparing a project poster for the project exhibition. The poster will effectively communicate the platform's features, advantages, and unique selling points to a diverse audience, highlighting its potential impact and relevance to entrepreneurs in event management. This phase ensures that the project is not only technically sound but also well-presented, effectively showcasing its capabilities to potential users during the exhibition.

DESIGN DEVELOPMENT

The Virtual Event Management Platform for Entrepreneurs is structured as a web-based application, where all functionality is centralised. The system operates on a unified database shared across its components. Access to the platform is restricted to registered users, specifically entrepreneurs and their designated personnel managing events. External access is limited to registered users from other organisations, contingent upon approval by the system administrators. A stable internet connection is essential for seamless operation, given the application's web-based nature. Storage requirements are minimal as the system primarily relies on server-side resources. Users are expected to be proficient in web application interfaces and standard computer hardware interaction, including keyboard and mouse operations. Access to the system necessitates a web browser installed on the user's device for optimal functionality.

The Requirements of the Virtual Event Management Platform for Entrepreneurs (VEMP)

The requirements for the Virtual Event Management Platform for Entrepreneurs were established through thorough research and consultation with event management experts. Research involved analysing relevant articles and documents about virtual event management platforms and similar systems. Keywords such as "virtual event management platform", "event management software", and "online event planning tools" were used to identify pertinent literature through online databases and academic sources. Information gathered from these sources was meticulously reviewed to extract essential functionalities and features necessary for effective event management. Additionally, insights were gathered through discussions with students specialising in event management, who provided perspectives on challenges and desired functionalities in event planning and execution. This comprehensive approach ensured that the platform's requirements aligned with industry standards and user expectations in virtual event management.

The functional requirements for the VEMP consist of ten significant requirements, namely "signup account", "login account", "manage personal information", "create new event", "view feedback", "give feedback", "custom virtual event", "manage attendees", "register event", and "host virtual event", as rendered in Table 1. As for the non-functional requirements, the VEMP consists of two significant requirements: "reliability issues" and "usability issues," as shown in Table 2. M indicates the priority of the requirements for both applications: mandatory requirements (something the system must do), D – desirable requirements (something the system preferably should do), and O – optional requirements (something the system may do).

Table 1

Functional Requirements for VEMP

No.	Requirements ID	Requirements Description	Priority
1.	VEMP_01	Signup Account	
	VEMP_01_01	Users must enter personal information such as a username, password, contact number, email address, and organisation name.	M
	VEMP_01_02	The system displays an error message when users do not complete all required details for registration. Users will be prompted to fill in the required information.	M
	VEMP_01_03	The system will verify the entered information, display any invalid entries to notify the user, and prompt the user to re-enter valid information. Passwords must meet specified complexity requirements (e.g., minimum length and a combination of letters and numbers).	M
	VEMP_01_04	The system should enforce a unique username and email for each user account.	M
	VEMP_01_05	Upon successful registration, an automated confirmation email should be sent to the user's registered email address.	D

2. VEMP_02	Login Account	
VEMP_02_01	Users should be able to log in using their username and password.	M
VEMP_02_02	The system must authenticate users based on valid username and password combinations.	M
VEMP_02_03	Provide a "Forgot Password" feature that allows users to securely reset their passwords.	D
VEMP_02_04	The system should send the reset password link via email.	M
VEMP_02_05	The user can tap the link in the email to reset the password.	M
VEMP_02_06	The system will show the successful messages once the password has been changed.	D
3. VEMP_03	Manage Personal Information	
VEMP_03_01	Users should be able to update personal information such as contact details, organisation name, job title, and display name.	O
VEMP_03_02	Users can clear a specific text field by clicking the "x" icon.	D
VEMP_03_03	The system should display an error message if the user enters an incorrect format.	M
4. VEMP_04	Create New Event	
VEMP_04_01	Users shall enter event details such as event name, description, event type, objectives, goals, date, and time; budget for event expenses, such as speaker invitations; and registration type details, such as available quantity and the end date of event registration.	M
VEMP_04_02	Users can exit during event creation. Unfinished event creation is saved as a draft and displayed on the user dashboard by the system.	O
VEMP_04_03	The system should display an error message if the user enters an incorrect format.	M
VEMP_04_04	Users shall be able to edit the event information by clicking on the event.	O
VEMP_04_05	Users shall be able to delete an event.	O
5. VEMP_05	Register Event	
VEMP_05_01	Attendees should be able to register for events by providing the necessary details.	M
VEMP_05_02	Attendees could exit the registration process by clicking on the "x" icon.	O
VEMP_05_03	The system should display an error message if the attendee enters an incorrect format.	M
6. VEMP_06	Manage Attendees	
VEMP_06_01	Users can view all the attendees who registered for their event.	M

	VEMP_06_02	Users could download the attendees' list reports.	D
	VEMP_06_03	Users could add attendees.	O
	VEMP_06_04	The system should display an error message if the user enters an incorrect format.	M
7.	VEMP_07	Give Feedback	
	VEMP_07_01	Users could submit feedback regarding their overall user experience with the system.	M
	VEMP_07_02	Users could exit the feedback form by clicking the “close” button.	O
8.	VEMP_08	Manage Feedback	
	VEMP_08_01	The system administrator can view details of all user-submitted feedback.	M
	VEMP_08_02	The system administrator could download the attendee list reports.	O
	VEMP_08_03	A system administrator could view details of feedback.	O
9.	VEMP_09	Custom Virtual Event	
	VEMP_09_01	Users could upload a photo of the company logo, a background image, and an advertising video for the virtual event.	M
	VEMP_09_02	Users could update the company logo and background.	O
	VEMP_09_03	Users could quickly copy the generated link by clicking the “Copy” icon next to it.	D
10.	VEMP_10	Host Virtual Event	
	VEMP_10_01	All registered attendees can join the virtual event by clicking the link.	M
	VEMP_10_02	If the event host has not started yet, attendees will wait in the lobby.	M
	VEMP_10_03	All users can interact with one another through features such as event chat and emoji.	O
	VEMP_10_04	All users can leave the virtual event by clicking on the “exit” icon.	O
	VEMP_10_05	If an attendee’s information is not on the registered attendee list, they will not be allowed to enter the virtual event room.	M

