

# Software Project

## Golden Deal APP



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## 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
  - International 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 International Company the user should sign up/log in:
  - 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

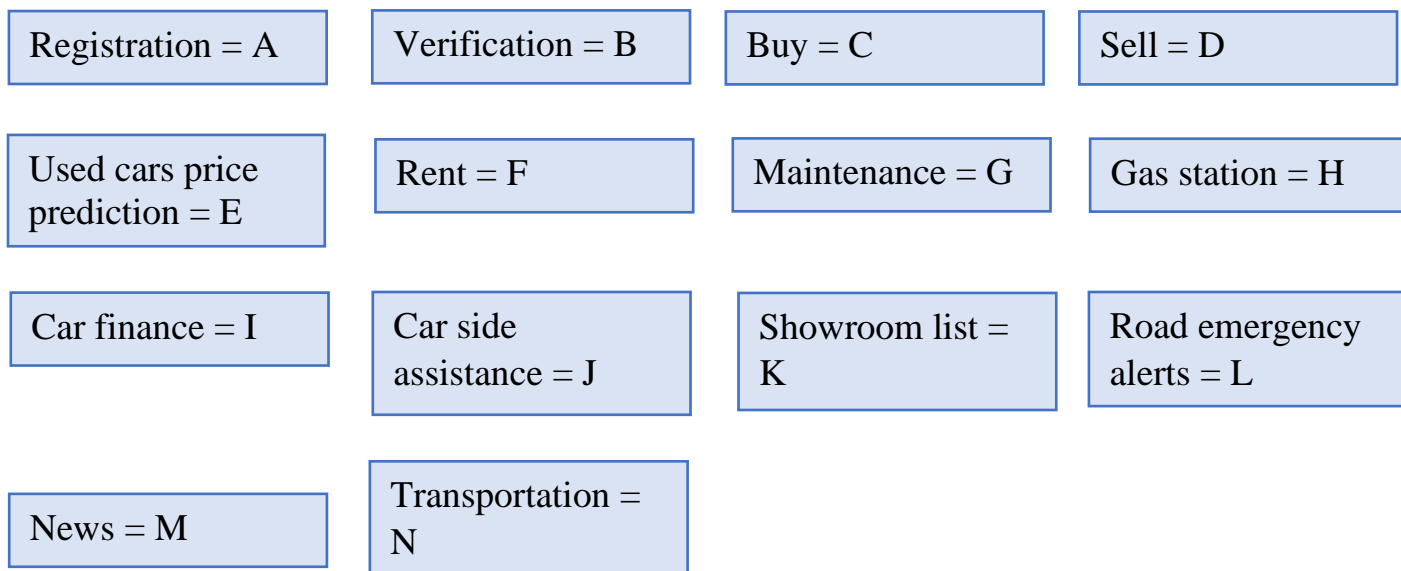
- Transportation
- 9- By choosing Buy:
- New {Cars, trucks, motorcycles, ...}
  - Used {Cars, trucks, motorcycles, ...}
- 10- After selecting new:
- Cars
  - Motorcycles
  - Trucks
  - Buses
- 11- When selecting Car/bus/motorcycle/truck:
- The user will find all car logos to choose from
  - After choosing 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.
- 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
  - Then the system will display any road alerts in this city
- 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 log in as company/showroom/shop:
- Add
  - Edit
- 29- If user selected add:
- The user can add cars and enter their information including: Type, Photos, Brand, Model year, Model name, Price, Transmission type, Body type, Fuel type, ....
  - Then user must select if he wants to sell/rent or let this car work for transportation
- 30- If user selected edit:
- The user can edit price of uploaded cars

