Republic of the Philippines
DON HONORIO VENTURA STATE UNIVERSITY
Villa de Bacolor, Pampanga
COLLEGE OF ENGINEERING AND ARCHITECTURE

Department of Computer Engineering

Online Web Reservation System for CM Private Rest House

FINAL PAPER

BSCpE 2A – Group 3:

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PROJECT OVERVIEW

The *CM Private Rest House* is a private resort that started before pandemic. The word CMP came from the initials of the owner. It is located in Brgy. San Nicolas Mexico, Pampanga. The resort accepted manual reservation through phone calls, and walk in. As the business grows from 2020 to our present year, the manual reservation cannot accommodate more guests. Because of some factors, like lack of staff and etc.

The *Online Web Reservation System for CM Private Rest House* is specifically designed to grab the attention of customers with its interactive and user-friendly interface. With the newly proposed system, reservations and details can be viewed and made online, instead of the traditional reservation (through SMS/calls and electronic messages). The client side shows information and advertisement of the said business to persuade more customers.

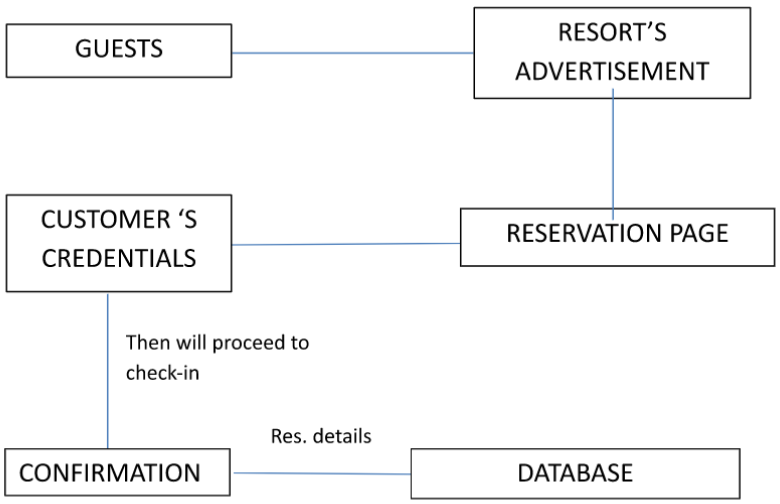
The system can be opened using web browsers for more enhanced viewing experience. The home page of the system consists of navigation bar for Page Overview, Location, About page, Contacts, Reservation, etc. The reservation process will ask the user first to choose available date/s and accommodations (rooms or function hall). The customer will also need to fill out important details to receive confirmation.

The developers will be using languages for front-end such as HTML, PHP, and JavaScript; and MySQL to easily access, process, and manage data for the customer's details and reservation.

Clients Requirements (Phase 1)

- The system can accommodate 3 reservations only depending on available slots.
- The system must only accept reservation prior 2 days.
- User side to view available dates and rates for reservation.
- Interactive and friendly user interface for the users/guests
- The customer may choose available accommodations.
- Admin's side to view customer's reservation details.

System Proposal

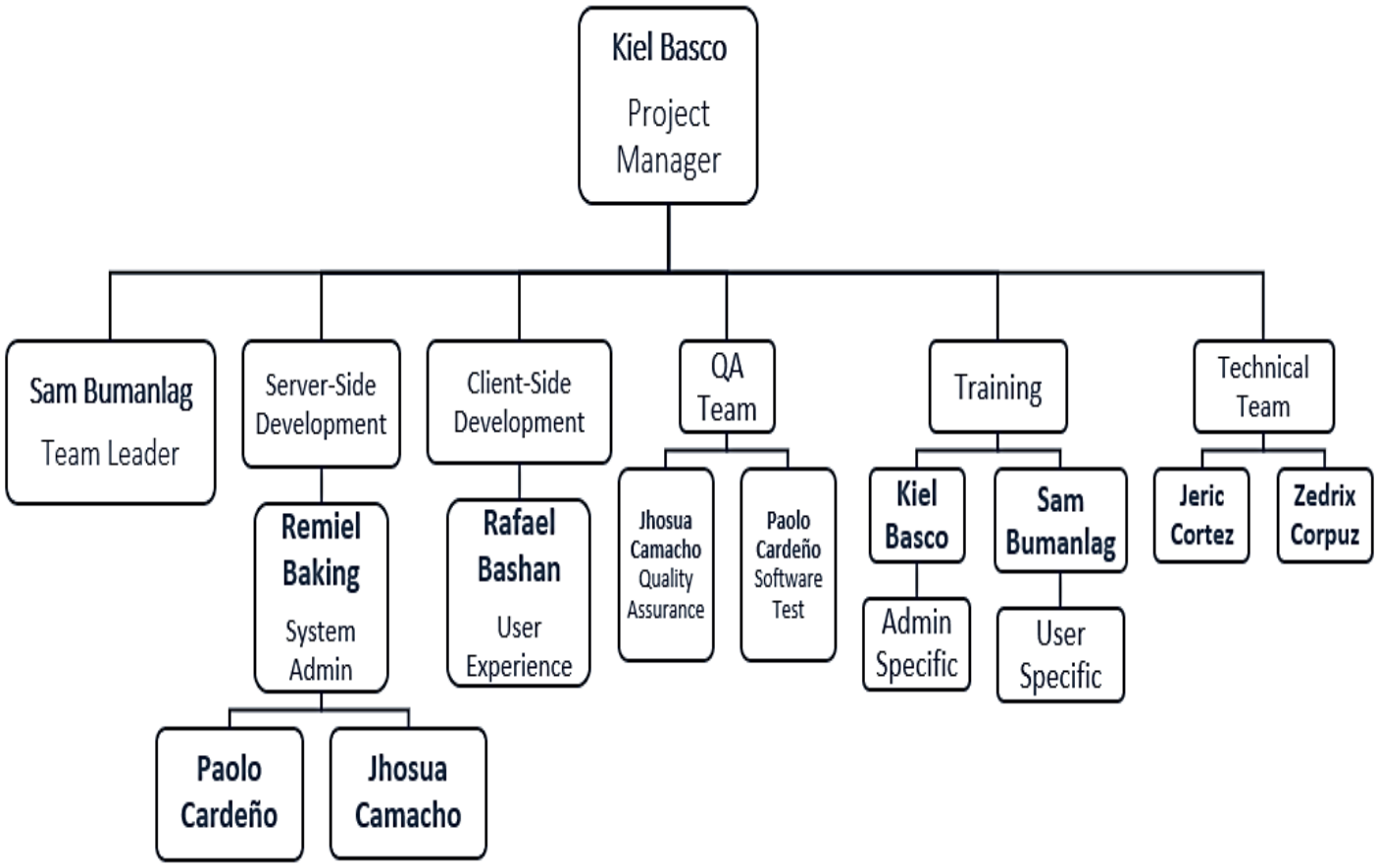


PROJECT PLANNING

I. Introduction

Planning enables developer team to turn ideas into reality, and organized in a certain timeframe. With the help of project planning for our Online Web Reservation System, our team can easily layout the basics of our software project, these includes scope, objectives, risk analysis, scheduling, requirements, breakdown of work, and monitoring. The key purpose of planning is to help facilitate project management and control as the project progresses; thus, generates feedback useful for the next planning phase.

II. Project Organization



III. Risk Analysis

Risks and Risk Types

Risk Type	Possible Risk
Technology	Delays, capacity failure, system availability, and other issues may occur with the new system due to technological risks
Requirements	Incomplete, inaccurate, and constantly changing software project requirements
Financial Problems	Financial issues that may cause project delays
People	Inadequate knowledge of tools and programming approaches
Estimation	The system's development time is underestimated

Risks Analysis

Risk	Probability	Effects
The system's database cannot handle a large number of reservations or processes	High	Catastrophic
Following the software project planning phase, major requirements alter	Moderate	Serious
Due to a lack of funding, the usage of materials or tools required for the software is delayed	Moderate	Catastrophic
The team's skilled developer encountered issues that put the project in risk	Moderate	Serious
The project's intended completion date was not met	Moderate	Catastrophic

Risk Management Strategies

Risk	Strategy
Data Base Performance	Database load testing is the process of determining how your database application operates when several people access it at the same time
Requirements Changes	A change control procedure specifies how requests for new requirements or changes to existing requirements are handled
Financial Problems	Provide a cost analysis of the supplies required for the project. And be watchful of your spending. (Just purchase what is required.)
Staff Illness	Reorganize the team so that there is higher work overlap. And be aware of each other's tasks
Time Duration Problems	Make a list of tasks with their durations to track the time required to complete the entire project

IV. Hardware and Software Resource Requirements

System implementation is the most crucial phase in finishing the approved web system. We must justify certain basic requirements (software and hardware) in order for the system to function without obligation or customer complaint.

