



**Technological Institute of the Philippines  
Manila Campus**

**College of Information Technology  
CIT508: Object-Oriented Programming (IT21S1)  
Bachelor of Science in Information Technology**

**Project Name:**

**Metro Wheels**

**Group Members & Group Name:**

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Doctor, John Michael  
Fabon, Kirk Alou John  
Lizardo, Irah Reese  
Ong, John Marwene**



**Submitted to:  
Mr. Joselito V. San Juan**

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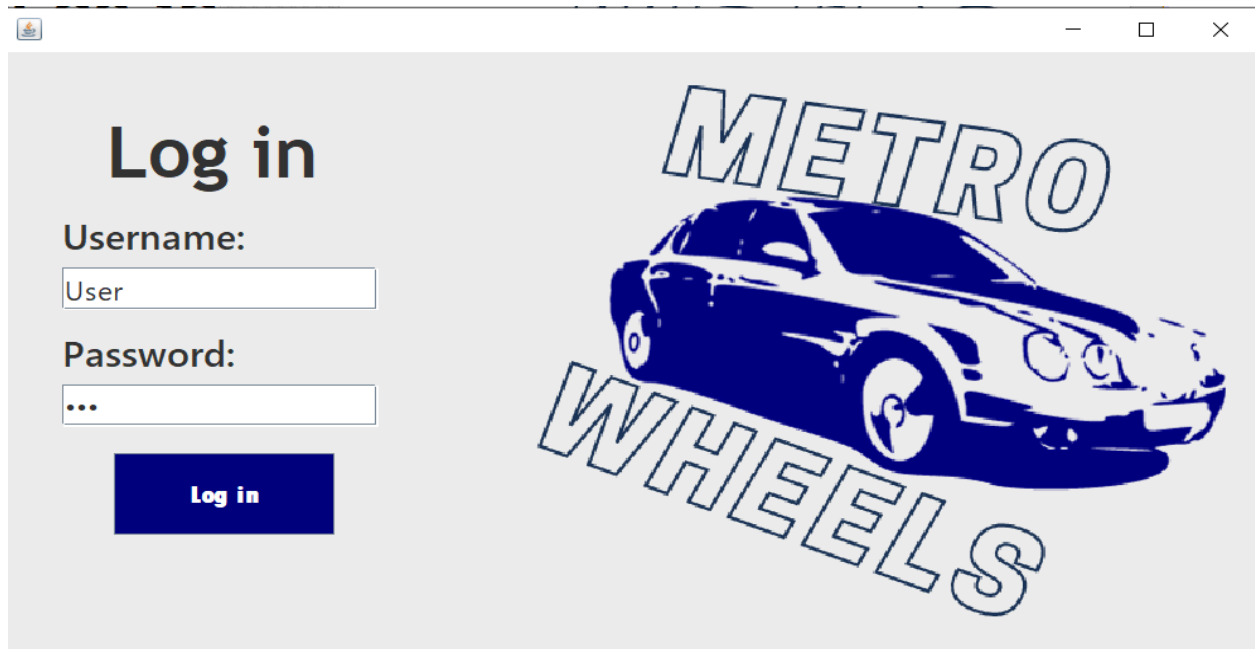


