

# Car Dealership

## Software Application

### URS Document

**Date:** 10-06-2024

**Client:** *Sam Auto* car dealership

Michael Smith - CEO

[m.smith@samauto.org](mailto:m.smith@samauto.org)

+31 682 75 9594

**Product Developer:** Samuil Kozarov

[s.kozarov@student.fontys.nl](mailto:s.kozarov@student.fontys.nl)

+31 661 70 1214

# Table of Contents

URS Document	1
Table of Contents	2
About the Document	3
User roles	3
Functional requirements	3
Non-functional requirements	4
Use Cases	6
Use Case: User Log-In for desktop application	6
Use Case: User Log-In for web application	7
Use Case: Log in with secret question	8
Use Case: User Sign up	9
Use Case: Adding a new vehicle	10
Use Case: Updating a vehicle's information	12
Use Case: Searching for an available vehicle's characteristics	13
Use Case: Searching for an archived vehicle's characteristics	14
Use Case: Selling a vehicle	15
Use Case: Searching for a customer's information	17
Use Case: Promoting a customer	18
Use Case: Bookmark a vehicle	19
Use Case: See a bookmarked vehicle's characteristics	20
Use Case: See a saved for buying vehicle's characteristics	21
Use Case: Save a vehicle for buying	22
Use Case: Rate a vehicle	23
Use Case: Search for a vehicle	24
Use Case: Editing personal information	25
Use Case: Adding a new employee	26
Use Case: Log out from desktop application	26
Use Case: Log out from web application	28
GUI Views	29
Desktop application	29
Log In	29
Forgot password	30
Menu	31
Manage Vehicles	32
Add Vehicle	34
Update Vehicle	35
Delete Vehicle	36
Sell Vehicle	37
Sales & Archive	38
Manage Customers	39
Manage Employees	40

Adding Employee	40
Statistics	41
Account page	41
Web application	42
Log In	42
Forgot Password	43
Sign Up	44
Account page	45
Catalogue	46
Car Preview	47
My Garage	49
Search	50
Contact	51

## About the Document

This purpose of this document is to detail the user requirements for the development of a software solution designed for *Sam Auto*

## User roles

The software solution will support different types of users, each with specific permissions and functions

1. HR Manager
2. Employee
3. Customer

## Functional requirements

ID	Name	Constraints
FR-01	All users must be able to identify themselves	All users must identify themselves to the system by Logging in or Signing up before accessing the desktop application and some of the web application pages (some of the web application pages allow anonymous visiting). Users also have the opportunity to log in with a secret question, if the account password is forgotten. All users can log out

FR-02	Employees should be able to manage all vehicles' data	The employees should be able to browse through all available vehicles, add new, delete, sell vehicles, update and read vehicles' characteristics. Employee should also be able to browse through archived vehicles and sales
FR-03	Employees should be able to manage all customers' data	The employees of Sam Auto should have access to all identified customers and should be able to see their non sensitive information and related data such as saved for buying vehicles and bought vehicles. Also, they should be able to promote customers.
FR-04	Customers should have access to an interactive catalogue	The system should allow all customers to browse through Sam Auto's catalogue and interact with it, allowing the authenticated users to bookmark favourite vehicles, check already marked as such, save vehicles for buying (and check already saved) and rate each one
FR-05	All users should be able to manage personal Information	All users should be able to update and edit their own password, secret question and contact info
FR-06	HR Manager should be able to manage all employees	The HR Manager of Sam Auto should be able to browse through all employees, add new and delete

## Non-functional requirements

ID	Name	Constraints
NFR-01	The software product must be secured	When authenticating, sensible data must be hidden. The user password should be encrypted using an encryption algorithm
NFR-02	The software product should be scalable	The loaded amount of data must not affect the performance and responsiveness of the system. The

		system must be scalable to manage big amount of data
NFR-04	The software product should be easily accessible	The desktop application will be available 24/7 on all devices that it is installed on The web application will be available 24/7 for all users
NFR-05	The software product should be easy to use	The user interface should be intuitive and user-friendly, requiring minimal training for staff and customers to navigate and use effectively
NFR-06	The web interface product should be widely accessible	The web application should be accessible from all modern web browsers
NFR-07	Application Lifecycle Management	Closing any tab within the application should result in the termination of the entire application instance, ensuring a clear and consistent application lifecycle management for users