## Subsystems





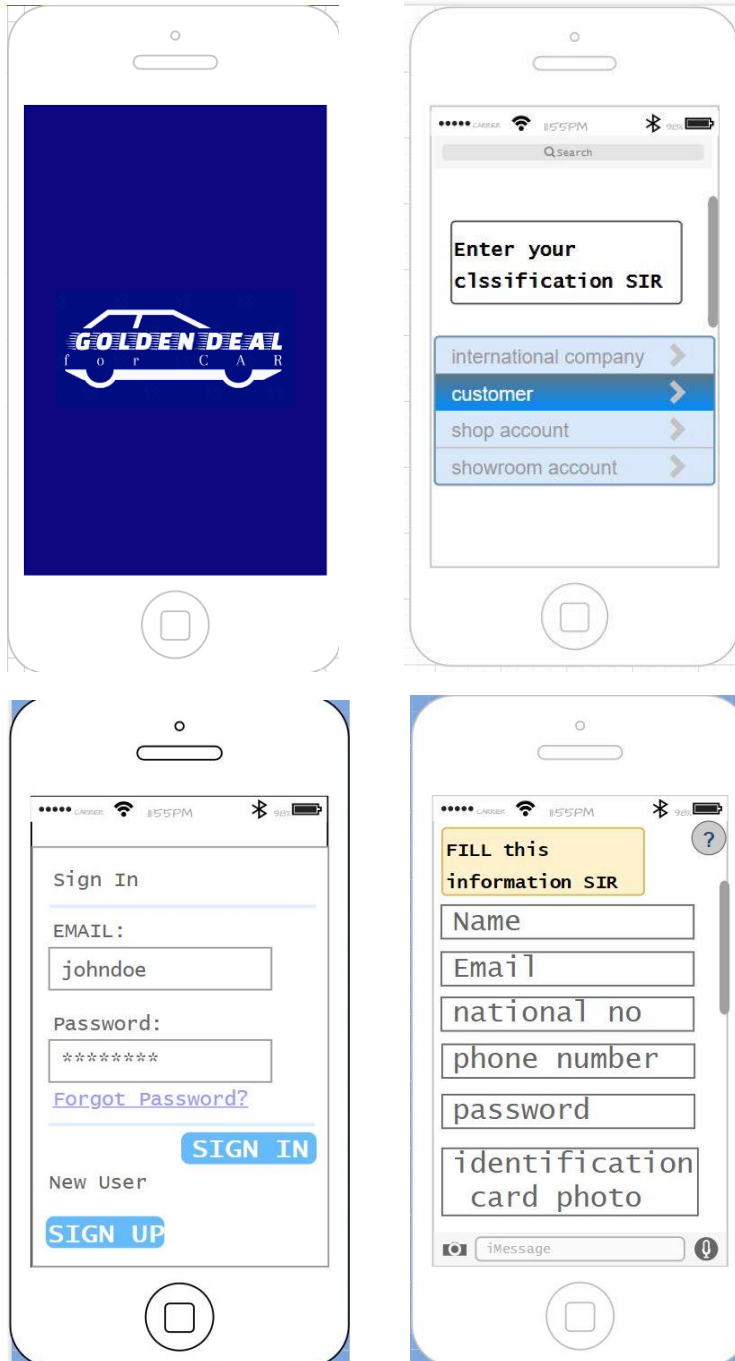


Subsystem Name	Subsystem Function	Subsystem Interface
1- Registration	This function allow user to log in / sign up Incase of sign up each kind of user should enter different kind of information	1- void customerSignUp (string email, string password, String name , int ID , Object Photo, int phoneNumber, 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	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>

	sells them nearest to you	
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)
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 all the available maintenance service near you and will also display all previous maintenance information	1- String nearestMaintenanceShops ( object location) 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 by analyzing all road news	1- String anyRoadAlerts ( string city) <ul style="list-style-type: none"> <li>String roadAnalysis(String city, String news)</li> </ul>
13- News	This function will show you all car news of all cars or selected brands only	1- Boolean enableNotificationMessage(Boolean enable) 2- String showAllCarNews (Boolean enableNotificationMessage) 3- String filterNews(String brands)
14- Transportation		1- String nearstTransportationCompanies (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)

