


Research Article

My Giling Application

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Abstract: Our project is to make an innovation for Giling because we identified some problems from students who experience using Giling. This innovation is to help students with no transport to go to class or anywhere. So, we came out with a systematic application which MyGiling. This innovation can make it easier for students who want to book Giling. So, by booking from this application, students do not have to compete with other students. They also can check the availability of Giling directly from the application without needing to contact the driver one by one. Other than that, students will not be confused about the price because in that application they already state the price for each location. Students also have two options to make a payment whether by online or cash. This can help the students who are cashless. This application can ensure the safety of students because the drivers of Giling are trusted. All the drivers registered under UiTM.

Keywords: Student Transportation; Booking System; Cashless Payment; Real time Availability; Safety Assurance.



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1. INTRODUCTION

Innovation is described as the process of developing new ideas, processes, goods, services, or solutions with a significant positive impact and value. Our final project is about innovation in transportation in UiTM Machang, especially for students which is 'Giling'. Our idea is to create a booking application for 'Giling' to improve their booking system. We called our innovation as 'MyGiling'. The students can install the application on any gadget like tablets and smartphones.

We came up with this innovation because the booking system for 'Giling' is not systematic, which causes confusion between the drivers and students. For example, students who frequently go home every weekend will often face problems in booking 'Giling' because they need to compete with each other. For students who want to use the 'Giling' to go to class, they do not know which 'Giling' is available, and some students do not even know about who they need to contact. This will cause them to miss the class, rush to go to class, and more problems. For the driver, there will be a problem with overlapping schedules. Other than that, the driver cannot manage their schedules wisely and make the driver feel pressure because they need to pick up the students from different destinations.

The first importance of our innovation is it is convenient for both students and drivers. For students, they do not need to compete with each other anymore in booking an available 'Giling' especially the students who like to go home on the weekend. This innovation will also help the students who want to go to class because they just need to install the application, and they do not have to stress out about figuring out the available 'Giling' and which driver to contact. It is because this application contains all the information needed by the students. For example, the driver's contact number, available Giling and more. For the driver, it is convenient because the driver will not be confused since the schedule is more systematic. For example, there will be no more overlapping schedules. The second importance of our innovation is it can ensure the safety of students. This application only approves registration with UiTM email. Plus, the driver for each 'Giling' is verified under UiTM Machang. So, there will be no scammers or outsiders that can hack this application and harm the students. Last but not least, this can guarantee time management for both students and drivers. By using this application, the students can detect the driver's location so that they can arrange their time wisely. For example, they can do their task or assignment without any pressure because they can expect the time arrival. For the drivers they can arrange their time to pick up each student from different locations so that they do not feel rushed and arrive on time.

Why this issue is an urgent matter because it will create a stressful situation for students who don't have any transportation to go anywhere for example, they are having a hard time getting food, necessities, and others. They also have difficulties going to class. Most students only rely on 'Giling' as their main transportation. If we don't solve the issues, they will affect the students in terms of their academic performance, attendance performance, and emotional well-being. Next, in every university, the safety of students is very important, so we must take care of students' safety. For the driver, it is important to solve this issue so the drivers can avoid any confusion related to the schedule. Last but not least, there are no systematic payments for the 'Giling' which will affect their daily income.



Figure 1: Evidence

2. METHOD & MATERIAL

The development of the MyGiling application followed a structured approach, beginning with an exploration of the key issues students faced with Giling transportation. We conducted interviews with students who regularly used the service to gather insights into their challenges and expectations. The interviews were conducted via WhatsApp, where participants shared their experiences regarding booking, pricing, and payment difficulties. This initial empathy-driven research helped shape the focus of the innovation and highlighted the importance of clear communication and flexible payment options. The data collected from these interviews informed the development of our systematic solution, ensuring that the app addressed real student needs.

