

Car Rental System for Triangle Philippines  
A Revised Software Requirement Specification  
presented to the  
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INTROSE

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## 1. Introduction

### 1.1. Overview

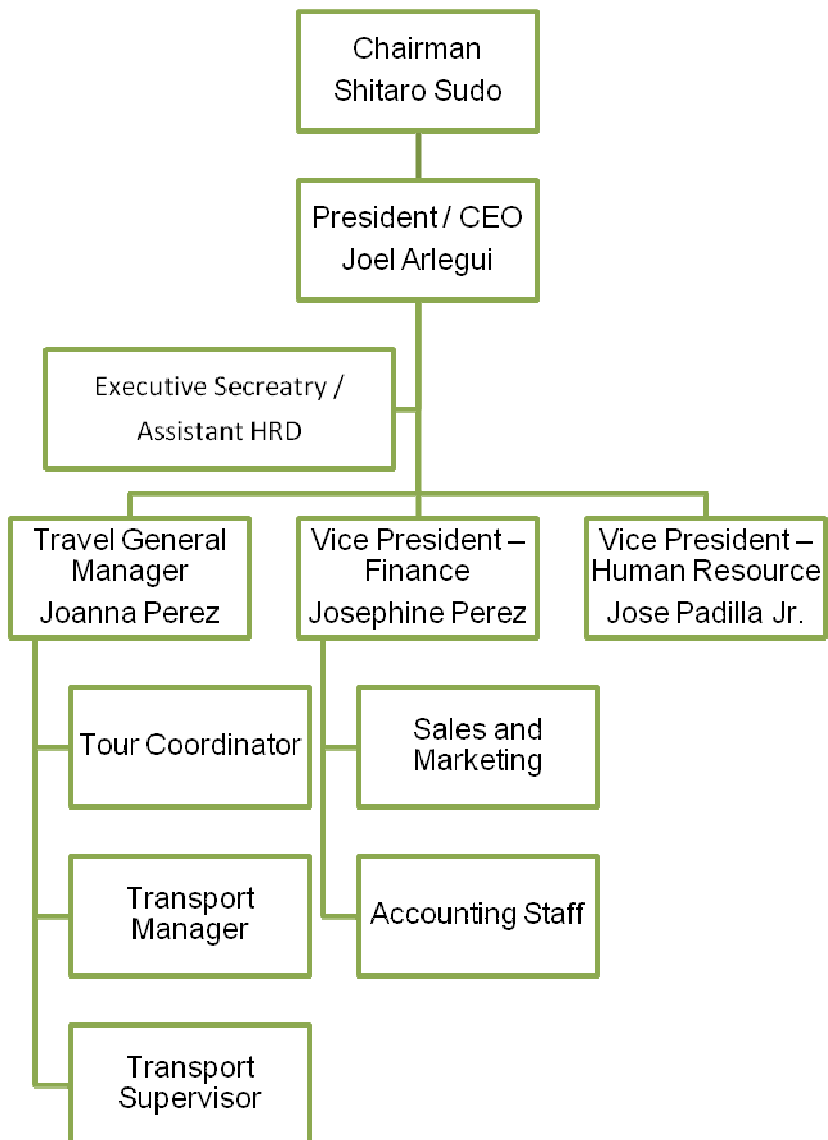
#### 1.1.1. Company Background

Triangle Philippines Travel and Transport Corporation, is a Japanese – Filipino partnership company engaged in International and Domestic Ticketing, Hotel Booking, Tour Packaging, Tour Guiding, Travel Documentation and Transport Services.

Triangle Philippines is a small inbound-outbound company that has played a role in the Philippine Travel and Transport Industry in less than a year, Triangle Philippines has become known in the Travel and Transport industry for its reliable services and quality tours in the Philippines.

Triangle Philippines has its own Satellite Transportation Division located at various places of interests; such as SM Mall Of Asia, Robinsons Place Manila, and Market! Market! They provide a wide range of transportation operating with fully air-conditioned vans, cars and Public Utility Vehicles. They also have added a new service feature which is the Airport Metered Taxi which caters the transportation needs of tourists to any part of Luzon. Airport Metered Taxis are designated in Pasay City and Clark, Pampanga. A Triangle Philippines branch can be located at Apelo Cruz cor. Rodriguez St., Malibay, Pasay City where it is managed by the Laarni and Joel Arlegui. Other operating branches of Triangle Philippines can be located at Ermita, Manila and Malay, Aklan.

### 1.1.2. Organizational Chart



### 1.1.3. Business Processes

- Application Process:
  1. A driver will have to submit a copy of his resume to the branch office, indicating the driver's classification. It can either be a multicab, taxi, mall coupon taxi, or a tourist van.
  2. The driver will have to be interviewed if his qualifications and requirement are met by the company's standards.
  3. If a driver will be accepted to a company, the driver's resume will be put on a folder with a piece of paper attached to indicate the classification together with the other driver's resume of the same classification.
  4. The driver will then be assigned a specific vehicle.
  
