WEB-BASED POCHIE EVENTS AND CATERING SYSTEM MOBILE APPLICATION

A Thesis Presented to
The Faculty of College of Information Technology
Mondriaan Aura College Incorporated
Subic Bay Freeport Zone
SBFZ

In Partial Fulfillment
of the Requirements for the Degree of
Bachelor of Science in Information Technology

Jayson Albert Riel, Lopez
John Llyod,Nazar
Danica,Cerrada

April 2025

APPROVAL SHEET

**In Partial Fulfillment of the Requirements
for the Degree of Bachelor of Science in Information and Technology**

**Web-based Pochie Events and Catering system
with Mobile Application**

Has been presented by Jayson Albert Riel Lopez, John Llyod Nazar and Danica Cerrada whose grade in the oral defense is _____.

ARTURO P. CASEÑAS JR, PhD
Adviser/Dean, Academic Affairs

Recommending Approval:

MR. YÑIGO YZRAEL B. GENIZA
Chairman

MR. UMPONG GLEN GERGUT
Member

MR. JOHN ARCHIDE
Member

Approved:

ENGR. YZAGANY IVARRA B. GENIZA, P.E.C.E., MSc.
Asst. Vice President for Academic Affairs

THIS WORK IS DEDICATED TO MY PARENTS AND THE
STUDENTS OF MONDRIAAN AURA COLLEGE
OF INFORMATION TECHNOLOGY

Web-based Pochie Events and Catering System with Mobile Application

Technology has profoundly transformed how people interact with the world, seamlessly integrating into their daily lives. From ordering food to booking transportation, digital tools have streamlined tasks, blurring the lines between their online and offline worlds. This evolution has also revolutionized industries such as event planning and catering, offering innovative solutions that enhance efficiency, personalization, and customer satisfaction. For instance, artificial intelligence (AI) and virtual reality (VR) are now integral to event management, enabling personalized experiences and immersive engagement. According to The Event Planner Expo (2024), AI enhances attendee personalization, while VR creates dynamic, engaging environments that redefine event participation. In the catering sector, technological advancements have similarly brought remarkable improvements. Tools like predictive analytics and digital platforms allow for personalized menu planning, online ordering, and efficient communication, as highlighted by Incentivio (2024). These innovations enable caterers to adapt to evolving consumer preferences while enhancing operational efficiency. Additionally, the adoption of mobile apps and event management software has streamlined processes, as noted by Curated Events (2024), providing seamless services that ensure higher customer satisfaction.

While technology has greatly influenced consumer behavior, human connection remains vital in creating successful and memorable events. As stated by Event Guru Software (2024), technologies like AI and VR should complement—not replace—personal interactions, which are crucial for building trust and connection. Social media, a cornerstone of the digital

era, also plays a pivotal role in event promotion and catering. Platforms like Facebook and Instagram offer businesses powerful marketing tools to expand reach, boost engagement, and influence consumer decisions. According to Ingrassia (2022), the rise of influencer marketing has changed how consumers select services, from restaurants to event solutions, shaping purchasing behaviors through personalized, relatable endorsements. The COVID-19 pandemic further accelerated the adoption of digital tools, especially in food delivery and event management. Food delivery applications, for example, experienced exponential growth, as noted by Silva(2022), with ease of use and trust emerging as critical factors in consumer satisfaction. Likewise, virtual and hybrid events became the norm, driven by sustainability goals and shifting work environments. As Charles (2023) highlights, these advancements reduce carbon footprints while improving engagement and accessibility. In the hospitality and event management industries, embracing technology has not only optimized operations but also fostered sustainability.

Digital reservation systems, as observed by Saura (2024), improve resource efficiency, predict service demands, and contribute to the circular economy. Similarly, event management software and mobile apps, as described by Zolotukhina (2023), enhance attendee engagement and operational simplicity, solidifying their importance as indispensable tools in modern event planning. Despite these advancements, balancing technological innovation with human-centered approaches remains essential. Personal connections, attention to detail, and adaptability continue to define the success of catering and event planning services. This study delves into the transformative role of technology in these industries, analyzing how it reshapes operations, influences consumer behavior, and supports sustainability while emphasizing the irreplaceable value of human interaction.

Information Technology in Education

Information technology has become a driving force in reshaping education worldwide. Its integration into teaching and learning processes empowers educators and prepares students for a technology-driven future. Recent studies underscore the pivotal role of IT in enhancing educational experience. According to Thairoongrojana (2024), advanced technologies like Artificial Intelligence (AI), Virtual Reality (VR), and Augmented Reality (AR) are transforming the way students engage with content. These technologies enable personalized learning experiences, foster collaboration, and create immersive environments that boost student engagement and retention. As VR and AR continue to develop, they offer unique opportunities for interactive learning, such as virtual field trips and simulated science experiments. In a study conducted by Magallanes et al. (2024), the importance of Information and Communication Technology (ICT) proficiency was highlighted among Physical Education teachers in Pampanga. The study found that ICT skills are vital not only for improving teaching methodologies but also for fostering career progression. Teachers with higher ICT proficiency were able to create more dynamic and engaging lessons, leading to better student outcomes. The study also pointed out the need for continuous professional development to equip educators with the necessary tools to integrate technology effectively into their classrooms. Moreover, Badshah et al. (2023) discussed how the Internet of Things (IoT) is revolutionizing education by creating "smart classrooms." IoT devices, such as connected sensors and smartboards, enable real-time data collection and analysis, allowing teachers to monitor student progress and tailor their teaching approaches. These technologies promote more interactive learning experiences and provide students with access to resources anytime, anywhere. However, the study also noted that challenges like digital equity and data

privacy remain barriers to widespread adoption. These studies reflect the profound impact of IT on modern education, emphasizing the need for proper training and infrastructure to fully harness its potential. As digital technologies continue to evolve, the future of education will be increasingly shaped by technological advancements, offering new opportunities for both teachers and learners.

Information Technology in Healthcare

Food waste is a significant issue in the healthcare sector, with substantial economic, environmental, and ethical implications. Hospitals and other healthcare facilities generate considerable amounts of food waste daily, contributing to greenhouse gas emissions, resource depletion, and increased operational costs. However, recent research highlights the potential of information technology (IT) to address this challenge. This review examines that explore the application of IT solutions to minimize food waste in healthcare catering.

