**Calbayog Events Venue Rentals Web Application**

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**CHAPTER 1**

**INTRODUCTION**

**Project Context**

Web application development, the creation of application programs that reside on remote servers and are delivered to the user's device over the Internet, is one of the most important sectors of the modern information technology (IT) and digital world. These web app advancements have provided businesses with new frameworks and innovative solutions to analyze their growth, eliminate tech and other barriers, and improve businesses’ products and services accordingly (Davis, 2020).

An online reservation system is a software solution that allows customers to book their reservations or appointments online via a company’s website or app instead of over the phone or in person. Depending on the sophistication of the platform, an online reservation system might also permit customers to pay for their appointment or reservation services ahead of time. (Tian, 2021).

Calbayog, is a city on the western coast of Samar Island, Philippines. The city lies along the Samar Sea at the mouth of the Calbayog River. It is a religious and educational Centre, with fishing and mat-making the main industries. Residents in Calbayog and clients from different places are having problems and issues in finding events places that good suit their preferences in Calbayog city. The potential clients still need to travel to different locations just to see the events places, it’s tiresome, a waste of time and money. Events venues are also having trouble communicating with potential clients because they don’t’ have a system that will manage their reservations and make their services public. Moreover, the reservation processes are done manually, which is repetitive and troublesome.

The researchers proposed to develop a web-based application entitled Calbayog City Events Venue Rentals Web Application that’s solved the problem encountered by the residents and potential clients of event venues in Calbayog City. This proposal has a special feature because the events venues in Calbayog City can be found and viewed in this web application. The clients can make reservations once they have chosen a specific event venue that will suit their preferences. The application will also accept the payment through gateway interfaces as per the clients and event venue transactions. The application will also generate bookings, reservations, and sales reports.

**Purpose and Description**

The purpose of this system is to provide a streamlined availability control and booking process between a customer and an event venue; an easy transaction process between potential clients and events venue; save time and money in finding events venue because it can be accessed within one click.

Calbayog Events Venue Rentals Web Application is an automated online booking and reservation that will help events venue accommodate its customer in the most efficient ways of service. The system will carry its functions like online bookings, reservations and reports. The system will process and handle reservations (creating reservation, canceling reservation), creating and deleting clients’ accounts, creating and deleting events venues accounts, accepting payment through gateway interfaces, sending confirmation messages through e-mail, displaying various searching features of reservation, and provide reports. The system will provide history or dashboards to business entities and clients. The system will also have log-in and log-out mechanisms for all the users.

**Objectives**

The main objectives of this study is to develop an Events Venue Rentals Web Application for Calbayog City.

Specifically, it aims to:

1. Provide the online registration for clients and business entities.

2. Manage booking and manipulate booking information.

3. To accept payment through gateway interfaces.

4. Generate Relevant Reports.

5. Evaluate the capability of system using Technology Acceptance Model.

**Scope and Limitations**

The system will provide six modules: The Administrator Module, Business entities Module, Clients Module, System Module, Reservation Module, and Payment Module. The administrator will manually check the required papers which is submitted as attachments through the web application and in person, such as business permits, BIR registrations, sanitary permits, etc. The administrator can also log-in and log-out. Business entities have the power to manage and manipulate reservation information, confirm payment, and manage the services they offer. The business entities can upload the required documents through this system then submit it personally to the administrator. The system module will secure the system and send confirmation messages through e-mail to the clients once payment is received. This process will be done manually by the business entities. The client’s module will handle the process of creating and updating clients’ accounts. Registered clients can view the information of the registered business entities company, and the availability of the services, and make a reservation. For the not registered clients, they are not allowed to make a reservation. They can only view the details of the services the company is offering. The reservation module will handle all the reservation information and processes. The payment module will handle and accept payment through gateway interfaces. However, it still depends on what the clients and business entities agreed upon. Once the reservation is made, the client will receive a confirmation message through e-mail. The client can only make one a reservation at the moment. They can only make another reservation once the cancellation of the previous reservation is confirmed by the business entities.

The system will not be utilized by establishments, that is not within Calbayog City offering event venues and event accommodation. The system will not accept and manage the payment, it will only accept payment through gateway interfaces. The system will not automatically register the business entities it will be handled manually by the administrator.

**CHAPTER 2**

**Review of Related Literature/Systems**

This chapter contains the system’s related literatures, studies and systems, which will help researchers develop the Calbayog Events Place Rentals Application. These resources aided the researchers in designing and developing information systems and understanding the advantages to organizations. The researchers developed a successful information system using these related studies.

As modernization and technology are rapidly innovating, they are adopted by all sectors of society, including the economy, businesses, and organizations. The researchers, like the proposed system, adapted technological advancement to address the issues and problems raised by the respondents.

According to (Cleary, 2020) Any organization and society heavily rely on information systems and information technology (IS/IT). IS/IT has a big influence on how companies and organizations with their customers, market themselves, deliver their products, and run their business processes. Organizations and society face new opportunities and challenges as a result of new developments in IS/IT. When a company fails to keep up with its competitors' use of IT or the expectations of its customers, it may be forced to shut.

Since the Internet's explosive growth in recent years (Kujanpää, 2012), an increasing number of daily tasks and operations are being performed online via computers and mobile devices. Making reservations or using a booking system is one of these jobs. There are various kinds of booking systems available from various software developers and companies, and they are required in a variety of situations. There are reservation systems in restaurants, hospitals, barbershops, and schools, among other places.

In the hospitality industry, technology application innovations for services used as digital marketing strategies include providing online reservation system facilities as distribution channels and online customer reviews as promotional tools.

