

Implemented Features

The system provides registration page for customers to register then login

Admin Features:

- Advanced Search by any of the car, customer, or the reservation information
- Adding a car to the system
- Editing cars' status
- Generating the following reports
 - All reservations within a specified period including all car and customer information.
 - All reservations of any car within a specified period including all car information.
 - The status of all cars on a specific day.
 - All reservations of specific customer including customer information, car model and plate id.
 - Daily payments within specific period.

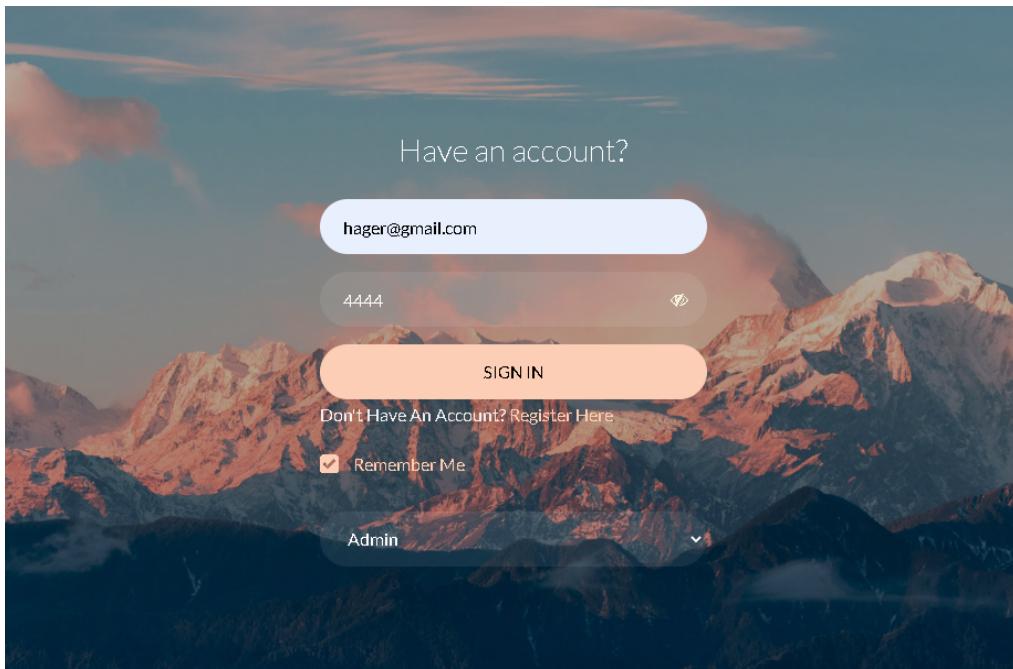
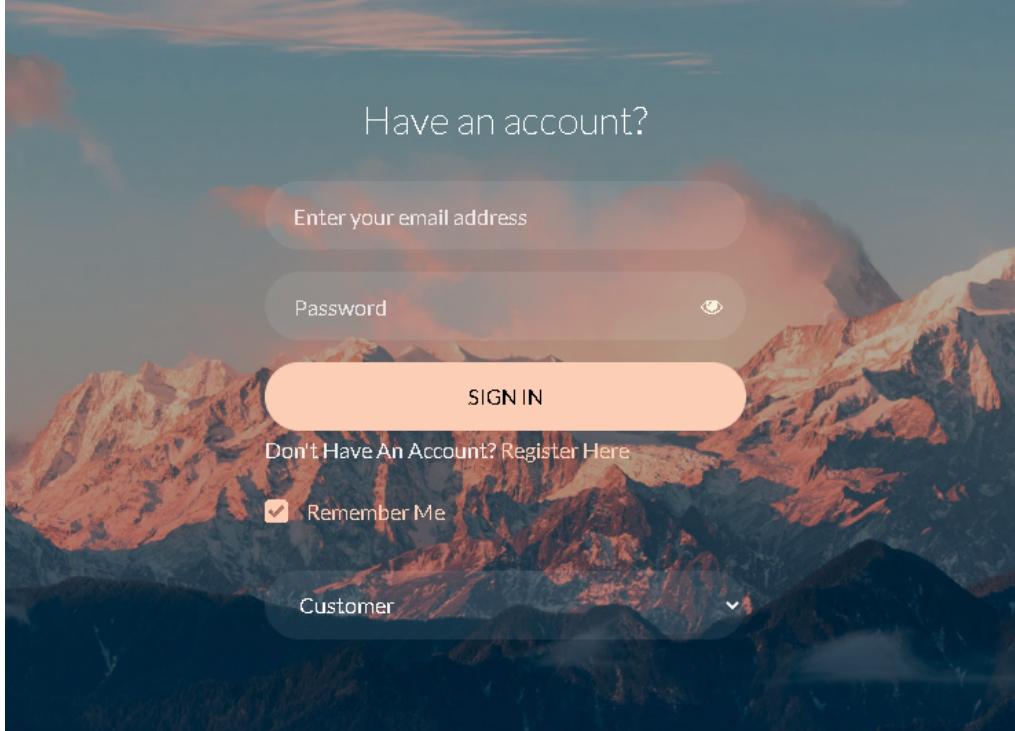
Customer Features:

- Showing all the cars in the warehouse
- Searching by any of the car specs they need
- Reserving a car

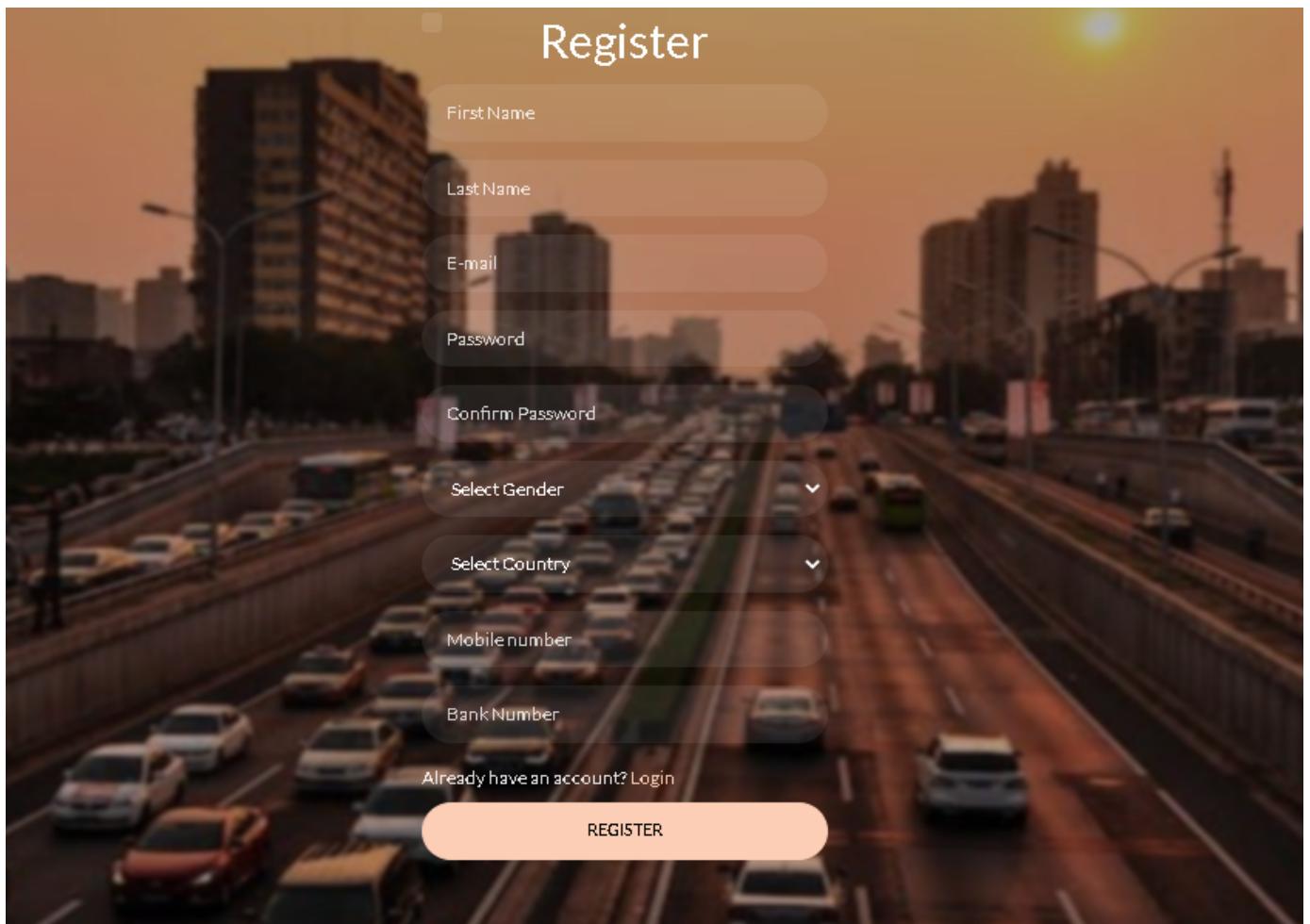
Upon first loading the website, user is asked to first login. If they don't have an existing account, they're simply redirected to registration page by clicking on the 'Register Here'.