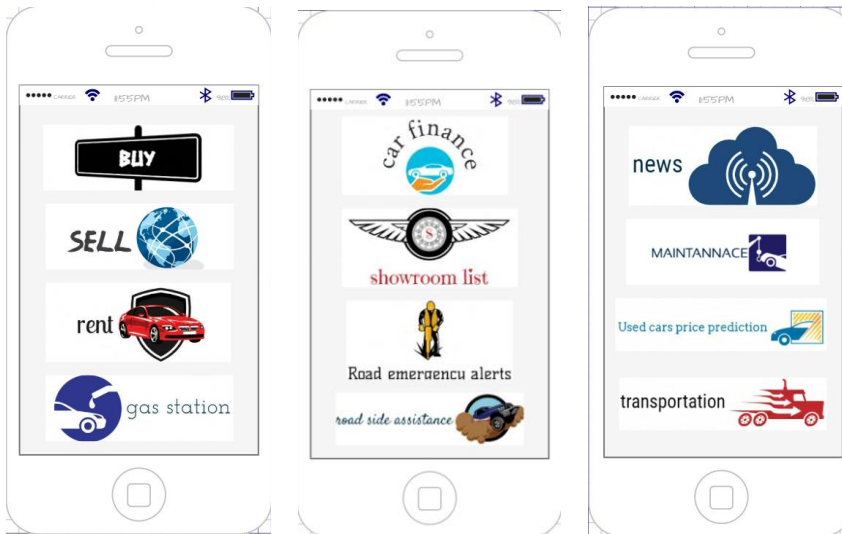
## Graphical User Interface



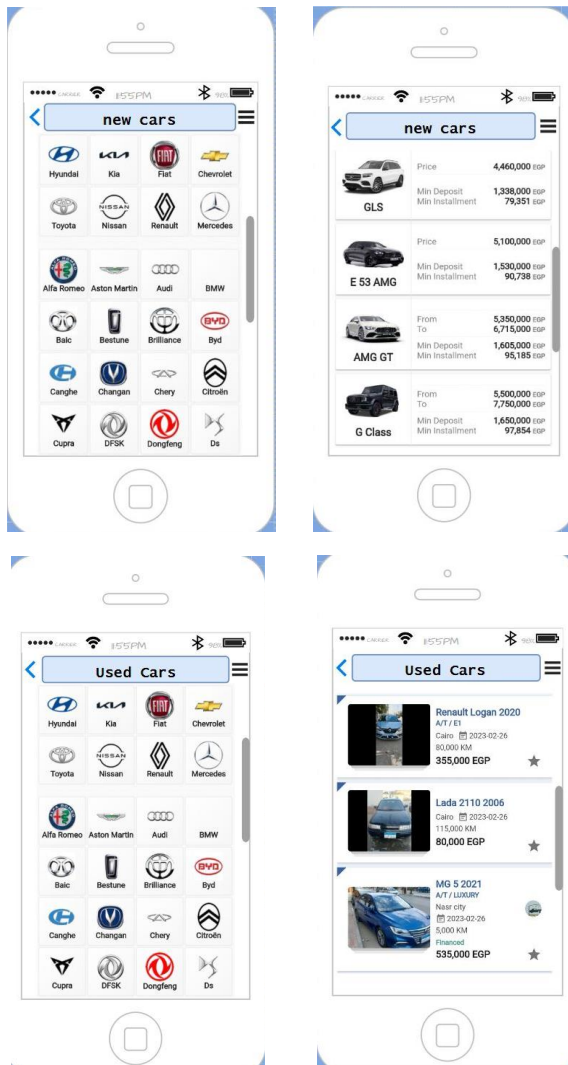
Once you open the app, you should select if you are a customer, car company, equipment shop, car showroom

Then you should enter your email and password if you already have an account but if you don't you should select sign up