- Car Rental Process:
  1. The customer could either contact the company either by phone or walk-in.
  2. The customer will fill out a reservation form indicating all the necessary details regarding their contact numbers, car preference and the date a car will be needed. If the customer calls, an employee will fill out their reservation form.
  3. The employee will check if the car preferred is available for the said date. The employee will look at the white board if a car is available for the date given by the client.
  4. The secretary will record the details on a logbook called the daily movement and it is to be stored in the company cellphone for back up. The details that would be inputted on the company cellphone are the clients contact number and full name for easier reference.
  5. There will be 2 copies of the reservation form, 1 will be filed in a folder as a copy for the company and the other copy will be for the driver.
  6. The company will contact a driver who is available for the schedule of the customer.
  7. A staff member will check a folder containing all the resumes of active private car drivers and will check the white board if that certain driver has a schedule on that day.
  8. The customer will have to confirm the transaction or if he/she would like to cancel or modify the schedule, a few days before.
  9. The customer can cancel the transaction anytime before the vehicle is deployed. However, if the vehicle arrives on the place and the client wishes to cancel it, the client will have to pay for the gasoline fee. If the customer cancels the transaction, the record on the logbook will be erased.
  10. If the customer confirms the transaction, the secretary will add the details on a white board containing the driver's name, the car's plate number and car model, duration of the rental, the start date and the name of the customer.
  11. The secretary will contact the driver a day before the schedule to remind him that he will have a task and what time should he be on the place agreed upon.
  12. The secretary will issue a car pass for the driver to be presented to the exit gate for authorization purposes.

13. The secretary will also give a trip ticket to the driver wherein the driver must fill out and put the necessary details. It would be the client details and the trip details.
14. The driver will have to list down the time he arrived at the meeting place, the odometer reading and the time where they left at a certain destination. He will have to list down all the destination or stops that he made in the trip ticket.
15. The secretary will update the white board indicating that the transaction is ongoing when the date of the rental arrives.
16. The driver will pick up the customer at their house. The driver already has a receipt that has been issued for the client. If the client will rent for more than a day, the client will be required to pay a down payment and the driver will bring two receipts. One of which is for the down payment and the other one is for the remaining balance. The reason for doing so is for instances wherein the client would like to extend the car rental and the client will have to pay for the whole day so there is a need to issue another receipt for this transaction. The settling of accounts is done before they start the trip.
17. The driver returns and the cash / check will be given to the accounting staff.
18. A staff member in the main office will check the details written in the form and check whether the odometer readings agree with the trips he made. He will then give the trip ticket to the secretary.
19. The secretary will put the trip ticket on a folder containing all the trip tickets of a driver, there is a folder for every private car driver. She will summarize all the trip tickets in one page to be printed out and put in the folder.
20. The secretary will then encode the transaction in the computer and the record of the transaction on the white board will be deleted if the contract has already been settled.

- Multicab Process:

1. The company multicab driver will reserve a vehicle that can be good for a month, a week, or depending on the preference of the driver. A driver can only drive one multicab however; a multicab can have 2 drivers in case the driver will not show.
2. The driver will go to the branch everyday to see if there is an available multicab in case a driver that is assigned to a vehicle does not show up.
3. The guard will fill out a vehicle checklist, before a vehicle is deployed, to indicate that the multicab is in good condition. The vehicle checklist also serves as a waiver form and whatever damage will be accountable to the driver. There will be triplicate copies of the vehicle checklist, the original form will be given to the driver and the 2 will be kept as duplicates in case the driver lost the original copy.
4. The driver has to pay a boundary at the branch or depending on the said contract, at the end of the day, upon returning the vehicle. There is a guard that stays until early in the morning which the drivers must return the vehicle before 2 in the morning.
5. The guard will collect the boundary from the driver and will check if the multicab is still in good condition. If the multicab should be repaired, the staff member will record on the vehicle checklist in what condition the vehicle is returned. There is also a logbook to keep track of which driver is driving a certain multicab, the guard will write down how much the driver paid and if there was damage done.