# Use Cases

**Use Case:** User Log-In for desktop application

**ID:** UC-001

**Reference:** FR-01

**Actor:** HR Manager and Employee

**Description:** Actor enters personal credentials to access the system

**Main Success Scenario:**

1. Actor starts Sam Auto desktop application
2. System loads the application, opens the log-in page and requests username and password
3. Actor enters the required by the system username and password and confirms
4. System validates credentials and allows actor to use it redirecting to the menu page

**Extensions:**

**4A: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. End of use case

**4B: Non-existing user**

1. System display error message that provided credentials are incorrect
2. End of use case

**Use Case:** User Log-In for web application

**ID:** UC-002

**Reference:** FR-01

**Actor:** Customer

**Description:** Actor enters personal credentials to access the system

**Main Success Scenario:**

1. Actor opens the URL link of Sam Auto web application
2. System loads the application
3. Actor navigates to the My profile page
4. System requests username and password
5. Actor enters the required by the system username and password and confirms
6. System validates credentials and allows actor to use it redirecting to the menu page

**Extensions:**

**6A: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. End of use case

**6B: Non-existing user**

1. System display error message that provided credentials are incorrect
2. End of use case

**Use Case:** Log in with secret question

**ID:** UC-003

**Reference:** FR-01

**Actor:** All users

**Description:** Actor wants to log in but, does not know the account password

**Main Success Scenario:**

1. Actor starts the Sam Auto application
2. System loads the application
3. Actor navigates Forgot password
4. System requests username, secret question and answer
5. Actor enters the required by the system information and confirms
6. System validates credentials and allows actor to use it redirecting to the profile page

**Extensions:**

**6A: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. End of use case

**6B: Provided information is incorrect**

1. System display error message that provided information is incorrect
2. Return to MSS step 4

**Use Case:** User Sign up

**ID:** UC-004

**Reference:** FR-01

**Actor:** Customer

**Description:** An unknown actor authenticates to the system

**Main Success Scenario:**

1. Actor navigates to the Sign up page
2. System requests personal credentials and information
3. Actor enters the required by the system data
4. System validates data and creates new profile

**Extensions:**

**4A: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. Return to MMS step 2

**4B: There is already an existing user with inputted email (username)**

1. System display error message that user already exists in the system
2. Return to MMS step 2

**4C: Inputted data does not meet the requirements**

1. System displays an error message of impossibility to register the actor
2. Return to MMS step 2

**Use Case:** Adding a new vehicle

**ID:** UC-005

**Reference:** FR-02

**Actor:** Employee

**Description:** Actor adding a new vehicle to Sam Auto system

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the adding new vehicle page
2. System requests vehicle type to be selected
3. Actor selects vehicle type
4. System loads all fields for the selected vehicle type and requires vehicle's characteristics
5. Actor provides vehicle's characteristics and confirms
6. System validates the new vehicle, adds it to the system and redirects actor to previous page

**Extensions:**

**5: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. Return to MMS step 4

**Use Case:** Deleting a vehicle

**ID:** UC-006

**Reference:** FR-02

**Actor:** Employee

**Description:** Actor deleting a vehicle

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the available vehicles page
2. System loads first up to ten available vehicles
3. Actor navigates to the the pagination page containing the searched vehicle
4. System loads corresponding to the pagination page number up to ten available vehicles
5. Actor selects a vehicle to be deleted and confirms
6. System displays an alert message that vehicle will be permanently deleted and asks for second confirmation
7. Actor confirms the second confirmation
8. System deletes selected vehicle