Software Requirements:

Operating System: Windows 8, 8.1, 10

Web Browser: Google Chrome, Brave, Firefox, Microsoft Edge, Safari (Mac)

Database Management System: PHP Database

Web Development System: Visual Studio Code

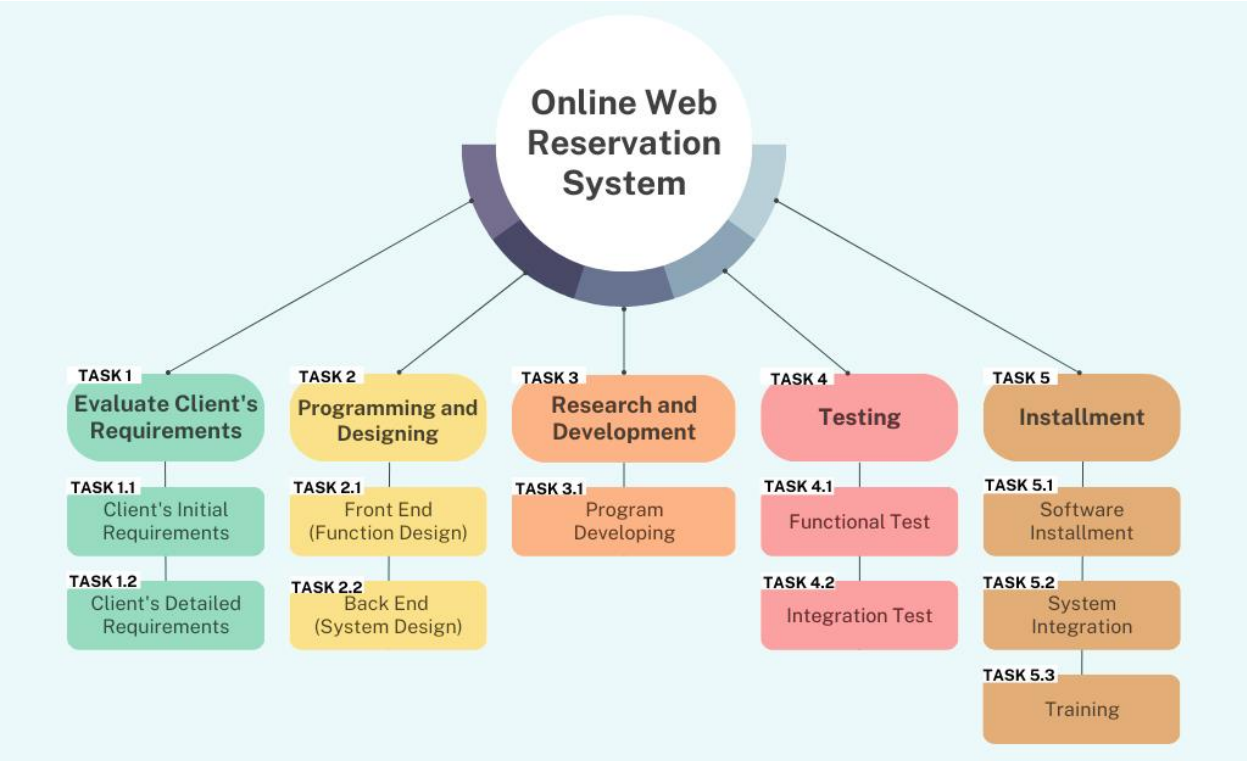
Hardware Requirements:

RAM: Minimum 2GB

HDD: Minimum 50 GB

Processor: Intel or AMD (Dual-core CPU)

V. Work Breakdown



WEEK 1
Task 1: Evaluating Client's Requirements

Task 1.1: Client's Initial Requirements

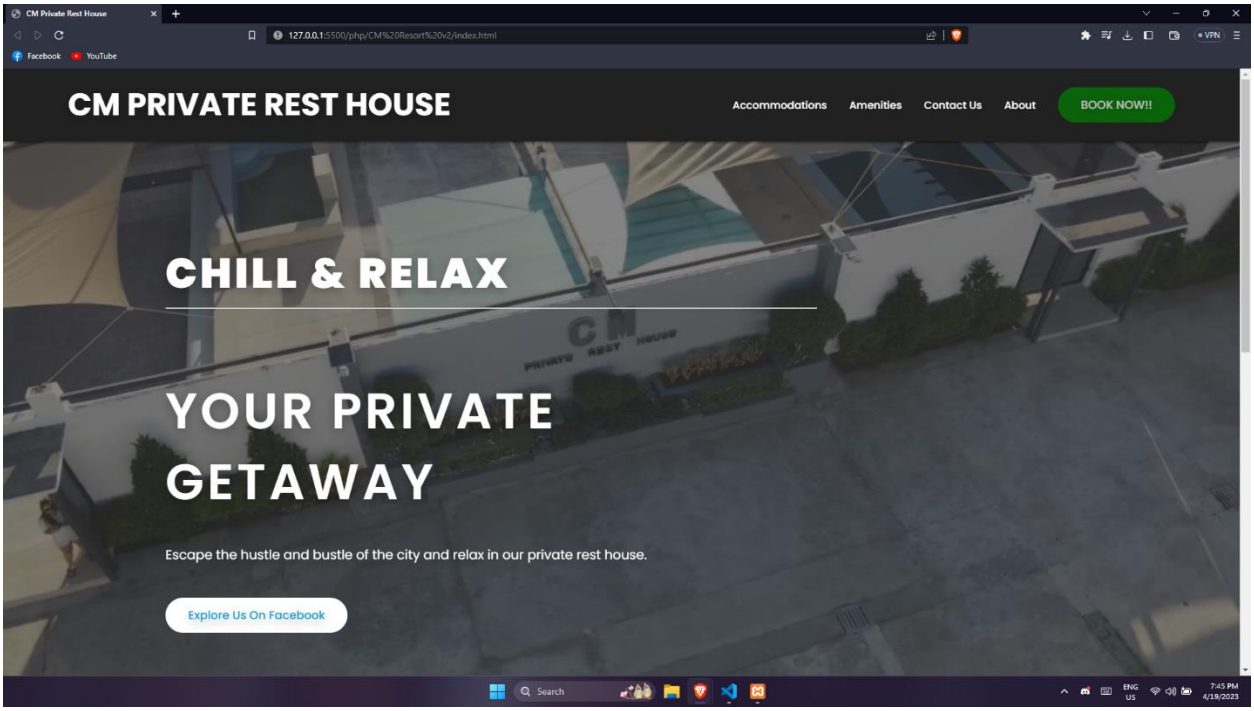
The interview session of our group with the client revolved about the problems that their business faces. The two major problem of their business is the lack of advertisement, and a booking or reservation system for its customers.

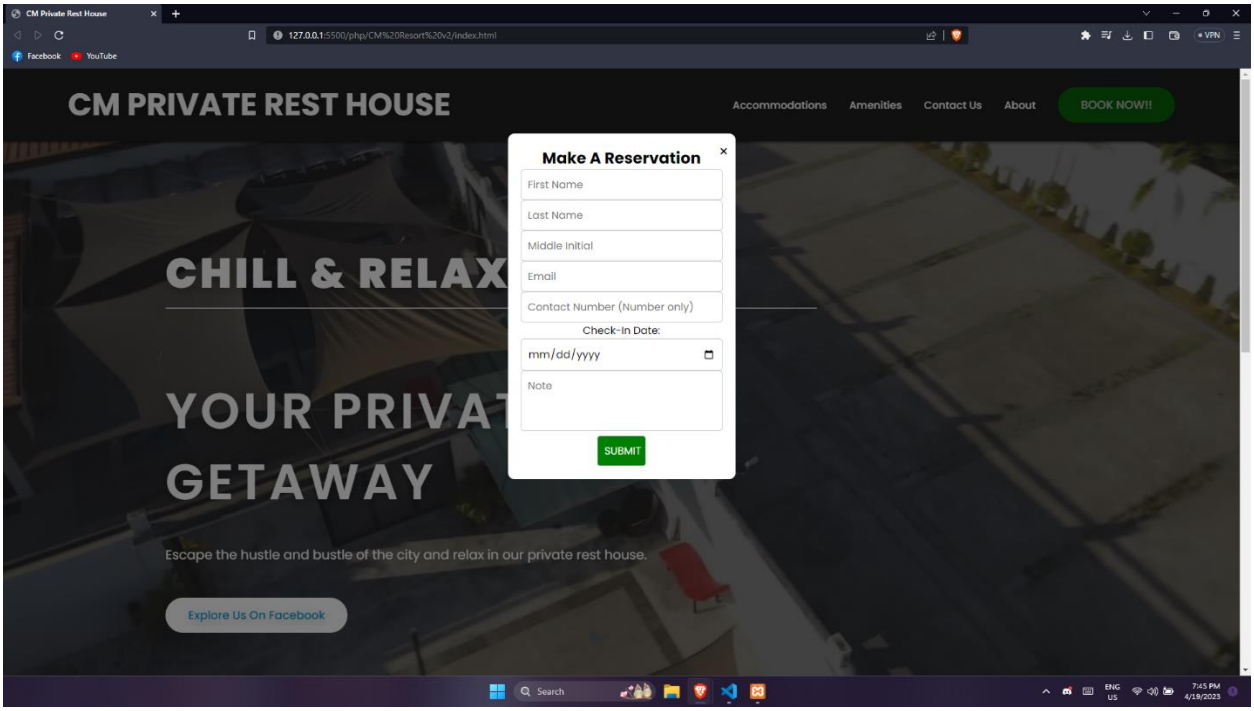
Task 1.2: Client's Detailed Requirements

