<UiTM Ride-Hailing System>
Software Requirement Specifications

Version 2.0

SEMESTER MARCH – JULY 2019

GROUP: JCS1104B

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Revision History

Date	Version	Description	Author
13/3/19	1.0	System Development Planning	Muhammad Hariz Fitri, Khairul Imran, Muhammad Amir Yasier
10/4/19	2.0	System Requirements Specification	Muhammad Hariz Fitri, Khairul Imran, Muhammad Amir Yasier

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Software Requirement Specifications

1. Fact Finding Techniques

For the purpose of making sure our system achieves its objectives, we need to perform fact-finding technique which is one of the steps in preliminary investigation. We need to collect the data and information from the students in UiTM Segamat to prove that the problems that we have investigate before in SDP do exist as a real problem among students. Therefore, we use 2 techniques in getting information which is conducting user-survey and interview. We conducted a survey on 81 students (exceeds our target in SDP which is just 50 students) who has experiences using Student Grab Services. We asked them in the questionnaire what are the problems that they faced before this and whether they will use this system if we create it for them. We also conducted an interview with students' driver that currently provide illegal Student Grab Services in UiTM Segamat.

1.1 Questionnaires and Interview Review

According to our Software Development System (SDP), we mentioned that our initial plan was we are going to do both interview and survey. For the survey, our initial target was only 50 students but at the end of the survey, we managed to get 81 students meanwhile for the interview, our target in SDP was to interview 10 drivers. However, due to some problems we faced such as not having enough time and manpower to interview 10 drivers, we only interviewed 2 drivers. We used simple random sampling methods for both of it. From the survey answers, we understood what the real problem is in order for us to create this system. After that, we created many graphs like pie charts based on the data that we collected. Lastly, inferences can be made from the overall survey.

Here are some of the questions that we asked in our survey:
1. Have you ever used Grab services provided by the students in UiTM Johor Kampus Segamat
2. Is it hard to book a driver manually for your desired trip?
3. Do you agree if the Grab services provided by the students should be legalized/approved by UiTM and Polis Bantuan?
4. What are some of the problems that you face using the Grab services provided by the students right now? (multiple answers)
5. If there is a booking system created for UiTM Students' Grab Services, would you be interested to use it?

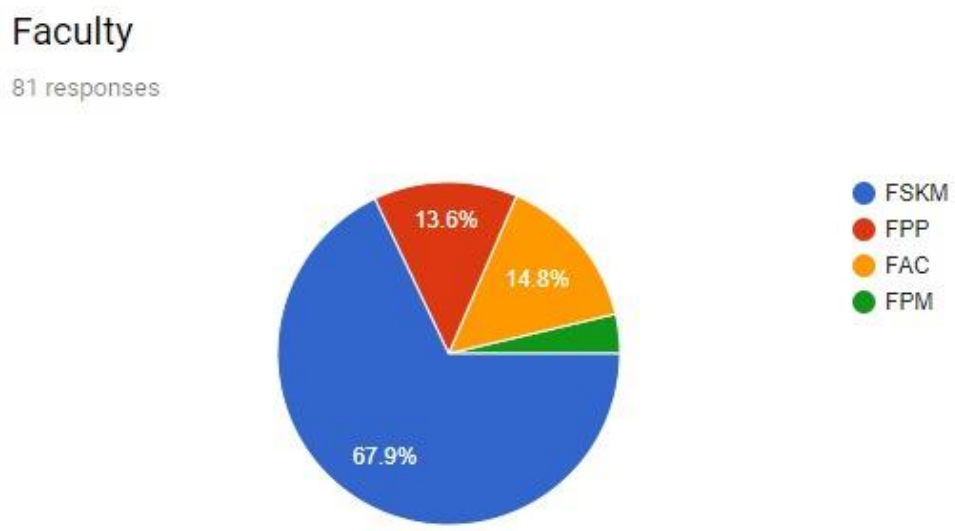
We found some student drivers' phone numbers from their services advertisement in college WhatsApp groups. Here are some of the questions that we asked in our interview with the drivers:
1. Do you agree if your services are legalized by UiTM and Polis Bantuan?
2. If you know how much your customers rate you, would you improve your service?
3. If there is a booking system created for UiTM Students' Grab Services, would you be interested to use it as a platform to run your business?

1.2 Business Rules

1. One student can place many bookings. Multiple bookings can be made by a student.
2. One driver can accept one booking placed in the system. Each booking can be accepted by one driver.
3. Each student can rate many drivers. Many drivers are rated by a student.
4. A student can rate many past trip drivers. Past trip drivers are rated by one student.
5. A driver can see all the rating that he received from past customers. All the rating can be seen by 1 driver.
6. Each driver can only have one car in the system. A car is only owned by one driver.

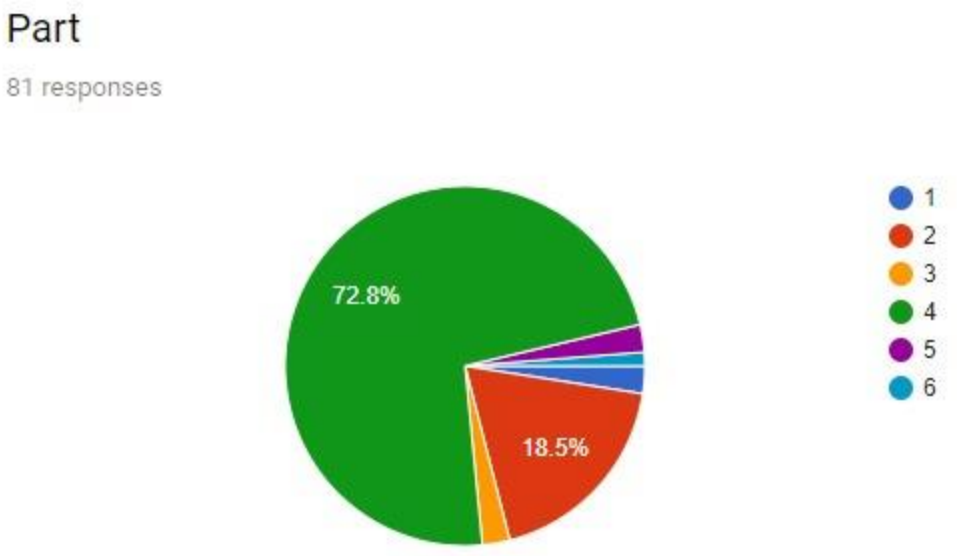
1.3 Summary of findings

Question 1:



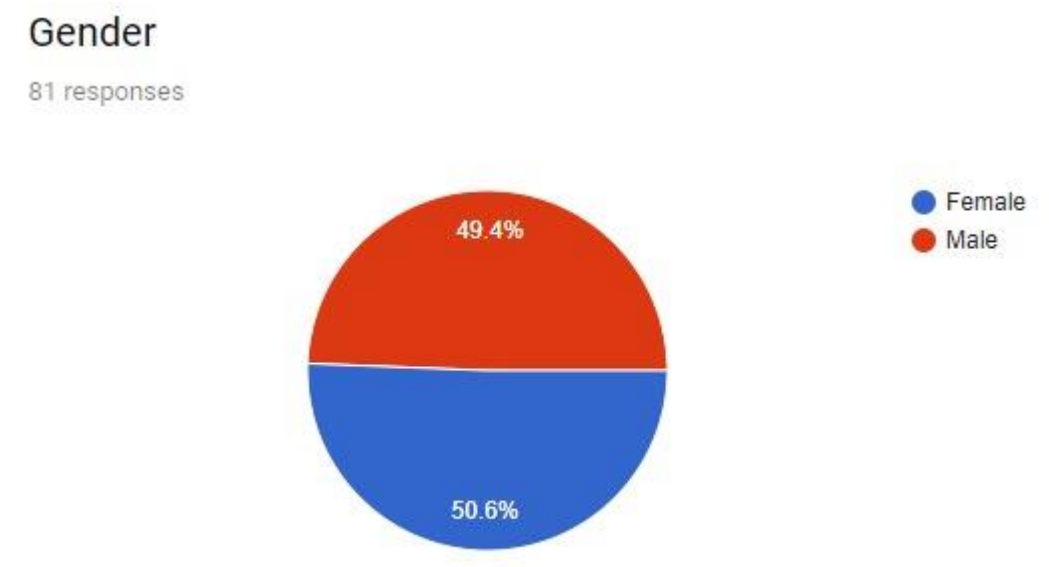
We asked the students that answer this survey from which faculty are they from. Most of the students (67.9%) are from Faculty of Computer and Mathematical Sciences (FSKM).

Question 2:



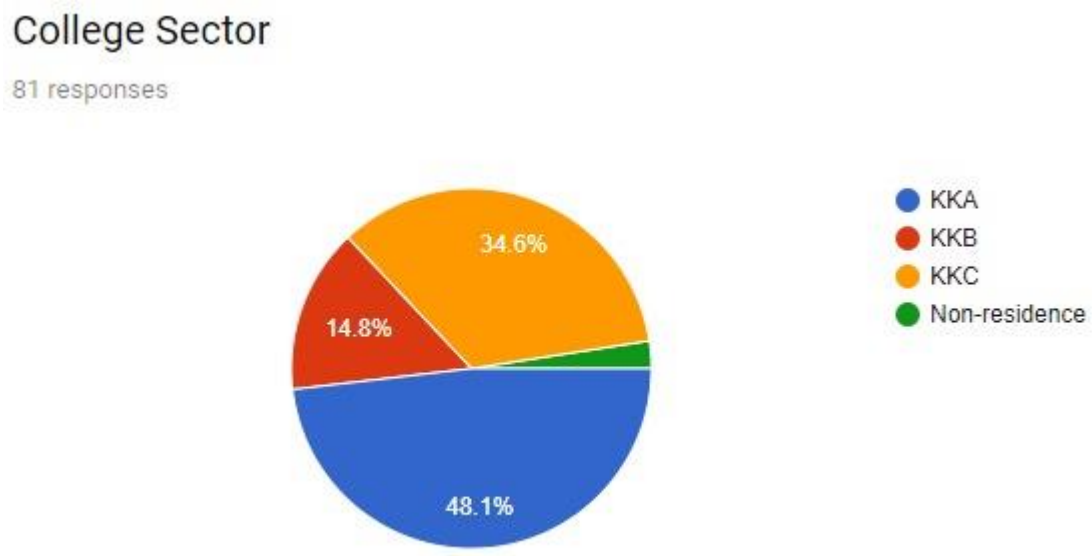
We asked the students what their current semester is. 72.8% of the students are in their 4th semester while 18.5% of them are in their 2nd semester.

