

# Golden Deal APP



Project Manager: Sousannah Magdy  
Rashad 21100869

Youssef Samuel Monner21100866

Salma Mohamed Abdelfattah 21100795

Mayar Elshamy Soliman 21100876

DR\Eslam Elgedawy

# Index

Parts	Pages
1. Abstraction, Requirements	2-7
2. Subsystems, Traceability Matrix	8-13
3. Functional, Non-Functional Requirements	13-15
4. System service, System rules	15-19
5. Use-case diagram	20-21
6. Use-case description	21-23
7. Test Requirements	23
8. Use-case scenario	24-31
9. EERD	32-34
10. Component	35
11. Architecture models	36
12. Interfaces	37
13. Class diagram	38
14. Modeling matrix	38-39
15. Sequence diagram	40-43
16. Dataflow diagram	44-52
17. GUI, User manual	53-69

## Abstraction

“Some people put more into their cars more than they put into their relationships”. This app will help take care of your car or even buy a one if you don't have. The app will also help you sell, rent or even find equipment, maintenance and more. The app will also give you information about near gas stations, showrooms, road emergency alerts, car news and of course all the information you need about all kinds of cars.

## System and User Requirements:

- 1- Once the application opened the user must choose:
  - Customer
  - Company
  - Car Showrooms
  - Shop
- 2- Once the user choose customer, the user should sign up/log in:
  - The user can use Google auto sign up/Apple auto sign up.
  - Enter their name, email, National ID, Identification card/passport photo, Phone number, Password, Confirmation of confidentiality.
  - If the user has an existence account, the user can log in by entering their email and password.
- 3- Once the user choose Company the user should sign up/log in:
  - The user should choose if he is an international company or a transportation company
  - The user should enter name of responsible for IT, Commercial Registration No, Company's agent Commercial Registration No
  - The user should enter the following information as it will be shown to the customer: Company name, Company founder name and photo, Introduction about company, email, logo, website, Location, Company's agent in Egypt, Agent's email, Company's agent location
  - Then the system will generate an ID and send it with verification message
  - The user should choose classification of cars to be sold
  - If the user has an existence account, the user can log in by entering ID and password
- 4- Once the user choose Car Showrooms the user should sign up/log in:

- The user should enter car showroom's email, Commercial Registration No, Password
  - The user should enter the following information as it will be shown to the customer: owner name, Location, Website, Logo
  - Then the system will generate an ID and send it with verification message
  - The user should choose classification of cars to be sold
  - If the user has an existence account, the user can log in by entering ID and password
- 5- Once the user choose Shop the user should sign up/log in:
- The user should enter Commercial Registration No, Email, Password, National ID/Passport
  - The user should enter the following information as it will be shown to the customer: Shop name, Location, Website/Social media pages, Logo, Phone number
  - If the user has an existence account, the user can log in by entering ID and password
- 6- Forget password/ID:
- If user selected forget password the user must enter the email/ Commercial Registration No in order to send a verification message and change password/ID
- 7- Verification message:
- The system will send an email to verify user email
  - The system will also send an SMS message to verify user number
- 8- After log in as Customer:
- Buy
  - Sell
  - Used Cars Price Prediction
  - Rent
  - Maintenance
  - Gas Stations
  - Car Finance
  - Road side assistance
  - Showroom List
  - Road Emergency Alerts
  - News

- Transportation
- 9- By choosing Buy:
- New {Cars, trucks, motorcycles, ...}
  - Used {Cars, trucks, motorcycles, ...}
- 10- After selecting new:
- Cars
  - Motorcycles
  - Trucks
  - Buses
- 11- When selecting Car/bus/motorcycle/truck:
- The user will find all car logos to choose from
  - After choosing the logo the system will display all cars of the certain logo
  - The user can search by price and compare cars by using search bar
  - After selecting the car, all the car information will display including: photos, Performance, price, Facelifts, Maintenance price/km, Owners reviews, Market perception
  - After selecting a certain edition system will display: Owners reviews, Market perception, Details{will show other editions differences}, Performance{motor, speed, transmission, origin, traction type, ...}
  - The user can compare the car with others or add it to favorite or go on and complete viewing
  - The user can enable location and search for the nearest car showrooms/company's agent and showing the actual distance in km
  - The system will also show their ratings and reviews
- 12- After selecting used:
- Cars
  - Motorcycles
  - Trucks
  - Buses
- 13- After selecting used car/motorcycle/bus/truck:
- System will display all used cars
  - The user can search by using search filters: Brands, City, Model year, Price, Transmission type, Body type, Fuel type, km
  - The user can compare cars or add them to interest.

- The user can enable location and search for the nearest used car showrooms
- 14- After selecting sell:
- The system will display adding part, when adding the car the user must fill all car information including: Photos, Brand, City, Model year, Model name, Price, Transmission type, Body type, Fuel type, km.
  - The user can also select view to view all previous cars that he/she sold or selling at that time
- 15- After selecting Used Cars Price Prediction:
- You can search by car model and year to find its price range
- 16- After selecting Rent:
- Cars
  - Motorcycles
  - Equipment
- 17- When the user select cars:
- The system will display all types of cars including: Sedan, Coupe, Pick up, Hatchback, Limousine, Crossover, Van, Bus, Trucks{Heavy 1semi tractor, Semi sleeper}, .....
  - After selecting car type the user should select a logo from the brands displayed
  - Then the user should enter the start date and end date
  - After that the system will display all cars available at that time including all cars information: Price/hour, Showroom name, Location, Distance in km{if he enabled the GPS}
- 18- When selecting Motorcycles:
- The system will display all motorcycles type including: Sport bike, Dual-sport, Retro, Scooter, Touring, Standard/Naked, Adventure touring, Cruiser.
  - After selecting motorcycle type the user should select a logo from the brands displayed
  - Then the user should enter the start date and end date
  - After that the system will display all motorcycles available at that time including all motorcycle information: Price/hour, Showroom name, Location, Distance in km{if he enabled the GPS}
- 19- When selecting equipment:

- The system will display all equipment types including: Front end loader, Excavator, Grader, Dumping truck, Bulldozer, TLB, Roller, Mobile crane, Bobcat, Forklift, Tower crane, Crane, Concrete mixer
  - After selecting equipment type the user should select a logo from the brands displayed
  - Then the user should enter the start date and end date
  - After that the system will display all available equipment at that time including all equipment information: Price/hour, Showroom name, Location, Distance in km{if he enabled the GPS}
- 20- When choosing Maintenance:
- Maintenance shops: When selecting the system will display all nearest maintenance shops in km {user must enable locations}
  - History: When selecting the system will display all old maintenance
- 21- Select Gas station:
- The user must enable location to see nearest gas stations and will show distance in km
  - When selecting gas station system will display all fuel kinds
- 22- If user selected car finance:
- Will display a calculator to calculate car installments
- 23- If user selected car side assistance:
- The user will use this feature mostly in emergency situations
  - The system will display all car assistances near to the user and will display there numbers
  - And also the system display all emergency numbers when selecting emergency numbers.
- 24- If user select showroom list:
- The system will show all showrooms available near user, and there information including: location, distance in km, phone number, showroom name.
- 25- If user select road emergency alerts:
- User should choose the city or enable location
  - Then the system will display any road alerts in this city or near his current location
- 26- If user select News:
- If user enabled notifications the system will show all car news nationally and internationally

- There is also a filter option to choose to see news from specific brands only
- 27- If you select Transportation:
- The system will display all transportation companies (from nearest to farthest)
  - After selecting a company the system will display all types of cars offered by the company
  - After selecting car type the system will display all car details including: weight in kg, price/kg or price/km
  - Then the user should send a message to the company including package type, price offer, date, time of packaging/arriving, location of packaging/arriving
- 28- If the user login as company/showroom/shop:
- Add
  - Edit
- 29- If user selected add:
- Company: The user can add cars and enter their information including: Type, Photos, Brand, Model year, Model name, Price, Transmission type, Body type, Fuel type, ....
  - Company (Transportation): The user can add cars and enter their information including: Type, Photos, Brand, Model year, Model name, weight in kg, price/kg or price/km, ....
  - Showroom: The user must select car condition (New, Used, Imported) Then user can add cars Then user must select if he wants to sell/rent it
  - Shop: The user can add all car equipment in his shops then user should select sell/rent
- 30- If user selected edit:
- The user can edit all car information of the uploaded cars including: Photos, Brand, Model year, Model name, Price, Transmission type,
  - Body type, Fuel type, ....
  - The user can also add new features to the car
  - The user can edit price of uploaded cars



## Subsystems

Registration = A

Verification = B

$$\text{Buy} = C$$
$$\text{Sell} = D$$

Used cars price prediction = E

$$\text{Rent} = F$$

Maintenance = G

Gas station = H

Car finance = I

Car side  
assistance = J

Showroom list =  
K

Road emergency  
alerts = L

News = M

Transportation =  
N

$$\text{Add} = 0$$

Edit = P

## Traceability Matrix

[illegible]

19	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0
20	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
21	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
22	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
25	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
26	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
27	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0
28	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
29	0	0	1	1	0	1	0	0	0	0	0	0	0	1	1	0
30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1

## Subsystems:

Subsystem Name	Subsystem Function	Subsystem Interface
1- Registration	This function allow user to log in / sign up Incase of sign up each kind of user should enter different kind of information	1- void customerSignUp (string email, string password, String name , int ID , Object Photo, int phoneNumber, int confirmation) <ul style="list-style-type: none"> <li>Void customerLogIn(string email, string password)</li> </ul> 2- void companySignUp (string ITName, string CompanyName, string CompanyFounderName, Object photo, string IntroductionAboutCompany, string email, Object logo, object website, object Location) <ul style="list-style-type: none"> <li>Void company&amp;CarShowroom&amp;Shop login(int ID, string password)</li> </ul> 3- void CarShowroomSignUp(String showroom'sEmail, int CommercialRegistrationNum, String Password, String ownerName, String Location, String Website, Object Logo)           4- Void ShopSignUp(int CommercialRegistrationNo, Object Email, String Password, int NationalID/Passport, String ShopName, String Location, String

		Website/SocialMediaPages, Object Logo, int PhoneNumber)
2- Verification	This function checks all the information entered by user in sign up then sends verification message to complete sign up	1- Boolean checkUserInfo(Object info) <ul style="list-style-type: none"> <li>void ForgetPassword/ID (String the email, int CommercialRegistrationNum)</li> <li>Int verificationMessage(String email, int phoneNumber)</li> </ul>
3- Buy	This function controls all buying information of used and new cars and who sells them nearest to you	1- String ChooseNewOrUsed(string type) 2- String selectCarLogo (String brand) <ul style="list-style-type: none"> <li>String displayCarInfo()</li> <li>String showNearestShowwroom/Company(Object Location)</li> </ul>
4- Sell	This function controls all selling information of used and new cars and can edit car price after uploading it	1- Void fillCarInformation(object photos, string brand , string city , string model, int year, string modelName, double price, string transmissionType, string bodyType, string fuelType, int km) 2- Void editCarPrice (Float price) 3- Public string viewAllPreviousCars();
5- Used cars price prediction	This function analyze all market prices of the used car with specific model and gives you a price range	1-int findPrice(string Carmodel,int year) <ul style="list-style-type: none"> <li>Float analyzeMarketPrices(string Carmodel,int year, Object market)</li> </ul>
6- Rent	This function will show you all available cars of the type you select and in the date you enter	1- Void rentDate/Type(string startDate, string endDate, string carType)
7- Maintenance	This function will show you	1- String nearestMaintenanceShops ( object location)

	all the available maintenance service near you and will also display all previous maintenance information	2- String getMaintenanceHistory ( )
8- Gas station	This function will show you all the available gas stations near you and will also display all kinds of fuel there	1- int nearestGasStation(object location) 2- String getFuelKinds ( )
9- Car finance	This function works as a calculator to help you know how much many you will pay monthly depending on price, how many months	1- Float calculator ( float carPrice, int months)
10- Car side assistance	This function in case of emergency can help you by showing car assistances near you and all emergency numbers	1- String nearestCarAssistances(object location) 2- int getCarAssistanceNumbers ( ) 3- String getEmergencyNumbers ( )
11- Showroom list	This function will show you all show rooms available near you and their information	1- String nearestShowRooms(object location) 2- Object getShowRoomInformation ( )
12- Road emergency alerts	This function will show you any closed road	1- String anyRoadAlerts ( string city) ▪ String roadAnalysis(String city, String news) 2- String anyRoadAlertsNearMe(Object location)

	by analyzing all road news	<ul style="list-style-type: none"> <li>String roadAnalysisByLocation(Object location, String news)</li> </ul>
13- News	This function will show you all car news of all cars or selected brands only	<ol style="list-style-type: none"> <li>Boolean enableNotificationMessage(Boolean enable)</li> <li>String showAllCarNews (Boolean enableNotificationMessage)</li> <li>String filterNews(String brands)</li> </ol>
14- Transportation		<ol style="list-style-type: none"> <li>String nearestTransportationCompanies (object location )</li> <li>String getAllTypesOfCarsOffered( string companyName)</li> <li>String getAllCarsDetails(string carType)</li> <li>Void detailsOfTransportation( string packageType, double priceOffer, string date, string timeOfPackaging, object locationOfPackaging)</li> </ol>
15- Add		<ol style="list-style-type: none"> <li>Void companyAdd (String Type, Object Photos, Object Brand, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo)</li> <li>Void ShowroomAdd (String Type, Object Photos, Object Brand, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo) <ul style="list-style-type: none"> <li>Void showroomLocation (Object Location)</li> </ul> </li> <li>Void TransportationAdd (String Type, Object Photos, Object Brand, int Model_year, String Model_Name, Object weight_in_kg, int price/kg, int price/km, Object carInfo)</li> <li>Void ShopAdd (String Type, Object Photos, Object Brand, String Model_year, String Model_Name, Object equipmentInfo)</li> </ol>
16- Edit		<ol style="list-style-type: none"> <li>Void companyEdit(String Type, Object Photos, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo) <ul style="list-style-type: none"> <li>Void changeCarPrice(int price)</li> </ul> </li> <li>Void ShowroomEdit (String Type, Object Photos, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo) <ul style="list-style-type: none"> <li>Void editShowroomLocation (Object Location)</li> <li>Void changeCarPrice(int price)</li> </ul> </li> </ol>

		3- Void Transportationedit (Object weight_in_kg, int price/kg, int price/km, Object carInfo) 4- Void ShopEdit (String Type, Object Photos, Object Brand, String Model_year, String Model_Name, Object equipmentInfo)
--	--	---

## Functional requirements:

1. The user shall be able to choose from (customer - company - car Showrooms - Shop)
2. The user shall be able to log in if he/she already have an account or sign up if he/she don't have an account
3. The user (customer) shall be able to Choose from (Buy/ Sell /Used Cars Price Prediction / Rent / Maintenance /Gas Stations/ Car Finance / Road side assistance / Showroom List / Road Emergency Alerts / News / Transportation).
4. After selecting buy the user shall be able to view all car information and the company/showroom offering it including all company/showroom information
5. The system shall provide all car information (price, model name, year,...) and all company/showroom information (name, location, number, ....) when user select buy
6. The user (customer) shall be able to add the car information and the user can also sell all cars that he/she sold or selling at the moment through history
7. After selecting Used Cars Price Prediction the user can search for used cars to find its price range,
8. The System shall provide minimum, average, maximum price prediction when user select used car price prediction
9. After selecting gas station the user can search for nearest gas stations by enabling location
10. The system shall provide the user with the nearest gas stations and shows distance in km after selecting gas station
11. After selecting car side assistance the user shall be able to view all assistance near him/her and emergency contacts after enabling location
12. The system shall provide all car assistances near user and their information and emergency contacts when user select car side assistance
13. After selecting road emergency alerts the user shall be able to view all road alerts near him/her by enabling location or enter a city to see its road alerts
14. The system shall provide all road alerts near user or in the city entered by user when user select road emergency alerts

15. After selecting news the user shall be able to see all car news and events, the user can also filter news to see news of one brand only
16. The system shall provide all car news and events or news of specific car brand when user select news
17. After selecting transportation the user shall be able to see all transportation companies, cars, information available and send a message to the company in order to complete transportation process
18. The system shall provide all transportation companies, cars, information available and send the user's message when user select transportation
19. After selecting add the user can add a car/equipment and fill its information in order to sell/rent it
20. The system shall upload car added by the user when user select add
21. After selecting edit the user shall be able to edit all cars/equipment he already uploaded
22. The system shall update all information user edited when user select edit
23. After selecting showroom list the user (customer) can search for Showrooms near him/her
24. the system gives the user the nearest Showrooms, shows distance in km, phone number and Showroom name after selecting showroom list
25. After selecting car finance the user shall enter installment period in months and price
26. The system shall provide a calculator to make user calculate car installments when selecting car finance
27. After selecting rent the user shall enter date to search for cars/equipment
28. The system shall display all available cars in the date entered by user and its information including (Price/hour, Showroom name, Location, distance in km{if he enabled the GPS}) when selecting rent

## **Non-Functional requirements:**

1. Security
  - This app provides user a system that is safe and protecting his data and personal information
  - The system also provides safe buy/sell/rent operations as system has personal information of both customer and provider (to prevent fraud)
  - The system also provides authenticated companies/showrooms/shops as the system checks their commercial number

- The app send a message each time you log in from different device in order to be more secure
2. Performance
    - The app has a great performance and quick responds to user interactions
  3. Usability
    - The system is easy to user with user friendly interface
    - The system saves user's data in order to make system easier to use for the user

## **System Rules:**

1. In sign up the system must check password contains of 8 characters at least including at least (1 uppercase character, 1 symbol, 2 numbers)
2. In sign up the system must check that the confirm password field is identical to enter password field
3. The system must check commercial registration number before accepting company/showroom/shop account.
4. The System must check that the user already logged in before using some system methods as (Maintenance, Rent, transportation, Road emergency alerts, sell, add, edit, Car Finance)
5. the system shall not be available outside the boundaries of applicable regions with the same driving rules and traffic rules and the car market (available countries: Egypt, Lebanon, Libya, Syria, Kuwait, Morocco, ....) .
6. in news department the system shall not send notifications before user enable notification
7. in sell department, in sell department and transportation department, The System must check that user already entered National ID, Identification card, passport photo and phone number
8. if user entered a wrong password or a wrong username 3 times, the system must send a warning message to account owner.
9. The system shall not check user login before using some system methods as (Showroom list, Car side assistance, news, Gas Station, used car price prediction, buy)
10. System must check that the user enabled location before using (gas station, road emergency alerts, road side assistance).
11. In sell department, the system must check that user filled all main fields before adding car to market
12. System shall not display unavailable cars in (rent, transportation)