Table 2

Non-Functional Requirements for VEMP

No.	Requirements ID	Requirements Description	Priority
1.	VEMP_11	Reliability Issues	
	VEMP_11_01	The system will generate the attendees’ registration report within 1 minute.	M

VEMP_11_02	The system will generate a feedback report within 1 minute.	M
VEMP_11_03	The system should update from one interface to another within 10 seconds.	M
2. VEMP_12	Usability Issues	
VEMP_12_01	Users should be able to update their personal details within 15 seconds	M
VEMP_12_02	Users should be able to update their changed password within 5 minutes.	M
VEMP_12_03	Users should be able to upload a photo of up to 1 MB.	D
VEMP_12_04	Users should be able to log in or log out of their account within 10 seconds.	M
VEMP_12_05	The system interface should be consistent and have a friendly user design.	M

The requirements specified in Figures 1, 2, 3, and 4 were represented and structured using appropriate modelling methods and tools. This project utilised its own Unified Modelling Language (UML) to visualise and model these requirements. Two behavioural diagrams, including use case and activity diagrams, that depict the application's structural aspects were used in this analysis. Draw.io served as the tool of choice for creating these diagrams. Figure 1 illustrates the system's use case diagram, detailing how interactions occur between the use cases and the application's actors. Use cases serve as the fundamental functional requirements for each application, elaborating on its dynamic behaviour. Consequently, the activity diagram in Figures 2, 3, and 4 depicts the interactions involved in using the system.

Figure 1

Use Case Diagram of VEMP

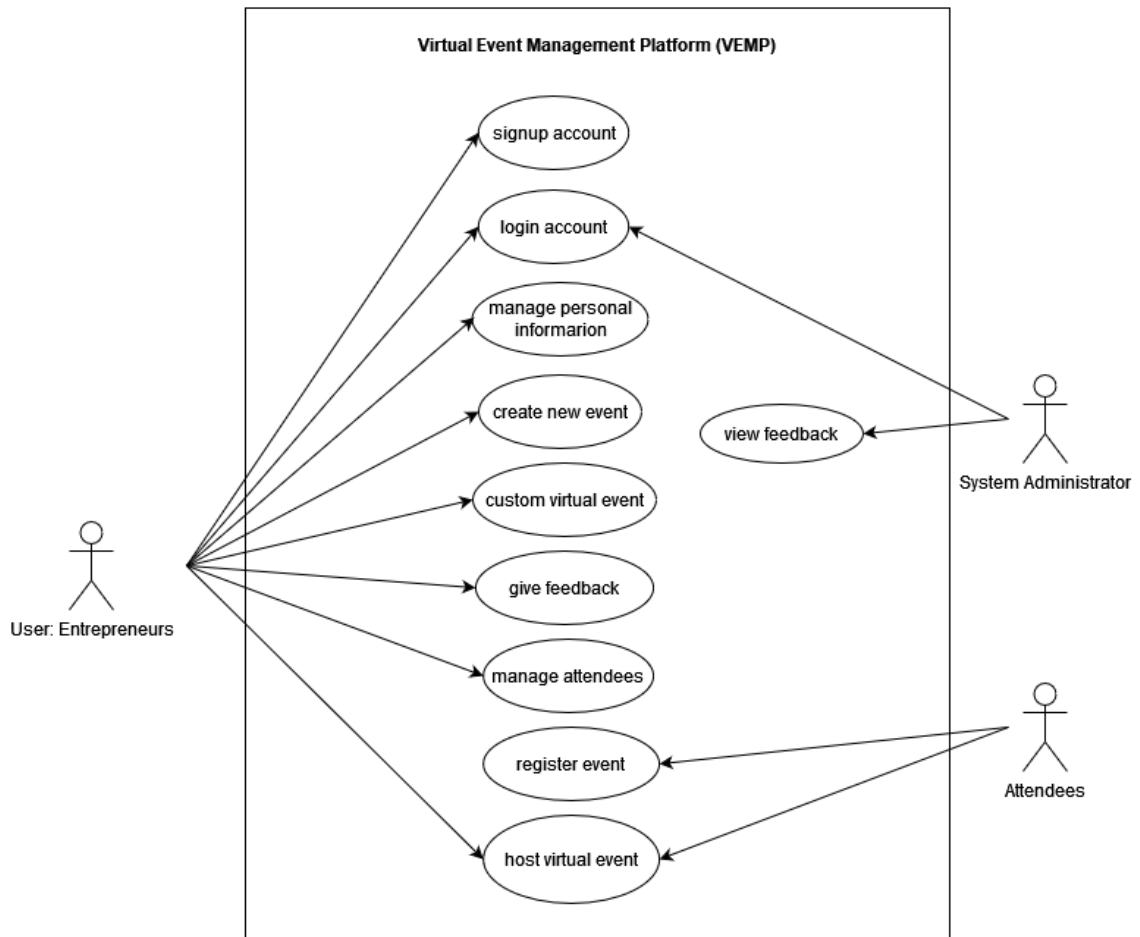


Figure 2

Activity Diagram of VEMP (system administrator interacting with the system)