**Extensions:**

**2: There are not any available vehicles**

1. System does not load any vehicles
2. End of use case

**3: The vehicle the actor looks for is in the already listed vehicles**

1. Return to MMS step 5

**7: Actor performs another action and does not confirm the second confirmation**

1. System does not delete vehicle
2. End of use case

**Use Case:** Updating a vehicle's information

**ID:** UC-007

**Reference:** FR-02

**Actor:** Employee

**Description:** Actor updating a vehicle's information

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the available vehicles page
2. System loads first up to ten available vehicles
3. Actor navigates to the the pagination page containing the searched vehicle
4. System loads corresponding to the pagination page number up to ten available vehicles
5. Actor selects a vehicle to be updated and confirms
6. System loads current vehicle's information
7. Actor selects field to update, updates it and confirms
8. System validates the changes and updates the vehicle's information

**Extensions:**

**2: There are not any available vehicles**

1. System does not load any vehicles
2. End of use case

**3: The vehicle the actor looks for is in the already listed vehicles**

1. Return to MMS step 5

**8: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. Return to MMS step 6

**Use Case:** Searching for an available vehicle's characteristics

**ID:** UC-008

**Reference:** FR-02

**Actor:** Employee

**Description:** Actor searches for an available vehicle's characteristics from Sam Auto system

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the available vehicles page
2. System loads available vehicles page and request filtering criteria to be supplied
3. Actor supplies filtering criteria (brand, model, id) and confirms the searching
4. System processes filtering and loads first up to ten results
5. Actor navigates to the the pagination page containing the searched vehicle
6. System loads corresponding to the pagination page number up to ten results
7. Actor selects vehicle from the results
8. System loads selected vehicle's characteristics

**Extensions:**

**3: Actor does not supply filtering criteria**

1. System loads first up to ten available vehicles
2. Return to MSS step 7

**4: No vehicles' brand, model or id contain the the filtering criteria**

1. System loads no results
2. End of use case

**5: The vehicle the actor looks for is in the already listed vehicles**

1. Return to MMS step 7

**Use Case:** Searching for an archived vehicle's characteristics

**ID:** UC-009

**Reference:** FR-02

**Actor:** Employee

**Description:** Actor searches for an archived vehicle's characteristics from Sam Auto system

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the archive page
2. System loads archive page and request filtering criteria to be supplied
3. Actor supplies filtering criteria (brand, model, id) and confirms the searching
4. System processes filtering and loads first up to ten results
5. Actor navigates to the the pagination page containing the searched vehicle
6. System loads corresponding to the pagination page number up to ten results
7. Actor selects vehicle from the results
8. System loads selected vehicle's characteristics

**Extensions:**

**3: Actor does not supply filtering criteria**

1. System loads first up to ten archived vehicles
2. Return to MSS step 7

**4: No vehicles' brand, model or id contain the the filtering criteria**

1. System loads no results
2. End of use case

**5: The vehicle the actor looks for is in the already listed vehicles**

2. Return to MMS step 7

**Use Case:** Selling a vehicle

**ID:** UC-010

**Reference:** FR-02

**Actor:** Employee

**Description:** Actor selling a vehicle

**Pre-Condition:** The actor has logged

**Main Success Scenario:**

1. Actor navigates to the available vehicles page
2. System loads first up to ten available vehicles
3. Actor navigates to the the pagination page containing the searched vehicle
4. System loads corresponding to the pagination page number up to ten results
5. Actor selects a vehicle to be sold and confirms
6. System navigates to selling vehicle page and asks for final selling price
7. Actor selects final selling price and confirms
8. System asks for payment method to be chosen
9. Actor selects payment method and confirms
10. System loads first up to ten identified customers and asks a buyer to be chosen from the list
11. Actor navigates to the the pagination page containing the searched customer
12. System loads corresponding to the pagination page number up to ten identified customers and asks a buyer to be chosen from the list
13. Actor selects buyer and confirms
14. System displays message for successfully sold vehicle, marks the vehicle as sold and stores it in the archive page

**Extensions:**

**2: There are not any available vehicles**

1. System loads no results
2. End of use case

**3: The vehicle the actor looks for is in the already listed vehicles**

3. Return to MMS step 5

**5: Selected vehicle is saved for buying**

1. System displays an alert message that vehicle is saved for buying and ask for confirmation for the buyer
2. Actor confirms
3. Return to MMS step 6