13. System must verify account information before confirming sign up
14. System shall not provide unavailable/other country emergency numbers
15. System must provide car prices in country currency
16. System must provide sold out cars to user in buy only
17. In buy department, the system must provide exact time of offer(sale) offered by the company
18. System shall not allow user to add exact same car twice in sell option

### System service:

Service Name	Service Functions	Service Operations
1- Registration	This function allow user to log in / sign up Incase of sign up each kind of user should enter different kind of information	<ol style="list-style-type: none"> <li>1- void customerSignUp (string email, string password, String name, int ID, Object Photo, int phoneNumber, int confirmation) <ul style="list-style-type: none"> <li>▪ Void customerLogIn(string email, string password)</li> </ul> </li> <li>2- void companySignUp (string ITName, string CompanyName, string CompanyFounderName, Object photo, string IntroductionAboutCompany, string email, Object logo, object website, object Location) <ul style="list-style-type: none"> <li>▪ Void company&amp;CarShowroom&amp;Shop login(int ID, string password)</li> </ul> </li> <li>3- void CarShowroomSignUp(String showroom'sEmail, int CommercialRegistrationNum, String Password, String ownerName, String Location, String Website, Object Logo)</li> <li>4- Void ShopSignUp(int CommercialRegistrationNo, Object Email, String Password, int NationalID/Passport, String ShopName, String Location, String Website/SocialMediaPages, Object Logo, int PhoneNumber)</li> </ol>
2- Verification	This function checks all the information entered by user in sign up then sends verification message to	<ol style="list-style-type: none"> <li>1- Boolean checkUserInfo(Object info) <ul style="list-style-type: none"> <li>▪ void ForgetPassword/ID (String the email, int CommercialRegistrationNum)</li> <li>▪ Int verificationMessage(String email, int phoneNumber)</li> </ul> </li> </ol>

	complete sign up	
3- Buy	This function controls all buying information of used and new cars and who sells them nearest to you	1- String ChooseNewOrUsed(string type) 4- String selectCarLogo (String brand) <ul style="list-style-type: none"> <li>▪ String displayCarInfo()</li> <li>▪ String showNearestShowroom/Company(Object Location)</li> </ul>
5- Sell	This function controls all selling information of used and new cars and can edit car price after uploading it	1- Void fillCarInformation(object photos, string brand , string city , string model, int year, string modelName, double price, string transmissionType, string bodyType, string fuelType, int km) 2- Void editCarPrice (Float price) 6- Public string viewAllPreviousCars();
7- Used cars price prediction	This function analyze all market prices of the used car with specific model and gives you a price range	1-int findPrice(string Carmodel,int year) <ul style="list-style-type: none"> <li>▪ Float analyzeMarketPrices(string Carmodel,int year, Object market)</li> </ul>
8- Rent	This function will show you all available cars of the type you select and in the date you enter	1-Void rentDate/Type(string startDate, string endDate, string carType)
9- Maintenance	This function will show you all the available maintenance service near you and will also display all previous maintenance information	1- String nearestMaintenanceShops ( object location) 2- String getMaintenanceHistory ( )

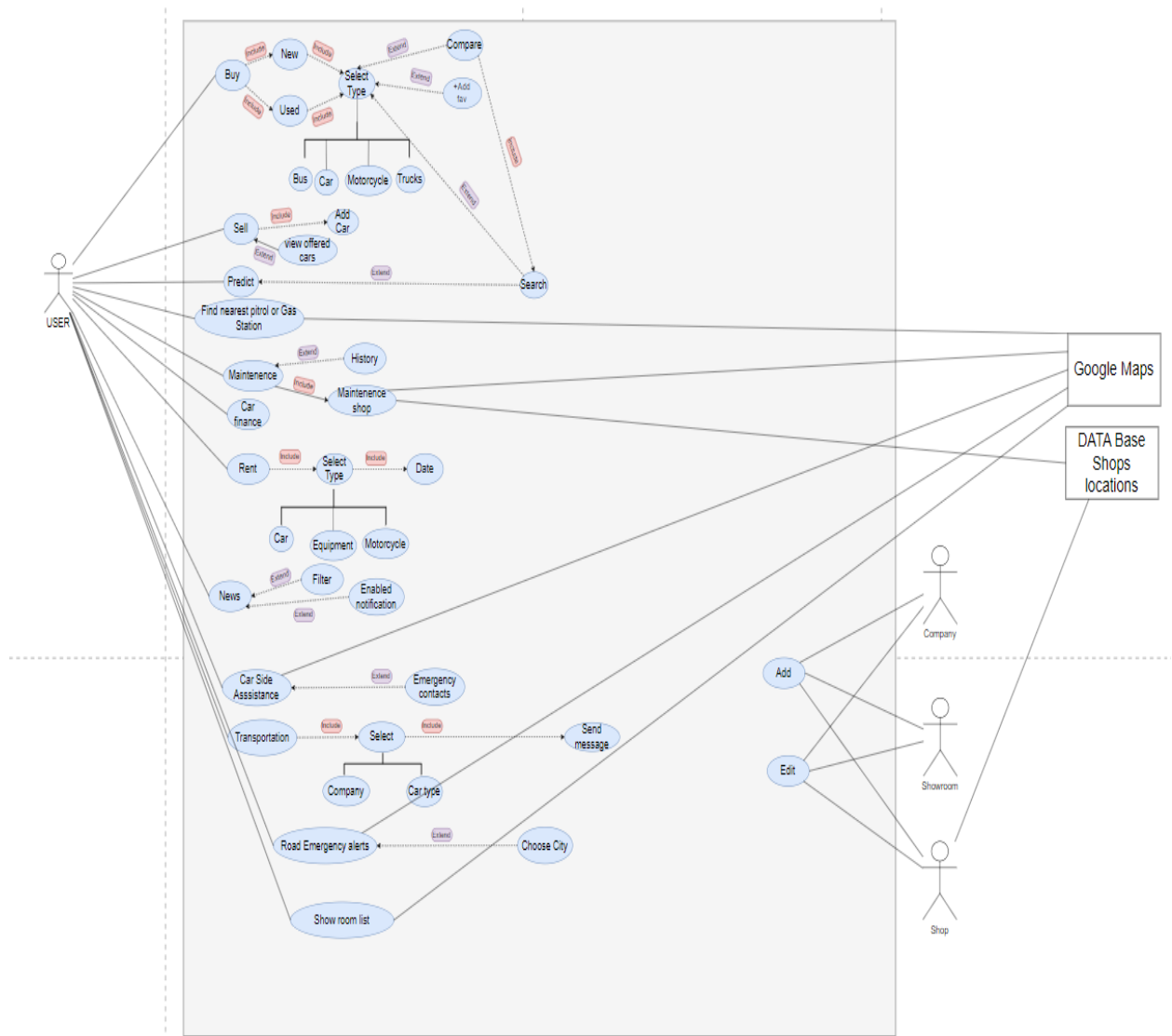
10- Gas station	This function will show you all the available gas stations near you and will also display all kinds of fuel there	1- int nearestGasStation(object location) 2-String getFuelKinds ( )
11- Car finance	This function works as a calculator to help you know how much many you will pay monthly depending on price, how many months	1- Float calculator (float carPrice, int months)
12- Car side assistance	This function in case of emergency can help you by showing car assistances near you and all emergency numbers	1- String nearestCarAssistances(object location) 2- int getCarAssistanceNumbers ( ) 3- String getEmergencyNumbers ( )
13- Showroom list	This function will show you all show rooms available near you and their information	1- String nearestShowRooms(object location) 2- Object getShowRoomInformation ( )
14- Road emergency alerts	This function will show you any closed road by analyzing all road news	1- String anyRoadAlerts (string city) ▪ String roadAnalysis(String city, String news) 2- String anyRoadAlertsNearMe(Object location) ▪ String roadAnalysisByLocation(Object location, String news)
15- News	This function will show you all car news of all cars or	1- Boolean enableNotificationMessage(Boolean enable) 2- String showAllCarNews (Boolean enableNotificationMessage) 3- String filterNews(String brands)

	selected brands only	
16- Transportation		1- String nearestTransportationCompanies (object location ) 2- String getAllTypesOfCarsOffered( string companyName) 3- String getAllCarsDetails(string carType) 4- Void detailsOfTransportation( string packageType, double priceOffer, string date, string timeOfPackaging, object locationOfPackaging)
17- Add		1- Void companyAdd (String Type, Object Photos, Object Brand, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo) 2- Void ShowroomAdd (String Type, Object Photos, Object Brand, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo) ▪ Void showroomLocation (Object Location) 3- Void TransportationAdd (String Type, Object Photos, Object Brand, int Model_year, String Model_Name, Object weight_in_kg, int price/kg, int price/km, Object carInfo) 4- Void ShopAdd (String Type, Object Photos, Object Brand, String Model_year, String Model_Name, Object equipmentInfo)
18- Edit		1- Void companyEdit(String Type, Object Photos, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo) ▪ Void changeCarPrice(int price) 2- Void ShowroomEdit (String Type, Object Photos, int Model_year, String Model_name, int Price, Object Transmission_type, Object BodyType, Object FuelType, Object carInfo) ▪ Void editShowroomLocation (Object Location) ▪ Void changeCarPrice(int price) 3- Void Transportationedit (Object weight_in_kg, int price/kg, int price/km, Object carInfo) 4- Void ShopEdit (String Type, Object Photos, Object Brand, String Model_year, String Model_Name, Object equipmentInfo)

## Use-case diagram:

- If the photo is not clear here is a google drive link of the diagram on draw io

[https://drive.google.com/drive/folders/1qzgh92JzIGx9Lct7dB\\_oLsJYX1ztCQde?usp=share\\_link](https://drive.google.com/drive/folders/1qzgh92JzIGx9Lct7dB_oLsJYX1ztCQde?usp=share_link)



## Use-case Assumptions:

1. Add to favorite: if the user like any car he can add it to favorite option
2. Google maps: if the user want to know what the nearest gas station, showrooms, car side assistance, maintenance shops and road emergency

alerts he can put his location or enable location then google maps will display the nearest (gas station, ....)

3. Shops location: when any shop will log in then the system will asks him to enter his location, assuming that his location is not registered on google maps
4. Shops location (user): when the user wants to know what the nearest maintenance shops and google maps doesn't display any nearest locations then he can select shops locations it will display all nearest shops that is not registered on google maps
5. add: The company can add cars and enter their information, the showroom must select car condition (New, Used, Imported) then can add cars, the shop can add all car equipment
6. Predict: the user can search by car model and year then the system will predict its price range by comparing cars that has a similar model
7. Edit (company-showroom-shop): the company can edit details of uploaded cars or add new features, the showroom can edit the new, used and imported cars and their details and can edit car form from sell to rent or vice versa, the shop can edit details of all equipment or edit details of equipment that has been rented

## Use-case description:

1.

<b>Use case:</b>	Buy
<b>Goal and context:</b>	This use case allow user to: <ul style="list-style-type: none"> <li>▪ Buy new or used cars, Motorcycle, trucks and buses</li> <li>▪ To see all car details and company/showrooms offering it</li> </ul>
<b>Preconditions:</b>	The system must be fully configured, Appropriate user name, Password must be Obtained
<b>Success End condition:</b>	The user successfully bought the car
<b>Primary Actor:</b>	User
<b>Secondary Actors:</b>	System Service
<b>Trigger:</b>	The user login to the system and wants to buy items

2.

<b>Use case:</b>	Sell
<b>Goal and context:</b>	This use case allow user to: <ul style="list-style-type: none"> <li>▪ Sell a car.</li> </ul>

	<ul style="list-style-type: none"> <li>Also view all previous cars that he/she sold or selling at that time</li> </ul>
<b>Preconditions:</b>	The system must be fully configured, Appropriate user name, Password must be Obtained, user must choose a selling method, the user must fill all car information.
<b>Success End condition:</b>	The user successfully sold his/her car
<b>Primary Actor:</b>	User
<b>Secondary Actors:</b>	System Service
<b>Trigger:</b>	The user wants to sell his/her a car

3.

<b>Use case:</b>	Maintenance
<b>Goal and context:</b>	<p>This use case allow user to:</p> <ul style="list-style-type: none"> <li>see history maintenance list and the date of maintenance occurred and type of maintenance</li> <li>show list of maintenance shops, services types, locations and contacts number</li> <li>see all maintenance shop near him/her if user enable location</li> </ul>
<b>Preconditions:</b>	The system must be fully configured, Appropriate user name, Password must be Obtained, user must enable location, user must choose maintenance method.
<b>Success End condition:</b>	User
<b>Primary Actor:</b>	System service
<b>Secondary Actors:</b>	The user successfully saw maintenance shops list, maintenance history list.
<b>Trigger:</b>	The user wants to see available maintenance shops and maintenance history

4.

<b>Use case:</b>	predict
<b>Goal and context:</b>	This use case allow user to enter car model and the system will display all price prediction (minimum, average, maximum) price of the used car
<b>Preconditions:</b>	The system must be fully configured, appropriate user name and password must be obtained, the user must enter car model name

<b>Success End condition:</b>	The system successfully will show all price predictions of the car
<b>Primary Actor:</b>	user
<b>Secondary Actors:</b>	System service
<b>Trigger:</b>	The user wants to know the price range of a used car

## Test requirements:

1. Validate the system (cars/motorcycles / trucks / buses) that displayed aren't sold
  - Validate when the user chooses new (cars/motorcycles / trucks / buses) the system will display only new items not used and vice versa
  - Validate when the user selects logo, the system will display all cars that have that logo only
2. Validate that all car information is obtained
  - Validate that all information fields are filled with right format of each field
  - Validate that main information fields of the car (like model, price, photos, ...) aren't null
  - Validate that the selling option is selected
  - Validate that history displayed in selling history should be relevant to logged in user only
3. Validate that the history list will display the right maintenance date
  - Validate that the system will display the maintenance shop name correctly
  - Validate that the system will display the clear repair type
  - Validate that the system will display the clear type of parts
  - Validate that the system display purchased for repair
  - Validate that the list of maintenance shops are clear
  - Validate that all search keyword / filters should get cleared
4. Validate that the system will display correct prediction for entered model
  - Validate that the system will display minimum, average, maximum price correctly
  - Validate the system will display all model years with the price prediction of every model year of the entered model correctly
  - Validate that if the user enters an invalid word then no prediction should be displayed
  - Validate the user can sort model years in an ascending and descending order



## Use-case scenarios:

### 1. Use Case: Buy

#### ▪ Actor Intentions

1. The application open and choose customer.
2. Select Buy from the list.
3. Selected New or used
5. You can choose Cars or Motorcycle or Trucks or Buses whatever you want to buy
6. Select a brand
8. select a car
10. You can search by price and compare cars by using search bar
12. User enable location

#### ▪ System Responsibility

4. The system will display options: New or used
7. The system will display all cars of this brand
9. The system will display all information of selected car including: Owners reviews, Market perception, details {will show other editions differences}, Performance {motor, speed, transmission, origin, traction type, ...}
11. The system will display car comparison in a table format
13. The user can search for the nearest car showrooms/company's agent and showing the actual distance in km.

#### ▪ Alternative Courses

1. Step 12: Failure to determine user location
2. Step 13: Failure to find company/showroom location of selected car as it is unavailable/sold out

### 2. Use Case: Sell

#### ▪ Actor Intentions

1. The application open and choose customer.
2. Enter email and password if you already have an account, else click sign up to make account.
3. Select Sell from the list.
5. The user should fill all car information (photos, Brand, Model Name, ....)
6. The user should confirm selling by clicking on sell my car

7.The user can select a view history option

- **System Responsibility**

4. system will display adding part

8.system will display all previous cars that he/she sold or selling at that time

- **Alternative Courses**

1. Step 6: Failure to complete selling as the user hasn't filled all information fields or filled it with the incorrect format of each field
2. Step 8: Failure to find user history

### 3. Use Case: Road emergency alerts

- **Actor Intentions**

1. The application open and choose customer.
2. Select Road emergency alerts from the list.
3. The user should enable their location
5. The user can also enter a city to search for alerts in it

- **System Responsibility**

4. The system will display all road alerts near user location
- 6.The system will display all road alerts in the entered city

- **Alternative Courses**

1. Step 3: Failure to determine user location
2. Step 5: Failure to find entered city

### 4.Use Case: Car side assistance

- **Actor Intentions**

1. The application open and choose customer.
2. Select Car side assistance from the list.
3. The user should enable their location
- 5.The user should select an assistance
- 7.User can also select emergency numbers

- **System Responsibility**

- 4.The system will display all car assistances near the user location

6.The system will display all information including assistance number, exact location

8.The system will display all emergency numbers

- **Alternative Courses**

1. Step 3: Failure to determine user location
2. Step 8: Failure to display emergency numbers

## 5. Use Case: News

- **Actor Intentions**

1. The application open and choose customer.
2. Select News from the list.
4. The user can select a car brand

- **System Responsibility**

- 3.The system will display all car news and events nationally and internationally
- 5.The system will display all car news and events nationally and internationally of this brand only

- **Alternative Courses**

1. Step 5: Failure to display news of selected brand

## 6.Use Case: Rent

- **Actor Intentions**

1. The application open and choose customer.
2. Select Rent from the list.
4. The user should select the type of the rent (cars, motorcycles, equipment)
5. The user should select a logo from the brands displayed.
6. The user should enter the start and end date of the rent.
8. The user should select a car

- **System Responsibility**

3. System will show all types of (cars, motorcycles, equipment)

7. The system will display all (cars, motorcycles, and equipment) available for rent at the time entered by the user

9. The system will display all information of selected car

▪ **Alternative Courses**

1. Step 5: Failure to display cars as the user doesn't select a logo from the brands displayed or selected a logo that doesn't exist for renting
2. Step 6: Failure to display cars as the user doesn't enter start and end date of the rent or entered a wrong date
3. Step 9: Failure to display cars as the user select a (cars, motorcycles, equipment) not available for rent at that time

**7. Use Case: Car finance**

▪ **Actor Intentions**

1. The application open and choose customer.
2. Select Car finance from the list.
4. The user should enter the price
5. The user should enter installment period in month

▪ **System Responsibility**

3. The system will display a calculator to calculate car installments
6. The system will display amount of installment/month

▪ **Alternative Courses**

1. Step 4: Failure to display amount of installment/month as the user doesn't enter the price
2. Step 5: Failure to display amount of installment/month as the user entered installment period in wrong format

**8. Use Case: Transportation**

▪ **Actor Intentions**

1. The application open and choose customer.

2. Enter email and password if you already have an account, else click sign up to make account.
3. Select Transportation from the list.
4. The user should enable location
6. The user should select an appropriate company
9. The user should select a car
11. The user should send a message to the company including (package type, price offer, date, ...)

