ShuttleGo: Mobile Based E-Wallet with QR Code Scanner and Queueing System for Washington Place Dasmarinas

A Capstone Project Proposal
Presented to the Faculty of the
Information and Communications Technology Program
STI College Dasmarinas

In Partial Fulfilment
of the Requirements for the Degree
Bachelor of Science in Information Technology

Michelle A. De Asis
Franchesca M. Delos Reyes
Rhen Dhel B. Patigayon
Sage Florence L. Soriano

<Date of Proposal Defense>

APPROVAL SHEET

This capstone project proposal titled: **ShuttleGo: Mobile Based E-Wallet with QR Code Scanner and Queueing System for Washington Place Dasmarinas** prepared and submitted by **Michelle A. De Asis, Franchesca M. Delos Reyes, Rhen Dhel B. Patigayon, and Sage Florence L. Soriano**, in partial fulfillment of the requirements for the degree of Bachelor of Science in Information Technology, has been examined and is recommended for acceptance and approval.

Maureen Royce Sacay
Capstone Project Adviser

Accepted and approved by the Capstone Project Review Panel
in partial fulfillment of the requirements for the degree of
Bachelor of Science in Information Technology

<Panelists' Given Name MI. Family Name>
Panel Member

<Panelists' Given Name MI. Family Name>
Panel Member

<Panelists' Given Name MI. Family Name>
Lead Panelist

Noted:

Anna Lissa Abello
Capstone Project Coordinator

<Program Head's Given Name MI. Family Name>
Program Head

<Date of Proposal Defense>

Table of Contents

List of Figures

Appendix

Introduction

Ever since the COVID-19 pandemic started, things started to change drastically. The transition from traditional ways to digitalization emerged, and social gatherings became online gatherings. Some of these changes are the use of physical money being added as one of the ways to transfer the virus from person to person, lockdown implementations, and making the new norm of online transactions which utilized the use of E-wallets. One example of this cashless payment is the Beep card mainly used in selected bus transportation and train terminals in Metro Manila Philippines. The commuters use this to easily tap their card onto the scanner for their fare payment. The proponents of STI College Dasmarinas came up with a project that can be a solution for the enhancement of the commuting experience of Washington Place Dasmarinas which can still be used even after the pandemic.

Project Context

Washington Place Dasmarinas is located at Sampaloc II along Aguinaldo Highway. It offers the newest, up-to-date, and grandest developed modern house and lot for people. The business is registered as a Real Estate Investment Firm. The Village Administrator and Board of Directors are assigned for the decision-making wherein the Board of Directors has the final say. One of the staff they have is Mr. Kian from Accounting Department which the proponents had interviewed.

Bukyo (E-Tricycle Service) is one of the services offered by Washington Place Dasmarinas for the people that started around February 15, 2022. It is intended for easy transportation in the subdivision, especially for homeowners who do not own private vehicles. As of today, there are two Bukyo services available that operate from 5:00 am to 10:00 pm without break time for meals. The peak time of their service is from 10:00 am to 1:00 pm since it is where the sun's rays are the hottest. Since there are only two drivers that operate the Bukyo, they work on a rotational schedule alternately. For instance, if Driver 1 will drive for today, Driver 2 will drive for tomorrow. So far, there is no experience of the shuttle service not being available. The drivers rent the Bukyo for the service and get to

keep it after a day of work, are required to remit their boundary the day after their schedule, keep their sales, and take responsibility for the vehicle's fuel. One of the problems encountered here is there is no issuance of receipt after the drivers remit the boundary which will cause a problem for the legitimacy of the driver's boundary record.

Bukyo was advertised on the bulletin board, and words got spread to the residents. It became popular because of its Facebook page with 5,629 followers and 53,584 check-ins. It is rated 4.6 stars with 157 reviews. Aside from the Facebook page, people can message them through their contact number and email address. Every Thursday and Friday is their busiest day due to a lot of inquiries around 5:00 pm to 10:00 pm. The only problem here is it takes three hours to one day for the page admin to respond to some of the inquiries on their Facebook page since they are always busy with their roles and there is no specific person to handle all the inquiries.

They have two methods when it comes to contacting the Bukyo driver to use the shuttle service. The first way is through texting the driver. The commuters have the drivers' contact numbers to let them know if the commuter wants to use the shuttle service. Once the driver received the text message, they will go to the commuter's address to fetch them. The second way is through chat on their Messenger group which consists of the HOA administrator, the drivers, and the homeowners. They will leave a message on the group, letting the driver know that they want to use the service. In this current system, the problem encountered is when the homeowner has a poor signal in their area and cannot communicate with the driver to use the service. There are only an estimated 140 passengers per day. The passenger contacts the driver in advance to set a schedule for their departure time. One of the problems encountered by the driver is not monitoring the number of commuters per day since they need to have a record of the total commuters they are having per day to accumulate it. This will also be helpful for the future queuing system of the subdivision once the number of commuters increases.

When it comes to the fare system, the special service costs 40 pesos, while it costs 15 pesos per head with a maximum of three passengers, and they can pay through GCash or physical money. There is also an implementation of a 50% discounted price for senior citizens. In

this traditional method, the passenger pays cash while the driver collects the money from each passenger. There are scenarios where not all passengers have the exact amount of money needed to pay for the shuttle fare, and sometimes the driver does not have enough coins for the passengers' change. It results in a time-consuming and inefficient procedure for both the passenger and driver.

The Washington Place Dasmarinas is strict when it comes to outsiders coming into the subdivision to keep the peace of the place. If there is an outsider who wants to enter the subdivision, they must say the house block and lot number they wish to visit then the security guard will need to confirm it with the homeowner before letting them use the shuttle service. Once the homeowner confirms the identity of the visitor, they can now use the shuttle service, otherwise, they will not be able to use it. The homeowners sometimes tell the security guard in advance that they will be having a visitor to let them use the shuttle service. The security guard of the subdivision writes in the logbook to record outsiders coming into the subdivision. An unexpected visitor can only get into the subdivision if there is a resident that will confirm their identity. This became a problem since there is a great chance of faking the time of visit logged by the outsider, ineffective when it comes to searching the visitor's previous log, and too much paperwork.

The Homeowners of Association handles the shuttle service of the subdivision. They also handle the driver's daily boundary, attendance, maintenance of the vehicle, and driver's information from their Biodata, and professional license. However, they do not monitor the rotation of the driver or where the driver is headed. They also do not generate any reports related to the Feedback for the Drivers, Shuttles, Shuttle Service, Complaints, Inquiries, Missing items, and issuing a receipt after receiving the boundary. To act on the stated problem, the HOA needs to monitor the feedbacks and complaints they are receiving or will receive to make the generation report.

ShuttleGo will focus on a Mobile Application with a QR Code Scanner for the Shuttle Service of Washington Place Dasmarinas. The main objective of this project is to provide a better commuting experience for the residents of the said subdivision. In addition, the administrator from the HOA can now have access to the necessary data for the making the

generation of the report. This application will benefit the residents and non-residents when it comes to improving their commuting experience. The shuttle driver will also benefit by having a receipt of boundary transactions, more organized booking, and more accurate payment. Lastly, the HOA will benefit by having a generation of reports feedback, complaints, and a record of boundary transactions.

Purpose and Description of the Project

The proponents proposed a QR Code Based Shuttle Fare Payment System to overcome existing issues with the manual fare payment method and to provide a better commuting service. ShuttleGo is a mobile application that will generate a commuter's QR Code which will be used for the payment system of the shuttle service. QR stands for "Quick Response", it is a type of barcode that stores information as a series of pixels in a square-shaped grid and can be read simply by a digital device, (Kaspersky, n.d.). Commuters and drivers will transact online for payment using the application. Through this, the admin can keep track of the number of passengers by looking at the number of recorded payment transactions. Furthermore, the application's capability of issuing a digital copy of a receipt when the boundary is remitted will help with the issue of the validity of the remittance of the boundary. Also, with the help of the application's data, they will be able to prepare a report regarding the feedback and complaints they will receive. The proponents decided to use a mobile application since most people nowadays have their own mobile devices and use it for their productivity. Utilizing a mobile application gives convenience and provides customer satisfaction because of its unique features.

For the user-side feature which enables the commuters to have a quick transaction, this feature is the digital payment sometimes called electronic payment. It will let the commuters adopt the implementation of a cashless payment system as they can provide payment through the use of this mobile application, and they will be able to receive notification for their proof of transaction.

Another feature that will benefit the shuttle driver is the monitoring of transactions. This function will give assistance to the shuttle drivers of the subdivision to monitor the number

of passengers they accommodated within a day. Related to this, they can also monitor the total sales they earned. The driver can also manage the booking of their passengers to make it more organized through the use of the additional feature of the application which is the queuing system, and they will be informed about the commuter's location once they need to be fetched.

Additionally, an application's feature which is the generation of reports will help them in keeping track of their shuttle drivers, the remittance of their boundary, commuter's feedback, and complaints. Through this feature, the administrators will be able to monitor the whereabouts of the driver and if their boundary has been remitted. Also, in this admin-side feature, they can view the feedback and complaints about the service.

With the help of these functions, the subdivision will be able to administer an efficient fare settlement and handle their other business processes by making it easier and more systematic. The proposed project will improve the customer service and experience in their commuting process.

Objectives of the Study

The main objective of this study is to develop a mobile application and QR Scanner to improve and automate a shuttle service's manual procedure. To lessen and somehow prevent the issues encountered, the proponents aim to do the following:

1. To implement a digital payment system to replace the traditional method by using a mobile application and QR scanner. The goal of this study is to provide a convenient and accurate payment system that enables the passenger to load their account through GCash and pay by scanning the QR code.

2. To develop a booking that notifies the shuttle driver about the passenger and their location. The proponents came up with an idea to have a queuing system to prevent overlapping of the booking, and a function that enables the passenger to book a trip wherein the shuttle driver will immediately notify if there's a

passenger including their location and destination. It will become more organized, and easier for the shuttle driver as well as for the passenger.

3. To develop a function that enables the admin to monitor the commuter's feedback and complaints about the service. The proponents came up with an idea to help the admin immediately notify about the feedback and complaints about them to respond and solve any identified issues since commuter's feedback, and complaints are sent directly to the admin.

4. To have a function that enables the admin to issue a receipt and monitor the boundary remittance. The proponents came up with an idea to have a function that enables the admin to generate a report whose driver already remits their boundary. Using the system, the admin can easily issue a receipt and enable access for review and tracing whose driver remits their boundary.

Scope and Limitations of the Study

The information will be gathered at Washington Place Dasmarinas, which will utilize as a population-representative. Accounts can only be created by residents and drivers. In addition, the administrator has access to all accounts in the application and can view, edit, and update them. In fact, the administrator can see every transaction.

A. User's Module

- Administrator: having the ability to modify commuters' and drivers' accounts. The report generation is also visible to the administrator.

- Drivers: have access to manage customers through bookings and track transactions such as the number of commuters and total sales

- Commuters: have access to see if they have a rider for the service on that day. They can also pay the cost to the driver using the application on their phone.

B. Booking module

Commuters can make a reservation and choose the type of ride they want (e.g Special ride,

Join ride, or Emergency ride). The special ride will be in the queue as well. However, the driver will decide whether or not to prioritize it.

The Driver can choose whether he wants to accept the customer or not. (e.g the driver only wants to accept special commuters). Commuters may also cancel their reservations if the driver has not yet accepted them.

C. Payment Module

Each commuter has their own QR code, this will be used to pay their fare. They must also verify their account via email or phone number to gain access to the payment module. They will deposit money into the application using their GCash account to pay the driver

D. Monitoring Module

- Driver: can keep track of the number of commuters and total sales on a daily basis

- Administrator: can access the generation of report. Monitor the boundary record of the driver and complaints of every commuter. Keep track of all outsiders who will be entering the subdivision. If the homeowners have a scheduled visit, the administrator will be notified. Outsiders will not be able to gain access to the subdivision by using a fictitious address. Furthermore, the application can let the administration keep track of every transaction, account, and complaint made by each resident who uses the shuttle.

