

COMP3385 Project 2

Due Date:

April 27, 2024 at 11:59 PM

For this project we will create a fictional Auto Sales site called United Auto Sales that will allow users to add cars that they want to sell, search for available cars and be able to view some more information on those cars. Users can also add a car to their favourites so they can quickly get back to it.

Database Schema

Cars

Column Name	Data Type
id	Integer
description	String
make	String
model	String
colour	String
year	String
transmission	String
car_type	String
price	Decimal/Float
photo	String
user_id	Integer

Column Name	Data Type
<code>created_at</code>	DateTime
<code>updated_at</code>	DateTime

Favourites

Column Name	Data Type
<code>id</code>	Integer
<code>car_id</code>	Integer
<code>user_id</code>	Integer

Users

Column Name	Data Type
<code>id</code>	Integer
<code>email</code>	String
<code>password</code>	String
<code>name</code>	String
<code>location</code>	String
<code>biography</code>	String
<code>photo</code>	String
<code>created_at</code>	DateTime
<code>updated_at</code>	DateTime

Note

Ensure that you define the appropriate models and create your database migrations.

Requirements

You should be able to register for an account on our United Auto Sales web application. Once a user has an account, they should be able to login and see available cars. They can also search by the make or model of the cars. A user also has the ability to submit information for a car being sold as well as upload a photo. Users can also view the full details of a car and also "Favourite" cars that they like. And lastly a user can view their own profile and see the cars that they have added to their favourites.

Part 1

The aim of the first part of the project is to build the API for your United Auto Sales application. This includes creating routes (endpoints) for the user registration and login system as well as the ability to add and view cars, search for cars and favourite cars. See Table 1.

The API routes (endpoints)

HTTP Method	Route	Description
POST	/api/v1/auth/register	Accepts user information and saves it to the database
POST	/api/v1/auth/login	Accepts login credentials as email and password
POST	/api/v1/auth/logout	Logout a user
GET	/api/v1/cars	Return all cars
POST	/api/v1/cars/	Used for adding new cars
GET	/api/v1/cars/{car_id}	Get Details of a specific car
POST	/api/v1/cars/{car_id}/favourite	Add car to Favourites for logged in user
GET	/api/v1/search	Search for cars by make or model
POST	/api/v1/users/{user_id}	Get Details of a user
POST	/api/v1/users/{user_id}/favourites	Get cars that a user has favourited.

Table 1: API Routes

Test to ensure that your API works by using either the Postman REST Client (<http://getpostman.com/>) or the Curl command line tool to make requests to your API routes (endpoints).

Part 2

You are required to use VueJS to build the front end of your web application that will interact with the API you built in Part 1. You should also ensure the following is in place:

1. You should use the VueRouter library to create routing for your frontend and implement some Vue components to represent the different pages. See Table 2 below for a list of routes.
2. A User should be able to Register for an account and Login to the website. See Figure 2 and 3.
3. You should generate and send the appropriate Authorization header with each request to your API (except the login and register API routes) using a JWT e.g. `Authorization: Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9.eyJzdWIiOiIxMjM0NTY3ODkwIiwibmFtZSI6IkpvaG4gRG9lIiwiaWF0Ij0iOnRydwV9.TJVA950rM7E2cBab30RMHrHDcEfxjoYZgeFONFh7HgQ`
4. When a user successfully logs in they should see the last 3 cars that have been added from all users. They should also see a search box, where they can search by the make or model of a car. See Figure 4.
5. A user can click on the "View more details" button/link for a car to see the full details on the car. The "Email Owner" button does not need to do anything for this project but should still be included on the page.
6. A user should however but able to click on the "heart" icon to add the car to their favourites. See Figure 5.
7. A user can view their own profile by clicking 'My Profile' from the menu. See Figure 6. When viewing a users' profile, you should be see the details about the user as well as any cars they have favourited.
8. The user should be able to choose to add a new car for sale to system at which point they will supply all the relevant details for the car and upload an image. See Figure 7.
9. You should display a success message if the user successfully adds a new car or failure otherwise.