The Artificial Intelligence-Driven Food Waste Reduction in Hospital Catering a Pilot Study (2023). it is use of AI-powered forecasting tools to predict patient meal demand and optimize food production in a hospital setting. By analyzing historical data, patient demographics, and dietary preferences, the AI system accurately predicted meal requirements, leading to a significant reduction in food waste and associated costs.a Mobile Ordering System on Patient Satisfaction and Nutritional Intake in a Long-Term Care Facility This investigated effects of implementing a mobile ordering system that allowed residents in a long-term care facility to choose their meals. Smith, A.(2022) system empowered residents with greater autonomy and choice, resulting in improved patient satisfaction, increased meal intake, and reduced food waste.this study investigated the potential of blockchain technology to improve food safety and traceability in hospital kitchens. Brown, C.(2024) argued that blockchain can help track

ingredients from source to consumption, ensuring food safety and facilitating quick responses to potential outbreaks. By enhancing transparency and accountability in the food supply chain, blockchain technology can also contribute to reducing food waste by identifying areas of inefficiency and optimizing inventory management.the urgent need for hospitals to prioritize food waste reduction strategies. Deborah A. Saber(2022) highlights the environmental and public health implications of food waste and calls for hospitals to align their food services with the EPA's Food Recovery Hierarchy. The study underscores the importance of measuring food waste at individual hospitals to develop effective waste reduction strategies.the significant potential of IT solutions to address the challenge of food waste in healthcare catering. By leveraging AI-powered forecasting, mobile ordering systems, and blockchain technology, hospitals can optimize food production, enhance patient satisfaction, and improve food safety while minimizing waste. These findings underscore the importance of integrating IT into healthcare catering operations to achieve economic, environmental, and social sustainability goals.

Information Technology in Entertainment

In the rapidly evolving landscape of the entertainment industry, technology is playing an increasingly significant role in enhancing guest experiences, optimizing operations, and improving overall efficiency. Sanchez(2023) research focuses on how technology is reshaping food service and event experiences, with a focus on data-driven optimization and immersive technologies. Her work has examined how data analytics and predictive modeling can be used to optimize catering logistics at music festivals, such as by real-time tracking of

food consumption patterns, AI-powered scheduling for staff deployment, and route optimization for food delivery. She has also investigated how VR technology can be used to enhance the pre-event catering experience, by allowing event organizers to virtually "walk through" different catering setups and visualize food presentation, and enabling guests to experience 360° views of dishes and make informed menu selections based on immersive visuals. Finally, she has explored the use of AR technology to enhance food service at sporting events, such as by using AR apps to provide real-time information about food availability, wait times, and nutritional content, AR-powered way finding to guide attendees to the nearest food vendors or concession stands, and interactive AR games and experiences designed to entertain guests while they wait for their orders. Sanchez(2023) said that technology is reshaping food service and event experiences, with a focus on data-driven optimization and immersive technologies. Her work has examined how data analytics and predictive modeling can be used to optimize catering logistics at music festivals, such as by real-time tracking of food consumption patterns, AI-powered scheduling for staff deployment, and route optimization for food delivery. She has also investigated how VR technology can be used to enhance pre-event catering experience, by allowing event organizers to virtually "walk through" different catering setups and visualize food presentation and enabling guests to experience 360° views of dishes and make informed menu selections based on immersive visuals. Finally, she has explored the use of (AR) Augmented Reality technology to enhance food service at sporting events, such as by using Augmented Reality apps to provide real-time information about food availability, wait times, and nutritional content, Augmented Reality-powered way finding to guide attendees to the nearest food vendors or concession stands, and

interactive Augmented Reality games and experiences designed to entertain guests while they wait for their orders.

Event catering is undergoing a technological revolution driven by AI, IoT, VR, and AR solutions. IoT sensors and RFID tags enable real-time tracking of food consumption, helping organizers prevent shortages, manage inventory, and reduce waste. At the same time, AI-powered analytics support more efficient staffing by predicting peak demand and deploying personnel where they are needed most. Delivery logistics are also enhanced through AI-driven route optimization, ensuring food remains fresh and service times stay short. Immersive technologies such as VR and AR are transforming both planning and attendee experiences. Organizers can virtually walk through venues, fine-tuning layouts and seating arrangements without relying on static blueprints. Guests gain new ways to interact with food options, from exploring hyper-realistic 3D menu previews via VR to using AR-based mobile apps that display wait times, food availability, and directions to specific vendors. Even the waiting process can become more engaging through AR-powered games and interactive content. In addition, AI chat-bots facilitate multilingual ordering, robotic kitchen assistants deliver consistency and speed, and personalized AI recommendations cater to individual dietary preferences. However, as these technologies become more prevalent, organizers must address potential drawbacks. Privacy concerns arise when collecting real-time guest data, emphasizing the need for robust security measures and transparent user consent. High implementation costs may prevent smaller event planners from adopting these solutions early on, and technology adoption barriers especially for older demographics

underline the importance of user-friendly design and alternative service options. Despite these challenges, the integration of AI, VR, and AR in event catering holds the promise of greater efficiency, improved guest satisfaction, and innovative new experiences for attendees.

Information Technology in Food Services

Technology has played a significant role in transforming the food service industry, improving efficiency, streamlining operations, and enhancing customer experience. According to Research and Markets (2024), the adoption of digital tools such as AI-driven management systems, mobile ordering, and smart kitchen equipment has allowed businesses to optimize workflow and maximize revenue. The increasing reliance on technology has also improved food safety, order accuracy, and overall service efficiency. Mordor (2024) highlights the growing role of (AI) Artificial Intelligence in food services, estimating that the (AI)Artificial Intelligence market will expand from USD 13.39 billion in 2025 to USD 67.73 billion by 2030 at a CAGR of 38.3%. AI-driven solutions, such as predictive analytics, food sorting, quality control, and supply chain optimization, have enabled businesses to automate critical processes while enhancing food safety compliance. Additionally, robotics and AI-powered kitchen automation are streamlining food preparation, reducing human error, and minimizing operational costs. Despite these advantages, widespread AI adoption presents challenges, including high implementation costs and the need for specialized workforce training. Although technology enhances service quality, Onwezen (2024) argues that digital solutions cannot entirely replace human interaction in food services. AI-powered order processing and robotics in food preparation improve efficiency, but customer engagement

remains an essential aspect of the dining experience. Another major concern is data security, such as digital transactions, AI-driven recommendations, and automated decision-making systems that raise privacy risks that businesses must address. Consumer acceptance of smart food innovations, such as lab-grown meat and 3D-printed meals, remains uncertain due to regulatory and ethical concerns. Despite these challenges, technology continues to drive innovation in food service, with (AI) Artificial Intelligence optimizing inventory management, predictive analytics reducing waste, and automation improving supply chain efficiency. The use of robotics in food preparation is also creating new opportunities for businesses to enhance service speed while minimizing labor costs.

Mordor (2022) highlights the importance of Information Technology education and training for food service employees to ensure they can effectively use modern systems. Institutions such as Industrial Training Institutes (ITI) provide essential digital skills, enabling workers to operate AI-driven platforms, troubleshoot technology-related issues, and adapt to the industry's evolving digital landscape. Furthermore, Information Technology advancements have revolutionized restaurant operations by improving order management, payment processing, and customer engagement through loyalty programs and data-driven marketing strategies. Beyond front-end service, IT-driven innovations have enhanced supply chain management by improving inventory tracking, reducing food waste, and optimizing labor scheduling. These advancements help businesses reduce costs while maintaining high service standards. In conclusion, information technology is reshaping the food service industry, driving efficiency, innovation, and customer satisfaction. While challenges such as cybersecurity threats, training costs, and implementation expenses persist, the benefits of

digital transformation far outweigh the drawbacks. Businesses that leverage technology effectively will remain competitive and adaptable in a rapidly evolving industry.