With the problems given in the latter part of the Task 1.1, we've come to the decision of developing an Online-based Reservation System with a user-friendly interface for its advertisement and information. The client wants the system to be able to accommodate guests depending on available slots, must accept reservation prior to what is given, UI for the users or guests, and an admin's side that is reliable, easy to use, and can manipulate data.

WEEK 2
Task 2: Programming and Designing

Task 2.1: Front End (Function Design)





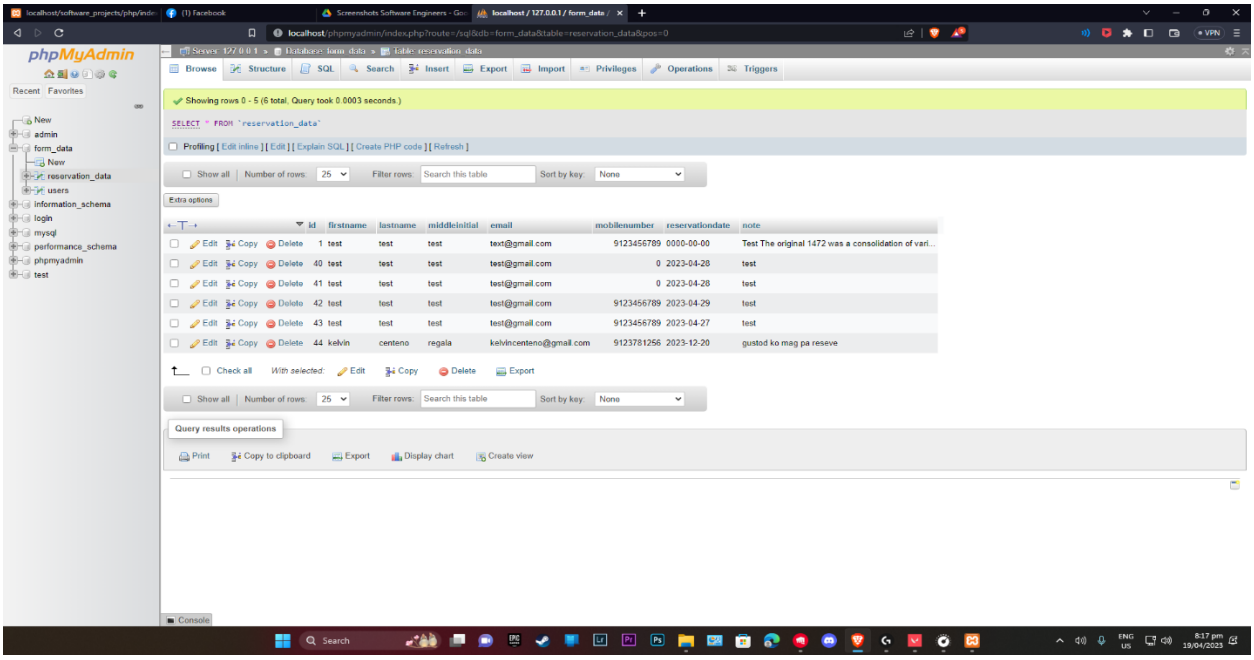
Front-end development is the process of designing a website's or application's user interface and user experience. It entails designing and creating the aspects of a website or application with which users directly interact, including as the layout, navigation, forms, and visual elements like as text, photographs, and videos, as seen in the example photos above. The front-end developers design the layout and look of a website or application using computer languages such as HTML, CSS, and JavaScript.

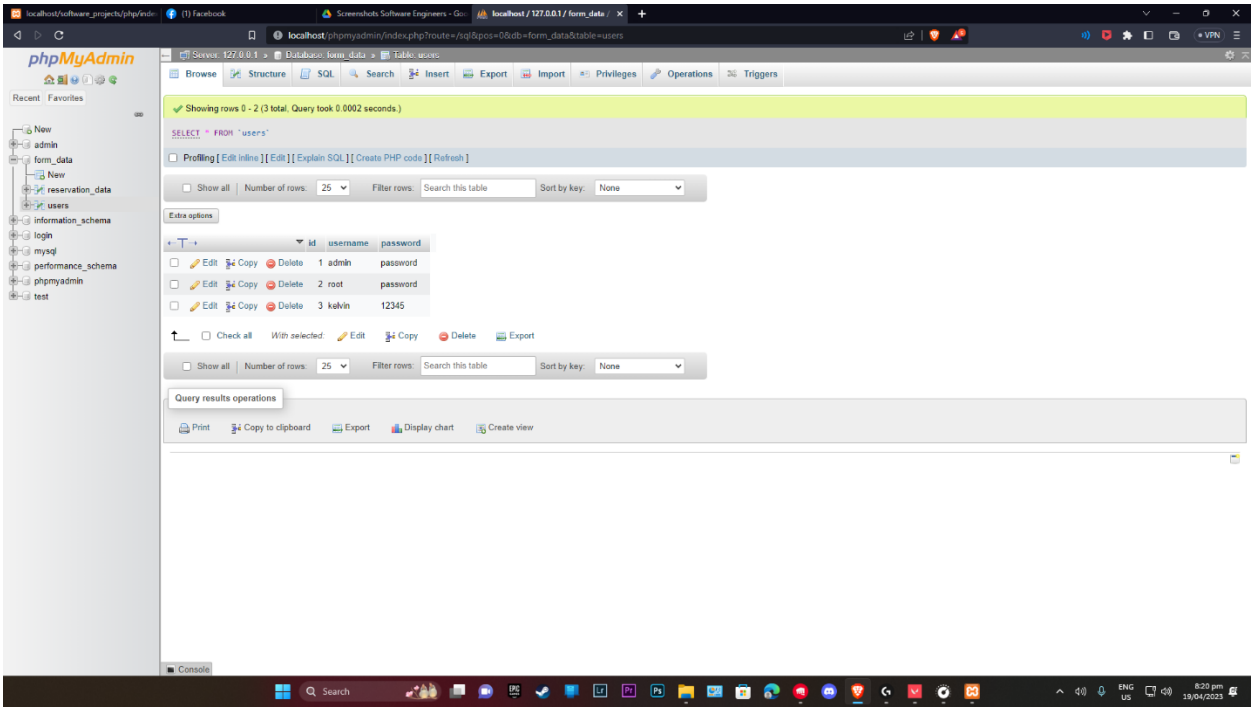
The front-end developers used Microsoft Visual Studio Code as the main application for coding. HTML is used to structure and format the content of a website or application, whereas CSS is used to style and format the content. JavaScript is used to enhance the interactivity and functionality of a website or application by adding dynamic effects (Ex. Popup Forms), processing user input, and connecting with servers.

Front-end development necessitates a thorough understanding of user experience design concepts, as well as familiarity with numerous programming languages and frameworks. It is an important aspect of the software development process since it has a direct influence on how people interact with the website or application and can have a big impact on its success.