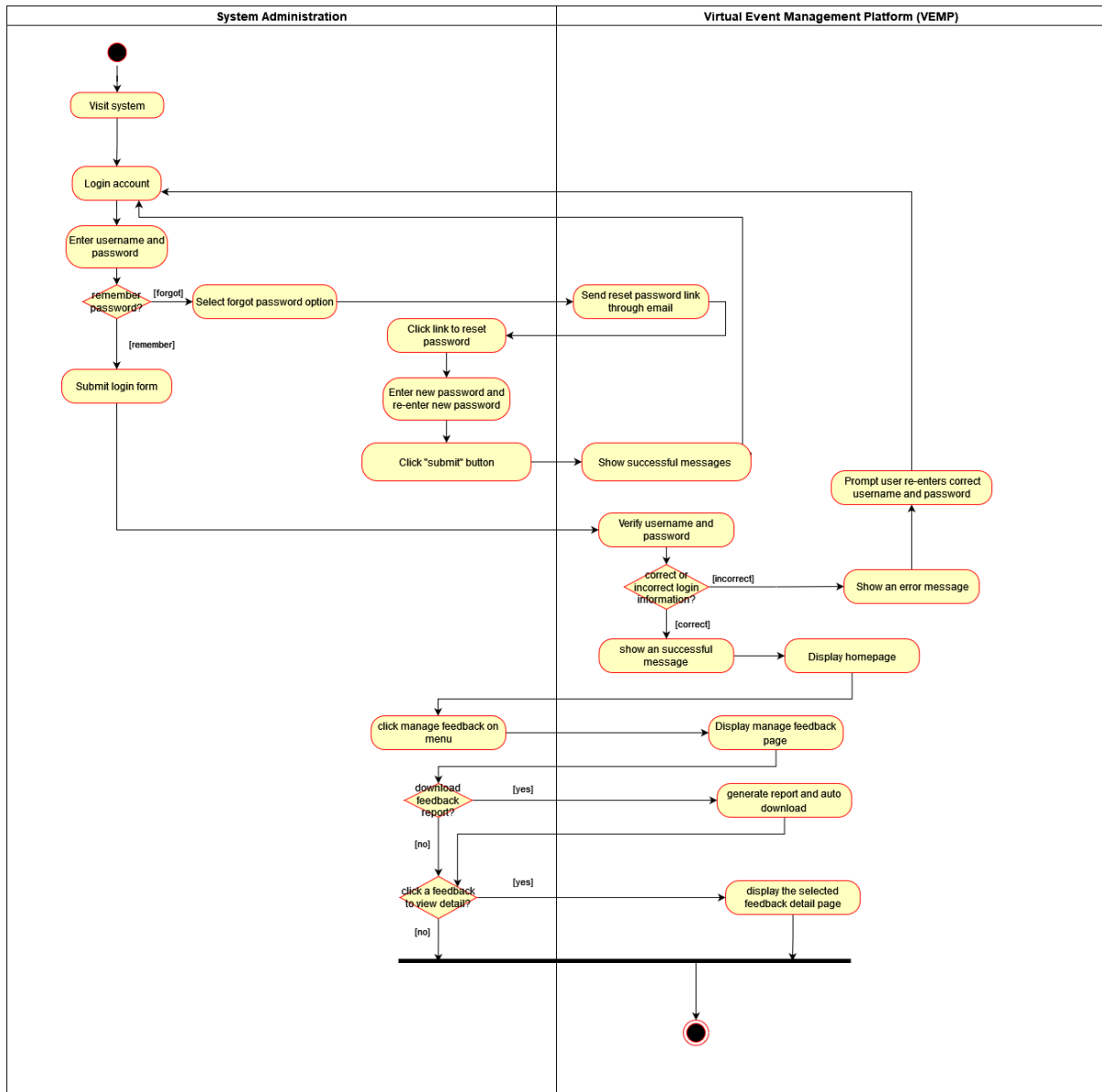


Figure 3

Activity Diagram of VEMP (entrepreneurs interacting with the system)

