Car Pool Rest-A

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CAR POOL RESTA

HABEEB E SADEED

This report is submitted in partial fulfillment of the requirements for the Bachelor of Computer Science (Software Development) with Honours.

FACULTY OF INFORMATION AND COMMUNICATION TECHNOLOGY UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2021

DECLARATION

I hereby declare that this project report entitled

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is written by me and is my own effort and that no part has been plagiarized

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STUDENT : _____ Date : 11/09/2022

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I hereby declare that I have read this project report and found

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DEDICATION

Everyone who has given me the support, inspiration, and passion for seeing this project through to its end deserves to have their names included in this Final Year Project dedication page. First and foremost, I would like to thank my loving parents, who have provided me with unfailing love and encouragement throughout my whole life. Throughout the past two months, they have been continually on the lookout for me, at all hours of the day and night, on a daily basis. Thank you very much for your help and support.I am eternally thankful for my parents' love and support, especially my mother, who never stopped lovingme while simultaneously doubting me and pushing me to my limits and beyond. As a result, I am glad for their existence, as well as for engaging me to assist them in navigating challenging situations and learning how to deal with them effectively. In order to achieve my goals, I must aim to be a hardworkingindividual with a strong sense of purpose and the capacity to develop into an outstanding type of individual. I would also like to convey my gratitude and appreciation to Nor Hafeizah Binti Hassan, and she has acted as my mentor and the person I look up to as a supervisor for her assistance and guidance throughout the years. She has received billions of unending loves since the beginning of time, and the number of them continues to expand every day. I consider myself really fortunate and honoured to be under his supervision and care, which is something I take for granted most of the time.

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ABSTRACT

The purpose of this project is to investigate the outcome of a new type of ride sharing app application which we named as Car Pool RestA . This application will be available for use for the users within a particular range. In this report , we have discussed the build of this application in terms of its importance among other ride sharing applications. This thesis will discuss the practical demonstration of some of the new features that the application will uniquely offer and these very features will be the highlight of the new kind of application or the Car Pool RestA as we named it to be in light of solving a problem in a particular scenario serving the ride needs of a given population lying in a particular range ensuring a top quality service to all the residents in a particular community .

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LIST OF ABBREVIATIONS

API	**Application Programming Interface**
FYP	**Final Year Project**
UI	**User Interface**
IOS	**iPhone Operating System**
Mac	**Media Access Control**

CHAPTER 1: INTRODUCTION

1.1 Introduction

Car Pool RestA will be available as a cross-platform mobile application service on both the Android and iOS platforms, and its database will be accessible via the web. Through this program, we have observed that it is usually difficult for some residents of a specific location to get to their destinations on time, particularly in the lack of continuous on-going bus service in the neighborhood,which we hope to address. On the other hand, the Car Pool RestA programme will make an attempt toaddress the situation. Any person who resides in a certain geographic area where this application is inuse, regardless of their employment status or background, has the choice to become a licensed driver as a result of the implementation of this programme. CarPool RestA is an easy programme from the driver's point of view in terms of its user interface. Every homeowner in a certain neighborhood doesnot have the same schedules and habits as the others. Aside from that, they can register with the government and provide their services to other residents in times of need at an exorbitant fee when the situation calls for it.

Business analysts believe that the demand for emergency transportation will continue to grow in price, causing costs to rise further and further. This allows the rider to save their reputationby not missing crucial deadlines, and it also allows the rider to benefit from the experience by ridingin the opposite way. It is possible that drivers will use this application because of the high demand for services during critical hours, which may result in drivers being required to exclude ride requestsfrom other clients who do not have urgent deadlines. As a result of the high demand, clients with scheduled appointments will be prioritized first, which may encourage drivers to use this application.

1.2 Problem Statements

Concerning current scenarios in Malaysia and other parts of the world where GrabCar and other ridesharing applications do hold a monopoly in the business, we have acknowledged that we find organizational blunders and managerial behind every ride-sharing app's initial successes mistakes, and growth hurdles that must be overcome. One such setback is being overly business-oriented and failing to provide services to clients based on their needs and priorities. Customers who use ride-sharing programs regularly may have their requirements at specific periods in their schedules. The worldwide ridesharing sector is dominated by large corporations such as Uber and Lyft.

CarPool RestA, on the other hand, is not primarily concerned with making a profit but rather with providing noble services to a certain community of people who live in a specific location. Forwant of a better expression, the goal is to fully eradicate any prospect of customers being forced towait in a line. Furthermore, the pool of drivers accessible is adequate in terms of size, which will beuseful in giving service to everyone who falls within a specific range of distances from the terminal.

We frequently miss the bus that transports us to and from our university or your company, which is always planned to run on a strict schedule. What we have observed in the present Malaysian circumstances is that, at various times, Grab services are extremely crowded at the same time, and one cannot afford to wait any longer than necessary because his meeting is scheduled to begin in around 30 to 45 minutes in some cases. It is extremely inconvenient for people who do not have access to their own transportation. If one has his or her own transportation, it is possible that his orher own transportation will not be adequate at all times.

1.3 Objectives

The project has the following objectives:

1. Launch alternative ride system ensuring ease of availability during class hours/office hours withinan area restricted.

2. Open alternative income opportunities for anyone within a preferred region/area by helping other students/workers who are in need of transport.

3. Students/workers or anyone can register in the app as being drivers offering noble services topeople having exams or important appointments,

4. Car Pool System will be dedicated to a restricted area only, so less waiting time of customers asseen in the Grab or MyCar services and thereby serving the needs of friends and families.