You can either login as an admin or a customer.

Login Page:



In order to register, customer is asked to fill in all the required fields which are validated individually. For instance, confirm password field must have the same input as password field and fields can't be left blank on before submitting.



How it works: tab on the left displays the activities and actions that are accessible to user, and the rest of the page displays cars available in the warehouse that belongs to the country of the customer. By clicking one of the cars displayed, user is redirected to a page where they can look up the displayed plate number and either reserve or rent it.

Car Rental Service


mariem

Home			
Car Search	Price: \$300 Car Name: Mercedes Car Model: GLA Car Color: pink Status: active	Price: \$1000000000 Car Name: lamborghini Car Model: urus Car Color: black Status: active	Price: \$500000 Car Name: Renault Car Model: Logan Car Color: red Status: active
Contact Us			Price: \$700000 Car Name: Chevrolet Car Model: aveo Car Color: grey Status: active
About Us			
Log Out			

			
Price: \$800000 Car Name: Chevrolet Car Model: lanos Car Color: blue Status: active	Price: \$600 Car Name: renault Car Model: sandero Car Color: pink Status: active	Price: \$90 Car Name: a Car Model: a Car Color: a Status: active	Price: \$100 Car Name: hh Car Model: hh Car Color: hh Status: active

Car Search Page

This page allows the customer to search for the car they need by many specs (Car Name, Car Model, Car Color, Car Price) where the cars will be shown in a real time updatable table with all of the car specs (Name, Model, Color, Price, Plate Number, Condition, Warehouse Location) and the search results will differ from user to another according to the country of the user due to the variation in the stock in each warehouse.

Secondly the Reservation Form where the user should insert the plate number of the car they want to reserve, the pickup date and the return date then click 'Reserve' and the car will be reserved.

The screenshot shows a web-based application interface for car search and reservation. On the left, a sidebar menu is visible for a user named 'mahmoud'. The menu includes links for Home, Car Search, Payment, Contact Us, About Us, and Log Out. The main content area has a dark header bar with the word 'Search' in white. Below the header, there are two sections: 'Search' and 'Reserve'. The 'Search' section contains input fields for 'Search' (with 'fo' typed), 'Car Model' (with 're' typed), and 'Car price (per day)'. To the right of these fields is a table showing car details: Name (Ford), Model (Fiesta), Color (red), Price (400), Plate Number (222222), Condition (good), and Warehouse Location (7 Manchester St. Huron, ON N0G 8G7). The 'Reserve' section contains fields for 'Enter car plate number', 'Start date' (mm/dd/yyyy), and 'Return date' (mm/dd/yyyy). A large blue 'Reserve' button is centered below these fields. At the bottom of the 'Reserve' section, a message asks if the user wants to confirm their reservation, with a link to 'Payment'.

Name	Model	Color	Price	Plate Number	Condition	Warehouse Location
Ford	Fiesta	red	400	222222	good	7 Manchester St. Huron, ON N0G 8G7

Contact Us

[Home](#)
[Car Search](#)
[Contact Us](#)
[About Us](#)
[Log Out](#)

Phone: 1-800-555-5555

Email: fake@test.test

For enquiries and complaints please email us!

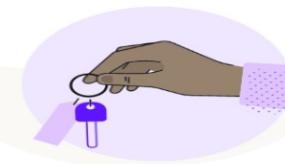
About Us

[Home](#)
[Car Search](#)
[Contact Us](#)
[About Us](#)
[Log Out](#)

Who are we?