Figure 1: Metro Wheels Login interface

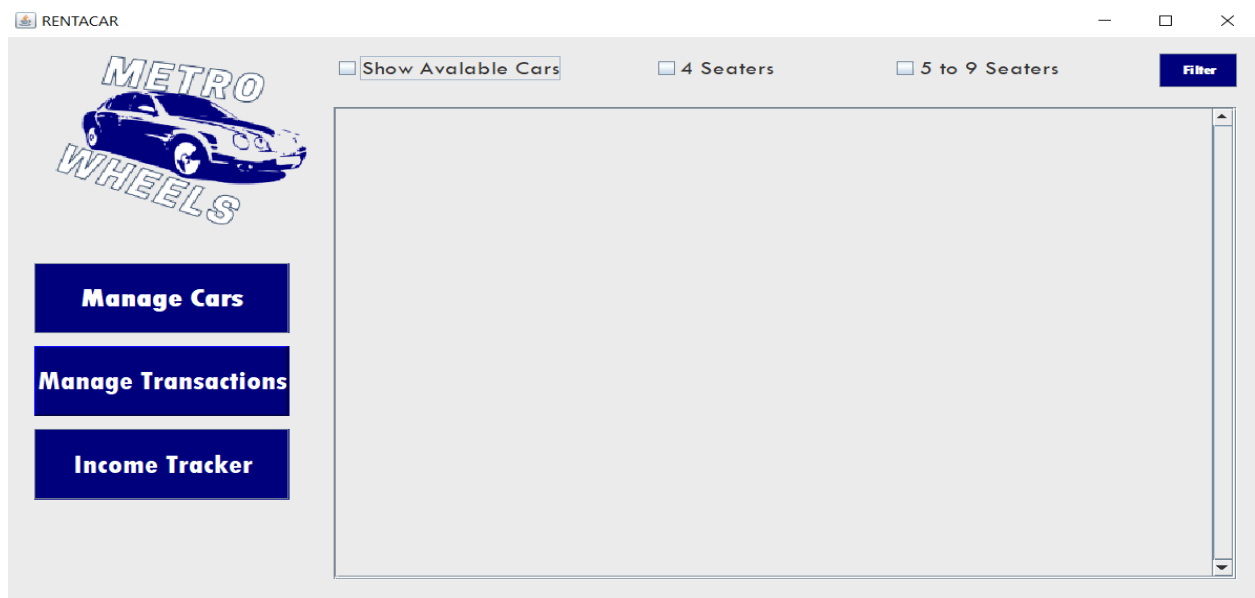


Figure 2: Main Interface of Metro Wheels

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BACK

METRO WHEELS

Car Model:

Car Price:

Car Color:

Car Plate Number:

Capacity:

ADD CARUPDATEDELETE


UPLOAD PHOTO

Car Search

● Car ID ● Car Name ● Plate Number

car_id	name	price	color	plate_number	capacity
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### Figure 3: Manage Car Interface

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**Name:**

**Car:**

**Days of rent:**

**Total Price:**

**Check Out**

### Figure 4: Manage Transaction

**INCOME TRACKER**

2023-12-02

Total Car Rented: 0

Income: 0.0

[Print Rental Details](#)

id	name	age	days_of_...	car_name	plate_nu...	car_color	total_price	date_rent...	status
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Figure 5: Income Tracker

**CUSTOMER TICKET**

Full name:

Age:

Day/s of rent:

PRICE: 1000

COLOR: Blue

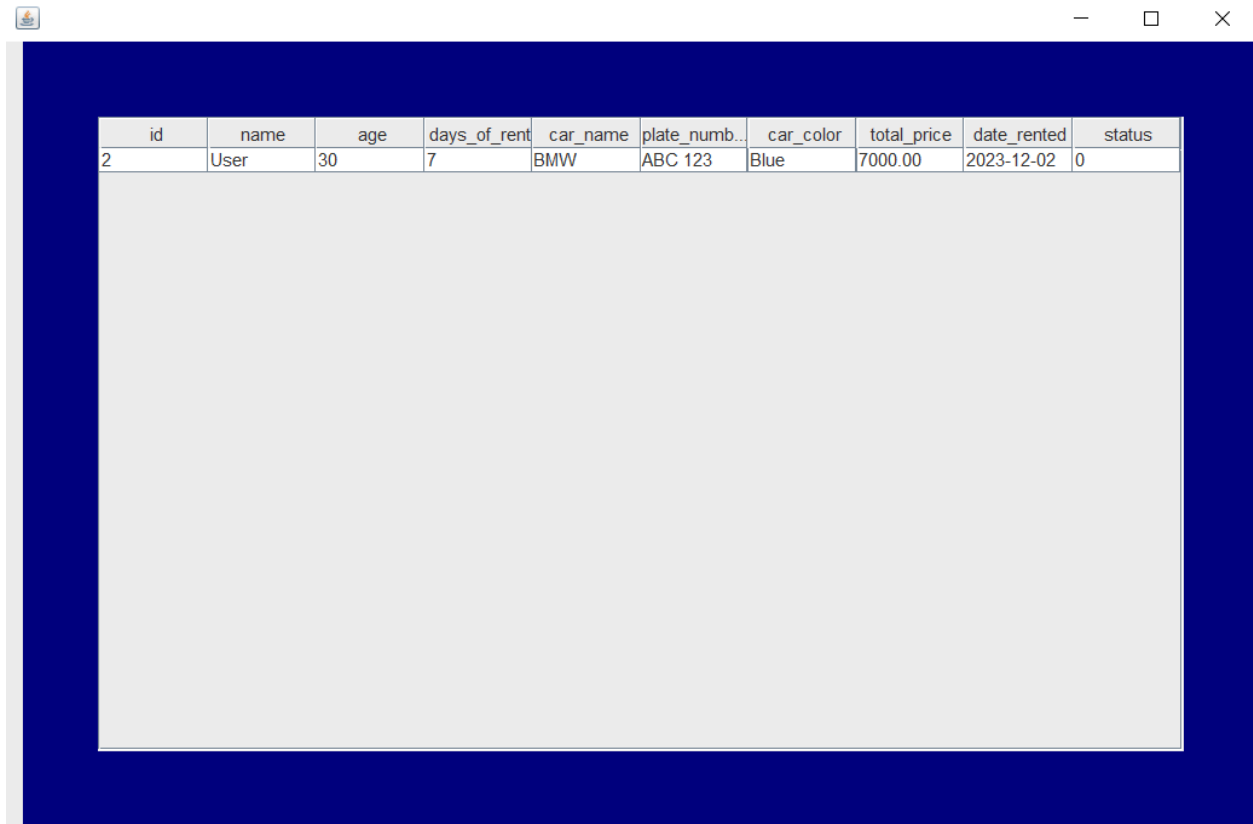
MODEL: BMW

CAPACITY: 4

PLATE NUMBER: ABC 123

[CONFIRM](#)

Figure 6: Customer Ticket



id	name	age	days_of_rent	car_name	plate_num...	car_color	total_price	date_rented	status
2	User	30	7	BMW	ABC 123	Blue	7000.00	2023-12-02	0

Figure 7: History of rented car

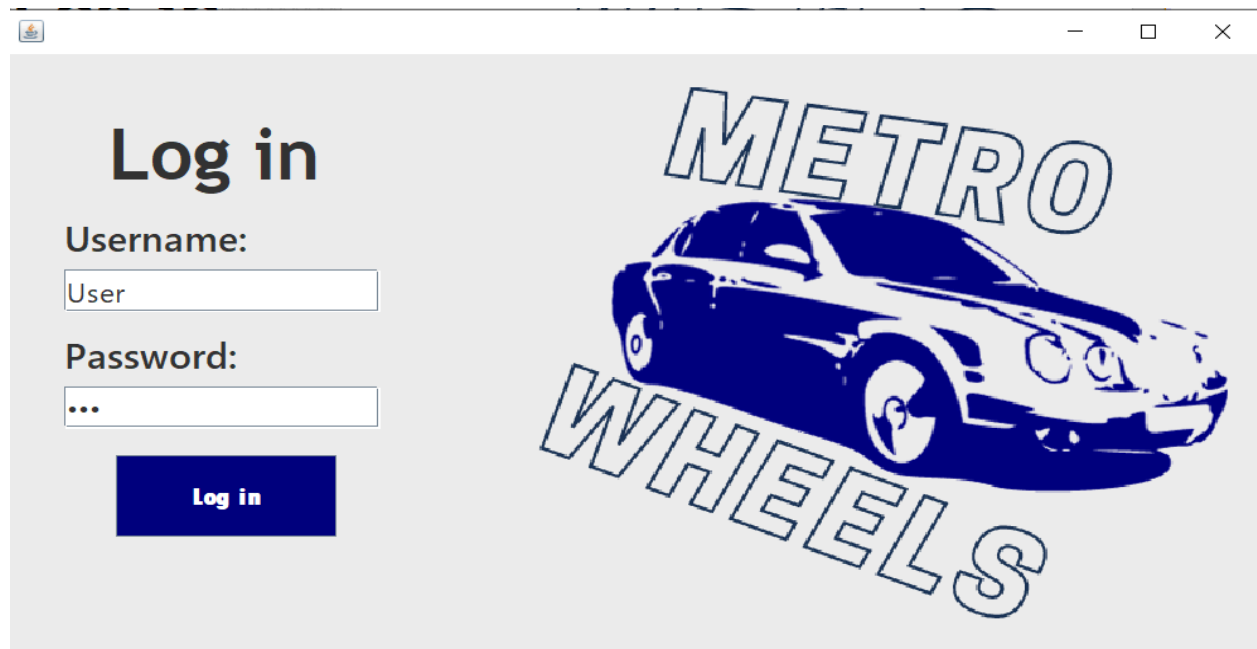
## **Background**

### **Overview of the project**

Our system enables customers to manage, browse available vehicles, check availability, and make reservations through a user-friendly interface. It also has a database, making it easier to access, save, and view the transaction history. This said database is important when handling the data generated by the system and also in protecting the information of the customer. The Metro Wheels feature account management for both customers and the administrator, allowing customers to track their rental history, preferences, and payment details. For the administrators, there is a dedicated income tracker button that provides a comprehensive and efficient view of the financial performance of the rental business. This system aims to enhance efficiency and lessen human error in the rental industry.