Information Technology in Catering

The rapid advancement of technology has prompted significant developments in various industries, including catering services. According to Gunadhi (2023), the increasing prevalence of technology has led to the creation of catering ordering websites, enabling consumers to navigate the ordering process with greater ease. Suhayati (2022) emphasized that the internet serves as a vital digital marketing tool in the modern age, particularly for advertising and promoting catering services. Through electronic and information technologies, businesses can market their products effectively, allowing customers to place orders conveniently from their homes. These platforms provide essential information about catering services, such as pricing, product descriptions, and images, ensuring transparency and convenience for consumers. For businesses, the implementation of online catering services offers multiple advantages. These include increased operational efficiency, improved customer satisfaction, and broader accessibility, as customers can place orders anytime, even after business hours. Online platforms enable businesses to expand their reach, target diverse audiences, and streamline processes such as reservations and real-time order tracking. Automation reduces errors, saves time, and provides features like customizable menus, which enhance user experiences and foster customer loyalty. Moreover, businesses can gain valuable insights into customer behavior and preferences, optimize marketing

efforts through social media and email, and benefit from reduced staffing costs. On the consumer side, online catering services offer unparalleled convenience. Customers can place orders from any location at any time without the need for physical visits or phone calls. These systems provide detailed menus with nutritional information, enabling informed decision-making. Personalized meal options, flexible delivery schedules, and event-specific planning further enhance the user experience. Consumers also rely on reviews and ratings for quality assurance, contributing to a smooth and satisfying ordering process. The relationship between information technology and engineering, particularly in web development, is crucial in the development of such platforms. Technologies like Personal Home Page Hypertext Preprocessor (PHP), Hypertext Markup Language (HTML), CodeIgniter, Bootstrap, and MySQL play an integral role in creating robust and scalable web applications. PHP facilitates the creation of dynamic, data-driven websites, while HTML structures web content. CodeIgniter, a lightweight PHP framework following the Model-View-Controller (MVC) design, ensures rapid development of well-structured applications. Bootstrap simplifies the creation of responsive, mobile-first websites with its adaptable templates and grid system. MySQL, a reliable relational database management system, manages and organizes data efficiently. Handayani (2024) further explored the positive impact of information technology on business operations, particularly in culinary industries like catering services. Technology not only enhances operational efficiency but also fosters business growth and innovation. In conclusion, information technology is deeply embedded in engineering, providing businesses with tools and solutions to improve their operations and expand their reach. Online catering services exemplify how IT applications benefit businesses and consumers, driving growth while ensuring convenience and efficiency.

Research conducted in Aura College has shown the significant impact of Information Technology (IT) in the hotel and service industry, particularly in enhancing customer satisfaction, reducing costs, and increasing workforce engagement. Mabborang, Arianne, Fernando, and Ancheta (2022) demonstrated the success of the proposed TAZA Filipino Cuisine and Cafe online ordering system with a mobile application, which addressed the challenges of manual systems. This solution allowed customers and staff to access the website anytime, as long as there was internet connectivity, providing greater convenience. Similarly, Lauzon and Laguatan (2022) proposed the Web-based A-B Housevet Animal Clinic Appointment System with a mobile application, which effectively managed customer appointments by allowing the addition, deletion, and editing of appointment data. This system, which featured a computer-based database, also facilitated smoother transaction management and improved the clinic's operations. Additionally, another research highlighted the proposed Web-based Bien's Steve Place room reservation system, which integrated a mobile application for easier and more efficient booking management. This system was designed to handle reservations, allowing the modification of customer information, and enhancing the overall user experience for both guests and administrators.

The **Web-Based Pochie Events and Catering System with Mobile Application** will provide solutions to the manual processes mentioned above by offering the following improvements. The proposed system will allow customers to book events through the website or mobile app, eliminating the need for phone calls or in-person meetings. It will automatically check the availability of event dates and send instant confirmation, reducing the risk of double bookings and miscommunications. The system will feature an interactive menu with detailed descriptions and images, allowing customers to select their preferred

options easily. customers will have the ability to make real-time changes to their menu choices, which will be instantly updated in the system. This will eliminate the need for repeated communication and ensure that the customer's preferences are accurately reflected. The system will provide real-time updates and allow both the customer and catering staff to access event details from anywhere. It will also send automatic reminders and notifications to the event planner and catering team about important tasks, ensuring that every aspect of the event is coordinated efficiently and without oversight. The system will track inventory levels, including food ingredients and catering supplies, ensuring that the correct amount of food is prepared for each event. It will generate automatic alerts when inventory is low, minimizing food waste and ensuring that sufficient supplies are available for every event. Billing will be automated through the system, with invoices generated based on the customer's selections and services rendered. customers will be able to view and pay their invoices directly through the website or app. After the event, the system will send automated requests for feedback, allowing the company to track customer satisfaction and improve future service offerings.

Description of the Manual Catering System at Pochie Events and Catering

The Manual Catering System at Pochie Events and Catering relies on manual processes to manage event bookings, menu selection, event coordination, catering services, and post-event billing. customers contact the company by phone or in-person to book events, providing details such as date, type, guest count, and menu preferences, which staff manually record in notebooks or physical documents. This leads to issues like double bookings, missing preferences, and communication gaps. Menu selection involves customers reviewing

printed menus or discussing options over the phone, but miscommunication and repeated exchanges can cause mismatches and inefficiencies. Event details, including location and special requests, are manually confirmed with the customer, but the lack of real-time updates increases the risk of errors. On event day, the catering team prepares food and serves guests based on handwritten notes or spreadsheets, which makes inventory tracking and quantity management challenging, often leading to waste or delays. After the event, billing is done manually, which can result in discrepancies or missed charges, while customer feedback is informally collected, making it difficult to track satisfaction systematically.

Prospects of the New Web-based Catering System

Capabilities: The proposed Web-based Pochie Events and Catering System with Mobile Application is an example of an advanced information system designed to streamline catering operations. The system is equipped with several capabilities, including automated event bookings, catering orders. It integrates both web-based and mobile platforms, ensuring easy access for users—event planners, customers, and catering staff—through their smartphones, tablets, or computers. This system offers real-time order tracking, payment processing, and customer support, creating efficient and seamless experience for both customers and Admin. The system uses cloud storage to securely store customer data, order history, and payment records. Its mobile application allows customers to place catering orders on the go and monitor the status of their events. The mobile app provides notifications for updates such as order confirmations, delivery schedules, and reminders about event preparations. Additionally, the system ensures customer satisfaction by offering personalized

options such as customized menus and special dietary requests. This eliminates the need for manual updates and reduces the chances of human error, increasing operational efficiency.

The Web-based Pochie Events and Catering System also supports automated invoicing and billing, which ensures accurate financial records and easy access for both customers and admin. The platform's design enables seamless communication between customers, event organizers, and catering admin, making it easier for everyone involved to manage the logistics of each event. This system significantly reduces time spent on administrative tasks and minimizes the possibility of scheduling conflicts.