- **System Responsibility**

5. The system will display all transportation companies (from nearest to farthest)
7. The system will display all types of cars offered by the company
8. The system will display all car types offered by company
10. The system will display all car details
12. The system will send user message to the company

- **Alternative Courses**

1. Step 4: Failure to display nearest companies and types of cars as the user doesn't enter the location
2. Step 11: Failure of completing transportation process as the user doesn't send a message to the company

## 9. Use Case: Maintenance

- **Actor Intentions**

1. The application open and choose customer.
2. Enter email and password if you already have an account, else click sign up to make account.
3. Select Maintenance from the list.
4. Enable location
6. Select history to see previous maintenance

- **System Responsibility**

5. System will display all nearest maintenance shops in km by using location

7. The system will display all maintenance history

▪ **Alternative Courses**

1. Step 4: Failure to display nearest companies and types of maintenance as the user doesn't enter the location

**10. Use Case: Gas station**

▪ **Actor Intentions**

1. The application open and choose customer.
2. Select Gas station from the list.
3. Enable location

5. Select a gas station

▪ **System Responsibility**

4. The application has a lot of gas stations' location so the system will display all nearest gas stations in km by using location
6. The system will display all fuel kinds available

▪ **Alternative Courses**

1. Step 4: Failure of displaying nearest gas stations as the location is turned off

**11. Use Case: Used Cars Price Prediction**

▪ **Actor Intentions**

1. The application open and choose customer.
2. Select Used Cars Price Prediction from the list.
3. Enter car name (model)

▪ **System Responsibility**

4. The system will display all price range of the entered car
5. The system will display all prices of model years
6. The system will display minimum, maximum, average price of the model

▪ **Alternative Courses**

1. Step 4: Failure of displaying prediction as user entered an unavailable model

#### 14. Use Case: Showroom list

- **Actor Intentions**

1. Enter The application open and choose customer.
2. Select Showroom list from the list
3. the user must add his location

- **System Responsibility**

4. The system will show all showrooms available near user, and there information

- **Alternative Courses**

1. Step 4: Failure of displaying showrooms near user as the user didn't enter location

#### 13. Use Case: Add

- **Actor Intentions**

1. The application open and choose company/showroom/shop.
2. Enter email and password if you already have an account, else click sign up to make account.
3. Select Add from the list
6. Company: can add a new car including all car details: photos, car features, car performance and price.
7. Showroom: can add a new car or used car or an imported car including all car details: photos, car features, car performance, price, km (for used car and imported car only), possibility of installment.
8. Shop: can add a new product and its details, his price, photos for product and a user manual.
9. Confirm adding

- **System Responsibility**

4. Validate company or showroom or shop register number.
5. System Shows car brand for the company or showroom logo or shop name.

10. System accept new uploaded (car details, photos, features, performance, price).

▪ **Alternative Courses**

1. Step 10: Add process can Fail in case of that the internet disconnected
2. Step 4: Add process can fail in case of the register number for the company or showroom or shop are not true.

#### 14. Use Case: Edit

▪ **Actor Intentions**

1. Enter The application open and choose company/showroom/shop.
2. Enter email and password if you already have an account, else click sign up to make account.
3. Select Edit from the list
5. Company: can edit the uploaded cars, edit details, photos, car features, car performance, model and price.
6. Showroom: can edit the uploaded cars (new cars, used cars or imported car) details as photos, car features, car performance, price, Km (for used car and imported car only) and possibility of installment.
7. Shop) can edit the uploaded product and its details, price, photos and the user manual.
8. Confirm editing

▪ **System Responsibility**

4. Validate company or showroom or shop register number.
5. System Shows car brand for the company or showroom logo or shop name.
9. System accept edit From Company/Showroom/Shop indifferent details

▪ **Alternative Courses**

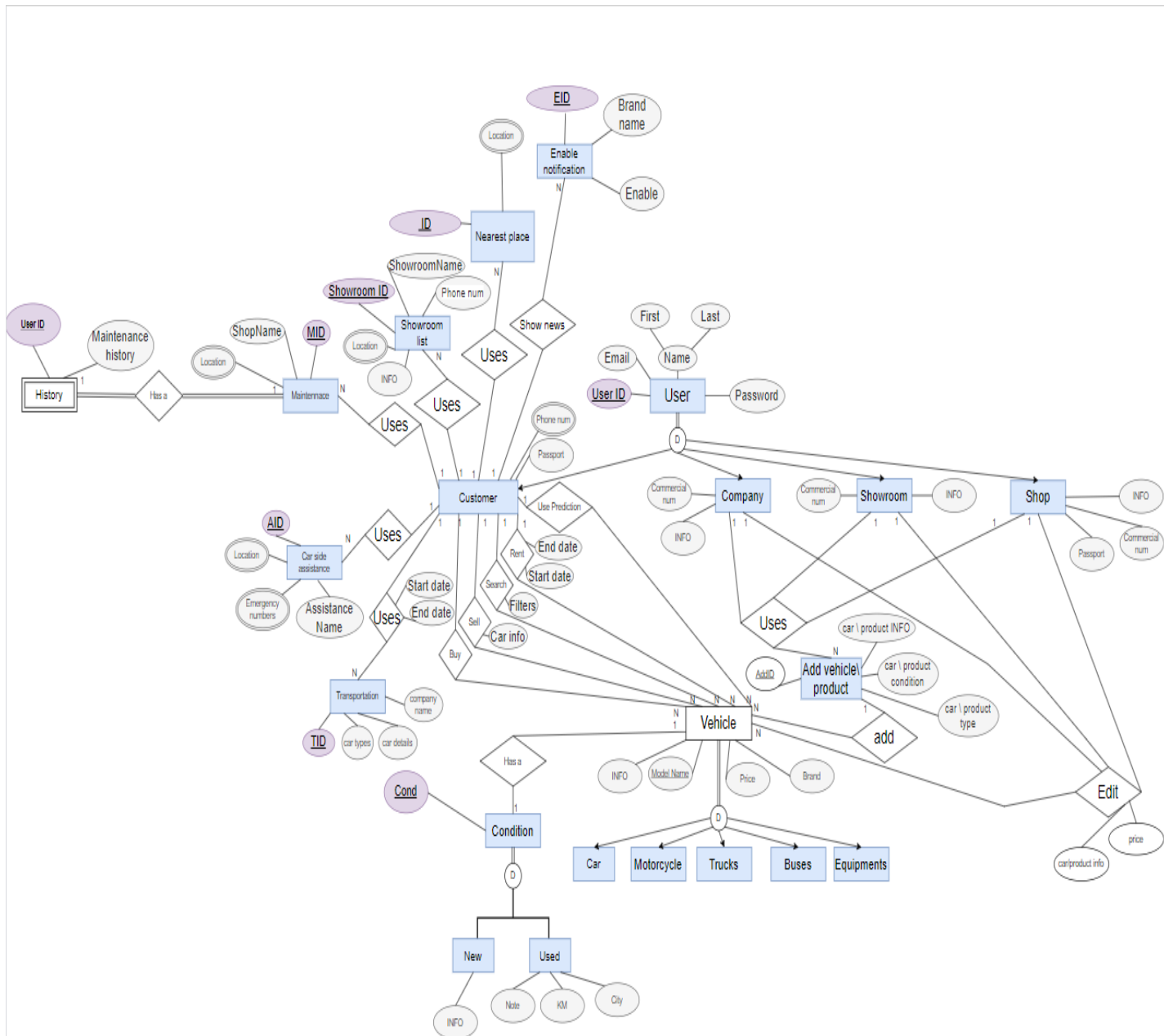
1. Step 9: Edit process can Fail in case of that the internet disconnected
2. Step 4: Can Fail in case of the register number for the company or showroom or shop are not true.



## EERD:

- A link for the EERD on drive for better quality

[https://drive.google.com/file/d/1IM30I-jRKhcJ9\\_qVNzo3ONNDYv7dLIk3/view?usp=sharing](https://drive.google.com/file/d/1IM30I-jRKhcJ9_qVNzo3ONNDYv7dLIk3/view?usp=sharing)



## EERD Description

- The database of the application is sorted by the user's name, password, password and ID.
- In this application, users must be customers, companies, showrooms, or shops.

### Customer:

- The user must enter his or her phone number and passport.
- The user can use prediction for one or more vehicles, but only one vehicle can be used for prediction by one customer.
- The customer can rent a vehicle, and the customer must enter an end date and a start date. A customer can rent many vehicles, but the vehicle cannot be rented by more than one customer at the same time.
- The customer can search for vehicles and filter them to show vehicles that have the logo we want.
- The customer can sell more than one vehicle at the same time and must enter all the vehicle information.
- The customer can buy more than one vehicle at the same time.
- The customer can transport cars by entering the start date, end date, car type, company name, and car details.
- The application has a benefit called car-side assistance. It is only available to customers. It saves a lot of emergency numbers and locations.
- The application has a benefit called Gas Station and Petrol Station. It saves a lot of station locations.
- The application has a benefit called "Showroom." It saves a lot of showroom locations, information, names, phone numbers, and IDS.
- The application has a benefit called "road emergency alert." It helps you if you are in an emergency; it alerts you.
- The application has a benefit called enable notification. It helps you get notifications from your favourite brand.
- The application has a benefit called maintenance. It saves shop names, locations, and maintenance history.

### Company:

- The user must enter some information and a commercial number.

- The user can add vehicles and products. The user can add product information, product condition, and product type.
- The user can edit vehicles and products. The user can edit the model name, this information, and the price.
- Every vehicle has a price, brand, information, and model name. The model name is the primary key. Vehicles have many types, like cars, motorcycles, trucks, buses, and equipment.
- This application has new and used vehicles.
- Every vehicle and product must be edited or added by only one shop, but one shop can add and edit many vehicles and products.

### **Showroom:**

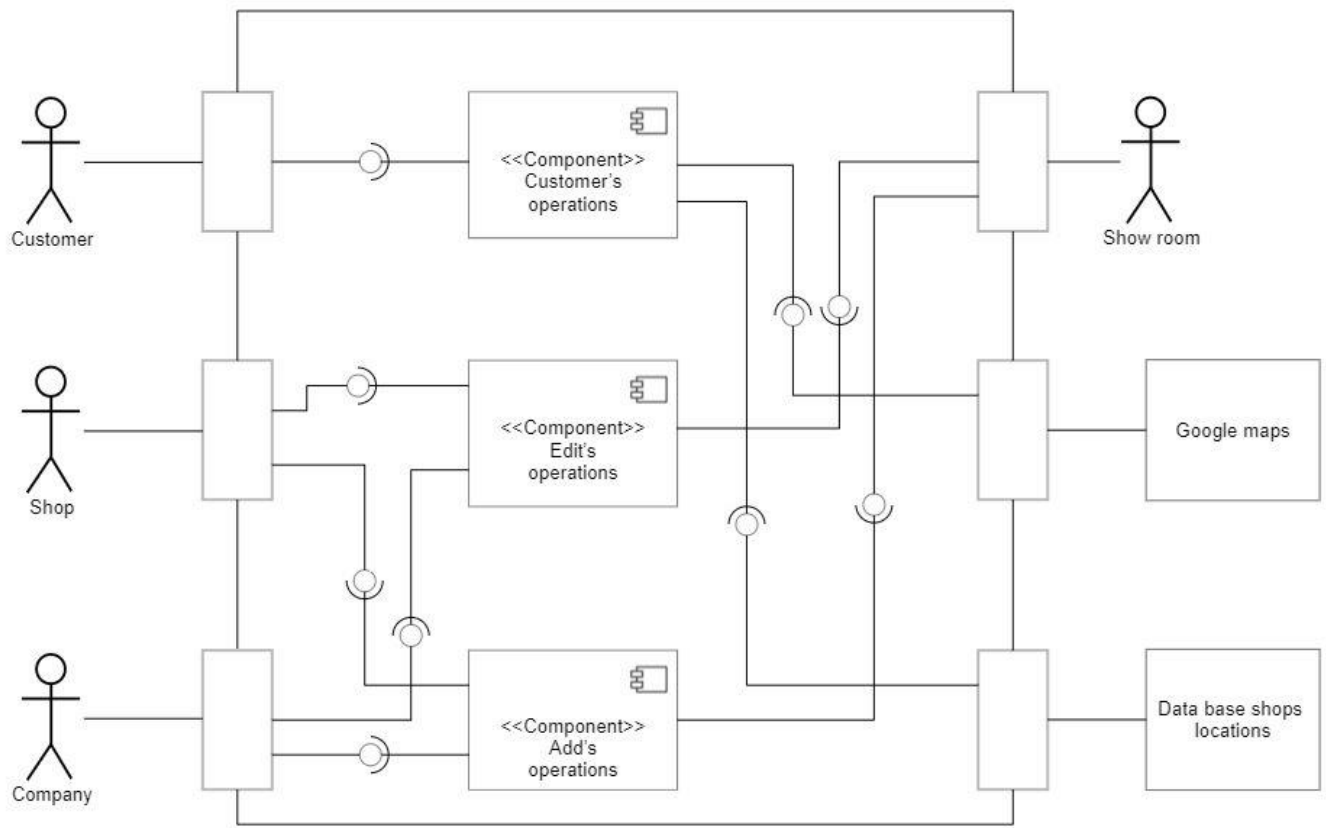
- The user must enter some information and a commercial number.
- The user can add vehicles and products. The user can add product information, product condition, and product type.
- The user can edit vehicles and products. The user can edit the model name, this information, and the price.
- Every vehicle has a price, brand, information, and model name. The model name is the primary key. Vehicles have many types, like cars, motorcycles, trucks, buses, and equipment.
- This application has new and used vehicles.
- Every vehicle and product must be edited or added by only one shop, but one shop can add and edit many vehicles and products.

### **Shop:**

- The user must enter some information, including a commercial number and passport.
- The user can add vehicles and products. The user can add product information, product condition, and product type.
- The user can edit vehicles and products. The user can edit the model name, this information, and the price.
- Every vehicle has a price, brand, information, and model name. The model name is the primary key. Vehicles have many types, like cars, motorcycles, trucks, buses, and equipment.
- This application has new and used vehicles.

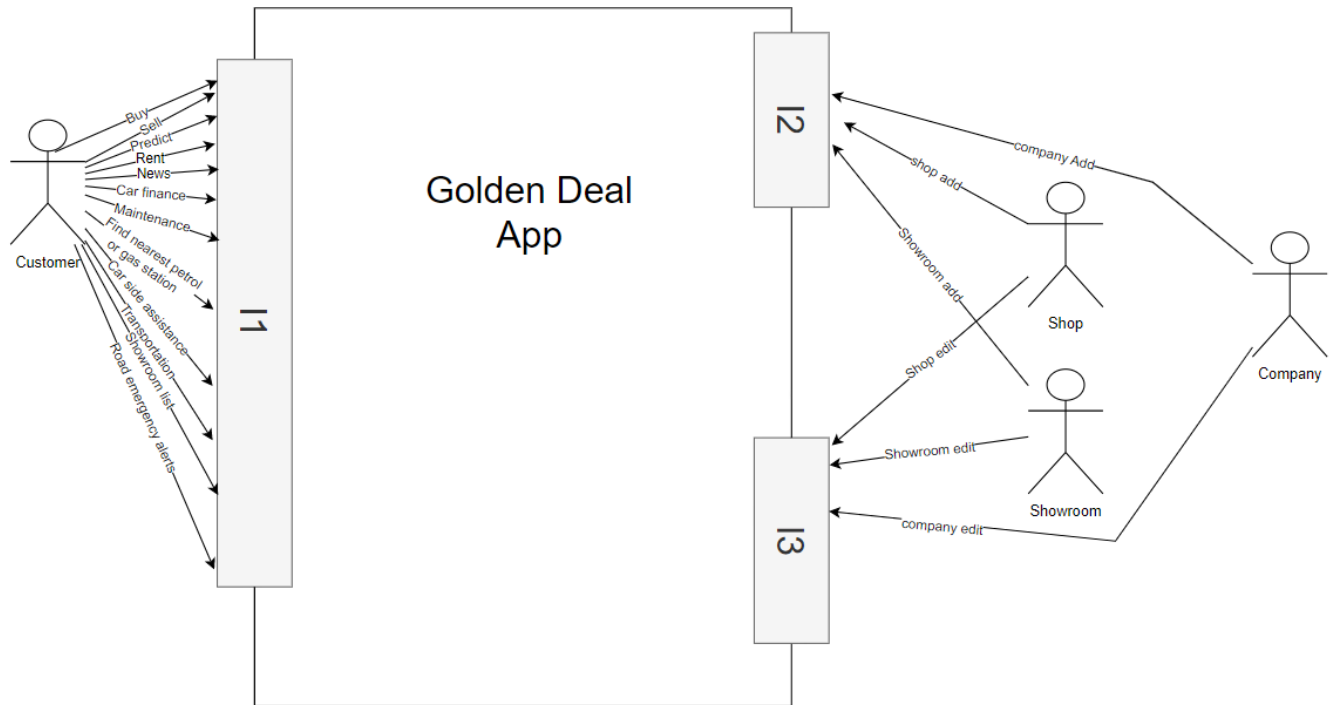
- Every vehicle and product must be edited or added by only one shop, but one shop can add and edit many vehicles and products.