(Delizo & Esguerro, 2011) Led the development of a web-based hotel reservation system that allows users to book hotel rooms using a web browser. The presentation layer uses JavaServer Faces technology, the service layer uses Spring Framework, and the data access layer uses the iBatis library. The system included features such as hotel room search and booking, email notification of all events involving a user sent to a given address during the user registration, support for the definition process of each hotel component, and completion of the booking process by notifying the system that the guest arrived at the hotel and obtained keys to the booked room. Its modular architecture makes the app more error-resistant and flexible, making it simple to add new features.

The proposed system and the mentioned information system have the same features, such as features for the said services, email notification and confirmation, support for the organization's business process, and automatic completion of the booking process once the reservation process is complete.

Based on the related system of (Delizo DA, & Esguerra M.A., 2011) Online Hotel Reservation System for the College of International Hospitality Management at Lyceum of the Philippines University serves as a tool for the faculty members to teach their students the basic operations of hotel reservation. For security purposes, the system required a username and password assigned to each account. The creation of student and client accounts was handled by a system administrator. Online Reservation System for University Facilities. This project designed and developed the IAU facilities reservation online system. The proposed system addressed the unbalanced use of university facilities such as halls, theaters, swimming pools, and stadiums, with the IAU reservation facilities system proposing to be used by the community as part of the university's role in community services without generating any financial gain for the university. The Unified Modeling Language (UML), MySQL, and the Visual Basic (VB) programming language were used to design and implement the proposed IAU facilities reservation system.

Online Hotel Reservation System for the College of International Hospitality Management at Lyceum of the Philippines University and Calbayog Events Venue Web Application has the same functionalities in terms of creating accounts and security. In the proposed system the administrator will be the one who will responsible for registering the business entities accounts. In addition, both of the system required username and password for all the users for security purposes.

According to (Bucag, Castil, Maglangit, Solde, & Nikki, 2016), the current reservation system requires the client to fill out a registration form provided by Alomah's Place, which requires the client to provide some personal information as well as reservation data, which appears redundant and inappropriate. People's actions are heavily reliant on their manual reservation system, which increases the risk of human error. Even data/records are transferred and sorted manually, resulting in inaccurate data. This type of procedure is best for walk-in customers who have the opportunity to look around Alomah's Place. The Alomah's Place owner use the Online Reservation & Billing System to improve and update their current system. Other services offered by Alomah's Place owner are only displayed by the system. The offered reservation was displayed on the website by the system. If a member is not registered, they can only view the entire website; in terms of client inquiries, the administrator can only respond to any messages sent by the client at any given time.

The described system above has a similar type of application to the proposed system; they are both web applications or can be accessed through the web. All the services offered are displayed on the website, and guests or non-registered users can only view the entire site and cannot make reservations.

Bhakat (2012) developed an online railway ticket reservation system. The code end programming language used was ASP.NET and C#. The data is stored in a Microsoft SQL Server database with multiple tables. This website is an online travel booking site that allows users to book tours to national and international destinations in a few simple steps at a low cost. It enables the Administrator to carry out all operations and see all reservations. However, only limited access is granted to the general public. Travelmasti assists with tour package booking. Before booking a tour, the user must first register.

The system mentioned above together with the proposed system is accessible through the world wide web. The administrator can also see all the operations. It also requires user registration.

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According to (Resmark, 2020) You're doing everything yourself if you manage reservations manually. Taking reservations, canceling reservations, and informing customers of available times are just the starting point. Then there's the human aspect to take into account. It's easy to overbook, misplace the schedule, or write down incorrect (or incomplete) information with a manual system. Manual reservation management is, in simple, inconvenient at best and a significant revenue drain at worst. Customers who must call in to make a reservation will have a poor user experience. Reservation management software solves all of these issues. They centralize all of your data and more. They also make it simple to offer online reservations, which relieves a lot of stress and increases sales. In addition to the more general issues that reservation software addresses, these systems are frequently designed to address industry-specific problems.

For Hansonic Hotel, an online hotel reservation system is being developed (Bemile, Achampong, & Danquah, 2014). Formerly, both the hotel and the Hans Botel use a manual booking system. When a booking book is full, it is usually dumped somewhere else or thrown away, which is not an useful method because it prevents you from analyzing data to spot trends and making proper plans. Management isn't happy about it because they can't keep proper records or keep track of details. Customers will be unable to book a room from any location, which will obviously limit their competitiveness. As a result, the research team created an online hotel reservation system that allows customers to book whatever they require from wherever they are before checking into the hotel. The system will make information and reporting more accessible and retrievable.

Hansonic Hotel reservation system systematically and automatically processes the reservation the same with Calbayog Events Venues Rentals Web Application, together with the system can be accessed online.

La Felicidad Resort, according to (Mojica,2019), has been using a manual system for billing and reservations. As a result, most transactions and operations were problematic for the resort desk officers. They found it difficult to keep track of availability, which caused delays in making reservations. As an outcome, they didn't have enough data storage, such as databases, which led to data tampering. Resorts, for example, require a system that can store, manage, and manipulate files, as well as make billing and reservation processes simple, without sacrificing high-quality service for their valued customers. In general, the created website promotes the resort's amenities and services. As a result, the website served as a means of keeping up with the region's most popular resorts. The database served as a data repository as well as a tool for updating and retrieving information. As a result, the data security issue is resolved because only authorized users have access to the system.

The mentioned system above is very similar to the proposed system. Both of the system will manage all the booking processes. Starting from managing the reservation list to providing reports and evaluation.

