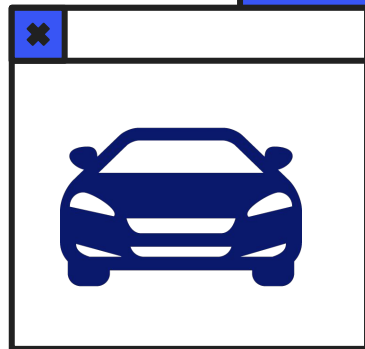




CarVille

Don't reinvent the wheel!
Just Rent it!



Mohamed Alaa Zeftawy	6886
Nour Hesham Shaheen	7150
Seif el Din Ayman	6825
Sohayla Khaled Abouzeid	6851

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INTRO



CarvilleTM

don't reinvent the wheel, just rent it

Our website is a car rental system, with facilities for both customers and an admin that can manage the website.

The following report describes the functionalities of our website with screenshots of the user interface.

To build our frontend app, we used the **Vue.js** framework and to build our backend, we used the **Node.js** framework. Our database was written in **MySQL**.

○ ●

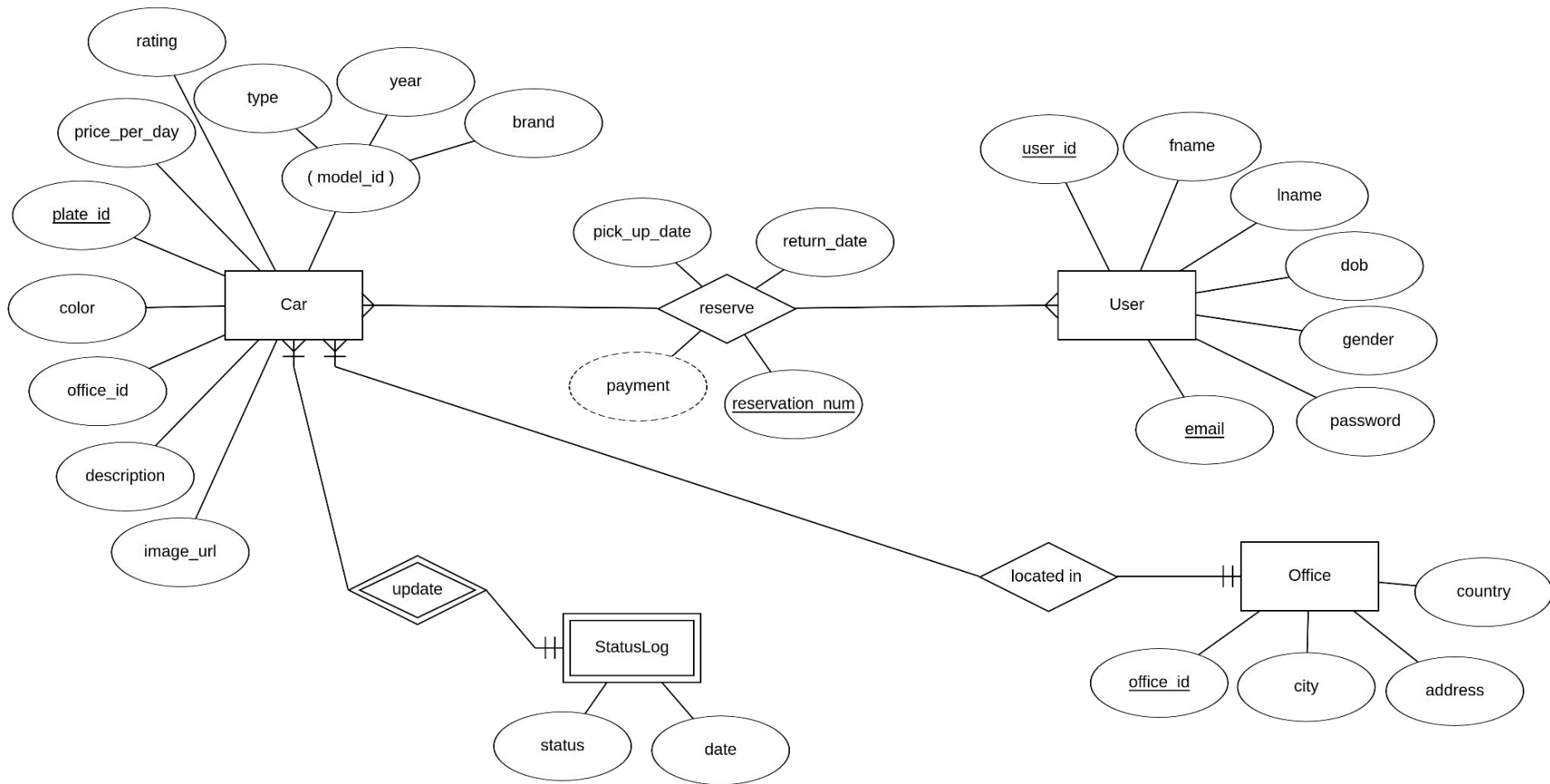
“Don’t reinvent the wheel, just rent it!”

Our slogan represents our workflow with this web app. Our approach was achieving simple and to-the-point features while still making a fully-functional system.





ERD





SCHEMA

Car

<u>plate_id</u>
price_per_day
color
model_id
office_id
status
description
image_url
rating

StatusLog

plate_id
status
date

User

<u>user_id</u>
fname
lname
email (U)
password
gender
dob

Model

<u>model_id</u>
brand
type
year

Reservation

<u>plate_id</u>
<u>user_id</u>
pick_up_date
return_date
reservation_num (U)
payment

Office

<u>office_id</u>
address
city
country

WALKTHROUGH

This section describes the features implemented while showing a walkthrough of our website.