- Commuters: can keep an eye on their balance and see if the driver is ready to go

The application must be internet-connected. In this case, if the signal is poor, the application will not cover the area. The application lacks a feature for tracking items left in the shuttle by passengers. The primary function of the application is to provide the QR code for payment and to track each transaction made by the shuttle. Furthermore, the scope of this research will be limited to the subdivision.

REVIEW OF RELATED LITERATURE/SYSTEMS

Review of Related Literature

Foreign Literature

QR Code-based Payment

With the advancement of smartphone technology, mobile payment systems have grown in popularity. According to a recent study by Juniper Research, the total number of QR code payment users will reach 2.2 billion in 2025, up from 1.5 billion in 2020. As stated in the article of Scand (2021) entitled "Are QR Codes the Future of Mobile Payments?", the reasons for this are the growing mobile industry wherein iOS and Android devices embed QR scanners into their camera applications and due to the Covid-19 pandemic which leads to contactless payments and data sharing this has become the preferred means of connection between sellers and their buyers.

In the study entitled "Smart Bus Ticketing System", the QR-Code is extensively utilized nowadays since it reduces the need for additional materials such as business cards, posters, and booklets to be accessible. The principles of scanning QR-Code have been widely integrated with most of the devices used today, especially mobile phones, as the usage spreads quickly (Rohadi, 2020).

According to another study entitled "Developments of QR Code-Based Mobile Payments in East Asia", despite the fact that Japan was one of the first countries to implement contactless chip-based mobile payments, QR code-based mobile payment applications have grown in popularity there in recent years. One of the studies found that China offers a unique environment for payment using QR codes (Zhang, 2017). Besides that, this country has made a significant impact on the adoption of QR Code payments and manages security issues related to QR Code payments very well. Also, according to this study QR code-based mobile payments are seen as having an advantage over other digital payments by both banks and nonbanks in terms of attaining widespread adoption. For instance, merchants might be more likely to embrace QR code-based mobile payments than other forms of digital payment.

Mobile-based Ticketing

The Mobile-based Ticketing Service (MBTS) of researchers Ahmed Ibrahim and Azman Ta'a for the commuters of Iraq is developed to solve the problem of standing up in a long queue. According to their research, the main problem with the manual system is that each branch works independently, and each customer's inquiry must be communicated to the head office by each branch's front desk officer to get the most up-to-date schedule, seat availability, and other reservation-related information as well as to avoid duplicate bookings or over-capacity. Furthermore, because each branch only works during specific hours and bookings may only be made on the spot, there is a physical restriction to the availability of reservations. These limits aren't the only problems the company is dealing with right now. Human errors, for example, ticket pricing miscalculations, inaccuracies in recording passenger data, etc. also cause issues. Moreover, with a manual booking system, paper documents might easily be misplaced, wasting storage space and money. To solve this problem, a digitalized and systematic online ticket booking through the use of a mobile application is implemented. This system will aid company personnel like the administrators or drivers in their everyday tasks by making their work more organized and connected to other company branches. Aside from that, MBTS will make it easier for staff to monitor and supervise the company's activities. Customers will be able to check for ticket availability at any time and from any location using their mobile phones. Furthermore, the method will alleviate customers' concerns about losing their physical tickets while also allowing businesses to dramatically cut ticket lines.

Cashless Payment

The payment system in the nation is fast transitioning to more IT-based methods. The researchers have a significant number of money transactions in the retail industry. Payment cards are one of the fastest-growing payment methods used by shops in the industry, aside from cash. In the retail business, cards are one of the most secure and easy ways of payment. The majority of card transactions at the point-of-sale (POS) are made using credit cards or debit cards. The current paper is a systematic technique to look into these card-based payments in the country and offer directions for their product usage and pricing patterns, keeping merchants and cardholders in mind. The Reserve Bank of India (RBI) is

anticipated to find the research valuable in its efforts to implement an efficient payment system for the country.

According to the study entitled “Cashless Payment System in India- A Roadmap” for the government, accepting cash as a form of payment is a costly undertaking. The country must transition from a cash-based payment system to a cashless (electronic) payment system. This will aid in the reduction of currency administration costs, the tracking of transactions, the detection of tax evasion and fraud, and the integration of the parallel economy with the mainstream. Furthermore, when card usage spreads beyond the city limits and into the countryside, the electronic payment system will create massive amounts of data on people's buying habits in these places. This data will assist the government in achieving its goal of bringing more people into the financial inclusion net. By creating items that cater to particular purchasing habits. Card payment data might be utilized as a rapid estimate of private consumption as card payments rise and become a large element of retail sales.

Complaint Management

“Companies that listen to their customers grow faster.” According to Guy Winch, Ph.D a registered psychologist, complaining psychology enables the transformation of problems into opportunities and shows that business has the customer’s back. As the company or business grows the number of critics also increases. Regardless of how big or small it is businesses must have a process for handling customer complaints.

In the study entitled “Complaint Management: Customer Complaints Handling Procedure”, in a survey more than 50% of customers in the United States believe that most businesses act on customer complaints. When a customer thinks that the company is not listening to their concerns, they are inclined to trust the company’s product or service and will share their complaints with others. Unsatisfied consumers before would only tell friends or family members about their negative experiences, but with the rise of social media, customer complaints may now reach an infinite number of people. That is why businesses must have a complaint management process that allows them to communicate with the customers to work out a solution since customer feedback is essential for businesses to understand what they do well and where they can improve.

In another study entitled “A Typical Call Monitoring System to Handle Complaints & Queries in Smart Cities,” a complaint is an expression of dissatisfaction with an organization's products, services, employees, or complaint handling which a legal response or resolution is needed. Complaints are essential for an organization's management to be held responsible to the public. In addition, it serves as a reminder to evaluate the organization’s performance and the behavior of the employees. A complaint Monitoring System is an online solution for any organization to resolve the complaints and queries of the staff and faculty members. Also, to automate processes such as managing existing complaints, registering new complaints, and complaint status management.

Local Literature

Cashless Payment

Due to the never-ending pandemic, people have been practicing social distancing for over a year. Most people must commute to work or to run errands, during a pandemic like COVID-19, public transportation is risky. Everyone is vulnerable, even with face masks and shields, because of contact with individuals that may already be infected with the virus (Yaranon, 2021). According to the article entitled “Can the Philippines implement Cashless Public Transport?”, adapting the cashless public transportation payments is one step that needs to be taken. It helps to eliminate some of the threats that people face and allows them to avoid physical contact.

As stated in the study entitled “Application of a Multiple Carrier Cashless Payment System for Public Transportation in Metro Manila: A New Normal Perspective”, since the outbreak of the pandemic, the usage of a cashless system is inevitable, as it is a solution designed to eliminate and minimize direct physical contact between people to prevent the virus from spreading quickly. It increased the use of online payment solutions for transportation services (ABS-CBN News, 2020). Considering new technological advances, such as the internet, it gives more convenience to people, especially when mobile banking is available, and comparable means to produce cashless methods are available.

According to the Visa Consumer Payment Attitudes survey in 2016, 6 out of 10 Filipinos

chose cashless payment. In comparison to five years ago, 49 percent of people now carry more cards in their wallets, while 29 percent carry less cash. Filipinos have a strong interest in new technology that provides convenience and security than the other countries that are already ahead of the game. Filipino's day-to-day transactions can become more efficient and eliminates the need to carry large amounts of cash, cards, or even stand in line for ATM withdrawals Marc (2018).

According to the research entitled "An Exploratory Study on Uber, GrabCar, and Conventional Taxis in Metro Manila," Uber and GrabCar are defined as popular and new modes of transportation under the Transport Network Company (TNC), which mostly competes in taxi services in the Philippines. The rise of this mode has a great impact on the taxi sector, since these two have become popular in the market because to the premium services they offer to their passengers. Uber and GrabCar has changed the dynamics of taxi services by expanding its service offerings. Its services have quickly expanded to become the Southeast Asian region's quickest, safest, and largest taxi booking smartphone application (Phillip, 2014). Not everyone can afford a car, therefore another option is to take a taxi. Sadly, some taxis today provide terrible service due to the age of the vehicle and poor maintenance. When TNC services like Uber and GrabCar were started, customers preferred to use them because of the reliability and convenience they offer to commuters, including cashless payment and safety that taxis fail to develop. The main factors why customers book a trip through Uber and GrabCar are convenience, safety, reliability, less hassles, easy to book a ride, cashless payment, drivers have passed background checks, and cars are new. According to another study entitled "Insights on GrabTaxi: An Alternative Ride Service", GrabTaxi gives passengers with quick access to find a taxi that is nearest to them in real time through the app and a few finger tap, no more waiting outside in the midst of the heat, waving their hands until they can catch a taxi, or anticipating what time a taxi will come. In addition, to ensure that customers have a great trip, GrabTaxi utilizes feedback, in which taxi drivers who get complaints and rated unsatisfactorily by passengers on their service, behavior, and vehicle condition may face fines, suspensions, and bans. Overall, GrabTaxi passengers were satisfied with their service. However, some drivers experienced cancellations of booking, when a booking was accepted and they were already on their way to pick up a passenger, but the passenger chose instead to get into any other

taxi passing them by before the GrabTaxi driver could reach them. Also, in some parts of the city, GrabTaxi 's system received a poor signal causing drivers to have technical issues.

Joey Devanesan said in his article entitled “The Philippines is going cashless – finally” that Filipinos would prefer a cash basis as their payment method before the pandemic. In the year 2017, the bank transfer method is the leading digital payment in Southeast Asia regions, but in the Philippines, only 20% of the population would prefer to go digital on their payment. In comparison to its neighboring countries, the Philippines has been reluctant to adopt digital payments. Approximately 98% of Filipinos did not have credit cards until recently. In 2020, as the COVID-19 pandemic happened Filipinos shifted to abandoning cash as their payment method. This change happened due to the fear of contracting the virus via physical touch. GCash has become the Philippines' largest e-payment platform followed by Paymaya. GCash has over 20 million registered users and can be used at over 63,000 physical and online stores, and it has seen a large increase in new users since mid-March when the pandemic was in full bloom. Due to the massive increase of users of GCash, they upsized their e-wallet capacity to enable their users to continue using the application. Meanwhile, Shopee, the region's market-leading e-commerce platform, reported an increase in digital payments on its platform, with many new consumers purchasing for the first time, and an increase in payments for things like mobile phone reloads, bill payments, and household items trends that weren't so noticeable before COVID-19. With the benefits of using e-payment, Filipinos now would prefer to make transactions online, reducing the use of paper-based money.

Cashless Economy

A cashless transaction is a safe and easy way to make payments. Cashless transactions are a technique of conducting payments without using real currency, and they represent a doorway to global economic growth. Cashless payment is a change in people's behavior in which they stop using money as a medium of exchange for goods and services and instead use electronic transfer payments or non-electronic payments like checks (Tee and Ong, 2016). When electronic banking became ubiquitous in the 1990s, a trend toward using non-cash transactions began to emerge in everyday life. By 2010, several nations had adopted digital payment methods, with gateways such as PayPal, digital wallet systems managed

by companies such as Apple, contactless payment through electronic cards or smartphones, electronic bills, and banking all being widely used.

According to the study “Cashless Payment: A Behavioral Change to Economic Growth,” it appears that much has already been done to raise public awareness of the cashless economy and that a significant percentage of the population is eagerly anticipating its implementation. The cashless economy plan will assist emerging economies significantly; as a result, the cashless system will aid in the struggle against corruption and money laundering. The cashless economy is projected to eliminate the risk of carrying currency, which is one of its most significant contributions. People will have less need to walk around with cash now that most transactions are handled electronically, resulting in a significant reduction in cash loss, theft, and armed robbery.