The existing system of venue reservation at Adamson University (Banogon, Battad, Guevarra, Lapea, & Alejandro, 2019) is costly, lengthy, and strenuous all at the same time. With only four (4) employees, the OSA handles at least forty (40) inquiries and transactions per day. The PFGSO, on the other hand, processes at least ten (10) transactions per day exclusively from RSOs, as well as institutional events that are deemed more important. The PFGSO employs ten (10) people. The PFGSO will be able to accept or receive online bookings for their services thanks to a reservation system. The Office of Student Affairs can have an access for the events done for their perusal. The Physical Facilities and General Services Office can update the status of the needed equipment and/or the venues if it is available or unavailable. The convenience of having an online reservation system is one of the main reasons why any service that accepts reservations should have one.

The developed systems at Adamson University and Calbayog Events Venue Rentals both accept and receive online bookings for the services they are offering. Both of the systems can perform the task of editing and updating information and details based on the user’s wants and needs. Both systems will also show the availability of the services the organization or business entity is offering.

One of the best features of this system is that it is a web application and can be accessed from anywhere with internet access. The availability of the services and ease of access.

An Online Clinic Reservation System is implemented using an online-based web application in the study of (Zaw, 2019). This process can transform a manual document-based system into a computerized online system. Users can use this system to look up clinic information, services, and make appointments online. The doctor and patient information can be managed by the administrator. Login requires a username and password for security reasons. Doctors can look up information about their appointments. The system will have a database that will store all of the information. For the private clinic, they use a digital system to keep track of patient information and other clinic-related data.

Calbayog Events Venue Rentals Web Application and the described system above have the same task processes. Both systems are web applications. The clients can check the availability of the services, get service information, and make appointments online. The user accounts can be managed by the administrator. Both of the users require a username and password for security purposes.

IoT based biometric transport system (Alam, Kader, Parvin, Sultana S., Sultana Z. & Muhammad, 2021). A device is installed at the bus's entrance as part of this system. After being authorized by this device, students or other stakeholders can book an available seat. By controlling an LED array, the device can display the seat layout and indicate whether a seat is booked or empty. An LCD display shows the total number of seats and the number of empty seats. The device transmits data to a server via the internet. As a result, the transportation authority can keep track of how many empty seats there are on the bus and store the information for future analysis. This system assists educational institutions' transportation divisions in more cost-effectively and intelligently managing transportation facilities, avoiding many difficulties.

Both the proposed system and the system mentioned above can track the availability of the services offered by the organizations.

Payment processing is also one of the major drawbacks of manual reservations. The customers need to go to the office personally to process the payment. Online payment systems are defined here as financial payments made electronically via cell phones. With payment apps such as Gcash, Paymaya, Palawan Express, etc., people no longer need to carry cash or credit cards around to make their purchases.

According to the findings of (Mulyana, Rusmana, and Rafdhi, 2021), information regarding traditional and modern art can be made available in a network computing environment where users of the Kenda application can participate in helping to promote traditional arts and purchasing art services for specific events. The user can also view photos of the art gallery and make transactions online even during online session. This Kenda application is used as an advertising medium by artists and art studio owners, as well as to introduce their talents to potential users or the general public. On its mobile application, online ordering also helps to make use of an online payment system. While the organizer makes use of the Kenda application to look for artists or recruit new artists to join who will fill the show. Based on the prices of the art performers' services and the different kinds of art in this Kenda application, the organizer will search for suitable art performers to fill in the program.

Kenda Application and Calbayog Events Venue Web Application both serves as an advertising medium to the organization. Aside from being an advertising medium it also provides online reservation services. The clients can view the available services and base on the amount of services the organization can filled out the suitable services the clients are finding.

Automated calculation of expenses is one of the advantages of reservation systems. Likewise, it is available with this system. You don’t need to calculate manually all the expenses, which is tedious and has a high risk of miscalculation.

Automated household water supply monitoring and billing system was researched (Rahman; Ahmed, Hasan & Ashraful, 2018). This project used an Arduino mega 2560, a double relay for automation of the switching feature, and water level and water flow sensors to detect the level and amount of water used, respectively. The automatic switching of the DC water motor based on the level of water in the reservoir, and also the display of the amount of water used in each block, are features of this project. A LCD Alphanumeric display was used for the display. They also included a set utilization capacity for each floor and billing based on usage.

Monitoring the availability and use of the services is what the system described above and the Calbayog Events Venue Rentals Web Application have in common. The software and technologies used are different, but the outcomes are similar.

Checking the availability of the services offered by the organizations is one of the processes that this system offers. The clients can save time and money because instead of going to the event venues in person, they can check the availability using this system.

The authors of this paper (Karthi and Harris, 2016) assert that there must be a reliable way to determine whether a parking space is available and to reserve one. Only the parking space's availability is the focus of the current work. Drivers, however, are unable to determine whether a parking space is immediately available in this fast-paced world. Smart parking with a reservation option using a cloud-based environment has been developed to address this drawback. This helps drivers park their cars more easily and reduces traffic congestion. Using the reservation app on an Android mobile, drivers can make requests to see if a parking space is available. A driver can reserve a slot through an online payment system if it is available. Additionally, drivers can cancel the reserved parking through the propose system. The system also enables drivers to cancel the reserved parking slot. Amount will be refunded after cancellation charges.

Calbayog Events Venue Rentals Web Application and the system above provide reservation services. The users can see the availability of the services or make requests to see the availability of the services. The user can reserve the service through online payment if it is available. The reservation can also be cancelled, and the amount of payment will be refunded with cancellation charges.