### Component Diagram:

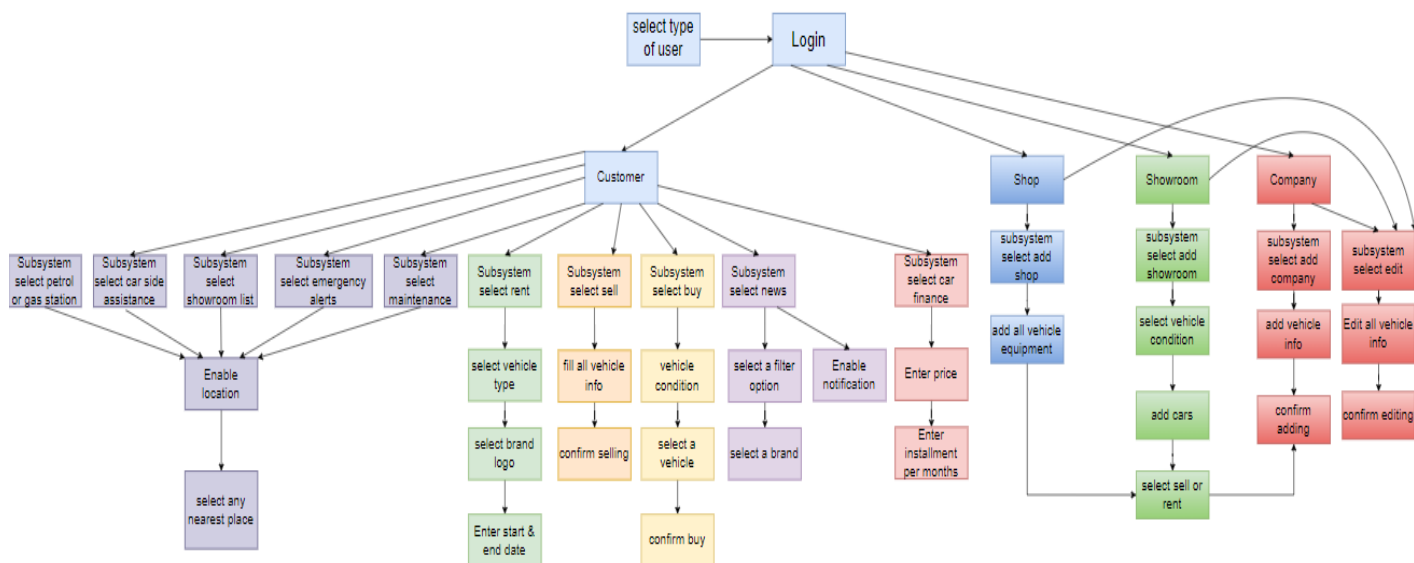


## Architecture models:

### ACD:



### Pipeline Architecture:



## Interfaces definitions:

### 1. interface 1: customer's operations

- \* public String buy (object carlogo, String newOrUsed)
- \* public void sell (object photos, string brand , string city , string model, int year, string modelName, double price, string transmissionType, string bodyType, string fuelType, int km)
- \* public String predict(String carModelName, String year)
- \* public String rent (String startDate, String endDate):String
- \* public String News (String enable)
- \* public float carFinance( int months, float price)
- \* public String Maintenance(Object Location)
- \* public String gasStation (Object Location)
- \* public String carSideAssistance(Object Location)
- \* public String roadEmergencyAlerts((Object Location)
- \* public String Transportation (String carType, String CompanyName)
- \* public String showroomList(Object Location)

### 2. interface 2 : Add

- \* public void showroomAddcars(object car)
- \* public void shopAddEquipment(object equ)
- \* public void CompanyAddcars(object car)

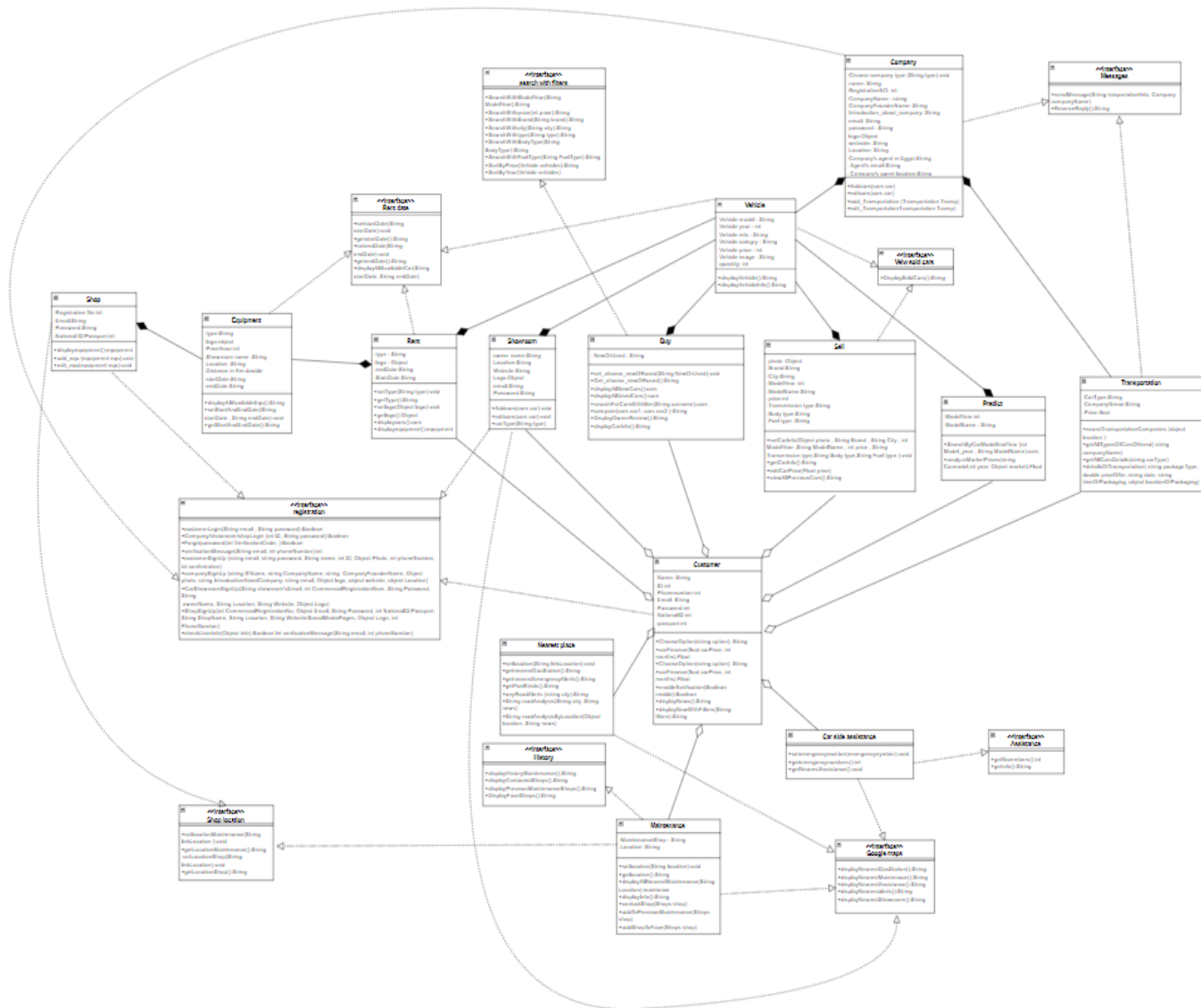
### 3. interface 3 : Edit

- \* public void showroomEditcars(object car)
- \* public void shopEditEquipment(object equ)
- \* public void CompanyEditcars(object car)

## Class Diagram:

- a link for the class diagram on draw.io for better quality

[https://drive.google.com/file/d/1AggDqhEq\\_IN\\_uFGefyrfbMJTjGM5vUpH/view?usp=sharing](https://drive.google.com/file/d/1AggDqhEq_IN_uFGefyrfbMJTjGM5vUpH/view?usp=sharing)



## Modeling Matrix:

## Use cases

Buy = A	Sell = B	Predict = C
Find nearest pitrol or Gas Station = D	Maintenance = E	Car finance = F
Rent = G	News = H	Car side assistance= I

Transportation= J	Road emergency alerts= K	Showroom list = L
Add = M	Edit = N	

## Classes

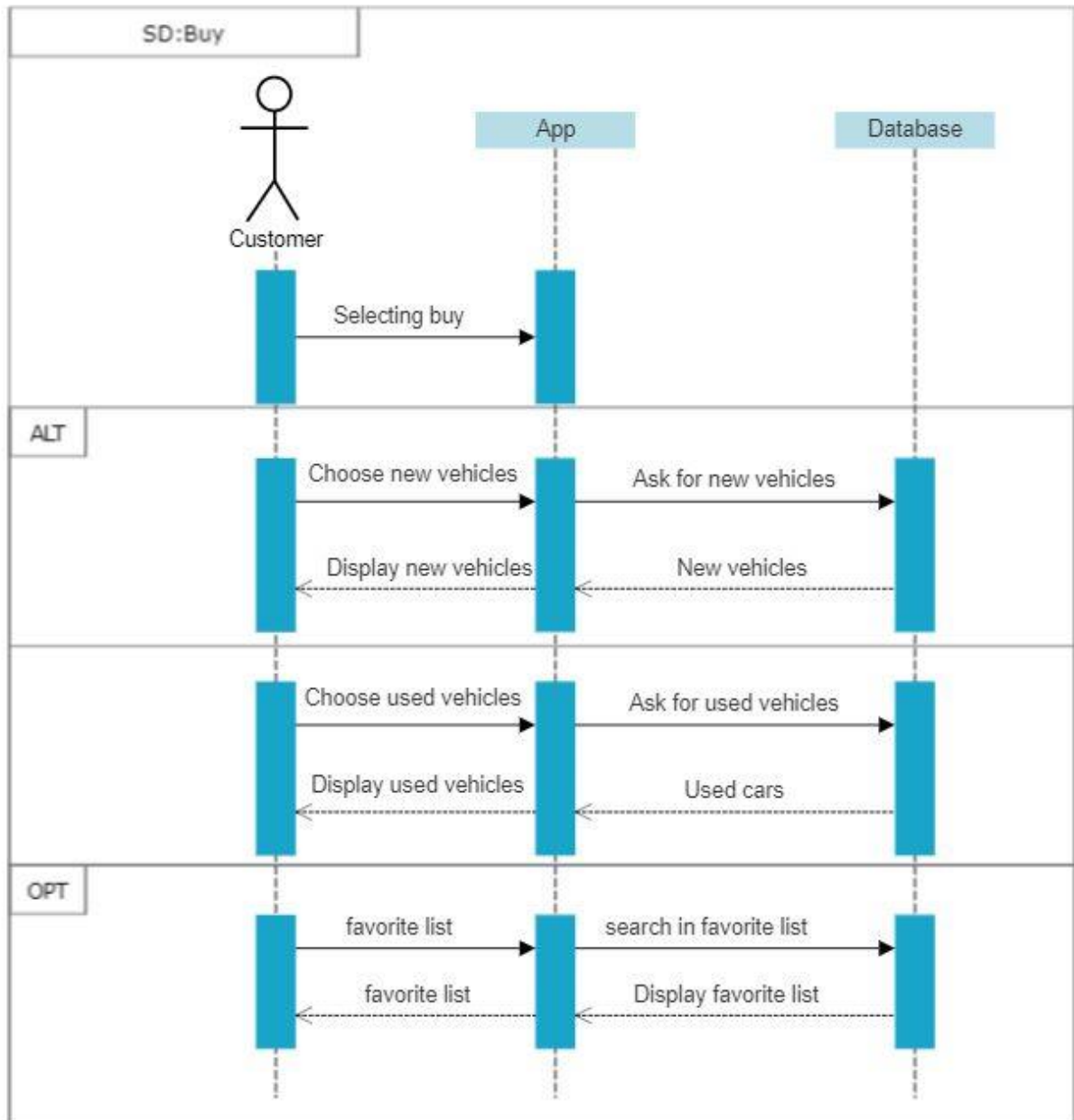
Customer = 1	Shop = 2	Showroom = 3
Company = 4	Vehicle = 5	Buy =6
Sell =7	Predict = 8	Rent = 9
Maintenance= 10	Nearest places= 11	Car side assistance=12
Equipment =13	Transportation=14	

	A	B	C	D	E	F	G	H	I	J	K	L	M	N
<b>1</b>	1	1	1	1	1	1	1	1	1	1	1	1	0	0
<b>2</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	1
<b>3</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	1
<b>4</b>	0	0	0	0	0	0	0	0	0	0	0	0	1	1
<b>5</b>	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<b>6</b>	1	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>7</b>	0	1	0	0	0	0	0	0	0	0	0	0	0	0
<b>8</b>	0	0	1	0	0	0	0	0	0	0	0	0	0	0
<b>9</b>	0	0	0	0	0	0	1	0	0	0	0	0	0	0
<b>10</b>	0	0	0	0	1	0	0	0	0	0	0	0	0	0
<b>11</b>	0	0	0	1	0	0	0	0	0	0	1	0	0	0
<b>12</b>	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<b>13</b>	1	1	0	0	0	0	1	0	0	0	0	0	1	1
<b>14</b>	0	0	0	0	0	0	0	0	0	1	0	0	0	0

