Use Cases

for

Team 5

CarMa

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1. Document Information

1.1. General Information

- Any field encased in brackets or otherwise assumed to be a placeholder should be filled in appropriately.
- Use cases are numbered in a distinct sequential order across the user classes. These identifying numbers are used in each use case.
- Not all rows are required in each use case.
- Page breaks are required between each use case.

1.2. Explanation of Fields

Use Case ID:	Taken from list of use cases.		
Use Case Name:	Taken from list of use cases.		
Created By:	[username]	Last Updated By:	[username, null allowed]
Date Created:	[date]	Date Last Updated:	[date, null allowed]
Actors:	Comma delimited list of user classes.		
Description:	Brief description/high level overview of the use case and its purpose.		
Preconditions:	Outside of this use case, what conditions need to be met. (e.g. User is logged in.)		
Postconditions:	What is the state after the flow has completed? (See examples.)		

Normal Flow:	Contains the normal flow of distinct actions taken during the use case. See examples for formatting. Format should match.
Alternative Flows:	Deviations that are regular in nature and allow the user to proceed down a different path. See examples for formatting and numbering. Format should match. Not always required; put “None” if not applicable to the use case.
Exceptions:	Deviations that are the result of errors in the flow. See examples for formatting and numbering. Format should match. Not always required; put “None” if not applicable to the use case.
Priority:	Taken from prioritized feature list.
Frequency of Use:	How often does this use case occur? See examples.
Special Requirements:	Either “None” or numerated list of special requirements. See examples. Not always required.
Assumptions:	Either “None” or numerated list of assumptions. See examples. Not always required. (Frequent examples include “User is logged in.” or “User is designated as an administrator.”)
Notes and Issues:	Either “None” or a numerated list of notes and issues. See examples.

2. Prioritized Feature List

The various user classes identified the following use cases and primary actors for the car sharing app CarMa:

User class	Use Case
All	1. Login 2. Sign up 3. Reset password
User	4. Put in credit card information 5. Put in the driver's license information 6. Use a map to locate a vehicle 7. Choose the type of vehicle 8. Give a time frame for pick up and drop off 9. Reserve vehicle 10. Summary of reservation 11. Modify reservation 12. Take photo of the car
Administration	13. Verify license 14. Give refunds 15. Modify vehicle options and information 16. Suspend users 17. Generate reports 18. Generate payment request 19. Infrastructure maintenance

3. Use Cases

3.1. Use Case 1

Use Case ID:	1		
Use Case Name:	Login		
Created By:	emioneal	Last Updated By:	emioneal
Date Created:	November 3, 2019	Date Last Updated:	November 5, 2019
Actors:	User		
Description:	The user will be asked to enter their already created information in order to enter their account, this allows the user to proceed with their action of requesting a car.		
Preconditions:	1. The user has previously made an account 2. The user is not already logged into the system		
Postconditions:	1. The user will then be logged in 2. The user will be able to see the features that are offered 3. The user can request a vehicle		

Normal Flow:	**1.0 Login to the system** 1. The user opens the application 2. The user is prompted to put in their user name 3. The user is prompted to enter their password 4. The system will check if this information is valid
Alternative Flows:	**1.1 Incorrect login information** 1. User page will refresh with an error message 2. Return to step 2 **1.2 User does not have an account** 1. The user will push the "create an account" 2. The user will enter information 3. Return to step 2
Exceptions:	**1.0.E.1 User enters the wrong information** 1. The system will notify the user of the error 2. The user will be able to try again **1.0.E.2 User is already logged in** 1. User will see their account **1.0.E.1 User does not have an account** 1. User will tap "create an account" 2. User will start use case 2
Priority:	High
Frequency of Use:	When the user is not logged in. The user is never automatically signed out
Special Requirements:	None
Assumptions:	1. The user already has an account 2. The user knows their information
Notes and Issues:	None

3.2. Use Case 2

Use Case ID:	2		
Use Case Name:	Sign Up/register		
Created By:	emioneal	Last Updated By:	emioneal
Date Created:	November 5, 2019	Date Last Updated:	November 5, 2019
Actors:	User		
Description:	The user will create an account with CarMa. The user will enter a series of information in exchange for a profile.		
Preconditions:	1. The User has the CarMa app on their device 2. The user does not already have an account		
Postconditions:	User is registered and has an account		
Normal Flow:	**2.0 Create an account** 1. User opens app 2. User will have the option to login or create an account 3. User taps create an account 4. User is required to enter the username 5. System checks if the username is taken 6. User is required to enter a password 7. User has to retype password 8. User is required to enter an email 9. System checks if the email is taken		