We start by choosing if we want to sign in, sign up, sign in as administrator or browse as a guest. This is done through a simple drop-down menu.



WALKTHROUGH

This section describes the features implemented while showing a walkthrough of our website.



1. USER / GUEST



REGISTER

Facilities:

Validation

* Each field is **validated** before being sent to the backend app (email has to be valid, password and confirm password fields must match, age must be over 18, ... etc.)

* Email is sent to backend to check if it already exists because no two users can have the same email.

* Date is chosen from a date picker.

* Gender is chosen from a drop-down menu.

REGISTER

First name

Name is required.

Last name

Name is required.

E-mail

E-mail is required

Password

Password is required

Confirm Password

This field can not be empty

Gender

Gender is required



Birth date

Date can not be empty

☐ Agree on terms and conditions

You must agree to continue!

SIGN UP

REGISTER

Facilities:

Validation

* Each field is **validated** before being sent to the backend app (email has to be valid, password and confirm password fields must match, age must be over 18, ... etc.)

* Email is sent to backend to check if it already exists because no two users can have the same email.

* Date is chosen from a date picker.

* Gender is chosen from a drop-down menu.

REGISTER

First name

Name is required.

Last name

Name is required.

E-mail

E-mail is required

Password

Password is required

Confirm Password

This field can not be empty

Gender

Male

Female



Birth date

Date can not be empty

☐ Agree on terms and conditions

You must agree to continue!

SIGN UP

REGISTER

Facilities:

Validation

* Each field is **validated** before being sent to the backend app (email has to be valid, password and confirm password fields must match, age must be over 18, ... etc.)

* Email is sent to backend to check if it already exists because no two users can have the same email.

* Date is chosen from a date picker.

* Gender is chosen from a drop-down menu.

The screenshot shows a registration form titled "REGISTER" with several input fields. The "First name" and "Last name" fields have red error messages: "Name is required.". The "Password" field has a red error message: "Password is required". The "Gender" field is a dropdown menu with a red error message: "Gender is required". The "E-mail" field has a red error message: "E-mail is required". The "Confirm" field has a red error message: "This field is required". At the bottom, there is a checkbox for "Agree on terms and conditions" with a red error message: "You must agree to continue!". A date picker is open, showing the month of December 2022, with the 29th selected. A "SIGN UP" button is visible at the bottom right.

2022

< December 2022 >

S	M	T	W	T	F	S
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31

First name
Name is required.

Last name
Name is required.

E-mail
E-mail is required.

Password
Password is required

Confirm
This field is required

Gender
Gender is required

☐ Agree on terms and conditions
You must agree to continue!

SIGN UP

LOGIN

Facilities:

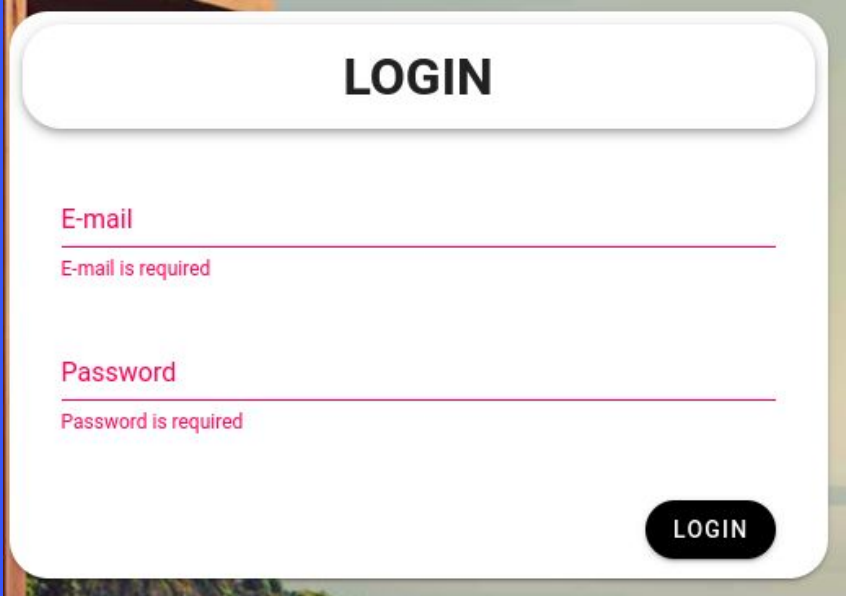
Website Access

* Through cookies and authentication, some tabs and pages of our website are only accessible if a user logs in.

* This page checks if the email and password the user entered exist in our database. If they do, the user is redirected to browse the available cars. If not, an error message pops up to the user.

Encryption

* Passwords are encrypted using the bcrypt hash library in JavaScript.



LOGIN

E-mail
E-mail is required

Password
Password is required

LOGIN

LOGIN

Facilities:

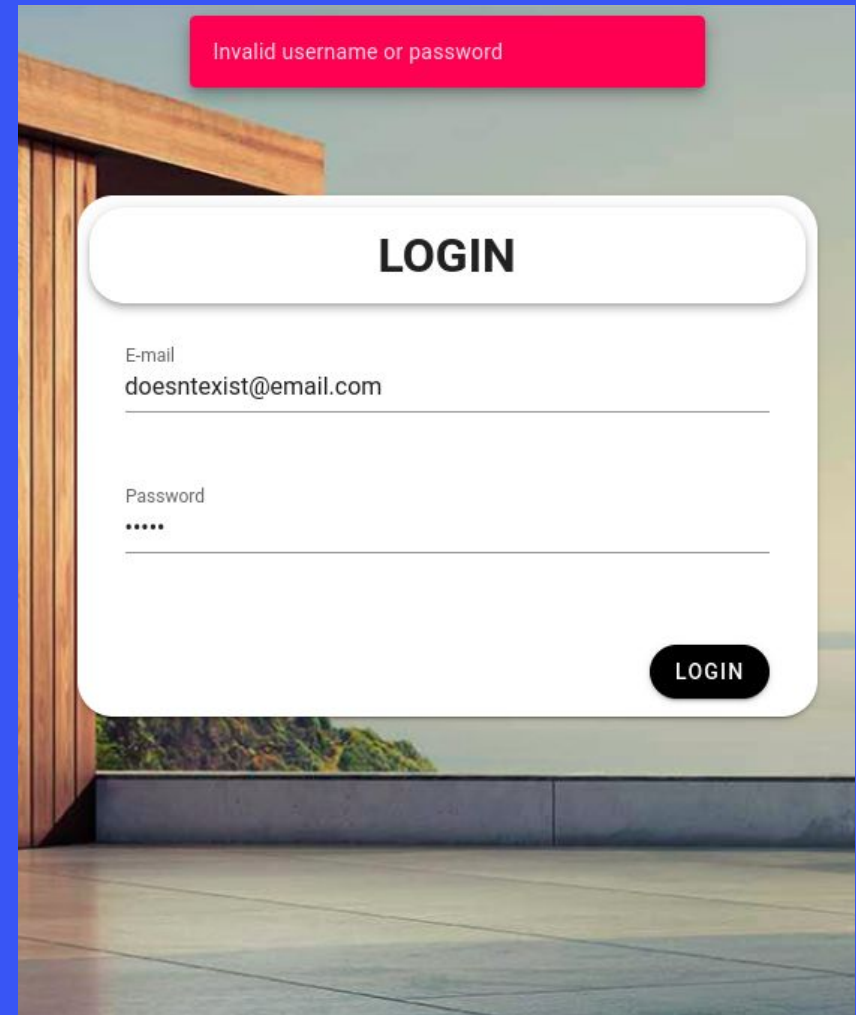
Website Access

* Through cookies and authentication, some tabs and pages of our website are only accessible if a user logs in.

* This page checks if the email and password the user entered exist in our database. If they do, the user is redirected to browse the available cars. If not, an error message pops up to the user.

Encryption

* Passwords are encrypted using the bcrypt hash library in JavaScript.



Puma

★★★★☆

700

Corolla

★★★★★

1600

Civic

★★★★★

450

Model Y

★★★★☆

600

Cherokee

★★★★☆

1240

Civic

★★★★☆

1340

Picanto

★★★★★

920

Picanto

★★★★☆

1300

Logan

★★★★★

1500

Corolla

★★★★☆

670

Envy

★★★★★

500

Envy

★★★★★

590

Envy

★★★★☆

600

Logan

★★★★☆

690

Maverick

★★★★★

1300

Maverick

★★★★★

640

CX-3

★★★★★

610

CX-3

★★★★☆

1620

BROWSING

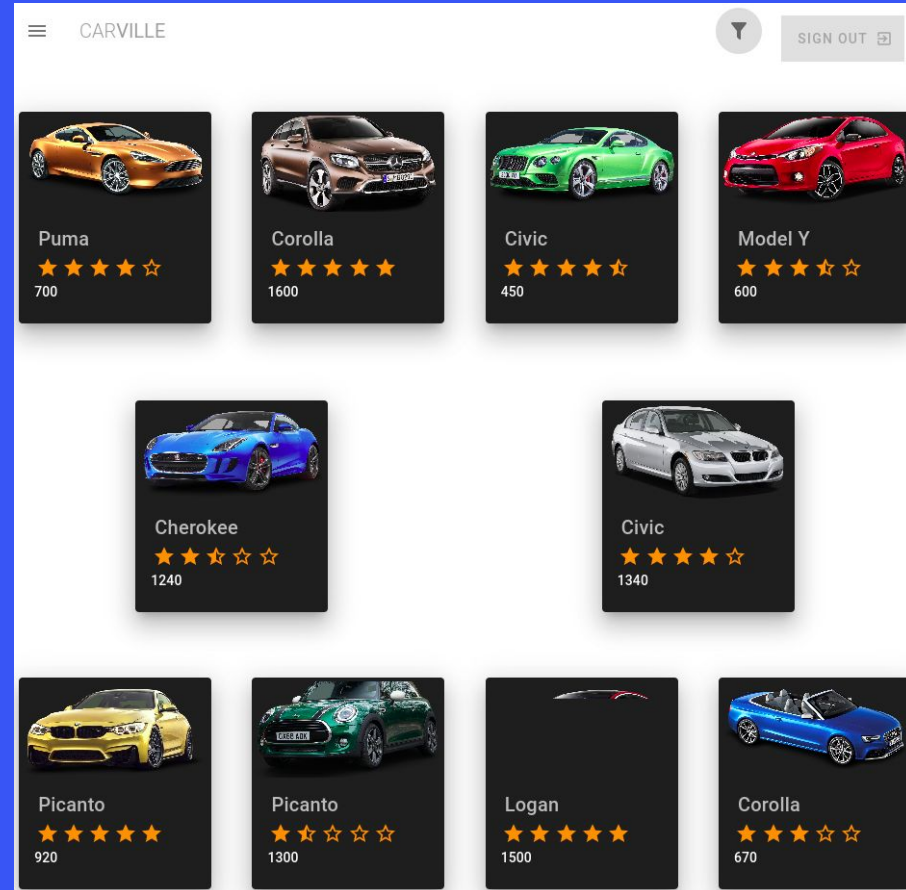
Facilities:

Filtration

* When a user logs in, he gets transferred to the “Browsing” page showing him 10-20 cars. If the user wants to see all of the cars available in the system or filter them by a certain attribute, he can click the filter icon in the navigation bar (navbar).