Question 3:



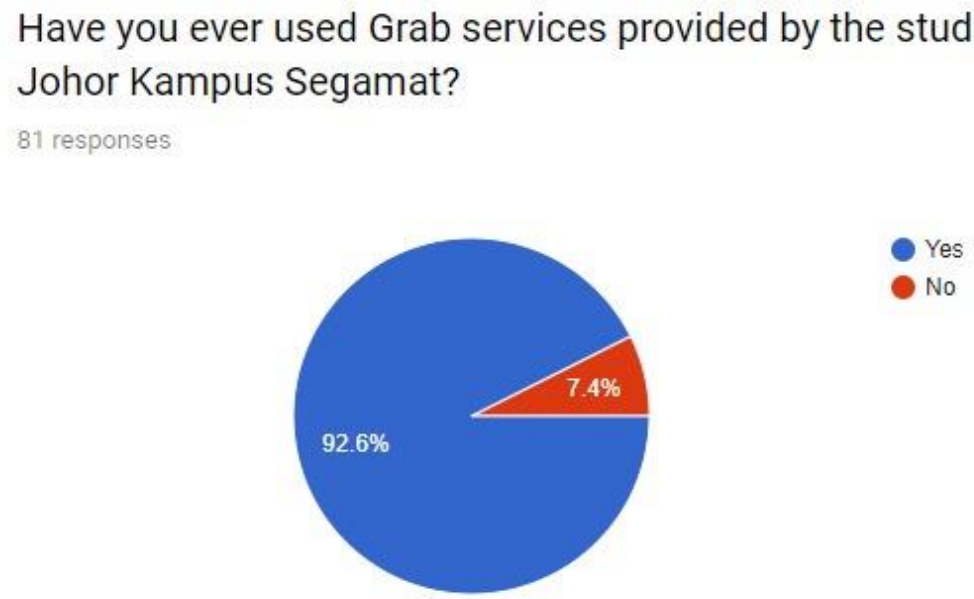
We asked the students what their gender is. We happen to receive a quite balance response from male (49.4%) and female (50.6%) students.

Question 4:



We asked the students from which college sector do they belong to or they do not belong to any college (Non-Residence). Most of the students that answer this survey is from College Sector A (KKA) which is around 48.1%.

Question 5:

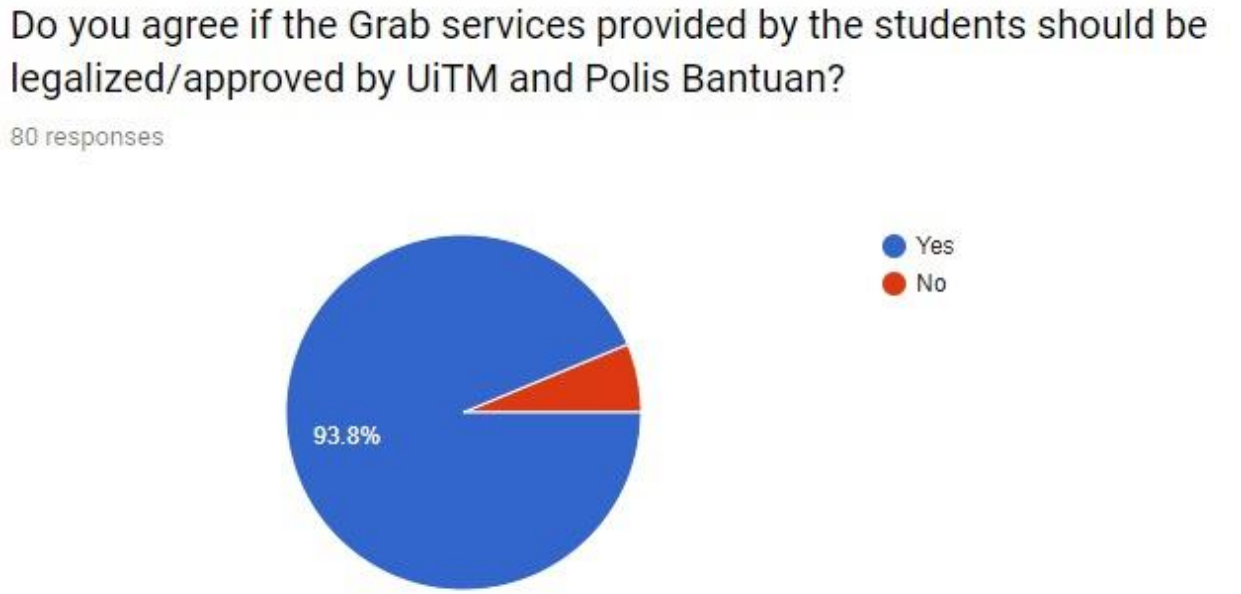


Most of the students that answer this survey (92.6% out of 81 responses) said that they have used Grab services provided by the students while only 7.4% said no.

Question 6:

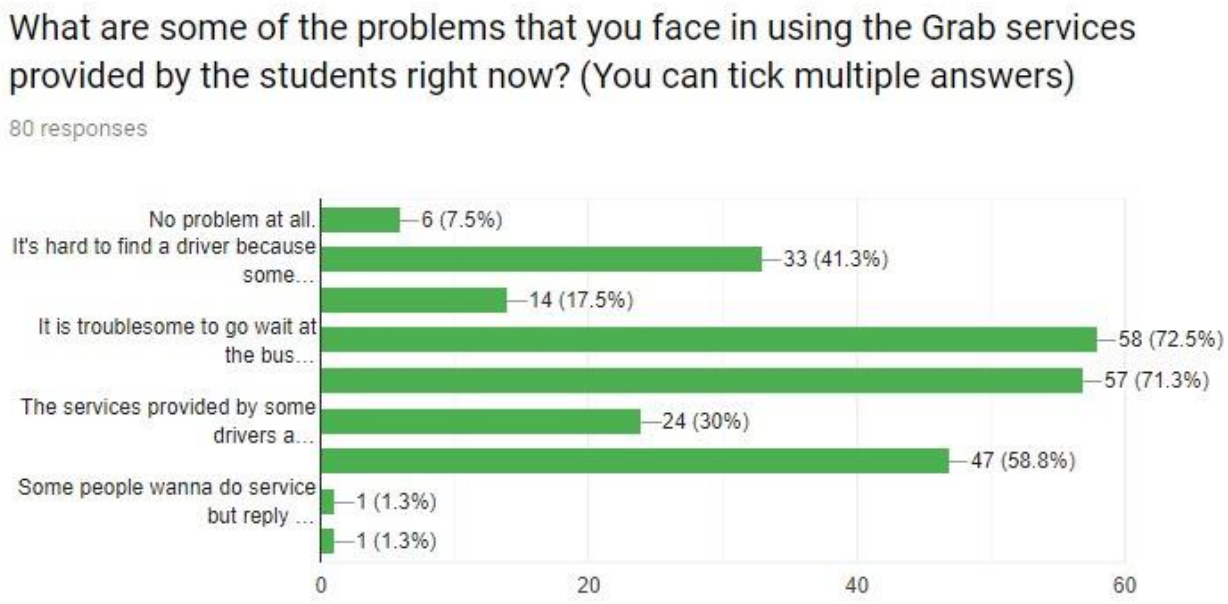
We asked the students whether it is hard to book a driver manually. On the scale of 1 to 5, where 1, being the smallest number on the scale represents “not hard at all” and 5, being the largest number on the scale represents “very hard”. The result is **10 students answer 5**, **21 students answer 4** and **30 students answer 3** which is in the middle between “not hard at all” and “very hard”.

Question 7:



92.3% of the students answer yes to this question which makes this system as very relevant to be implemented and the current law should be amended by UiTM.