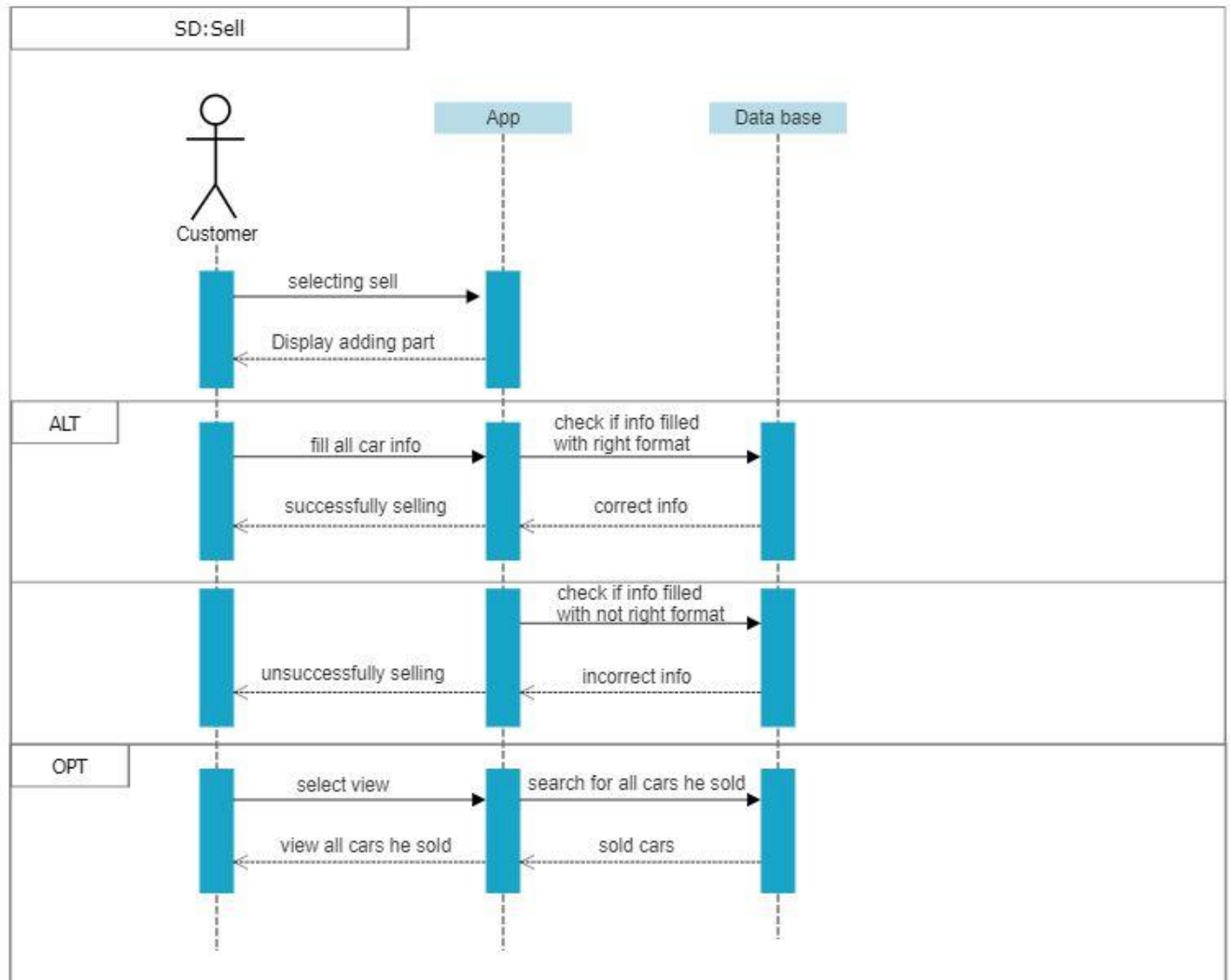


## Sequence diagram:

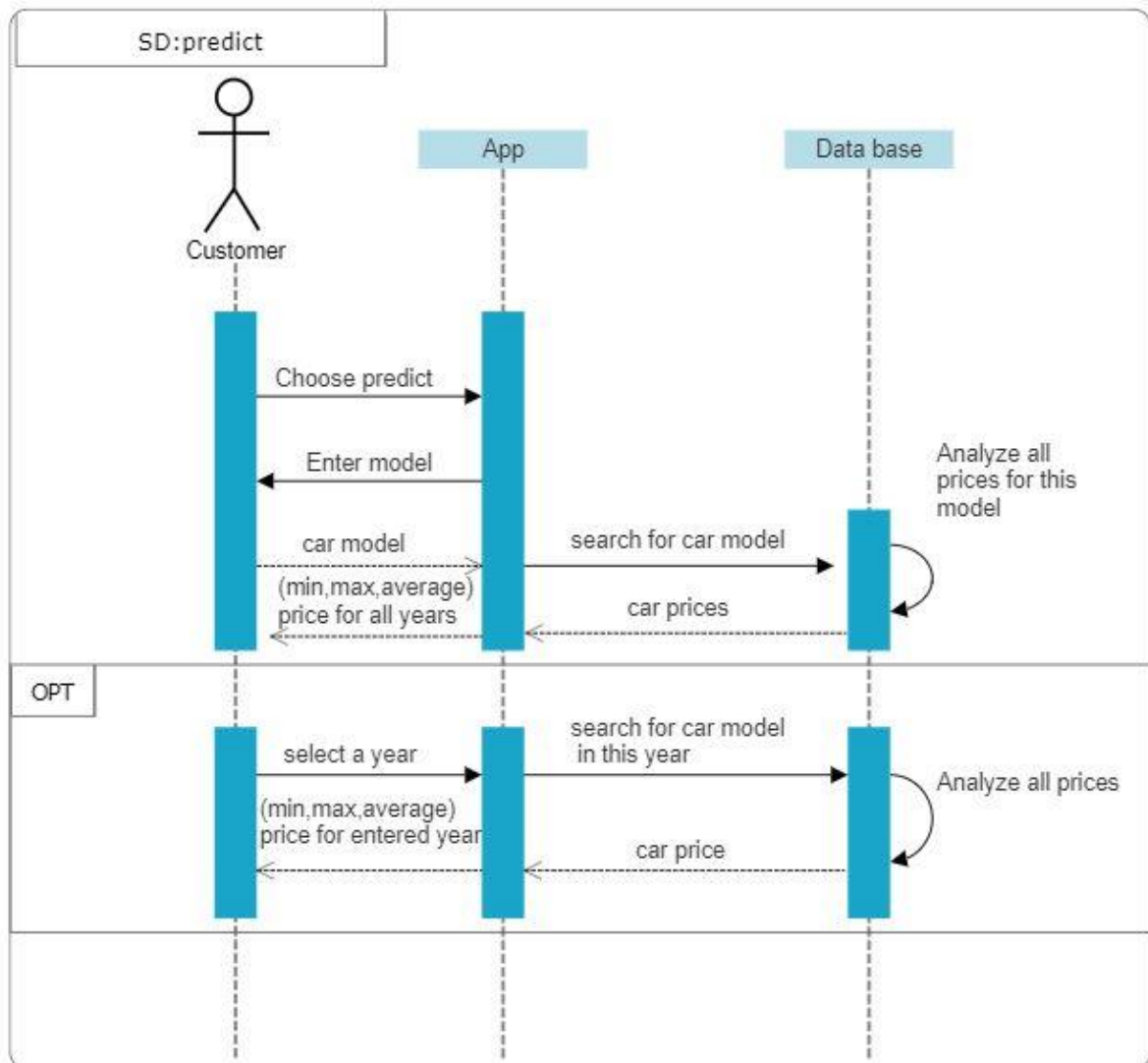
### 1. Buy



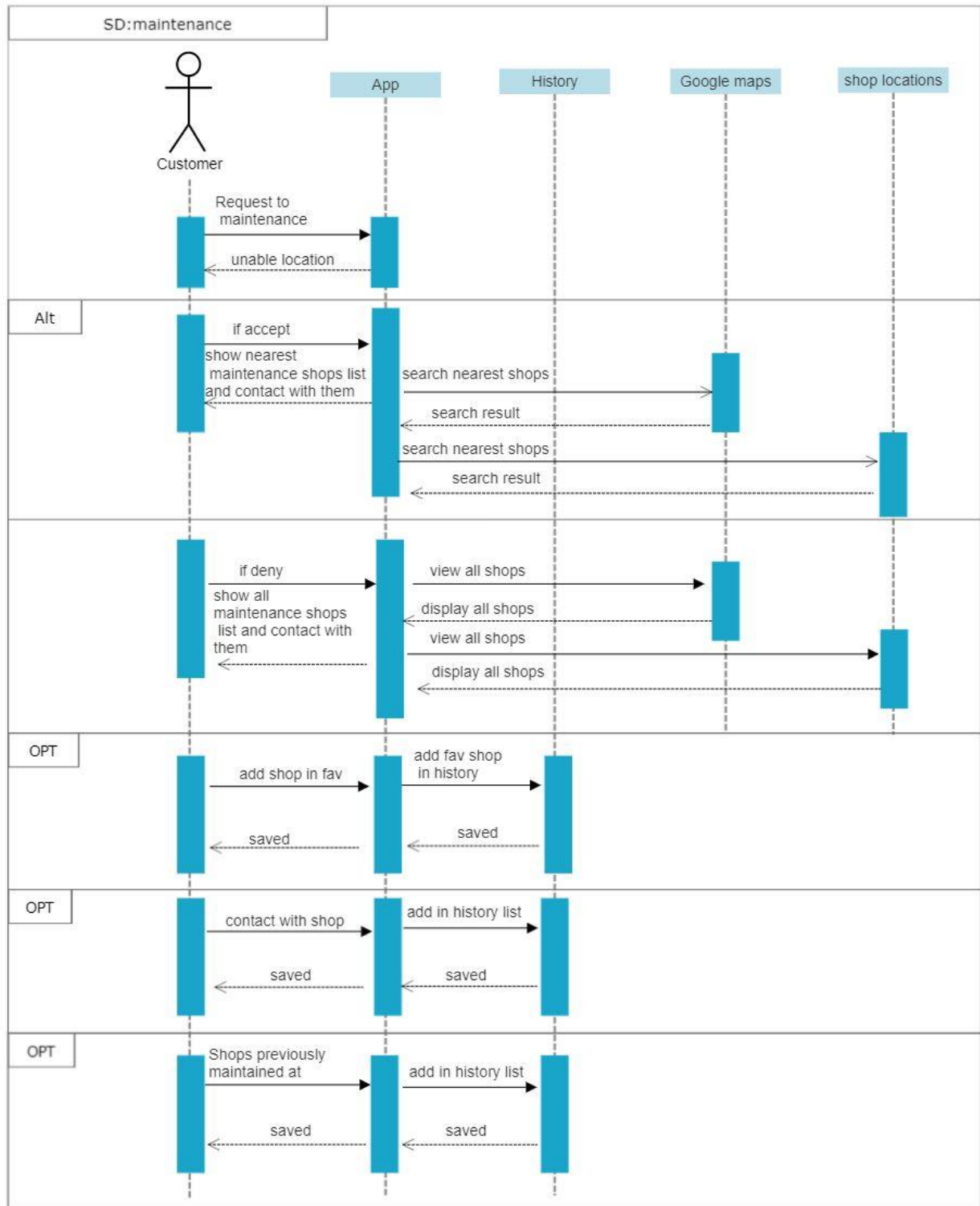
## 2. Sell



### 3. Predict

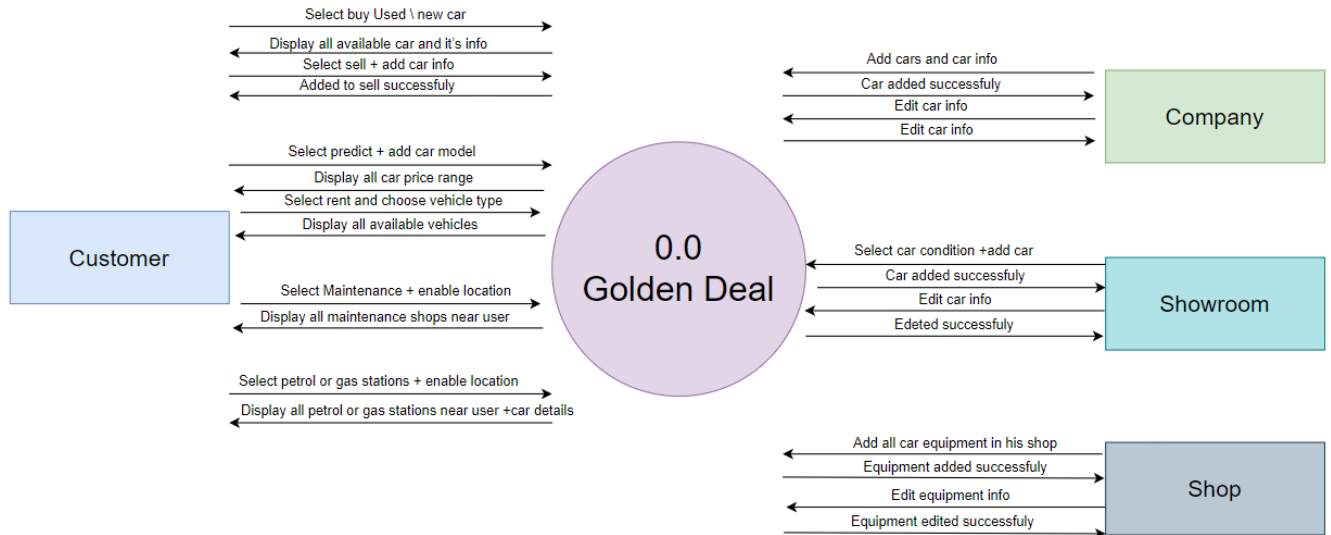


## 4. Maintenance

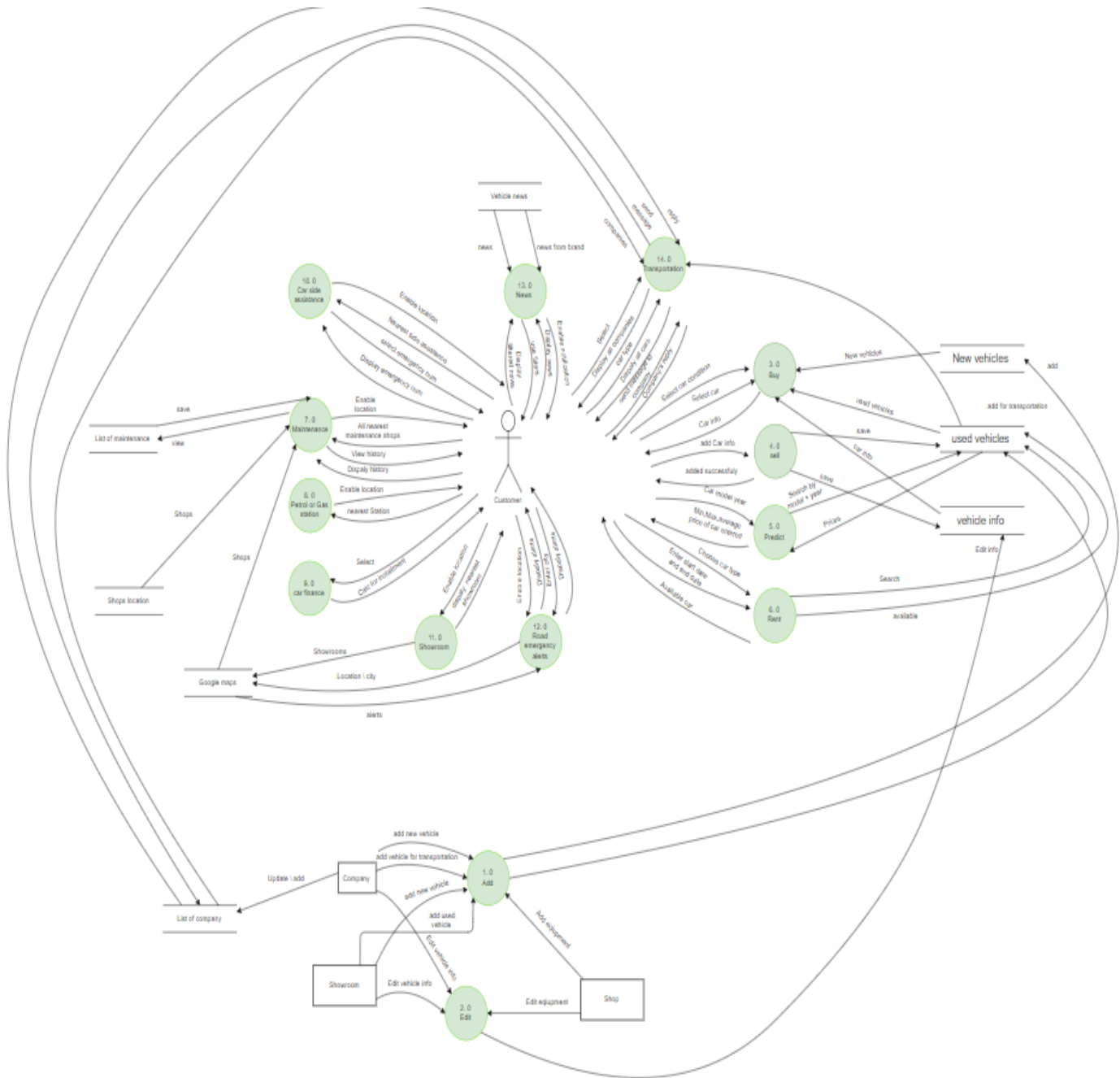


## Dataflow diagram:

### Level zero:

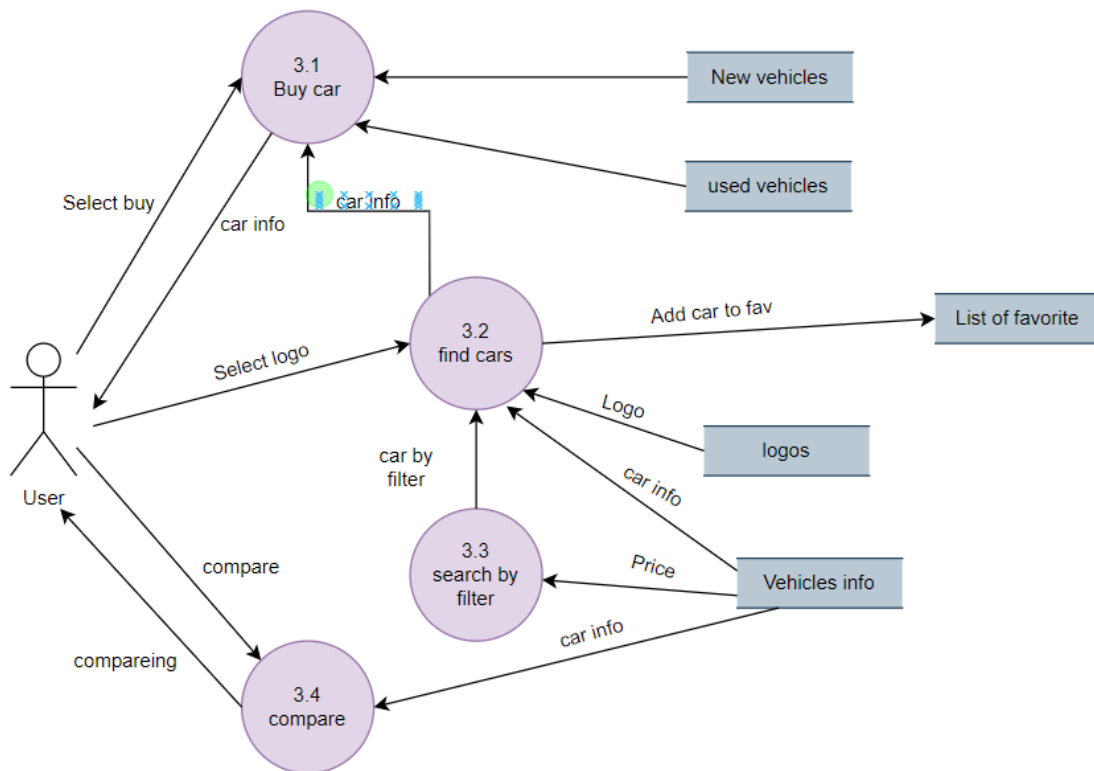
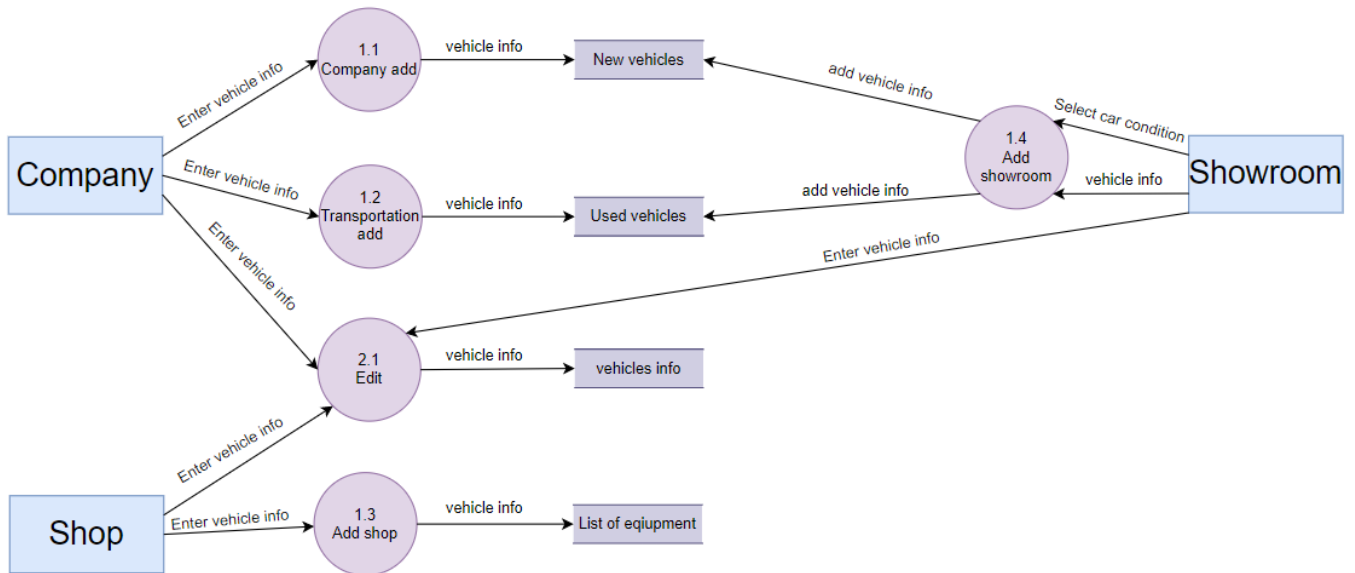