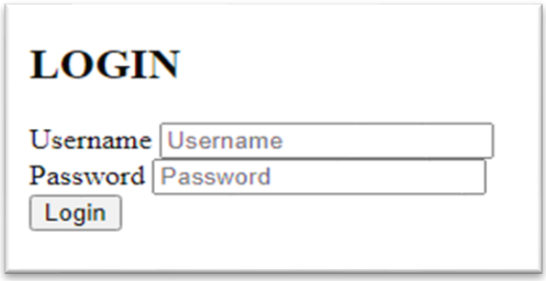
WEEK 3
Task 2: Programming and Designing

Task 2.2: Back End (System Design)





Client's Access



Back-end development involves the development of the server-side components of a website or application that are in charge of data storage, business logic, and connectivity with other systems. Backend development, as opposed to front-end development, is concerned with the non-visible parts of a website or application, such as databases, servers, and APIs.

The back-end developers construct the logic that supports a website or application using programming languages such as Java, Python, Ruby, and PHP. They also employ a variety of frameworks and libraries to ease development and improve the system's scalability and speed. Back-end developers also collaborate closely with front-end developers to ensure that the system's server-side components are seamlessly integrated with the user interface and user experience. The back-end developers use the application XAMPP Control Panel as SQL to store the collected data from the users.

Back-end development is a crucial component of the software development process since it handles the system's data processing and storage. It is in charge of ensuring that the system is safe, scalable, and capable of handling enormous amounts of traffic and data. Back-end developers collaborate closely with other development team members such as designers, front-end developers, and project managers to ensure that the system satisfies the demands of the users and the client.

To summarize how the code/program runs for both (Frontend and Backend):

- ✓ 1st, Index.html is the core code; it is also the front-end of the program that the client or user will execute, leading them to the browser/site where they will see a usable graphical user interface that they can use to interact with the site.

- ✓ 2nd, after viewing the site/HTML, customers can click the green "BOOK NOW!!" button. A button, which will cause the popup form to appear. This is the form that the client or user will fill out in order to make a reservation at the resort.

- ✓ 3rd, when the customer/user has completed the popup form. The data will now be transferred or proceeded in the MYSQL/XAMPP that serves as the back-end of the code which will function as a database server or where the data will be stored.

- ✓ 4th, Insertpopupform inside the insert.php is the code that will be responsible for transferring data in the databases created by the developers.

- ✓ 5th, the Administrator Login is where the administrator/client will enter/input his or her credentials to have access to the database/data that has been moved to the SQL.

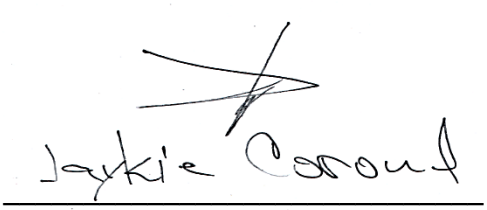
- ✓ 6th, after logging in, the client may view or verify who has filled out/wishes to reserve in their business/resort. Because the client has the authority, he/she has the ability to accept/refuse or even remove data/reservations in the database.

Client's Requirements (Phase 2)

- The system must display the reservation status codes of customers (e.g. cancelled, pending, confirmed, etc...)

- Make administrator's login page interface more appealing or attractive.

- Complete the front page's advertisement; include suitable pictures and information for the accommodations.