According to the related system of (Tigist, 2019), the system enables customers to check the availability of bus tickets, book bus tickets using prepaid card payment mode, and view trip information online. Regardless of the geographic barrier, the system effectively manages bus ticketing activities, which can act as a catalyst in the cutthroat business environment. The creation of this online bus ticketing system makes it easier for customers to purchase tickets whenever they want, and it also allows the business to handle ticket sales more effectively. Both the passengers and the transportation office will find the Prepaid card payment system to be simple and practical. The ability to book tickets from any location with an internet connection is one of the advantages of using this online bus ticketing system.

Online Bus Ticketing System, like Calbayog Events Venue Rentals Web Application, offers reservation processes, service availability, and reservation information online. Payment is managed through prepaid card payments in the Online Bus Ticket Reservation application, while it is accepted through gateway interfaces in the Calbayog Events Venue Rentals Web Application.

According to the study by Khaitan, Sisodia, Jaiswal, and Kabra (2021), their developed systems enable customers to check the availability of bus tickets at any time using the online system. Additionally, customers do not need to use cash to purchase tickets; instead, they can use any online payment platform to simplify the process. Customers can pay for tickets using quick and easy online payment methods. Since the website is accessible around-the-clock and reservations can be made whenever, there is no time restriction on the reservation availability. Additionally, the use of a digital payment system that only accepts payments online further reduces the spread of viruses, making both business, travel safer and comfortable.

The system described above has similar features to the proposed system. The reservation features provide the availability of the services and are accessible anytime and anywhere with an internet connection. In terms of payment, the only difference is that in the proposed system, payments will only be accepted through gateway interfaces; the system will not manage them automatically.

Systems that generate reports are a huge benefit to every organization. It makes every report and information and data gathering ten times easier. It also reduces the time consumed by the system users to evaluate reports.

Based on the system of (Castro and Custodio, 2016), they improved the pre-existing system, where the reservation process cannot be done online, and designed a system that can be available anytime and anywhere by various users from its Front Office, highlighting the best features of BulSU Hostel, its reservation process, and other services. On the other hand, the administrator and other authorized users are the only people whom can access the Back Office. Using this account, the administrator can rapidly edit or modify every one of the website's components, including the booking process, associated expenses, and gallery images. In addition to maintaining the website through this account, the admin can delete data and print reports.

Similar to the proposed system, the BulSU Hotel Reservation System is accessible online. The system will also handle reservations. The users can rapidly edit or modify everything in the website components, including the booking process, associated expenses, and gallery images. The administrator can also delete data and, most importantly, print reports.

In the study by (Razali, Kasim, Hassan, Mahdin, Ramli, Fudzee, Salamat, 2018), their system can automatize manual system to web application. Additionally, the developed system can make reservations for customers easier. This system can assist operators in managing customer reservation information and generating profit reports. Likewise, this created system offers a variety of web-based technology application experiences, ranging from manual to more structured techniques.

The system described above is also a web application that can make reservations for clients, the same as the Calbayog Events Venue Rentals Web Application. They also have similar features for assisting in managing customer reservations and generating profit reports.

Patients can easily book and manage their own appointments with the system developed by (Idowu, Adeosun, & Williams, 2014) for the NHIS medical appointment booking system. They will receive a prompt SMS or email reminder of their appointments prior to the scheduled time. Their appointment can be quickly viewed at the Home page of the system itself. These features might inadvertently contribute to a decrease in the number of patients who cancel or show up late for appointments and missed medical appointments. Patients would be notified via SMS or email if their appointment was postponed, if the service provider had an urgent need elsewhere, or in any other circumstance that might lead to their absence. With this system, patients could also keep tabs on their own appointment history. The system's main purpose is to make it easier for patients and medical staff to schedule appointments. The system's usability and functionality will be further improved by the addition of new modules like Announcement, Medical case record, and block/unblock schedule, which will also enable more flexible management of patients' appointments. By giving patients the ability to manage their own appointments and personal profiles, the system transfers some administrative tasks to the users. It won't take long to switch from a paper-based appointment record to an electronic one. The system also makes it easier for medical staff to produce reports, which lessens their workload.

Calbayog Events Venue Rentals Web Application and the NHIS medical appointment booking system have almost the same features. In terms of notification, both systems will use email to remind their clients about the reservations they made. The appointment will be displayed on the homepage of the service they’ve appointed. An email will also be sent if the reservation is canceled or the cancellation is confirmed. Users can also access their reservation history. In terms of security, both systems require a username and password. The users will also have the freedom to edit their profiles. Both systems will also provide reports.

The Development of an Online Bus Ticket Reservation System for a Transportation Service in Nigeria (Oloyede, Alaya, & Adewole, 2015). According to the study, bus travel is a rapidly expanding business in Nigeria, with numerous operations that must be completed manually. It takes a long time and results in numerous errors. As a result, a lot of problems arise from time to time, and they have a lot of customer disputes. They are offered this reservation system to solve the above problem, as well as to maintain records of items, seat availability for customers, price per seat, bill generation, and other things. Three modules make up the reservation system. The first module aids the customer in determining the availability of seats in a specific bus on a specific date, the second module aids him in reserving a ticket, and the third module aids him in canceling a reserved ticket. The administrator can add vehicle, driver and generate report as well.

The proposed system and the Online Bus Transportation in Nigeria relates in providing reservation processes, availability and price of the service, bill generation and generating reports.

The workshop reservation system is capable of handling transitions for multiple workshops based on the study of (Shah and Luo, 2016). The workshop reservation system keeps track of each participant's registration data. The workshop reservation system enables a user to add a workshop to his or her cart, check history, and view workshop details in addition to other regular activities that a content management system typically offers to its registered users. An administrator will have complete control over all functionalities, including adding and deleting information without any limitations. A report for any workshop may also be produced by the administrator.

