A PRELIMINARY EVALUATION OF USIM STUDENTS' CAR BOOKING

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ABSTRACT

The objectives of the research are to investigate the gaps in the existing car booking mobile application for USIM students, to develop a secured car booking mobile application, MyRide, and to implement system testing to ensure MyRide mobile application is working. The scope of the research includes a car positioning module, car position mapping module, and authentication module. The result of the research is a mobile application for car booking called MyRide. The research is to enhance the current method of booking a car.

INTRODUCTION

Among all transportation services, a mobile application is a major technology used by the public as a medium for convenience purposes. A smartphone application is the most simple and convenient way to book a car, especially in a crowded town or metropolis. Back in the old days when the taxi was popular, people need to wait for passing by taxi or make a booking via call. This creates a huge downgrade in transportation service if time and convenience are considered. Creating a transportation system that is easy to use and accessible to the public can be a difficult task, as it must take into consideration the variety of elements that are involved in travel, including the connectivity of the public transportation system [1].

Nowadays, the tech world is emerging as people want services that need less involvement and can be done entirely on their mobile devices. The mobile trend in every industry is massive, from booking flights to renting a hotel. Car booking app development is an example of a service that saves time and money by delivering user-friendly mobile apps. Having a more confident attitude among people toward technology increases the odds of self-booking ride-hailing trips, using an app [2]. In Universiti Sains Islam Malaysia (USIM), for example, students tend to use their mobile phones in case of booking transport, especially cars.

However, USIM has a problem when it comes to booking a car method. Individual public passenger services had been experiencing issues with information asymmetry and coordination between the user and the driver, as it was unclear where to take a taxi, service hours, safety, cleanliness, car quality, driver reliability, driver knowledge of the city, and the fee to be paid for the service provided. To solve these problems and enhance the car booking services, it is essential to have a mobile application that mainly focuses on car booking for USIM students.

There was a situation when providing a good quality of transport services to the public became a great challenge due to the poor service of current public transport. A developing country like Malaysia is still facing low ridership in public transport as one of the reasons people do not use public transport is their dissatisfaction with the lack of information about arrival and departure times [3]. Nevertheless, uprising mobile used to upgrade the transport services via a mobile application like car booking.

METHODOLOGY

The methodology for this research is a waterfall model that includes five phases namely requirements, design, implementation, verification, and maintenance. The requirements phase is to identify the user needs. It includes an online survey that was conducted to require data on existing car booking mobile applications that have been used by USIM students in early 2022. There were 23 respondents from USIM students who answered the survey from 15th May until 29th of May 2022. The design phase is to develop the system, the implementation phase is to execute the system, the verification phase is to test the system, and the maintenance phase is to detect and fix the problems.

RESULTS AND DISCUSSION

Based on Figure 1, Telegram is the most popular mobile application to book a car among USIM students. Grab Car is a runner-up as 26.1% of the respondents are using the app while MyCar is the third choice with 13% and AirAsia ride has the same percentage as EzCab with 4.3% of the respondents.

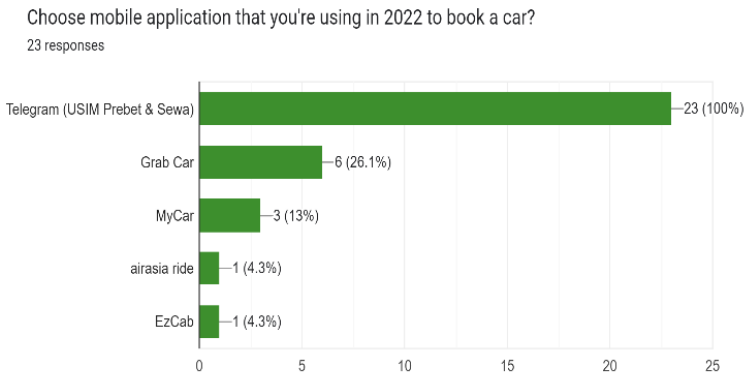

Figure 1. The percentage of existing mobile applications used by USIM students to book a car either using Telegram group (USIM Prebet & Sewa), Grab Car, MyCar, AirAsia ride, or EzCab.

Figure 2 has shown that among 23 respondents, 43.5% are not satisfied with the current existing mobile applications to make a car booking. This result indicates almost half of the respondents have problems with Telegram, Grab Car, MyCar, and other car booking mobile applications in the current market. The survey also includes respondents' reactions to the development of a specific mobile application to book a car among USIM users. Figure 3 shows that 82.6% of respondents said 'Yes' and none of them choose 'No' on the development idea.

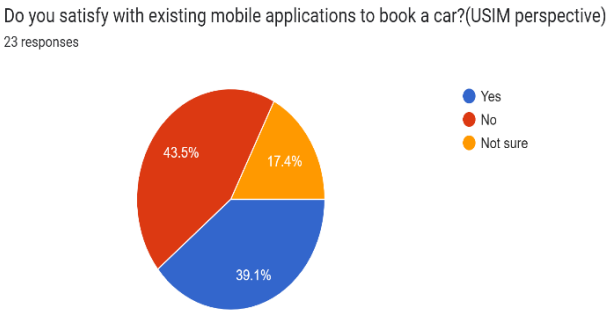

Figure 2. The percentage of user satisfaction on existing mobile applications to book a car.

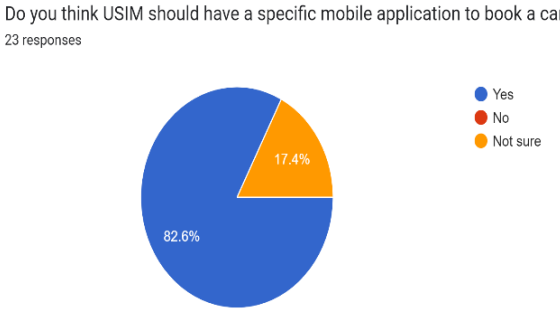

Figure 3. Percentage of respondents' reaction to the development of a specific mobile application to book a car among USIM users.

MyRide will have a few functional requirements such as users can request a ride should be matched to a driver in proximity and can see all nearby drivers. Drivers can answer or decline requests from nearby users. When a trip is created, both parties see each other's real-time location.

REFERENCES

[1] W. C. Chan, W. H. W. Ibrahim, M. C. Lo., M. K. Suaidi, and S. T. Ha. "Sustainability of public transportation: An examination of user behavior to real-time GPS tracking application," *Sustainability*, 12(22), 2020.

[2] Misra, M. Shirgaokar, A. W. Agrawal, B. Dobbs, and M. Wachs, "How older adult use ride-hailing booking technology in California," *Transportation Research Part A: Policy and Practice, 155*, 11–30, 2022.

[3] E. A. Azmi, F. N. Nusa, and A. K. Rahmat. "Service attributes influencing declining ridership of public rail operation based on passenger experience survey in Klang Valley," *AIP Conference Proceedings*, 2018.