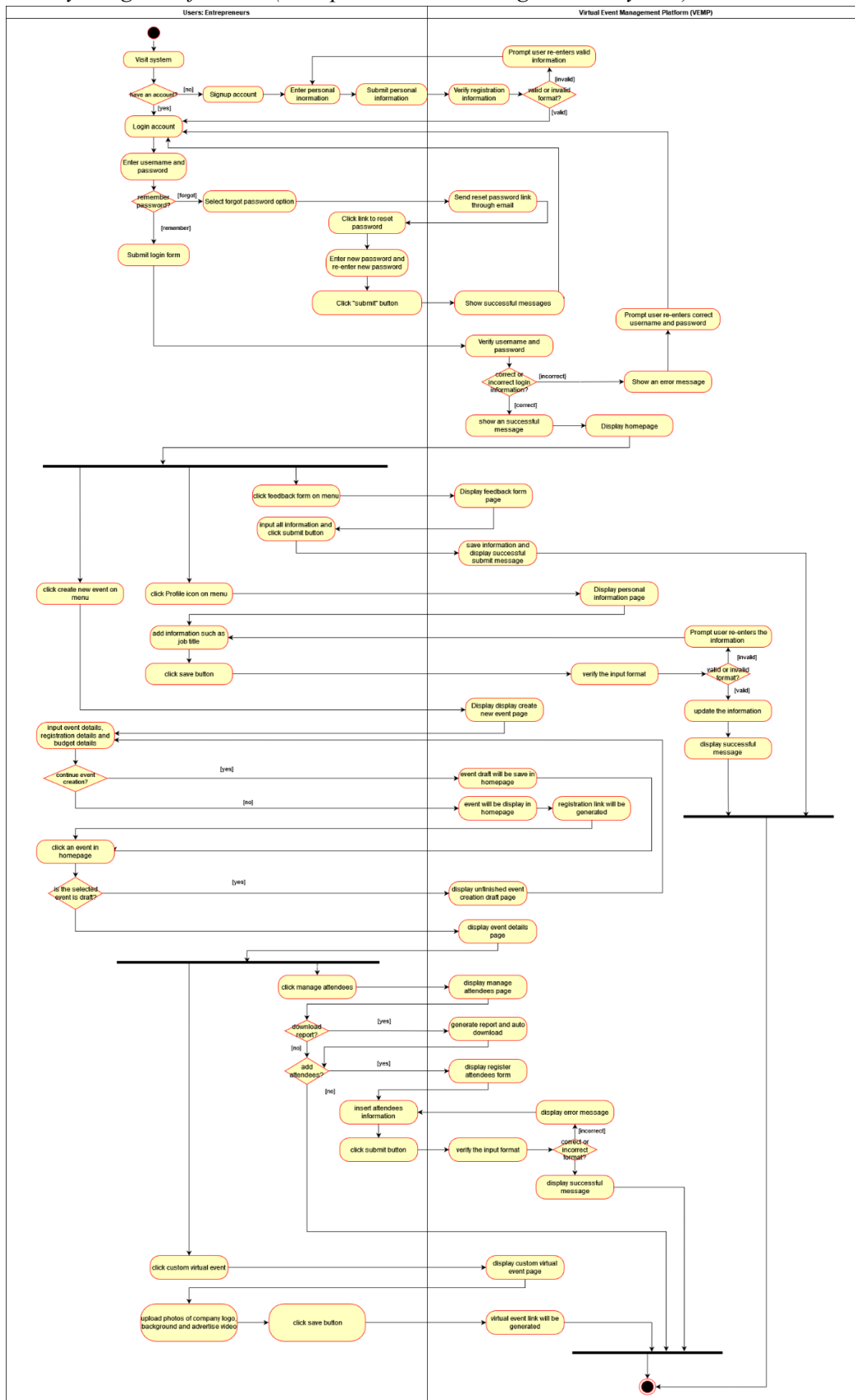
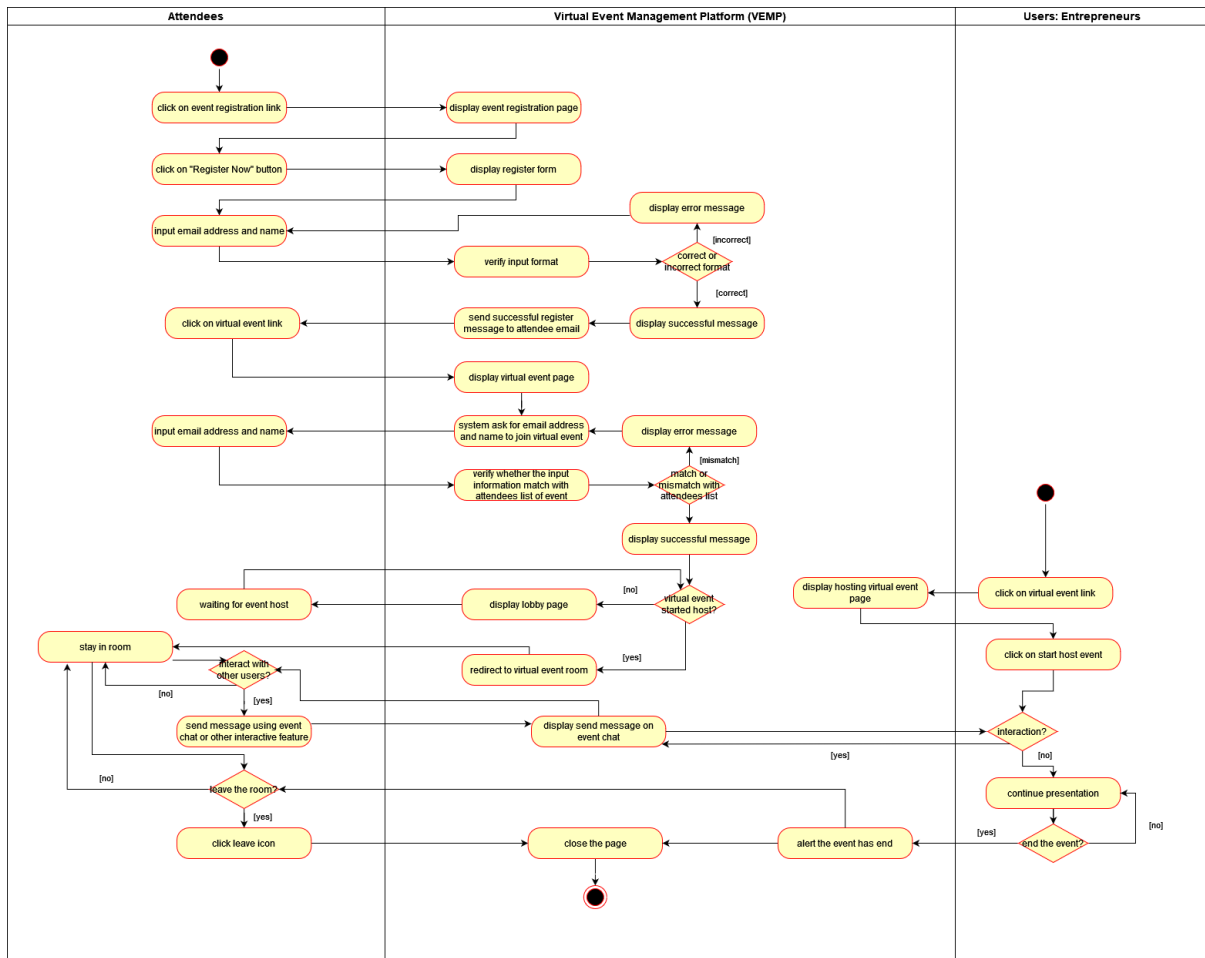


Figure 4

Activity Diagram of VEMP (interaction between the system, attendees, and entrepreneurs)



PROTOTYPE DEVELOPMENT OF VEMP

The Virtual Event Management Platform for Entrepreneurs (VEMP) prototype was crafted to optimise event management processes through a robust web-based application. Frontend development used HTML, CSS, and JavaScript to deliver a responsive, user-friendly interface. Meanwhile, Node.js and the Express.js framework powered the backend infrastructure, ensuring efficient data handling and API integrations. Key features include real-time communication capabilities facilitated by integrated technologies such as WebRTC and WebSocket. These technologies enable seamless interaction and collaboration among event participants, enhancing the platform's utility for entrepreneurs. Throughout development, Visual Studio Code was utilised as the primary IDE, leveraging its capabilities for streamlined coding and debugging. MongoDB served as the database, providing scalable, reliable data storage for event management. Screenshots illustrating the intuitive user interface and real-time communication features of VEMP are depicted in Figures 5 to 7, demonstrating its potential to simplify event coordination and enhance participant engagement.