6. The guard will give the boundary to the accounting staff and the checklist to the secretary when the office opens.
- Metered Taxi Process:
    1. The taxi driver will go to the garage where white taxis are located.
    2. The guard or inspector will also have a checklist indicating that the taxi is in good condition before deployment.
    3. After the day, the driver will have to return the taxi to the garage and will pay the boundary fee.
    4. The guard will inspect the taxi if it is damaged by the driver and will accept the payment from the driver.
    5. An assigned employee will forward to the main office the boundary fee paid by the driver.
    6. A staff member in the main office will check the details written in the form and check whether the odometer readings agree with the trips he made.
    7. The form will then be placed in an envelope which contains all the forms for the white taxi transactions.
  - Airport Taxi Process
    1. The taxi driver will go to the airport in his assigned vehicle.
    2. The taxi driver will fill out the same form that is used by the metered taxi and put the initial odometer reading.
    3. The driver will pick up passengers from the airport to the destination of the passengers.
    4. The driver will print out 2 receipts on an automated machine to be issued to the passengers; the other copy will be kept by driver which will be forwarded later to the office.
    5. The driver will once again record odometer reading along with the other travel details such as the place where he dropped off his client.
    6. The process will be repeated for all the transactions/trips he will make.
    7. At the end of his shift the driver would have to record his last odometer reading.
    8. At the end of his shift driver will return to their office located at the airport to submit the form and the receipts.
    9. A staff member will then forward these records to the main office.
    10. A staff member in the main office will check the details written in the form and check whether the odometer readings agree with the trips he made.
    11. The form will then be placed in an envelope which contains all the forms for the yellow taxi transactions.
  - Consolidation Process
    1. The secretary will encode all the transactions that happened during the day. She will have to check the daily movement that is written on a logbook. She should be able to generate a report of all the transactions including all the details of the trip. It includes the tour code, guest name, date, destination, vehicle, driver and the pick-up place.

2. The accounting staff who remits all the cash should also be able to generate a report regarding all the income.
3. The secretary will print the report that she made and will pass it to the accounting staff.
4. The accounting staff will check any discrepancies between his report and the report of the secretary.
5. The accounting staff will return the report to the secretary if there are changes that has to be made.
6. The travel manager will receive all the reports from different departments and will return if there are still discrepancies with their reports.
7. The travel manager will compile all the reports of the departments and summarize them to be forwarded to the president of the company.

1.1.3. Problems to be addressed

Problems	Root Cause	Symptoms and Frequency	Business Impact
Waste of Resources	Too much paperwork (consolidation process step 1 and 3).	Because they should be able to generate a report, they have to work overtime almost every day since they have to check a lot of records and minor discrepancies usually arise therefore forcing them to check and do everything all over again until all the records are already consistent with each other. Most of the staff members also have to go to the office even during weekends just to manage the large number of records and paperwork.	Due to frequent overtime, the office is forced to use the electricity longer and most of the staff would need to stay at their office even during weekends therefore increasing electricity consumption. About Php 7,000.00 is the extra amount paid for the excessive use of electricity in a month and Php 2,500.00 for the excessive use of office supplies a month.
Loss of contracts and source of income	The travel manager is forced to help out with organizing the large amount of paperwork in the office therefore giving her little time to do marketing and advertisement. (consolidation process step 5 and 6)	It is difficult to hire another employee that agrees to work overtime almost every day because of the large number of paperwork to be managed. Because of this instead of looking for more clients, the travel manager is stuck doing paper works with the employees just to beat the deadline of submitting the reports.	For a month, the travel manager can average contracts amounting to Php 20,000.00 a month if she could use her time for marketing instead of spending her time in transferring records. This value was obtained by computing for the number of contracts she gets when there is nothing much to do in the office therefore giving her time to do marketing and advertisement.

<p>Time Consuming</p>	<p>Because there are too many records being made with each transaction it is more difficult for them to look for and keep track of records. Another problem is that there are numerous processes that are being followed for each transaction, most of which are very redundant and removable, therefore causing a more complex system. It would also take time for an employee to check the availability of a driver or car because there is no list of the cars and drivers that would indicate their corresponding status (i.e. under repair, not available).</p>	<p>Most of the time their boss would ask for records of their customers by giving the customer's name or the tour code and the staff would have to backtrack and to check numerous records manually for the right record. And also because they do not keep track those clients / drivers who have not yet settled their accounts, they would have to check back and forth in their logbooks to check whether that certain client or driver has paid or not.</p>	<p>Whenever this problem occurs a lot of time is wasted because instead of having the employees doing other tasks like marketing and encoding, they would spend a longer time looking for records therefore causing them to have limited time to do their work forcing them yet again to work overtime just to finish all their tasks. The company's losses because of paying for overtime work amounts to about Php 4,700.00 per week or around Php 18,000.00 a month.</p>
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## 1.2. Objectives, Scope, and Limitations

### 1.2.1. Objectives

- The general objective of this project is to develop a software that will automate the rental process of the company and be able to store information in a single database.
- The specific objectives of the project are:
  - To help decrease their workload;
  - To improve the records of the drivers / clients who have monthly contracts so that it can be written only once and only the status change every day will be changed instead of writing all the information again and again; and
  - Driver
    - To store and easily track driver's information
    - To check the availability of the driver
  - Vehicle
    - To store all vehicle information (plate number, etc.)
    - To track all repair records of the vehicle
    - To track all transport records of the vehicle
    - To check the availability of the vehicle
  - Rental
    - To manage all rental services (add, modify, cancel a transaction)
    - To track all car rentals in a given day

### 1.2.2. Scope and Limitations

The software that will be developed will be covering the following: The organization of the list of drivers, clients and vehicles must be restructured and automated to increase data efficiency and save memory space. Data storage and management of data is necessary for this project to ensure that the company will be given a more simplified approach that would get rid of unnecessary paperwork and avoid the waste of workspace. For easier reference to data, the software will include the viewing details of the vehicle, driver, tour / reservation schedules and the past transactions of a client.