Related Studies and/or Systems

Careem

Careem is a taxi application that works similarly to Uber that helps the customers make it easy to book a car or taxi online. It offers many services such as ride-booking, food delivery, and at-home services. It is the world's largest transportation network organization based in Dubai and operates in different countries such as the Middle East, Africa, and South Asian countries. The application has a user-friendly interface and makes it easy for your passengers to book again. The following are the features of the Careem booking application that benefit both passengers and drivers:

I. Sign up/Sign in

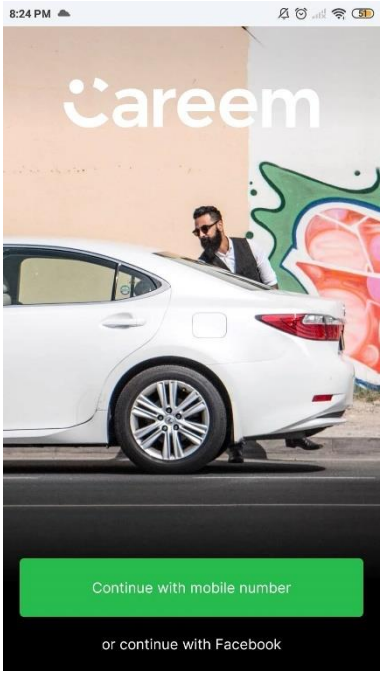

Figure 1. Sign Up/ Sign In

The first step in using the Careem booking application is for the user must create an account. Users can register and log in to their account using their phone number or social media account this saves time since users do not have to enter all their information again.

II. Booking

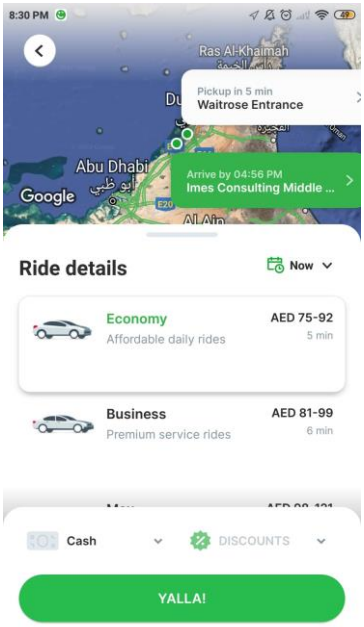

Figure 2. Booking

Using the application passengers enable to book right away and book in advance. Passengers are required to enter their location and destination, preferred car type, pick-up time, and payment method. In addition, passengers unable to cancel the booking within 2 minutes and 1 hour before the pickup time for advance booking. After 2 minutes or 1 hour before the pickup time, the passenger needs to pay the minimum fare and the waiting charge.

III. Payment Method

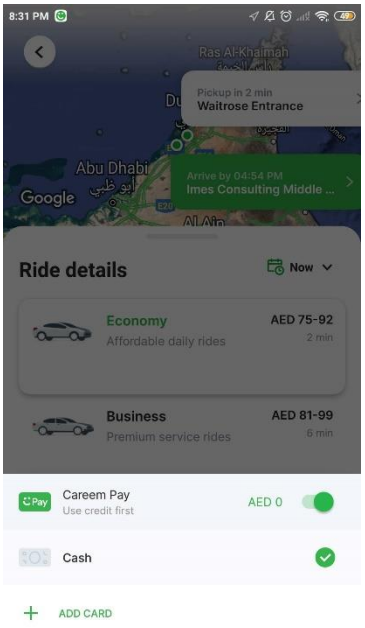

Figure 3. Payment Method

Passenger has a lot of options for payment such as cash, credit or debit card, Careem Pay credit, and Wallet.

IV. Wallet

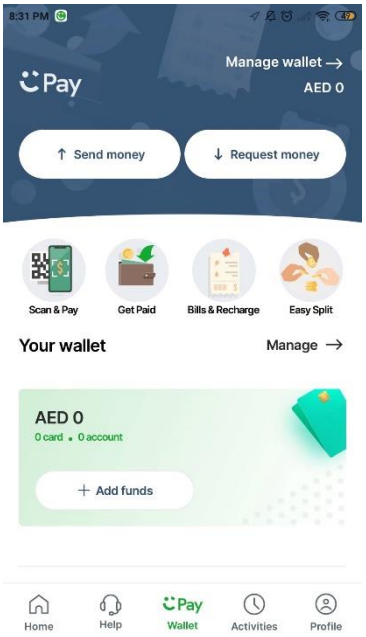

Figure 4. Wallet

The application offers wallet features to the passenger. If a passenger does not want to use cash or a Credit Card they have an option to use their wallet to pay.

V. Booking history

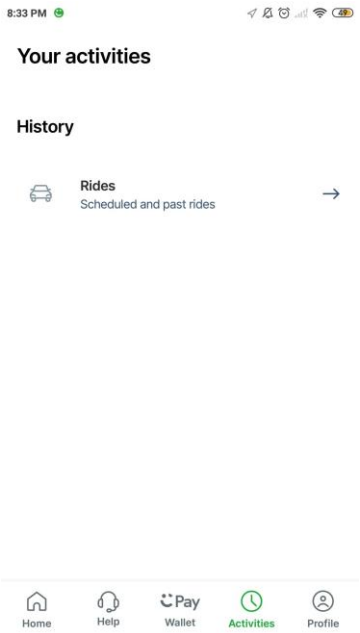

Figure 5. Booking History

Passengers are able to view their entire booking history using the application. Booking history includes date and time, driver's name, payment, and the location and destination of the book.

VI. Passenger's review and complaints

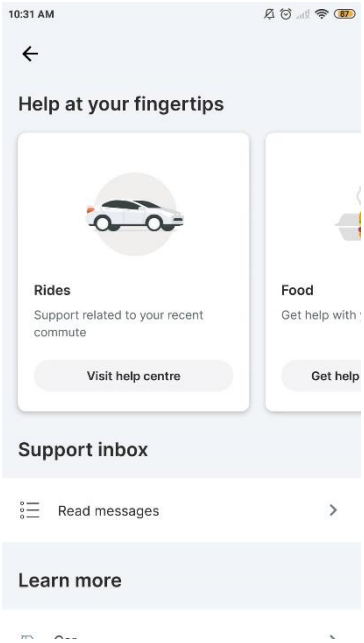

Figure 6. Passenger's Review and Complaints

Passengers are allowed to give ratings and complaints about the driver about their behavior or ride experience. The ratings and complaints are monitored by the admins so they can take action.

VII. Booking Notification

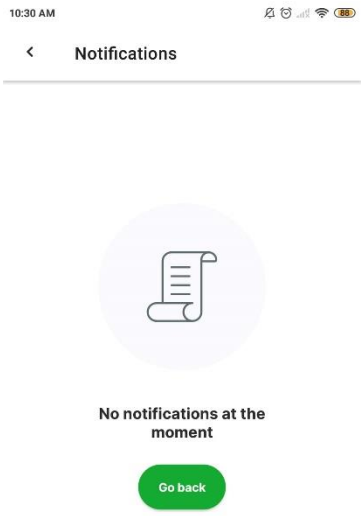

Figure 7. Booking Notification

The driver will be notified of incoming bookings, and able to view the passenger's details such as the name of the passenger, location and destination, car type, and payment method. Drivers can accept or reject rides as per their choice notification is sent to the customer as well as admin if the booking is rejected.

Other Modules From Related System

The researchers of the study entitled "Smart Integrated Payment System for Public Transportation in Jakarta" proposed a system to use for public transportation payment, that uses incentives to encourage individuals to take public transit by accumulating points for each ride and allowing them to redeem the points for discounts, promotions, and other benefits. There are different features that characterize this software as a smart application:

I. E-Wallet Balance

This feature displays the remaining balance in the account of the customer.

II. Route History

This feature displays the user's travel history, including details such as when, where they left and arrived, how much they paid, public transit ID, driver ID, etc.

III. Total Points

The program will display the points that have already been collected from the trip utilizing public transportation.

IV. Promo & Discount Information

The application will display information about promotions and discounts that may be redeemed with points.

V. Public Transportation Information

In this feature the customer can view the information about the public transportation, specifically their journey route.

VI. Smart Journey Plan

The Smart Journey Plan function is comparable to Trafi (www.trafi.com), an app that shows the best route and public transportation to get to your destination. This function also displays the ETA (Estimated Time of Arrival), making it easier for users to determine when they should arrive at the terminal/bus stop and when they will get to their destination.

NFC Mobile Payment System

Smartphones, wireless tablets, and laptop computers have mostly been used to send data in recent years. These gadgets may now be used to pay for products and services using data transmission, a technique called mobile payments. Payments can now be made very easily and conveniently using an NFC-enabled mobile phone, due to the emergence of new technologies such as Near Field Communication (NFC). According to the study entitled "An Empirical Analysis towards the Adoption of NFC Mobile Payment System by the End User", people can make transactions utilizing this technology by holding an NFC-enabled

phone within range of an NFC scanner. Although to a limited extent, this technology is popular in the United States, Canada, Korea, and Japan. Apple Pay and Samsung Pay are both notable applications of the NFC payment system, which allows for contactless mobile transactions without the use of a wireless data network or credit/debit cards.

Accepting NFC payments is not only easy and convenient, but it also often deepens customer engagement, (Fisglobal,2022). NFC payments can assist merchants by allowing them to develop effective customer loyalty programs in payment processing. For an instance, customers use their phones to redeem a voucher instantly. Based on the study entitled "Financial Experiences, Beliefs, and Near Field Communication-Based Mobile Payments Among Young Adults", Trutsch (2016) stated that mobile payments were more of a replacement for paper-based cash payments, which is consistent with their findings. As a result, there is a chance that cash users will consider making the bigger move to digital. Those who already utilize other types of electronic payment are more likely to use NFC payments. However, despite the benefits of NFC mobile payment, the adoption rate of this system in the United States is still low, (Kats, 2018). As a result, it's crucial for service providers to understand what motivates customers to use NFC mobile payment.

QR code-based Payment System

According to a study entitled "Prototype of Non-Cash Transaction Systems in the Traditional Market Based On E-Wallet and QR-Code" the Cihapit Market Bandung in Indonesia is a known market that offers traditional transaction process. However, they do not have any alternative payment method other than the cash basis. According to their interview, there is a great significance between the number of android users, those who are familiar with the non-cash payment method, and buyers that use non-cash payment method rather than those who did not. Another issue that develops is the frequent occurrence of transaction processes that take an excessive amount of time, either due to manual shopping calculations or the time required to create the appropriate money and change. This became a problem since there is no supported system for the non-cash payers of the Cihapit Market Bandung. To solve this problem, the authors implemented a QR-code-based e-wallet system. Using an E-Wallet and QR-Code, the payment process can be completed

conveniently and efficiently using smartphone devices and for the customers. Through the Midtrans Payment Gateway, the authors use the Go-Pay E-Wallet as a payment method. The findings of this study show that the system developed may speed up and simplify the transaction process. Scanning and creating QR-codes can be done precisely and fast, with scanning taking around 2.531 milliseconds.

Cashless Payment System as Medium of Exchange in ASEAN Nations

Payments for products and services have become more innovative as a result of information technology. Cashless payment is one of them since it allows for electronic payments like credit transfers, direct debits, card payments, e-money, and non-electronic payments like checks. This technological advancement has broadened the scope of payment systems and shifted the payment system toward an e-World trend (Oginni et al. 2013). Credit cards and debit cards are becoming more widely used payment tools in recent years. The increasing rate at which these cashless payments are being used suggests that this specific invention is being more widely adopted. Everett Rogers proposed the notion of Diffusion of Innovation in 1962. This notion asserts that innovation adoption is a result of individuals' interactions through interpersonal networks.

According to a study entitled “Diffusion of Cashless Payment as Medium of Exchange in ASEAN Nations” economic integration is the goal of the ASEAN Economic Community (AEC) 2025 Plan. One of its goals is to persuade member countries to establish a single-payer system and promote financial inclusion. The study was able to determine which member nations have already implemented this strategy and which are still in the process of implementing payment system improvements. Countries such as Thailand, Malaysia, and Singapore have a greater percentage of credit card and debit card adoption. The bank penetration rate in these nations is relatively high. Banks, as is well known, are the primary providers of credit and debit cards. Furthermore, the readiness of consumers and companies to embrace cashless payments might be a factor in the country's high adoption rate.