	10. User is required to enter a birthday 11. User checks if the user is at least 18 12. User picks a security question 13. User answers the question 14. The user taps the box to agree to terms 15. The user taps create 16. The system has saved the users information 17. The user is registered
Alternative Flows:	**2.1 Username is taken** 1. User is prompted to enter a different username 2. User continues process **2.2 email is taken** 1. User is prompted to enter a different email 2. User continues process **2.3 User stops the process** 1. User decides to not create an account 2. User taps "cancel" 3. User is taken back to main page
Exceptions:	**2.0.E.1 User is not eligible due to age** If user is not at least 18 to sign a contract then they will not be able to create an account **2.0.E.2 User is already registered** 1. System will notify user that account already exists 2. The user ends registration and logs in
Priority:	High
Frequency of Use:	Once per user and administration
Special Requirements:	1. User must enter all fields of the registration 2. User must have a unique email and username 3. User must tap the box to agree to term before signing up

Assumptions:	1. The user has the app 2. The user does not already have an account
Notes and Issues:	1. Users must be 18 years old or older to use the app because they have to agree to our terms which are a contract. Also, the user must be old enough to drive. 2. One issue is that a user could lie about their age and create an account

3.3. Use Case 3

Use Case ID:	3		
Use Case Name:	Reset the password		
Created By:	emioneal	Last Updated By:	emioneal
Date Created:	November 5, 2019	Date Last Updated:	November 5, 2019
Actors:	User		
Description:	If the user already has an account and needs to login but has forgotten their password there is an option to retrieve or change a password.		
Preconditions:	1. User already has an account 2. User has forgotten password		
Postconditions:	1. User has changed password 2. User has access to account		
Normal Flow:	**3.0 Reset Password** 1. User opens app 2. User enters username 3. User enters password 4. User gets an error about the wrong password 5. User taps "forgot password?" 6. User is prompted to enter email 7. User enters email		

	8. User goes to their email and opens the email from CarMa 9. User taps the link in the email 10. The link leads to a page 11. User enters a new password 12. User enters the new password again 13. System updates password 14. User goes to the app and enters the new password 15. User has access to account
Alternative Flows:	**3.1 User forgot email** 1. User taps "forgot password?" 2. Prompted to enter email 3. User forgot email used 4. User taps "security question" 5. User enters username 6. User is prompted with their security question 7. User answers the question 8. User can resume to account **3.2 User does not have an account** 1. User is prompted to log in 2. User enters username and password 3. Error message that the account does not exist 4. User realizes they do not have an account 5. User then taps "create an account"
Exceptions:	**3.0.E.1 User has too many attempts** 1. User enters the wrong password 4 times 2. Account is frozen **3.0.E.2 User does not open email within a certain time** 1. User requests an email to be sent 2. User has 10 minutes to open the email and use the link 3. Link expires after 10 minutes
Priority:	High

Frequency of Use:	Whenever user forgets their password, could be more than once per user but also could happen 0 times
Special Requirements:	1. The security question is based on username since each one is unique 2. User must have an account in order to use this
Assumptions:	1. User already has an account 2. Only the user knows the answer to the security question
Notes and Issues:	1. An issue could be that the wrong person gets into the account

3.4. Use Case 4

Use Case ID:	4		
Use Case Name:	Enter credit card information		
Created By:	emioneal	Last Updated By:	emioneal
Date Created:	November 5, 2019	Date Last Updated:	November 5, 2019
Actors:	User		
Description:	In order for the user to rent a vehicle, they must pay for it. This will be done by the system storing the user's card information. There has to be a system to take payments for the service.		
Preconditions:	1. User has an account 2. User is logged in 3. User has a credit/debit card		
Postconditions:	User will be able to use the service because they provided a payment		
Normal Flow:	**4.0 Enter credit card information** 1. User opens app 2. User goes to settings 3. User goes to payment options 4. User taps "add payment" 5. User enters the name on the card 6. User enters the card numbers 7. User enters the expiration date 8. User enters the CVC 9. User taps "save card" 10. User taps "confirm" 11. System authorizes payment		
Alternative Flows:	**4.1 User pays when requesting vehicle** 1. User opens app 2. User request vehicle		