A new system for the company's Accounting / Sales / Marketing Department is no longer needed since the current system they are using is already efficient so we are trying to focus on bigger and the more major problem of scheduling and information storage. There also won't be a need to secure the data because all of the employees can have access to the data because they need to coordinate with other departments of the office.

## 2. Functional Requirements

### 2.1. Software Functions

#### *Add Reservation*

- System takes the inputs of the user and checks the database for already existing records
- System updates the database to record the existence of the reservation in the database

#### *Modify Reservation*

- System takes the data inputted by the user and checks if record already exists
- System updates the already existing record in the database to show the changes made by the user to the reservation record.

#### *Delete Reservation*

- System takes the user input and matches it with existing records in the database
- System removes from the database the records that matches the user inputted data and updates the database to not include the record of the reservation anymore

#### *View Reservation*

- System retrieves all records of reservations in the database and displays it.
- System displays the details of a reservation the user wants to view.

#### *Add Vehicle*

- System takes the inputs of the user and checks the database for already existing records
- System updates the database to record the existence of the vehicle in the database

#### *Modify Vehicle*

- System takes the data inputted by the user and checks if record already exists
- System updates the already existing record in the database to show the changes made by the user to the vehicle record

#### *Delete Vehicle*

- System takes the user input and matches it with existing records in the database
- System removes from the database the records that matches the user inputted data and updates the database to not include the record of the vehicle anymore

#### *View Vehicle*

- System retrieves all records of the vehicles in the database and displays it.
- System displays the details of a vehicle the user wants to view.

#### *Add Driver*

- System takes the inputs of the user and checks the database for already existing records
- System updates the database to record the existence of the driver in the database

#### *Modify Driver*

- System takes the data inputted by the user and checks if record already exists
- System updates the already existing record in the database to show the changes made by the user to the driver record

#### *Delete Driver*

- System takes the user input and matches it with existing records in the database
- System removes from the database the records that matches the user inputted data and updates the database to not include the record of the driver anymore

#### *View Driver*

- System retrieves all records of driver in the database and displays it.
- System displays the details of a driver the user wants to view.

#### *Assign Driver*

- System adds the driver that is assigned by the user then updates the reservation details.

#### *Add Trip*

- System takes the inputs of the user and checks the database for already existing records
- System updates the database to record the existence of the deployment in the database

#### *Modify Trip*

- System takes the data inputted by the user and checks if record already exists
- System updates the already existing record in the database to show the changes made by the user to the trip record

#### *Delete Trip*

- System takes the user input and matches it with existing records in the database
- System removes from the database the records that matches the user inputted data and updates the database to not include the record of the trip anymore.

#### *View Trip*

- System retrieves all trip records of a certain vehicle in the database and displays it.

#### *Add Vehicle Repair*

- System takes the inputs of the user and checks the database for already existing records
- System updates the database to record the existence of the vehicle repair in the database

#### *Modify Vehicle Repair*

- System takes the data inputted by the user and checks if record already exists
- System updates the already existing record in the database to show the changes made by the user to the vehicle repair record

#### *Delete Vehicle Repair*

- System takes the user input and matches it with existing records in the database
- System removes from the database the records that matches the user inputted data and updates the database to not include the record of the vehicle repair anymore.

#### *View Vehicle Repair*

- System retrieves all repair records of a certain vehicle in the database and displays it.

#### *View Driver History*

- System retrieves all the trip records of a particular driver in the database that the user chose and displays the information.

*View Vehicle History*

- System retrieves all the transaction records of a particular vehicle in the database that the user chose and displays the information.

*View Vehicle Repair History*

- System retrieves all the vehicle repair records made on a specific vehicle in the database that the user chose and displays the information.

*View Upcoming Reservations*

- System retrieves all the upcoming transactions report shows a list of all private car reservations that will occur within 2 days and displays the information.

*View Unpaid Transactions*

- System retrieves all the completed transactions/ reservations that are still unpaid and displays the information.

*View Daily Reservations*

- System retrieves all the private car reservations that took place within a certain day and displays the information.

*View Daily Deployment*

- System retrieves all the public vehicle deployments that took place within a certain day and displays the information.

## 2.2. User Types and their Description

### *Secretary*

- The secretary will have access to all the features of the system; she will be the one who controls all the functions of the system.

### *Transport Manager*

- The transport manager will manage all the reports that are generated by the system.

## 2.3. Data Files and their Description

### *Driver Files*

- The driver file stores all information about the driver such as: full name, address, contact number, birthday, gender, and classification.

### *Vehicle Files*

#### *Private Car Files*

- The private car file stores all the information of the car. It contains the car model, plate number, vehicle type, and status of the vehicle.

#### *Multicab Files*

- The multicab file stores all the information about the multicab. It contains the jeep model, plate number, vehicle type and status of the vehicle.