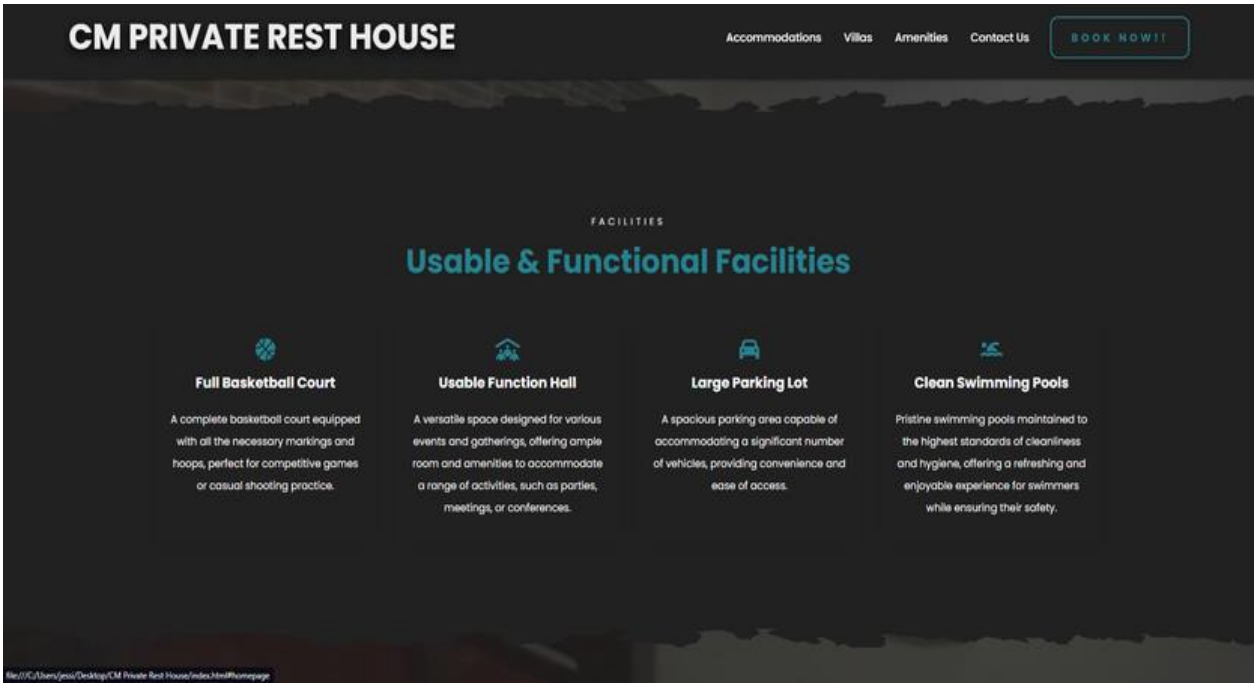


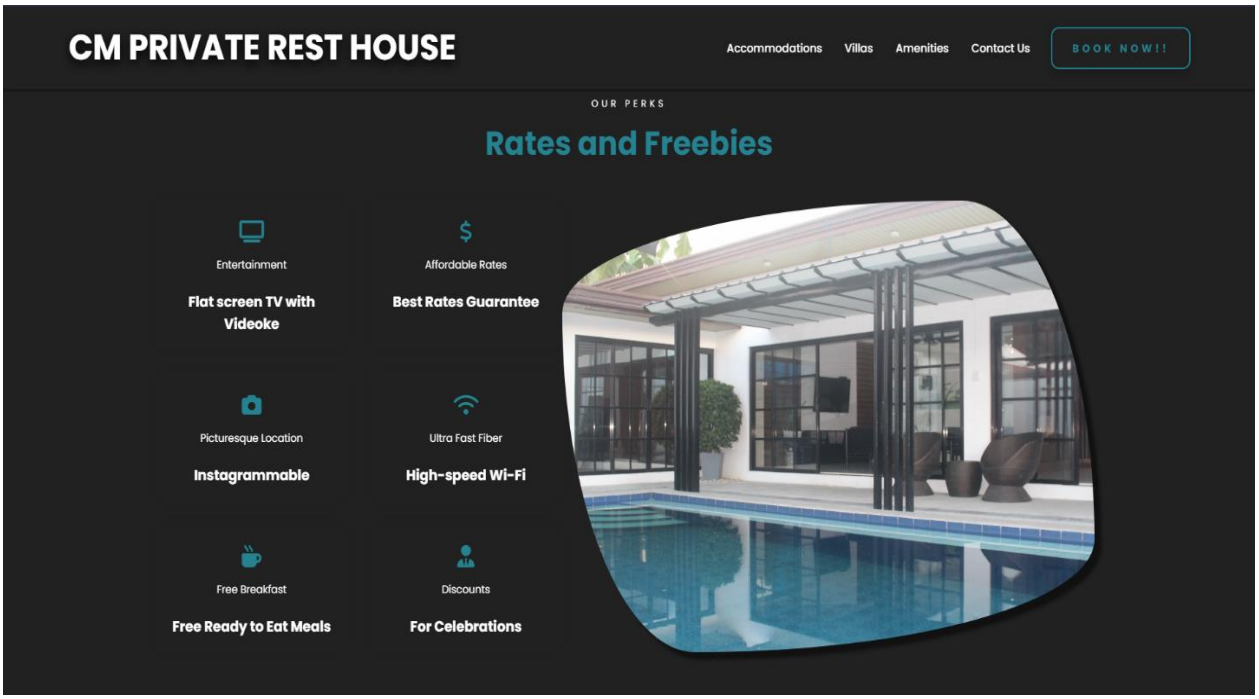
Client's Signature over Printed Name

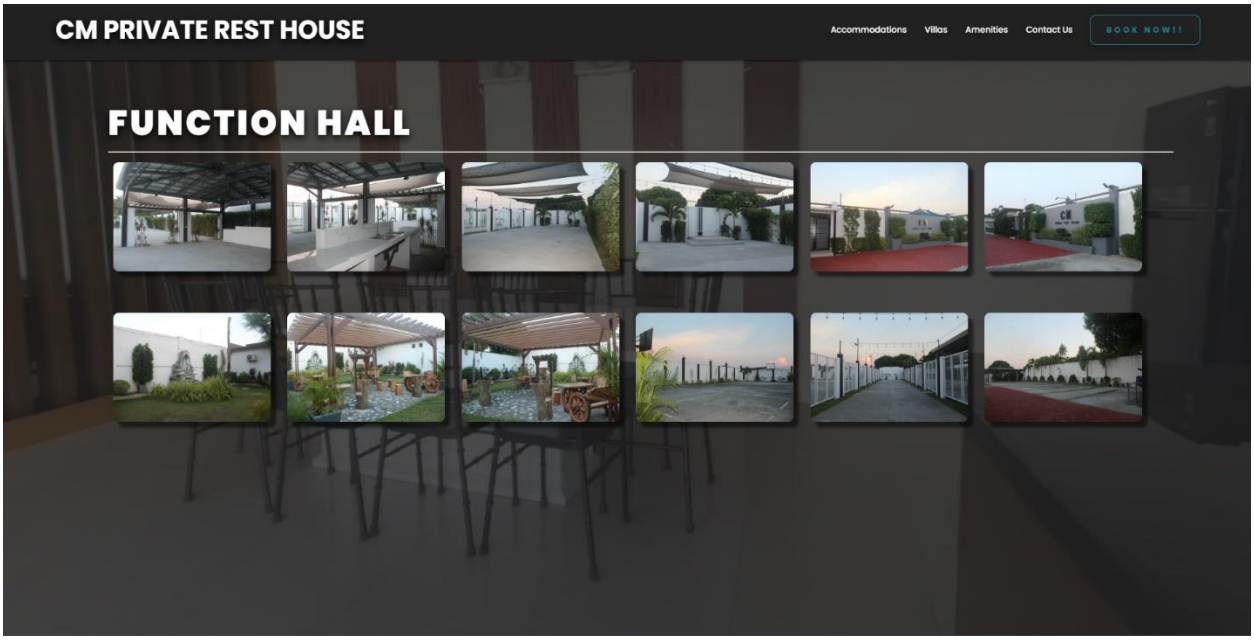
WEEK 4
Task 3: Research and Development

Task 3.1: Program Developing

Frontend







Client's Server (Backend)

"!!ALWAYS MAKE SURE TO LOGOUT!!" Logout

CS-Resort Reservation List

ID	First Name	Last Name	MiddleInitial	Email	MobileNumber	ReservationDate	Note	Action	Status Bar
1	test	test	test	text@gmail.com	9123456789	0000-00-00	Test The original 1472 was a consolidation of various other human factors standards. I assume they're from both formal research and "lessons learned" from operational experience. Human factor engineering came into its own in the military in the 1940s when the armed forces had to contend with o Test.	Accept Reject Delete	Pending

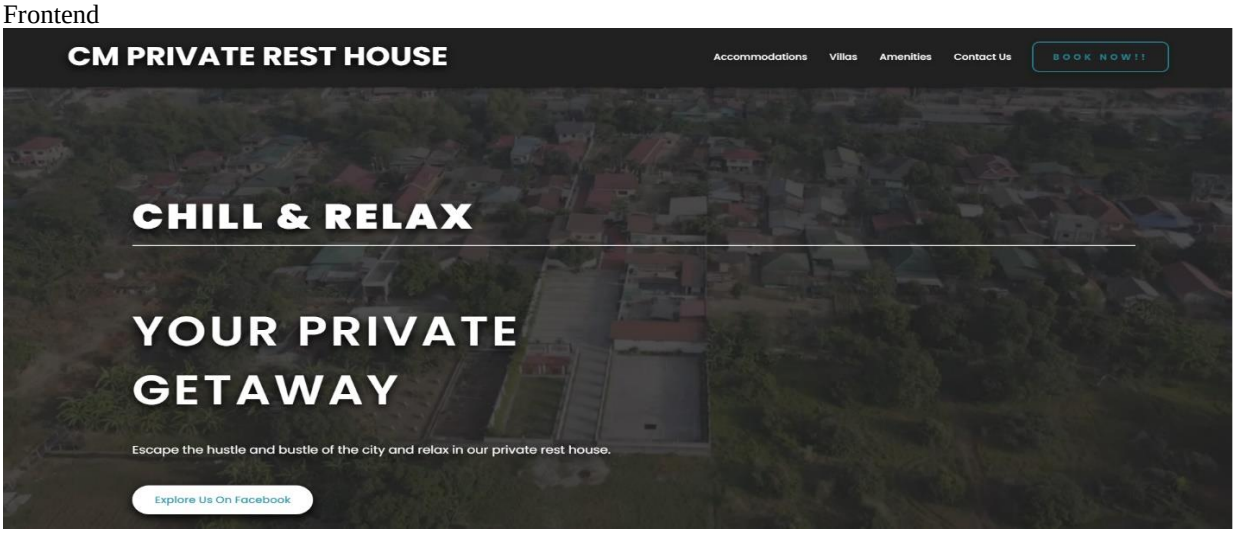
ID	First Name	Last Name	MiddleInitial	Email	MobileNumber	ReservationDate	Note	Action	Status Bar
40	test	test	test	test@gmail.com	0	2023-04-28	test	Accept Reject Delete	Accepted
41	test	test	test	test@gmail.com	0	2023-04-28	test	Accept Reject Delete	Rejected
42	test	test	test	test@gmail.com	9123456789	2023-04-29	test	Accept Reject Delete	Unknown
43	test	test	test	test@gmail.com	9123456789	2023-04-27	test	Accept Reject Delete	Pending

For the program development, developers began by making the frontend design more dynamic and adding certain design elements as required by the client. Latest resort images, with a slight adjustment from how it seemed previously, to better its presentation for guests who want to reserve. Backend designers enhanced various functionalities to make them faster and easier for the client to utilize. The status bar now categorizes the actions on the reservation list. Accept, reject, and delete statuses are used to inform customers about the status of their reservations. Overall, program development enhances the appearance of the frontend as well as access to the backend.