	3. A message pops up to add payment before it can continue 4. Return to step 4 5. User receives verification for service
Exceptions:	**4.0.E.1 User has insufficient funds** 1. The user requests a vehicle 2. User does not have payment saved 3. User is prompted to enter payment 4. The user enters payment method 5. System processes 6. User does not have the amount in their account 7. System denies user 8. User is prompted to enter a new method **4.0.E.2 User cannot provide CVC** 1. User request ride 2. Payment is saved a. User has payment saved 3. System requests user to enter CVC 4. User does not know CVC 5. System denies payment method 6. System prompts the user to enter a new method **4.0.E.3 User cancels request** 1. User does not want the vehicle and the time requested 2. User cancels transaction
Priority:	High
Frequency of Use:	At least once per user but could be as frequent as every time the user uses the service
Special Requirements:	1. User can choose to enter payment every time or save it 2. User must confirm CVC before every use
Assumptions:	1. User has an account 2. User is logged in
Notes and Issues:	1. User can have more than one payment type 2. Will be using PayPal's API

3.5. Use Case 5

Use Case ID:	5		
Use Case Name:	Enter drivers licence information		
Created By:	emioneal	Last Updated By:	emioneal
Date Created:	November 5, 2019	Date Last Updated:	November 5, 2019
Actors:	User		
Description:	Since this is a service that provides a vehicle the user must enter their driver's licence in order to use and rent the vehicle.		
Preconditions:	1. User has an account 2. User is logged in 3. User has a valid driver's licence		
Postconditions:	User will be eligible to use service and licence information will be confirmed		
Normal Flow:	**5.0 Enter driver's licence information** 1. User opens app 2. User goes to settings 3. User taps "licence information" 4. User taps "add information" 5. User enters name on licence 6. User enters licence name 7. User enters address on licence 8. User will take a photo of licence 9. User will tap "confirm information" 10. System will verify licence and driving record 11. User will be notified if they are approved		
Alternative Flows:	None		

Exceptions:	**5.0.E.1 Users licence becomes invalid** 1. User tries to reserve vehicle 2. Their licence becomes invalid 3. System runs information 4. System will notify the user that their account has been suspended **5.0.E.2 Users allows another person to use account** 1. User allows someone besides themselves to use their account and information 2. If CarMa is alerted of this user will be notified that their account is suspended
Priority:	High
Frequency of Use:	Each person is required to enter one licence number
Special Requirements:	1. One licence per account 2. No learners permits 3. No major violations on record
Assumptions:	1. The licence will match the driver every time
Notes and Issues:	1. Issue: as of now we have no way to confirm this 2. Issue: another person without a licence could use the user's account

3.6. Use Case 6

Use Case ID:	6		
Use Case Name:	Use a map to locate a vehicle		
Created By:	gprabowo	Last Updated By:	gprabowo
Date Created:	November 6, 2019	Date Last Updated:	November 6, 2019
Actors:	User		
Description:	The user will use the map to locate themselves and look for a vehicle nearest to them.		
Preconditions:	1. User has an account 2. User is logged in 3. User has their location on		
Postconditions:	User will be able to locate the nearest vehicle to them.		
Normal Flow:	**6.0 Use a map to locate a vehicle** 1. User logs in 2. Map is on main screen 3. User taps the map to locate where they are 4. Zoom in to find the nearest vehicle in the area		
Alternative Flows:	None		
Exceptions:	**6.0.E.1 Unable to locate their current location** 1. User has difficulty locating their current location 2. Make sure the internet is working 3. Quit the application and open it up again **6.0.E.2 Users location is not on** 1. User does not have the location on in their phone settings		

	2. User turns on the location on their phone
Priority:	High
Frequency of Use:	Every time a user is looking to rent/book a car, they need to use the maps in order to see which location nearest to them have a car available for them to rent/book
Special Requirements:	1. Location must be on in the user's phone in order for the maps to work
Assumptions:	1. There will be no problem locating the cars available on the maps
Notes and Issues:	3. Issue: as of right now, we still do not know how to let the users see (from the maps) if there are cars available at the location