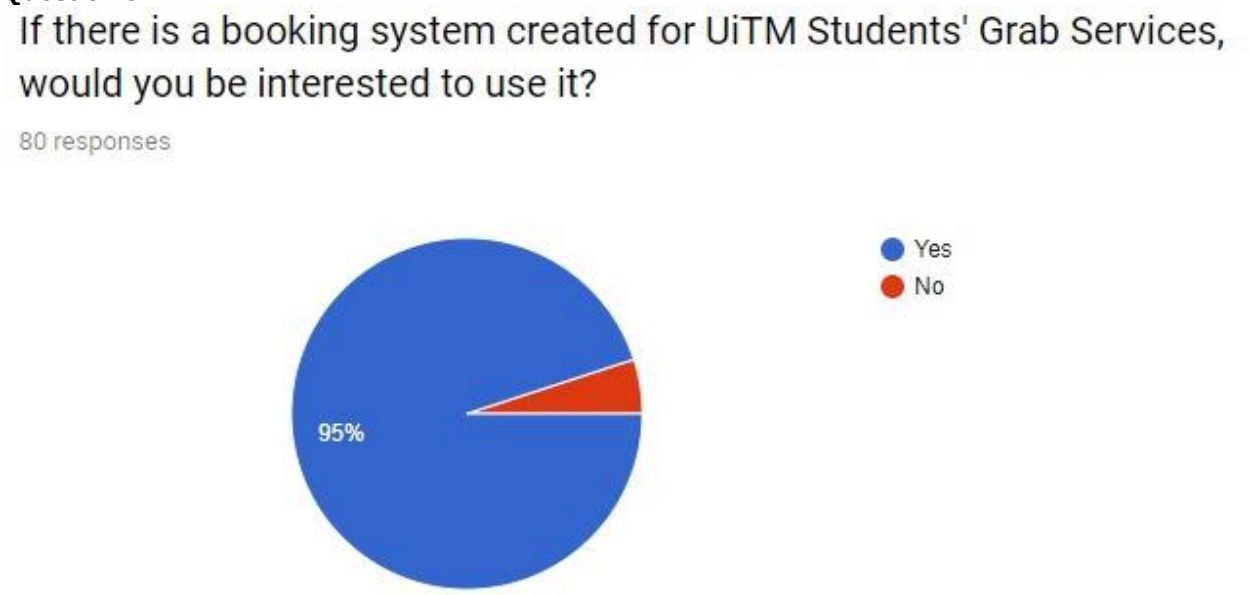
Question 8:



The result from this question is as follow: -
1. **No problem at all**: 6 students answer this.
2. **It's hard to find a driver because some drivers advertise their services in a WhatsApp group that I do not belong to**: 33 students answer this.
3. **Some drivers cancel their job at the last minute**: 14 students answer this.
4. **It is troublesome to go wait at the bus stop outside of UiTM instead of just waiting inside UiTM/below my college**: 58 students answer this.

5. **There is no complete list of available drivers, so I need to personally message each driver to ask whether they are available or not**: 57 students answer this.
6. **The services provided by some drivers are bad (late/not friendly/no aircon/dirty car)**: 24 students
7. **The price charged by some drivers are too expensive**: 47 students answer this.
8. **Other: Some people want to do service but reply late to their customers**: 1 student answer this.
9. **Other: Not specified**: 1 student answers this.

Question 9:



Lastly, we asked them whether they would be interested to use a booking system for UiTM Students' Grab Services. The result is way beyond what we expected, which is 95% of them would use it if we created this system.

Interview with 2 UiTM Students That Provide Grab Services

We asked 2 drivers (Muhammad Afiq and Muhammad Farhan) and both of them gave the same answer.

Q1. Do you agree if your services are legalized by UiTM and Polis Bantuan? **Answer:** I agree.
Q2. If you know how much your customers rate you, would you improve your service? **Answer:** Yes.
Q3. If there is a booking system created for UiTM Students' Grab Services, would you be interested to use it as a platform to run your business? **Answer:** Yes, I cannot wait to use it. Please develop it fast.

Conclusion:

Since 95% of the respondents said that they would use this system, it is very relevant for us to develop it. This proves that this system is not just a white elephant project where only the developers think it as relevant and are excited to create it meanwhile most people actually do not see the so-called problem as a real problem for them. Besides, the problems that we mentioned in SDP do exist as proven by the result from question number 8. This system can solve most of the problems such as it can ease the students to book a driver since this system will be a central where every students and drivers use. Students do not need to personally WhatsApp each driver to ask whether they are available or not. It can also help the drivers to get customers easily as they do not need to spam their service advertisement frequently in WhatsApp groups anymore. Another problem that will be solve is the services provided by some drivers are bad (late/not friendly/no aircon/dirty car). Using this system, students can give rating to the drivers and check the driver's average rating to know either the driver provide a good service or not. Drivers can also get feedback from their customers so that they are more motivated to improve their services.

1.4 SWOT analysis

Strength

1. Sole system that offers car hailing in UiTM Segamat.
2. Easier for UiTM Segamat students to book the drive with the existence of a centralized system which will monitor all ride-hailing service in Segamat area especially in UiTM Segamat.
3. Convenient for the passenger and driver since the service official approved by UiTM Segamat which will allow the driver to enter the UiTM Segamat area freely to take a passenger from their doorstep.

Weaknesses

1. Weak internet service in Segamat area that could interrupt the process in the system itself for both the user and the driver since our system will be internet dependent.
2. The drivers can only use this system to find customers but then make a deal outside of the system by personally message the customers using Whatsapp. Therefore, the system cannot get the record and commission.

Opportunity

1. The demand for public transportation among students to go to Bandar Segamat and other places around are high since most students do not have a car but need to go to those places.
2. The official Grab and other ride-hailing applications do not cover Segamat Area.

Threat

1. Other types of transportation such as Bas Muafakat Johor and Van UiTM that have their loyal customers.
2. Data of all the students might leak because of the lack of security of its database. Then, the data might be sold to companies out there for marketing purpose such as using the students' phone numbers to do telemarketing.

Tangible benefits

1. Reduce time taken for a student to book drivers since there is a centralized place where all the drivers are available rather than searching driver numbers through multiple WhatsApp groups.
2. Less effort needed for the students where they can just wait for the drivers below their college instead of walking to the UiTM front gate.
3. UiTM Segamat will gain the income from the fine that being charge to the passenger and the drivers and also from the monthly payment the drivers have to pay as a service charge.

Intangible benefits

1. The system will track all the past bookings therefore it will be easier for the drivers to trace how many trips have they do and what is their total income from it. This can help their decision making such as how many more trips they need to complete to achieve their target of profit.
2. The system will be user-friendly and easy to use even for a first-timer; therefore it can increase user satisfaction.
3. Drivers can do their business safely since they do not need to worry anymore about doing illegal grab services.