Prospects of the New Web-based Catering System

The Web-based Pochie Events and Catering System with Mobile Application is an advanced platform designed to streamline catering operations through both a web interface and a Progressive Web App (PWA). This integrated system provides a seamless experience for event planners, customers, and catering staff across smartphones, tablets, and computers. By leveraging the latest web technologies, the system offers a mobile-friendly, app-like experience directly from users' browsers, eliminating the need for separate app downloads. The PWA ensures fast, reliable, and engaging interactions, and push notifications for users. Customers can easily browse catering packages, place orders, and schedule events through the web interface or mobile PWA. This automated process reduces manual intervention, minimizes scheduling conflicts, and enhances overall event management efficiency. The

system allows customers to track the status of their catering orders, keeping them informed of delivery schedules and event preparations. Notifications via the web and mobile platforms

ensure that users receive timely updates and remain informed throughout the process. The platform enables smooth communication between customers, event organizers, and catering staff, minimizing the risk of miscommunication and ensuring better coordination throughout the event lifecycle. The system simplifies event management tasks, from booking to post-event follow-ups. Automated reminders and updates ensure smooth operations and reduce the time spent on administrative work. Customers can manage their profiles, including personal information and order history, through a responsive and consistent interface, accessible via both the web and mobile PWA.

The Web-based Pochie Events and Catering System stands out by combining the flexibility of web and mobile platforms with the efficiency of a Progressive Web App. This innovative approach delivers high-quality user experience, increases operational efficiency, and provides a streamlined and personalized catering experience for customers

Enhancements

The proposed Web-Based Pochie Events and Catering System includes an additional feature: a Progressive Web App (PWA). The researchers developed this mobile-friendly application to provide customers with seamless access to their event bookings, catering requests, and schedule updates anytime and anywhere. Through this system, customers can conveniently monitor their booking status, modify catering orders, and receive real-time updates on their events. This enhancement ensures that clients can efficiently manage their catering needs, even remotely. The integration of a PWA allows instant communication

between administrators and customers, enabling real-time notifications about booking confirmations, delivery updates, and event modifications. This feature keeps customers well-informed and minimizes delays or miscommunication in event coordination.

The researchers also incorporated a responsive design, ensuring the system is accessible across multiple devices with various screen resolutions, including smartphones, tablets, and desktops. This is achieved using modern CSS, Bootstrap, and JavaScript, enhancing the website's appearance, layout, and interactivity. The intuitive interface provides a user-friendly experience, allowing customers to navigate the platform effortlessly while ensuring optimal performance and accessibility across all devices.

Mobile Application

The development of a Progressive Web App (PWA) for the Web-Based Pochie Events and Catering System further enhances the user experience by offering a convenient way to manage event details, catering orders, and payments directly from smartphones or tablets. The PWA provides real-time updates on event schedules, meal preparations, and order statuses, keeping customers, event organizers, and catering staff well-informed. Using the proposed mobile application, customers can, make reservations, request special dietary preferences, and view available menu options; place orders and receive push notifications to track the order status, ensuring that customers are updated on any event-related changes; receive reminders for upcoming events, order confirmations, delivery schedules, and other important updates; and customize catering orders remotely, check order history, and confirm

or reschedule event bookings. The PWA's versatility allows it to function on Android devices and can be accessed directly from the browser, ensuring accessibility for a wide range of users without needing to download a separate app. The integration of these features allows the PWA to be an essential tool for efficient event and catering management, enabling a smooth experience before, during, and after the event.

Statement of the Problem

This study aims to develop the Web-Based Pochie Events and Catering System with a Mobile Application to enhance catering management and improve customer service. Specifically, it seeks to answer the following questions:

1. How will the proposed Web-based Pochie Events and Catering System improve event and catering management through its online features?

2. How will the Progressive Web App (PWA) enhance customer interaction and satisfaction in terms of ordering, payments, and event monitoring?

3. How will the proposed system manage and secure customer data, payment information, and event details?

4. What criteria are essential for evaluating the manual-based and computerized-based system's effectiveness in managing catering orders, improving customer experience, and supporting event organization?

Research Objectives

In general, the study aims to develop a Web-Based Pochie Events and Catering System with Mobile Application that will enhance the management of catering services, event bookings, and customer interactions in real-time.

Specific objectives of the study are:

1. To design a user-friendly interface for both the web-based platform and mobile application that allows customers to browse available event packages, select catering options, and make reservations easily.

2. To create a seamless user-friendly mobile application that enables users to track catering orders, receive real-time updates on event statuses, and interact directly with the service provider for inquiries or changes.

3. To develop a secured web-based system that allows event planners and staff to manage event schedules, catering orders, payments, and customer preferences efficiently.

4. To evaluate the manual-based catering process and compare it with the web-based system using the following criteria:

    a. efficiency;

    b. user-friendliness;

    c. security;

    d.real-time communication.

Scope and Delimitations of the Research

The proposed Web-based Events and Catering System with Mobile Application the system aims to offer a comprehensive platform for event planners and catering service providers to manage and coordinate events seamlessly, improve customer experience, and enhance operational efficiency.

Administrator's Module. This application helps manage web and mobile systems in an easy and organized way. It also allows the admin to create and share contents like posts, event updates, and news. These features work together to provide a seamless and user-friendly experience.

Customer's Module. This application will be developed to allow users to schedule appointments and order food easily. It also enables users to engage with content created by the admin, such as updates, posts, and event announcements. Additionally, users can create and manage their profiles for a more personalized experience.

Scope of the System. The following will be the scopes of the attributes of the Web-Based Pochie Events and Catering System with Mobile Application:

1. Customers will be able to view event packages, check available services, and request quotations through the system.
2. The system will allow users to book events and view available schedules for venue reservations and catering services.

3. Customers will be able to create and manage their profiles, which will include contact information, past transactions, and preferences.

4. Users will have the ability to customize menus for events by selecting dishes and packages offered by the catering service.

5. The system will feature a (PWA) Progressive Web application for easier access to services, updates, and notifications.

6. The system will define user roles, such as administrators and customers, each with specific access rights and functionalities.

7. The system will support adding, searching, updating, and deleting records related to events, customer information, and catering services.

Delimitation of the Study

- The web application will only support **Cash on Delivery (COD)** and will not include online payment options for any services.

- The system requires an **active internet connection** to function and cannot operate offline.

- The system will not include native mobile applications for Android or any other platforms.

Conceptual Framework

This conceptual framework of the study is presented using a graphical representation shown in Figure 1. It reflects what are the environments and components of the web-based system.