Recommendations from Other Related Systems/Research Papers

A mobile application gives an alternate method for commuters to pay for their fare in a cashless manner. The mobile application provides public service vehicle investors with a

tool that allows them to easily track revenue collected while reducing the risk of theft associated with carrying cash. Also, other issues including delay for change and overcharging will be addressed (Irungu, 2016).

The study of Irungu entitled "QR-Based Mobile Payment Application for Public Service Vehicles" have come up with the following recommendations:

- The developed solution is compatible with Android phones that have Internet access. The use of a mobile application over a Wi-Fi or mobile broadband network is encouraged.

- To give an alternative for commuters to recharge their electronic wallet account, the mobile solution needs to be integrated with new payment providers.

- It was also suggested the implementation of a notification feature. Commuters will be able to submit questions or comments via a mobile application using this function.

Additional recommendations from other related systems include the passengers' ability to determine whether the selected time schedule is fully booked or unavailable. Also, the passengers will be notified of the delay through the application and the QR Code will be upgraded to be more secure and encrypted.

Synthesis

Over the years, payment transactions have changed dramatically. Technology advancement, customer convenience, and security measures have all contributed to the evolution of how people pay for their goods and services. Consequently, developing a mobile application that enables commuters to adopt digital payment transactions will address the shortcomings of the non-cashless platforms. Some of the features from other related systems that will be applicable in this study are the E-Wallet for the payment and the passengers will be able to view their balance in that feature. Another important feature is the booking wherein it enables the passenger to have an advance booking. Additionally, passenger's feedbacks and complaints are another function that will be helpful in the proposed application wherein they can give reviews or complaints about their commuting

experience.

Cashless transactions have grown highly popular, and E-wallets are in high demand worldwide (Singh et al., 2020). Thus, the implementation of a cashless payment system in the fare payment of the shuttle service will improve the quality of the commuting experience of the commuters.

TECHNICAL BACKGROUND

Overview of Current Technologies to be used in the System

Research Methodology

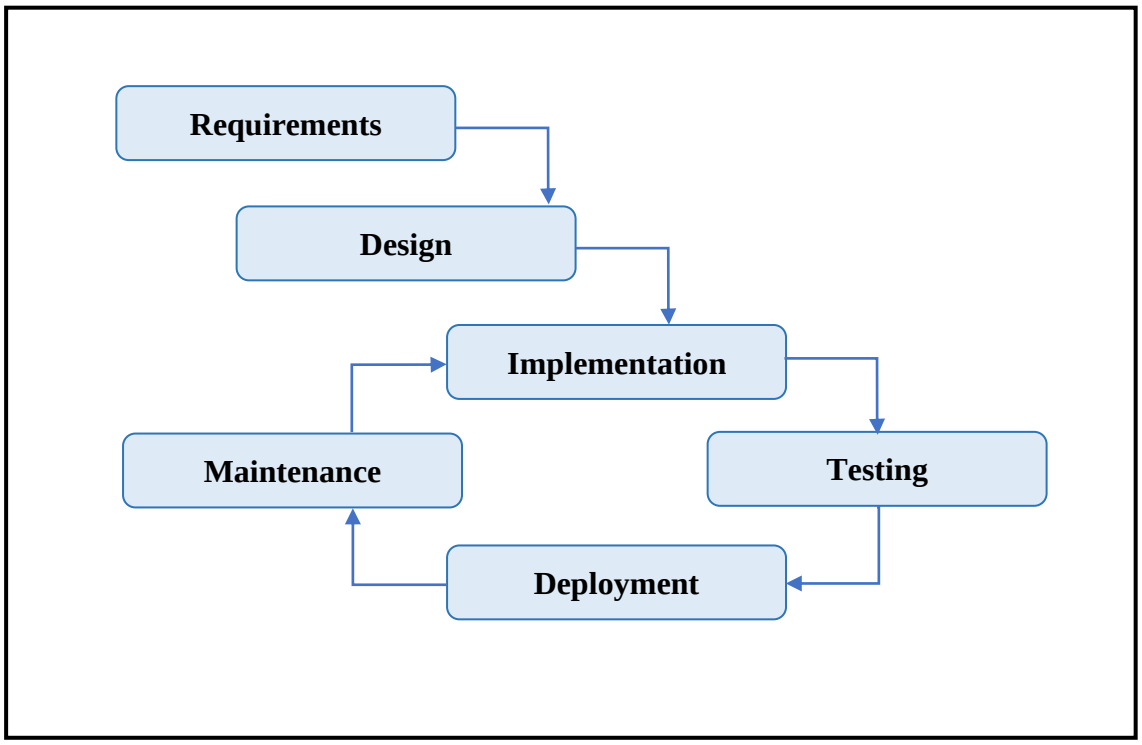

Figure no. 9 Agile-Waterfall Hybrid Method

The proponents will use the Agile-Waterfall Hybrid Method in developing the proposed project. This method combines the advantages of both the Agile and the Waterfall methods. This methodology can be used to create software or a product that includes both hardware and software. In addition to this, it will allow the flexibility of the project from the Agile methodology while keeping the workflow of the Waterfall methodology. This will implement the steps from the Agile methodology for the repetitive actions. The advantage of using this methodology technique is it allows for improved cooperation and flexibility to the changing requirements. When dealing with a line of roughly similar items, the hybrid model considerably aids product line management and software code reuse.

The proponents first started to think about what kind of project they will be doing and its name. Then they conduct an interview with the subdivision's accountant and the village

admin. The questions asked were about the background and history of the subdivision, business operations/transactions, encountered problems, hardware and software used, and the other business process of the subdivision. The aim was to gather the data needed to compare the business process of the subdivision with the proposed project to understand what are the needs of the client to improve the passenger's bukyo service experience. Since the first interview was not complete, the second interview was conducted with the subdivision's driver about the vehicle monitoring, driver monitoring, and map/shuttle stops.

After the interview, the proponents proceeded in making the diagram of the subdivision's business process and the proposed project using diagrams.net to compare what other solutions must be implemented to the encountered problems of the client. The proponents had observed the lack of receipt on the boundary remittance of the driver to the admin, making of generation report, and the manual logging of the outsiders in the logbook. These problems result in affecting the integrity of the data they input. In this design phase, the proponents had also conceptualized the functional requirements of the application, prototyping through Figma, and further revisions of the diagram for both the application and the subdivision.

To build the application, the proponents had studied several programming languages including HTML, CSS, PHP, SQL, JavaScript, Java, and Kotlin. They had used IDEs such as VS Code, Atom, and Android Studio to program the application and the website. Due to Android Studio's heavy usage, the proponents faced several problems including overheating, lagging, and slowness of the device. In this stage, the hardware has also been bought such as the Arduino. Every after the coding of the website and the application, the proponents were also testing their work. This opened the possibility of seeing what went wrong and immediately fixing it, going back and forth to the implementation and testing stage.

After the implementation and the testing stage, the project was ready. It was released to the admin, driver, and several residents of Washington Place Dasmarinas. This tested and analyzed the created project of the proponents including the proposed solutions. After

several weeks of testing the project, it was ready to be officially released and be used by all in the subdivision. The proponents have provided constant support and maintenance to the system software to ensure the quality and that it works smoothly with the changes that happened.

Conceptual Model of the Study

Input	Process	Output
○ Clients Information ○ Problem of their process ○ Rotation of drivers ○ knowledge about online payment ○ Transportation system of the subdivision **Requirements (Shuttle Go Application)** a. Basic information of clients ○ Name ○ Address ○ Contact Number ○ Email	**System Module** **a. Registration** **b. Login as commuter** **c. Dashboard** ○ Generate QR Code ○ Check the current balance ○ Reloading the balance ○ View, edit and update account **d. Login as Driver** **e. Dashboard** ○ Drivers information (View, edit and update account) ○ Monitoring of transaction ○ Monitoring the total sales ○ Monitoring the no. commuters **f. Booking** ○ View booking ○ Accept and cancel of booking **g. Admin's account** ○ Monitor the driver's account ○ Generation of report ○ Monitor the commuter's account	**ShuttleGo: Mobile Based E-Wallet with QR Code Scanner and Queueing System for Washington Place Dasmarinas**

Unified Theory of Acceptance and Use of Technology (UTAUT)

The Unified Theory of Acceptance and Use of Technology has recently emerged as one of the most sophisticated and intensive approaches for evaluating technology adoption and acceptance (Momani, 2020). According to IGI Global website, with a variety of factors, including social influence, the UTAUT model describes technology use intention and behavior.

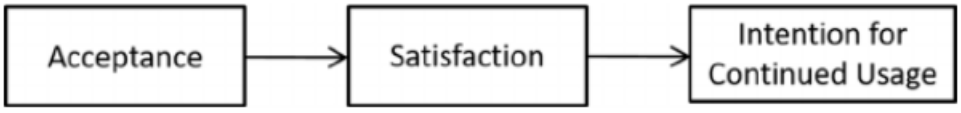

Figure 1. The influence of acceptance and satisfaction on continued usage intention (Momani, 2018)

Figure 1 depicts the relationship between acceptance and satisfaction, as well as their impact on the intention to use the system indefinitely. The actual usage of any information system is based on the persistence of a desire to use it. This concept will be applied in the proposed project when they have started using the ShuttleGo mobile application. Once the application was accepted by the intended users, the continuing usage will depend on the user's satisfaction with the mobile application.

Queuing Theory

According to the article entitled "Queuing Theory", Queuing Theory refers to the mathematical study of line congestion and delays. Queuing theory investigates every aspect of waiting in line to be served, such as the arrival process, service process, number of servers, number of system locations, and number of customers—who might be individuals, data packets, transportation, etc. Queuing theory helps users to make informed business decisions on how to design efficient and cost-effective workflow systems. Queuing is divided into four categories which are the following:

- Arrival – the process by which customers arrive at the line or queue.
- Queue – the process of the queue itself or how does the line moves.

- Service – it is the process of providing the requested service to a customer.
- Leaving – the act of leaving the queue area.

Customers who experience unorganized queues might cause annoyance and are more likely to avoid using the service again. By applying Queuing Theory, the booking feature of the proposed system will keep the queues organized, help to reduce passengers wait times, and improve efficiency since the driver does not have to manually organize the booking queues. Driver can accept bookings using the First In, First out method wherein customers are served on a first come, first serve basis. Another is the Priority approach wherein the passenger is served based on how urgently they need the services. For instance, the passenger already has an advance booking, an emergency, or the passenger is a senior citizen or person with disability. In addition, the Processor Sharing method can also be used wherein driver can accept 3 bookings or passengers at the same time.

Theory of Database Normalization

Database normalization is a popular approach and guideline for developing database schema. It is the process of organizing database attributes to reduce or remove data redundancies. A poorly designed database is inconsistent, which may cause problems when adding, removing, or updating information. Normalizing a database has many advantages such as database structure is easier to understand, data duplication can be avoided, and it also make sure that only relevant data is stored in each table. In short, it improves database speed, accuracy, and efficiency. Database Normalization Theory will be applied in designing and creating the database to make it accurate and efficient. By applying this theory in developing the system, it helps the proponents to organize data in a database to eliminate anomalies and maintain consistency.

Design Theory

Design Theory is an idea that describes how and why design works. It is the asking and answering, ‘Why am I designing it this way?’ If you cannot answer that question at every

step of the design process, you should do some further thinking (Stevenson, 2020). The following are the design concepts that should include design theory:

1. Alignment – aligning items on a page helps to generate visual relationships and a consistent design. It enables the viewer's eyes to see order, makes viewing easier and more comfortable.
2. Hierarchy – hierarchy is essential in creating organization in a design, grouping related objects together indicates that they are connected.
3. Balance – is the weight distributed on a page by how objects are positioned. There are two types of balance, the symmetrical and tension balance.
4. Contrast – gives impact and emphasis to a design, can be achieved by combining two elements that are opposite, such as classic and contemporary font or cool and warm colors.