2. Storyboard

2.1 Storyboard Diagram + Narrative

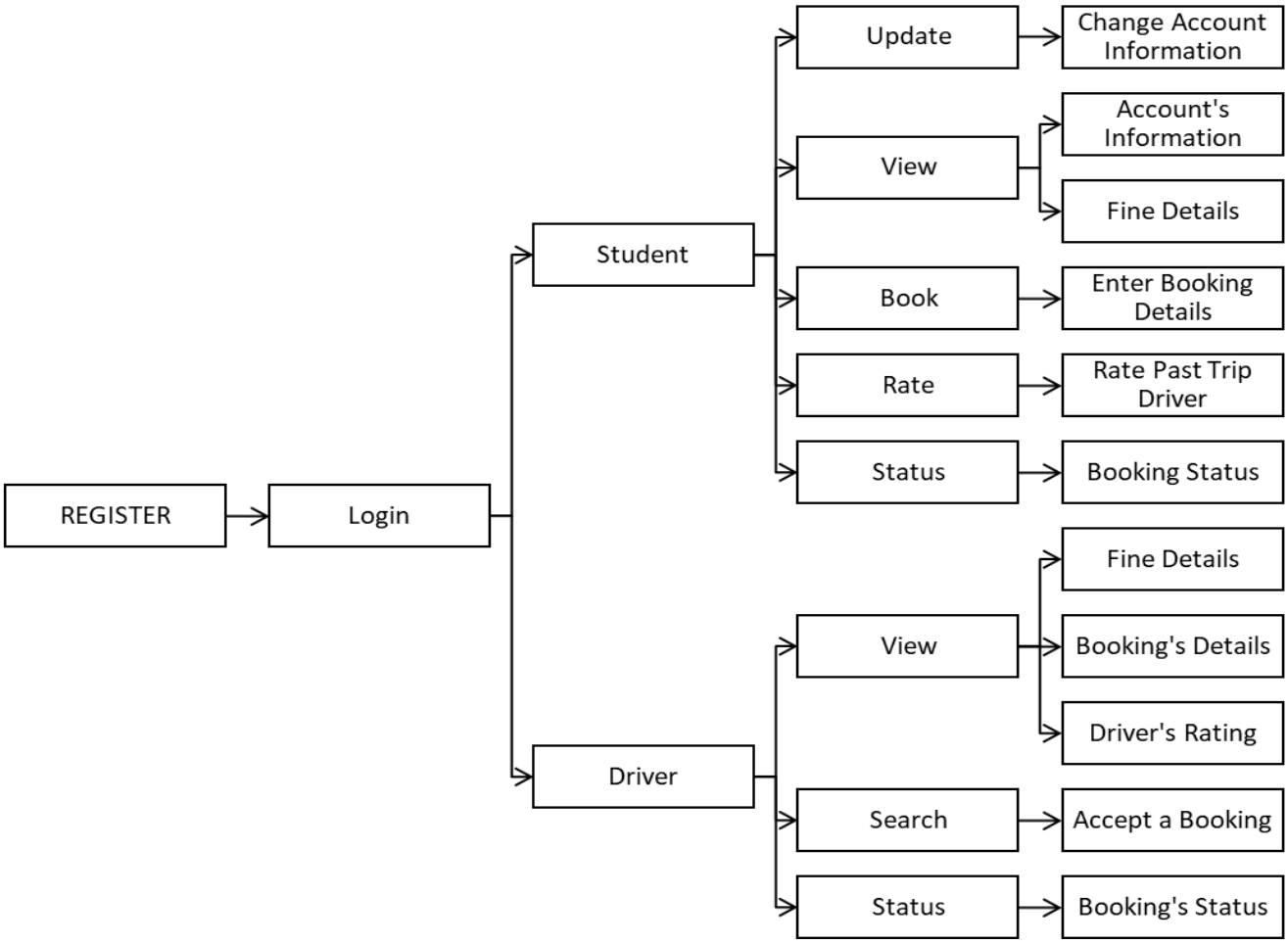


Figure 2.1 Storyboard for the UiTM Ride Hailing System

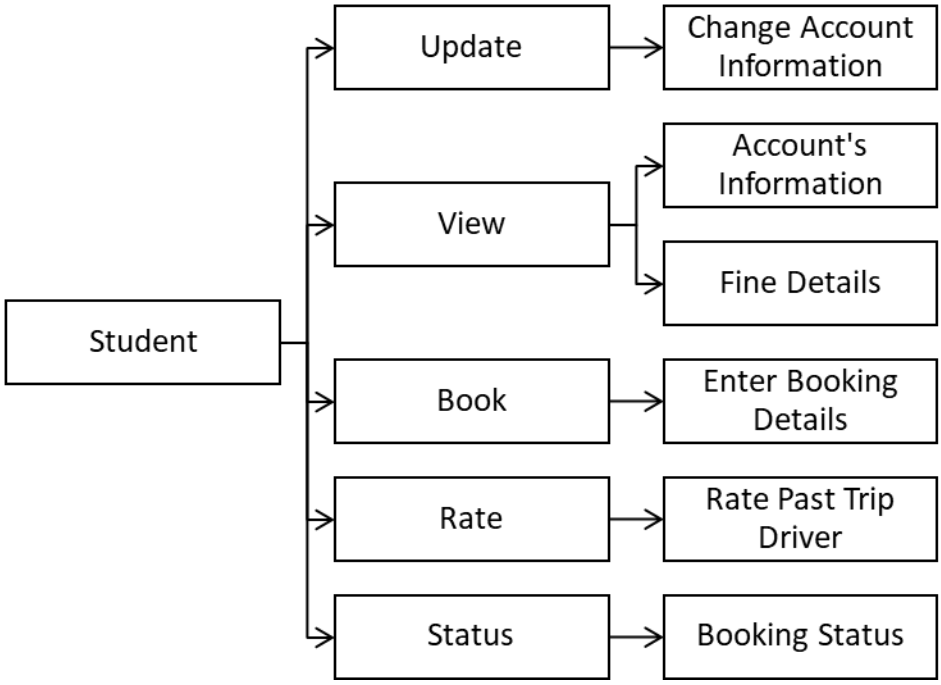


Figure 2.2 Storyboard for the student Flow Diagram

Student -> Update

- Student can change their account details such as name, college etc.

Student -> View

- Student can view their Account's Information.
- To view the amount of fine they must pay.

Student -> Book

- Student can place a booking for a trip by entering the details of the trip.

Student -> Rate

- Student can rate the driver who accepted their booking after the end of the trip.

Student -> Status

- Student can view their current trip status either depart, on the way or arrived. They can also cancel the booking meanwhile the status is "Driver on the way to pickup

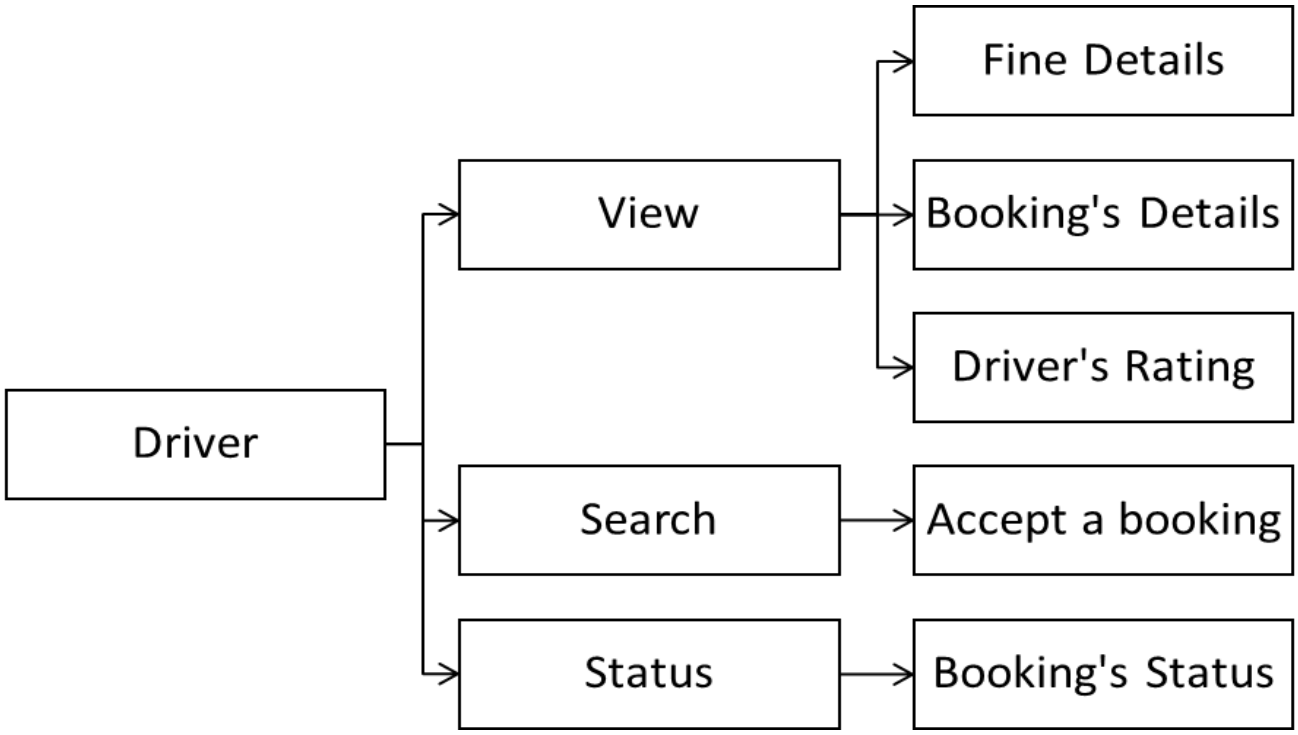


Figure 2.3 Storyboard for the Driver Flow Diagram

Driver -> View

- Driver can view the amount of fine they have to pay due to last minute trip cancelation.
- Driver can view all the details for the booking placed in the system.
- The Driver can view their rating given by the customer from their past trip.

Driver -> Search

- The Driver can search bookings placed in the system and accept one of it at a time.

Driver -> Status

- The driver needs to do a confirmation on the trip's status such as 'on the way to pick up', 'in transit to destination' and 'arrived at the destination'.

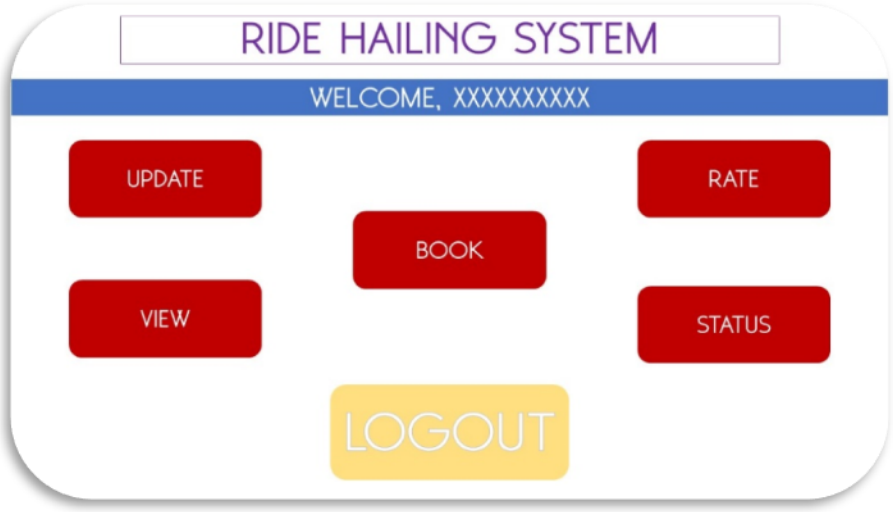
2.2 Storyboard Sketches + Narrative

Homepage:

- **Three** Command Button:
    1. **Register**: Click the button to register.
    2. **Driver login**: Click the button to login the system as a driver.
    3. **Student login**: Click the button to login the system as a student.

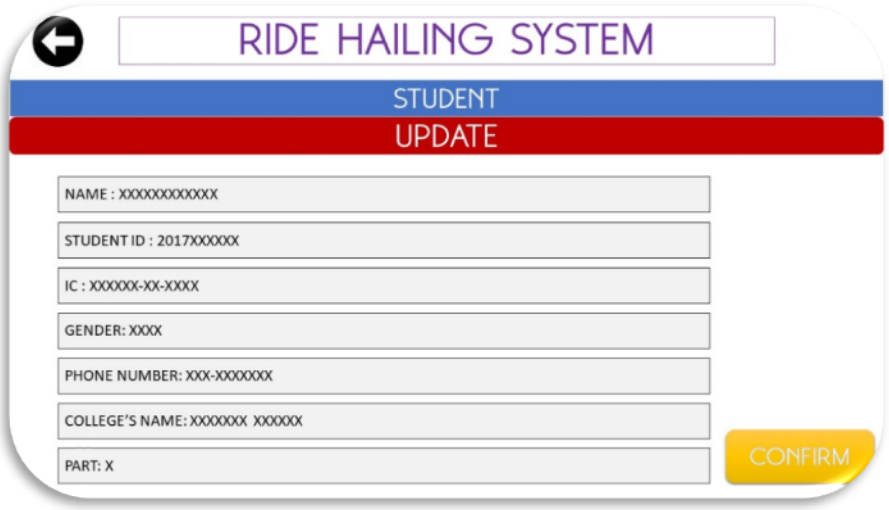
Student Login Page:

- **Two** grey boxes will be the place to enter the ID and the password.
- **Big Yellow Login** Button will take the user to their account page if they enter the correct ID and Password in the box.
- **Driver Login** button will take the user to the driver login page in case of miss clicked
- **Register button** will take the user to registration page where they need to fill their details.