Figure 5

Sign Up and Login Account Page

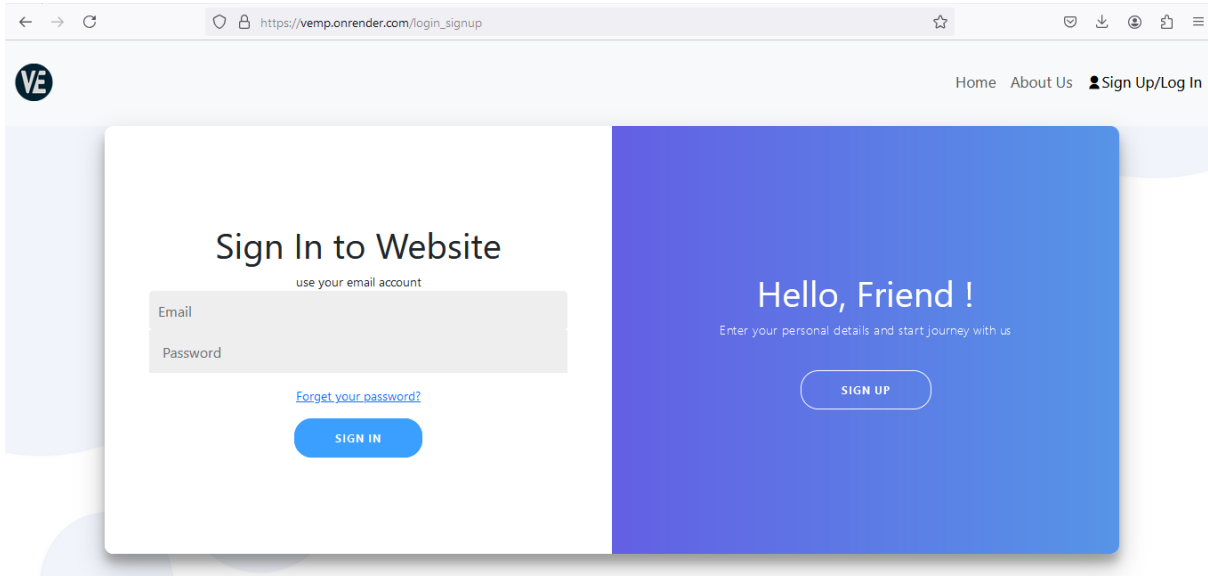


Figure 6

Event Customisation Page

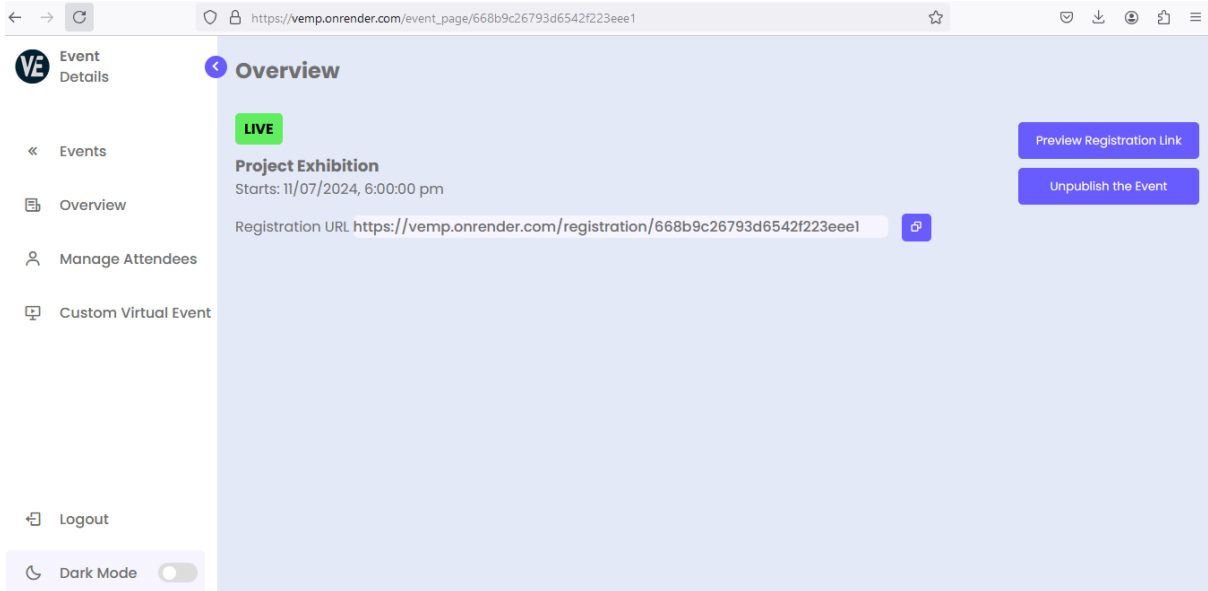
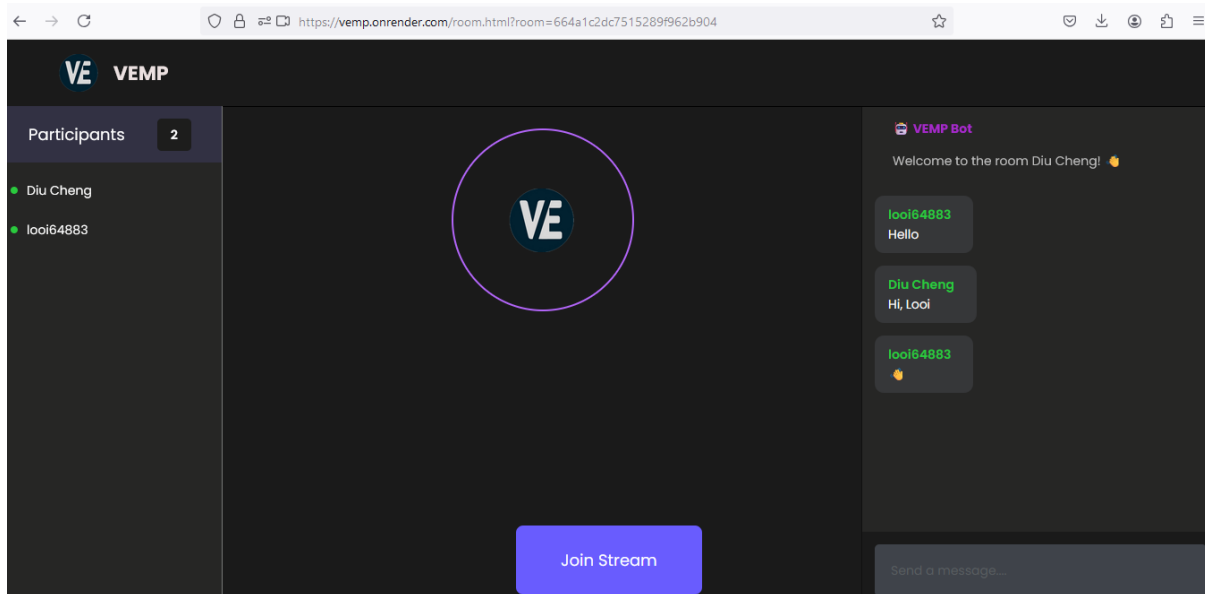


Figure 7

Virtual Event Page



EVALUATION AND RESULT

The Evaluation Settings

In response to current circumstances, the evaluation of the Virtual Event Management Platform for Entrepreneurs (VEMP) was conducted remotely and unmoderated, reflecting the need for flexibility and accessibility amidst ongoing challenges. The primary focus was a usability evaluation of the platform's design and functionality among representative users in the entrepreneurial community. This approach involved developing a structured test plan, gathering diverse participants, and meticulously analysing their feedback to inform improvements and refinements.