See Reservations

* If the user is logged in (not a guest), through a hamburger menu, he can check all of his past and future reservations with all of their details.



BROWSING

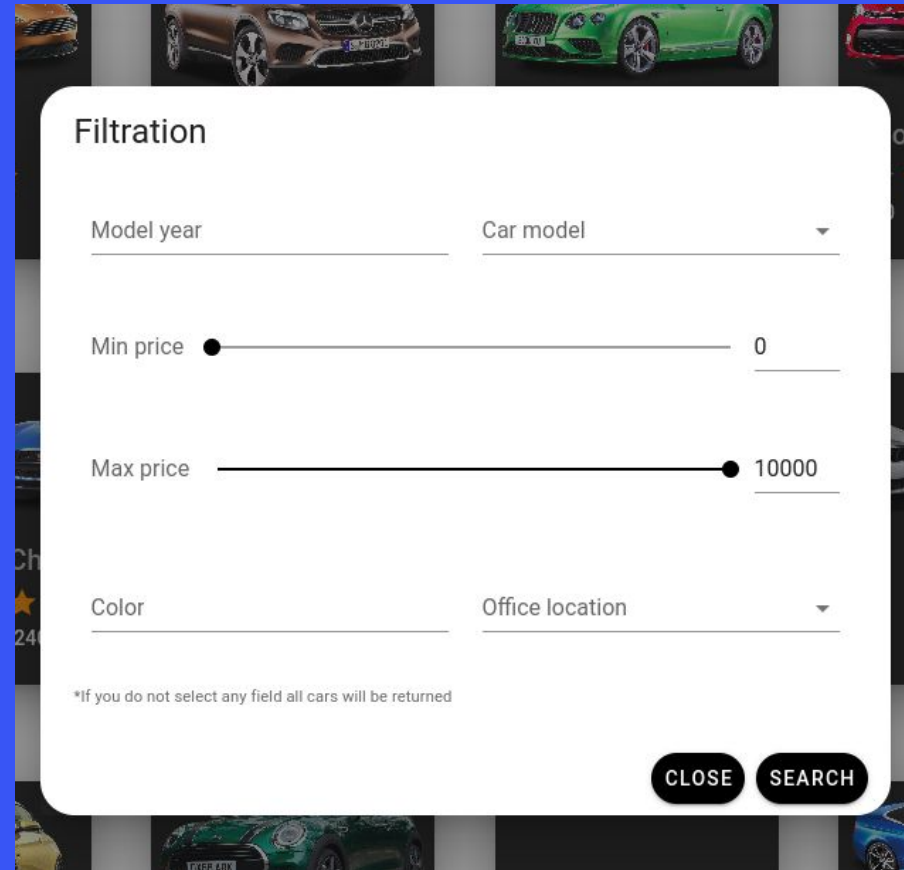
Facilities:

Filtration

* When a user logs in, he gets transferred to the “Browsing” page showing him 10-20 cars. If the user wants to see all of the cars available in the system or filter them by a certain attribute, he can click the filter icon in the navigation bar (navbar).

See Reservations

* If the user is logged in (not a guest), through a hamburger menu, he can check all of his past and future reservations with all of their details.



The screenshot shows a mobile application interface for browsing cars. A white 'Filtration' modal is open over a background of car images. The modal contains several filter options: 'Model year' and 'Car model' as dropdown menus, 'Min price' and 'Max price' as range sliders (with '0' and '10000' respectively), and 'Color' and 'Office location' as dropdown menus. A note at the bottom states: '*If you do not select any field all cars will be returned'. At the bottom right of the modal are two buttons: 'CLOSE' and 'SEARCH'.

Filtration

Model year Car model

Min price 0

Max price 10000

Color Office location

*If you do not select any field all cars will be returned

CLOSE SEARCH

BROWSING

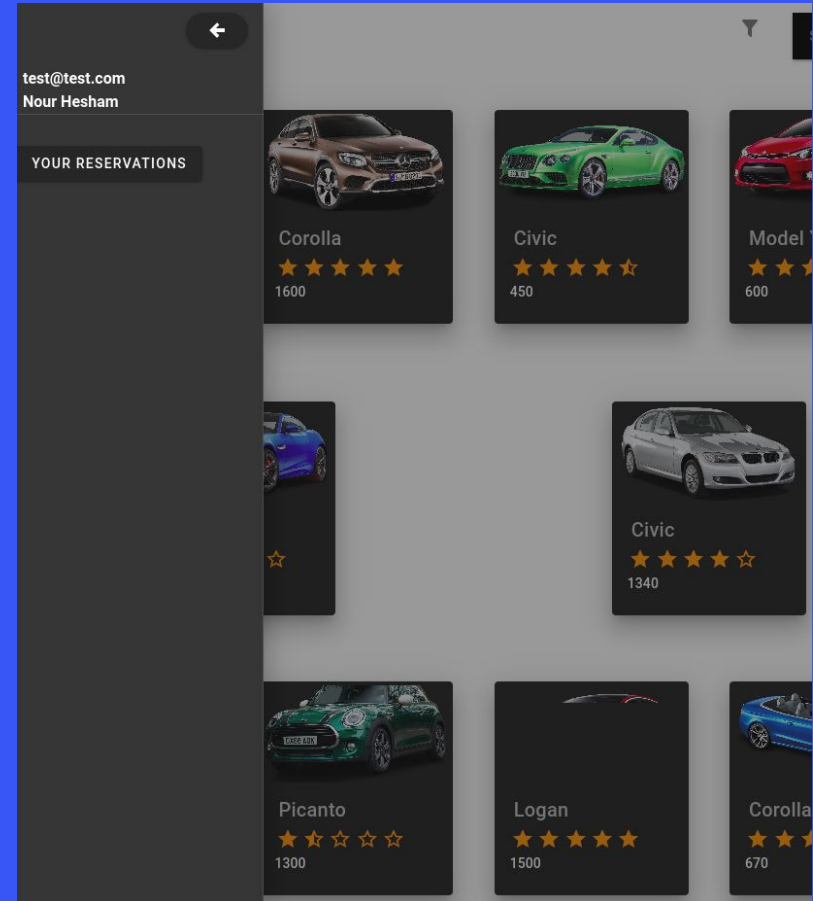
Facilities:

Filtration

* When a user logs in, he gets transferred to the “Browsing” page showing him 10-20 cars. If the user wants to see all of the cars available in the system or filter them by a certain attribute, he can click the filter icon in the navigation bar (navbar).

See Reservations

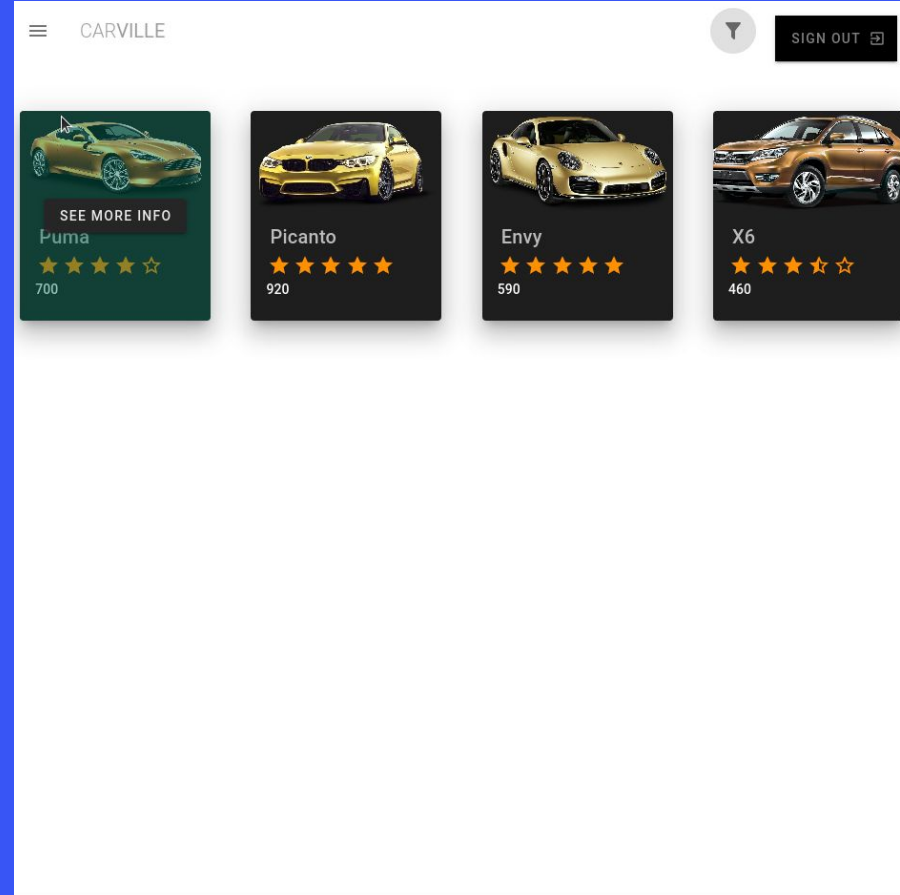
* If the user is logged in (not a guest), through a hamburger menu, he can check all of his past and future reservations with all of their details.



FILTRATION

EXAMPLE: Filter by color

* The following is an example if we filtered by the color “Gold”, these are the results that appear.



RESERVE

Facilities:

See Car Info

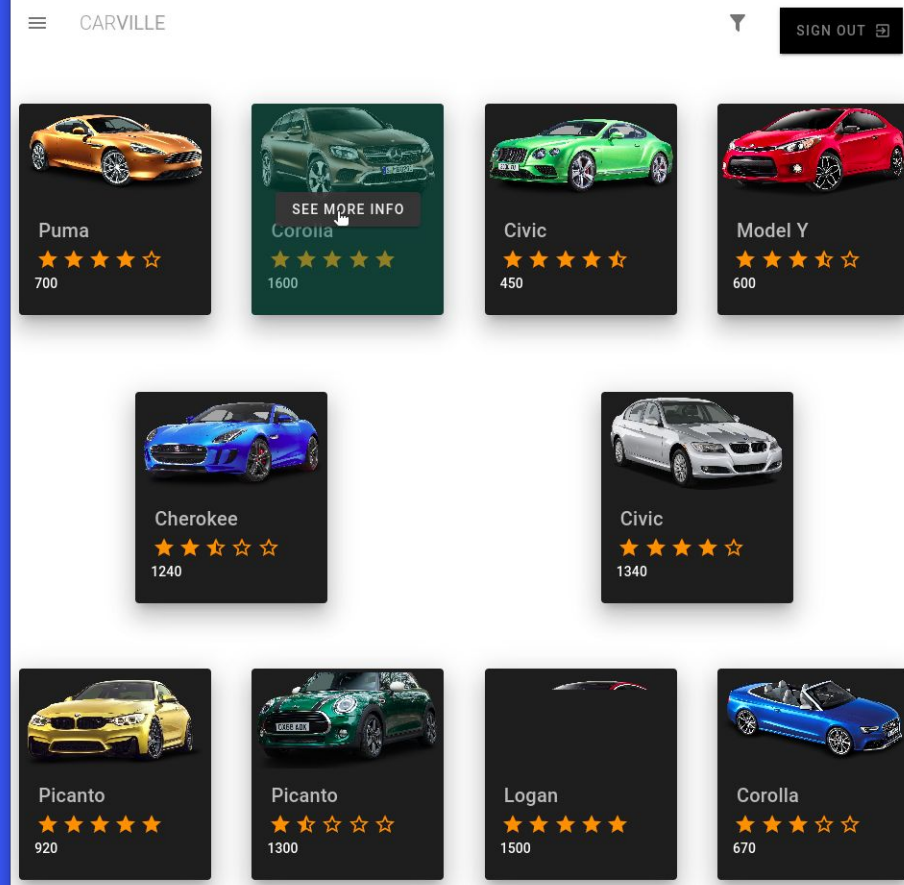
* When a user/guest clicks on a car, he can see all of its information.