In developing the mobile application, Design Theory must be considered to create more effective, and appealing design for the users. It will help the proponents to understand and gain knowledge about design principles, which are the vital part of a successful design.

Color Theory and Color Technical

Color theory is the study of how and why a particular color or color palette should be used in a design. While Color technical, is a of technical factors about the use of color in a final design. Color mixing and color systems are examples of color technical. The main principles of color theory are the following (Olesen, 2013):

1. Value – is the brightness or darkness of the color.
2. Chroma – is the colorfulness of a color. High chroma means brighter or more saturated colors, while low chroma indicates faded tones.
3. Hue – is used to represent the colors position on the color wheel. For example, light blue, dark blue, and pale blue are all from the same colors which is blue.
4. Contrasting colors – these are different colors used in color design to capture attention.

This theory will be applied in designing since color choice is essential for making the mobile application attractive and pleasing to the human eye. A basic understanding of color theory will help the proponents to choose the right colors and color combinations for the application.

Calendar of Activities

The Gantt chart presents the summary of activities. Listed are the activities and opposite them are their duration or periods of execution.

Completed **Ongoing**

Gantt Chart of Activities

MONTH / ACTIVITY		FEBRUARY				MARCH				APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER				OCTOBER				NOVEMBER		
Conceptualization	Project Area																																							
	Project Title																																							
	Name of Application and Description																																							
Analyzing	Functional Requirements																																							
	System Flow Diagram																																							
	Prototype of Admin Website (Figma)																																							
	Prototype of the Mobile App (Figma)																																							
	Questionnaire for Interview																																							
Requirement Gathering	Client Searching																																							
	Data Gathering (Interview)																																							
	Chapter I																																							
	Review of Related Literature																																							
Implementation	Website coding																																							
	Mobile Application coding																																							
Testing	Testing of the website																																							
	Testing of the application																																							
Deployment	The initial launch of the application																																							

	The official launch of the application
Maintenance	Maintaining the application

Resources

- Hardware
    - Mobile Phones/Android Phones (Android Version 8.0 (Oreo and up)
    - Keyboard
    - Monitor
    - Mouse
    - Desktop/Laptop
        - Minimum Specification
        - OS: Windows 8 and up
        - Processor: i3 9th gen 4 cores, 4 thread, 3.7 GHZ
        - 64 bit
        - Graphics: Inter Graphics 630 or GeForce GT 1050ti
        - Ram: 8GB DDR4 RAM 2666mhz
        - HDD: 320hdd
        - PSU: 600Watts Generic or 450 Bronze true rated PSU
        -
- Software

Android Studio (Version 4.4 and Up)

The proponents will use Android Studio to create the android application of the system

Languages:

- Java
- kotlin
- Structured Query Language

Xammp / Microsoft SQL Server

The proponents will use Xammp to create local database for the system

Language:

- Structured Query Language

Visual Studio Code

Primary editor for creating website

Languages:

- PHP
- CSS
- Java Script
- Structured Query Language

Atom

- Atom is a html editor; The proponents will use this editor as a secondary editor for the system

Canva

The proponents use canva to create our own logos and background images

SVG icons

The proponents use SVG icons to some aesthetic icons for the system

Appendix

References

Singh, U. A. R. D. R., & Dadhich, P. S. P. R. (2017). A Typical Call Monitoring System to Handle Complaints & Queries in Smart Cities.

Paronda, A. G. A., Regidor, J. R. F., & Gaabucayan-Napalang, S. (2017). An exploratory study on Uber, GrabCar, and conventional taxis in Metro Manila. University of the Philippines.

Ackaradejruangsri, P. (2015). Insights on GrabTaxi: An alternative ride service in Thailand. Review of Integrative Business and Economics Research, 4(3), 49

Corporate Finance Institute. (2022). Queuing Theory. Retrieved from Queuing Theory - Overview, How It Works, Factors (corporatefinanceinstitute.com).

Jiwaji.edu. (2022). What Is Queuing Theory?. Retrieved from http://www.jiwaji.edu/pdf/ecourse/political_science/MBA%20FA%20204%20Queuing_Theory-converted.pdf

Avinash, (2020). Complaint Management: Customer Complaints Handling Procedure. Retrieved from https://www.kommunicate.io/blog/customer-complaints/

Olesen, J. (2013). Color Design Theory: How to Choose the Right Colors for Your Design. Retrieved from https://www.color-meanings.com/color-design-how-to-choose-the-right-colors-for-your-design/

Oliver, S. (2020). What Is Design Theory? The Only Guide You Need. Retrieved from https://www.shillingtoneducation.com/blog/design-theory/

Pzuhevich, V. (2021, August 26). Are QR Codes the Future of Mobile Payments?. Retrieved from https://scand.com/company/blog/future-of-qr-code-payments/

Irungu, A. N. (2016). QR-based mobile payment application for Public Service Vehicles [Thesis, Strathmore University]. Retrieved from https://suplus.strathmore.edu/handle/11071/4881

Caya, R., Hernandez F., & Noroña M. (2021). Application of a Multiple Carrier Cashless Payment System for Public Transportation in Metro Manila: A New Normal Perspective [Thesis, Mapua University]. Retrieved from http://ieomsociety.org/proceedings/2021rome/647.pdf

Warnars, H., Lanita, Y., Prasetyo, A. & Randriatoamanana, R. (2017). Smart Integrated Payment System for Public Transportation in Jakarta. Retrieved from https://doi.org/10.11591/eei.v6i3.655

ABS-CBN News. (2020, August 21). Transport authorities tap PayMaya for 'cashless' push. Retrieved from https://news.abs-cbn.com/business/08/21/20/transport-authorities-tap-paymaya-for-cashless-push

Rohadi, M. (2020). Smart Bus Ticket System Using QR Code [Thesis, Universiti Sultan Zainal Abidin]. Retrieved from https://myfik.unisza.edu.my/www/fyp/fyp19sem2/report/051668.pdf

Al-Ani, A. K. (2015, December). MOBILE – BASED BUS TICKETING SYSTEM IN IRAQ. Retrieved from ResearchGate: https://www.researchgate.net/profile/Ahmed-Al-Ani-3/publication/315801024_MOBILE__BASED_BUS_TICKETING_SYSTEM_IN_IRAQ/links/58e668ebaca2727858cc5786/MOBILE-BASED-BUS-TICKETING-SYSTEM-IN-IRAQ.pdf

Ashish Das, R. A. (2010). Retrieved from dspace library: http://www.math.iitb.ac.in/~ashish/workshop/PaymentCardAugust31.pdf

Devanesan, J. (2020, July 27). The Philippines is going cashless – finally. Retrieved from TECHWIRE ASIA: https://techwireasia.com/2020/07/digital-payments-are-finally-soaring-in-the-philippines/

Hinayon, D. E. (2020). Diffusion of Cashless Payment as Medium ofExchange in ASEAN Nations. Retrieved from jehrd: https://www.ijterm.org/index.php/jehrd/article/view/217/173

Mouhamad Hatta Hiroshi Sasmita, I. A. (2019). PROTOTYPE OF NON CASH TRANSACTION SYSTEMS IN THE TRADITIONAL MARKET BASED ON E-WALLET AND QR-CODE. Retrieved from https://elibrary.unikom.ac.id/id/eprint/1533/13/UNIKOM_Mouhamad%20Hatta%20Hiroshi%20Sasmita_Jurnal%20Dalam%20Bahasa%20Inggris.pdf

NEETU KUMARI, J. K. (2017). CASHLESS PAYMENT: A BEHAVIOURIAL CHANGE TO ECONOMIC GROWTH. Retrieved from nfct: https://nfct.co.uk/wp-content/uploads/journal/published_paper/volume-2/issue-2/LS0q4m3F.pdf

Terri Bradford, F. H. (2019, June). Developments of QR Code-Based Mobile Payments in East

Asia. Retrieved from kansascityfed: https://www.kansascityfed.org/Payments%20Systems%20Research%20Briefings/documents/7599/psr-briefingjun2019.pdf

Resource Person

Village Administrator: Ms. Rosecheele A. Ibañes

Accounting Department: Mr. Kian

Driver

Curriculum Vitae of

MICHELLE A. DE ASIS

B9 L10 Hamilton Homes Bucandala Imus Cavite

deasismichelle952@gmail.com

09217515899

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/ Institution
Tertiary	2019 - Present	STI College-Dasmarinas
Vocational/Technical	2017 - 2019	ACLC-Naga
High School	2012 - 2017	Antipolo National High School
Elementary	2006 - 2012	Antipolo Elementary School

SKILLS

SKILLS	Level of Competency	Date Acquired
HTML	Beginner	October 2021
CSS	Beginner	October 2021
SQL	Beginner	September 2020
Java	Beginner	September 2020

TRAININGS, SEMINARS, OR WORKSHOPS ATTENDED

Inclusive Dates	Title of Training, Seminar, or Workshop
March 2021	SAP Business One

Curriculum Vitae of

SAGE FLORENCE L. SORIANO
B26 L47 Molino Homes Ph II, Brgy. Salitran III, City of Dasmarinas Cavite
soriano.sage@gmail.com
09053348035

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/ Institution
Tertiary	2019 - Present	STI College-Dasmarinas
Vocational/Technical	2017 - 2019	STI College-Dasmarinas
High School	2012 - 2017	Dasmarinas North National High School
Elementary	2006 - 2012	San Miguel Elementary School

SKILLS

SKILLS	Level of Competency	Date Acquired
JavaScript	Beginner	2022
PHP	Beginner	2022
SQL	Beginner	2021
C#	Beginner	2021
Java	Beginner	2018
HTML	Beginner	2017
CSS	Beginner	2017

TRAININGS, SEMINARS, OR WORKSHOPS ATTENDED

Inclusive Dates	Title of Training, Seminar, or Workshop
2019	PEP Talk
2019	Mock Interview
2021	SAP Business One

Curriculum Vitae of

RHEN DHEL B. PATIGAYON

B7 L16 San Marino Classic Salawag, City of Dasmarinas, Cavite
rhendhelp@gmail.com
09217519816

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/ Institution
Tertiary	2019 - Present	STI College-Dasmarinas
Vocational/Technical	2017 - 2019	STI College-Dasmarinas
High School	2012 - 2017	Paliparan II National High School
Elementary	2006 - 2012	Pintong Gubat Elementary School

PROFESSIONAL OR VOLUNTEER EXPERIENCE

Inclusive Dates	Nature of Experience/ Job Title	Name and Address of Company or Organization
Present	Technician	San Marino Classic Salawag Dasmarinas Cavite

SKILLS

SKILLS	Level of Competency	Date Acquired
Technical support and Trouble shooting	Moderate	2022
PHP	Beginner	2022
SQL	Beginner	2021
Java	Beginner	2018

TRAININGS, SEMINARS, OR WORKSHOPS ATTENDED

Inclusive Dates	Title of Training, Seminar, or Workshop
2017- 2022	National Certificate (NCII)
2019	Mock Interview
2021	SAP Business One

Curriculum Vitae of

FRANCHESCA M. DELOS REYES
B16 L14 Dove Street, Southcrest Village, San Agustin 2, Dasmarinas City, Cavite
chescamdelosreyes@gmail.com
09274663200

EDUCATIONAL BACKGROUND

Level	Inclusive Dates	Name of school/ Institution
Tertiary	2019 - Present	STI College-Dasmarinas
Vocational/Technical	2017 - 2019	Congressional Integrated High School
High School	2012 - 2017	Congressional Integrated High School
Elementary	2006 - 2012	Ramona S. Tirona Memorial School

SKILLS

SKILLS	Level of Competency	Date Acquired
Java	Beginner	September 2020
SQL	Beginner	March 2021
HTML	Beginner	October 2021
CSS	Beginner	October 2021

TRAININGS, SEMINARS, OR WORKSHOPS ATTENDED

Inclusive Dates	Title of Training, Seminar, or Workshop
2017- 2022	National Certificate (NCII)
March 2021	SAP Business One

LETTER OF RECOMMENDATION

March 30, 2022

Ms. Rosecheele A. Ibañes Village
Administrator Washington Place
Emilio Aguinaldo Highway, Dasmariñas City, Cavite

Dear Madam,

Good Day!