3.7. Use Case 7

Use Case ID:	7		
Use Case Name:	Choose the type of vehicle		
Created By:	gprabowo	Last Updated By:	gprabowo
Date Created:	November 6, 2019	Date Last Updated:	November 6, 2019
Actors:	User		
Description:	After locating the nearest location, users are able to choose the type of vehicles that they are looking to book		
Preconditions:	4. User has an account 5. User is logged in 6. User has their location on		
Postconditions:	User will be able to locate the nearest vehicle to them.		
Normal Flow:	**7.0 Use a map to locate a vehicle** 5. User logs in 6. Map is on main screen 7. User taps the map to locate where they are 8. Zoom in to find the nearest vehicle in the area		
Alternative Flows:	None		
Exceptions:	**7.0.E.1 Unable to locate their current location** 4. User has difficulty locating their current location 5. Make sure the internet is working 6. Quit the application and open it up again **7.0.E.2 Users location is not on**		

	3. User does not have the location on in their phone settings 4. User turns on the location on their phone
Priority:	High
Frequency of Use:	Every time a user is looking to rent/book a car, they need to use the maps in order to see which location nearest to them have a car available for them to rent/book
Special Requirements:	2. Location must be on in the user's phone in order for the maps to work
Assumptions:	2. There will be no problem in choosing the vehicle.
Notes and Issues:	4. Issue: as of right now, we still do not know what type of vehicles are available

3.8. Use Case 8

Use Case ID:	8		
Use Case Name:	Give a time frame for pick-up and drop-off		
Created By:	gprabowo	Last Updated By:	gprabowo
Date Created:	November 6, 2019	Date Last Updated:	November 6, 2019
Actors:	User		
Description:	After choosing the vehicle, users are able to pick up the car during the time that is available		
Preconditions:	1. users logged in 2. users picked the location for where they are going to pick up the car		
Postconditions:	User will be able to set pick-up and drop-off time		
Normal Flow:	**8.0 Set the time to pick up the vehicle** 1. users log in 2. go to maps and pick the location 3. set the time to pick-up and drop-off the car		
Alternative Flows:	None		
Exceptions:	**8.0.E.1 Unable to set the pick up time** 1. users are not able to set the pick up time 2. one of the reasons could be someone reserve the car ahead of time 3. pick another car that is available in the nearest area.		
Priority:	Low		

Frequency of Use:	Every time a user is looking to rent/book a car, they need to pick the car that they are planning to book/reserve.
Special Requirements:	1. make sure to book/reserve the car quickly so someone won't reserve the car first and drop-off
Assumptions:	3. There will be no problem setting the pick-up and drop-off time
Notes and Issues:	5. Issue: user might not return the car on time when the other user want to pick up the car

3.9. Use Case 9

Use Case ID:	9		
Use Case Name:	Reserve a vehicle		
Created By:	gprabowo	Last Updated By:	gprabowo
Date Created:	November 6, 2019	Date Last Updated:	November 6, 2019
Actors:	User		
Description:	After setting up the pick up time, users are able to reserve the vehicle for them to pick up		
Preconditions:	1. users logged in 2. users picked the location for where they are going to pick-up and drop-off the car 3. users reserve the car		
Postconditions:	User will be able to reserve the vehicle that they have chosen		
Normal Flow:	**9.0 Set the time to pick up the vehicle** 4. users log in 5. go to maps and pick the location 6. set the time to pick-up and drop-off the car 7. user confirm the total price 8. user reserve the car		
Alternative Flows:	None		
Exceptions:	**9.0.E.1 Unable to reserve the vehicle** 1. users are not able to reserve the vehicle 2. another users may have reserved it a few minutes quicker 3. users will need to choose another vehicle or in a different location		

	4. User’s bank transaction/payment gets declined
Priority:	High
Frequency of Use:	Every time a user is looking to rent/book a car, they are required to reserve the car ahead of time.
Special Requirements:	1. make sure that the vehicle that you reserve is the vehicle that you originally wanted
Assumptions:	4. There will be no problem reserving the vehicle.
Notes and Issues:	6. Issue: user might not be able to reserve the car as someone else reserved it ahead of time.