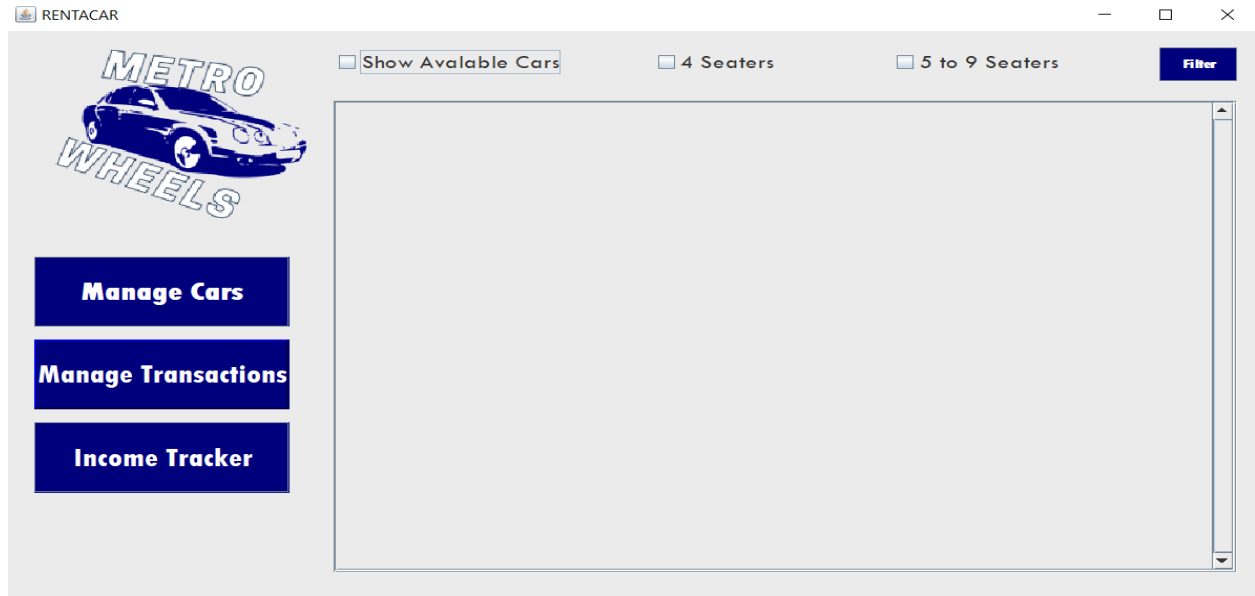
## Discussion of the Project

### Documentation



For the login, the system will ask for the credentials of the cashier or the administrator, and then the default username is User and the password is 123. After inputting the credentials that the system was asking for, they can now login to the system.





After logging into the system they will be redirected to the main interface, wherein the rental business features are shown the manage cars, manage transactions, and the income tracker. On the top part of the interface, you can see a filter and radio buttons where you can filter and sort available cars and the car's capacity (4 seaters, and 5-9 seaters) this helps the cashier/admin to find the specific car that the customer wants to rent and if it's rented or not.

BACK

Car Model:

Car Price:

Car Color:

Car Plate Number:

Capacity:

ADD CAR

UPDATE

DELETE

METRO WHEELS

UPLOAD PHOTO

Car Search

Car ID

Car Name

Plate Number

car_id	name	price	color	plate_number	capacity
--------	------	-------	-------	--------------	----------

This is the manage car interface, here the admin or the cashier will be able to input the car to be posted on the main page for the customers to rent on. They will be able to put the car model, car price, car color, car plate number, car's capacity, and the image of the actual car. On the right side of the car management, we have a car search wherein the admin can delete, update, or add a car. On the car search, they can filter out the specific details of the car making it easier to find.