The describe system above and the proposed system has similar features like checking history of transactions and view services details. The administrator of both systems will also have the power to control all functionalities without any limitations. Generating reports is also one of the same features.

Analyzing whether the clients and users can accept the system and what are the factors that affects that acceptance is very important. The system is useless if there is no user. Therefore, it is essential to evaluate the capability of the system using the Technology Acceptance Model (TAM). This system provides this essential analyzation.

According to the conclusions of (Li, Wang, Wangh and Zhou, 2019). Alipay has captured the attention of smartphone users as a convenient and new payment method. According to the study, individuals' intentions to use Alipay are primarily influenced by their risk perceptions, perceived ease of use, and perceived usefulness. Users' attitudes and intentions to use Alipay are positively influenced by perceived ease of use and perceived usefulness. Perceived usefulness was also positively influenced by perceived ease of use. Risk perception has a negative impact not only on perceived ease of use and perceived usefulness, but also on users' attitudes and intentions to use Alipay. To motivate individuals to use Alipay, the main focus should be on risk perception, perceived ease of use and perceived usefulness. In general, this research highlighted the importance of risk perception, perceived ease of use and perceived usefulness in motivating individuals to use Alipay. To encourage people to use Alipay, the main focus should be on perceived risk, perceived ease of use, and perceived usefulness. Overall, the said study emphasized the importance of risk perception, perceived ease of use, and perceived usefulness in motivating people to use Alipay.

According to the study of (Li-Yang, 2019) based on the framework of Technology Acceptance Model, the hypothesis put forward in this study has been found to have a positive and significant relationship between user's usability and user's usefulness. User's ease of use and user's attitude have a positive significant relationship. There is a positive significant relationship between user's usefulness and user's attitude. There is a positive significant relationship between users' usefulness and behavior intention. The user's attitude and behavior intention are positively significant.

The TAM is used as the theoretical framework in this study (Zhao Y.; Wang; Guo Z.; Huang, Pan, Guo Y., 20220) to evaluate the online reservation intentions for major attractions and its influential factors. Two variables—perceived risk and government policy—were incorporated into the model to further its potential application in the COVID-19 context. The study then analyzed how reservations for tourist attractions are adversely affected by subjective norms, governmental policy, perceived usefulness, perceived usability, and perceived risk. Using the previously mentioned research, this paper comes to the following conclusions: government policy is the primary factor influencing tourists' reservation intentions; subjective norms have no significant impact on reservation behavior under voluntary situations; perceived usefulness positively affects tourists' reservation intentions; and perceived risk significantly negatively affects reservations intentions. The external factor of government policy has a bigger effect on travelers' reservation motivations than perceived risk does.

According to the study of (Sa, Lee, Jee and Kim, 2018) which is the purpose of is to understand the intention of users of Korean professional baseball mobile reservation system by applying technology acceptance model (TAM). The results of this study are as follows. First, the interest of professional baseball games did not have a significant effect on the perceived usefulness. Second, the interest of professional baseball games had a significant effect on the perceived ease of use. Third, perceived ease of use of Korean professional baseball games mobile reservation system had a significant effect 365 on perceived usefulness. Fourth, perceived usefulness had a positive effect on behavioral intention to accept mobile reservation service. Fifth, perceived ease of use had no effect on behavioral intention. Davis mentioned that usefulness was significantly more strongly linked to usage than was ease of use. Other previous studies found a positive relationship between usefulness and behavioral intention. The results of this study on the relationship can be interpreted as the fact that the user believes that the service will be useful as the reservation service as easy to use. Based on these results, mobile reservation system providers should provide accurate, reliable, and professional baseball information without error on the information system. Users should be able to use the information conveniently while browsing professional baseball advance information on the mobile reservation site.

The study, which was based on a research study by Malison (2022), concentrated on mobile websites and applications for booking hotels and other accommodation. The findings indicated that the majority of participants, the elders, had used websites and applications for booking hotels and other accommodations. This is in line with the activity theory, which claimed that when people retire, they regularly replace their jobs with new endeavors. The social influence was the biggest factor that determined whether elderly people would accept an information system for tourism. It can be assumed that the motivation to use the system for the elders comes from sons, daughters, nephews, nieces, and other relatives, including their friends. This is in line with the idea of success aging and the active aging model, which show that social engagement is crucial to acceptance. "The ease of system usability" was another factor influencing older people's use of the system. The cognitive abilities of the elderly varied, and their use of cutting-edge services like websites varied according to their cognitive age. Likewise, family members or friends may advise the elders to learn the system since socialization was the main determining factor. The systems would appear to be simple to them at that point, and they would feel at ease and capable of using them. The social influence, followed by "The ease of system usability" and "The perception of system advantages" were the factors that had the biggest impact on the intention to use the system. According to what it appears, older people plan to use the system due to influence and recommendations from their family and peers. Additionally, if they believe the system is simple and offers benefits, older people may feel comfortable using tourism-related systems like checking occupancy, promotions, and campaigns.