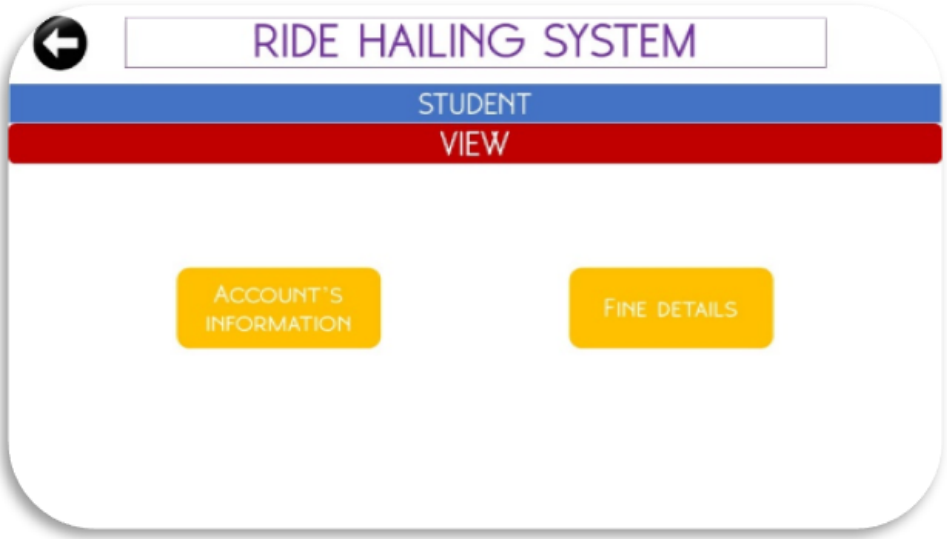
Student account's main page:

- **Five** red boxes indicate five choices or function that the user can choose.
- **Five functions**:
    1. Update: To update/change their personal information.
    2. View: To view their account information and fine details.
    3. Book: To book for a driver.
    4. Rate: To rate past completed trip.
    5. Status: To view the driver status.



Update Account Page:

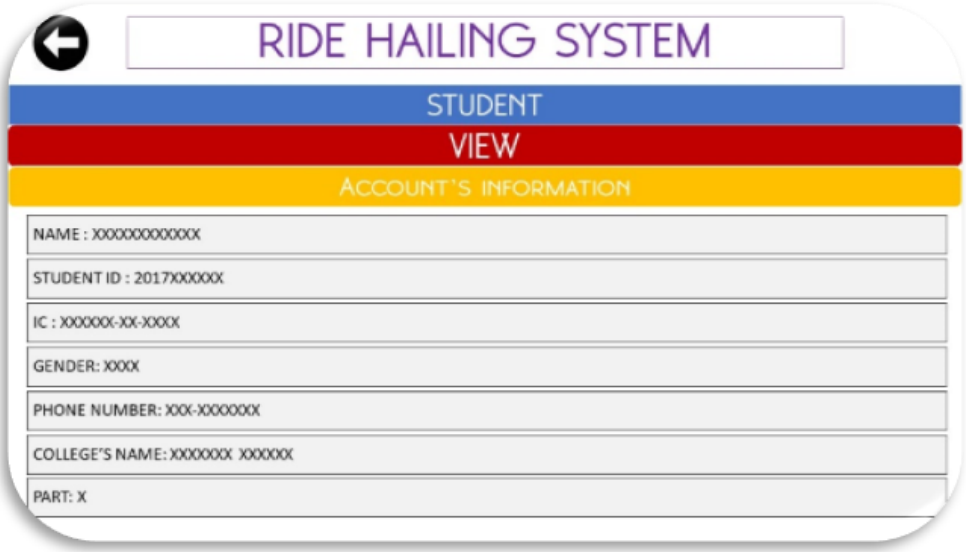
- The user can update their information for each attribute on the page and click the confirm button to save the changes.



View Option Page

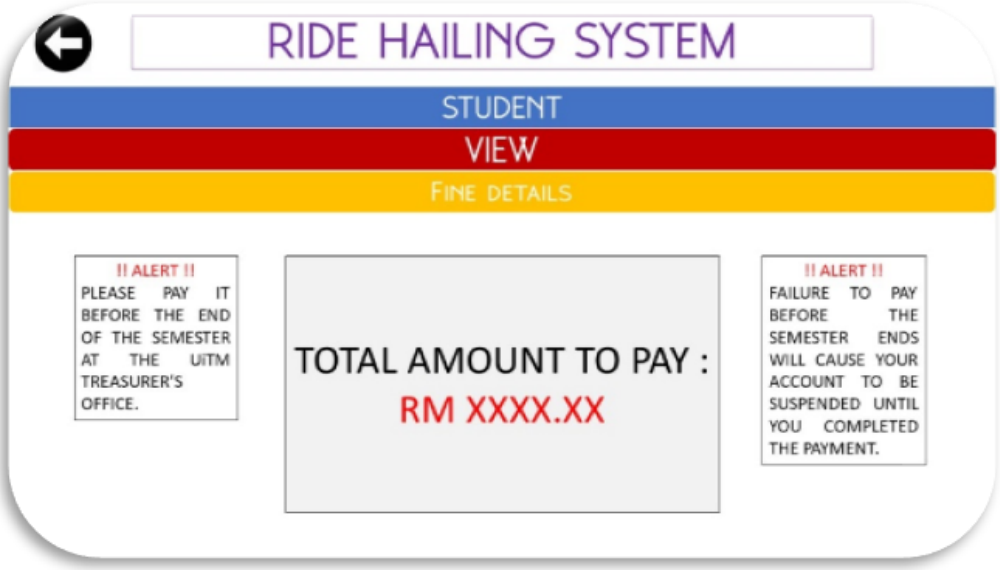
Two yellow button indicates two view options:

- Account's Information: To view the account's details.
- Fine Details: To view the fine details.



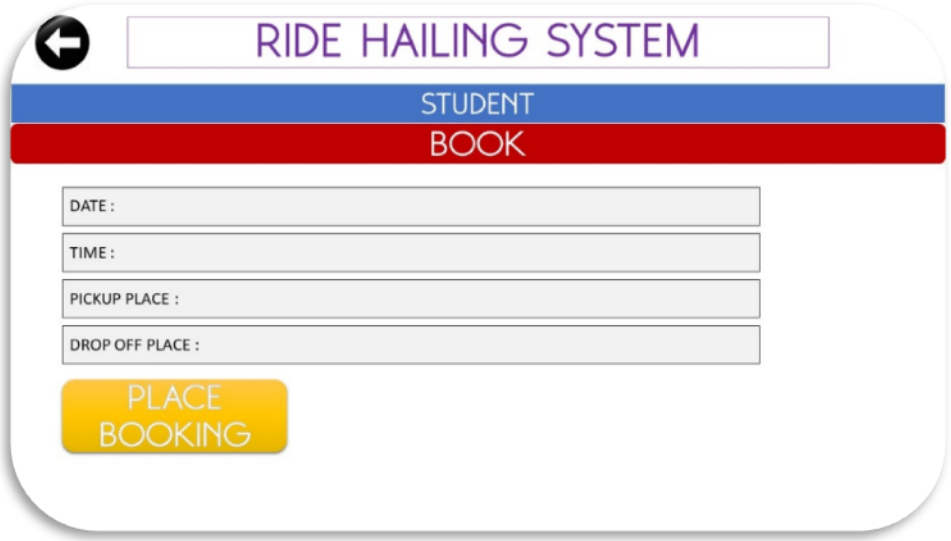
View Account's Information Page:

- It will display the user account information.



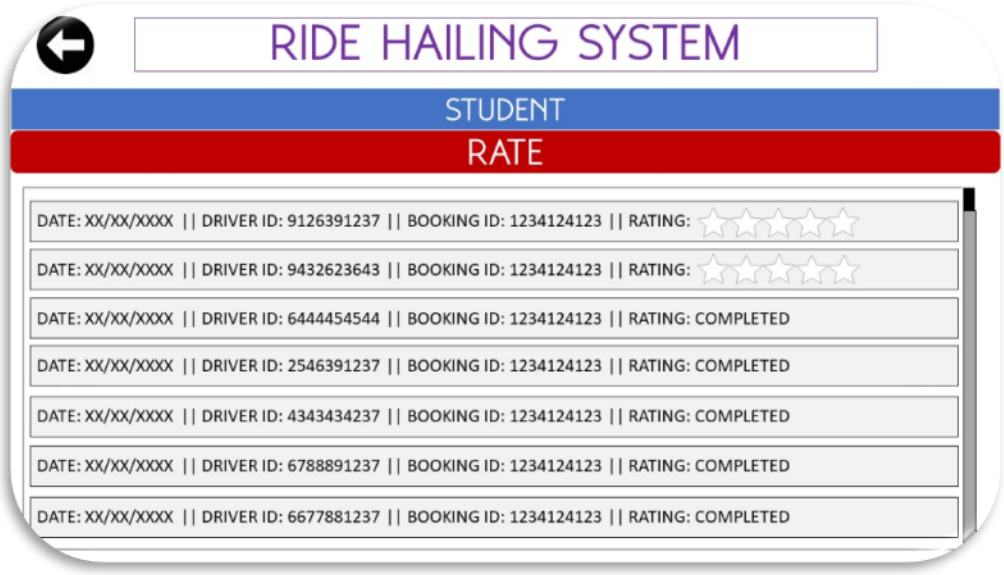
View Fine Details Page:

- It will display the total amount of fine that need to be paid.