**Name:**

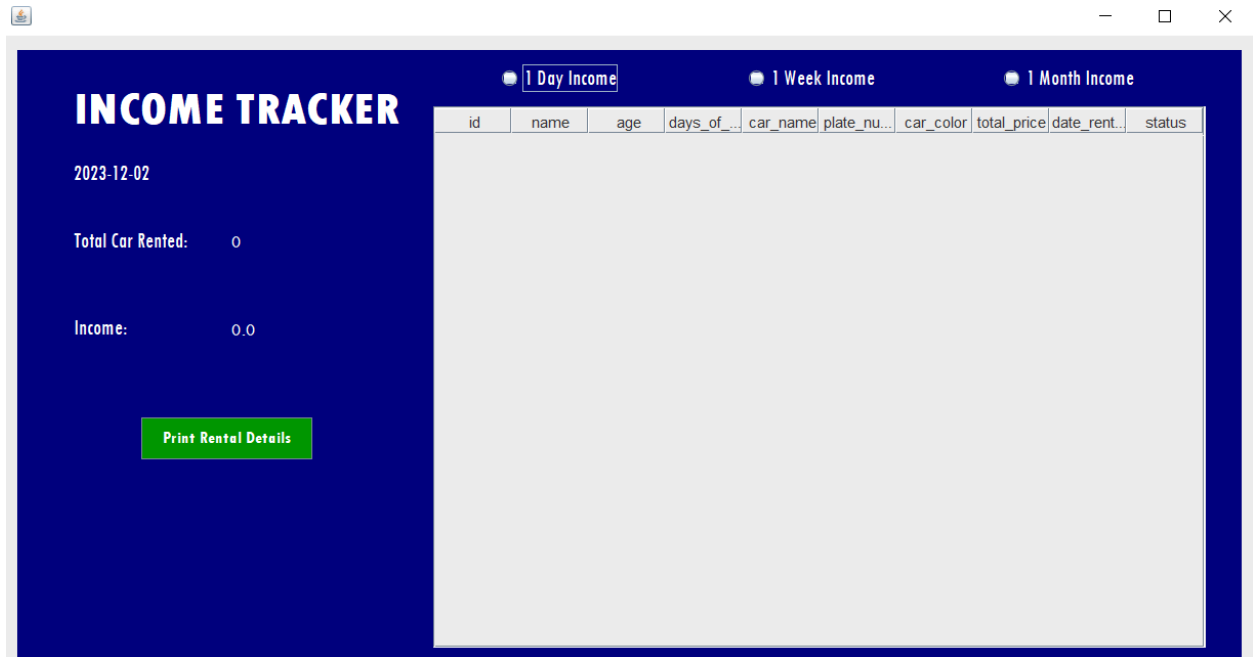
**Car:**

**Days of rent:**

**Total Price:**

**Check Out**

This is the manage transaction interface that we have as you can see we have two buttons the back button and the checkout button. And we have a label where the cashier will input the name, car, date, and price. After inputting the details of the customer, when the checkout button is pressed the records will be redirected to a pdf file that serves as a receipt for the transaction.



The income tracker interface keeps track of the income generated from the rental business. It provides a summary of total revenue over a specific period ( income per day, per week, and per month). The print rental details allow the cashier to generate a comprehensive spreadsheet report that contains specific details of the rental history such as the customer's ID, name, age, day/s of rent, car number, car color, total price, date of rent, and the status of the car.

**CUSTOMER TICKET**

Full name:  
User

Age:  
30

Day/s of rent:  
7

PRICE: 1000

COLOR: Blue

MODEL: BMW

CAPACITY: 4

PLATE NUMBER: ABC 123

CONFIRM

And lastly, the customer ticket. In this interface, the cashier inputs the full name of the customer, their age, and the day/s of rent. On the right side you can see the car details rented by the customer. After clicking the confirm button the details will be saved on the database.

## **Conclusion**

In conclusion, Metro Wheels' project implementation has been remarkably successful. Users are empowered to effortlessly manage their interactions with the platform thanks to the extensive feature set that has been implemented into the system. Users may quickly and easily navigate through the variety of accessible vehicles thanks to the user interface's straightforward navigation. Because of its intuitive design, Metro Wheels is a more dependable and effective way to obtain transportation services overall.

The integration of a strong database system is one of our project's major achievements. This database is essential to maintaining efficient data management and giving users fast access to information. The deployment of this database not only improves system performance but also adds to Metro Wheels' general scalability and reliability. It establishes the framework for upcoming advancements and enhancements, guaranteeing the platform's durability and flexibility in the ever-changing transportation services industry.