#### *Yellow Taxi Files*

- The yellow taxi file stores all the information about the yellow taxi. It contains the car model, plate number, vehicle type, body number and status of the vehicle.

#### *White Taxi Files*

- The taxi file stores all the information of the car. It contains the car model, plate number, vehicle type, and status of the vehicle.

### *Reservation Files*

- The reservation file stores all information about the reservations of private cars made in the company. It contains the car model, plate number, client's name, address, contact number, start date, end date, destination, and the driver's name.

### *Vehicle Repair Files*

- The vehicle repair file stores all information about all repairs made on each vehicle. It includes the car model, plate number, repair description, cost of repair, and the date of repair.

### *Deployment Files*

- The deployment file stores all information about the deployment of public utility vehicle every day. It stores information such as: date, car model, plate number, route, car status, driver's name, and boundary/rental fee.

## 2.4. Report Types and their Description

### *Driver History Report*

- The driver history report shows a list of all transactions that include a particular driver.

### *Vehicle History Report*

- The vehicle history report shows a list of all transactions that include a particular vehicle.

### *Vehicle Repair History Report*

- The vehicle repair history report shows a list of all repair transactions made on a specific vehicle.

### *Upcoming Reservations Report*

- The upcoming transactions report shows a list of all private car reservations that will occur within 2 days so that the secretary can remind the driver of his schedule.

### *Unpaid Transactions Report*

- The unpaid transactions report shows a list of all completed transactions/reservations that are still unpaid.

### *Daily Reservations Report*

- The daily reservations report shows a list of all private car reservations that took place within the day.

### *Daily Deployment Report*

- The daily deployment report shows a list of all public vehicle deployments that took place within the day.

## 2.5. Use Case Diagrams



## 2.6. Use Case Description

Use Case: Add Reservation (Private Car)

Actor: Secretary

Description: The user can add a reservation to the records.

Precondition: -

Post condition: The reservation details inputted by the user will be added to the records

### Normal Flow

Actions of Actor	Actions of System
	1. System displays reservation form and generates a tour code.
2. Secretary chooses the car model from drop down box	
3. Secretary enters the start date and end date	4. System displays the list of available units of the car model chosen
5. Secretary chooses a unit (plate number) from the list	
6. Secretary enters the following data: client's name, address, contact number, destination, and fee.	7.0 System displays information and asks for confirmation.
	8. System updates car record and stores reservation record

### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

### Exception Flow 4.E.1 No units of the car model are available

Actions of Actor	Actions of System
	1. System displays message : " No available units"
2. The secretary chooses another car model	3. System follows normal flow from step 4

Use Case: Modify Reservation (Private Car)

Actor: Secretary

Description: The user can modify a specific reservation chosen by the user.

Precondition: The reservation should exist.

Post condition: The information modified by the user should be updated by the system.

Normal Flow

Actions of Actor	Actions of System
	1. System provides a list of all the reservations
2. Secretary can enter tour code / guest name or search manually through the list	3. System provides list of the queries made by user.
4. The secretary chooses a reservation	5. The system displays all the details of the reservation
6. The secretary edits the information	
7. The secretary submits.	8. System displays modified information and asks for confirmation.
	9. System updates the reservation's record

Alternate Flow 8.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

Exception Flow 1.E.1 No units of the car model are available

Actions of Actor	Actions of System
	1. System displays message : " No available units"
2. The secretary chooses another car model	3. System follows normal flow from step 4

Use Case: Cancel Reservation (Private Car)

Actor: Secretary

Description: The user can cancel the reservation that she chooses.

Precondition: The reservation should exist.

Post condition: The reservation details can no longer be found in the system.

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the reservations that are still pending.
2. Secretary can opt to search by typing tour code / guest name or manually search the list.	3. System checks for the tour code / guest name.
4. Secretary chooses from the list that is to be deleted.	5. System displays the reservation details.
6. Secretary will cancel the reservation.	7. System asks for confirmation
	8. System deletes the reservation from the records.

#### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 3.E.1 Tour code / guest code entered is invalid

Actions of Actor	Actions of System
	1. System displays message : " Tour code / guest name does not exist"
2. The secretary chooses another car model	3. System follows normal flow from step 4

Use Case: View Reservation (Private Car)

Actor: Secretary

Description: The user can search the system for a reservation and view the details.

Precondition: The reservation should exist.

Post condition: -

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the reservations that are still pending.
2. Secretary can opt to search by typing tour code / guest name or search manually through the list.	3. System checks for the tour code / guest name.
4. Secretary chooses from the list that is to be viewed.	5.0 System displays information and asks for confirmation
6. Secretary can opt to edit the details.	7. System follow normal flow step 5 of Modify Reservation (private car).

#### Alternate Flow 5.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 3.E.1 Tour code / guest code entered is invalid

Actions of Actor	Actions of System
	1. System displays message : " Tour code / guest name does not exist"
2. The secretary chooses another car model	3. System follows normal flow from step 4

Use Case: Add Vehicle

Actor: Secretary

Description: The user can add a vehicle to the system provided that it the record doesn't exist yet.