On the study of (Suziante, Herawati, & Septiande, 2018). The systems would appear to be simple to them at that point, and they would feel at ease and capable of using them. The social influence, followed by "The ease of system usability" and "The perception of system advantages" were the factors that had the biggest impact on the intention to use the system. According to what it appears, older people plan to use the system due to influence and recommendations from their family and peers. Additionally, if they believe the system is simple and offers benefits, older people may feel comfortable using tourism-related systems like checking occupancy, promotions, and campaigns. However, for the Perceived Usefulness, only the users' side has a significant impact, not the driver's, and compatibility has no significant impact, even if it tends to the driver's or passengers' negative side. Peer Influence has a significant impact on Subjective Norms factors related to environmental and social influence, both from the driver's and the user's perspectives. However, according to user perceptions, the driver is the only one who is significantly impacted by the superior factor. Factors of Self-Efficacy and Technology Facilitating Conditions have a significant impact on the perception of behavioral control, whether it comes from the user or the driver. However, according to the user, the factors influencing resource condition are only significant from the driver's perspective. According to the driver but not the user, factors of perceived behavioral control have a significant impact on the intention to use factors related to a desire to use. According to the user, there is an intention to use, but the driver believes it is not important. According to the driver and the user, usage behavior factors that relate to the actual use are significantly influenced by intention to use.

As a result, Calbayog Events Venue Rentals Web-based Application, like the related studies and literature mentioned above, is one of the required systems and advancements in Calbayog City. Some organizations, however, prefer to use an actual system rather than web-based applications. Almost every organization, both private and public, believed that using a reservation system would help them find the quickest way to process reservations, reduce the amount of time to process reservations, and ensure the reliability and quality of their services to customers.

**CHAPTER 3**

**TECHNICAL BACKGROUND**

The explanation of all technical developments for the proposed system as well as the technologies that have been utilized will be covered in this chapter. The technologies together with its specification and description will be discussed.

**Software Requirements**

The software requirements are the programs that the researcher needs to create the Calbayog Events Venue Rentals Web Application. It consists of applications, scripts, programs, and so on that are used to operate computers and carry out specific tasks.

**Table 1**

**Software Requirements of Calbayog Events Venues Rentals Web-based Application**

|  |  |  |
| --- | --- | --- |
| **Software** | **Specifications** | **Descriptions** |
| Operating system | Window 10 | An operating system (OS), in its most general sense, is software that allows a user to run other applications on a computing device. |
| Programming Language | PHP | PHP stands for Hypertext Preprocessor. PHP is very popular and widely used open-source server-side scripting language to write dynamically generated web pages. This is the programming language that the programmer will used to code the system. |
| Database | MySQL Server  Management Studio | MySQL statements are used to perform tasks such as store data, update data on the database or to retrieve. This is responsible for handling the task of every modules and stores and retrieve data. |
| Application | Adobe Photoshop CS6 | Adobe Photoshop is a software application for image editing and photo retouching for use on Windows or MacOS computers. |
| Application | Visual studio code net. Core (IDE) | Visual Studio Code is a lightweight but powerful source code editor which runs on your desktop and is available for Windows, macOS and Linux. It comes with built-in support for JavaScript. TypeScript and Node. |

Table 1 shows the software requirements needed by the researchers to make a Calbayog Events Venue Rentals Web-based Application there will be possible and amiable. The researchers used Windows 10 or above due to common upgrades as an operating system because of it being the OS available on the laptop. In the programing platform, not only Windows 8 or higher can support the programming platform, but also the Linux, which is used by the company by programming, due to the availability of OS windows 10 or higher by developing an events Venues rentals application to accomplish the job.

The researchers also used a visual studio code net. Core and PHP as a programming language due to the expertise of the developers of the programming languages. The Visual Studio integrated development environment is where we create a creative launching pad that you can use to edit, debug, build code, and then publish an app. The researchers also used Adobe Photoshop CS6 in creating system background design and editing charts, table, logos and images.

**Hardware Requirements**

Hardware requirements are the physical components and peripherals that the researchers needed in order to develop the Calbayog Events Venue Rental Web-based Application. It includes everything with a circuit board that operates within a PC or laptop, such as the motherboard, graphics card, CPU (Central Processing Unit), ventilation fans, webcam, power supply, and so on.

**Table 2**

**Hardware Requirements of Calbayog Events Venue Rentals Web-based Application**

|  |  |  |
| --- | --- | --- |
| **Hardware** | **Specifications** | **Descriptions** |
| Laptop | Processor: intel Celeron  CPC1.60Hz RAM: 4GB  HHD: 500G | One of the hardware devices used in building the system. It is where the system runs and test at the same time. |
| Processor | Pentium III 630MHz | The processor, also known as the CPU, provides the instructions and processing power the computer needs to do its work. The more powerful and updated your processor, the faster your computer can complete its tasks. By getting a more powerful processor, you can help your computer think and work faster. |
| Random Access Memory (RAM) | 128 MB | RAM stands for Random Access Memory and is used as a short-term memory storage space for the computer to place data it’s currently working on so it’s easily accessible. |
| Hard Disk | 20GB | The hard disk is a spindle of magnetic disks, called platters, that record and store information. Because the data is stored magnetically, information recorded to the hard disk remains intact after you turn your computer off. |
| Monitor | 15” Color monitor | A computer monitor is an output device that displays information in pictorial form. A monitor usually comprises the visual display, circuitry, casing, and power supply. |
| KeyBoard | 122 Keys | A computer keyboard is an input device that allows a person to enter letters, numbers, and other symbols (these are called characters in a keyboard) into a computer. It is one of the most used input devices for computers. |

Table 2 shows the hardware requirements that the researches used in the development of the proposed Calbayog Events Venue Rentals Web-based Application. The programmer used a laptop to develop the system due to its availability. The reasonable requirements are minimum so that the development of the system is going to run accurate and better function of the laptop, if the laptop won't run, in case it doesn't meet the minimum requirements and the development will be unsuccessful. And it is better to meet the system requirements and above all to meet a better function of the hardware requirements to satisfy and develop success. These hardware resources were used in this study because these were the minimum requirements needed to make the system and to ensure that it is fully operational.