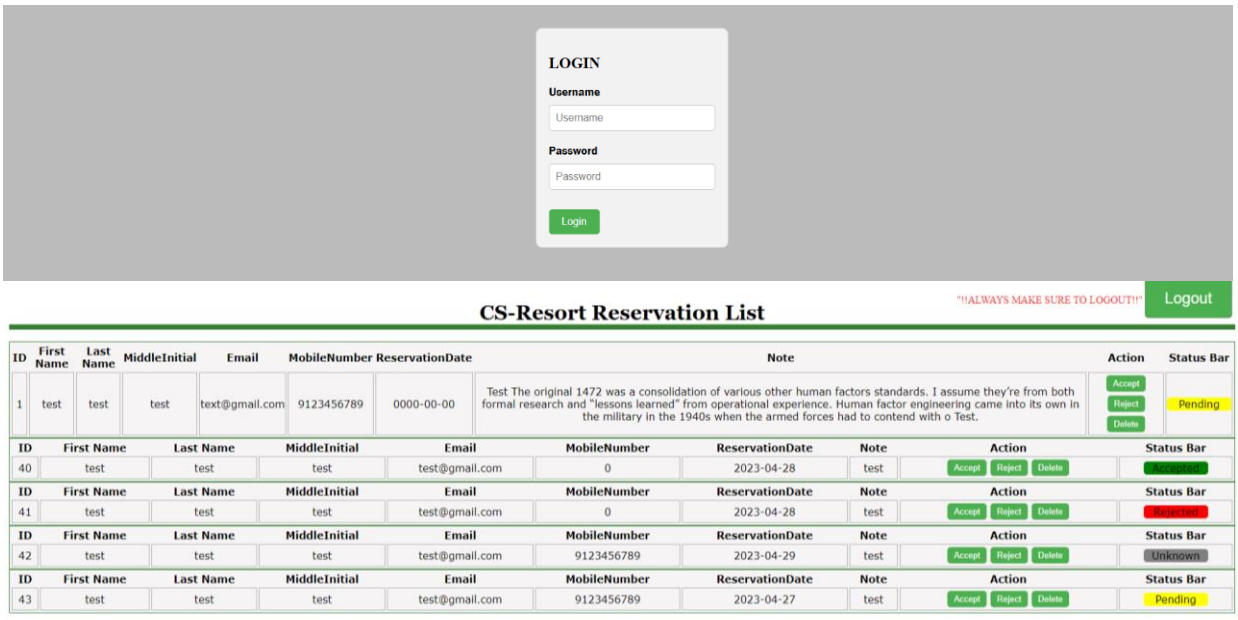
WEEK 5
Task 4: Testing

Task 4.1: Functional Test

Frontend



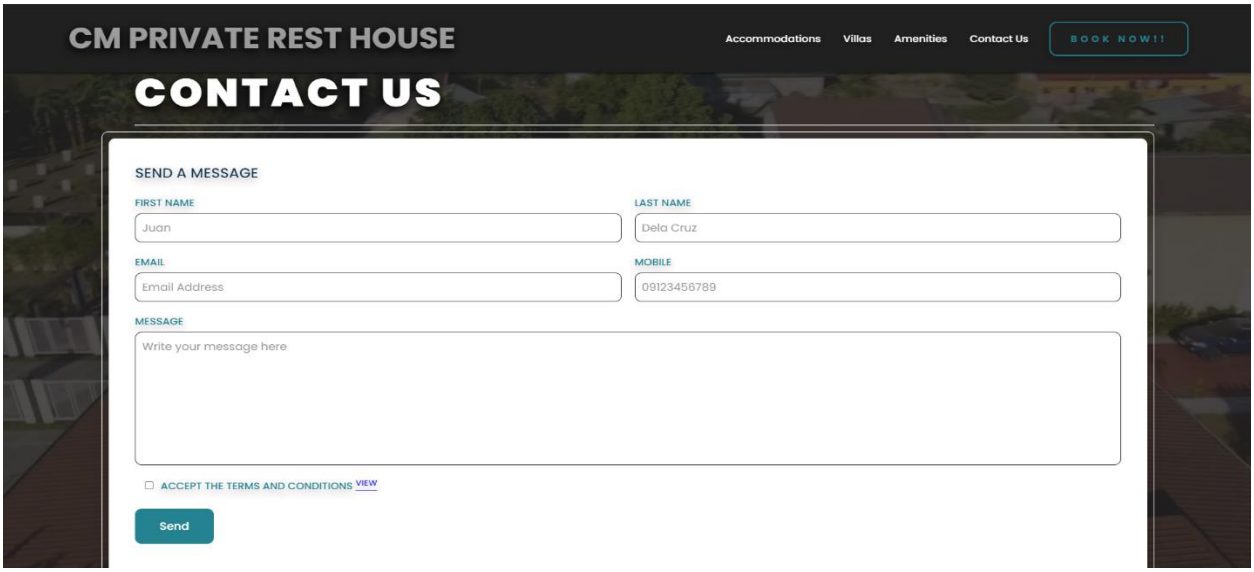
Client's Server (Backend)



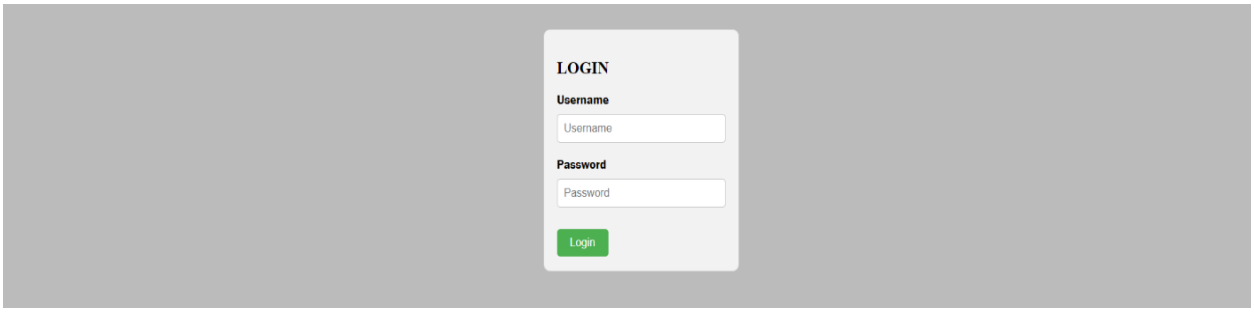
Functional testing is a sort of testing that aims to determine if each application feature functions in accordance with the program requirements. Each function is compared to the associated requirement to see if its output matches the client's expectations. As seen in the images above, all components work properly from the frontend to the client's server (backend). As a result, the functional test on this project was completed successfully.

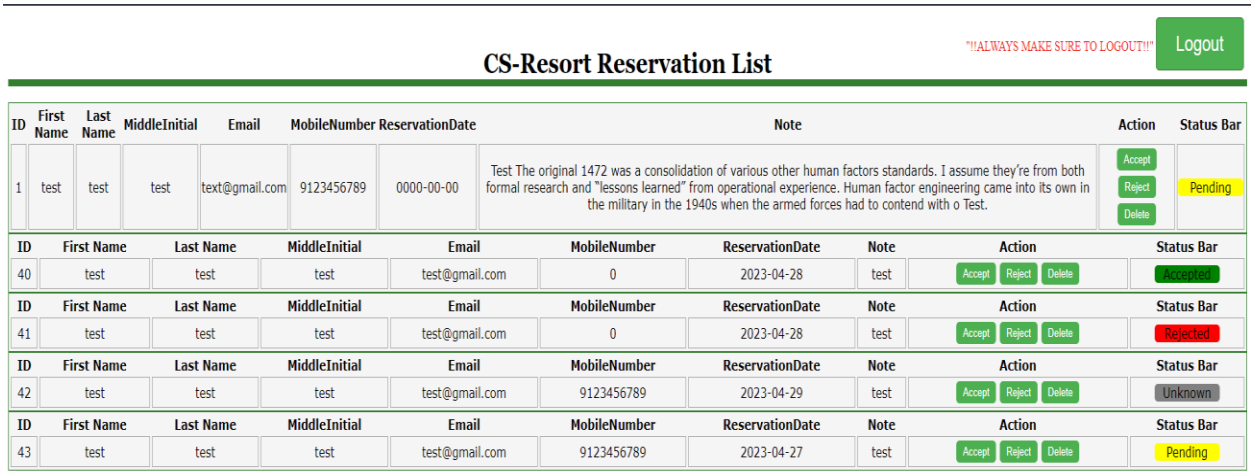
Task 4.2: Integration Test

Form (Frontend)