This is in reference with our project proposal in the subject **IT Capstone Project**. We would like to seek your assistance in accommodating the Third Year students enrolled in the course **Bachelor of Science in Information Technology** to conduct interviews and studies regarding their proposal entitled **Shuttle Fare Payment System Using QR Code** and to gather data and some documentation of your company, wherein they are required to propose a computerized system:

Patigayon, Rhen Dhel Balansag
Soriano,Sage Florence Laciste Delos
Reyes, Franchesca Magpantay De Asis,
Michelle Añonuevo

Their studies aim to prepare our students with what to expect in the field of work especially in Information Technology. Rest assured that all-important information of your company to incur by our students will be confidential. We will appreciate whatever help you can extend to us. We are looking forward for your valued cooperation.

Thank you very much for your assistance.

Very truly yours,

Anna Lissa I. Abello
IT Capstone Project Coordinator

Noted by;

Anna Lissa I. Abello, MIT
Academic Head

TRANSCRIPT OF THE INTERVIEW

Interviewer: Rhen Dhel Patigayon **Interviewee: Kian (Accounting staff)**

Rosecheele Ibañez(Village Administrator)

Rhen Dhel: Ay ako po, eto po yung ID ko from STI. Ano po kami from STI College po, hindi na po in-update po pero 4th year na po kami from STI. 'Dyan po sa may Bayan po papunta po sa may Guevarra po.
Kian: Anong course n'yo?
Rhen Dhel: IT po kami, BSIT po.
Kian: Sige sige.
Rhen Dhel: ah… ano po ah…
Sage: pipirma…
Rhen Dhel: For?
Sage: Sa ano, sa interview.
Rhen Dhel: For interview…
Sage: Oo.
Rhen Dhel: Sir ano po pala pangalan n'yo po?
Kian: Kian.
Rhen Dhel: Kian po. Yung position n'yo po sa may…
Village Administrator: Accounting staff
Kian: Accounting staff.
Rhen Dhel: Accounting staff po.
Rhen Dhel: Lapit ko na lang para marinig (the phone for clear recording).
Kian: Okay sige.
Rhen Dhel: Ah ano po ah yung ano po yung sa ano po, dito po saWashington ah ilang shuttle po yung umiikot po?
Kian: Shuttle ba tawag talaga tawag do'n?
Village Administrator: Hindi s'ya ano eh, oo shuttle s'ya pero dalawa.
Rhen Dhel: Pang service po.
Kian: Dalawa.
Village Administrator: Dalawa.
Rhen Dhel: Dalawa. Anong klaseng vehicle po s'ya? Ano po cab po ba, van?
Village Administrator: Bajaj.
Rhen Dhel: Bajaj?
Village Administrator: Parang Bukyo.
Kian: Bukyo.
Rhen Dhel: Ah Bukyo po.
Village Administrator: Oo.

Rhen Dhel: May ano po ba kayo may data po kung- estimation po kung maraming- kung saan po maraming- ilang population po meron dito po?
Kian: Population po?
Village Administrator: Population.
Rhen Dhel: Opo.
Kian: Meron, meron kaming data.
Rhen Dhel: Meron po kayong data.
Village Administrator: Ilan?
Rhen Dhel: Hihingi rin po kami sana for po confirmation po kung pwede po kung- as part of data gathering po at para malaman din po naming mga dapat po naming ilagay. Yung mga information po like yung number of employees po, yung mga drivers po, ah average commuters per day po kung wala naman po yung average commuter day pwede po yung system na po naming yung mag ano po non, and then shuttle service hour po, ah…
Village Administrator: Ano s'ya gagawa ba kami ng document para dyan o pwedeng sabihin na lang naming?
Rhen Dhel: Pwede pong sabihin na lang.
Village Administrator: Sige, yung pinaka una.
Rhen Dhel: Yung ano po yung kung ilan po yung number of employees or drivers po ng ano po shuttle po?
Kian: Drivers?
Village Administrator: Ah sa ang driver kasi dalawa lang…
Kian: Dalawa lang
Village Administrator: Oo.
Rhen Dhel: Dalawa lang din po yung umiikot na umiikot? Yung sa commuters per day po naestimate nyo…
Village Administrator: Sa commuters kasi hindi s'ya mahahawakan. Ang ginagawa kasi ng mga driver naming, actually hindi namin, kasi nirerentahan lang yung bukyo
Kian: Tapos mag
Village Administrator: Oo sila na bahala sa kita nila basta may ibibigay saming boundary.
Kian: Boundary.
Rhen Dhel: Ah so ano po yung mga driver na po ba nag aabot nung part po sa…
Village Administrator: Nung boundary oo.
Rhen Dhel: Tapos yung shuttle service hour po ah may- alam n'yo po yun or sila na bahala sa oras.
Kian: May oras yun eh.
Village Administrator: May oras lang, ang alam naming 5:30 hanggang 5:00. Pero hindi naming sure kasi s'ympre hawak nila yung oras nila basta nakapagbigay samin ng boundary.
Rhen Dhel: Ah okay na po yun, pero ang sure n'yo po is 5:30am to 10. Hanggang 10 lang po ng gabi.
Kian: 10.
Village Administrator: Oo.

61 Rhen Dhel: Doon lang po iikot yung oras nila. Okay po. Ah sa may ano po dito kunyari malaki po ba yung Washington po, diba malaki medyo po s'ya. May ano po mga like shuttle stop po, kung saan sasakay ganon?
62 Village Administrator: Ah ang ginagawa kasi nila…
63 Kian: Contact number.
64 Village Administrator: Contact number lang, iano dito sa fb group namin tapos sa security meron den tapos ko-kontakin na lang.
65 Kian: Thru phone. Kontakin may Block and Lot.
66 Rhen Dhel: Ah so kokontakin na lang po yung driver po driver na pupunta sa may bahay po nila.
67 Kian: Yes.
68 Rhen dhel: Ah ganon po. So wala pong mga stop points po. So ano po yung ano po, may current problem na po doon sa may naencounte nyo po ba or based po doon sa system nyo na kunwari po yung sa pagbibigay lang po ng boundaries, sa may contact person lang po may naencountered na po bang issue or may nagreklamo na pong mga residents?
69 Village Administrator: Actually, wala pa.
70 Kian: So far wala pa. Kasi kelan lang sya ulit nag start eh.
71 Village Administrator: Kasi kung kelan nag alert level 1, tsaka na lang ulit nagkaroon ng shuttle naming.
72 Rhen dhel: Pero kelan po sya nag start po?
73 Kian: Kelan ba exactly? Parang March 1.
74 Village Administrator: February 15.
75 Rhen Dhel: This year lang po?
76 Village Administrator: Oo.
77 Rhen Dhel: Last year wala pa po kayong ganyan?
78 Village Administrator: Wala.
79 Rhen Dhel: Lately lang po sya? Okay po. Ano po ah… paano nyo po ay namomonitor naano na pala yon (reading the questionnaire) paano po pala yung nagbabayad po yung ano yung mga commuters po, sa driver na po nag aabot?
80 Village Administrator: Sa- oo. Yung iba naman ang alam ko may gcash account yung driver…
81 Rhen Dhel: thru gcash na lang po. Hmmm. Ano po yun may mga discounts din po yan sila like for seniors and for students po?
82 Village Administrator: Ano wala. Ang alam lang naming fixed tapos special
83 Kian: Naka fixed na.
84 Rhen Dhel: Naka fixed na po sya. Ah so bukod po yung special tsaka yung may mga kasama po?
85 Kian: Regular fare oo tas ahm, special.
86 Rhen Dhel: Special. Ano pong pinag kaiba ng regular fare sa special?
87 Village Administrator: Sa special 40 pesos kasi isa lang…
88 Rhen Dhel: Ah solo lang po
89 Village Administrator: Kung gusto na nya umalis, alis na sya. Special 40 pesos
90 Rhen Dhel: Kapag regular po, ilan ang kasya sa isang vehicle ilan pong kasyang tao po?

91 Village Administrator: Kapag regular…
92 Kian: At least 3.
93 Village Administrator: 15 each ata ‘yon.
94 Kian: 15 pesos.
95 Village Administrator: Oo 15 pesos.
96 Rhen Dhel: Kapag regular po, 15 per head po.
97 Kian: hmm.
98 Rhen Dhel: Paano naman po yung outsiders po? Pwede po silang ano po parang mag shuttle pumunta kung saang ano po.
99 Village Administrator: Kung outsider, ang alam ko kasi ive-verify pa ni guard.
100 Rhen Dhel: Ah may verification pa po ng guard na need.
101 Village Administrator: Yung ibang home owner tumatawag na agad sa HOA na may bisita sila, magsha-shuttle, inform naming si guard, papapasukin na.
102 Rhen Dhel: Ah ganon po yung system po pag outsider po.
103 Village Administrator: Oo.
104 Rhen Dhel: So ano po sya secured, walang basta basta makakapasok? May mga chance po ba na ano ah may mga shuttle po na hindi available ganon and ano pong parang araw na?
105 Village Administrator: Ang nangyayari kasi sa ngayon ah or example diba dalawa lang yung e-tric naming or yung bukyo, yung isang bukyo lang ang tatakbo ngayon kinabukasan iba nanaman.
106 Rhen Dhel: Ah per day po isa lang po hindi po dalawang vehicle.
107 Village Administrator: Isa lang kasi usually naman yung homeowners dito may sasakyan.
108 Rhen Dhel: Ah konti lang po yung commuters dito.
109 Village Administrator: Hmm-mm konti lang.
110 Rhen Dhel: Ano pong ano parang iniwan nyo po rules and regulations po sa drivers bago po sya parang umikot, parang mag ano po sa inyo as shuttle driver? Yun po ganon.
111 Village Administrator: Proponents? Or sa parang sa application?
112 Rhen Dhel: Hindi po, parang rules po na inano. Kunyari po ah… kailangan taga dito po ganon, ahm may license, yung mga ganon po.
113 Village Administrator: Ah.. ginawa muna na board of directors namin, gagawa sila ng bio data, next dapat meron silang license, next kailangan yung ano na lang regular na kailangan kailangan isanitaze, kailangan ganto lang yung sasakay, ganto ah.. ilang lang sila, usually wala naman gaano.
114 Rhen Dhel: And driver po is taga dito lang po?
115 Village Administrator: Taga dito lang.
116 Rhen Dhel: namomonitor nyo naman po yun? Yung bawat ikot po nila, nag i-in- mag in po ba sila dito? Like ganon po.
117 Village Administrator: Yung ikot nila wala kaming info na nakukuha bali ang nangyayari kasi ah… for example ngayon sila nagayong araw. Kinabukasan na naming malalaman na sila yung tumakbo.