The study's conceptual framework clearly defines the key concepts essential for understanding its focus on the catering system. It outlines the various features and procedures that enhance the system's effectiveness. The primary users of the proposed system will be its customers. The framework is built on seven core principles: owner, staff, customer, efficiency, user-friendliness, security, and communication. Utilizing the graphical representation, the conceptual framework illustrates the sequence of activities involved in the system's development and implementation. In the context of team dynamics, the framework has been applied to examine the relationship between team-specific arrangements and innovative outputs

The cloud picture that contained all the graphical representations signifies the overall accessibility of the proposed web-based system using mobile devices and other compatible electronic devices with internet connection. The spoon picture represents efficiency just as a spoon allows for smooth and effortless scooping of food, efficiency in the system ensures seamless operations. It helps reduce manual work, streamline tasks, and improve service speed, leading to better coordination among staff and faster order processing. The plate picture represents the customers in that a plate holds and presents food, making it the central focus of a meal, just as customers are the heart of the catering system. Their satisfaction drives the entire operation, influencing service quality, event management, and overall success. The napkin picture represents user-friendliness in that a napkin is used to keep things neat and tidy, symbolizing how a user-friendly system ensures a smooth and hassle-free experience. Just as a napkin enhances the dining experience, an intuitive interface allows customers, staff, and the owner to navigate the system easily, making bookings and managing events stress-free. The bell picture represents real-time communication in that a

bell is used to signal readiness or call for attention, just as real-time communication ensures constant updates between customers, staff, and the owner. This feature allows for instant order tracking, event updates, and quick resolution of any issues, improving responsiveness and customer satisfaction. The wine glass picture represents the staff in that a wine glass requires careful handling and balance, much like the staff members who manage food preparation, delivery, and customer service. Their role is crucial in maintaining service quality, ensuring that everything runs smoothly, and meeting customer expectations. The fork picture represents security in that a fork securely holds food in place, symbolizing security within the system. Just as a fork ensures stability while eating, strong security measures protect user data, financial transactions, and event information from unauthorized access, ensuring a safe and trustworthy platform.
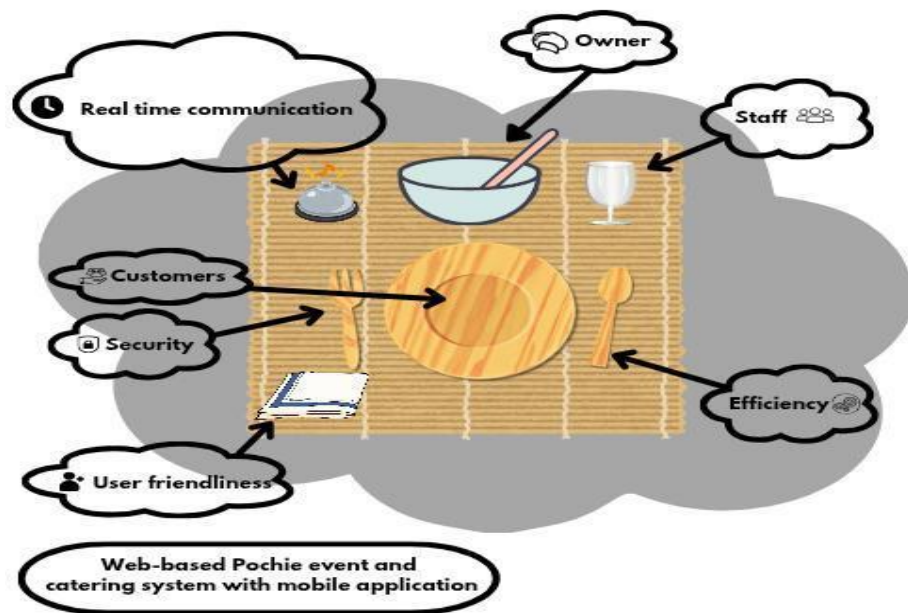
Figure 1. A Paradigm Showing the Conceptual Framework of the Study

Significance of the Research

The results of this study will hopefully benefit the following:

Catering Business Owners. This system will be designed to assist catering business owners in optimizing and simplifying their day-to-day operations. It offers a centralized platform that integrates essential functions such as booking management, scheduling, and customer communication. By consolidating these tasks into a single user-friendly interface, the system eliminates the need for manual processes and minimizes the risk of errors. Catering businesses can efficiently track and manage client inquiries, confirm bookings, and organize schedules to ensure seamless service delivery. Additionally, the platform will facilitate improved customer interactions by streamlining communication, ensuring timely responses, and enhancing overall customer satisfaction. Ultimately, this tool empowers business owners to focus more on delivering quality catering services while reducing operational complexities.

Customers. In today's fast-paced digital world, customers seeking catering and event planning services are increasingly tech-savvy and demand seamless online experiences. They expect user-friendly platforms, personalized options, and efficient communication, all accessible at their fingertips. The proposed Pochie's web-based system with a mobile application can meet their evolving needs. Driven by convenience and a desire for unique experiences, these customers value transparency, quick response times, and the ability to customize services to their specific requirements. Social media plays a crucial role in their decision-making process, with online reviews and recommendations heavily influencing their

choices. This research delves into the characteristics of this modern customer, highlighting the importance of a technology-driven, customer-centric approach in the catering and event planning industry.

Future Researchers. This research will serve as a valuable resource for future researchers who aim to learn more about the benefits of information technology in the catering industry, through the use of a web application, and likewise provide them with relevant information regarding operational efficiency and customer satisfaction and preferences. Similarly, this study will also benefit future researchers in terms of enhancing their knowledge, such that it could help them gain valuable insights about how information technology impacts the aforementioned industry and in terms of establishing an effective and efficient catering system.

References

A blend of innovation sustainability and global flavors.(2024).

https://www.incentivio.com/blog-news-restaurant-industry/catering-trends-in-2024-

a-blend-of-innovation-sustainability-and-global-flavors

AI in food & beverages market size. (2025) https://www.mordorintelligence.com/industry-

reports/artificial-intelligence-in-food-and-beverages-market

Catering marketing strategies: How to attract more clients. (2023).

https://fhahoreca.com/blog/catering-marketing-ideas

Consumer acceptance of new food trends resulting from the fourth industrial revolution: A

systematic review. (2022) https://pmc.ncbi.nlm.nih.gov/articles/PMC9399420/

Event management: Why it is important? (2022). https://www.ems-events.co.uk/why-event-

management-is-important

Event management software market statistics / forecast 2025. (2025).

https://www.alliedmarketresearch.com/event-management-software-market-A06254

GEM report: Technology in education. (2023). https://gem-report-

2023.unesco.org/technology-in-education/

Global food service industry market report 2021-2026 - Favorable consumer sentiment

towards outdoor dining options to champion streetaries trend beyond the pandemic.

(2022, January 25). *GlobeNewswire*.https://www.globenewswire.com/news-

release/2022/01/25/2372162/28124/en/Global-Food-Service-Industry-Market-Report-

2021-2026-Favorable-Consumer-Sentiment-Towards-Outdoor-Dining-Options-to-

Champion-Streeteries-Trend-Beyond-the-Pandemic.html

Importance of digital marketing in event management.