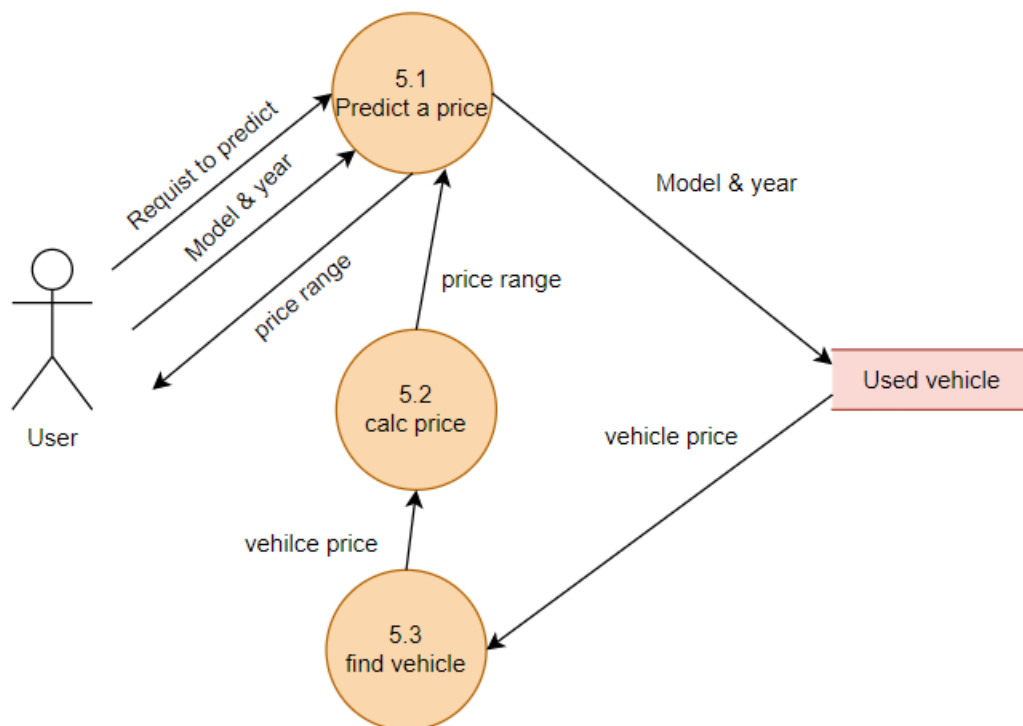
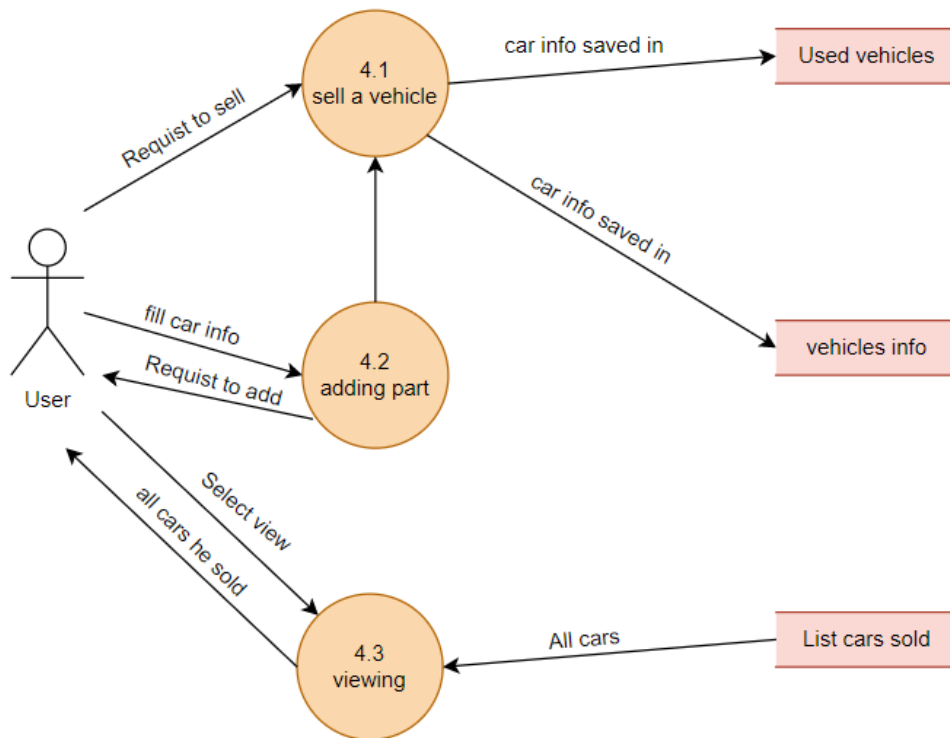
## Level 1:



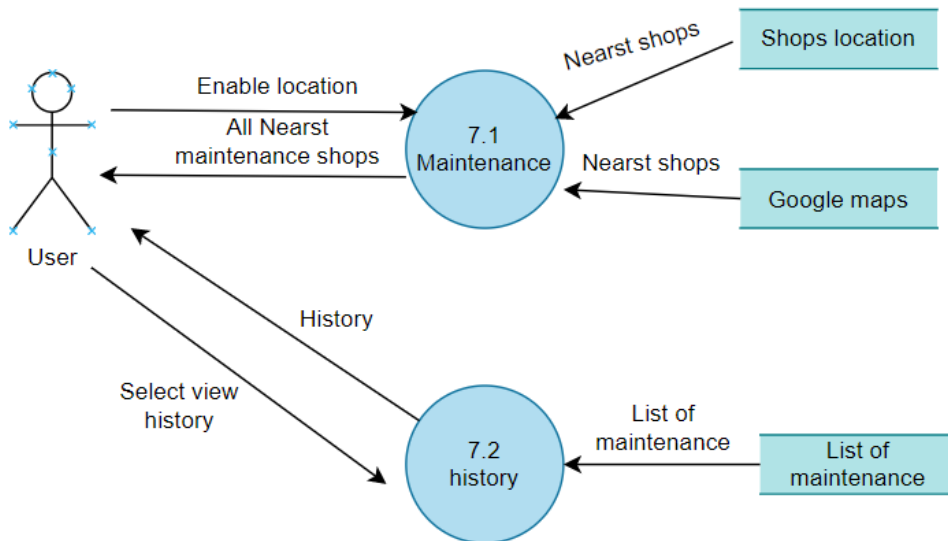
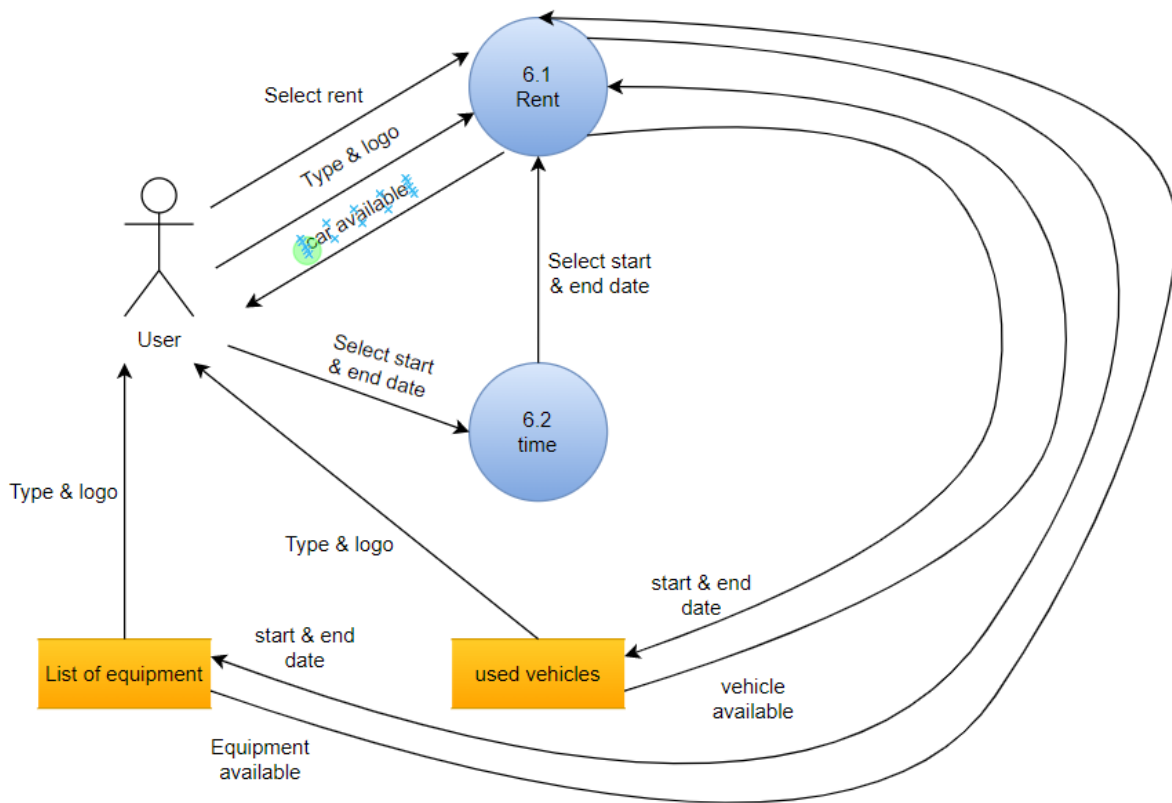
<https://drive.google.com/file/d/1YM2Kv1rJvAV5kpxQxg7mrUz3PPjg5oL/view?usp=sharing>

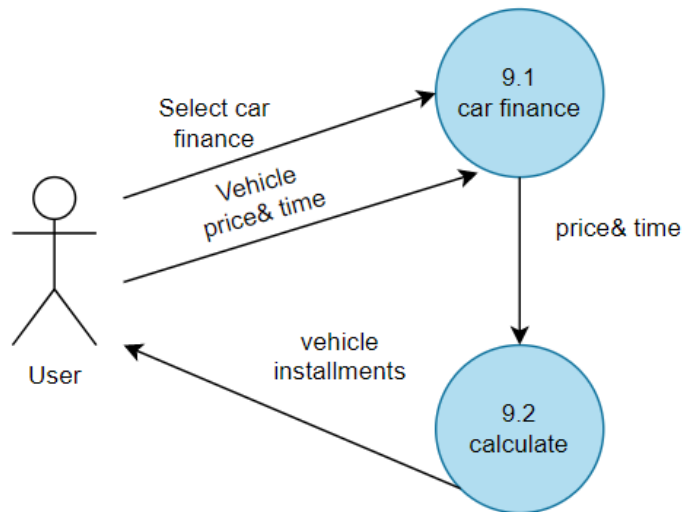
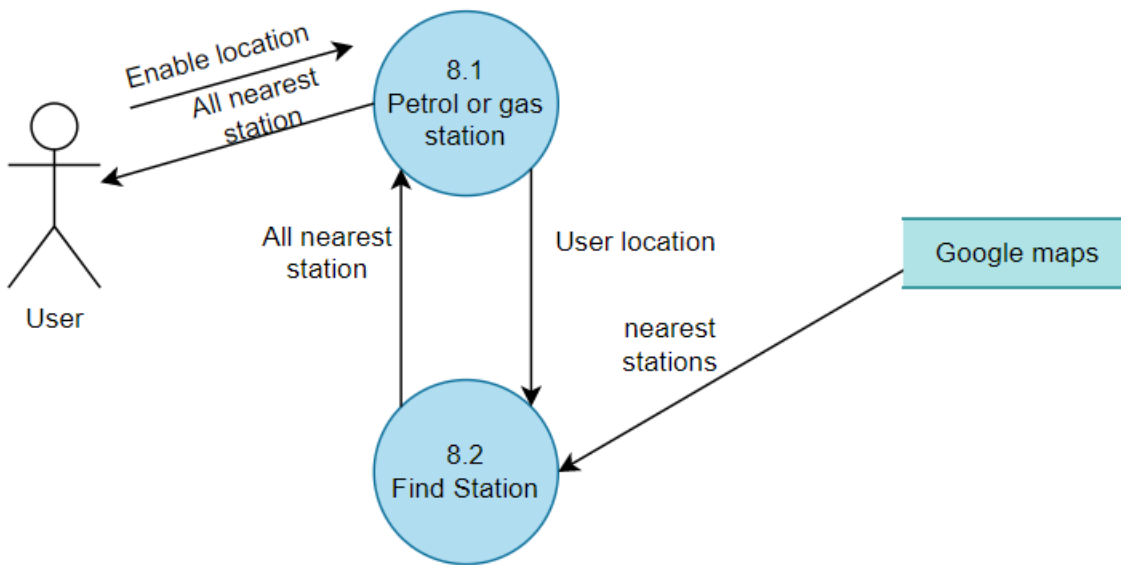
## Level 2:

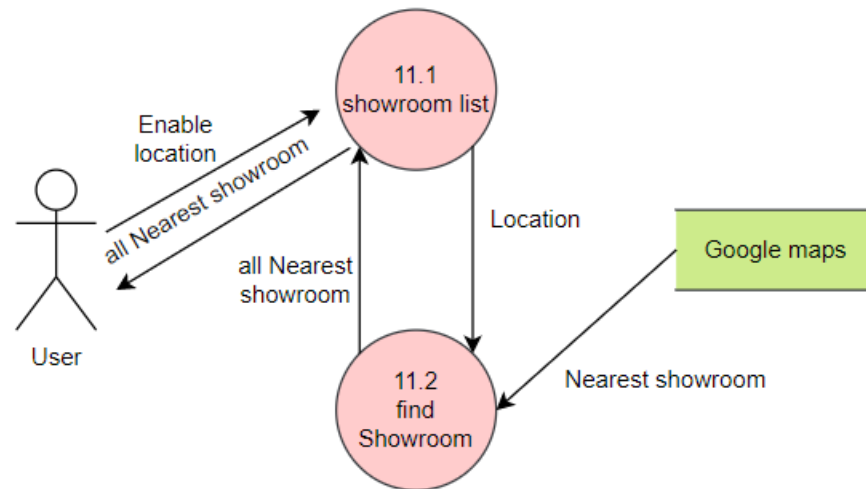
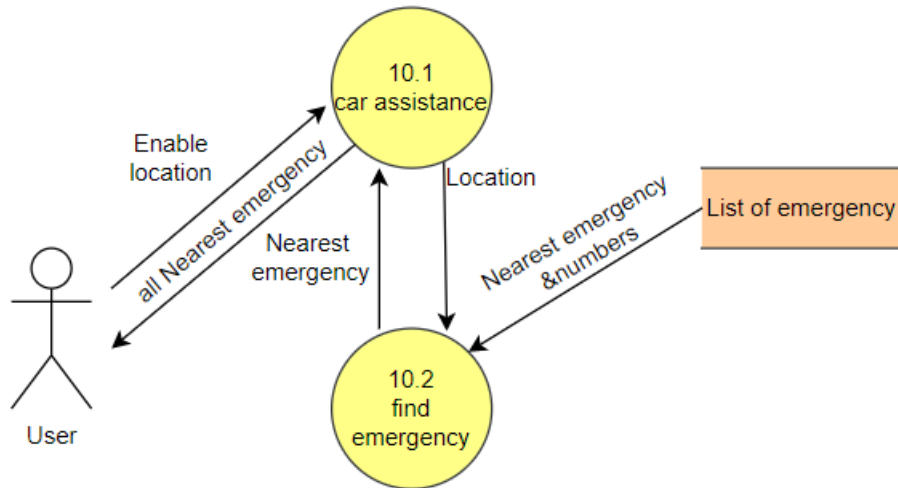


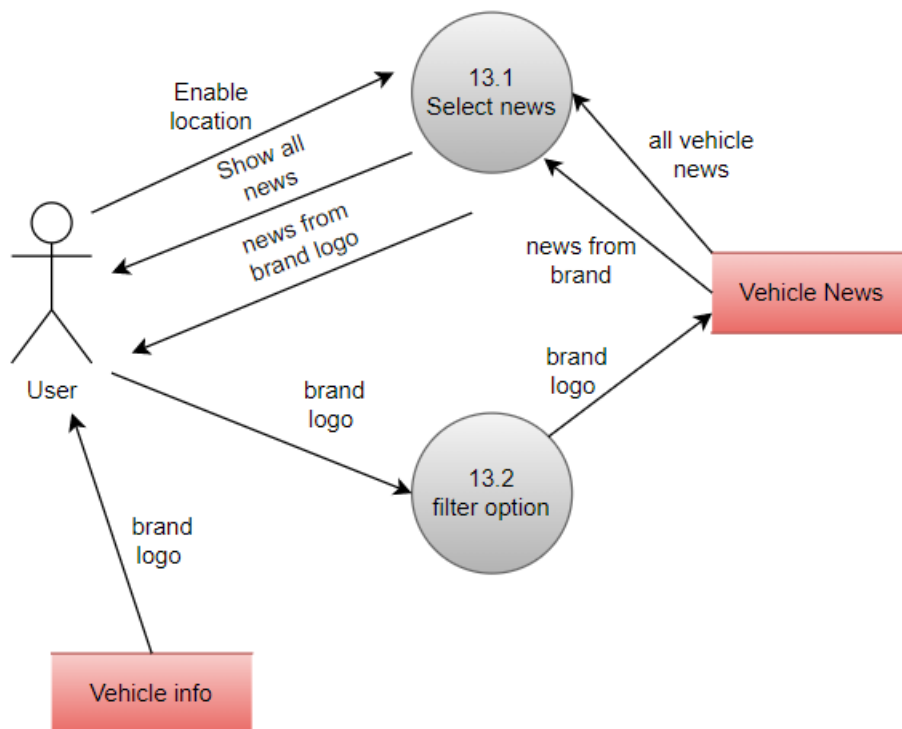
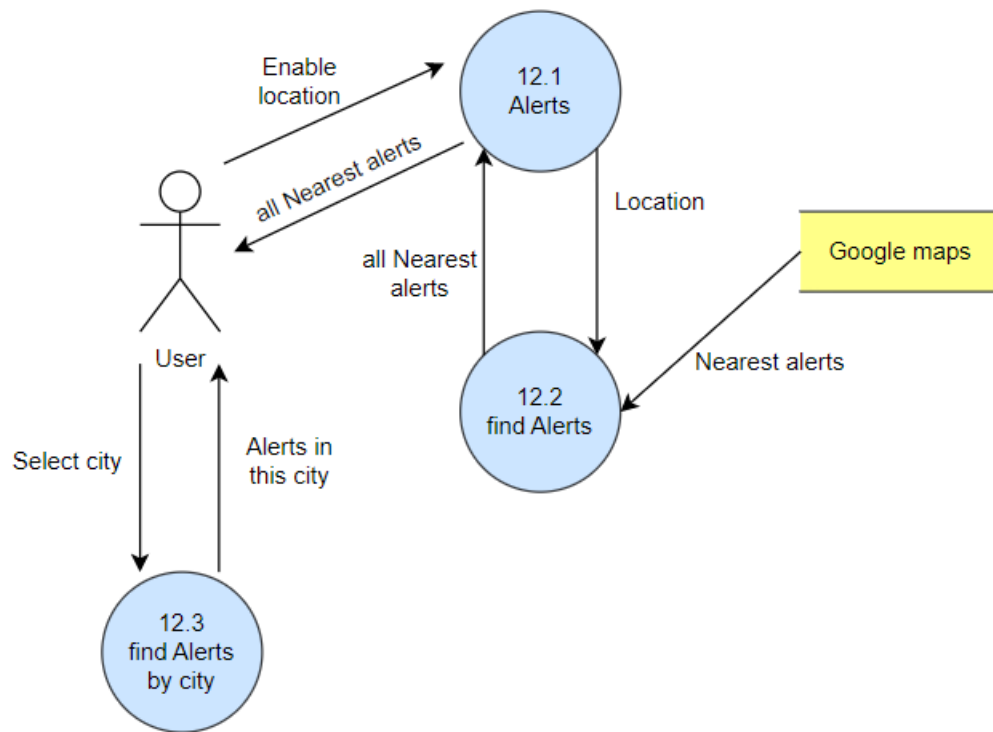