118 Rhen Dhel: Hmm so ano po ang nangyayari na lang po is magbibigay na lang po sila for boundary.
119 Village Administrator: Boundary na lang, oo.
120 Rhen Dhel: Ah gabi po yun ganon po or kelan po sila tuwing nagbibigay ng boundary
121 Village Administrator: Ang boundary nagbibigay sila for exampke ngayon sila tumakbo, kinabukasan ng umaga dapat iremit na samin yung boundary
122 Kian: Iremit.
123 Rhen Dhel: Ah kinabukasan din po. Ah ano po yun, yung boundary na yon percentage po ng kita nila that day po?
124 Village Administrator: Hindi, fixed na sya.
125 Rhen Dhel: Ah fixed na po sya, okay po.
126 Village Administrator: Oo.
127 Rhen Dhel: Ah…
128 Village Administrator: Diba kapag narelease sa HOA ibigay mo na lahat kasi hindi talaga naming hawak yung pinaka payment, usually monthly dues lang naman yung hawak naming, tapos yung ibang sticker lang, pero yung mga shuttle boundary lang.
129 Kian: Sa shuttle hindi na.
130 Village Administrator: yung mag reapers naman ng bukyo kami naman may hawak, if ever kailangan ng change oil, may papalitan, kami may shoulder non
131 Rhen Dhel: Ano po ma'am actually yung app po namin yun po yung magiging- bali mamomonitor nyo na po yung ano po yung ikot po nila, payment po, makikita nyo po kung nag-in po sila, ganun po. Bali…
132 Village Administrator: Ano yan may ilalagay kayong device ba doon?
133 Rhen Dhel: Opo, mag iimplement na po kami ng QR for payment po para makita nyo rin po yung total income po na makikita po nila, total sales po ganon po, mamomonitor nyo po talaga as in po. And then yun po ah… magkakaroon po kayo ng- yung sa driver po application po and then sa inyo po is thru ano po system web design po.
134 Kian: System.
135 Rhen Dhel: Kasi kayo po yung admin po eh para mamomonitor nyo po. Ano po ah… before po ba may nagkaganito na rin po, may nag implement na rin po ba ng software or hardware po sa inyo?
136 Village Administrator: Actually, kasi nung term namin- nag umpisa lang yung term namin noong August 2021. Iba kasi yung naghahandle dito
137 Rhen Dhel: Before
138 Village Administrator: Ibang employee, so ngayon lang sa time namin na naka encounter kami ng ganto. Tyaka ang alam ko dati yung board medyo ah mahigpit sila regarding sa mga nag te-thesis. Kasi usually ang gusto kasi ng board namin, trabaho tarabaho lang, pero kung may time naman kami na sinabi naming 30 minutes lang baka naman pwede pagbigyan kasi alam ko naman na mahirap humanap ng mga client
139 Rhen Dhel: Client po.
140 Franchesca: Ay jusko po.
141Village Administrator: Mga ganyan, kaya kinausap ko to (Kian) baka pwede sumaglit pero ako lang pala kakausap..

142 Kian: Ikaw nga lang yung sasagot sabi ko sayo e.
143 Village Administrator: Naranasan din naman naming mag thesis pero hindi ako masyadong natulong sa
144 All laughs
145 Rhen Dhel: So ayon po, ano po may mga naencounter pa po ba kayong iabng problems po sa drivers and commuters po? Rants, issue na kinomplain nila po sa inyo about drivers?
146 Village Administrator: Ah… sa driver wala naman kasi actually, mababait yung driver na andito eh kasi kung gumawa ka- kung yung driver gumawa ng kasalanan eh taga dito lang sya, pwede syang kuyugin. Yung mga commuter naman wala den pero date meron yung guard na sinabi naman samin na paano pagka sumakay yung hindi naman taga dito, nagsabi ng Blk and Lot so doon lang kami na-aware na kailangan na iverify nila. Yun lang naman. Pero wala nama usually.
147Rhen Dhel: So verification from outsider lang po yung naging problem nyo. So ayun po, based po doon sa may system naming diba nabasa nyo po, may mga gusto po kayong i-enhannce or i-improvement po, suggestion po? Willing- open din po kami for ano po improvement.
148Franchesca: Based po sa mga naencounter nyo pong problems.
149Rhen Dhel: Gusto nyo po iexplain ko din po sa inyo.
150Kian: Mabilis lang naman yan no?
151Rhen Dhel: Yes po. So dito po sir, may application po for residents po then magreregister po sila after po nila mag register may verification po from number or email po to prove po na hindi po sila AI. So after po mag verify, login po sila. After po mag login, homepage po. Sa commuting process po dito po makikita yung QR code nil ana ginenerate ng application po namin. And then, tutal wala pong loading points, ang mangyayari na lang po dito is pwedeng contakin na lang ni resident po yung driver po. Then after po non, select shuttle po, click po si driver. And then pagpunta po ni driver doon sa bahay nung resident po, scan si QR code then payment na po. Sa payment po naman if kailangan- parang e-walltet po kasi yung application kailangan mo sya loadan through gcash po. And then once na pagkascan nya po at insufficient balance, hindi po sya pwedeng makasakay po parang ganon po tutunog po yung system namin na naka implement po sa shuttle po. Then pag insufficient po hindi sya tatakbo, sasabihin po ng driver na insufficient- pwede sya mag load. Then kapag sufficient naman po, may load, lalabas po yung receipt then magno-notif po yung kay driver po okay naman po. Then ayun po yung for commuting process po, sa mga residents po na gagamit ng application po. Then dito naman po sa login as driver naman po, makikita po nila pagka open po nila is yung name, age, birthdate.
152Kian: Mga personal information
153Rhen Dhel: Opo. Ayun po driver's info. View account, update account, and edit account. Update account po if ever gusto po nilang kunyare po, may username din po kasi kung ano po tawag sa kanila. Then edit account po sa change pass para po sa privacy purposes po. Then history of payments po makikita dito mamomonitor nila dito yung mga number of commuters sa araw po na yon. And then total sales po kung naka magkano po sila,

makikita nyo rin po yun as admin po. Yung po yung makikita ng drivers po. Sa account management naman po which is kayo po as admin po. Handles driver's account po, kayo po magke-create ng account nila, maga-update po and magde-delete po if ever po na hindi na po sya nagda drive po ganon ng ilang months sinabi po na magre-resign na po sya delete account lang po and then create account for bago. For feedback po, ito naman po yung report ng commuters po, let's say sinabi po ng commuters na change password- may nakaka access ng account ko kasi po about emoney po kasi yung app po kaya kapag sinabi pong may naka open po ganon po so mapupunta po sa inyo yung report and then kayo po makakapag- ayan pwede nyo po machange pass, maretrieve yung pera po nila then sainyo po sila lalapit. And then ito naman po yung sa report. The sa commuters account naman po, view account dito po makikita niyo po yung pangalan nila, block and lot address and yung pera po na nakalagay sa account po nila and then yun update account kung gusto po nilang magpapalit ng password kasi nakalimutan po nila. So, ayun po for admin account po and then next page po yun po yung parang buong process po namin, dito niyo po makikita ang buong process ng application po.

154Sir Kian: Okay dun sa ano tanong ko lang, sa may commuters ano dito sa diba sabi kapag insufficient balance na sya 'di naggogo-through totally yung system niyo 'di sya pwedeng sumakay?

155Rhen Dhel: Ano depende po sya sa driver po kung papasakayin po kung kuwari kasi insufficient po wala pong balance hindi po makakapag QR wala pong papasok na pera sa driver's account po.

156Sir Kian: Pero pwede bang pwede naman siguro patransfer sya if ever ng balance? Kasi parang medyo sya eh…

157Rhen Dhel: Opo papatrasfer po sya, magpapaload po siya.

158Sir Kian: Pwede? Pwede naman siya magpapasa through gcash din dun sa mismong driver 'di ba talaga sya pwedeng cash basis?

159Rhen Dhel: Pwede naman pong ano pwede naman pong ganon cash pwede din naman pong cash para ano lang po kasi pag nagcash po ang mangyayari po is hindi niyo po mamomonitor and ang driver po kung may pera pong pumasok po kapag nagcash po pwede din naman po syang cash.

Sir Kim: Pero kasi nga kapag nagcash 'di sya makikita sa system, tama diba?

160Rhen Dhel: Ayun po ayun lang po yung ano, bali ang mangyayari po nun e aano po sya ni driver po eeencode po sya ni driver ng manumanu dun po sa may account sya po lalagyan po naming sya ng another function po, for driver account po.

161Sir Kian: Ah pero through gcash naman 'to?

162Rhen Dhel: Opo through gcash po yung pagload.

163Sir Kian: Problem na nila yun magcash in na lang sila

164Rhen Dhel: Ayun nga po magcacash in lang po sila.

165Sir Kian: So far okay naman eh. Pero regarding kung halimbawa man na meron mag ano nito go through nito hindi 'to sa ano sa account nila for example sya nya na kung magagalaw yung pera o hindi talagang admin ba yung makakapag access nun just in case? Kunwari may nawawalan or nagagalaw yung wallet nila if ever.

166Rhen Dhel: Mamomonitor po nila yan sir kunwari.

167Sir Kian: Okay oo mamomonitor pero sinong?
168Sage: Liable.
169Sir Kian: Oo liable. Kasi kung kami naman parang kung halimbawa lang dito kung kami or kayo? Kasi kayo yung gumawa nung app. Panong process?
170Rhen Dhel: Ano po kami po yung parang sa ano po namin sagutin po naming ang ganun issue po.
171Sir Kian: Ah okay okay.
172Rhen Dhel: Kasi may ano po sya server na ano po naming yung pera dun po papasok po so mamomonitor po naming per account po.
173Sir Kian: Then yung sa verification, ano ba yan halimbawa inexit nila then ano ba 'to registration ulit through phone number or through email yung makukuha nila yung code? Kasi ano yan eh parang katulad sa mga ano may mga OTP diba?
174Rhen Dhel: Opo OTP.
175Sir Kian: Para lang masecure yung ano nila yung mismong account nila. Okay meron naman?
176Rhen Dhel: Meron naman po. Dual two authentication kumbaga po.
177Sir Kian: Siguro una lang kapag yung lugar hindi ganun kalakas yung signal yung lang magiging cons siguro kapag siguro dun lang magtatagal yung tao. Pero so far okay 'to lalo na dito samin kasi 'di naman talaga namin na momonitor.
178Rhen Dhel: May recommendation po ba kayo or suggestion? Para po maimprove po yung.
179Sir Kian: Wala akong gaanong alam dito pero okay naman sya e.
180Rhen Dhel: So ayun po sir willing po ba kayong maging part po ng thesis project po namin base po dyan sa system na nakita niyo po?
181Sir Kim: Itatanong ko sa admin. Itatanong ko sakanila oo baka meron din kasing process na pagdaanan mahirap din kasing salita lang baka kailangan din ng black and white kasi may board of directors din kasi kaming kailangan pagdaanan. Then si Village administrator sya yung andito kanina sya yung admin kaya if ever na meron kayong ano request ipapasa pa namin.
182Rhen Dhel: Sige po ano na lang po bigay na lang po kami ng contact po para if ever.
183Sir Kian: Ito pwede akin na 'to?
184Rhen Dhel: Dito ko na lang po ilagay sa likod ngcontacts po.
185Sir Kian: Okay okay.
186Sir Kian: Nagtatanong sila, kung willing daw ba na maging part ng ano nila.
187Village Adminstrator: Nang ganyan? Pagregarding kasi sa payment ng e-trick talaga hindi talaga namin sya hawak.
188Rhen Dhel: Sino po yung ano namin? Kasi po ano po parang kunwari makakatulong narin po ayun nga po para mamonitor po yung mga driver po and shuttle service po.
189Village Adminstrator: Siguro ang pwede muna nating gawin, usually kasi para malaman ng board dapat may proposal. Kahit wala syang bayad,pero may bayad ba yan?
190Rhen Dhel: Wala pong babayaran.
191Village Adminstrator: Proposal muna para maipresent ko naman sa board naipresent niyo naman kay Sir Kian update na lang kami mageexplain sa BPE.

192Rhen Dhel: Ano email na lang.
193Village Adminstrator: Email na lang.