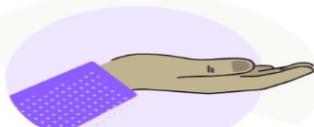
We are a group of students from Alexandria University.

Our goal is to provide a platform for people to rent cars to facilitate their and make getting around easier. Renting shouldn't be hard anymore!



[Book A Car >](#)

Down the street or across the
country find the perfect vehicle
for your next adventure.
We have a wide selection of cars, trucks,
vans, and SUVs to choose from.



Home page of admin allows them to add a car, search by customer, car specs, reservation under the name of advanced search. The option to generate reports of different types including: - All reservations within a specified period including all car and customer information.

All reservations of any car within a specified period including all car information.

The status of all cars on a specific day.

All reservations of specific customer including customer information, car model and plate id.

Daily payments within specific period

After selecting an option from a drop-down menu, the appropriate inputs are displayed accordingly. For instance, to generate a report on customer's reservations, required field is only customer id, whereas any other report to display anything within a specific period, date fields are displayed.

Admin Page

admin

- [Home](#)
- [Car Search](#)
- [Search By Car](#)
- [Search By Customer](#)
- [Search By Reservation](#)
- [Log Out](#)

Add Car

[Go](#)

Advanced Search

[Go](#)

Car Edit

[Go](#)

Car Reports

-- select an option --

The database is beforehand populated with warehouses and cars, so when an admin is to add a car, the options of warehouses available in a drop-down menu are the existing ones in the database. Admin fills in all the fields, and if a plate number exists in the database, admin is alerted and redirected back to the same page in case they want to modify it.

Add Car To The System

Home
Car Search
Search By Car
Search By Customer
Search By Reservation
Log Out

BMW
2022
1234567
1
black
200

ADD

Sample run of searching by a car in the realtime, among all options of advanced search including customer and reservation search.

Search

admin
Home
Car Search
Search By Car
Search By Customer
Search By Reservation
Log Out

Car Search
Go

Customer Search
Go

Reservation Search
Go

Search By Car

admin
Home
Add Car
Car Search

Car Name	Car Model	Plate Number	Status	Condition	Is paid	Warehouse id	Car Color	Car Price
Chevrolet	aveo	111aaa	active	out of service	N	1	black	100
Mercedes	2018	666fff	active	good	N	3	blue	928.5

Enter a Plate Number
C
Enter Model of Car

Search By Car



admin

[Home](#)[Add Car](#)[Car Search](#)[Search By Car](#)[Search By Customer](#)[Search By Reservation](#)[Edit Car Status](#)[Log Out](#)

Search

Car Name	Car Model	Plate Number	Status	Condition	Is paid	Warehouse id	Car Color	Car Price
Mercedes	2018	666fff	active	good	N	3	blue	928.5

Sample run of generating a report of reservation of a car:

Input values are:

12/22/2022 to 12/31/2022

Admin Page

admin

- [Home](#)
- [Add Car](#)
- [Car Search](#)
- [Search By Car](#)
- [Search By Customer](#)
- [Search By Reservation](#)
- [Edit Car Status](#)
- [Log Out](#)



Add Car

Go



Advanced Search

Go



Car Edit

Go



Car Reports

12/31/2022	<input type="button" value="Change Date"/>
01/05/2023	<input type="button" value="Change Date"/>
Reservation of car <input type="button" value="▼"/>	
<button>Go</button>	



Car Report

Car Name	Car Model	Car Plate Number	Car Color	Car Price	Reservation Start Date	Reservation End Date
Mercedes	2018	666fff	blue	928.5	2022-12-31	2023-01-01
Mercedes	2018	777eee	Pistachio	150.99	2022-12-31	2023-01-04
G-wagon	2021	333ccc	white	999.9	2023-01-01	2023-01-05

Car Report

admin

- [Home](#)
- [Add Car](#)
- [Car Search](#)
- [Search By Car](#)
- [Search By Customer](#)
- [Search By Reservation](#)
- [Edit Car Status](#)
- [Log Out](#)

Sample run of generating a car status report:

Input fields are 12/21/2022

The logic behind the table is, every time an admin adds or edits a car, the record is entered into status table which has a composite key of status_date and plate number of the car. Upon retrieving we only get the most recent status date of that plate number.