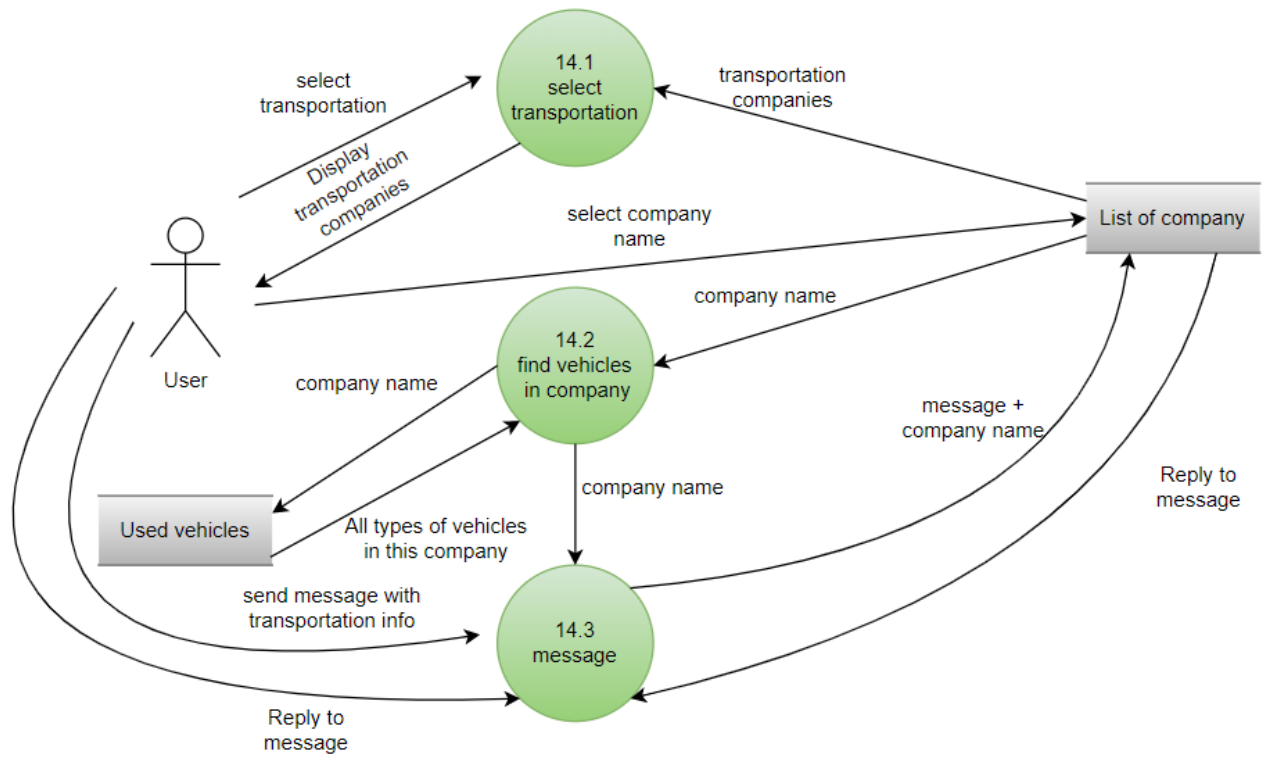










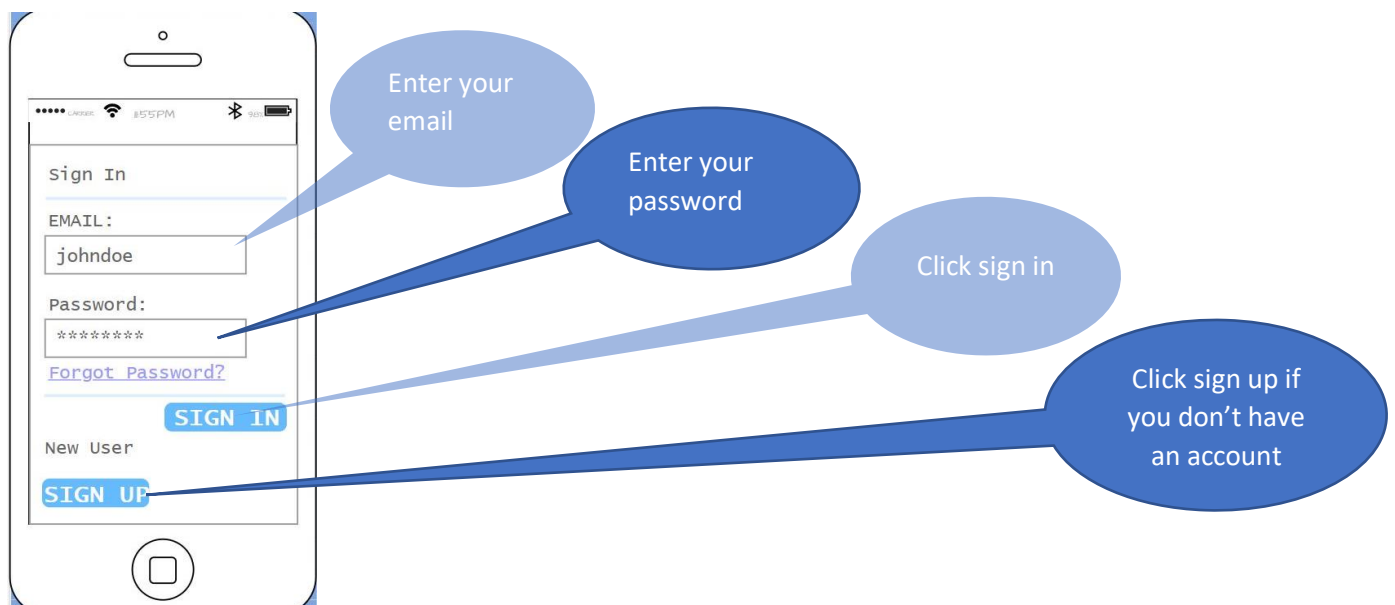


# Graphical User Interface + User Manual

## 1. Customer User Manual



For login or sign up



**FILL this information SIR**

Name

Email

national no

phone number

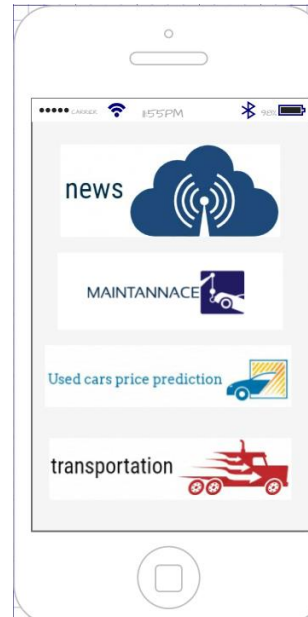
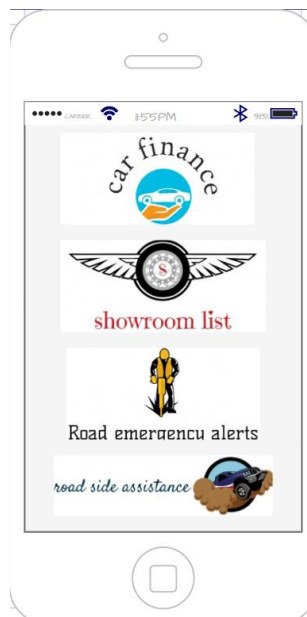
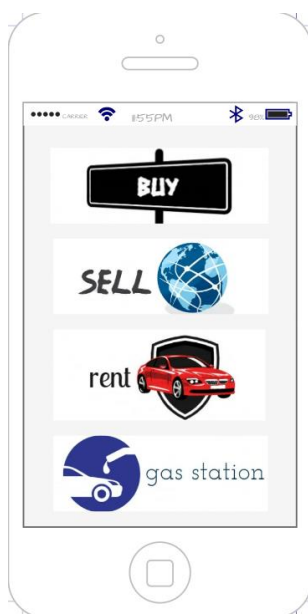
password

identification card photo

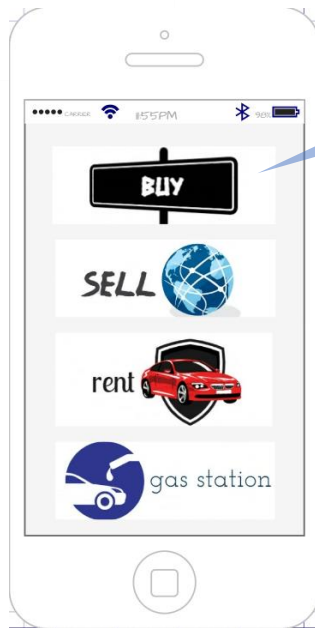
iMessage

When you enter sign up you should fill all the information needed

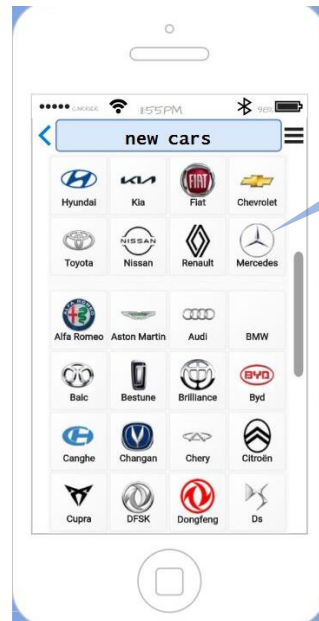
Then scroll down to complete filling the information needed



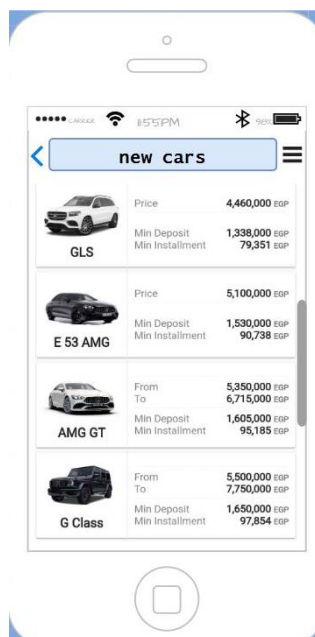
Then you can scroll throw options and select whatever you like



Select  
Buy



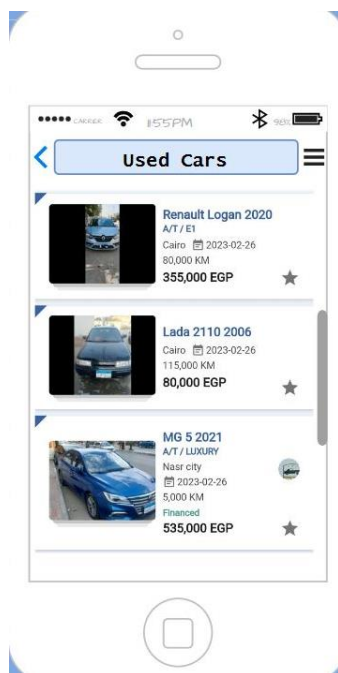
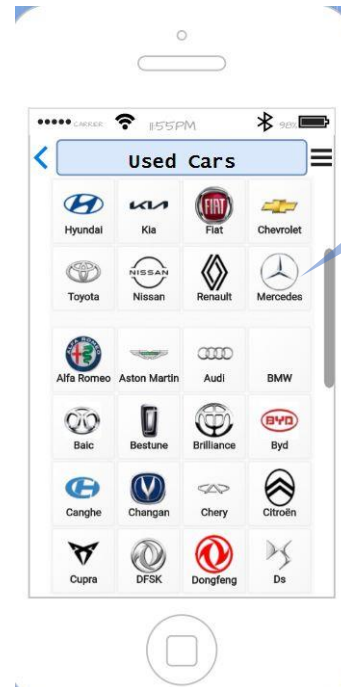
Select a  
brand



Then the system  
will display all new  
cars of this brand  
and its information



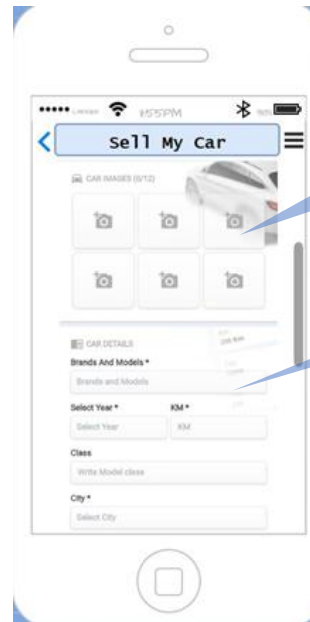




Then the system will display all new cars of this brand and its information

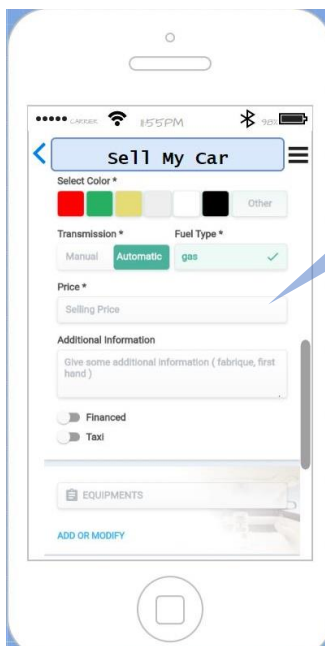


Select  
Sell

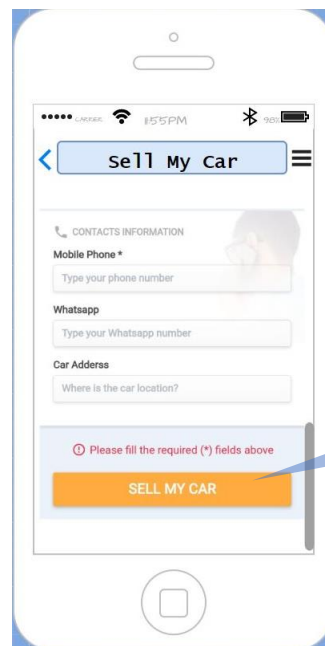


Add car  
photos

Fill car  
information



Fill car  
information

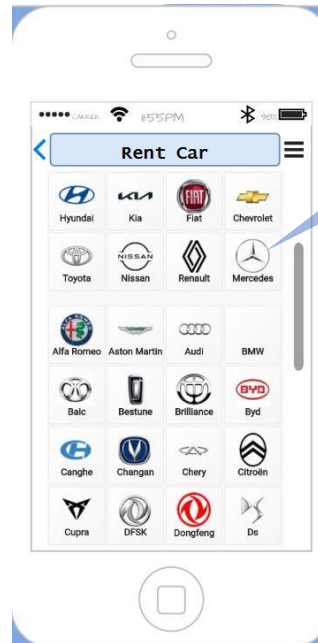


Fill car information  
including model  
year, color, model  
name, ...

Confirm  
selling

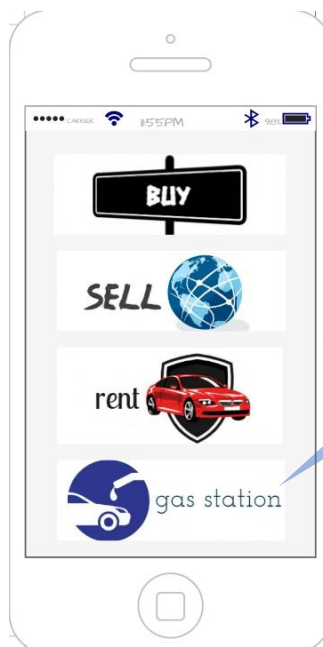


Select  
Rent

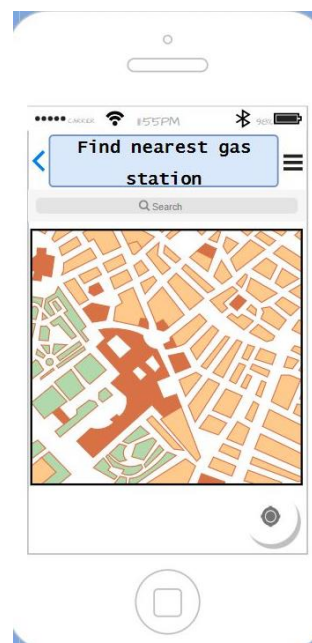


Select a  
brand

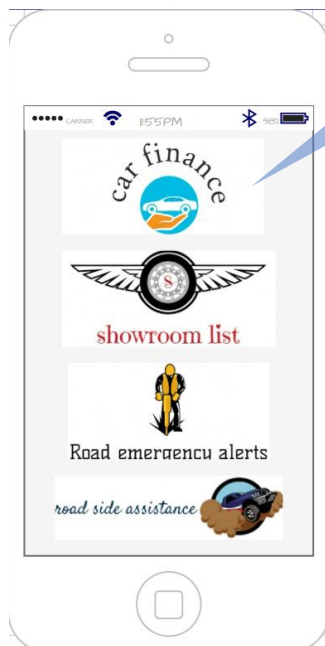
The system will  
show all cars  
available for rent



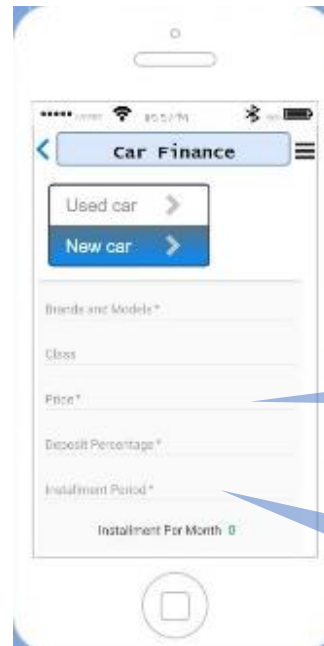
Select Gas  
station



Enable Location and  
the system will  
display nearest gas  
stations to you



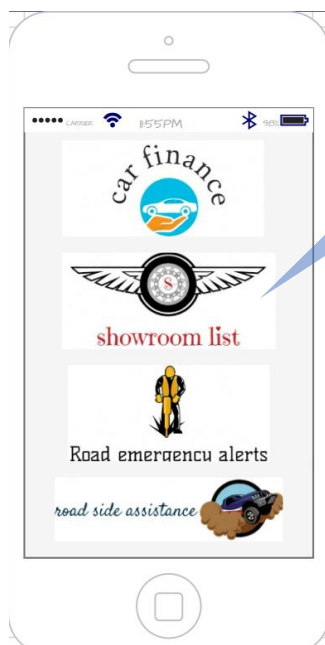
Select Car finance



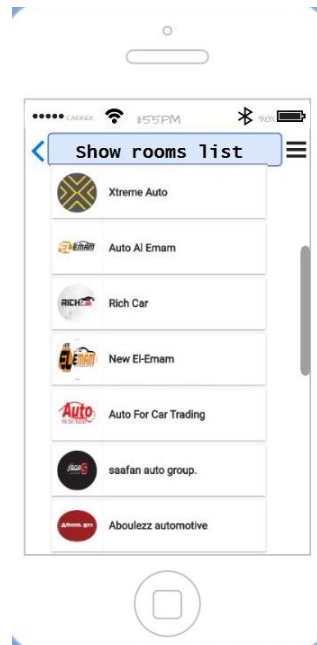
The system will display amount of installment/month