The evaluation of the Virtual Event Management Platform for Entrepreneurs (VEMP) targeted entrepreneurs and professionals interested in enhancing their event management capabilities. Participant selection utilised a combined approach of convenience and snowball sampling techniques from the non-probability sampling category. Convenience sampling involved selecting participants based on accessibility, utilising personal networks and digital outreach via platforms like WhatsApp and Facebook. Initial outreach efforts engaged key stakeholders in the entrepreneurial community, focusing on individuals with relevant experience and interest in virtual event management. Snowball sampling was subsequently employed, encouraging initial participants to refer others who might offer valuable insights. Despite challenges in initial participant engagement, ongoing efforts through digital distribution aimed to expand participation anonymously, ensuring a diverse range of feedback. Participant involvement was tracked through completed questionnaires, providing comprehensive insights across different evaluation categories.

The instrument used in this evaluation of the Virtual Event Management Platform for Entrepreneurs (VEMP) was meticulously designed to gather comprehensive feedback from participants. A structured

questionnaire administered through Google Forms served as the primary instrument. This questionnaire comprised 23 carefully crafted questions divided into two sections to gather detailed insights. Section A focused on demographic information to ensure a clear understanding of participants' backgrounds. Section B consisted of 17 questions rated on a five-point Likert scale, ranging from strongly disagree to strongly agree, assessing various aspects of the VEMP system's usability, functionality, and user experience. Additionally, two open-ended questions in Section B invited participants to provide qualitative feedback, including suggestions for improvement or constraints they encountered. The questionnaire was complemented by clear instructions provided in a Word document distributed to participants. This document included system access credentials, detailed instructions for conducting the evaluation, links to the Google Forms questionnaire, and a link to the VEMP system website. These materials ensured participants had all the necessary information to engage effectively in the evaluation, facilitating a structured and thorough assessment process.

The Participants' Demographic Information

An analysis of the demographic information of the Virtual Event Management Platform for Entrepreneurs (VEMP) test participants revealed that the majority were female, with 54.8% of the 31 participants female. Only 9.67% of the participants were female, had a Sijil Pelajaran Malaysia (SPM) education level, and were aged 35 and above; the rest were female, aged 18-34. The breakdown by race revealed that 35.46% female participants were Chinese, 12.89% were Malay, and 6.45% were Indian. Regarding their educational background, 22.56% of female participants held degrees, 19.34% had Sijil Pelajaran Malaysia (SPM) qualifications, and the rest held diplomas. This variety in age, race, and education among the female participants ensured that the feedback captured a wide range of experiences and expectations.

The male participants also brought a diverse set of perspectives. The remaining 45.2% of participants were male, with only 6.46% being Chinese and aged 35 and above, while the rest were male and aged 18-34. In terms of racial composition, Chinese accounted 25.82% of the male participants, while Indian and Malay accounted for 9.69% each. Their educational qualifications varied: 19.37% of male participants held Sijil Pelajaran Malaysia (SPM) qualifications, 12.91% held Bachelor's Degrees, and 6.46% held Master's Degrees and Diplomas. This diversity among the male participants provided a comprehensive evaluation of the VEMP system from various educational and racial backgrounds.

The Usability of Virtual Event Management Platform for Entrepreneurs

The questions in the questionnaire section were designed to assess various aspects of the Virtual Event Management Platform for Entrepreneurs (VEMP), including interface design, usefulness, user satisfaction, user experience, and participants' overall experience based on their interactions during the testing phase. Figures 8 to 12 illustrate the percentage distribution of responses specifically gathered from testing the web-based functionalities of the VEMP platform.