**10: There are not any identified customers**

1. System loads no results
2. End of use case

**11A: The customer the actor looks for is in the already listed customers**

1. Return to MMS step 13

**11B: Buyer is not Identified**

1. System does not find customer
2. End of use case

**Use Case:** Searching for a customer's information

**ID:** UC-011

**Reference:** FR-03

**Actor:** Employee

**Description:** Actor searches for an identified customer information from Sam Auto system

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the customers page
2. System loads customers page and requests filtering criteria to be supplied
3. Actor supplies filtering criteria (email, first name, last name) and confirms searching
4. System processes filtering criteria and loads first up to ten results
5. Actor navigates to the the pagination page containing the searched customer
6. System loads corresponding to the pagination page number up to ten results
7. Actor selects a customer from the search results
8. System display all selected customer's non-sensitive information

**Extensions:**

**3: Actor does supply filtering criteria**

1. System loads first up to ten identified customers
2. Return to MSS step 7

**4: No customer's information contains the the filtering criteria**

1. System loads no results
2. End of use case

**5: The customer the actor looks for is in the already listed customers**

1. Return to MMS step 7

**Use Case:** Promoting a customer

**ID:** UC-012

**Reference:** FR-03

**Actor:** Employee

**Description:** Actor promoting a customer from Sam Auto system

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the customers page
2. System loads first up to ten identified customers
3. Actor navigates to the the pagination page containing the searched customer
4. System loads corresponding to the pagination page number up to ten identified customers
5. Actor selects a customer to be promoted and confirms
6. System updates customer status and displays it

**Extensions:**

**2: There are not any identified customers**

1. System loads no results
2. End of use case

**3: The customer the actor looks for is in the already listed customers**

1. Return to MMS step 5

**5: The customer the actor selected is already promoted**

1. System does not allow customer to be promoted
2. End of use case

**Use Case:** Bookmark a vehicle

**ID:** UC-013

**Reference:** FR-04

**Actor:** Customer

**Description:** Actor bookmarks vehicle as favourite

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the catalogue
2. System loads first up to ten available vehicles
3. Actor navigates to the the pagination page containing the searched vehicle
4. System loads corresponding to the pagination page number up to ten available vehicles
5. Actor navigates to a vehicle and bookmarks it
6. System bookmarks vehicle and displays changes

**Extensions:**

**2: There are not any available vehicles**

1. System does not load any vehicles
2. End of use case

**3: The vehicle the actor looks for is in the already listed vehicles**

1. Return to MMS step 5

**5: The vehicle the actor wants to bookmark is already bookmarked by the actor**

1. System does not allow actor to bookmark vehicle
2. End of use case

**Use Case:** See a bookmarked vehicle's characteristics

**ID:** UC-014

**Reference:** FR-04

**Actor:** Customer

**Description:** Actor wants to check bookmarked vehicle's characteristics

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the My garage page
2. System loads first up to ten bookmarked by the actor vehicles
3. Actor navigates to the the pagination page containing the searched vehicle
4. System loads corresponding to the pagination page number up to ten bookmarked by the actor vehicles
5. Actor navigates to a vehicle and selects to see more
6. System redirects to a page with selected vehicle's characteristics

**Extensions:**

**2: There are not any bookmarked vehicles by the actor**

1. System does not load any vehicles
2. End of use case

**3: The vehicle the actor looks for is in the already listed vehicles**

1. Return to MMS step 5

**Use Case:** See a saved for buying vehicle's characteristics

**ID:** UC-015

**Reference:** FR-04

**Actor:** Customer

**Description:** Actor wants to check saved for buying vehicle's characteristics

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the My garage page
2. System loads first up to ten bookmarked by the actor vehicles
3. Actor selects a filtering criteria of saved for buying vehicles and confirms
4. System loads first up to ten saved for buying by the actor vehicles
5. Actor navigates to the the pagination page containing the searched vehicle
6. System loads corresponding to the pagination page number up to ten saved for buying by the actor vehicles
7. Actor navigates to a vehicle and selects to see more
8. System redirects to a page with selected vehicle's characteristics