TRANSCRIPT OF THE INTERVIEW

Interviewer: Franchesca Delos Reyes **Interviewee:** Driver

Michelle De Asis

Sage Florence Soriano

1. Franchesca: Sa thesis po namin.
2. Sage: Pakita mo, ito po oh.
3. Franchesca: May letter po.
4. Sage: Iwan ko na lang ‘to dito.
5. Driver: Ah galing na kayo kay ma’am Rosecheele?
6. Franchesa and Sage: Opo.
7. Sage: Pero kung busy naman po kayo pwede naman pong online na lang.
8. Driver: Sige okay online lang naman ako, ay ano nagaantay lang naman ako.
9. Sage: Kung may byahe po kayo stop na lang po natin.
10. Driver: Sige sige.
11. Sage: Sige po. So, sino ba unang magtatanong sainyo?
12. Franchesca: Ito po yung first question, Ano po yung average number ng trips niyo po sa isang araw?
13. Driver: 70+
14. Franchesca: 70+ tapos ano po, ano po yung shuttle service hours niyo po may lunch break po ba kayo or may shifting schedule po sa ibang driver?
15. Driver: Straight, 5:30 to 9:00 pm.
16. Franchesca: Tapos may specific po bang vehicle na nakaassign sainyo?
17. Driver: Ito lang, dalawa kami.
18. Michelle: Tag isa po kayo?
19. Driver: Oo
20. Sage: Bale ito po, kayo lang po nagamit nito?
21. Driver: Oo.
22. Franchesca: Tapos pano niyo po sino-surrender yung ano vehicle after po ng byahe?
23. Driver: Hindi namin sinusurrender, inuuwi namin sa bahay.

24. Franchesca: Ah okay. Tapos ano po tumatanggap po ba kayo ng commuters along the way? Kunwari po sa ano dyaan lang makasalubong lang.
25. Driver: Oo, kapag pumara isasakay. Kapag pumara..
26. Franchesca: Kahit wala po silang text sainyo or ano?
27. Driver: Oo oo.
28. Franchesca: Ah okay po. Na momonitor niyo po ba kapag meron hindi nakapag bayad na commuter? Sabagay ilan lang naman.
29. Driver: Oo ilan lang naman.
30. Franchesca: Opo, tapos may nag aano din po ba kayo nagaapply ng discount kunwari po sa sa student sa senior?
31. Driver: Oo sa senior kagaya kanina.
32. Michelle: Magkano po yung discount niyo?
33. Driver: Ano 20 pesos.
34. Franchesca: Bale 20 pesos po yung ano...
35. Driver: Bale ang sundo kasi namin dito is 40 pesos.
36. Franchesca: Ah ‘pag senior.
37. Driver: Eh siya lang naman pero yung ibang senior hindi naman.
38. Michelle: Ah 25 na po yung discounted na po?
39. Driver: Hindi, imbes na 40 pesos.
40. Sage and Franchesca: 20 na lang.
41. Driver: Ang binayad na lang sakin is 20 lang. Kalahati lang.
42. Franchesca: Then ano po nag aaccept po ba kayo ng reservation? Kunwari po bukas ng 4:00 pm pasundo po.
43. Driver: Oo.
44. Franchesca: Ah okay. Pano po text or call, sa facebook po?
45. Driver: Text, may ano naman kami hindi naman binibigay ang private number namin saka facebook.
46. Franchesca: Bale may nakahiwalay pong pangshuttle? pati po yung phone naginagamit niyo po ngayon pang shuttle lang.
47. Driver: Pang shuttle lang talaga.
48. Franchesca: Bale sa inyo po yan or sa admin?
49. Driver: Hindi saamin ‘to ng driver na kapalitan ko. Binili namin para dito lang ‘to sa.. para kung sino ang babyahe sa ang gagamit.
50. Franchesca: Ahhh okay. May pagkakataon po ba na hindi po available yung shuttle?
51. Driver: Wala.
52. Franchesca: Wala pa naman po? Then pano po nag iinquire yung mga tao Washington tungkol sa service sa Facebook po ba text, call?
53. Driver: Sa group chat ng Washington.
54. Franchesca: Ah may group chat po. Bale nag aaccept din po ba kayo ng feedback or suggestion po galing sa commuters? Pano po kayo nag aano dun?
55. Driver: Oo naman, depende na sakanila kung ano masasabi nila maireport din sa HOA okay lang naman samin.
56. Franchesca: Admin po tapos paparating.

57. Driver: Pero nagsimula dito wala naman gaano. Ah yung isa, isa lang yung kapalitan ko nareport sya.
58. Franchesca: Ah okay po.
59. Driver: Pero sa guard lang naman yun ‘di umabot sa HOA.
60. F: Tapos ano po may pagkakataon po ba na may nagrereport ng missing item po dito. Kunwari naiwan po yung payomg nila parang ganun.
61. Driver: Wala naman ah.
62. Franchesca: Wala pa naman po?
63. Driver: Nung nagsimula ako before covid may nakuha na akong cellphone saka wallet pero binalik ko naman sya naman yung may ari talaga.
64. Franchesca: Pano niyo po nirereport?
65. Driver: Di ko na nireport sa secuirty guard or sa HOA diniretso ko na.
66. Franchesca: Ah sa mismong may ari na. Ah okay po. Tapos ah pano po sila nagcocomplaint or yun po nagrereklamo yun po sa HOA po or pwededng sainyo muna?
67. Driver: Wala pa naman. Yung sa isa sa secuirty guard lang naman nagsabi na sabihan yung driver na ano magdahandahan ng patakbo ganun.
68. Franchesca: Ah okay po. So far po may mga naencounter po ba kayong problema sa pagpapalakad niyo po ng shuttle service?
69. Driver: Wala naman.
70. Franchesca: Wala pa naman po.
71. Michelle: Pano po kayo nagreremit ng boundary po? Or kanino or saan po kayo nagreremit?
72. Driver: Sa HOA.
73. Michelle: So bale po halimbawa ngayon po bukas po kayo magreremit?
74. Driver: Bukas ng umaga.
75. Michelle: Tapos ahmm bale po cash po yun or pwedeng gcash ganun?
76. Driver: Through cash.
77. Michelle: May resibo po bang binibigay sainyo?
78. Driver: Wala, logbook lang.
79. Sage and Franchesca: Ah may logbook sila.
80. Michelle: Logbook po sa ad.. HOA po?
81. Driver: Oo HOA.
82. Michelle: Pano po kapag halimbawa may emergency yung nakatukang driver ngayon pano niyo po iinform or sino po mag aano.. magddrive?
83. Driver: verAnong ibig sabihin..
84. Michelle: Halimbawa po yung nakatukang driver is may biglaang emergency sino po yung magddrive.
85. Driver: Ahhh yung kapalitan ko.
86. Michelle: Ah so pano niyo po ay iinform tatawagan niyo na lang po or text.
87. Driver: Tatawagan ko sya tapos aalis na ako diot sya na ang papalit.
88. Franchesca: Pag walang availbale na..
89. Michelle: What if po diba po dalawa lang kayo walang available na driver may ganun case na po ba?

90. Driver: Ah wala pa naman kasi sinusure naman lahat ng unit namin. Kunwari wala kaming byahe ginagawa na namin yung maintenance kunwari nya ang naka 2 days ngayon para tuloy tuloy yung byahe namin.
91. Michelle: Ay bale pano po pala yung sa maintenance po?
92. Franchesca: Sa maintanence po kayo po?
93. Driver: Ay sila, gulong lang samin.
94. Michelle: Di ba po chinacharge ‘to?
95. Driver: Hindi gasolina.
96. Franchesca: And M: ah gasolina.
97. Driver: Gasoline engine talaga ‘to. Gasoline engine ‘to.
98. M: Kayo po yung nagpapagasolina? I mean pera niyo po?
99. Driver: Oo, sarili namin.
100. M: Magkano po yung boundary na binibigay niyo po sakanila?
101. Driver: 400
102. M: 400 a day?
103. Driver: Sa ngayon. Naging 400 ngayon kasi mahina pa naman yung pasahero. Kasi walang mga estudyante.
104. M: Pano nga po pala yun malakas din po ba kita niyo?
105. Driver: Malalaman ba nila yan dun?
106. M: Ay hindi naman po, samin lang po.
107. Driver: Ang kita namin dito dalawang libo pinakamalki na yun sa isang araw.
108. Michelle: So, bale ayos naman po?
109. Driver: Ayos lang kasi san ka maghahanap ng dalawang libo ngayon. Wala hindi makakaabot yan dun sa HOA?
110. Michelle: Ay hindi po hindi po.
111. Franchesca: Samin lang po. Confidential yung information po.
112. M: So, bale yung lang naman po.
113. Franchesca: Yung ano po pala, ano po yung average number of commuters po niyo po sa isang araw? Parang gano po karami?
114. Driver: Kunwari sa 70+ na..
115. Franchesca: Na byahe.
116. Driver: Na byahe may tag tatatlo ipagpalagay na nating tig dadalawa lang.
117. Franchesca: Sa 70+ po na byahe?
118. Driver: Oo.
119. Sage: 240
120. Franchesca: Sa isang araw 70+
121. Driver: Kasi di pareparehas, minsan may karga akong 4 may 5.
122. Franchesca: Ah opo.
123. Sage: Peak hour pinakamaraming...
124. Franchesca: Ay ano po yung kadalasang oras na ano parang maraming pasahero po tanghali po ba or hapon?
125. Driver: 10 to... 10 to 1 ganun.
126. S: 10 am po?

127. Driver: Kasi mainit eh.
128. Franchesca: Ahhh. 10 am
129. Driver: Kapag ganito..
130. Franchesca: Wala masyado?
131. Driver: Oo, kasi naglalakad lang yung iba kasi di naman masyadong mainit eh.
132. Sage: Oh ano wala na kayong nakalimutan?
133. Franchesca: Thank you po kuya!
134. Sage, Franchesca and Michelle: Thank you po!
135. Franchesca: Salamat po sa time.
136. Driver: Okay, hindi makakarating yan dun ah.
137. Franchesca, Sage, and Michelle: Hindi po samin lang po yun.

Washington's Facebook Page

Washington's Bulletin Board

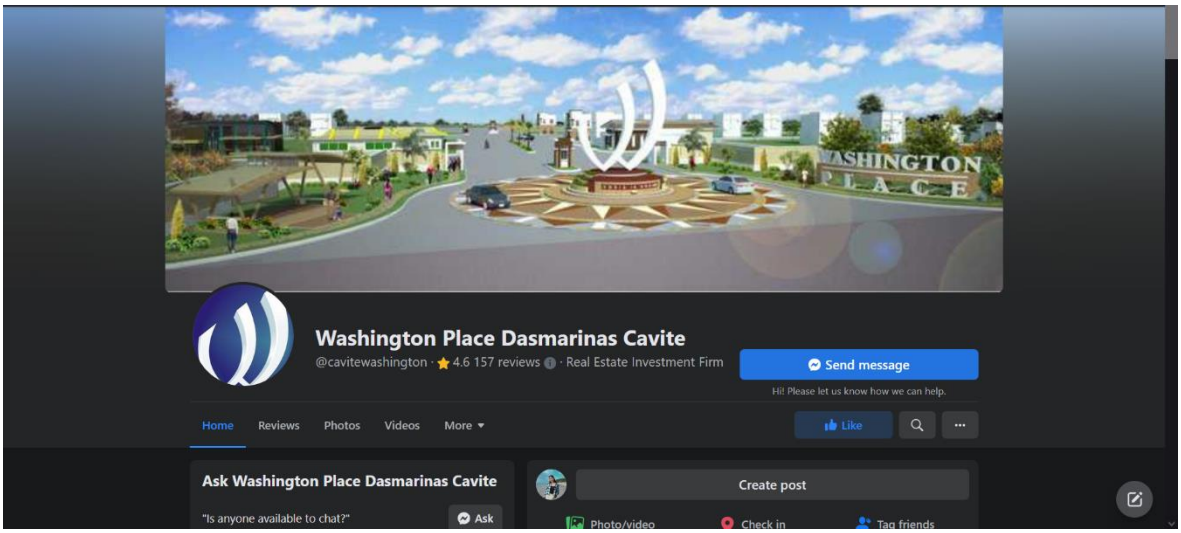

Figure 9. Washington's Facebook Page

Figure 10. Washington's Bulletin Board

Figure 11. Washington's Organizational Chart

Figure 12. Interview to the Village Admin and Accounting Department