3.10. Use Case 10

Use Case ID:	10		
Use Case Name:	Summary of reservation		
Created By:	gprabowo	Last Updated By:	gprabowo
Date Created:	November 6, 2019	Date Last Updated:	November 6, 2019
Actors:	Admin		
Description:	After reserving the car, users are given the summary of reservation.		
Preconditions:	4. users logged in 5. users picked the location for where they are going to pick-up and drop-off the car 6. users reserve the car 7. reservation summary is given		
Postconditions:	User will be given the reservation summary of the vehicle that they reserved		
Normal Flow:	**10.0 Summary of reservation** 9. users log in 10. go to maps and pick the location 11. set the time to pick-up and drop-off the car 12. user reserve the vehicle 13. summary of reservation is given to the users		
Alternative Flows:	None		
Exceptions:	**10.0.E.1 Summary of reservation is wrong** 1. the reservation summary is different from the one that the user reserved		
Priority:	Low		

Frequency of Use:	Every time a user reserve a vehicle, they will be given the reservation summary
Special Requirements:	2. make sure that the summary indicated the correct information for your reservation
Assumptions:	5. There will be no problem with the summary.
Notes and Issues:	7. Issue: the reservation summary might be different from what the user originally reserved

3.11. Use Case 11

Use Case ID:	11		
Use Case Name:	Modify reservation		
Created By:	tianhuan	Last Updated By:	tianhuan
Date Created:	November 9, 2019	Date Last Updated:	November 9, 2019
Actors:	User		
Description:	Users make choices about their reservation. Either changing contents in the reservation, or cancelling a reservation of vehicle.		
Preconditions:	1. User has an account 2. User is logged in 3. User has a valid driver's licence 4. User has placed a reservation		
Postconditions:	Reservation will update once user confirmed to change.		
Normal Flow:	**11.0 Modify reservation** 1. User already has a reservation 2. User click on button “modify reservation” 3. User reenters the information in reservation 4. User confirms changes applying to the reservation		
Alternative Flows:	None		
Exceptions:	**11.0.E.1 User reservation failed** 1. User modified reservation 2. The current type of vehicle/time is not available 3. System replies to users “Change failed” **11.0.E.2 Users input wrong information**		

	1. User modified reservation again 2. User confirmed the new request for reservation
Priority:	High
Frequency of Use:	Every time when user is changing location/ car model/ reservation time
Special Requirements:	1. User must input all information which is in the required areas from the form
Assumptions:	1. Every time when users are trying to make changes to their reservation, they are going to modify their reservation.
Notes and Issues:	1. We can accept the same information while modifying the reservation.

3.12. Use Case 12

Use Case ID:	12		
Use Case Name:	Take photos of the car before and after operating the vehicle		
Created By:	tianhuan	Last Updated By:	tianhuan
Date Created:	November 9, 2019	Date Last Updated:	November 9, 2019
Actors:	User		
Description:	Users take photos of the car in front, left, right and back before unlocking and after locking the car to record the car's condition		
Preconditions:	1. User logged in account 2. User made a reservation 3. User arrived at the car pool 4. User clicks “unlock car button” in the application		
Postconditions:	1. Users will then be required to take photos of current car condition 2. Users operate the car 3. User lock the car after operation 4. Users take photos again 5. User successfully finished the trip		
Normal Flow:	**12.0 Take photos of the car before and after operating the vehicle** 1. Users logged into their account 2. Users make a reservation 3. Users arrived at the car pool 4. Users unlock the car 5. Users take photos of the current car’s condition 6. Users start their trip 7. Users lock the car		

	8. Users take photos of the current car's condition 9. Users end their trip
Alternative Flows:	None
Exceptions:	**11.0.E.1 User upload photo failed** 1. User takes photos of the car's current condition 2. User upload photo failed, and the system returns "failed to upload photo" 3. User takes photos of the car's current condition again **11.0.E.2 Users take photos of other objects instead of the car they are using** 1. User takes photos of other objects 2. System returns "Wrong car/value in the photo" 3. User takes photos of the car's current condition again
Priority:	High
Frequency of Use:	Every time when users are unlocking / locking the car before and after their trip
Special Requirements:	None
Assumptions:	1. Users phone has a camera
Notes and Issues:	None

3.13. Use Case 13

Use Case ID:	13		
Use Case Name:	Verify license		
Created By:	tianhuan	Last Updated By:	tianhuan
Date Created:	November 9, 2019	Date Last Updated:	November 9, 2019
Actors:	System		
Description:	System verifies users’ license if they are available or out of date, and other information on the license in order to use and rent vehicles		
Preconditions:	1. Users upload their driver’s license 2. Users have valid driver’s license		
Postconditions:	User will be eligible to use service and license information will be confirmed		
Normal Flow:	**13.0 Verify license** 1. User uploads a photo of license 2. System process to verify the license 3. System notifies users whether if the license is confirmed		
Alternative Flows:	None		
Exceptions:	**13.0.E.1 Verify license failed because of the photo is unclear** 1. User upload a photo of the license 2. The photo is not clear 3. System replies to users “Upload photo again”		
Priority:	High		

Frequency of Use:	Once when user is registering in the app to make sure he is eligible to access vehicles and operate vehicles.
Special Requirements:	1. One license per account 2. No learners permits 3. No major violations on record
Assumptions:	1. The license will match the driver every time
Notes and Issues:	1. We have to have access to BMV to figure out information.