Figure 8

The Interface Design of VEMP Web-based Application Responses

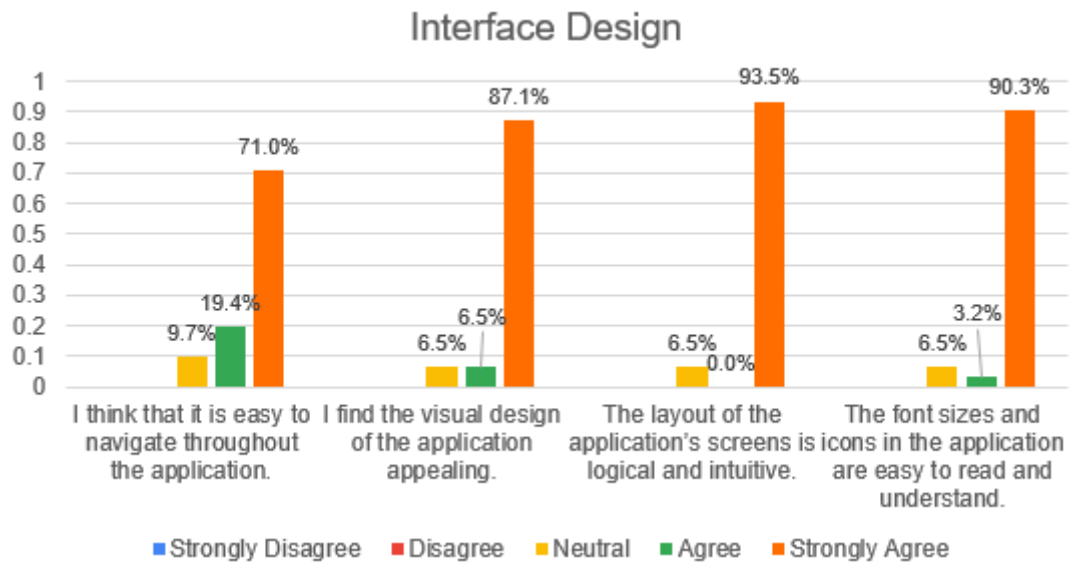


Figure 9

The Usefulness of VEMP Web-based Application Responses

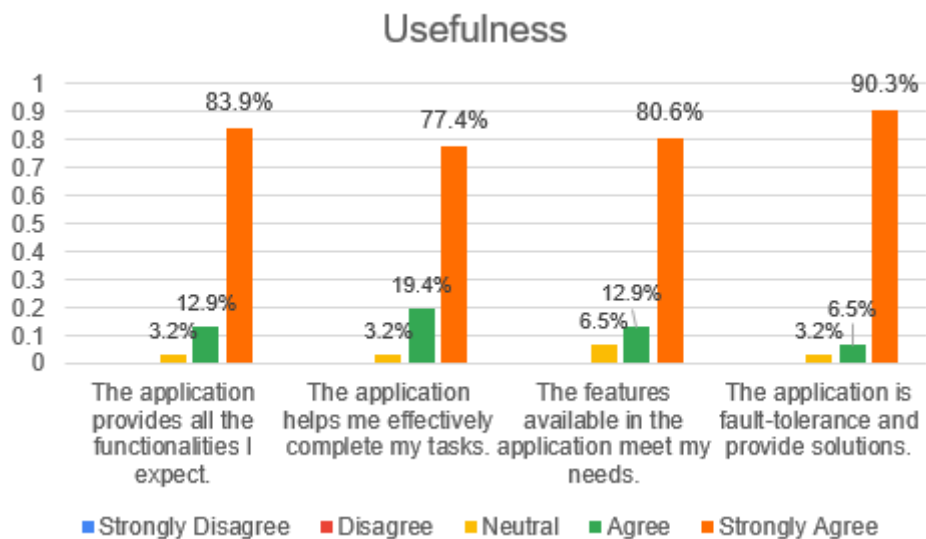


Figure 10

The User Satisfaction of VEMP Web-based Application Responses

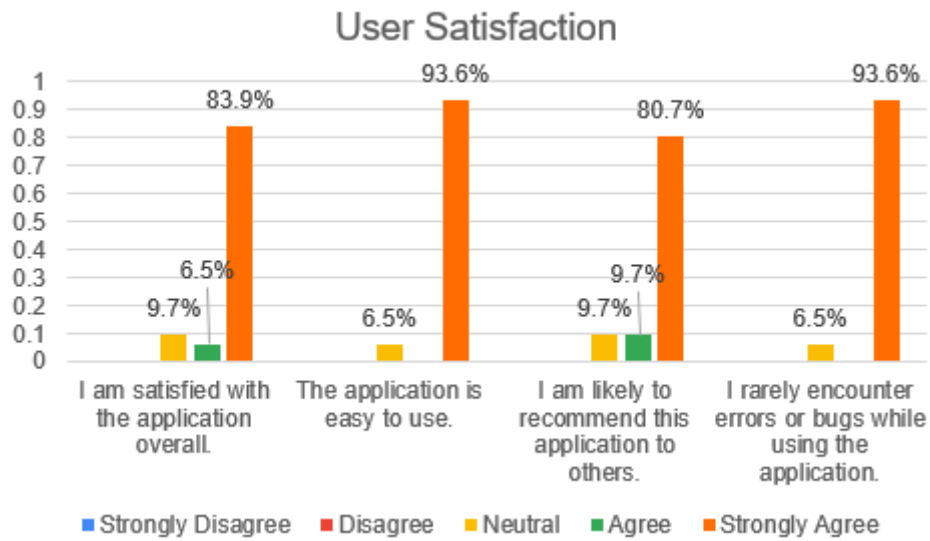


Figure 11

The User Experience of VEMP Web-based Application Responses

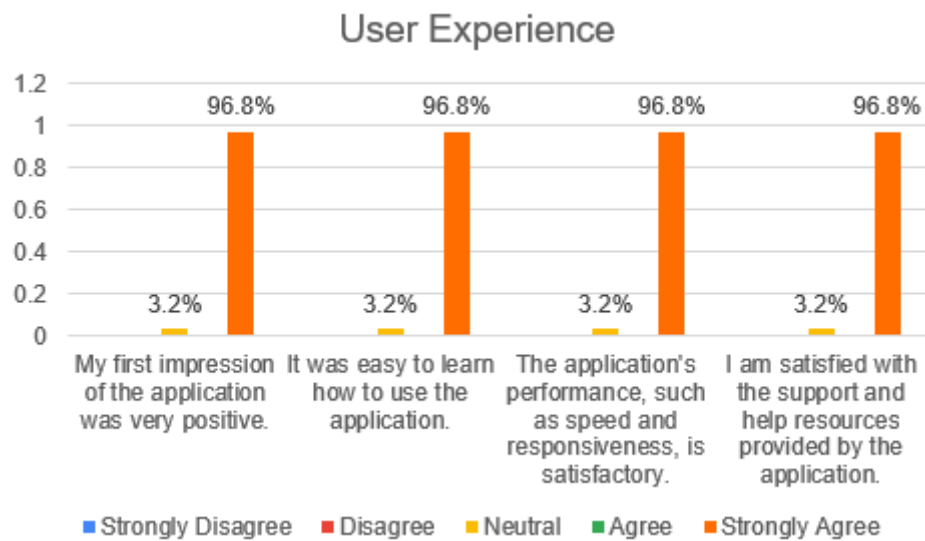
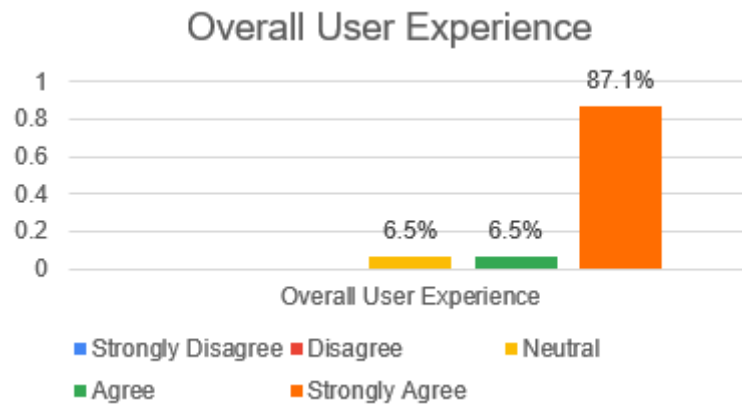


Figure 12

The Overall User Experience of VEMP Web-based Application Responses



The analysis of participant responses provided valuable insights into the Virtual Event Management Platform for Entrepreneurs (VEMP). Across various evaluation metrics, the majority of participants consistently rated the platform positively, with significant scores falling within the three to five range on the Likert scale. However, a noteworthy observation emerged regarding usability: a small percentage of participants reported challenges with the clarity of written instructions, indicating a need for clearer guidance to enhance user navigation and initial engagement with the platform.