(2022).https://inevent.com/blog/others/importance-of-digital-marketing-in-event-

management.html

Information technology education. (2024). *IME Journal, 623*, 359. https://so19.tci-

thaijo.org/index.php/IME/article/view/623/359

Innovations in event planning shaping the future of gatherings. (2024).

https://www.theeventplannerexpo.com/innovations-in-event-planning-shaping-the-

future-of-gatherings/

Mobile catering. (2023). https://vuniversity.in/mobile-catering/

Mobile food services market size, global trends. (2025).

https://www.verifiedmarketreports.com/product/mobile-food-services-market/

New tech's role in the events industry. (2024).https://eventgurusoftware.com/new-techs-role-

in-the-events-industry/

Seamless events in the digital age: The impact of event management apps. (2023).

https://www.linkedin.com/pulse/seamless-events-digital-age-impact-event-

management-apps-zolotukhina

The benefits of mobile catering. (2023). https://www.pandacoffees.com/post/the-benefits-of-mobile-catering

The evolution of corporate event catering trends and innovations. (2024)
.https://curatedevents.com/blog/the-evolution-of-corporate-event-catering_-trends-and-innovations/

The future of event planning: How technology is changing the game. (n.d.).
https://lesroches.edu/blog/future-event-planning-technology-changing-game/

The impact of technology on the events industry. (2023).
https://www.linkedin.com/pulse/impact-technology-events-industry-julia-charles-event-management

Towards smart education through the Internet of Things: A review. (2024).
https://arxiv.org/abs/2407.11366

Why is catering important at an event. (2022). Retrieved from https://robert-victor.co.uk/why-is-catering-important-at-an-event/

Appendix A

Name (optional): _____

Age: _____

Position: _____

Highest Educational Attainment: _____

QUESTIONNAIRES

EVALUATION OF THE CURRENT SYSTEM
(Pretest for End-users)

This survey questionnaire is provided in order to get the evaluation of the respondents towards the current system and its accuracy.

Instruction: Please rate the following questions based on the ratings given below:

SS (Strongly Satisfied)	S (Satisfied)	D (Dissatisfied)	SD (Strongly Dissatisfied)

QUESTIONS	SS 1	S 2	D 3	SD 4
1. The system (website) is easy to use.				
2. The system provides clear and helpful error messages.				
3. The records are safe and secured.				
4. The system efficiently handles booking and booking management.				
5. The features of the proposed system are complete.				
6. The CMS (content management system of the proposed system) allows for easy content updates, such as modifying menus, pricing, and promotions.				
7. The proposed system meets the expectations of the end-users in terms of functionality and usability.				
8. The system responds quickly to user inputs.				
9. The interface design is visually appealing and well-organized.				
10. The system's interface is user-friendly.				
11. The system's security measures meet the expectations of the end-users.				
12. The system is more satisfying to use.				

13. The system provides timely updates and notifications.				
14. The system's navigation is intuitive and easy to understand.				
15. The system can accommodate all transactions related to events reservation and catering. and end-users.				

Name (optional): _____

 Age: _____

Position: _____

Highest Educational Attainment: _____

QUESTIONNAIRES

EVALUATION OF THE CURRENT SYSTEM

(Pretest for Customers)

This survey questionnaire is provided in order to get the evaluation of the respondents

towards the current system and its accuracy.

Instruction: Please rate the following questions based on the ratings given below.

SS (Strongly Satisfied)	S (Satisfied)	D (Dissatisfied)	SD (Strongly Dissatisfied)

a .Booking Efficiency

QUESTIONS	SS 1	S 2	D 3	SD 4
1. The booking details, including event date and services, are accurately recorded.				
2. The system provides instant confirmation for bookings.				
3. The booking process is quick and hassle-free.				
4. Booking modifications and cancellations are handled smoothly.				
5. The system prevents duplicate or conflicting bookings.				

b.User-Friendliness

QUESTIONS	SS 1	S 2	D 3	SD 4
1. The booking form is easy to fill out and submit				
2. Booking status updates are easily accessible.				
3. The system provides clear booking procedures.				
4. Customers can see their profile information accurately.				
5. The system supports multiple devices effectively.				

c.Real-time communication

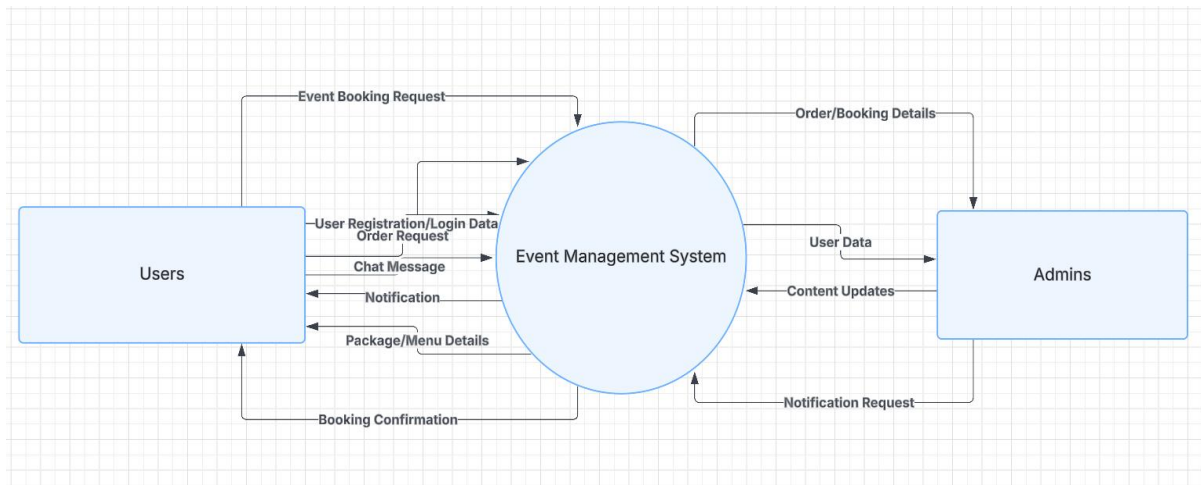| QUESTIONS	SS 1	S 2	D 3	SD 4
1. The proposed system has the quality required for real-time communication (e.g., messaging) using built in messaging in bookings.				
2. The proposed system has the reliability and stability of real-time communication services.				
3. The proposed system's response time for customer support for real-time communication has no unwanted issues.				
4. The proposed system has the security and privacy protection mechanism in using real-time communication tools.				
5. The proposed system provides the customers with ease of access regarding real-time communication services.				