**Extensions:**

**4: There are not any saved for buying vehicles by the actor**

1. System does not load any vehicles
2. End of use case

**5: The vehicle the actor looks for is in the already listed vehicles**

2. Return to MMS step 5

**Use Case:** Save a vehicle for buying

**ID:** UC-016

**Reference:** FR-04

**Actor:** Customer

**Description:** Actor saves a vehicle for buying

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to a vehicle and selects to see more about it
2. System loads a page with selected vehicle's characteristics
3. Actor navigates to save the vehicle and confirms
4. System asks for second confirmation
5. Actor confirms the second confirmation
6. System saves vehicle for the actor

**Extensions:**

**3: The vehicle the actor looks for is already saved for buying by the actor**

1. System does not allow vehicle to be saved
2. End of use case

**5: Actor performs another action and does not confirm the second confirmation**

1. System does not save vehicle
2. End of use case

**Use Case:** Rate a vehicle

**ID:** UC-017

**Reference:** FR-04

**Actor:** Customer

**Description:** Actor rates a vehicle

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to a vehicle and selects to see more about it
2. System loads a page with selected vehicle's characteristics
3. Actor navigates to rate the vehicle
4. System asks for rating to be selected
5. Actor rates the vehicle and confirms
6. System saves rating for the actor

**Extensions:**

**5: Actor does not rate the vehicle**

1. System does not save rating for vehicle
2. End of use case

**Use Case:** Search for a vehicle

**ID:** UC-018

**Reference:** FR-04

**Actor:** Customer

**Description:** Actor searching for a vehicle through Sam Auto web application

**Pre-Condition:** There is at least one available vehicle

**Main Success Scenario:**

1. Actor navigates to the Search page
2. System asks filtering criteria to be provided (category, engine, year of production, maximum price)
3. Actor provides filtering criteria and confirms
4. System processes filtering and loads first up to ten results
5. Actor navigates to the pagination page containing the searched vehicle
6. System loads corresponding to the pagination page number up to ten results
7. Actor selects to see more about vehicle from the search results
8. System loads a page with selected vehicle's characteristics

**Extensions:**

**3: Actor does not provide any filtering criteria**

1. System does not load any results
2. End of use case

**4: No vehicle's characteristics match the provided filtering criteria**

1. System loads no results
2. End of use case

**5: The vehicle the actor looks for is in the already listed vehicles**

2. Return to MMS step 7

**Use Case:** Editing personal information

**ID:** UC-019

**Reference:** FR-05

**Actor:** All users

**Description:** Actor editing personal password or contact information

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the personal information page
2. System loads actor's non-sensitive personal information
3. Actor selects field to update, updates it and confirms
4. System validates the changes and updates actor's personal information

**Extensions:**

**3: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. Return to MMS step 2

**4: Inputted data does not meet the requirements**

1. System displays an error message of impossibility to apply changes
2. Return to MMS step 2

**Use Case:** Adding a new employee

**ID:** UC-020

**Reference:** FR-06

**Actor:** HR Manager

**Description:** Actor adding a new employee to the Sam Auto system

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the add a new employee page
2. System loads all information fields and asks for new employee information to be provided
3. Actor provides new employee information and confirms
4. System validates provided information and creates account for the new employee

**Extensions:**

**3: The new employee is a manager**

1. Actor selects manager to be added
2. Return to MMS step 4

**4A: One or more fields are left empty**

1. System displays an error message that not all fields are filled
2. Return to MMS step 2

**4B: Inputted data does not meet the requirements**

1. System displays an error message about which requirement is not met
2. Return to MMS step 2

**Use Case:** Log out from desktop application

**ID:** UC-021

**Reference:** FR-01

**Actor:** HR Manager and Employee

**Description:** Actor logging out of the desktop application

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the menu page
2. System loads the menu page
3. Actor navigates to log out
4. System asks for confirmation of the action
5. Actor confirms
6. System logs out the actor and redirects to log in page