Overall, the evaluation highlights the effectiveness of the VEMP system in supporting entrepreneurial activities, particularly in event management. Participants reported high satisfaction with the platform's functionalities designed to streamline organisational tasks. Addressing usability improvements, particularly in instructional clarity, will be crucial in further enhancing user experience and ensuring broader adoption within the entrepreneurial community.

CONCLUSION AND FUTURE WORKS

The purpose of this study was to design and evaluate a virtual event management platform tailored to entrepreneurs' needs. Using a research and development (R&D) methodology, the platform was developed through problem identification, requirements analysis, system design, prototype implementation, and user evaluation. Usability testing involving 31 entrepreneurial participants indicated that the platform provides a user-friendly, useful, and efficient solution for organising virtual events. Key findings demonstrated positive user satisfaction with the interface design, functionality, and event management support.

The results suggest that integrated web-based platforms such as VEMP have the potential to address operational challenges faced by entrepreneurs by offering cost-effective tools for scheduling, attendee management, and event hosting. This has important implications for enhancing entrepreneurial engagement, business promotion, and networking opportunities in the digital economy.

Future research should extend usability evaluations to larger and more diverse samples, integrate advanced features such as analytics and decision-support tools, and explore artificial intelligence-driven functions to support personalised recommendations and automated event management processes.

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REFERENCES

- Allen, J., Harris, R., Jago, L. K., & Veal, A. J. (2000). *Events beyond 2000: setting the agenda: Proceedings of the conference on event evaluation, research and education*, Sydney.
- Bacq, S., Geoghegan, W., Josefy, M., Stevenson, R., & Williams, T. A. (2020). The COVID-19 Virtual Idea Blitz: Marshalling social entrepreneurship to respond to urgent grand challenges rapidly. *Business Horizons*, 63(6). <https://doi.org/10.1016/j.bushor.2020.05.002>
- Blancaflor, E., Nora, A., & Zacarias, J. C. (2022). *A Web-based Customer Relationship Management System Designed for Event Services: B2C E-Commerce Platform*. ACM International Conference Proceeding Series. <https://doi.org/10.1145/3556223.3556266>
- Carvalho, D. B. F., Gabrielle Dos Santos Barbosa, C., Luiz De Souza, C., & Haddad Borges, M. (2021). *Performing Virtual Events during the COVID-19 Pandemic: The case of the Startups Fair and Hackathon for New Educational Technologies in the Campo das Vertentes Region in Brazil*. Proceedings of the 39th ACM International Conference on the Design of Communication: Building Coalitions. Worldwide, SIGDOC 2021. <https://doi.org/10.1145/3472714.3473906>
- Eriksson, T. (2021). *Failure and success in using Mozilla Hubs for online teaching in a movie production course*. Proceedings of 2021 7th International Conference of the Immersive Learning Research Network, ILRN 2021. <https://doi.org/10.23919/iLRN52045.2021.9459321>
- Felicitta, J., & Jayanthi, G. J. (2009). *The Impact of M-Commerce in Global Perspectives - A SWOT Analysis*. Ehac'09: Proceedings of the 8Th Wseas International Conference on Electronics, Hardware, Wireless and Optical Communications.
- Fernando, T., Murray, N., Tan, K., & Wimalaratne, P. (1999). *Software architecture for a constraint-based virtual environment*. ACM Symposium on Virtual Reality Software and Technology, Proceedings, VRST. <https://doi.org/10.1145/323663.323686>
- Gupta, A., Chenatt, J. J., Singla, T., Rajput, D., & Gupta, S. (2022). Virtual Events in the Post-COVID-19 Pandemic Era in the Medical Profession: A Narrative Review. *Journal of Clinical and Diagnostic Research*. <https://doi.org/10.7860/jcdr/2022/53668.16328>
- Jauhiainen, J. S. (2021). Entrepreneurship and innovation events during the COVID-19 pandemic: User preferences for the VirBELA virtual 3D platform at the SHIFT event organised in Finland. *Sustainability (Switzerland)*, 13(7). <https://doi.org/10.3390/su13073802>

- Linthicum, A. (2021). *Hybrid Events in 2022: What You Need to Know*. Cvent.
- Mair, J., & Brown, J. (2023). The Future of Events. In *International Case Studies in Event Management*.
<https://doi.org/10.4324/9781003390381-16>
- Mora-Beltrán, C. E., Rojas, A. E., & Mejía-Moncayo, C. (2020). *An immersive experience in the virtual 3D VirBELA environment for leadership development in undergraduate students during the COVID-19 quarantine*. CEUR Workshop Proceedings, 2714.
- Perdana, A., & Mokhtar, I. A. (2022). Seniors' adoption of digital devices and virtual event platforms in Singapore during the COVID-19 pandemic. *Technology in Society*, 68.
<https://doi.org/10.1016/j.techsoc.2021.101817>
- Petrosyan, A. (2023, February 23). Number of internet users worldwide 2005-2017 | Statista. Statista; Statista. <https://www.statista.com/statistics/273018/number-of-internet-users-worldwide/>
- Ro, Y. K., Brem, A., & Rauschnabel, P. A. (2018). Augmented Reality Smart Glasses: Definition, Concepts and Impact on Firm Value Creation. *Progress in IS*. Springer, Cham.
https://doi.org/10.1007/978-3-319-64027-3_12
- Ton, H. N. N., & Le, N. K. (2021). Best Practices for Virtual Events During the COVID-19 Pandemic - Focusing on Attendee Engagement. *Advances in Social Sciences Research Journal*, 8(7).
<https://doi.org/10.14738/assrj.87.10369>
- W3 Lab. (2021). *Why You Should Choose a Web Application Over a Desktop One*. W3 Lab.
- Yoshimura, A., & Borst, C. W. (2020). *Evaluation and Comparison of Desktop Viewing and Headset Viewing of Remote Lectures in VR with Mozilla Hubs*. ICAT-EGVE 2020 - International Conference on Artificial Reality and Telexistence and Eurographics Symposium on Virtual Environments.