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



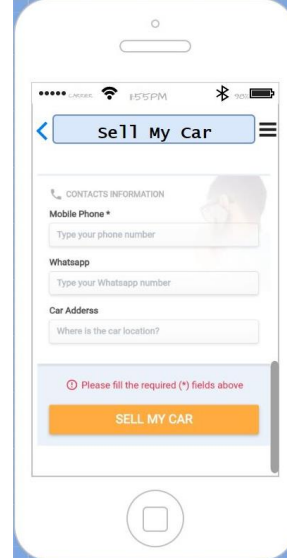
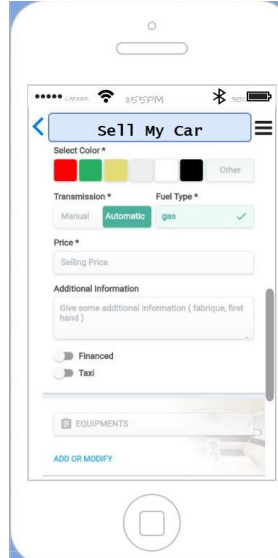
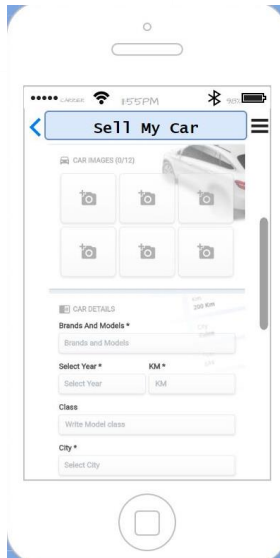
Then you can scroll throw options and select whatever you like



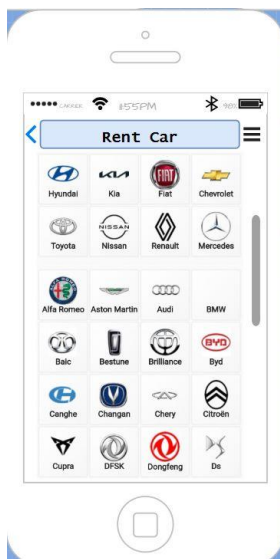
If you selected buy, you will get to choose new or used then the logos will appear after selecting

When selecting the logo you will see all the cars of this brand and its information

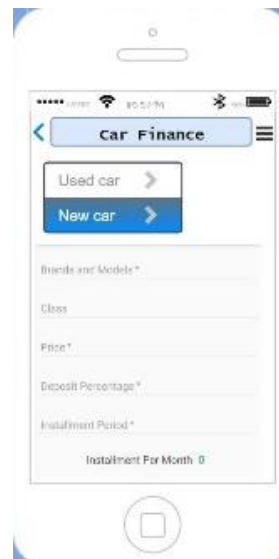
If you selected used, then you should select the logo then you will see all the cars of this brand and its information



If you selected sell you will add your car and fill all the car information then you will have to fill your personal information



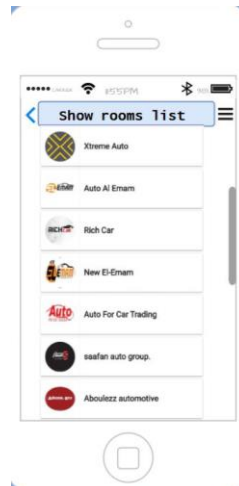
If you select rent you will get car logos and then you will enter a car type and a start and end date to display cars available



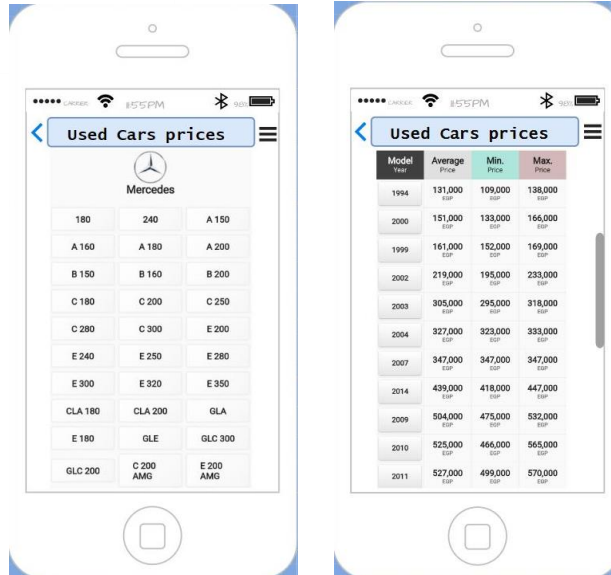
If you select car finance you will have to enter price and months in order to give you the amount of installment/month



If you select gas station and enable location you will see all gas stations near you



If you select Showroom list and enable location you will see all showrooms near you



If you select used cars price prediction you will select the car brand and model name and the system will show all price predictions of this model based on market

Thank You Dr Eslam for reading