Validate

* A logged-in user can reserve a car in a certain date range but all taken date ranges will appear **faded** in the date picker.

* Date cannot be empty or else an error message will pop up.

* You can't reserve a car "around" a taken date range, it will also prompt a pop-up message.



RESERVE

Facilities:

See Car Info

* When a user/guest clicks on a car, he can see all of its information.

Validate

* A logged-in user can reserve a car in a certain date range but all taken date ranges will appear **faded** in the date picker.

* Date cannot be empty or else an error message will pop up.

* You can't reserve a car "around" a taken date range, it will also prompt a pop-up message.



Toyota-Corolla 2020



\$ 1600

Roadside Assistance for the duration of the Certified Pre-Owned Limited Warranty.

available dates



Date From



Date To

RESERVE

RESERVE

Facilities:

See Car Info

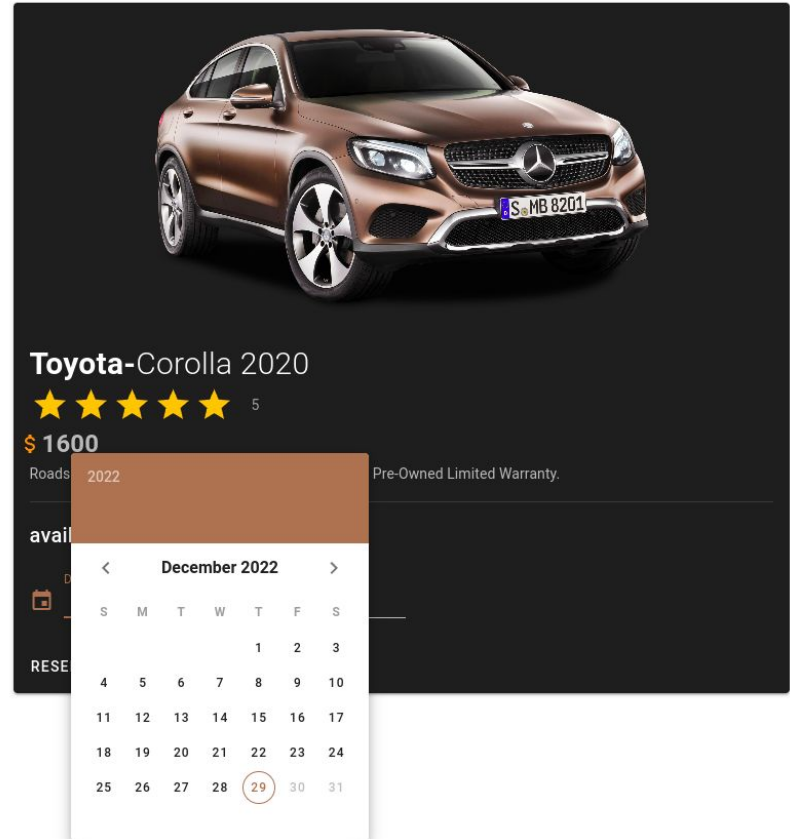
* When a user/guest clicks on a car, he can see all of its information.

Validate

* A logged-in user can reserve a car in a certain date range but all taken date ranges will appear **faded** in the date picker.

* Date cannot be empty or else an error message will pop up.

* You can't reserve a car "around" a taken date range, it will also prompt a pop-up message.



CONFIRM

Facilities:

Reserve

* User will be prompted to enter card details or choose cash on delivery, as well as enter a promo code, then reserve.

* If his reservation is successful, it will appear in his reservations table through the hamburger menu.

Confirmed

* User will receive a confirmation message as well as a code to track his reservation when his vehicle finally arrives on the pick up day.

RESERVE

Payment method:

☒ visa

☐ cash on pickup

card no:

promocode:

CONFIRM RESERVATION

CONFIRM

Facilities:

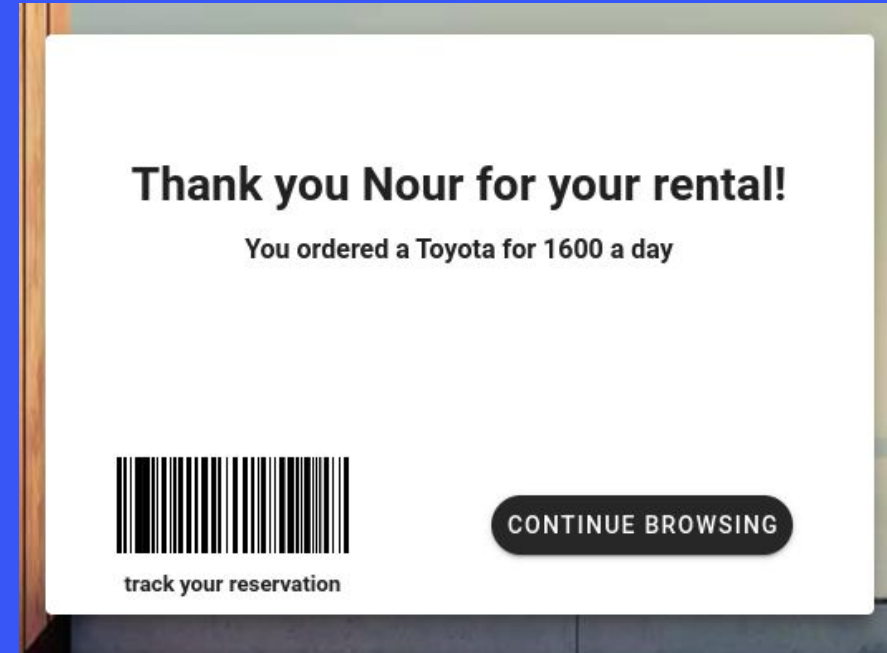
Reserve

* User will be prompted to enter card details or choose cash on delivery, as well as enter a promo code, then reserve.

* If his reservation is successful, it will appear in his reservations table through the hamburger menu.

Confirmed

* User will receive a confirmation message as well as a code to track his reservation when his vehicle finally arrives on the pick up day.



SIGN OUT

* When you're done using CarVille for all your renting activities, you can sign out, your cookies will be deleted, so no other user can see your information or your reservations.

Happy renting!



WALKTHROUGH

This section describes the features implemented while showing a walkthrough of our website.



2. ADMINISTRATOR



ADMIN LOGIN

Facilities:

Security

* Through authentication, none of the admin pages will be available to see without first logging in with the designated credentials for the admin “Mina”.

ADMIN LOGIN

Admin E-mail

mina@koleya.com

Admin Password

....|

LOGIN

ADMIN HOME

Facilities:

Add New Car

* Add a new car to the database with all its information.

Update Car Status

* Update an existing car's status.

Reports

* Available reports are: cars' status on a specific day, reservations within a period, reserved car info, customers' reservations, and daily payments.

Advanced Search



ADD CAR

Plate Id Price per day Color

Brand Type Year

Office Status

Image URL

Description

ADD CAR +

WALKTHROUGH - ADMIN ☐ ☒

ADD CAR

- * Add a new car to the database with all its information.
- * You need to choose the car's office from the drop down menu as well as the car's current status.
- * You will enter a short description and an image URL to be associated with your car.

Office

- 6 Batlaimous Street, Sidi Gaber, Alexandria, Egypt
- 31 Nile Street, Sheikh Zayed, Cairo, Egypt
- 54 Rue de Fleurs, 3e Arrondissement, Paris, France
- 34 Lionel Messi Street, Buenos Aires, Argentina
- 66 Zeftawy Street, Montreal, Canada
- 42 Wallaby Way, Sydney, Australia

Status

active

out of order

rented

ADD CAR +

UPDATE CAR STATUS

Plate Id

Status



UPDATE STATUS +

UPDATE STATUS

* Admin can enter a car's plate id and the new status and the status will be changed in the database.

* Admin can't leave either field empty.

REPORTS (1)

CARS' STATUS

* Admin is prompted to enter a day.

* This is done through an extra table in our database called StatusLogs that registers every time a status has been changed.

* Our query checks cars' last status change right before the date entered by the admin and returns all 50 cars' statuses on that specific day.

* Admin can also search in the output table for a specific plate id to get its status.

CARS' STATUS



Date

SHOW RESULTS

Search

Cars' status

Plate ID	Status
1341 SMS	Out Of Order
145 FEB	Active
444 JNA	Active
765 FRI	Out Of Order
099 DDD	Active
111 Mina	Active
111 NOR	Active
121 ABC	Active
123 SORS	Active
134 AAA	Active

Rows per page: 10 1-10 of 50 < >

SEARCH AGAIN

CUSTOMER'S RESERVATIONS

User Id

SHOW RESULTS

WALKTHROUGH – ADMIN

REPORTS (2)

CUSTOMERS' RESERVATIONS

* Admin is prompted to enter a certain user's id and get that user's reservations.

Customer's reservations

First Name	Last Name	E-mail	Gender	Date Of Birth	Plate ID	Brand	Type	Year	Pick Up Date
Nour	Hesham	test@test.com	F	2000-10-05	121 ABC	Mitsubishi	Puma	2009	2023-01-02
Nour	Hesham	test@test.com	F	2000-10-05	121 ABC	Mitsubishi	Puma	2009	2023-01-11
Nour	Hesham	test@test.com	F	2000-10-05	444 JNA	Nissan	Sunny	2017	2022-12-05
Nour	Hesham	test@test.com	F	2000-10-05	671 BRD	Honda	Civic	2018	2023-01-01

Rows per page: 10

1-4 of 4

RESERVATIONS WITHIN A SPECIFIC PERIOD

 Date From  Date To

SHOW RESULTS

WALKTHROUGH – ADMIN

REPORTS (3)

RESERVATIONS WITHIN A PERIOD

* Admin is prompted to enter a certain time period and get that all reservations within that period.