Frontend Routes

Route	Description
/	Display the homepage of the web application

Route	Description
<code>/register</code>	Accepts user information and saves it to the database
<code>/login</code>	Accepts login credentials as email and password
<code>/logout</code>	Logout a user
<code>/explore</code>	View/Explore all posts by all users
<code>/users/{user_id}</code>	View user profile info as well as all Posts by that user
<code>/cars/new</code>	Allow the user to add a new post
<code>/cars/{car_id}</code>	View all the details about a car

Table 2: Frontend Routes

Submission

Submit your code via the "Project 2" link on the VLE. You should submit the following links:

- Github repository URL for your Laravel Exercise e.g.
<https://github.com/{yourusername}/comp3385-project-2>

Appendix

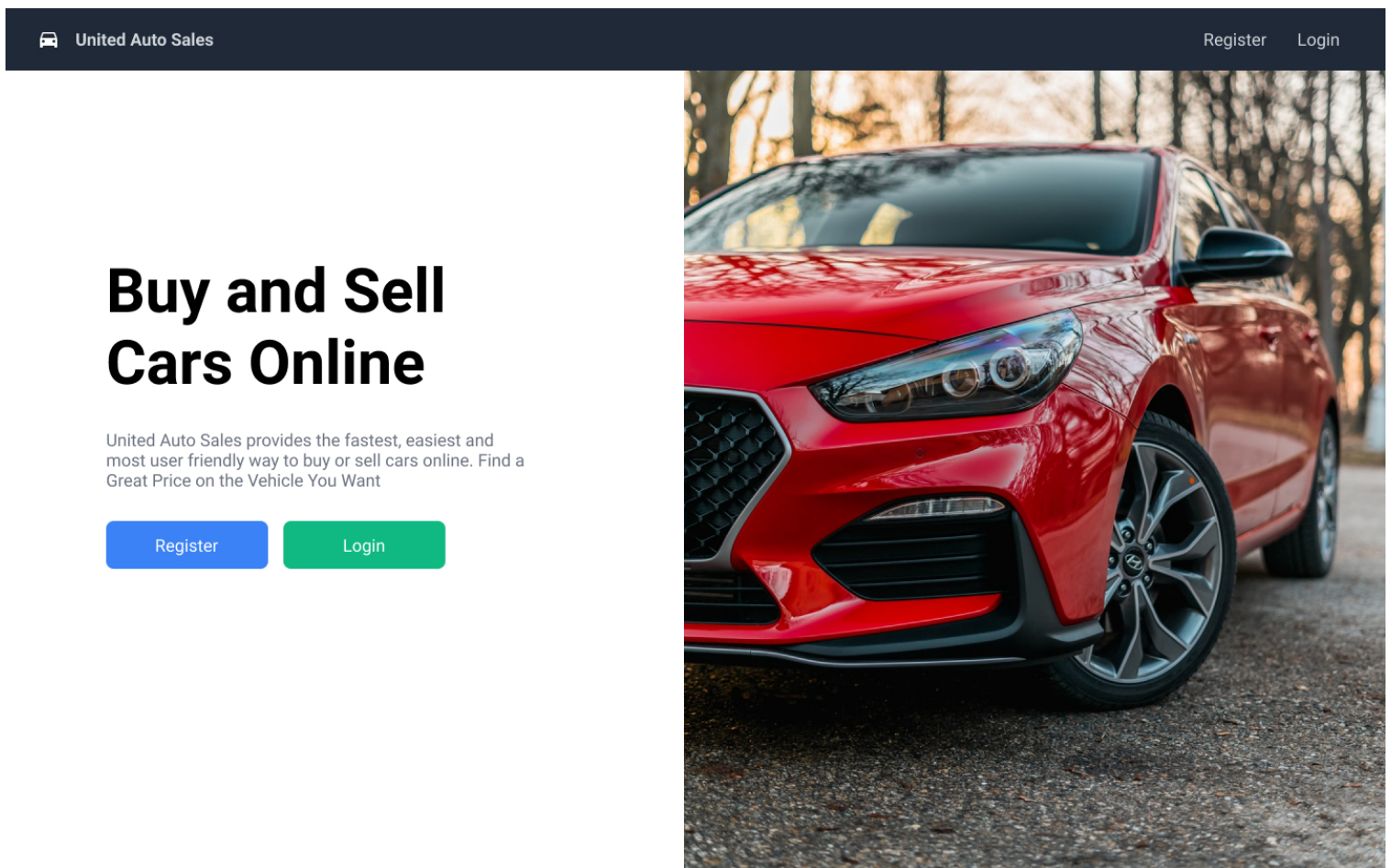


Figure 1. Home page

The image displays the 'Register New User' form on the United Auto Sales website. The form is centered on a light gray background. It features several input fields: 'Username' and 'Password' in the first row, 'Fullname' and 'Email' in the second row, and 'Location' in the third row. Below these is a larger text area for 'Biography'. At the bottom of the form, there is an 'Upload Photo' section with a 'Browse' button and the text 'No File Selected'. A large green 'Register' button is positioned at the very bottom of the form. The header of the page is identical to the one in Figure 1, with 'United Auto Sales' on the left and 'Register' and 'Login' on the right.