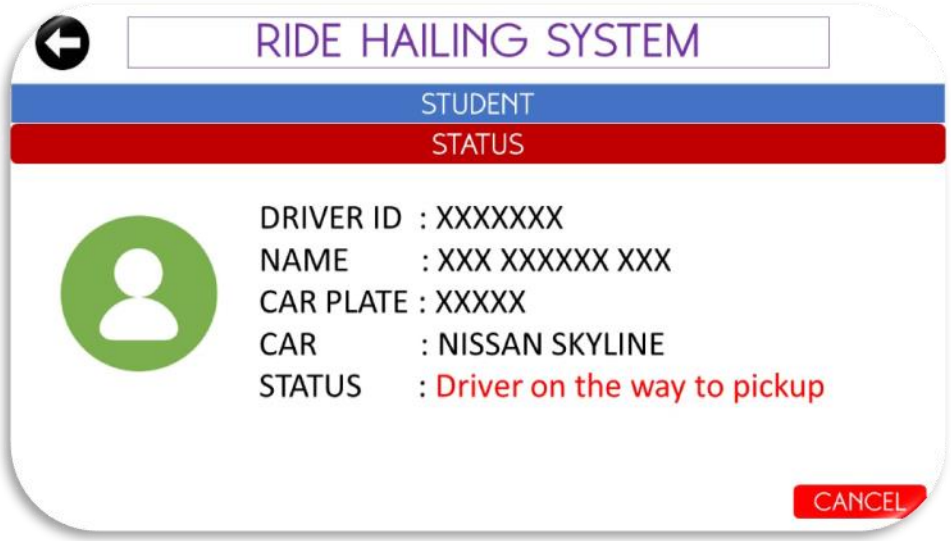
Place a Booking Page:

- To place a booking for a trip, the user needs to fill in these details:
    1. Date: Date of the trip.
    2. Time: Pickup time.
    3. Pickup Place: Location of pickup.
    4. Drop off place: Location of drop off.
- Click the yellow button to book a trip.



Past Trips and Ratings Page:

- The list of past completed trip will be display in a scrollable box and the user will be able to rate the driver for each trip.



Booking Status Page:

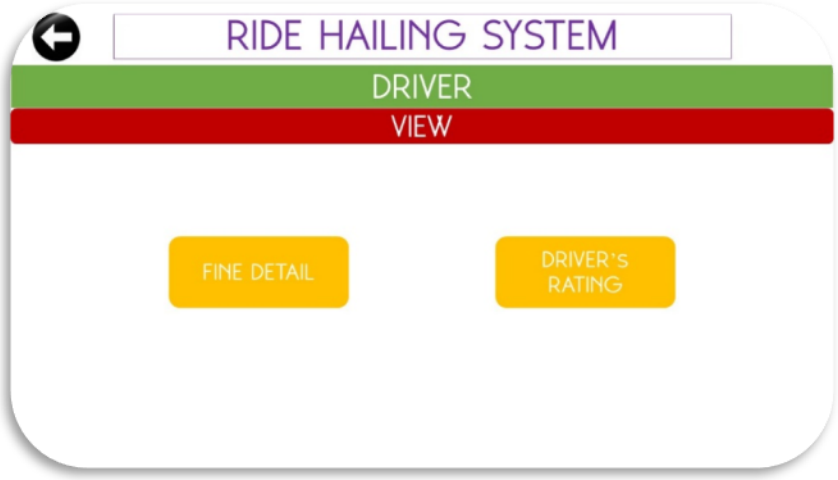
- There will be 5 different status for passengers after they placed a particular booking:
    1. Searching for a driver
    2. A driver has accepted your booking
    3. Driver on the way to pickup
    4. In transit to destination
    5. Arrived at destination
- The red cancel button could only be pressed to cancel the booking if the status is 1, 2 and 3. If they cancelled it 1 hour before the time booked while the status is 2 or 3, the passenger will be fined.

Driver Login Page:

- **Two** grey boxes will be the place to enter the ID and the password.
- **Big Yellow Login** Button will take the user to their account page if they enter the correct ID and Password in the box.
- **Student Login** button will take the user to the driver login page in case of miss clicked
- **Register button** will give a guide how to register as a driver by providing their personal details and send it to the administration's email address.

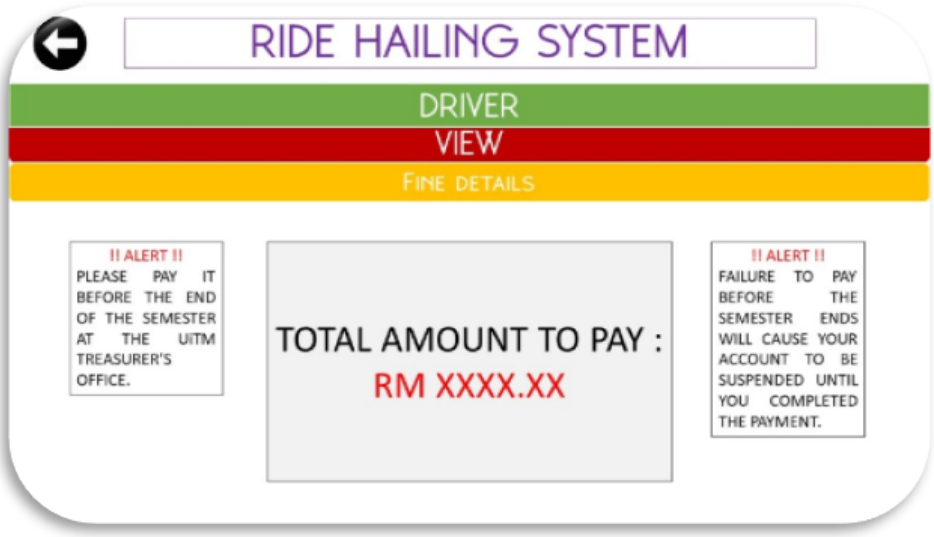
Driver's Account Main Page:

- Text in the green rectangle box will greet the driver with their name.
- **Three** red buttons:
    1. **View**: To view the [Fine Detail] and [Driver's Rating].
    2. **Search**: To search for any booking placed in the system in order to accept it.
- **Status**: Once a booking has been accepted by the driver, they must click this button to update the status of the driver to the customer such as [On the way to pick up], [In transit to destination], [Arrived at the destination] or [Cancel] to cancel the booking that they have taken.
- **One** big yellow button labelled [**LOGOUT**] that will log out the user from their account and bring them to the [Homepage].



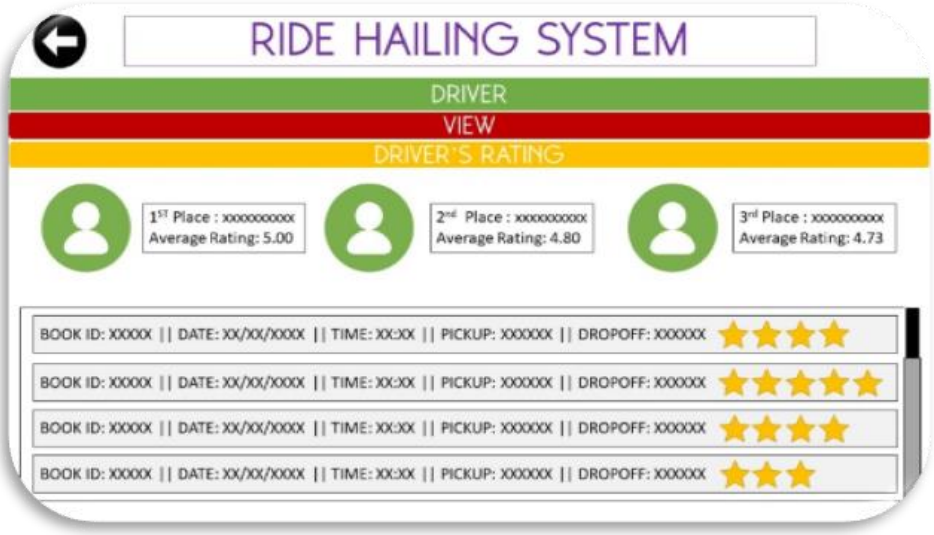
View Option Page:

- **Two** yellow buttons:
    1. **Fine Detail**: To view total amount of fine that needs to be paid.
    2. **Driver's Detail**: To view any rating received for past trip.



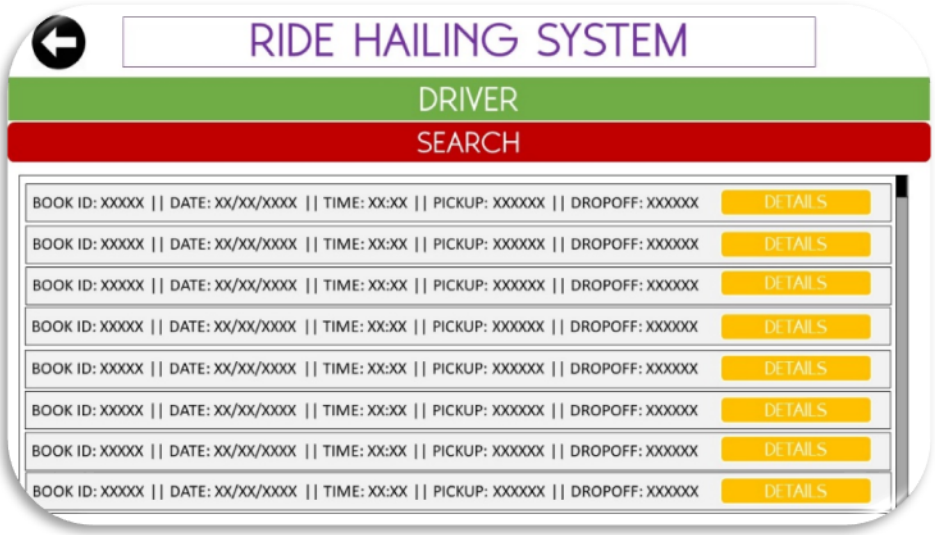
Fine Details Page:

- It will view the details of the fine that need to be pay.