**Extensions:**

**5: Actor does not confirm**

1. System does not log out the actor
2. End of use case

**Use Case:** Log out from web application

**ID:** UC-022

**Reference:** FR-01

**Actor:** Customer

**Description:** Actor logging out of the web application

**Pre-Condition:** The actor has logged in

**Main Success Scenario:**

1. Actor navigates to the my profile
2. System loads the actor account page and account information
3. Actor navigates to log out
4. System asks for confirmation of the action
5. Actor confirms
6. System logs out the actor and redirects to log in page

**Extensions:**

**5: Actor does not confirm**

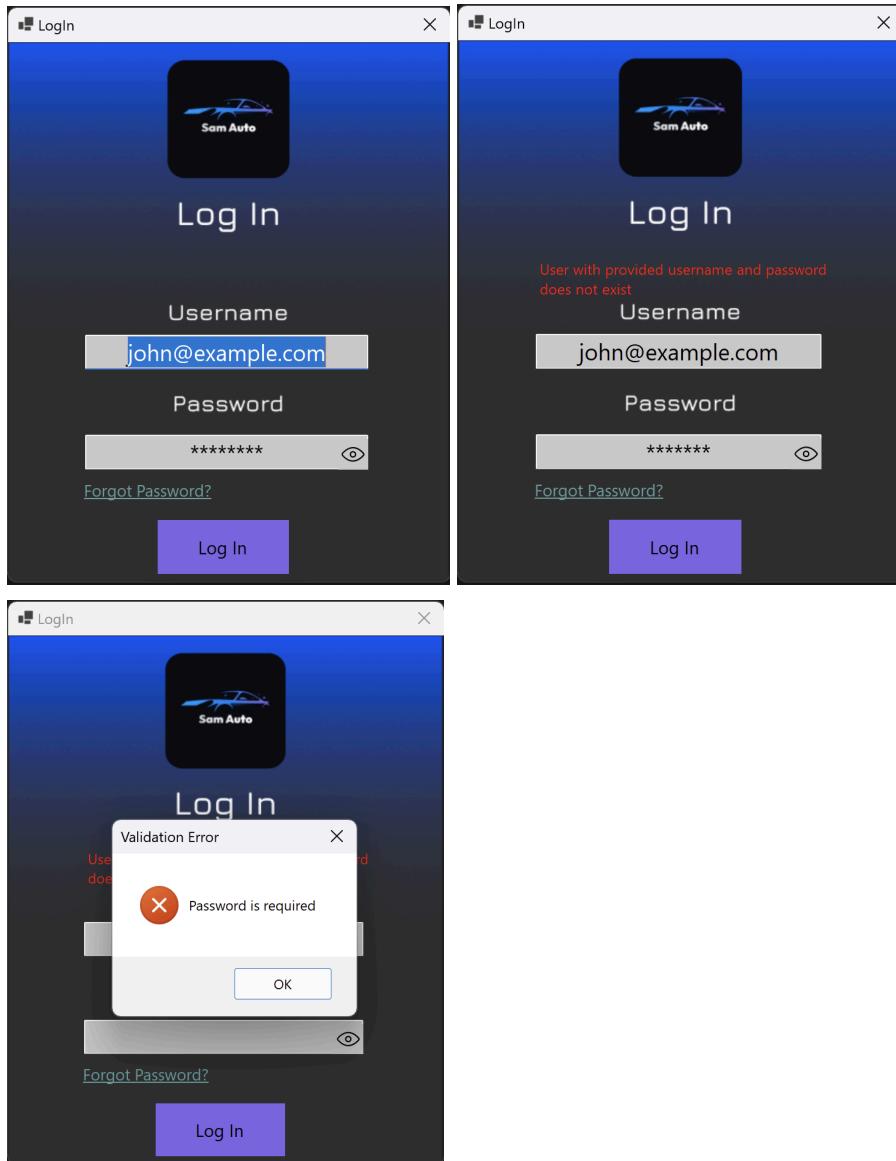
1. System does not log out the actor
2. End of use case