Reservations within a period												
Plate ID	Price Per Day	Color	Description	Status	Brand	Type	Year	Address	City	Country	User ID	Pick Up Date
111 Mina	600	red	Transmission - Continuously Variable Automatic. Engine - 2.4L I-4 cylinder. Maximum ground clearance 6.4".	Active	Tesla	Model Y	2021	31 Nile Street, Sheikh Zayed	Cairo	Egypt	1	2022-12-31
444 JNA	1200	red	Steering wheel mounted audio controls. Power driver seat. Roadside Assistance for the duration of the Certified Pre-Owned Limited Warranty.	Rented	Nissan	Sunny	2017	42 Wallaby Way	Sydney	Australia	1	2022-12-05
652 MID	1600	#A47551	Engine torque: 181 lb.-ft. @ 3,900RPM. Engine bore x stroke: 3.43" x 3.90".	Active	Toyota	Corolla	2020	6 Battalious Street, Sidi Gaber	Alexandria	Egypt	1	2022-12-30
671 BRD	450	green	Engine torque: 181 lb.-ft. @ 3,900RPM. Engine bore x stroke: 3.43" x 3.90".	Active	Honda	Civic	2018	6 Battalious Street, Sidi Gaber	Alexandria	Egypt	1	2022-12-31
671 BRD	450	green	Engine torque: 181 lb.-ft. @ 3,900RPM. Engine bore x stroke: 3.43" x 3.90".	Active	Honda	Civic	2018	6 Battalious Street, Sidi Gaber	Alexandria	Egypt	1	2023-01-02

REPORTS (4)

CAR RESERVATIONS WITHIN A PERIOD

* Admin is prompted to enter a certain user's id as well as a specific time period and get that user's reservation within that period.

RESERVATIONS OF A CAR WITHIN IN A SPECIFIC PERIOD

Plate Id



Date From



Date To

SHOW RESULTS

Reserved car info

Plate ID	Price Per Day	Color	Description	Status	Brand	Type	Year	Address	City	Country	User ID	Pick Up Date
671 BRD	450	green	Engine torque: 181 lb.-ft. @ 3,900RPM. Engine bore x stroke: 3.43" x 3.90".	Active	Honda	Civic	2018	6 Batlaimous Street, Sidi Gaber	Alexandria	Egypt	1	2022-12-31
671 BRD	450	green	Engine torque: 181 lb.-ft. @ 3,900RPM. Engine bore x stroke: 3.43" x 3.90".	Active	Honda	Civic	2018	6 Batlaimous Street, Sidi Gaber	Alexandria	Egypt	1	2023-01-02

Rows per page:

10

1-2 of 2



DAILY PAYMENTS

 Date From  Date To

SHOW RESULTS

Daily payments

Pick up Date

Payment

2022-12-30

3200

2022-12-31

12210

2023-01-02

1215

Rows per page:

10

1-3 of 3

WALKTHROUGH - ADMIN



REPORTS (5)

DAILY PAYMENTS

* Admin is prompted to enter a certain date range to receive a list of the sum of all payments received at each day in that range.

SEARCH AGAIN

ADVANCED SEARCH

[DAILY PAYMENTS](#)

* Admin is prompted to choose whether he wants to search for a car, customer, reservation, or any combination of the above. He can then search for any letter in the search bar and it will appear in real time on the table.

SEARCH

- ☐ Car
- ☐ Customer
- ☐ Reservation



Cars' table

Plate ID	Price Per Day	Color	Brand	Type	Year
671 BRD	450	green	Honda	Civic	2018
5430 WED	1340	#C0C0C0	Honda	Civic	2018

ADVANCED SEARCH

WALKTHROUGH – ADMIN



Search



Customers/reservations/cars table

Reservation Number	Pick up Date	Return Date	Payment	Plate ID	Price Per Day	Color	Brand	Type	Year	Description	
7	1970-01-02	1970-01-02		099 DDD	590	orange	Skoda	Octavia	2011	Rear window defroster. Dual front side impact airbags. Rear headroom: 38.6".	7
	2022-12-31	2023-01-18	11400	111 Mina	600	red	Tesla	Model Y	2021	Transmission - Continuously Variable Automatic. Engine - 2.4L I-4 cylinder.	3
	1970-01-02	1970-01-02		111 NOR	1600	#C0C0C0	Skoda	Superb	2006	Towing capacity: 1,500lbs. Engine bore x stroke: 3.43" x 3.90". Read camera for exterior parking.	8
	1970-01-02	1970-01-02		121 ABC	700	#FFD700	Mitsubishi	Puma	2009	Leather Upholstery. Exterior Parking Camera Right. Front hiproom: 54.5".	6
	1970-01-02	1970-01-02		123 SORS	1450	black	Mitsubishi	Eclipse	2021	Occupant sensing airbag. Front headroom: 38.0". Engine displacement: 2.4 L.	7
	1970-01-02	1970-01-02		134 AAA	960	white	Audi	A5	2018	Variably intermittent wipers. Engine bore x stroke: 3.43" x 3.90".	2
	1970-01-02	1970-01-02		1341 SMS	1700	#C0C0C0	BMW	X6	2020	7 Speakers. Bluetooth HandsFreeLink wireless phone connectivity. Curb weight: 3,457lbs.	7
	1970-01-02	1970-01-02		1345 GDS	1500	#A47551	Ford	Maverick	2019	Steering wheel mounted audio controls. Radio data system. Maximum ground clearance 6.4".	7
	1970-01-02	1970-01-02		145 FEB	640	white	Ford	Maverick	2019	Continuously variable automatic transmission with mode select. Torque: 181 lb.-ft. @ 3,900RPM.	3
	1970-01-02	1970-01-02		167 MAY	900	red	Tesla	Model Y	2021	Speed-Sensitive Windshield Wipers. 1-touch down/up windows. Odometer - 52,315 miles.	4

SEARCH AGAIN

IN CONCLUSION



CarVille can ...

- * Help you reserve a car from anywhere in the world!
- * Effectively and efficiently automate manual procedures for car reservation!
- * Help customers search for the cars they want by specs!
- * Make collection of information easy on the admins!





EXPERIENCE

01

ADMIN

EFFICIENT

02

CUSTOMER

EASY

03

TA

BONUS?

04

STUDENT

FULL MARK

THANK YOU !