1.4 Project Scopes

1.4.1 *Target Users*

1.4.1.1 *Drivers*

Driving will have a flexible earning opportunity. It's a great alternative to full-time driver jobs, part-time driver jobs, or other part-time gigs, temp jobs, or seasonal employment. Or maybe someone who is already a rideshare driver and wants to supplement your income by becoming a driver using the Uber platform. Drivers who use CarPool RestA come from all backgrounds and industries, setting their own schedule to make work fit into their lives, not the other way around.

1.4.1.2 *Riders*

The riders of this application are residents of a particular community. These local residents do not possess their own transports, and they might face problems in critical moments of their livesdue to lack of transport. They come from all walks of lives, and a portion of them may not be able toafford transport of their own. However, the fact is that they too have a necessity at certain times of theday. The carpool rest application comes with all the features required to fulfill the needs of people coming from all backgrounds.

1.4.1.3 *Modules and functionalities*

1. Registration Module: Both riders and drivers can register into the system using the mobile application platforms.
2. Login Module: Upon registration, both riders and drivers can log into the system.
3. Payment Module: As a startup application, the mode of payment will be cash. Once the riderhas arrived at his destination, he will pay the cash, while the driver will confirm the receipt of thecash.
4. Set range Module: The user of this application will be able to scan if his preferred area falls within the radius set.
5. Priority-based ride: The rider can let the drivers know the sheer urgency of the ride.
6. Earnings module: All the earnings will be computed and saved in the backend. These data can be viewed in the driver's UI.
7. Trip History module: All the trips will be recorded and saved in the database table.
8. Upon completion of each ride, the riders will be able to rate the driver out of 5.0. The driverswill be able to view the average of all the ratings incurred from serving all his clients.

1.5 Project Significance

The Uber/Grab/MyCar services are business oriented-and these services are very busy during certain times in the day. They do not have a way to look at the priorities of the customers, whether they are in some sort of rush or not. Mostly, they follow the orders on a first-come, first-servebasis. Most organizations have a conventional bus scheduling system, and this does not meet the demand of the people living in one particular area at run time. On the other side, Grab, Uber, andMyCar Services are business-oriented. The critical hours for students and workers requiring transportare taken care of. So, therefore, there is a need for a system to be built that will give ensure that thestudents/workers/ clerks or anyone regardless of whatever professions they belong to do not miss out on exams/important classes just because they cannot afford to purchase transport of their own. This is possible if the service is implemented within the restricted area in the first place.

Now a proposed solution could be as we analyze the aforesaid scenarios could be only and only if an area provides an alternative ride system that is available at run-time and does not follow the scheduled timing as other conventional ride services and is made to prioritize the transport needs of the people staying within that area only. If one has his own transport and then hecan use his transport to deliver his fellow classmates or office clerks helping them reach the exam venue and apparently opening doors of opportunities for these people to earn some extra cash whiledoing a noble service to the people in a particular area. It is because Grab, Uber, or MyCar services offer their services in various different locations, so they will never prioritize the needs of studentsand office clerks or anyone in need in a particular area.

1.6 Expected Output

- The system will be limited to target locations only set by the application system inthe backend.
- The application will feature priority-based ride is featured in the application.

1.7 Conclusion

Throughout the first segment, I went into great detail about each obstacle. There was a clear understanding of the project's objectives, scope, and solution to each difficulty. It also explains the significance of the project so that the benefits that may be reaped from using this strategy can be demonstrated. A favorable outcome can be achieved by employing this strategy toalleviate the problems of the hostel's pupils. A more in-depth discussion of the Project Methodology,the Project Schedule, and the Milestones will be covered in greater detail in Chapter 2 of this paper.

CHAPTER 2: LITERATURE REVIEW AND PROJECT METHODOLOGY

2.1 Introduction

Travelers in metropolitan areas can now gather transportation information via smartphone applications (apps), which have recently gained popularity as a method of gathering information. There may be further use for these apps in addition to simply providing consumers with travel information. Conventional MyCar Services and Grabs provided transportation for businesses in Malaysia; however, the availability of these services could not be guaranteed. An extensive verification process must be completed before a grab driver can be hired, which limits the likelihood of job easinesson the part of the employer. In order to address employment and availability difficulties, the only answeris to provide a pool of cars within a defined geographic area. In order to better comprehend this new application, we conduct a thorough literature review that includes smartphone applications, travel, literary review, and transportation implications. We've conducted interviews with a variety of Malacca residents who don't have access to an automobile for various reasons. In the last stage, users of Androidand iOS applications were polled in order to gain an understanding of how (usually) multimodal applications are used and how (generally speaking) multimodal trip aggregators can influence travel behavior. The findings of this study, which are summarised in this paper, contribute to a better understanding of multimodal travel through smartphone apps.

2.2 Facts and Findings

Table 2-1 A brief illustration of findings based on realistic perspective

Facts	Findings	Proposed Solution
Local residents cannot book a ride during peak hours.	These residents have important appointments or meetings to attend.	The drivers must be committed to offering their service within a specified community in a region-restricted.
Surge of price is very high during peak hours.	Riders will not have any second option apart from opting for the ride.	A pool of dedicated car drivers in a particular locality and these driversshould price the price computed by the application system based on the distance.
There is no way for the riders to let the drivers know the sheer importanceof the ride during critical hours while the booking ofthe ride is in progress and might consume a bulk of the rider's valuable time.	These riders might be patients, and the inability to book an instant ride might risk their lives. These riders might also be students and might at times fail to reach the exam venue in a timely manner.	The system should be developed and must comewith a priority-based ride-sharing module.