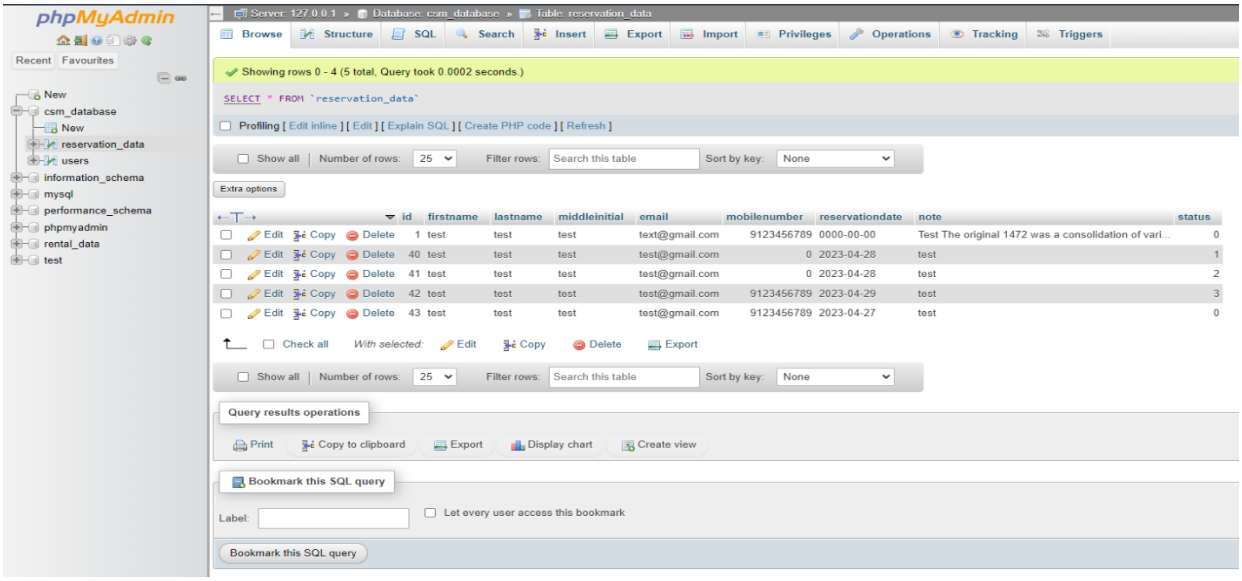


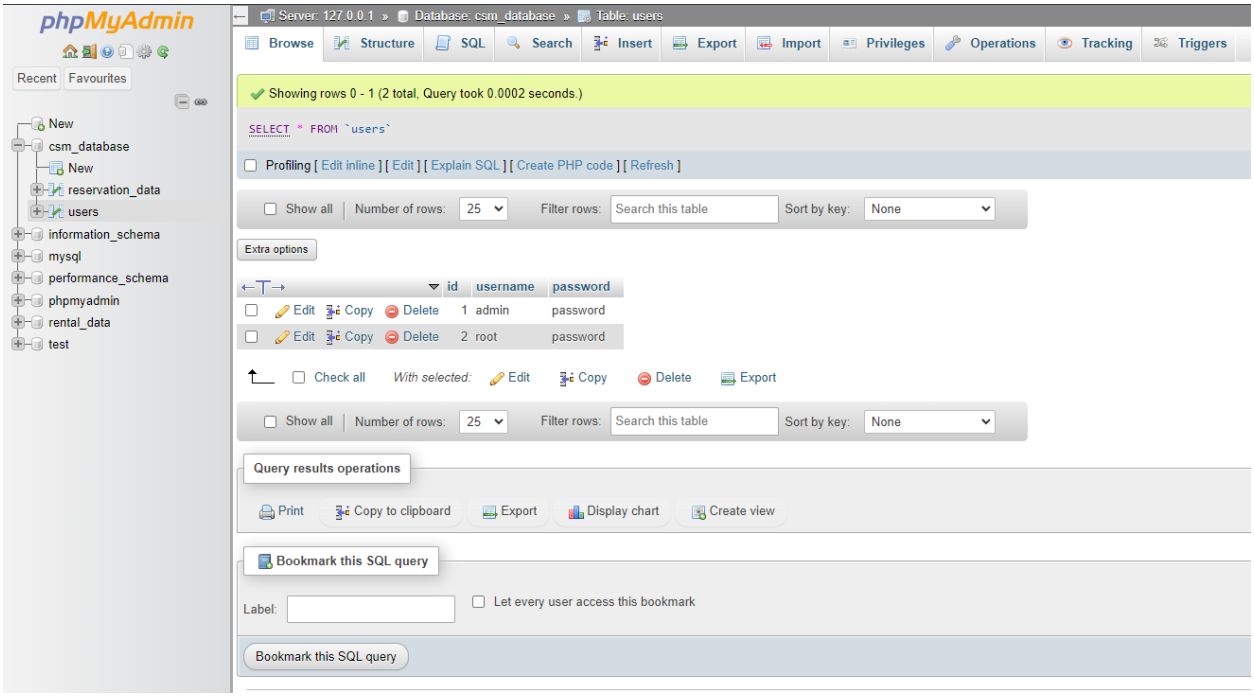
Client's Server (Backend)





MYSQL/XAMPP (Database)





The reservation system's integration testing was completed during Task 3 and Week 4. This testing was carried out to assess a system's or component's compliance with stated functional requirements. Developers employ this to create and test the frontend and backend. MySQL/XAMPP testing is also important because this is the back-end of the code that acts as a database server or where the data will be kept. Integration testing is effectively completed by testing the individual components that a system requires to function. Because all of the components are linked and operate as a single system.

WEEK 6
Task 5: Installment

Task 5.1: Software Installment

Having finished job 5, task 6 is now being shown to the client. Before deploying the software, the developers present the reservation program to the client in order to update and describe the final system.

Task 5.2: System Integration

System integration is accomplished by examining the two components required for a system to work. A client examines the look of the website (or frontend) to see whether his demands are met by the system's appearance. And testing the backend (client's server) to see whether it was working properly. The client approved it after seeing these.

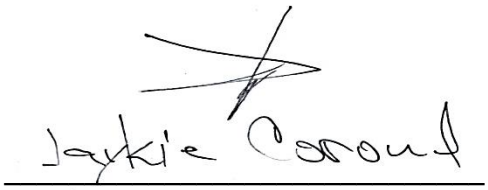
Task 5.3: Training

The client's software installation and system integration are complete. The training is presently taking place in order for the client to understand how to use it and its functions. Developers explain to the client how it works, from when their customer makes a reservation to how the resort administrator may access the backend of their server. The training lasts three hours in order to learn how the system works. After all of this, the system is now ready for the customer. And that they have now started to utilize for their resort firm.

CLIENT'S FEEDBACK

"Okay naman lahat, ayos lang yung system. Ngayon lang ako nakapag pagawa ng system na pang professional talaga. Perfect naman, wala ako question about dyan. Pakisabi nadin sa Prof niyo na nagpagawa, salamat din ah."

The Online Web Reservation System developed by BS Computer Engineering 2A students for CM Private Rest House has been authorized. And fulfilled all of the client's requirements for phases 1 and 2.



Client's Signature over Printed Name

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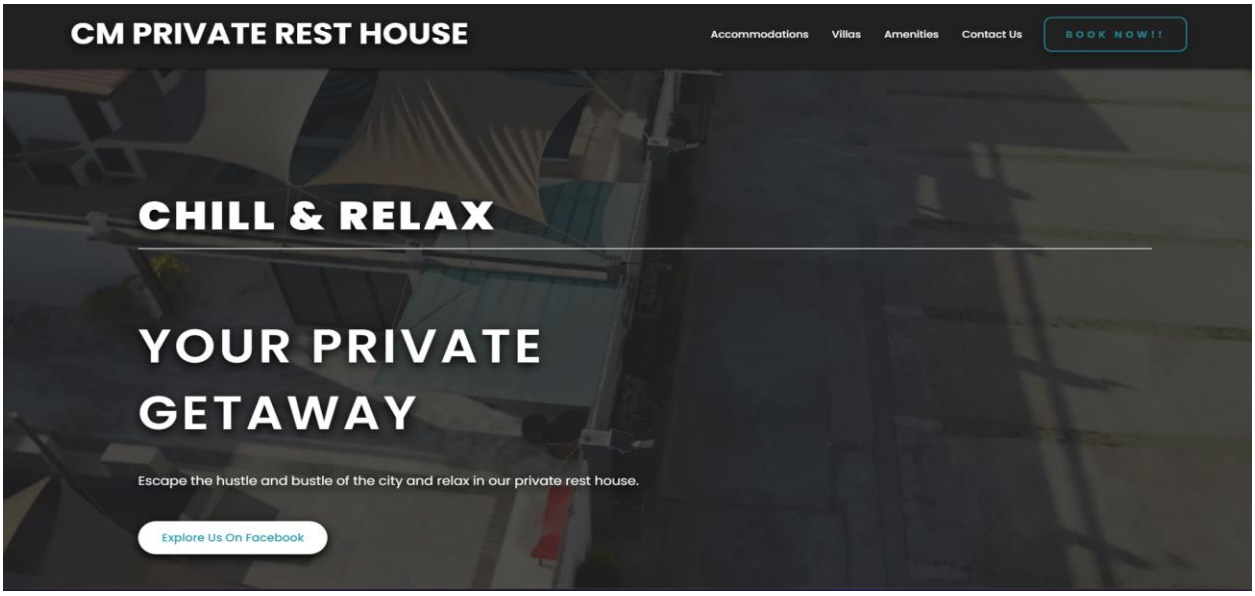