Enter price

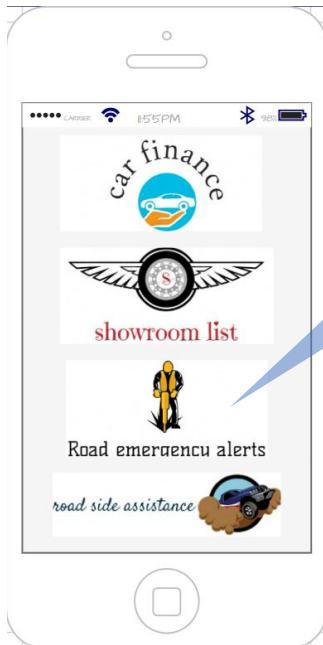
Enter installment period in months



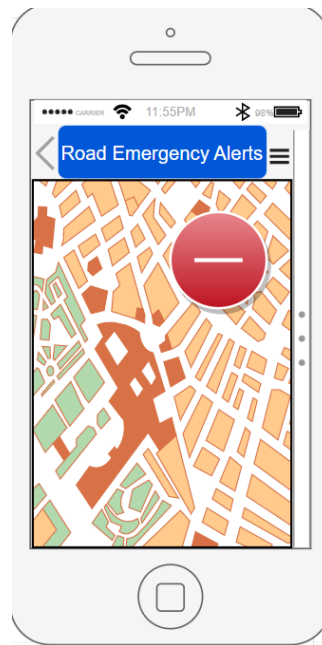
Select Showroom list



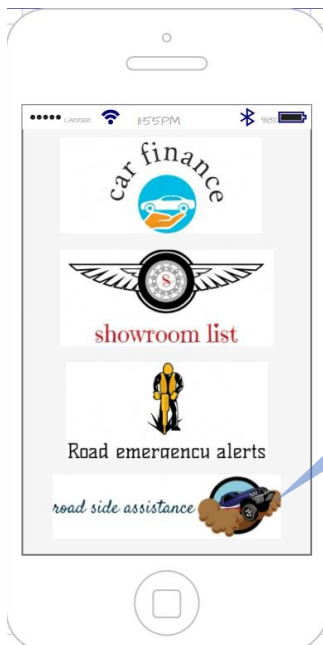
Enable Location and the system all showrooms near you



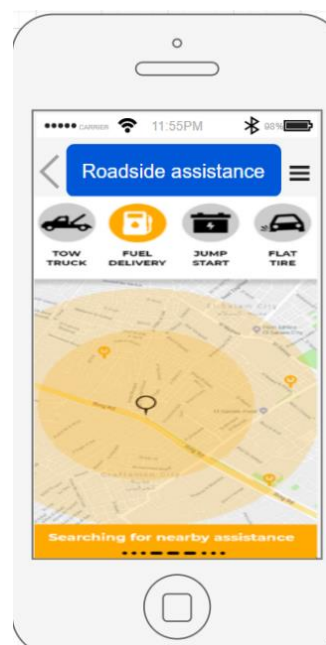
Select Road  
Emergency  
Alerts



Enable Location  
and the system all  
road alerts near  
you



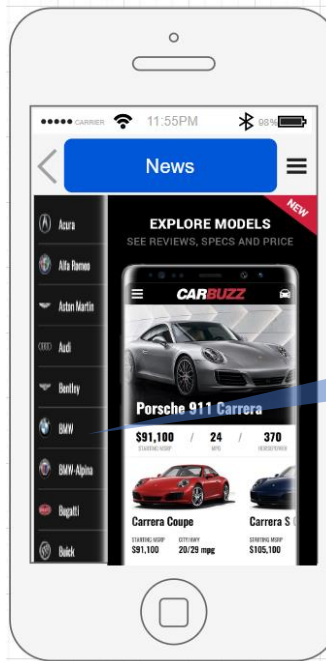
Select Road  
side  
assistance



Enable Location  
and the system all  
assistances near  
you



Select News



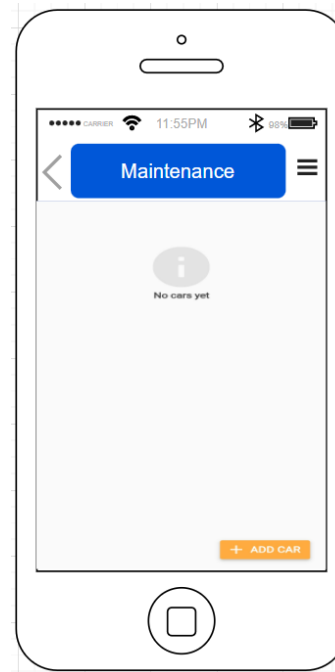
the system will display all car news and events

Select a brand

the system will display all car news and events of this special brand only



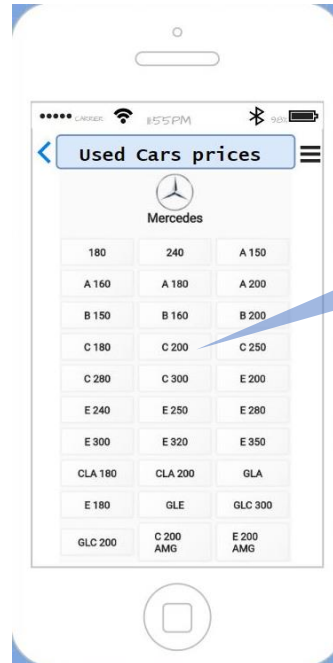
Select Maintenance



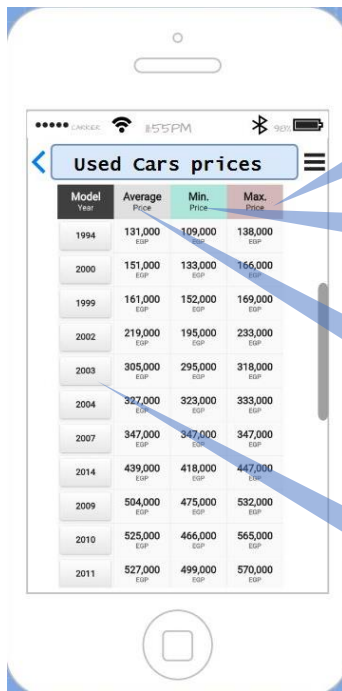
the system will display all your previous maintenance



Select used cars price prediction



Select car model



Maximum price

Minimum price

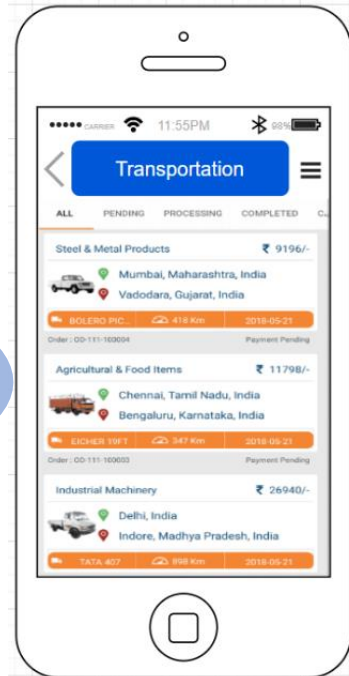
Average price

All model years

Then the system will display all price predictions of this model based on market

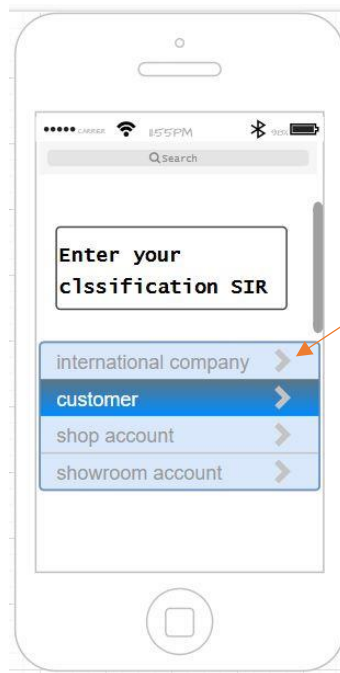


Select  
Transportation



the system will  
display all  
transportation  
options with some  
details below each  
one

## 2. Company/shop/ showroom User Manual



Once you open  
the app select  
Company/shop/  
showroom



## For login or sign up



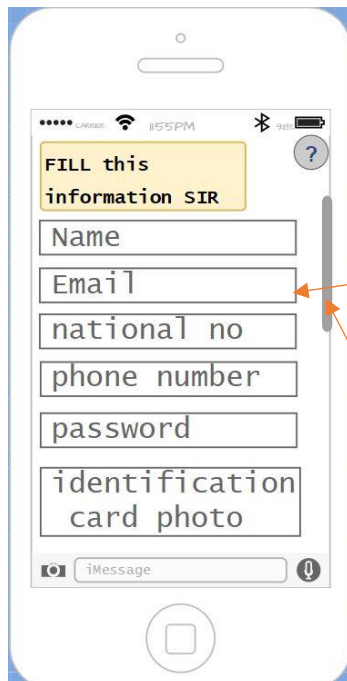
A mobile app interface for login and sign up. At the top, it says "Sign In". Below this are two input fields: "EMAIL:" with the text "johndoe" and "Password:" with masked characters "\*\*\*\*\*". A link "Forgot Password?" is below the password field. At the bottom, there are two buttons: "SIGN IN" and "SIGN UP". A "New User" label is positioned above the "SIGN UP" button. The status bar at the top shows "Carrier", "5:55 PM", and battery level.

Enter your email

Enter your password

Click sign in

Click sign up if you don't have an account

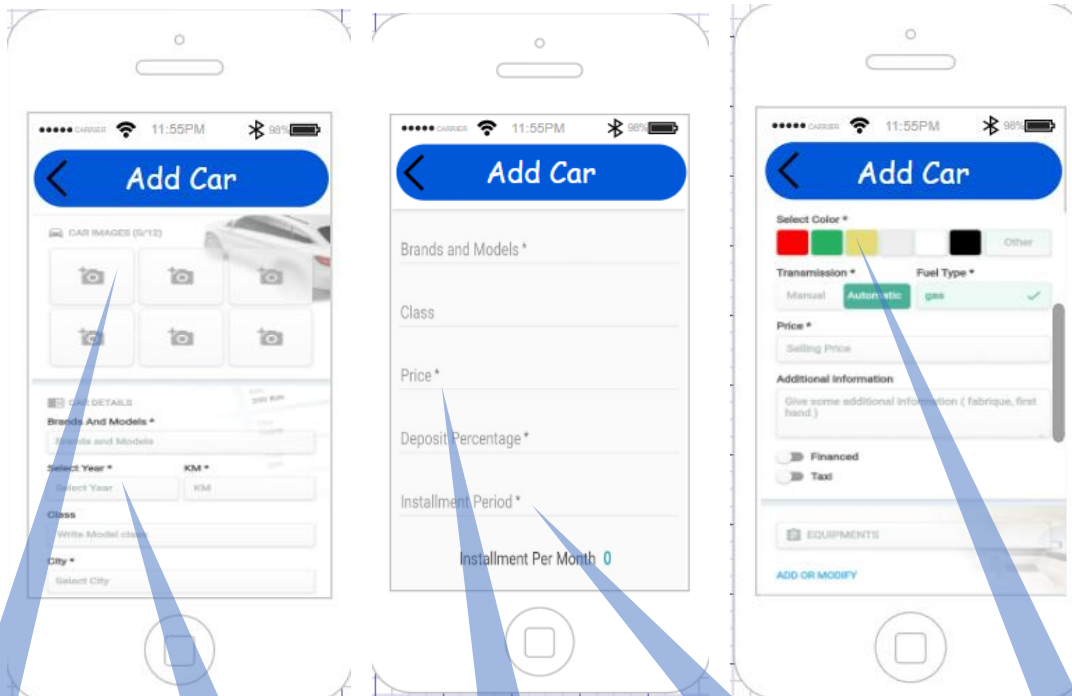


A mobile app interface for sign up. At the top, it says "FILL this information SIR" in a yellow box. Below this are several input fields: "Name", "Email", "national no", "phone number", "password", and "identification card photo". At the bottom, there is an "iMessage" button. The status bar at the top shows "Carrier", "5:55 PM", and battery level.

When you enter sign up you should fill all the information needed

Then scroll down to complete filling the information needed

## For Adding car



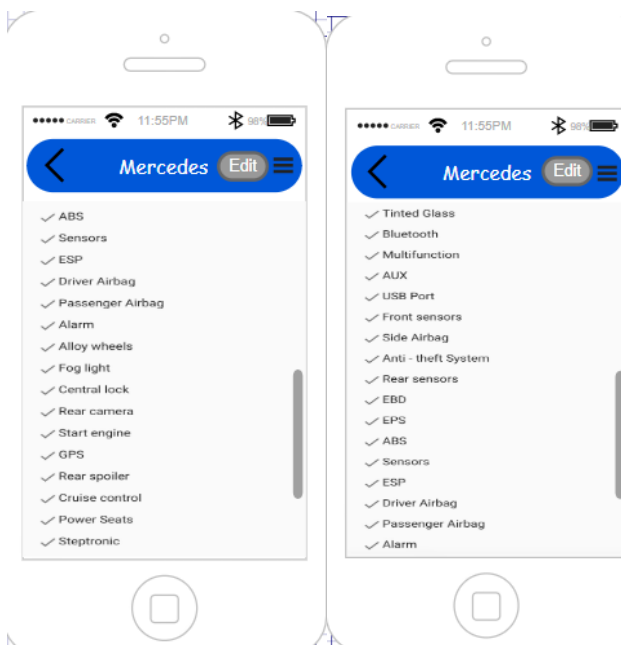
Add car  
photos

Add Model  
year

Add car  
price

Add  
installment  
period

Add car  
color



Complete filling all car info included  
in the two screens

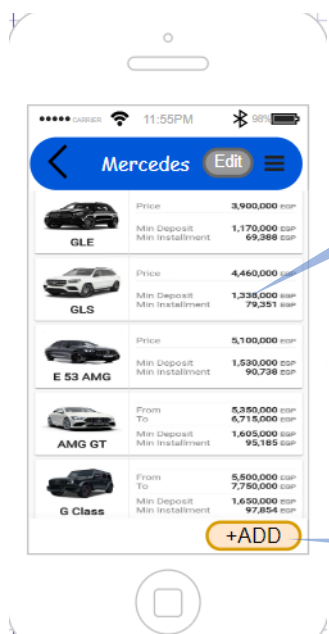
## if you are a showroom



After choosing car condition you will add the car the same way above

For Editing car

### 1. For company:



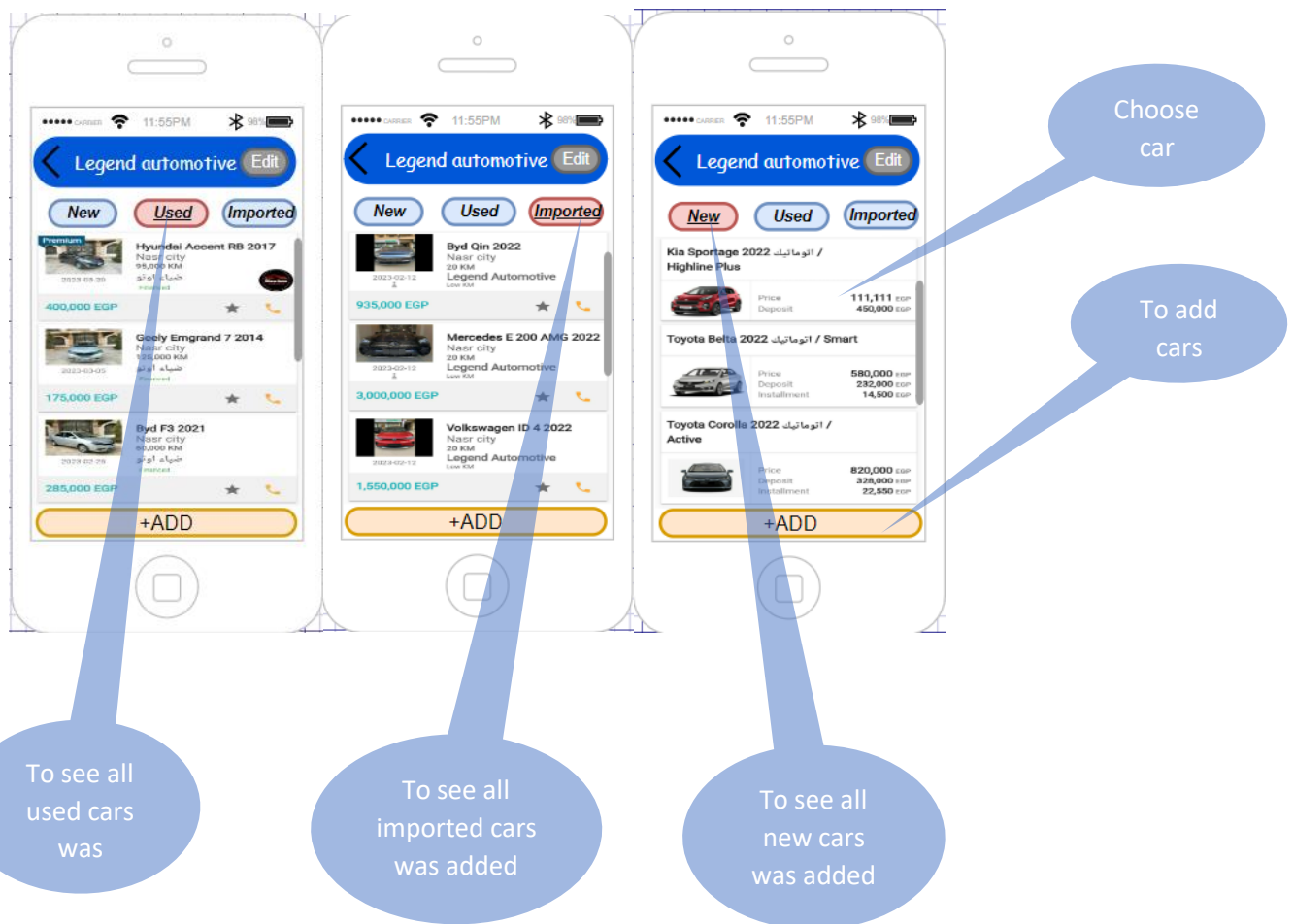
Choose car

To add cars

The system will display all cars that have been added



## 2. For showroom:





Press Edit

press edit and you  
can edit any of the  
car information