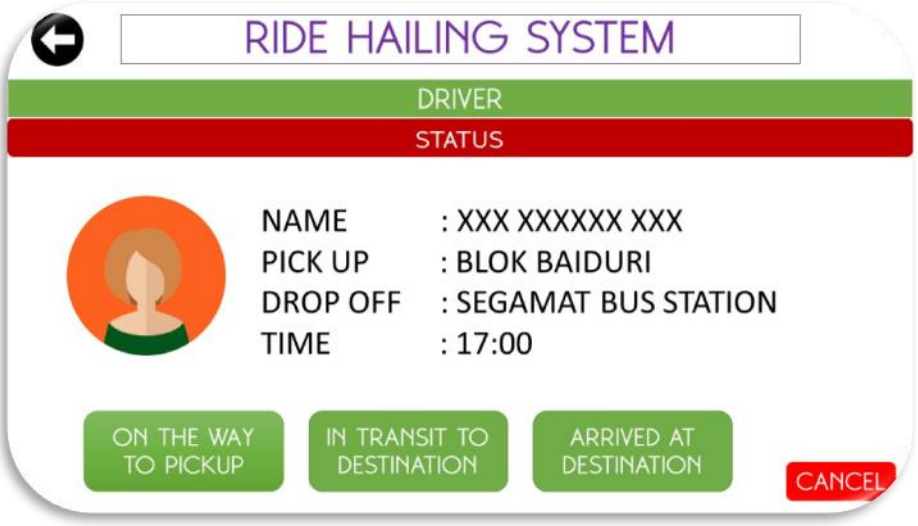
Driver's Rating Page:

- It will display the top 3 driver who get the highest rating.
- Below it is the past rating the driver get for every completed trip.



Search for Customer Page:

- It will display all the booking place by the student, and they can view its details and then accept it if they want to.



Booking Status Page:

- The page will display the information of the customer for the trip.
- **Three** green buttons to update the status of the driver to the customer:
    1. On the way to pick up: The driver is on the way to the pickup location.
    2. In transit to destination: The customer is currently in the car to the destination.
    3. Arrived at the destination: The driver already drops off the customer.
- The cancel button will allow the driver to cancel the job, but it is available only before the [On the way to pick up] button is pressed. If they cancelled it 1 hour before the time booked, the driver will be fined.

3. Data Modelling

3.1 Normalization of Entity Relationship Diagram (ERD).

Stud_Name	Stud_ID	Stud_IC	Stud_Gender	Stud_PhoneNo	Stud_College
Stud_Part	Driv_Name	Driv_IC	Driv_License	Driv_PhoneNo	Driv_Email
Car_RegNo	Car_Model	Car_Colour	Booking_ID	Booking_Time	Booking_Pickup
Booking_Drop	Booking_Price	Driv_Rate			

1st Normalization

Full Dependencies:
UiTM Ride-Hailing (Stud_Name, Stud_ID, Stud_IC, Stud_Gender, Stud_PhoneNo, Stud_College, Stud_Part, Driv_ID, Driv_Pass,_Driv_IC, Driv_Name, Driv_License, Driv_PhoneNo, Driv_Email, Car_RegNo, Car_Model, Car_Colour, Booking_ID, Booking_Time, Booking_Pickup, Booking_Drop, Booking_Price, Driv_Rate)

Partial Dependencies:
Stud_ID -> Stud_Name, Stud_IC, Stud_Gender, Stud_PhoneNo, Stud_College, Stud_Part

Driv_ID -> Driv_Pass,_Driv_IC, Driv_Name, Driv_License, Driv_PhoneNo, Driv_Email, Driv_Rate, Car_RegNo, Car_Model, Car_Colour

Booking_ID -> Booking_Time, Booking_Pickup, Booking_Drop, Booking_Price

Transitive Dependencies:
Car_RegNo -> Car_Model, Car_Colour

2nd Normalization

STUDENT (Stud_ID, Stud_Name, Stud_IC, Stud_Gender, Stud_PhoneNo, Stud_College, Stud_Part)

DRIVER (Driv_ID, Driv_Pass,_Driv_IC, Driv_Name, Driv_License, Driv_PhoneNo, Driv_Email, Driv_Rate, Car_RegNo, Car_Model, Car_Colour)

BOOK (Booking_ID, Booking_Time, Booking_Pickup, Booking_Drop, Booking_Price, Stud_ID*, Driv_ID*)

RATE (Driv_ID*, Stud_ID*, Driv_Rate)

3rd Normalization

STUDENT (Stud_ID, Stud_Name, Stud_IC, Stud_Gender, Stud_PhoneNo, Stud_College, Stud_Part)

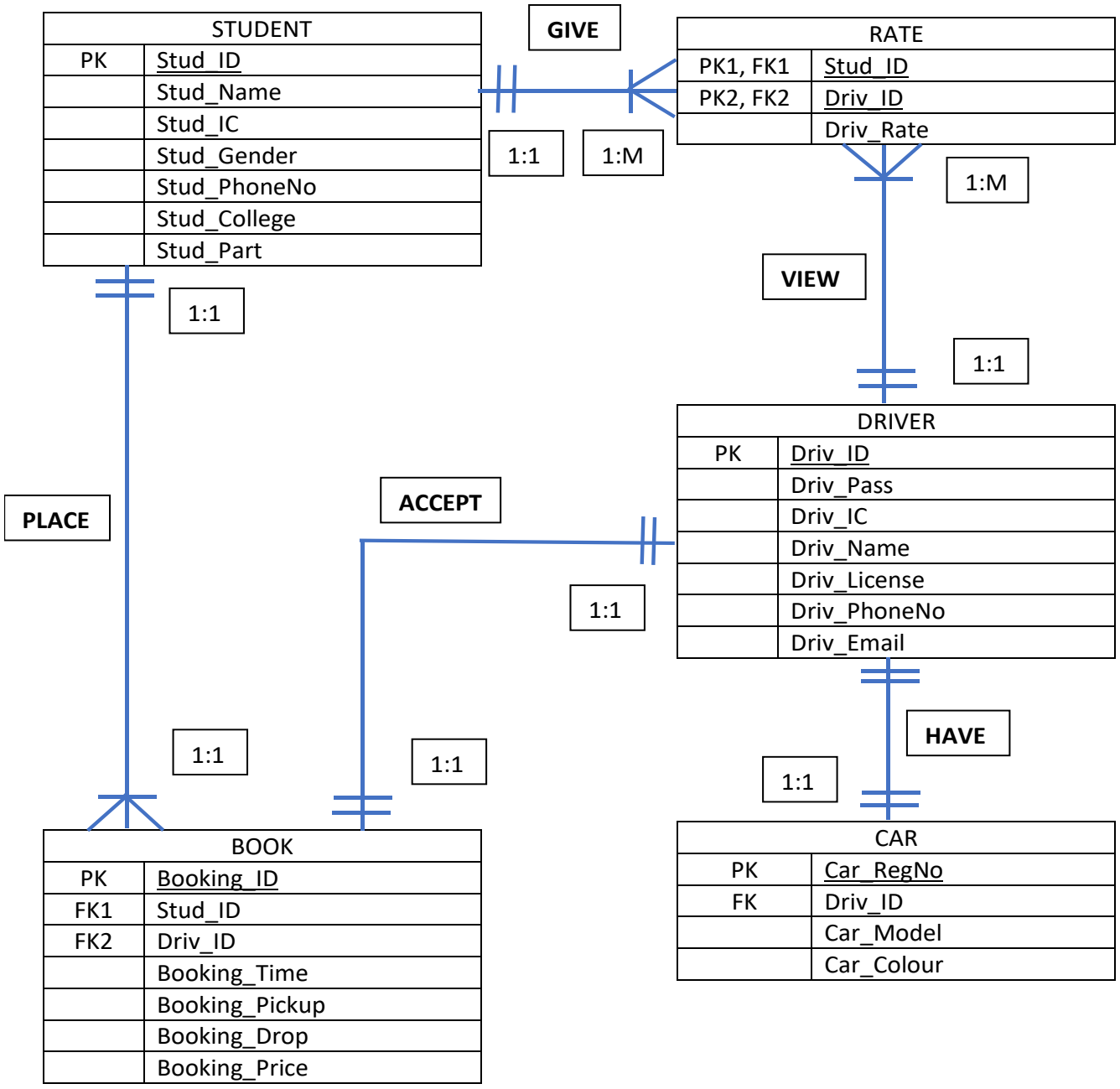
DRIVER (Driv_ID, Driv_Pass,_Driv_IC, Driv_Name, Driv_License, Driv_PhoneNo, Driv_Email, Driv_Rate, Car_RegNo*)

BOOK (Booking_ID, Booking_Time, Booking_Pickup, Booking_Drop, Booking_Price, Stud_ID*, Driv_ID*)

RATE (Driv_ID*, Stud_ID*, Driv_Rate)

CAR (Car_RegNo, Car_Model, Car_Colour)

3.2 Entity Relationship Diagram + Narrative



3.3 Data Dictionary

TABLE NAME	ATTRIBUTE NAME	CONTENTS	DATA TYPE	REQUIRED	PK/FK	FK REFER TABLE
STUDENT	Stud_ID	Matrix's No	INT(10)	YES	PK	
	Stud_Name	Student's Name	VARCHAR(30)	YES		
	Stud_IC	Student's IC No	VARCHAR(12)	YES		
	Stud_Gender	Student's Gender	VARCHAR(10)			
	Stud_PhoneNo	Phone Number	VARCHAR(12)			
	Stud_College	College's Name	VARCHAR(20)			
	Stud_Part	Part	INT(2)			
DRIVER	Driv_ID	Driver ID	INT(10)	YES	PK	
	Driv_Pass	Account Password	VARCHAR(20)	YES		
	Driv_IC	Driver's IC	VARCHAR(12)	YES		
	Driv_Name	Driver's Name	VARCHAR(30)	YES		
	Driv_License	License No	INT(20)	YES		
	Driv_PhoneNo	Phone No	INT(12)			
	Driv_Email	Driver's Email	VARCHAR(20)			
BOOK	Booking_ID	Booking ID	INT(10)	YES	PK	
	Booking_Time	Pickup Time	VARCHAR(20)			
	Booking_Pickup	Pickup Place	VARCHAR(20)			
	Booking_Drop	Drop off Place	VARCHAR(20)			
	Booking_Price	Trip's Rate	INT(2)			
CAR	Car_RegNo	Car Registration No	VARCHAR(10)	YES	PK	
	Car_Model	Car's Model	VARCHAR(10)			
	Car_Colour	Car's Colour	VARCHAR(10)			
RATE	Stud_ID	Matrix's No	INT(10)		PK/FK	STUDENT
	Driv_ID	Driver ID	INT(10)		PK/FK	DRIVER
	Driv_Rate	Driver's Service Rate	INT(10)			