**Human Resource Requirements**

Resource Requirements are specific capabilities or attributes required by researchers to perform and develop the system. It entails a variety of skills and knowledge, such as coding and design.

**Table 3**

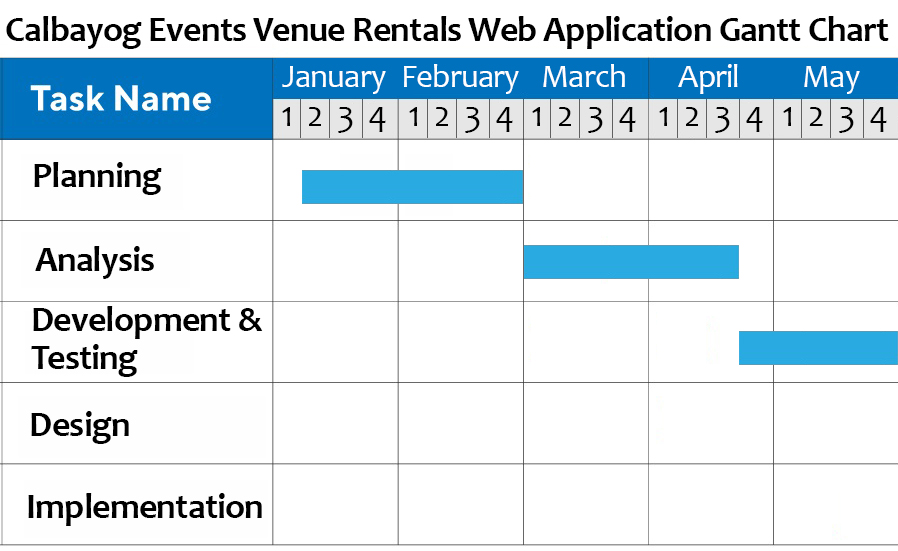
**Human Resource Requirements of Calbayog Events Venue Rentals Web Application**

|  |  |
| --- | --- |
| **Human Resource** | **Descriptions** |
| Programmer | A person who commands, test, debugs, and maintain the detailed instructions called computer programs the computers must follow to perform their functions. This will be the one who will code the configuration of the system. |
| Researcher  System Analyst | The one who conduct and collects information to fulfill the need of requirements before creating and designing a system.  This will be the one who will analyze the system and its processes. |
| Designer | A person that plans the form to design an object before it is made and to make it look good to the user. This will be the one who will design the GUI of the system as well as the design of the entire system. |
| User | The one who uses the system to input primary data.  This will be the administrator, business entities and clients. |

Table 3 shows that Human resources is the one who makes up the workforce of a certain organization in the achievement of its objectives. In table 3 above, the developer should have a programmer to develop a system and for the coding, scripting of the system to accomplish the system needed and accomplishing the crucial part of developing the system. The developer should also have a researcher or system analyst that will collect and conduct info rations to fulfill the needs of requirements before creating and designing the system. The developer should also have a designer to design a system and to make it wonderful to the user and to the owner. Lastly, the developer should have a user that will use the system and input primary data.

**Gantt chart**

Gantt is a chart in which a series of horizontal lines shows the amount of work done or production completed by the researchers in certain periods of time in relation to the amount planned for those periods. It’s illustrate the total amount of time the researchers finish an specific phase in developing the system.

****

**Figure 1.**

**Gantt Chart of Calbayog Events Venue Rentals Web-based Application**

Figure 1 shows the activities and periods done during the development of the Calbayog Events Place Venue Web-based Application. In planning, the researchers consumed 7 weeks of planning since they started gathering background information on the Events Places in Calbayog from the 2nd week of January to the last week of February. In analysis, the researchers also consumed seven (7) weeks to analyze the information they gathered in Event Places in Calbayog, starting from 1st week of March to 3rd week of April. In development and testing, the researchers started from last week of April.

**CHAPTER 4**

**METHODOLOGY, RESULTS AND DISCUSSION**

This project was built using the Systems Development Life Cycle (SDLC) methodology, which involves the phases of planning, analysis, design, development, implementation, and maintenance. It is the most popular and efficient method for researching projects. This chapter mainly focuses on the SDLC method's specified stages. This method was used to achieve the project's goal.

This idea was constructed in response to manual process issues and the time-consuming nature of locating event venues. There was a need to streamline the process of documenting client transactions when booking events and to create easily available support tools that would provide all event venue information in Calbayog City. The SDLC method's second phase was analysis. The analytical step resulted in the creation of an application that will provide information on event venues in Calbayog City while also allowing the client to reserve service at a specific event site that the client has chosen.

The researchers designed the entire project during the third phase of SDLC. At this stage, the researcher developed the visualization of the proposal by employing various diagrams that depict the full system. It required a statement of the functionalities of the various entities and other project features.

During the development phase, the researchers began developing the system based on the system's specifications and user needs. The system's design was followed. At this stage, the system's proposed design is developed per the aims and objectives.

Lastly, during the implementation phase, the developer tested and debugged the developed system multiple times.

Requirements Analysis

The assessment of requirements is crucial to the success or failure of a system because it is the process of defining the user's expectations for a new or modified program. Every misinterpretation at this point may cause an issue with the system's functionality.

The researchers interviewed the owners of the business entities to obtain all of the information necessary for researchers to construct the system appropriately.

The researchers acquired data by asking the owner what information they needed to collect when a client rented an event venue. The data gathered by researchers are business processes, services offered by the business entities, service details and information, reservation rules, and regulations. This data will assist researchers in developing or improving the business transaction process of online bike rental with GPS monitoring.