Precondition: -

Post condition: The inputted information will be added to the records.

Normal Flow

Actions of Actor	Actions of System
	1. System displays data entry form
2. Secretary chooses which type of vehicle to be added	3. System updates the data entry form
4. Secretary enters the following data: car model, plate number, vehicle type, and rental fee / boundary	5.0 System asks for confirmation
	6. System checks if the plate number does not exist yet
	7. System stores vehicle's record

Alternate Flow 5.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

Exception Flow 6.E.1 Plate number already exists

Actions of Actor	Actions of System
	1. System displays an error message: "Vehicle already exists in the record"
2a. Secretary cancels the process	2b. System follows normal flow from step 4
	3a. System displays the main screen

Use Case: Modify Vehicle

Actor: Secretary

Description: The user can modify the details of the chosen vehicle.

Precondition: The vehicle should exist.

Post condition: The modified information should be updated by the system.

Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles
2. Secretary can opt to search by typing the plate no. or search manually through the list.	3. System checks for the plate no.
4. Secretary chooses from the list the vehicle that is to be modified.	5. System displays the information.
6. Secretary edits the details of the driver.	
7. Secretary submits.	8. System displays modified information and asks for confirmation.
	9. System updates the driver's information from the records.

Alternate Flow 8.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

Exception Flow 3.E.1 Vehicle does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Vehicle does not exist"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Delete Vehicle

Actor: Secretary

Description: The user can delete a certain vehicle from the database

Precondition: The vehicle exists.

Post condition: The vehicle details can no longer be found in the system.

Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles
2. Secretary can opt to search by typing the plate no. or search manually through the list.	3. System checks for the plate no.
4. Secretary chooses from the list the vehicle that is to be deleted.	5. System displays the information.
6. Secretary deletes the vehicle.	
	7. System asks for confirmation.
	8. System deletes the vehicle's information from the records.

Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System follows normal flow from step 2

Exception Flow 3.E.1 Driver does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Vehicle does not exist"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: View Vehicle

Actor: Secretary

Description: The user can preview the details of a vehicle that is chosen.

Precondition: The vehicle exists.

Post condition: -

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles
2. Secretary can opt to search by typing the plate no. or search manually through the list.	3. System checks for the plate no.
4. Secretary chooses from the list the vehicle that is to be viewed.	5. System displays the information.
6. Secretary can opt to modify the details of the vehicle.	
	7. System asks for confirmation.
	8. System deletes the vehicle's information from the records.

#### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System follows normal flow from step 2

#### Exception Flow 3.E.1 Vehicle does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Vehicle does not exist"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Add Driver

Actor: Secretary

Description: The user can add a record of a driver to the system.

Precondition: -

Post condition: The inputted information should be added to the records.

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays data entry form
2. Secretary enters the following data: first name, middle name, last name, birthday, address, gender, contact number, and classification	
3. Secretary submits.	4.0 System displays information and asks for confirmation.
	5. System checks if the name already exists.
	6. System stores driver's record.

#### Alternate Flow 4.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 6.E.1 Name already exists

Actions of Actor	Actions of System
	1. System displays an error message: "Driver already exists in the record"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Modify Driver

Actor: Secretary

Description: The user can modify the details of a driver.

Precondition: The driver's record exists in the system.

Post condition: The modified information will be updated by the system.

Normal Flow

Actions of Actor	Actions of System
	1. System displays all the drivers
2. Secretary can opt to search by typing id no. / name or search manually through the list.	3. System checks for the name
4. Secretary chooses from the list that is to be modified.	5. System displays the information.
6. Secretary edits the details of the driver.	
7. Secretary submits.	7. System displays modified information and asks for confirmation.
	8. System updates the driver's information from the records.

Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

Exception Flow 3.E.1 Driver does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Driver does not exist"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Delete Driver

Actor: Secretary

Description: The user can delete the records and details of the driver from the system.

Precondition: The driver's record exists in the system.

Post condition: The driver's record will no longer be found in the system.

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the drivers
2. Secretary can opt to search by typing tour code / guest name or search manually through the list.	2. System checks for the driver name / id no
2. Secretary chooses the driver to be deleted.	3. System displays the driver's information
4. Secretary deletes the driver information.	
	5.0 System asks for confirmation
	6. System deletes the driver's record

#### Alternate Flow 5.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System follows normal flow from step 2

#### Exception Flow 3.E.1 Driver does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Driver does not exist"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: View Driver

Actor: Secretary

Description: The user can preview the details of a certain driver that is existing in the system.

Precondition: The driver's record exists in the system.

Post condition: -

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the drivers
2. Secretary can opt to search by typing tour code / guest name or search manually through the list.	2. System checks for the driver name / id no
	3. System displays the driver's information
4. Secretary edits the driver information.	
	5.0 System displays modified information and asks for confirmation.
	6. System updates the driver's record

#### Alternate Flow 5.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System follows normal flow from step 2

#### Exception Flow 3.E.1 Driver does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Driver does not exist"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Assign driver

Actor: Secretary

Description: The user can assign a driver a task in a certain reservation.