Figure 2. User Registration

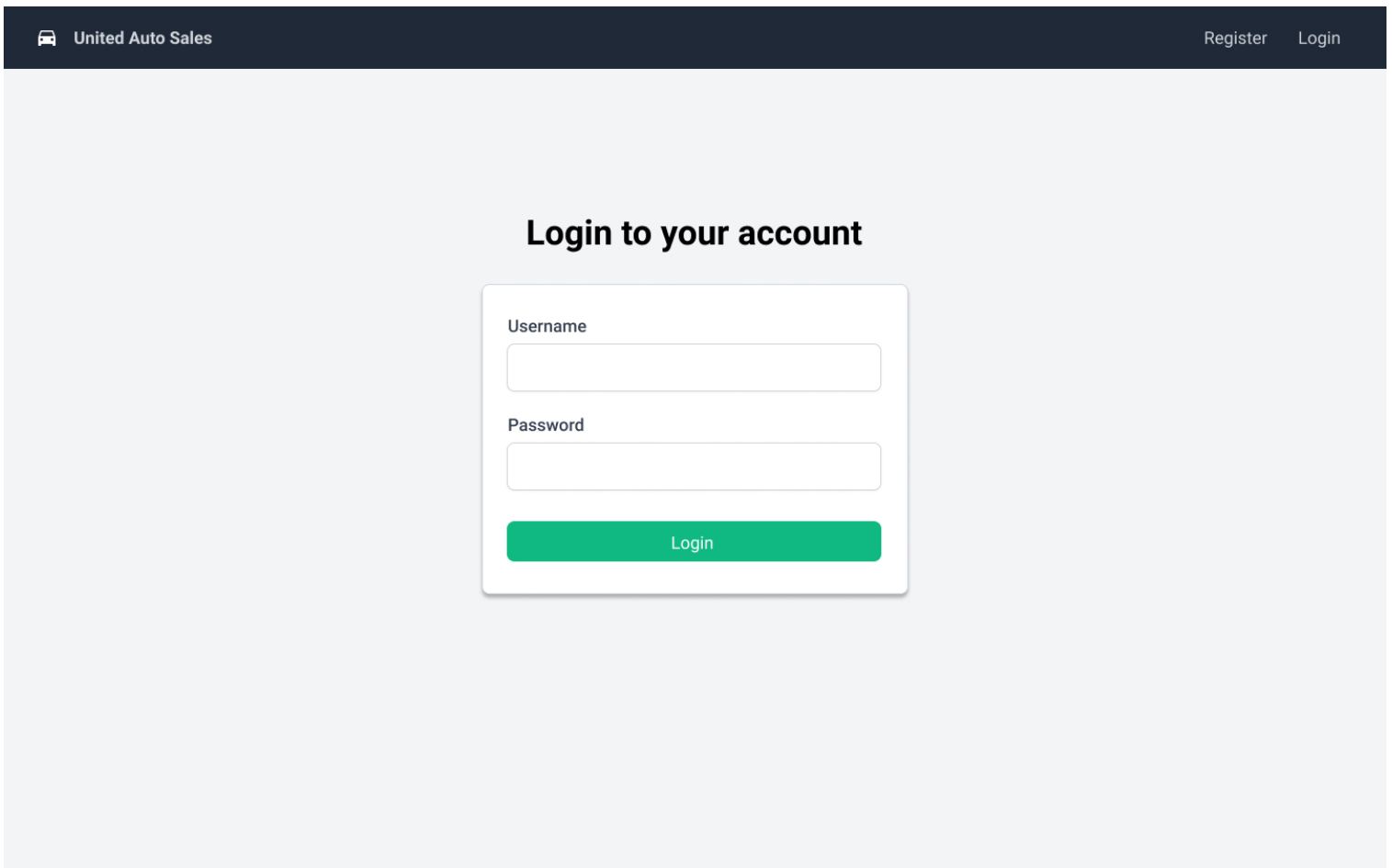


Figure 3. Login

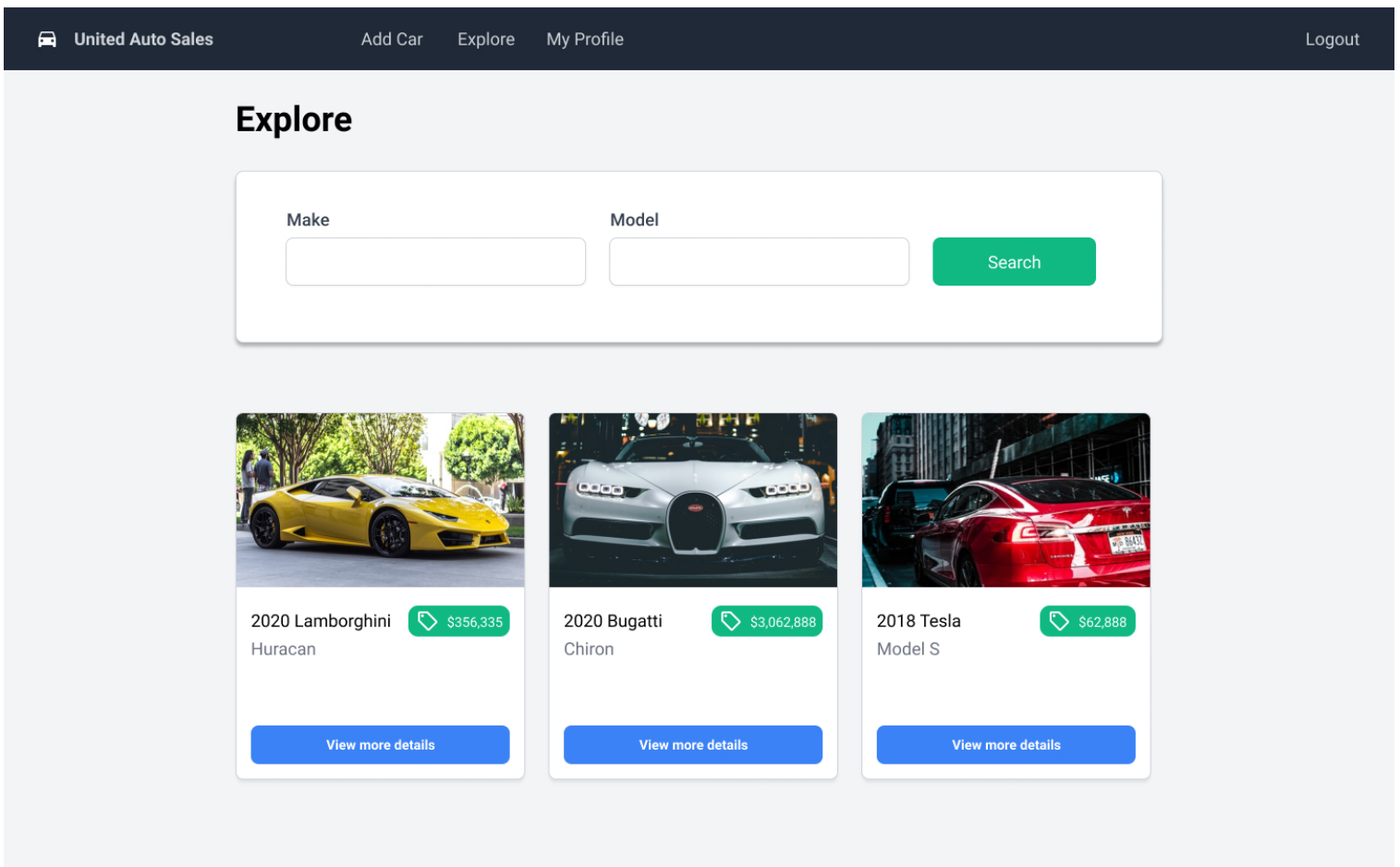


Figure 4: Explore Page. This displays Cars by all users and Search



2018 Tesla

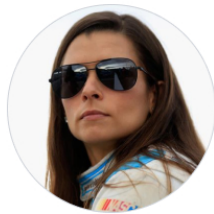
Model S

With the longest range and quickest acceleration of any electric vehicle in production, Model S is the highest performing sedan ever built. Both Long Range and Plaid powertrains, with updated battery architecture, are capable of back-to-back, consistent 1/4 mile runs.

Color	Red	Body Type	Sedan
Price	\$62,888	Transmission	Automatic

[Email Owner](#)

Figure 5: Car details page - when the heart is clicked to favourite a car it should change colour.



Danica Patrick

@dpatrick

I am a former professional racing driver and the most successful woman in the history of American open-wheel racing. I love cars and driving fast.

Email dpatrick@example.com

Location Wisconsin, USA

Joined April 8, 2021

Cars Favourited



2020 Lamborghini
Huracan

\$356,335

[View more details](#)



2020 Bugatti
Chiron

\$3,062,888

[View more details](#)



2018 Tesla
Model S

\$62,888

[View more details](#)

Figure 6: User profile with Favourite cars

Add New Car

Make

Tesla

Model

Model S

Colour

Red

Year

2018

Price

62888

Car Type

SUV

Transmission

Automatic

Description

Upload Photo

Browse

No File Selected

Save

Figure 7: Form for adding a New car