d. Security

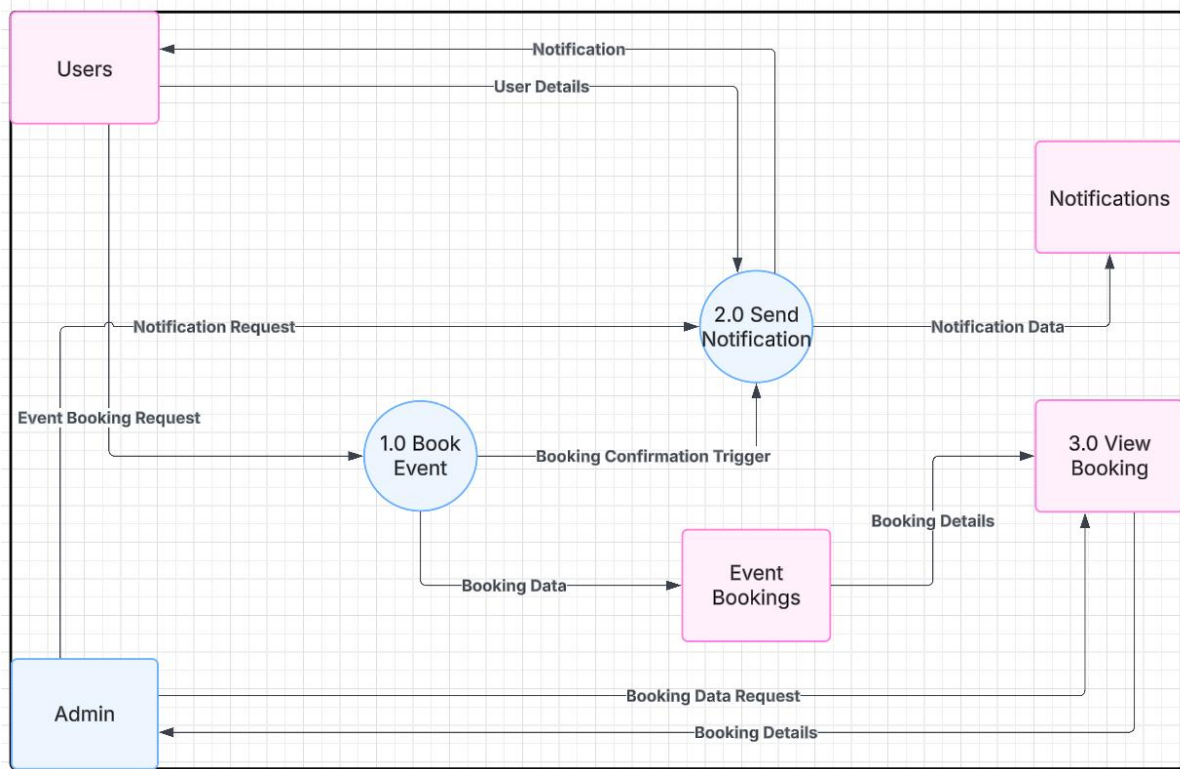| QUESTIONS	SS 1	S 2	D 3	SD 4
1. The proposed system saves personal and event-related information in a secure computer database.				
2. The proposed system protects sensitive data from unauthorized access or breaches.				
3. The proposed system has a regular back-up schedule for the computerized database.				
4. The proposed system implements user-level of accessibility to prevent unauthorized access.				
5. The proposed system commits to the security of the customers data				

Appendix B

CONTEXT DIAGRAM (PROPOSED SYSTEM)

LEVEL 0 (DATA FLOW DIAGRAM)

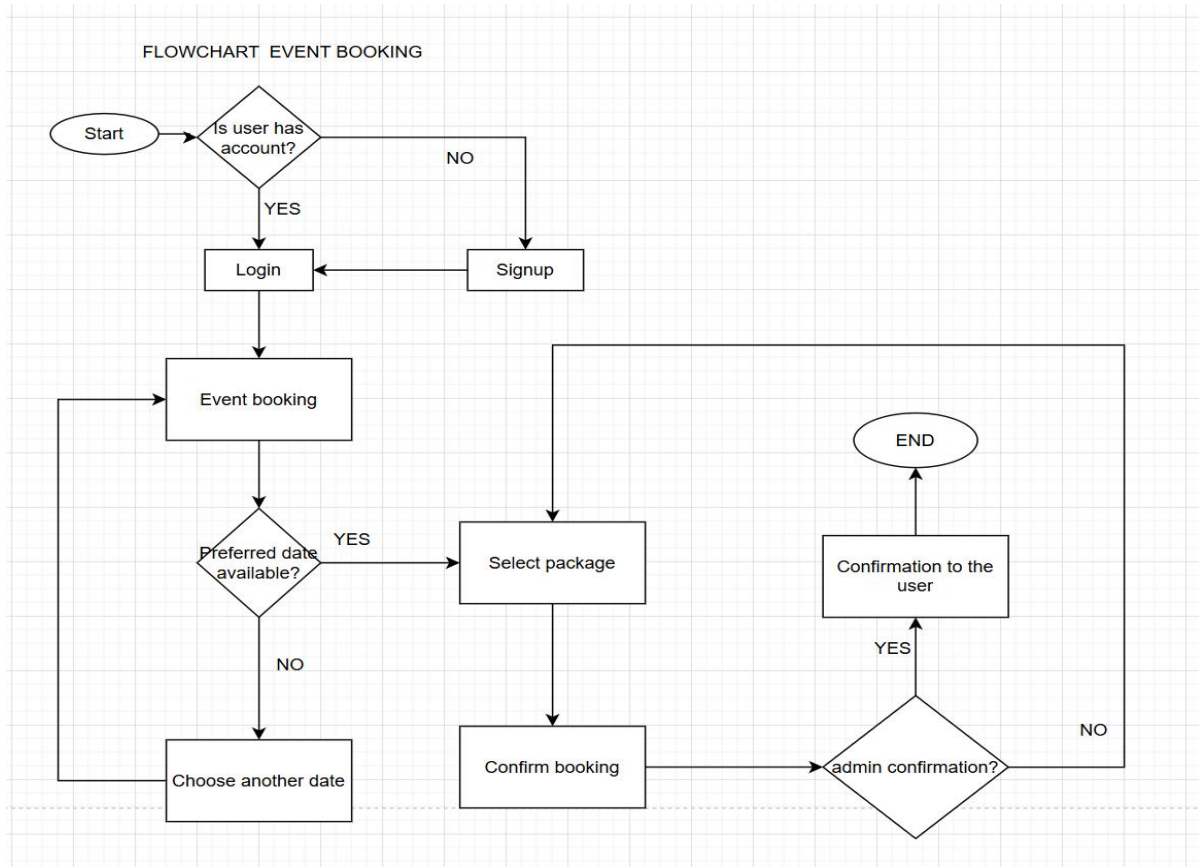# Appendix D

SYSTEM FLOWCHART

FLOWCHART EVENT BOOKING

Appendix G

SYSTEM FUNCTIONS

The proposed Web-based Pochie Events and Catering system with Mobile Application will have (2) main modules, which consist of:

1.   Administrator

2.   Customers

Administrator's Module. This module is used to manage the entire web-based and mobile systems.

Functions:

- This module is used to manage the entire web-based and mobile system such as viewing of upcoming booking and events of the customer

- This module can manipulate the data stored in the database.

- The administrator's module can be accessed only by users   with the highest level of accessibility.

- System's security and backup were set in this module.

Customer Module. This module enhances customer experience by offering personalized event planning and catering solutions.

Functions:

- Overview of bookings.

- Event & Catering Booking System: Online booking system with menu and venue selection. Manual checking of venue availability.

- Order & Payment Management: Manual invoicing.

- Live Order Tracking & Notifications: The customer is able to track basic order status, updates and notifications for booking confirmations.

Appendix H

PHYSICAL ENVIRONMENT AND RESOURCES

The researcher utilizes physical environment and other resources upon the implementation of the Web-based Pochie Event and catering system with Mobile Application.