**Requirements Documentation**

There are two types of requirements documentation for the Calbayog Events Venue Rentals Web application: functional and non-functional requirements. The Functional Requirements part contains the main criteria indicated by the user that the system must execute for the Calbayog Events Venue Rentals Web Application, as well as the requirements stated by the user that can be seen immediately in the final output. Non-functional requirements are quality limitations that the system must meet by the project contract.

**Functional Requirements**

**Table 4**

**Functional Requirements of Calbayog Events Venue Rentals Web Application**

|  |  |
| --- | --- |
| Functional | Description |
| Reservation | The action of reserving or booking an events through online using Calbayog Events Venue Rentals Application |
| Rental | The data of all business entities that are used by the customer to have a reservation |
| Report | The system can generate reports recording to the data need especially the daily, and monthly report of every transactions of the customer. |

Table 4 shows the functional requirements of the Calbayog Events Venue Rentals Web Application. The specified feature specifies the system's capabilities and limits. The table for Functionality describes the system's interactivity.

**Non-Functional Requirements**

**Table 5**

**Non-Functional Requirements of Calbayog Events Venue Rentals Web Application**

|  |  |
| --- | --- |
| Non-Functional | Description |
| Performance | The customer reservation request process can be done within 2 seconds and it depends also on the internet connection. |
| Efficiency | System process can response accurately to the certain needs of customer in Calbayog Events Place Rental Web Application |
| Security | Administrator only can access admin page. The administrator will manually check the required requirements and confirm the business entities registration. The business entities will manage its own business processes and business information. |

Table 5 shows the Non-Functional requirements of Calbayog Events Venue Rentals Web Application. The mentioned characteristics describe the system's restrictions.

**Design of Software, Systems, Product, and/or Processes**

**System Architecture**

**Figure 2. System Architecture of Calbayog Events Venue Rentals Web Application**

Figure 2 illustrates the flow of the Calbayog Events Venue Rentals Web Application, as well as the system's actual environment or usage. The diagram illustrates the most basic method of retrieving data from a computerized system, which represents a significant improvement for the Calbayog Events Venue Rentals Web Application. The system should interact with users or people who are involved with the system, and the process model of the developed system is best discussed using a context diagram and a data flow diagram that show the function performed by the system as well as the interaction between the activities done by the people involved and the activities held during the Calbayog Events Venue Rentals Web Application.

**Process Model**

This section will provide an overview of function-based process modeling. This covers a definition of process modeling as well as thorough information on how to collect data, build appropriate models, interpret output, and use process models.

**Context Diagram**

**Figure 3. Context Diagram of Calbayog Events Venue Rentals Web Application**

Figure 3 illustrates the Context Diagram of an Calbayog Events Venue Rentals Web Application in which

**Data Flow Diagram**

**Figure 4. Data Flow Diagram of Calbayog Events Venue Rentals Web Application**

Figure 4 shows the data flow diagram of Calbayog Events Venue Rentals Web Application. This graphic shows the process flow through which the system processed data in terms of input and output.

**Functional Decomposition Diagram**

**Figure 5. Functional Decomposition Diagram of Calbayog Events Venue Rentals Web Application**

Figure 5 shows the functional decomposition diagram of the Calbayog Events Venue Rentals Web Application.

**Data Model**

In this part, the method of developing a data model is for the data to be saved in a database. The data model emphasizes what data is required and how it should be arranged rather than what operations will be performed on it, which aids in the development of conceptual models and the establishment of relationships between data items.

**Entity Relationship Diagram**

**Figure 6. Entity Relationship Diagram of Calbayog Events Venue Rentals Web Application**

**Data Dictionary**

The data dictionary shown below was adopted by the researchers to show their tables within the database. Each table contains specific field names with their description, data type, and length of the record allowed being stored in the database and the key used to relate each table from one to another.

**Table 6**

**The Entity of the Database Called**

**Table 7**

**The Entity of the Database Called**

**Table 8**

**The Entity of the Database Called**

**Table 9**

**The Entity of the Database Called**

**Implementation Results**

**Figure 7. Provide the online registration for clients and business entities.**

**Figure 8. Manage booking and manipulate booking information**

**Figure 9. To accept payment through gateway interfaces.**

**Figure 10. Generate relevant reports.**

**CHAPTER 5**

**RECOMMENDATIONS**

Following their analyses and research on the Calbayog Events Venue Rentals Web Application, the researchers discovered that monitoring, recording and reservation processes will assist the business entities in managing the services they are offering. It will also make the event reservation easier. The information of the events venues in Calbayog City in one platform will enable the residents and potential clients easily find events venues that will fulfill their desires based on their own preferences.

Due to the contentious nature of this project's development, it should be maintained, improved, and presented during implementation. To encourage the user to use the system, the process must be simplified and well-designed. To be valuable to event venues locating and reservation, the major process proposed from beginning to end should perform properly without any issues or faults.

The system is capable of providing information about events venues in Calbayog City, monitor, record, and generate data about the event venues' availability of their services, as well as receive payments through gateway interfaces. The system can also give efficient data updating of records, record keeping, and a monthly report for future purposes, as well as real-time records for the organization.

The researcher strongly suggests using the Calbayog Events Venue Rentals Web Application to fully automate the reservation process based on the conclusions given above. Their process will become quicker and easier due to the system.

The study is available for interested researchers who were conducting comparable investigations to use as reference material. The researchers recommend to the interested researchers to upgrade Calbayog Events Venue Rentals Web Application into a mobile application. It will be exceptional if the application will process and accept the payment automatically and provide location and mapping in events venues location.