3.14. Use Case 14

Use Case ID:	14		
Use Case Name:	Give refunds		
Created By:	tianhuan	Last Updated By:	arifdian
Date Created:	November 9, 2019	Date Last Updated:	November 10, 2019
Actors:	System		
Description:	1. System take records of if users cancelled the trip and return refunds 2. User modified reservation and changes had applied to the trip		
Preconditions:	1. User logged in 2. User already has a trip on going 3. A. User cancels the trip B. User modified the reservation		
Postconditions:	User will end the trip / change the reservation and the refund will be processed		
Normal Flow:	**14.0 Give refunds** 1. User cancels a trip / changed the reservation 2. System will process the condition and deduct a percentage of the price and refund the rest to user 3. User's bank will be contacted and user will receive the refund within 24 hours		
Alternative Flows:	None		
Exceptions:	**14.0.E.1 User cancelled the trip before the due time** 1. User cancels the trip before the due time 2. No fees will be deducted		

	3. System return all refunds to user **14.0.E.2 User cancelled the trip after the due time** 1. User cancels the trip after the due time 2. Fees will be deducted from the refund according to how long the time has passed 3. System process the refund in 24 hours **14.0.E.3 User modified the reservation** 1. User modified the reservation 2. Trip price changed 3. Fees over the original price will be charged or refund fees if the new price is lower than the original price
Priority:	Medium
Frequency of Use:	Every time when user is cancelling a trip or changed to other types of vehicle
Special Requirements:	1. User must has credit card information
Assumptions:	1. Every time when users are trying to make changes to their reservation, the system will process the refund system
Notes and Issues:	None

3.15. Use Case 15

Use Case ID:	15		
Use Case Name:	Modify vehicle options and information		
Created By:	tianhuan	Last Updated By:	tianhuan
Date Created:	November 9, 2019	Date Last Updated:	November 9, 2019
Actors:	System/Operators		
Description:	Operators update vehicle options and information to make sure users can know the latest information		
Preconditions:	Operator updates every car options and information into the latest version		
Postconditions:	User can see the latest version of the options and they are allowed to choose the new options		
Normal Flow:	**15.0 Modify vehicle options and information** 1. Operator collect information of new vehicles and update them into database 2. Operatore access the application and update the information in the app 3. Publish the updates from the app.		
Alternative Flows:	None		
Exceptions:	None		
Priority:	High		
Frequency of Use:	Every time when new cars and information are released		
Special Requirements:	1. Operator must keep track of the information when a new vehicle is joining the options.		

Assumptions:	None
Notes and Issues:	1. Follow the latest information online and update information on time.

3.16. Use Case 16

Use Case ID:	16		
Use Case Name:	Suspend users		
Created By:	gprabowo	Last Updated By:	emioneal
Date Created:	November 9, 2019	Date Last Updated:	November 9, 2019
Actors:	System/Operators		
Description:	Operators are able to suspend users if they are not following the guidelines of CarMa		
Preconditions:	Operator should be able to see if the conditions are being met		
Postconditions:	Users won't be suspended if the guidelines are followed		
Normal Flow:	**16.0 Suspend users** 1. Operators are able to see which users are following the guidelines/instructions 2. if the user is not following the instructions, operators are able to suspend users		
Alternative Flows:	None		
Exceptions:	**16.0.E.1 case is reviewed** 1. User asks case to be reviewed 2. If operators find the suspension to be wrong the account will be reinstated a. If the review is found to be right the account will still be suspended		
Priority:	Low		
Frequency of Use:	Every time a user is not following the guidelines		

Special Requirements:	2. Operator must keep track of the users and data.
Assumptions:	None
Notes and Issues:	2. We have no idea if the user that booked the car is driving it, or if someone else is driving the car