Project Costing

Cost of project development

Time Feasibility	Number of Weeks												Costing	
Activity	1	2	3	4	5	6	7	8	9	10	11	12	No. of Weeks	Qty per Unit Totals
Data Gathering	▓	▓	▓	▓									4	200
Project Development and Planning	▓	▓	▓	▓	▓	▓	▓	▓					8	2000
Preparation of Materials	▓	▓	▓	▓	▓	▓	▓	▓	▓				10	150
Actual Project Development				▓	▓	▓	▓	▓	▓	▓	▓	▓	11	2750
Testing and Evaluation										▓	▓	▓	2	400
Program Implementation												▓	1	1500
Total Amount Php														7,000

Cost of Hardware Components

The cost of hardware components was based on https://pcworx.ph/ pricelist dated April 02, 2025. The hardware specification can run the Web-based Pochie Event and catering system with Mobile Application.

Hardware Component's Name	Cost
ACER aspire	Php 3,960.00
IRyzen 5 5500	Php 5,500
ASRock B450 Steel Legend	Php 3,800
Team TForce Delta 2x8GB 3600 WH	Php2,000
Hikvision E3000 256GB NVMe	Php 2,500
WD Blue 1TB HDD	Php5,580.00
ASUS TUF GTX1650	Php 3,500
FSP HV650 Pro 85+ Bronze	Php 2,800.0
Tecware Forge S White	Php 9,500
Gigabyte G24F-2 24" IPS 165Hz 1ms Monitor	Php 1,800
Logitech G304 Mouse	Php 2,200.00
Rakk Pluma Bluetooth Wireless Keyboard	Php 2,000
SteelSeries Arctis 3 Black Headset	Php 3,500
Total	Php ₱93,850.00.

Cost of Software Components

Software Component's Name	Software Cost
Microsoft Windows 11	FREE
Mozilla Firefox	FREE
Internet Explorer	FREE
Google Chrome	FREE
XAMPP server	FREE
Personal Homepage Hypertext Preprocessor (PHP)	FREE
Cascading Style Sheet (PHP)	FREE
Visual Studio Code	FREE
JAVASCRIPT	FREE
Bootstrap 5.3.3	FREE
Total	0

Operating Cost

Electric Consumption

Consumption Information	Computation
Monthly Rate	Php 11.58/kWh
1 Month/ 1 Set	50kWh * 11.58 Php
1 Year/ 1 Set	50kWh * 11.58 Php * 12
Total Electric Consumption Cost	Php 579 per month per set
	Php 6,948.00 per year per set

Web Host

Items	Prices
Domain Name Registration	FREE
Web Host Cost	Php 00.00 / month
Total Cost	0

Total Cost of the Project

Item	Cost
Project Costing	Php 7, 000
Hardware Components	Php 93,850.00
Software Components	FREE
Electric Consumption	Php 6,948.00 per year per set
Web Host	Php 0 per year
Total	Php 107,798

Appendix I

CURRICULUM VITAE

of

JOHN LLYOD NAZAR

Personal Data:

Birth date: AUGUST 17,2004
Birthplace: UNITED ARAB EMIRATES

Gender: MALE
Civil Status: SINGLE
Religion: CATHOLIC
Nationality: FILIPINO
E-mail address: johnllyod_nazar@aura.edu.ph

Educational Background

Tertiary: Mondriaan AURA College
Secondary: SANTA CRUZ ACADEMY   2022
Primary: Sta.Cruz South Central Elementary School   2015

Work Experienced:

Affiliated Organization:

Seminars Attended:

March 15 ,2025   "Branding Mastery: Uniting Design, Identity   Mondriaan Aura College
                  , and Industry Influence"

March 15 ,2025   "Hardware Fundamentals: For IT Professionals" Mondriaan Aura College

January 1,2025   "Browave(Philippines)Corporatio"   Mondriaan Aura College

October 28,2025 "Cyber Security: information Dissemination"   Mondriaan Aura College

CURRICULUM VITAE

of

JAYSON ALBERT RIEL, LOPEZ

Personal Data:

Birth date: MARCH 9,2003
Birthplace: OLONGAPO CITY
Gender: MALE
Civil Status: SINGLE
Religion: CATHOLIC
Nationality: FILIPINO
E-mail address: jaysonalbert_lopez@aura.edu.ph

Educational Background

Tertiary: Mondrian AURA College
SENIOR HIGH: Subic Bay College (SBCI)   2022
SECONDARY: James L.Gordon Integrated School   2019
Primary: Ilamin Elementary School   2015

Work Experienced:

Affiliated Organization:

Seminars Attended:

March 15 ,2025   "Branding Mastery: Uniting Design, Identity   Mondriaan Aura College
                          , and Industry Influence"
March 15 ,2025   "Hardware Fundamentals: For IT Professionals" Mondriaan Aura College

CURRICULUM VITAE

of

DANICA CERRADA

Personal Data:

Birth date: MARCH 26,2003
Birthplace: OLONGAPO CITY
Gender: FEMALE
Civil Status: SINGLE
Religion: CATHOLIC
Nationality: FILIPINO
E-mail address: danica_cerrada@aura.edu.ph

Educational Background

Tertiary:	Mondriaan AURA College	
SENIOR HIGH:	Mondriaan Aura College	2022
SECONDARY:	Olongapo City National HighSchool	2020
Primary:	Olongapo City Elementary School	2015

Work Experienced:

Affiliated Organization:

Seminars Attended:

March 15 ,2025   "Branding Mastery: Uniting Design, Identity   Mondriaan Aura College
                              , and Industry Influence"

March 15 ,2025   "Hardware Fundamentals: For IT Professionals" Mondriaan Aura College

March 2,2025   "The Perfect Mix Where Motion Meets Sound"   Gordon College

Date	Title	Venue
October 26,2024	"Introduction to Figma: Master- the Basics of UI/UX Design"	Gordon College
October 26,2024	"Branding Mastery:Uniting Design,- and Industry Influence"	Gordon College
October 20,2024	"Branding and Identity: Creating- a Visual Identity"	Gordon College
October 14,2024	"DevSecOps:Beyond Compliance,- Towards Resilience"	Mondriaan Aura College
October 14,2024	"Leveraging Cloud Technologies for Modern Software Development"	Mondriaan Aura College
October 12,2024	"SULONG AURISTA:LEADERSHIP TRAINING AND SEMINAR"	Mondriaan Aura College
September 4,2024	"SQL and PostgreSQL Database with- PgAdmin Basics"	Mondriaan Aura College
April 27, 2024	"Ctrl+Alt+Defend:Lock It Down An Introduction- to Cybersecurity"	Gordon College
March 18,2024	"Open Source Software"	Mondriaan Aura College
March 14,2024	"Discovering Laravel:Your Gateway- to PHP Framework Mastery"	Mondriaan Aura College
October 28,2023	"Cyber Security:Information Dissemination"	Mondriaan Aura College
October 14,2023	"The Basics of Phython"	Mondriaan Aura College
October 21,2022	"THE 4 PILLARS OF OOP USING- MICROSOFT,C# AND .NET"	Mondriaan Aura College