## GUI Views

## Desktop application

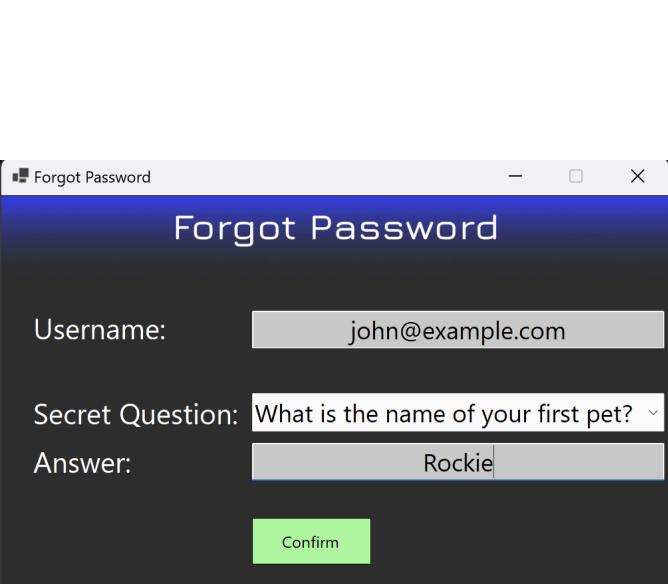
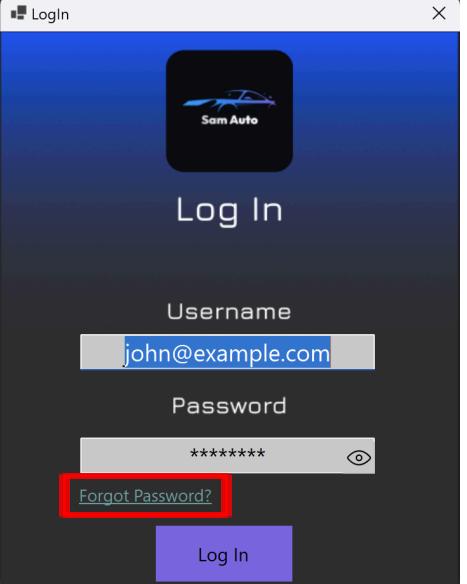
### Log In

This is the first page that appears after starting the program. This page allows all staff members (HR Manager and Employees) to enter their personal credentials and if they are known to the system it give them access to it, otherwise it will print an error message

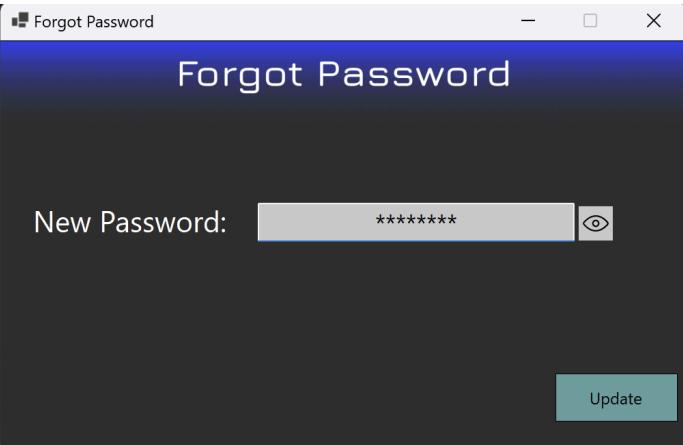


## Forgot password

The forgot password page allows the staff members to change their password after answering their predefined secret question with a correct answer



The image shows two windows side-by-side. The left window is titled "Login" and features a logo for "Sam Auto". It has fields for "Username" (john@example.com) and "Password" (\*\*\*\*\*). Below these is a "Forgot Password?" link, which is highlighted with a red rectangular box. A purple "Log In" button is at the bottom. The right window is titled "Forgot Password" and displays the same information: "Username: john@example.com", "Secret Question: What is the name of your first pet?", and "Answer: Rockie". A green "Confirm" button is at the bottom.