Admin Page

admin

Home

Car Search

Search By Car

Search By Customer

Search By Reservation

Log Out



Add Car

Go



Advanced Search

Go



Car Edit

Go



Car Reports

12/31/2022

Status of all cars

Go

Car Status Report

admin

Home

Car Search

Search By Car

Search By Customer

Search By Reservation

Log Out

Date	Car Plate Number	Car Status	Car Condition
2022-12-29 19:57:58	111aaa	active	out of service
2022-12-30 02:34:01	1234567	active	good
2022-12-28 20:25:38	123456789	reserved	good
2022-12-29 20:28:42	444ddd	active	good
2022-12-29 19:57:41	kk	active	good
2022-12-29 19:58:04	la2	active	out of service

All reservations with all of customers and cars information report which takes two dates as input and shows all the reservations within the period

Admin Page

The Admin Page interface features a sidebar with a user icon labeled "admin" and links for Home, Add Car, Car Search, Search By Car, Search By Customer, Search By Reservation, Edit Car Status, and Log Out. The main area contains four large buttons:

- Add Car**: Represented by a car icon with a plus sign, with a "Go" button below it.
- Advanced Search**: Represented by a magnifying glass over a car icon, with a "Go" button below it.
- Car Edit**: Represented by a car icon with a pencil inside a circle, with a "Go" button below it.
- Car Reports**: Represented by a clipboard with a car icon, with a date range selector (12/31/2022 to 01/02/2023), a dropdown menu set to "Cars and Customers", and a "Go" button below it.

Car Report

The Car Report interface features a sidebar with a user icon labeled "admin" and links for Home, Add Car, Car Search, Search By Car, Search By Customer, Search By Reservation, Edit Car Status, and Log Out. The main area displays a table of reservation details:

Reservation ID	Start Date	Return Date	Amount to be paid	Customer ID	First Name	Last Name	Email	Gender	Country ID	Mobile Number	Car Name	Car Model	Car Color	Car Plate Number
18	2022-12-31	2023-01-03	1350	2	mahmoud	samy	mahmoudsamy@gmail.com	male	3	0111111111	Ford	Fiesta	blue	333333
25	2022-12-31	2023-01-06	2100	2	mahmoud	samy	mahmoudsamy@gmail.com	male	3	0111111111	kia	2020	black	1111111

**Sample run of generating a report of payment between the dates
12/24/2022 and 01/05/2023**

The payment is calculated as the difference between start of payment and end of rent date multiplied by the daily price of a car.

Admin Page

admin

[Home](#)

[Car Search](#)

[Search By Car](#)

[Search By Customer](#)

[Search By Reservation](#)

[Log Out](#)

Add Car

Advanced Search

Car Edit

Car Reports

12/24/2022

01/05/2023

Payment

Car Report

admin

[Home](#)

[Car Search](#)

[Search By Car](#)

[Search By Customer](#)

[Search By Reservation](#)

[Log Out](#)

Payment Date	Total Payment
2022-12-26	4800
2022-12-29	600

- **Edit Car Page : It's the page where the Admin can edit a specific car's condition for example from “good” to “Out of service”** in the figure below.

Edit Car Page



admin

[Home](#)

[Edit Car Status](#)

[Add Car](#)

[Car Search](#)

- [Search By Car](#)
- [Search By Customer](#)
- [Search By Reservation](#)

[Log Out](#)

Car Plate Number:

New Car Status:

localhost/car_system/page_admin.php

Edit Car Page



admin

[Home](#)

[Edit Car Status](#)

[Add Car](#)

[Car Search](#)

- [Search By Car](#)
- [Search By Customer](#)
- [Search By Reservation](#)

[Log Out](#)

Car Plate Number:

New Car Status:

Car condition edited.

Sample run of generating a report of reservation by customer ID. All reservations of the customer that has the customer ID=2 .

Admin Page

The Admin Page interface includes a sidebar with user information and navigation links, and a main content area with four cards:

- Add Car:** Features a car icon with a plus sign, a "Add Car" button, and a "Go" button.
- Advanced Search:** Features a magnifying glass over a car icon, a "Advanced Search" button, and a "Go" button.
- Car Edit:** Features a car icon with a pencil inside a circle, a "Car Edit" button, and a "Go" button.
- Car Reports:** Features a car icon next to a grid of boxes, a "Car Reports" button, a dropdown menu set to "Reservation of customer", and a "Go" button.