3.17. Use Case 17

Use Case ID:	17		
Use Case Name:	Generate Reports		
Created By:	emioneal	Last Updated By:	arifdian
Date Created:	November 10, 2019	Date Last Updated:	November 10, 2019
Actors:	System/Operators		
Description:	The system will generate reports for the operators to understand what is working and what is not.		
Preconditions:	User will allow the system to collect data		
Postconditions:	Operators will have a report weekly or monthly about how many cars were rented out and which location, how long the trips were, the condition of the cars and etc.		
Normal Flow:	**17.0 Generate reports** 1. System will keep track of user location 2. System will keep track of user time 3. System will keep track of when vehicle is rented out (time-duration) 4. System will keep track of each location when vehicle is parked 5. System will keep track of the pictures that users upload 6. System will keep track of the time of day it is the busiest 7. System will keep track of how many users were on service at the time 8. System will keep track of how many vehicles were rented out for the month 9. System will gather the data and send to operators		

Alternative Flows:	**17.1 Operator wants a report before the end of the month** 1. Operator will go to settings 2. Operator will tap reports a. Operator will tap generate new report 3. New report will be emailed
Exceptions:	**17.0.E.1 system is down** 1. Operator will report the issue 2. Once system is back up, return to 17.1
Priority:	Low
Frequency of Use:	Every month or as operator needs one
Special Requirements:	1. Operator must keep track of the users and data.
Assumptions:	1. Users will allow their pictures that are uploaded to be saved 2. Car will have gps tracking device
Notes and Issues:	None

3.18. Use Case 18

Use Case ID:	18		
Use Case Name:	Generate payment request		
Created By:	emioneal	Last Updated By:	arifdian
Date Created:	November 10, 2019	Date Last Updated:	November 10, 2019
Actors:	System/Operators		
Description:	The system will generate a payment request for each transaction used on the app.		
Preconditions:	1. The user has picked a vehicle 2. The user has picked a location 3. The user has given a time frame		
Postconditions:	PayPal and operators will have received payment, user will be charged		
Normal Flow:	**18.0 Generate payment request** 1. System will grab the users ID 2. System will grab the time of transaction 3. System will inform user of vehicle details a. Name of vehicle b. System number 4. System will inform user of transaction a. Show subtotal amount b. Show tax c. Show full total d. Show insurance/additional fee if applies 5. System ask user to confirm total 6. User will confirm total and authorize payment (from case 9) 7. User's bank will authorize amount if the there is sufficient funds. 8. Money will be extracted from user's account 9. System will generate and save record		

Alternative Flows:	**18.1 User denies total** (from step 5) 1. User denies total 2. System asks the user to confirm that they deny it a. If user wants to continue then the order will continue b. If user wants to deny amount then the system will cancel order **18.2 User does not have the funds** (from step 6) 1. Bank does not authorize payment 2. User is asked to enter new method
Exceptions:	None
Priority:	High
Frequency of Use:	Every transaction
Special Requirements:	None
Assumptions:	1. We are using PayPal to integrate into the system’s backend
Notes and Issues:	None

3.19. Use Case 19

Use Case ID:	19		
Use Case Name:	Infrastructure maintenance		
Created By:	arifdian	Last Updated By:	arifdian
Date Created:	November 10, 2019	Date Last Updated:	November 10, 2019
Actors:	System/Operators		
Description:	Operators will monitor the condition of main infrastructure including vehicles, application and etc.		
Preconditions:	None		
Postconditions:	Infrastructures including vehicles and application are maintained by operator on time, check and record every condition happened on the vehicle		
Normal Flow:	**19.0 Infrastructure maintenance** 1. System and operator record vehicle condition at every time the vehicle is used 2. After a period, operator maintain vehicles and record details and time when vehicles are repaired / due for service 3. Maintain proper documentation such as license tag renewal and insurance update after each cycle of time 4. Application is included as an infrastructure, it should also be maintained as soon as there are new versions going to release		
Alternative Flows:	**19.1 Operator wants data from each maintenance history** 1. Operator go to system database		

	2. Operator fetch the data for each maintenance history 3. Operator update new data to the maintenance history
Exceptions:	None
Priority:	High
Frequency of Use:	Every update of application and maintenance of vehicles
Special Requirements:	None
Assumptions:	1. Operators are maintaining infrastructures every time on time to satisfy rules and regulations of operation.
Notes and Issues:	None