Once the problems were identified, the next step involved conceptualizing the MyGiling app. A rapid prototyping method was employed to design a user-friendly interface that included features such as real-time availability tracking, fixed pricing for various locations, and dual-payment options (online and cash). Wireframes were created to visualize the application's functionality, particularly focusing on ensuring simplicity and ease of use for the target users students of UiTM Machang. Tools such as Figma and Adobe XD were used to develop the prototype, allowing the team to test different layouts and receive feedback on usability.

In terms of materials, the project relied heavily on digital tools to create, test, and refine the MyGiling app. The interviews were documented using Google Docs to keep track of user responses and analyze patterns in the data. For the development of the application itself, Android Studio was used to build the app's framework for Android devices, ensuring compatibility with smartphones and tablets. Additionally, online payment integration was explored using FPX (Financial Process Exchange), a widely accepted Malaysian online payment gateway, to facilitate cashless transactions.

The testing phase was critical in ensuring that the app functioned smoothly in real-world scenarios. Simulated bookings were conducted with volunteers from the UiTM student body to assess the app's reliability, payment options, and user experience. Feedback was gathered to identify any issues with the user interface, payment failures, or booking errors. Adjustments were made to address these problems before finalizing the prototype. This iterative process allowed for continuous improvements, ensuring the app met both the technical requirements and the expectations of the users.

Overall, the materials and methods utilized in developing MyGiling were focused on creating an accessible, reliable, and safe solution for students. By leveraging feedback from students, using efficient design tools, and integrating secure payment methods, the project successfully delivered a prototype that addressed key transportation challenges. This systematic approach ensured that the application was not only functional but also aligned with the needs of its users, providing a clear path for future implementation and scaling.

3. FINDINGS

The My Giling application is designed to address several key challenges faced by students using the university's transportation services. One of the primary issues is miscommunication with drivers, which often leads to delays and frustration. To solve this, the app will include a feature that provides automated reminders and real-time notifications to drivers. This will help streamline the communication process, ensuring that drivers are always informed and punctual.

Another major concern is the lack of flexible payment methods, as many students no longer carry cash. Recognizing this, My Giling will introduce a dual-payment system, allowing users to choose between cash or online payment options. By integrating secure online payment gateways, the

app will make transactions easier and more convenient for students. Currently, Giling services lack a fixed pricing structure, which can cause confusion among students. To address this, the app will automatically state the price based on specific location. This will provide students with clear information on fares, enabling them to budget more effectively and avoid misunderstandings with drivers.

The limited availability of Giling vans often leads to overcrowding and long waiting times for students. To mitigate this issue, the app will explore strategies to increase the number of available transportations. Additionally, it will allow for the registration of other transportation options, such as Grab services, offering students more choices and reducing dependency on transportation alone. Another innovative feature of My Giling is its user-friendly design, which ensures that students can easily navigate the app. The interface will include simple booking procedures, real-time updates on transportation availability, and options for route tracking. This focus on usability will make the app accessible even to those who are less familiar with technology. In addition to providing core transportation services, the app aims to foster a sense of community among users. Features such as ride-sharing and group bookings will allow students to collaborate and travel together, reducing costs and promoting sustainability. This approach aligns with the university's broader goals of environmental consciousness and student welfare.

To ensure reliability, the app will also prioritize the maintenance of transportation and driver responsibility. Feedback systems will be incorporated, enabling students to rate their experiences and provide suggestions for improvement. This will help maintain high service standards and build trust between users and service providers.

Overall, My Giling seeks to improve the transportation experience for university students. By addressing common points such as communication, payment options, pricing, and availability, the app aims to provide a smooth, efficient, and student-centered solution. This comprehensive approach ensures that the service not only meets but exceeds the expectations of its users.

