2.0 Background Study

The current operating structure of students' e-hailing service exposes a considerable lack of official websites or dedicated apps for both passengers and drivers, resulting in a more informal and inefficient process. Instead, the students' Telegram group serves as the main method of arranging a grab ride. Students who require grab services post their requests in this group, indicating their preferred time and location. Drivers who are accessible and willing to satisfy these requests respond appropriately to the communications.

One of the system's significant downsides is that students must put their grab orders far in advance because there is no way to ensure the availability of a driver at a given moment. Users may experience uncertainty and inconvenience because of the lack of real-time information. Drivers, on the other hand, must often check the Telegram group to reply to any open ride requests due to the competitiveness of taking orders. This ongoing alertness to acquire trips adds to the drivers' workload, resulting in a competitive attitude within the group.

Payments are also done by online payment and cash. While this is a universal method of accepting payment, without a tracking system for gathering the data, the driver must manually check the record of the payment every time the consumer pays for the trip to ensure that the payment has been made. If the customer pays with cash, they must manually record the data and carry a small amount of cash with them to guarantee that they have enough change for the consumer.

Aside from operational difficulties, the existing style of operation for the students' e-hailing service creates serious safety issues for both passengers and drivers. There is no central authority accountable for addressing issues or assuring the safety and welfare of the participants if the Telegram group is not overseen by an administrator. In the event of a disagreement, misconduct, or other safety-related occurrence, users and drivers can only utilize a Google form to report their concerns. Unfortunately, this procedure lacks transparency, and persons making reports are frequently unsure whether any steps have been taken to address the issues. Because of the absence of accountability and transparency, both passengers and drivers may feel insecure and unprotected. Passengers and drivers in the Telegram group have no direct recourse to resolve safety issues due to this safety gap. As a result, they've taken an informal approach to raising awareness about any possible risks and difficulties inside the community using the same Telegram group.

3.0 Problem Statement

These issues collectively contribute to a system lacking real-time efficiency, official structure, effective payment tracking, and proper safety protocols, leading to a lack of transparency and accountability within the student transportation service.

1.   Inefficient booking system

Due to the lack of real-time information, students who wished to utilize the service were compelled to submit their requests in advance. Once a request has been accepted, it may be impossible to adjust the time, as doing so could result in cancellation. The drivers are required to consistently monitor the group for requests for rides, which creates an environment of competition.

2.   Lack of official platform

Due to the lack of an official platform, the students' e-hailing service operates on an informal and inefficient system, wherein both the users and the drivers may need to request and reply one by one through Telegram.

3.   Issues in payment tracking

Given that the drivers are reliant on a combination of cash and online payment methods, there is currently no established monitoring system in place to monitor the payment data. They must perform a manual confirmation of the payment records to ensure that the consumers are, in fact, making the payment.

4.   Safety concerns

The reporting of safety and misconduct concerns is confined to a Google Form, which is lacking in transparency and accountability due to the absence of a central governing body to supervise the entirety of the issues. This may cause users and drivers to feel unprotected as a consequence of the absence of a formal safety mechanism. The community of students operates solely on the informal information shared by its members, and the factual accuracy of that information may be beyond what we know.

5.0 Objectives

- To design a systematic booking system that can accommodate both early and real-time booking to ease the process of requesting and taking orders for the service.
- To design a system with a proper and official platform for the students to track their drivers, provide any feedback or lodge complaints, and locate any available driver at a particular moment.
- To create a robust payment system including user-preferred payment methods, structured monitoring for accuracy, and automated payment confirmations to enhance efficiency.
- To create an efficient system for collecting and documenting passenger and driver information, establish a centralized reporting and feedback system that is publicly accessible within the UniRide community, and incorporate GPS to reduce the likelihood of safety issues.

6.0 Scopes

6.1 System

Mobile application

- Create a mobile application that is compatible with both Android and iOS.
- Allow the user to register and log in to a designated account for either the passenger or the driver.
- Allow the passenger to view the driver's information and location while the driver can view the passenger's information.
- Provide an anonymous feedback and complaint system.
- Provide an efficient payment system.

6.2 User

Passengers

- Allow the passenger to book a ride-hailing service by providing time, current location, and destination.
- Allow the passenger to access the driver's location and details, as well as the vehicle's specifications.
- Allow the passenger to know the price of the ride beforehand.
- Allow the passenger to make payment online in the system.
- Allow the passenger to leave anonymous feedback and complaints in the system.

Drivers

- Allow the drivers to view the available requests.
- Allow the drivers to accept the ride requests.
- Allow the drivers to view their customers' information details.
- Help the drivers to track and collect their payment records.
- Allow the drivers to view their feedback and complaints received.

6.3 Feasibility study

Technical

- Mobile application as the main platform.
- Use a database system to store drivers' and students' information.
- Use a database system to record order history and payment information.
- Able to make online payment in the system.
- Utilize GPS to determine the driver's location.

Economic

- Hardware cost
- Software cost
- Consultant cost
- Training cost
- Maintenance cost
- IS support cost

Operational

- Maintenance
- Human resources
- Ease of use
- Efficiency

6.4 System Boundaries

UniRide is an online ride-hailing mobile application designed specifically for the student population at UTM. To utilize the program, it is necessary for individuals to undergo a registration process and provide suitable documentation as a means of preventing any potential misuse. The service user can reserve a ride, examine the estimated cost, obtain information about the driver's location and particulars, complete the payment online, and provide anonymous feedback. Registered drivers can view and accept available requests, access customer details, review payment history, and analyze feedback provided. UniRide additionally employs the utilization of GPS technology to monitor the precise location of the driver's vehicle, hence facilitating convenience for customers and ensuring their safety.