4. System Specification

4.1 Module/Function + narrative

DRIVER	STUDENT/USER
1) Registration 1.1 Name 1.2 Driver ID 1.3 Password 1.4 Picture 1.5 Gender 1.6 IC Number 1.7 Phone Number 1.8 License Number 1.9 Car Registration Number 1.10 Car Type 1.11 Car Color 1.12 E-mail **2) Login and logout** 2.1 User ID 2.2 Password **3) View** 3.1 Fine details 3.2 Top 3 drivers with the highest rating 3.3 Rating received from past trips 3.4 Booking details such as date, time, pickup place and drop-off place. **4) Update** 4.1 Update the booking status either "On the way to pick up", "In transit to destination or "Arrived at destination" to the user. **5) Search** 5.1 Bookings placed by the students.	**1) Registration** 1.1. Name 1.2. Matrix number 1.3. Gender 1.4. IC Number 1.5. Phone Number 1.6. Collage address 1.7. E-mail 1.8. Semester **2) Login and logout** 2.1 Matric Number 2.2 Password/IC number **3) View** 3.1 Account's information 3.2 Fine details that they get due to cancel trip that has been accepted by a driver on the last-minute. 3.3 Past trip and rating given to drivers. 3.4 Current booking status either "Searching for a driver", "A driver has accepted your booking", "Driver on the way to pick up", "In transit to destination or "Arrived at destination". 3.5 Driver's details such as their name, picture, car plate number and car model. **4) Update** 4.1 Change account information **5) Search** 5.1 Drivers that are available to bring them to their desired destination.

6) Add 6.1 Accept a booking placed by the students to add it into their current job to finish. Driver can only accept 1 booking at a time. They cannot accept another job until they complete it. **7) Delete** 7.1 Cancel a booking that the driver has already accepted before.	**6) Add** 6.1 Give rating and feedback to the driver based on the driver's performance and service. 6.2 Place a booking by providing details such as date, time, pickup place and drop-off place. **7) Delete** 7.1 Cancel a booking that the student has already placed in the system.

Registration is one of primary module in any data management system. UiTM Ride-Hailing System start with registration. The driver and the student must register into this system. In the registration, they must fill in their personal's details. For the driver, they must send an email to the administrator and state their name, picture, gender, phone number, IC number, license number, car registration number, car type, car color and e-mail. For the student, they must fill in their name, matrix number, IC number, gender, phone number, college address and their semesters. After the registration, the driver will have a unique ID and the student will use their matrix number.

Booking can be made after login and the user can view bookings currently placed by other students. The user can also place a booking to their destination. While the driver can view details of all the bookings placed and then decide which one they want to accept the job.

The student will get a notification if the driver accepts their requests while the drivers will get a notification when there are new bookings placed. User can also give their rating based on the quality of service provided by the driver.

The student can cancel their booking placed. If they cancelled it 1 hour before the time booked while the status "A driver has accepted your booking" or "Driver on the way to pick up", the passenger will be fined. The cancel function will also allow the driver to cancel the job, but it is available only before the "On the way to pick up" button is pressed. If they cancelled it 1 hour before the time booked, the driver will also be fined.

4.2 Purpose of Module / Function

4.2.1 Lists of Input Data

- **Login/Authenticated**

This interface will consist of two compulsory fields, "Login ID / Username" and "Password". There will be option for "New Registration" which will redirect to registration page and "Forgot Password" option in case the user forgot the password. If the login ID and the password entered is correct, the main user interface opens but if it is incorrect, an error message will be displayed.

- **Registration/new form.**

The user will enter his personal details like Name, Username, Password, Gender, E-mail and Phone Number. User will be warned about any mistakes when they fill in the registration or any other constrains such as password is not strong enough. Once the "Register Button" clicked, the server will check if the username is already taken and it will alert the user. If the process of registration is done right, a new account will be created in the database.

- **Add new records/retrieve records from other systems**

If users want to change their personal information, they can log in to their account in the homepage. Then on the student account's main page, they can click the update button to update their personal information such as changing their phone number. The system can also retrieve records from other systems such as checking their matrix number from UiTM database.

- **User can add booking details and give feedbacks.**

To place a booking for a trip, the user needs to fill in these details:

1. Date: Date of the trip.
2. Time: Pickup time.
3. Pickup Place: Location of pickup.
4. Drop off place: Location of drop off.

They can also give ratings and feedback regarding the driver's service after the trip is completed.

- **Input from driver to accept and update the status of the trip to the students.**

Driver can accept a booking placed by the students to add it into their current job to finish. Driver can only accept 1 booking at a time. They cannot accept another job until they complete it. After they accepted it, drivers need to click 3 buttons to alert the students whether the driver is:

1. On the way to pick up: The driver is on the way to the pickup location.
2. In transit to destination: The customer is currently in the car to the destination.
3. Arrived at the destination: The driver already drops off the customer.

4.2.2 Processes involved

Registration

Registration is one of the main modules in any data management system. UiTM Ride-Hailing System starts with a registration personal detail. Students can register directly into the system but a driver cannot register directly, they must email their application to the system administrator and if their application is approved, the system administrator will registered an account for them.

Login and Logout

The student will login using their matrix number as a username and IC number as their password. The driver will login using a unique ID as a username given to each driver by the system administrator and a password that they set during their registration. The user can logout from the system if they want. They just need to click "Logout" button in the main page if they no longer wish to use the system.

Add

The student can add a booking if they want to go to a particular place. A driver can accept a booking placed by the student and add it into their current job to be completed. A student can place many bookings at a time, but a driver can only accept 1 trip at a time and must complete it before they can accept another trip. Students can also give feedback on their trip.

Viewing

There are a lot of viewing process involved in this system as explained in the 4.1 above. For example, driver can view the booking details such as date, time, pickup place and drop-off place before deciding to take the job or not. Another example is student can view the driver's details such as their name, picture, car plate number, car model and the booking status.

Search

Students search for a driver that are available to bring them to their desired destination while drivers can search for booking placed by students to view the booking details and accept the job.

Update

Students can update their account information such as changing their college while driver must update the booking status of their current trip to the students.

Delete

Students can cancel a booking that they have already placed while driver can cancel a booking job that the driver has already accepted before. Both will be fined if they cancel 1 hour before the time booked.

4.2.3 Lists of Output Data

DRIVER:

View

1. Fine details

2. Top 3 drivers with the highest rating

3. Rating received from past trips

4. Booking details such as date, time, pickup place and drop-off place.

Search

1. The driver can search to accept a booking placed by the student.

STUDENT:

View

1. Account's information

2. Fine details that they get due to cancel trip that has been accepted by a driver on the last-minute.

3. Past trip and rating given to drivers.

4. Current booking status either "Searching for a driver", "A driver has accepted your booking", "Driver on the way to pick up", "In transit to destination or "Arrived at destination".

5. Driver's details such as their name, picture, car plate number and car model.

Search

1. Search for a driver that is available to pick them up to the desired destination.

4.3 User Characteristics

1. Administrator of the system. The programmers and other people that develop this system will have access to this system as an administrator. They can see other details that is hidden from the users such as the daily report of how many people use the system in that particular day and other functions such as to check and ban account that provide false information. They are also the only people that can register a driver into the system when the driver's details are checked and proven to be a qualified driver

2. All students in UiTM Segamat, Johor can use this system to book a driver. As long as they still study here and have a valid matric number, they can to use it until they graduate. They are the most

3. For those who want to be a driver, they must register first by providing many details such as their passport photo, driving license and car registration number. Drivers that have an expired driving license cannot use this system until they renew it. Besides, drivers who are identified to cause trouble such as being rude/racist to customers will be banned forever from using our system.

4.4 Safety and Security

The server of the UiTM Ride-Hailing System will have its own safety and security measure to avoid and prevent the possibility of data loss, damage or harm. We use server provided by HostGator.com which is a very known company that provide fast, reliable and highly secured server.

To use our system, students are required to log into their account which has their own password to protect their account from being used by other people easily. If they think their password is known by someone else, they can immediately change their password using the update function. Besides, if they do not remember their password, they can click the "Forgot my password" to reset their password through their e-mail.

If someone want to be a driver, they must register by emailing to the system administrator and provide their details such as IC number, their passport photo, picture of their driving license, car registration number. These details will need to be verified by the administrator of this system before they are eligible to be a driver. For example, if their driving license is already expired, their application will be rejected, and they must renew their license first. This is to ensure the safety of the users by screening the drivers first and not just simply letting everyone to be a driver in this system.

Lastly, we will install SSL (Secure Socket Layer) on our server which is the standard security technology for establishing an encrypted link between a web server and a browser. This link ensures that all data passed between the web server and browsers remain private and integral. SSL is an industry standard and is used by millions of websites in the protection of their online transactions with their customers. Thus, our website will be highly secured and cannot be easily hacked by irresponsible hackers. The users will feel safe when using our system.