3.1 Project Challenges

The project challenges that we need to manage for producing the outcomes which are the finances to build the application which it may take a lot of budgets, and we must find the fund from the funders that we can collaborate with. So, we decided to make a loan from a trusted organization like MARA. This is because MARA supports local businesses, especially in education. So, the possibility of approval is high. Next, Giling drivers might face a few challenges in which the possibility of not getting a full loan is low as they might only get 50% of the loan. So, this will make it harder for Giling organization to add more Giling transportation like more vans or cars because they will lack budget as they did not get the full amount of the loan. Other than that, we realize that we must ensure that our marketing for this innovation is effective and is known by all the students in UiTM Machang. This is because students need to know about this application which may help to ease their burden every day. Besides, the challenge that we faced was the driver of My Giling verification. This is because we have to know well the profile of the drivers whether they have a good and clean record of driving or not. We will get rid of the My Giling drivers that do not fulfill the requirements that are needed. Moreover, the problem that we face is the operation hours of My Giling which are being stated at 7.00 a.m. until 12.00 a.m., but we know that some students may have an emergency to use Giling after the operation hours. For the solution, we decided to activate the application 24 hours. So, if any students face an emergency, they could directly use My Giling application to book giling immediately at any time.

3.2.2 Project Success Indicator

The project success indicators are firstly operational efficiency. The operational efficiency must follow the My Giling application's booking order and minimize transportation delays to students. Besides that, the success indicators are the usage metrics which is how frequently the students of UiTM Machang are using the application. Moreover, the success indicator is financial viability which contributes to the My Giling drivers' income, and also the students may not feel wasted by paying My Giling drivers because the price is affordable. Other than that, we want user satisfaction to have a positive impact on the My Giling application, positive ratings like comfort, safety, and reliability that being rate will provide some booster for this application to grow more after this. Next, the success indicators is the safety of the passengers, which is students or staff that booked the My Giling will have their record if anything happened to them when they ride My Giling. We have to ensure that at least minimal or no incidents are reported during the operations. Furthermore, the key indicators of success will be integration and accessibility. This is because My Giling allows the student to go to inside UiTM Machang and the Non-Resident area which is the destination that demands towards the students. After all, they want to go to class and go back to their hostel. It also provides students that want to visit a town or different district, for example Tanah Merah, Jeli, Kota Bharu, Pasir Putih and many more inside Kelantan. Because of that, My Giling provides sustainability that may work because this project will be used by students because they likely don't have any transportation to go to anywhere other than by using My Giling transportation.

4. DISCUSSION

We discovered that the MyGiling app is the most effective way to solve students' issues with the current Giling system after talking to them and learning about their difficulties. It is evident that students deal with a variety of problems, such as trouble scheduling rides, confusing prices, limited option for the type of transport and a lack of available payment options. Our goal in establishing MyGiling is to make transportation safer, more dependable, and easier for both drivers and students.

Firstly, the automatic reminders to driver's feature will significantly enhance the reliability and punctuality of the transportation service. By integrating a system that sends timely notifications, the app will ensure that drivers receive regular alerts about their scheduled trips, pick-up locations, and passenger details well in advance. These reminders can be set to trigger at specific intervals, such as an hour before a pick-up, and include all necessary trip information like student names, destinations, and any special instructions. This feature addresses a common issue raised by students regarding missed or forgotten bookings, which often leads to delays or disruptions in their schedules. With automated reminders, drivers will be better prepared, minimizing the chances of oversight and ensuring a smoother, more efficient service. This not only improves the students' experience but also helps maintain the service's reputation for reliability.

5. CONCLUSION

The goal of MyGiling project was to provide a systematic and innovative approach to the important transportation issues that UiTM Machang students faced. To improve the overall user experience, the project concentrated on developing a mobile application that would increase booking efficiency, offer fixed pricing, provide two payment options, and expand transportation options.

Through interviews and feedback from drivers and students, the solution was created using a user-centered and sympathetic approach. The findings have brought the spotlight on problems like

lack of transportation options and availability, limited payment options, unclear pricing, and miscommunication between students and drivers. Features like notifications and messages, fixed prices for specific destinations, cash and online payment options, real-time tracking, and a variety of transportation options are all included in the resulting MyGiling application.