Finally, Metro Wheels is a perfect example of careful planning and efficient project management. Our dedication to providing a top-notch and useful system is demonstrated by the seamless integration of functions for database integration, car browsing, and user management. While we celebrate these accomplishments, we are also looking forward to new developments that will keep Metro Wheels at the forefront of the transportation services industry.

## Individual Reflections

### Co, Junno Elizer

This project was both fun and difficult for me. Fun because I learned more about Java and how to handle a database using Java language. I feel that my knowledge in coding became one step higher than before. It was also fun since I was working with my friends. We supported each other all the time to make the project successful. However, the project was also difficult because I found it hard to manage my time while creating the project and with other commitments. I am thankful for my groupmates since they understand me.

I was tasked to be the back-end developer for the project. However, unlike Kirk and Marwene, I am tasked to make the program run smoother. It was kind of difficult to do this since the code was already complete when I was making it run smoother, which means that I might have to rewrite some parts since a block might be affecting something. Although it was kind of a headache to do this, I found satisfaction in the end when the system was running much smoother.

To conclude, this project made my time management skills and coding skills much better than before. I realized that the application of the MVC model is important because it lets the view of the program much better than not having MVC.

**Doctor, John Michael**

In creating this project with my group it was really fun and at the same time very challenging for us but aside from that I learned a lot from them and I got to share and collaborate with them on my ideas and skills to make the creation of our project much easier because everyone is collaborating and sharing their ideas and knowledge about the project. Also, everyone in our group is given a role on what are the things that they need to do to make it organized and to make sure that everyone is participating in the creation of our project called Metro Wheels.

My role on our project is UI designer with my partner Irah Reese Lizardo. We are the front-end developers and we are responsible for designing and layouting the main interfaces of our Metro Wheels Car Rental System. The one who is handling the database and the backend developers of our project are Junno Elizer Co, John Marwene Ong, and Kirk Alou John Fabon. With the dissemination of the roles that we have it was really easy for us to determine who will be the one we can ask for help if we don't know the things that we need to do.

Overall this project enhanced my communication skills, leadership skills, time management skills, etc. And I got to apply all the things that I learned from our subject Object Oriented Programming and also the lessons that we have were a really big help for us to make this project possible. Thanks to my group mates for doing this project with me and I'm grateful to be part of this project with them.



**Fabon, Kirk Alou John**

This project was a little bit difficult and really tested my back-end skills, since I am part of the back-end and database in which I ensure that everything runs smoothly. I was the one designated to guarantee that the information of our system was stored and accessed in an orderly and in an easier way.

I played a crucial role in not just handling the technical side of things but also making sure the system was reliable and user-friendly. This project really put my skills to the test, but it was a valuable experience since all of us worked hard to make this system possible. We all learned a lot from making this project, it gave us a broader perspective and how we can apply our learnings in real life.

**Lizardo, Irah Reese**

It was fun making this project because I get to collaborate my ideas with my groupmates making it easier for us to plan effectively on what kind of things or functions we want to implement in our project. I mostly enjoyed helping in making the GUI which focuses more on how our project would look like. I mainly focused on helping with the GUI since it is easier for me to understand it rather than doing the backend programming, and also it is the first thing the users interact with. It is important to create an interface that is not only visually appealing but also user-friendly because it is a key to ensure a positive user experience.

In essence, this project not only allowed us to apply our technical skills but also provided a platform for our personal and collective growth as a group. Learning how to adapt and contribute to different aspects of the project, even if they are not my primary expertise, was a valuable experience that allowed me to explore and grow as an IT student.

**Ong, John Marwene**

Embarking on the group project, the initial hurdles seemed a bit overwhelming, but as we pooled our efforts, a collaborative spirit emerged, making the workload more manageable.

Completing my tasks within the project brought a deep sense of satisfaction. It wasn't just about finishing a job; it was about realizing that my individual contributions played a crucial role in the overall success of our collaborative effort. Each late night spent working together, though tiring, felt like an investment in something meaningful. It was during these late hours that our bonds strengthened, and the shared commitment to the project became manageable.

In the end, working as a team not only enhanced the quality of our project but also made the entire experience deeply satisfying. The journey was as significant as the destination, filled with laughter, shared struggles, and the ultimate joy of witnessing our collaborative work succeed.