Precondition: The driver's record, vehicle and the reservation exists in the system.

Post condition: -

#### Normal Flow

Actions of Actor	Actions of System
	1. System asks the secretary to choose whether he/she wants to add a driver for a PUV or a reservation
2. The user chooses to add a driver for a PUV	3. System asks the user for vehicle type.
4. Secretary chooses vehicle type from drop-down list	5. System displays list of plate numbers with the vehicle type chosen
6. The secretary chooses a unit	7. System displays the name of the assigned driver for the unit if available
8. The secretary can choose to add a new driver or change the driver	9. The system provides a list of available drivers
10. The secretary chooses a driver to assign to the unit	11.0 The system asks for confirmation
	12. The system updates the car unit's record

#### Alternate Flow 2.1 The Secretary wants to add a driver for a reservation

Actions of Actor	Actions of System
	1. System displays all the reservations
2. Secretary chooses a reservation from the list	3. System displays the reservation details including the assigned driver if available
4. The secretary can add or change the driver for the reservation	5. System displays a list of available drivers
8. The secretary chooses a driver to assign to the reservation	8. The system asks for confirmation
	9. The system updates the reservation's record

#### Alternate Flow 11.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

Exception Flow 6.E.1 There is no driver assigned or chosen

Actions of Actor	Actions of System
	1. System displays an error message:"No available driver"
2a. Secretary cancels process	3a. System displays the main screen
	2b. System displays previous screen

Use Case: Add trip

Actor: Secretary

Description: The user can add a trip record to a vehicle when that certain vehicle went out.

Precondition: -

Post condition: The inputted information will be added to the records.

#### Normal Flow

Actions of Actor	Actions of System
	1. System asks the user for vehicle type.
2. Secretary chooses vehicle type from drop-down list	3. System displays list of plate numbers with the vehicle type chosen
4. The secretary chooses a unit	5. System displays the name of the assigned driver for the unit along with the date for the day
6.0 The secretary can choose to change the name of the assigned driver or add one if there is no assigned driver	7.0 The system asks for confirmation
	8. The system adds the record to the trip records

#### Alternate Flow 6.1 Secretary chooses a different driver

Actions of Actor	Actions of System
	1. System displays a list of available drivers
2. The secretary chooses a driver	3. The normal flow is followed starting from step 7

#### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 7.E.1 There is no driver assigned or chosen

Actions of Actor	Actions of System
	1. System displays an error message: "No driver is assigned"
2a. Secretary cancels process	2b. System displays previous screen
	3a. System displays the main screen

Use Case: Update trip

Actor: Secretary

Description: The user can modify the trip records in a vehicle.

Precondition: The trip details should exist in the system.

Post condition: The modified information should be updated by the system.

#### Normal Flow

Actions of Actor	Actions of System
	1. System asks the secretary for vehicle type.
2. Secretary chooses vehicle type from drop-down list	3. System displays list of plate numbers with the vehicle type chosen
4. The secretary chooses a unit	5. The system displays all the trip records made for the unit
6. The secretary chooses a trip record to update	7. System displays a form that asks for the trip details whose fields depend upon the type of car and some of the fields which have been filled before will display the information that was inputted before
8. The secretary fills out the necessary information	9.0 The system asks for confirmation
	10. The system updates the trip records

#### Alternate Flow 9.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 7.E.1 There is no driver assigned or chosen

Actions of Actor	Actions of System
	1. System displays an error message: "There is no trip record for this unit"
2a. Secretary cancels process	2b. System follows the normal flow from the start
	3a. System displays the main screen

Use Case: View Trip

Actor: Secretary

Description: The user can preview all the trip records of a certain vehicle.

Precondition: The trip details should exist in the system.

Post condition: -

Normal Flow

Actions of Actor	Actions of System
1. The secretary can opt to view records by date, vehicle or by driver	2. The system asks the secretary to input the date, the plate number or the driver name depending on the secretary's choice
	3. The system displays all the trip records that contain the plate no, date or driver name that was entered by the secretary
4. Secretary chooses a trip record to view	5. The system displays the details of the trip

Exception Flow 3.E.1 Driver does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "No trip record exists"
2a. Secretary cancels the process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Add Repair

Actor: Secretary

Description: The user can add a repair record when a vehicle is damaged.

Precondition: The vehicle is in need of repair.

Post condition: -

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles.
2. Secretary can opt to search by typing the plate no. or search manually through the list.	3. System checks for the plate no.
4. Secretary chooses from the list the vehicle that is to be added a repair history.	5. System displays the repair history information.
6. Secretary enters the following data: repair description, date repaired, and cost	
	7.0 System displays information entered and asks for confirmation.
	8. System updates vehicle's repair record.

#### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 8.E.1 Plate number does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Plate number does not exist"
2a. Secretary cancels process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Modify Repair

Actor: Secretary

Description: The user can edit a certain repair record of a vehicle

Precondition: The record to be modified should exist.

Post condition: The modified information will be updated by the system.

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles.
2. Secretary can opt to search by typing the plate no. or search manually through the list.	3. System checks for the plate no.
4. Secretary chooses a vehicle from the list.	5. System displays the repair history information.
4. Secretary chooses one repair record	
6. Secretary edits the repair record information	7.0 System asks for confirmation
	8. System updates vehicle's repair record

#### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 3.E.1 Plate number does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Plate number does not exist"
2a. Secretary cancels process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Delete Repair

Actor: Secretary

Description: The user can delete a repair record of a vehicle in the system.

Precondition: The record to be deleted should exist.

Post condition: The record can no longer be found in the system.

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles.
2. Secretary can opt to search by typing the plate no. or search manually through the list.	3. System checks for the plate no.
4. Secretary chooses a vehicle from the list.	5. System displays the repair history information.
4. Secretary chooses one repair record	
6. Secretary chooses Delete option.	7.0 System asks for confirmation
	8. System deletes vehicle's repair record

#### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 3.E.1 Plate number does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Plate number does not exist"
2a. Secretary cancels process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: View Repair

Actor: Secretary

Description: The user can preview all the repair records a certain vehicle has.

Precondition: The vehicle and repair records should exist.

Post condition: -

#### Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles.
2. Secretary can opt to search by typing the plate no. or search manually through the list.	3. System checks for the plate no.
4. Secretary chooses a vehicle from the list.	5. System displays the repair history information.
4. Secretary chooses one repair record	
6. Secretary chooses Delete option.	7.0 System asks for confirmation
	8. System deletes vehicle's repair record

#### Alternate Flow 7.1 Confirmation

Actions of Actor	Actions of System
1. Secretary chooses the "NO" option	2. System displays the previous screen

#### Exception Flow 3.E.1 Plate number does not exist

Actions of Actor	Actions of System
	1. System displays an error message: "Plate number does not exist"
2a. Secretary cancels process	2b. System follows normal flow from step 2
	3a. System displays the main screen

Use Case: Display Vehicle History

Actor: Secretary

Description: The user can display all the trip details the vehicle has made.

Precondition: Vehicle plate number should exist in the record

Post condition: -

Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles.
2. Secretary can opt to search by typing the plate no. or search manually through the list.	
3. Secretary chooses a vehicle from the list.	4. System displays the travel history of the chosen vehicle.

Use Case: Display Driver History

Actor: Secretary

Description: The user can preview all the trips that the driver has made.

Precondition: Driver should exist in the record

Post condition: -

Normal Flow

Actions of Actor	Actions of System
	1. System displays all the drivers.
2. Secretary can opt to search by typing the name or search manually through the list.	
3. Secretary chooses a driver from the list.	4. System displays the travel history of the chosen driver.

Use Case: Display Vehicle Repair History

Actor: Secretary

Description: The user can preview all the repair history of a vehicle from the system.

Precondition: Vehicle plate number should exist in the record.

Post condition: -

Normal Flow

Actions of Actor	Actions of System
	1. System displays all the vehicles.
2. Secretary can opt to search by typing the plate no. or search manually through the list.	
3. Secretary chooses a vehicle from the list.	4. System displays the repair history of the chosen vehicle.

Use Case: Display Upcoming Reservation

Actor: Secretary

Description: The user can preview all the reservation that will be happen within 2 days.

Precondition: There are upcoming reservations within 2 days

Post condition: -

Normal Flow

Actions of Actor	Actions of System
	1. System retrieves all reservations taking place within 2 days.
	2. System shows a list of all upcoming reservations.

Use Case: Display Unpaid Transactions

Actor: Secretary

Description: The user can preview all the drivers / clients that still haven't settled their accounts.

Precondition: There are unpaid transactions in the records

Post condition: -

Normal Flow

Actions of Actor	Actions of System
	1. System retrieves all completed reservations that are still unpaid.
	2. System shows a list of all unpaid transactions.

Use Case: Display Daily Reservations

Actor: Secretary

Description: The user can preview all the reservations made within the day.

Precondition: There are reservations made during the day.

Post condition: -

Normal Flow

Actions of Actor	Actions of System
	1. System asks the user to input a date
2. Secretary enters the date	3. System shows a list of all private cars that went out on the specific date

Use Case: Display Daily Deployment

Actor: Secretary

Description: The user can preview all the vehicles that were deployed on a certain date.

Precondition: -

Post condition: -

Normal Flow

Actions of Actor	Actions of System
	1. System asks the user to input a date
2. Secretary enters the date	3. System shows a list of all public utility vehicles that were deployed on the specific date

### 3. Non Functional Requirements

#### *Company Logo*

- The company logo should be displayed at the upper portion of the screen.

#### *2x2 Picture of Driver*

- There should be a picture of the driver at the upper rightmost corner of the screen for easy identification of the drivers.