This project is important because it could improve transportation services by providing students with ease, safety, and trustworthiness. The implications for daily life include shorter waiting times, better communication between drivers and students, more efficient time management, and fixed pricing. Problems that had a poor impact on students' everyday lives and academic performance are resolved immediately by these improvements.

However, the project does have some limitations. Challenges like obtaining a sufficient budget, verifying driver requirements, and guaranteeing flexible time operation in case of emergencies that need constant consideration.

In order to ensure broader implementation, future improvements will concentrate on improving the marketing strategy, improving vehicle availability, and improving the application user experience. Adding advanced scheduling methods and offline functionality will increase accessibility and consistency even more.

In conclusion, the MyGiling project successfully created the framework for more well-planned and student-friendly transportation systems in UiTM Machang. With further development and improvement, MyGiling could become an important resource for students greatly improving their time on campus and beyond.

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Appendices

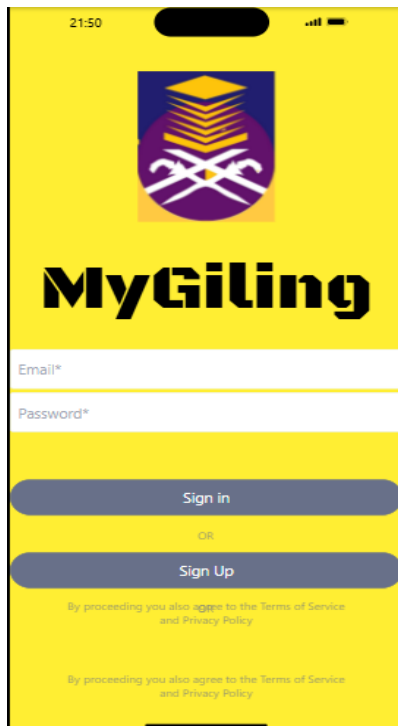


Figure 2: Login page

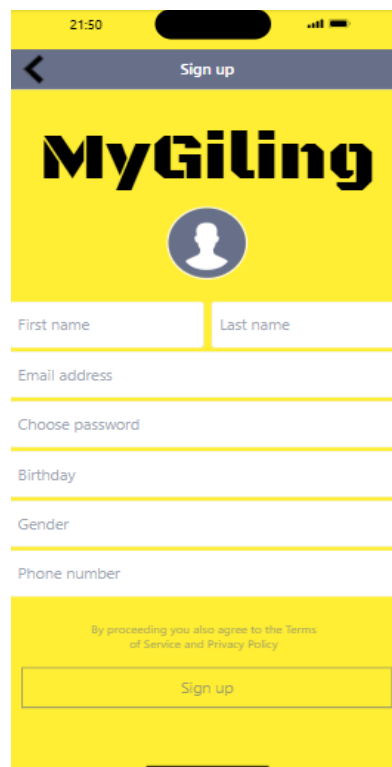


Figure 3: Sign Up Form

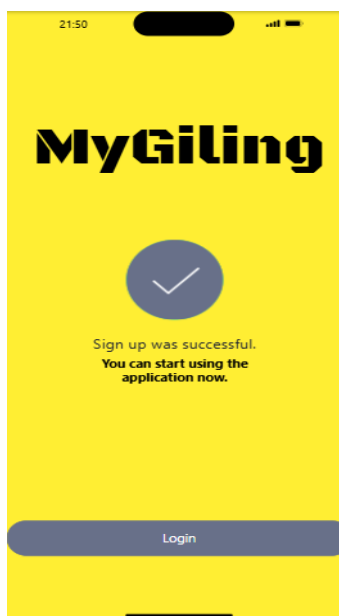


Figure 4: Successful Sign-up

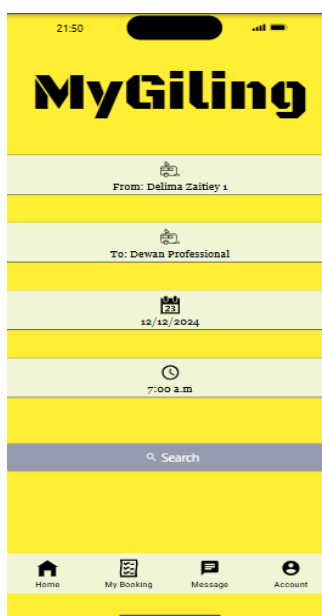


Figure 5: Search Destination



Figure 6: From Destination

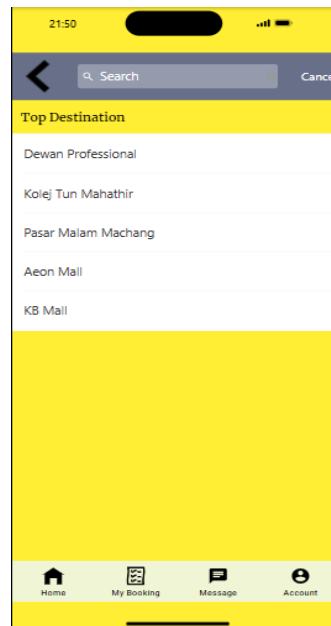


Figure 7: To Destination

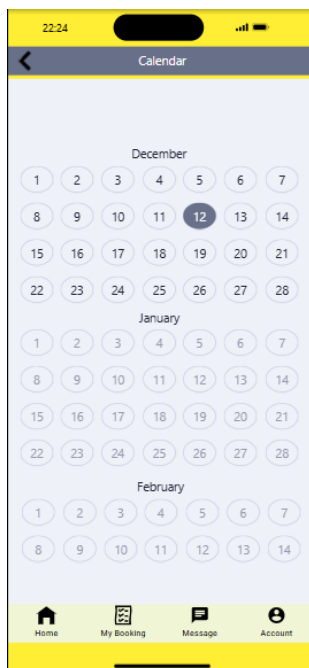


Figure 8: Date Selection

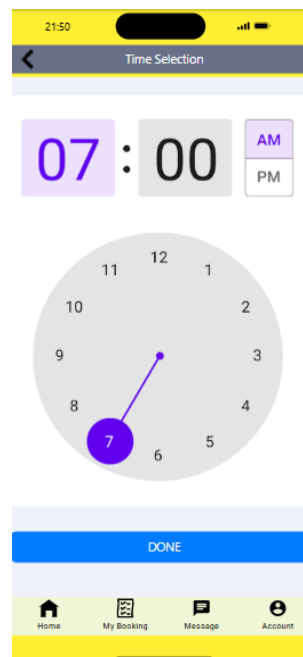


Figure 9: Time Selection

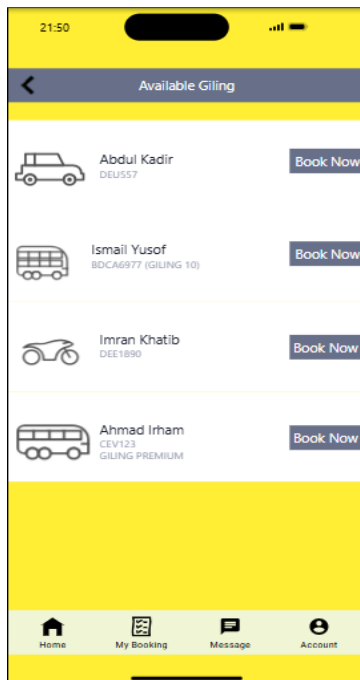