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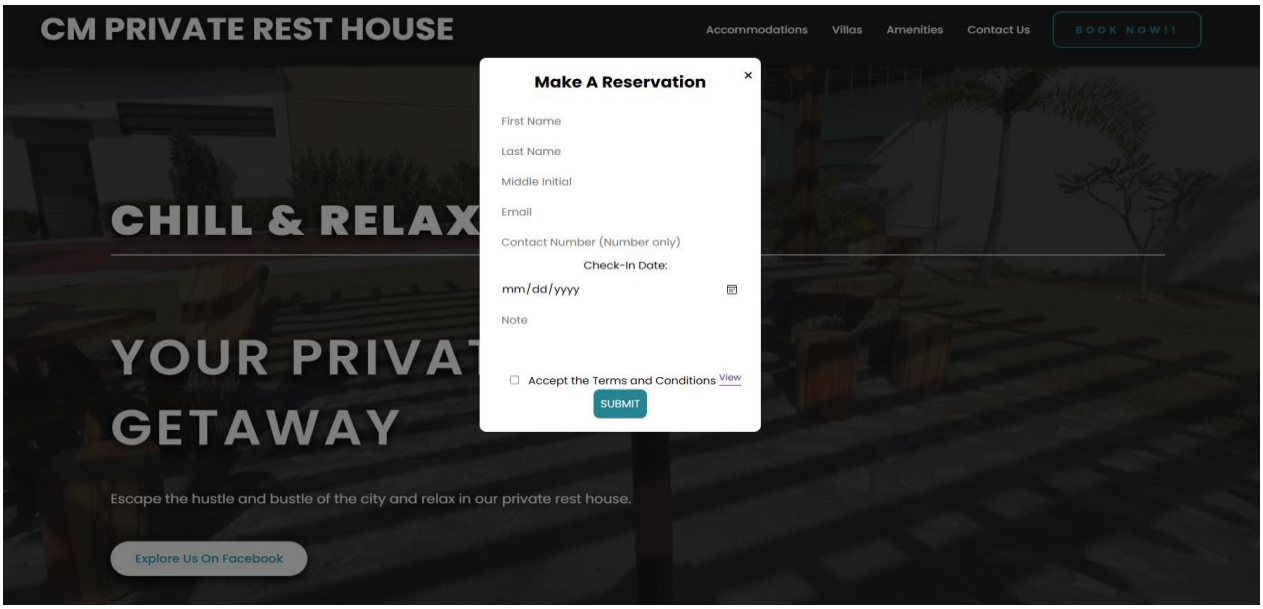

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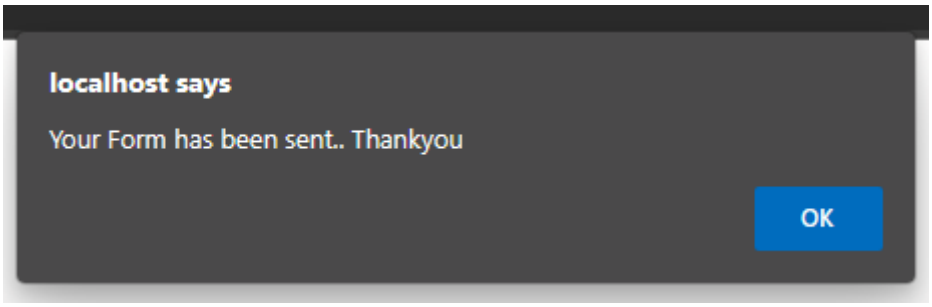

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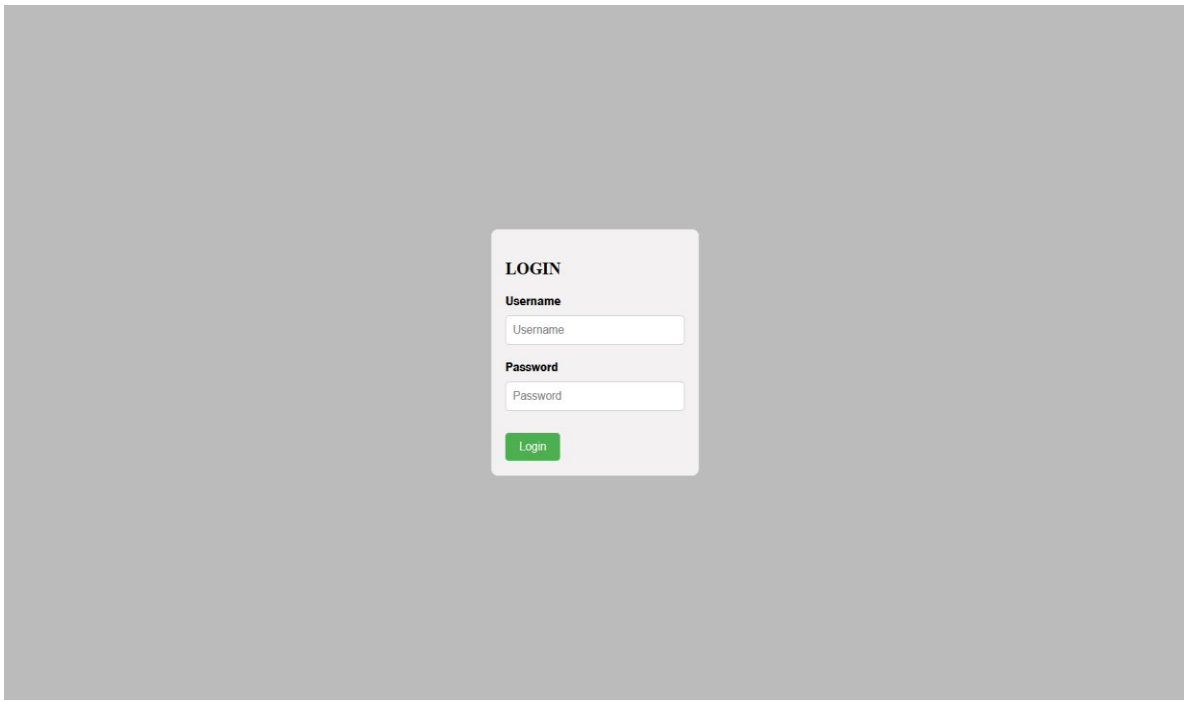

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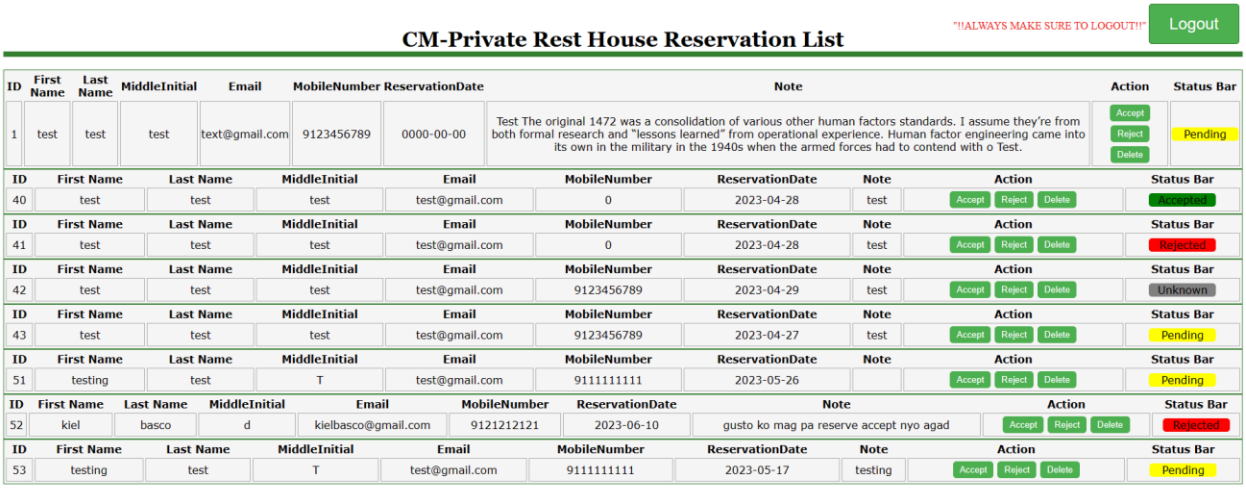

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CM-Private Rest House Reservation List

ID	First Name	Last Name	MiddleInitial	Email	MobileNumber	ReservationDate	Note	Action	Status Bar
1	test	test	test	text@gmail.com	9123456789	0000-00-00	Test The original 1472 was a consolidation of various other human factors standards. I assume they're from both formal research and "lessons learned" from operational experience. Human factor engineering came into its own in the military in the 1940s when the armed forces had to contend with o Test.	Accept Reject Delete	Pending

ID	First Name	Last Name	MiddleInitial	Email	MobileNumber	ReservationDate	Note	Action	Status Bar
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41	test	test	test	test@gmail.com	0	2023-04-28	test	Accept Reject Delete	Rejected
42	test	test	test	test@gmail.com	9123456789	2023-04-29	test	Accept Reject Delete	Unknown
43	test	test	test	test@gmail.com	9123456789	2023-04-27	test	Accept Reject Delete	Pending
51	testing	test	T	test@gmail.com	9111111111	2023-05-26		Accept Reject Delete	Pending
52	kiel	basco	d	kielbasco@gmail.com	9121212121	2023-06-10	gusto ko mag pa reserve accept nyo agad	Accept Reject Delete	Rejected
53	testing	test	T	test@gmail.com	9111111111	2023-05-17	testing	Accept Reject Delete	Pending