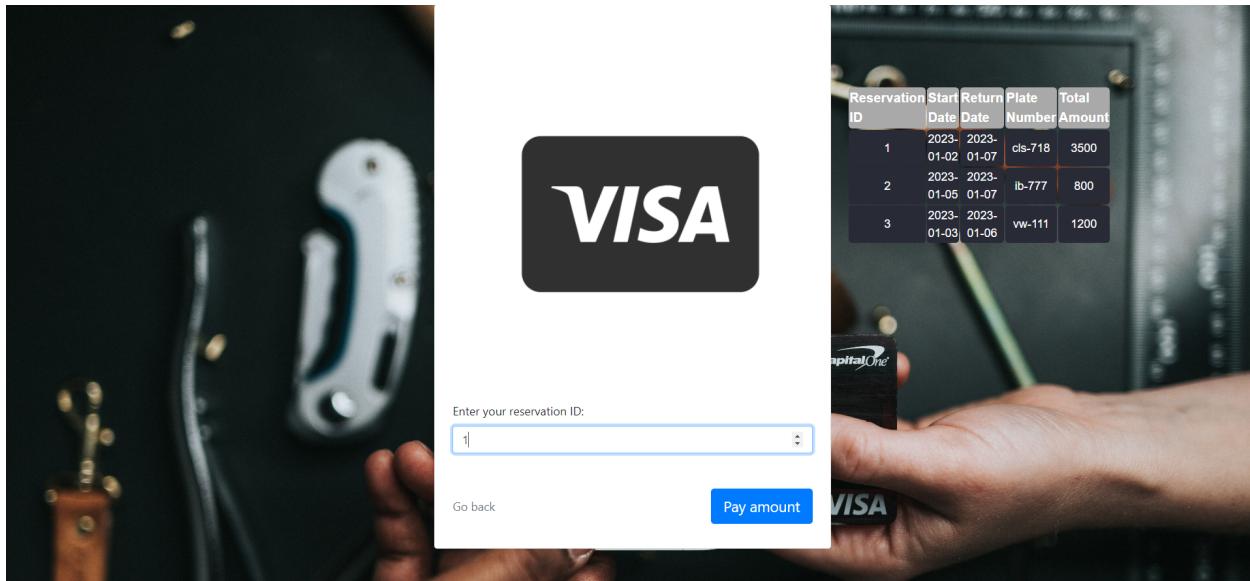
Customer Data:

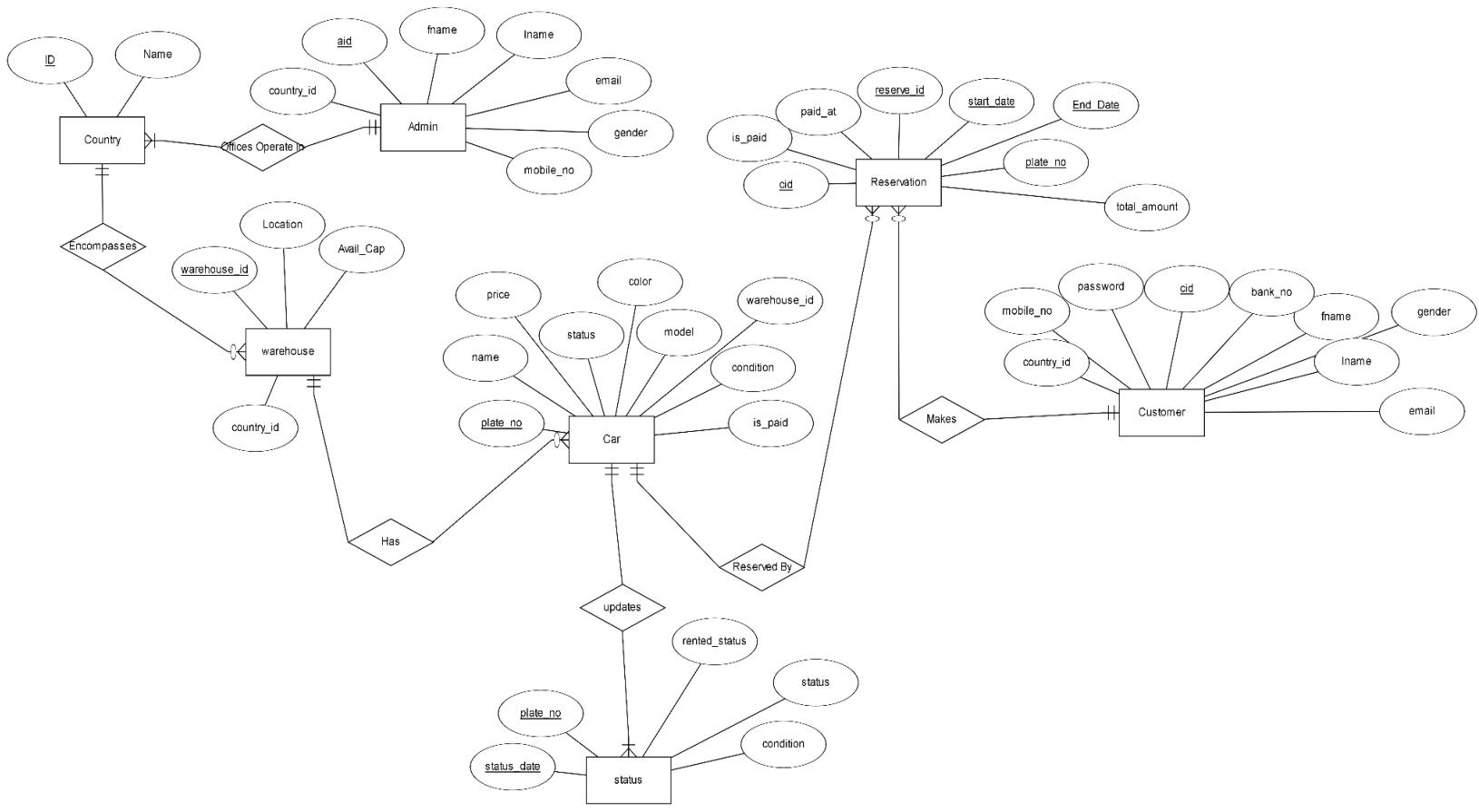
Customer ID	First Name	Last Name	Email	Gender	Country ID	Mobile Number	Bank Number	Car Name	Car Model	Car Plate Number
2	sara	mostafa	saramostafa@gmail.com	female	7	01982777339	12345	Audi	Etron	333ccc

Left Sidebar:

- admin
- Home
- Add Car
- Car Search
- Search By Car
- Search By Customer
- Search By Reservation
- Edit Car Status
- Log Out

- **Payment Page:** first, it shows all the non-paid reservations by the logged in user ,then the user must choose a specific reservation ID from the table and enter it ,so the system will update all the required attributes in the database to confirm the payment and it will be rented.





ERD Logic:

The schema consists of 7 tables:

-admin

-car

-reservation

-country

-customers

-reservation

-status

-warehouse

Admin table only has one tuple and the system doesn't allow registration as an admin to maintain the hierarchy of the system.

Status table keeps all modifications of a car's status and whether it's rented or not and its condition on the system. On editing car status, adding a car, reserving or renting we insert into this table. When we wish to retrieve the most recent record of the plate number of that car's status we sort beforehand then extract it into our reports.

Reservation table keeps records of all reservations, we have 2 main attributes which combined together identify whether a car is rented or just reserved -is_Paid (a bool value) and start_date that's automatically generated when a user wishes to reserve a car on the system-

Customers table encompasses a variety of attributes such as customer id, first name, last name, country_id, mobile_no, md5 hashed password and bank account number. The country_id references the table country which has an ID corresponding to each country. This matters because on login cars are displayed on a user's profile according to the cars available in this specific warehouse in the specific country.

Some of car table's attributes car_id, name, model, plate_no, status, condition, color and price. All are specs that allow the user to search as well as admin to search by them. The plate number is unique for each car among all warehouses.

Warehouse table has available capacity of the cars in the country, the table is modified and available capacity is incremented whenever the admin adds a car.

We maintain privacy by preventing user and admin of going back to their profiles on the system after logging out.

Automatically updating the system:

On login and registration, the system retrieves all cars from reservation table that are past their return date (End_date). As it does it so, the retrieved plate numbers are then inserted into status as not rented, are deleted from the reservation table and modified in the car table to show that the car reservation is no longer paid for.