Figure 10: Book Giling

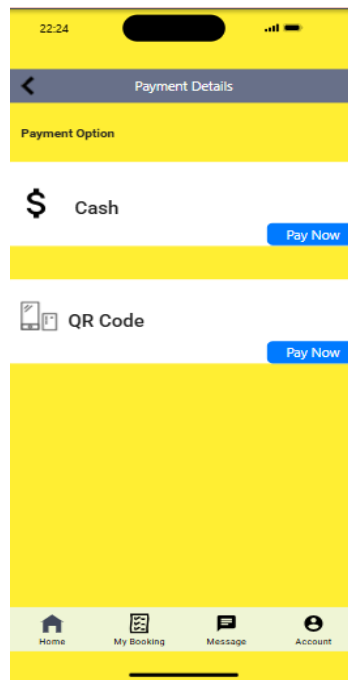


Figure 11: Payment Method

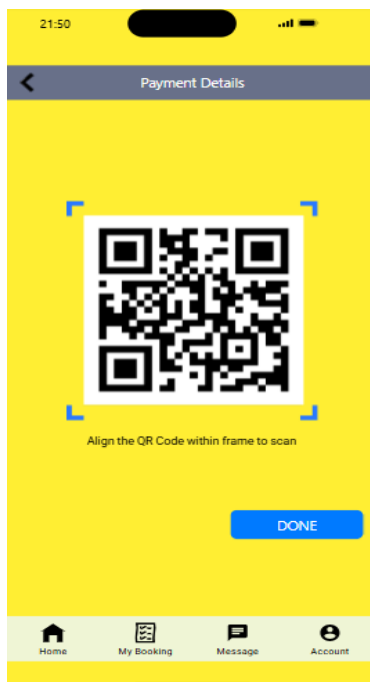


Figure 12: QR Code

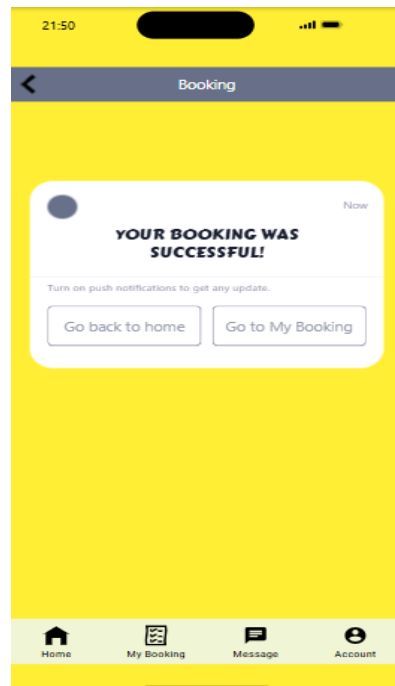


Figure 13: Booking Successful



Figure 14: Booking History

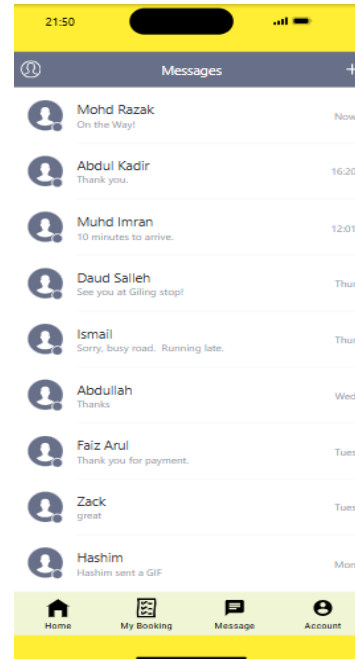


Figure 15: Messages

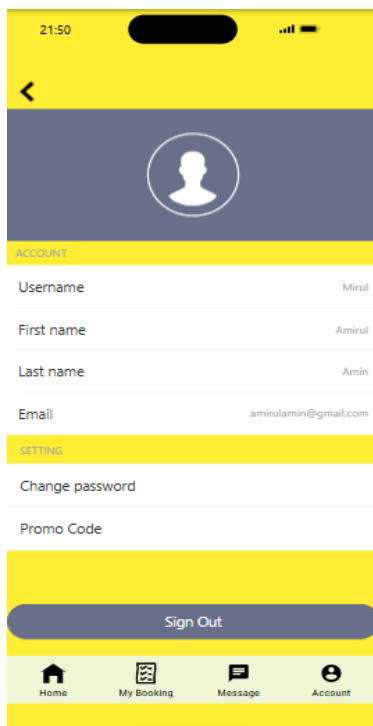


Figure 16: Account

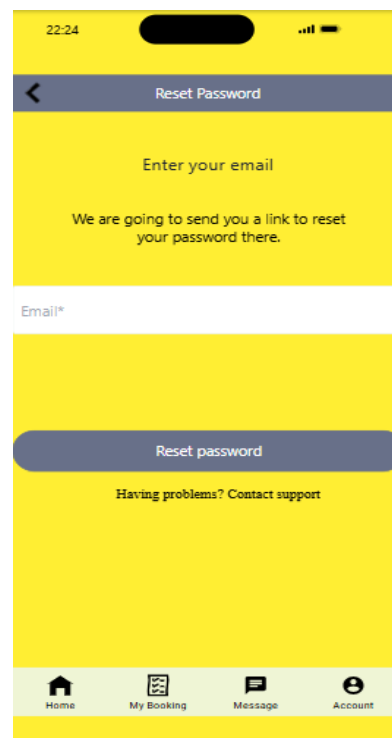


Figure 17: Reset Password

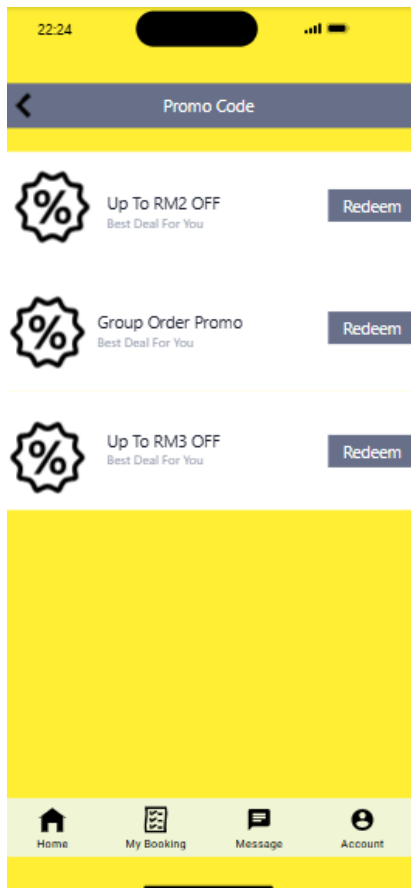


Figure 18: Promo Code

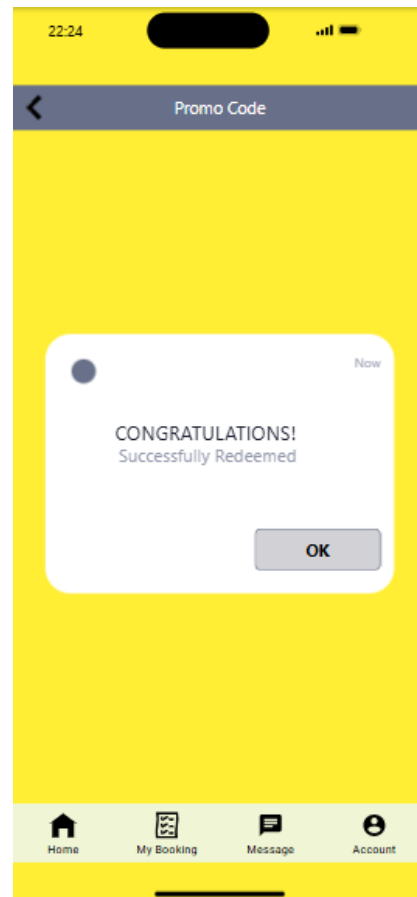


Figure 19: Successful Redeem

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