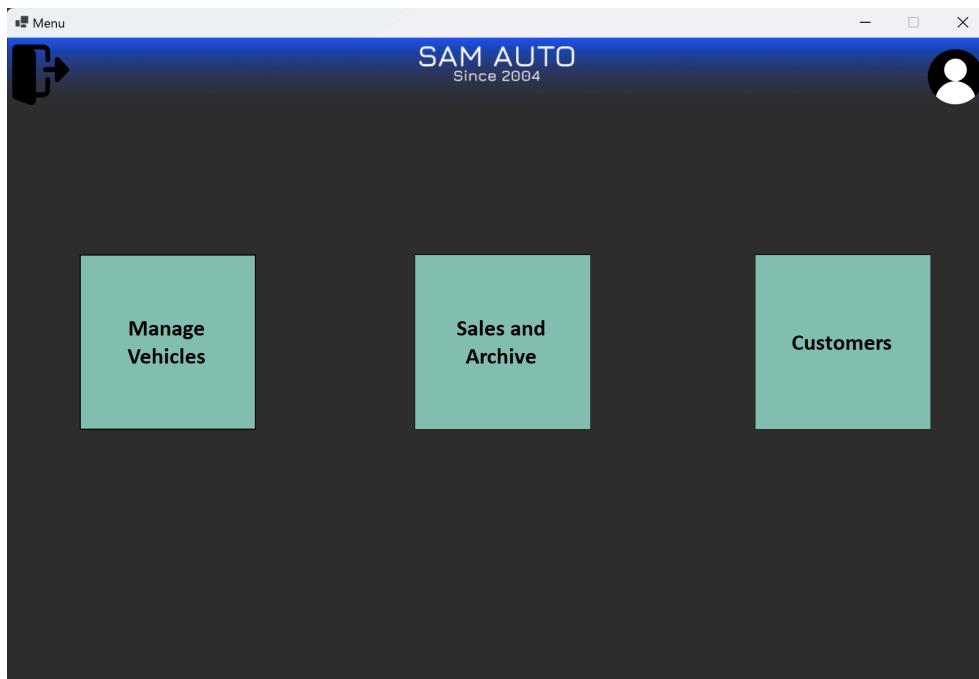


The image shows a single window titled "Forgot Password". It contains a "New Password:" field with the value "\*\*\*\*\*" and an "Update" button below it.

## Menu

The menu page is the first page the user accesses after a successful log in. It holds the main navigations of the application. According to the role of the staff member (HR manager or employee) different menus are accessed. The menu page holds the log out button

### Menu for employee:



### Menu for HR manager:



## Manage Vehicles

The vehicles manager page allows the user to browse through all available vehicles by using the navigation bar, search for vehicles and read characteristics of each vehicle. Also from this page, the user can navigate to add new, sell, delete and update vehicle

Manage Vehicles

### Manage Vehicles

+Add vehicle

Search:

Results:

- 9 - Mazda 6
- 10 - Volkswagen Passat
- 13 - Ford F-650
- 16 - Harley-Davidson Sportster**
- 17 - Honda CBR1000RR
- 18 - Yamaha YZF-R1
- 19 - Kawasaki Ninja 301
- 20 - Joke Car
- 21 - Funny Car
- 23 - Fancy Car

Vehicle Information

**16 - Harley-Davidson Sportster**

**17,000.00€**  
**Floor Price: 17,000.00€**

Date of Production:  
**01/02/2023**

Cubic Capacity **300**

Transmission: **Manual**

Body Type: **Sport**

Mileage (km): **50**

Color: **Black**

Engine: **Internal\_Combustion**

Fuel: **Gas**

Condition: **New**

Wind shield: **False**

Box attached: **False**



1 > Delete Sell

Manage Vehicles

### Manage Vehicles

+Add vehicle

Search:

Results:

- 24 - Smile t
- 25 - Gray Daihatsu
- 26 - Bentleley GTR
- 28 - Volvo Master2
- 29 - Kawasaki Ninja**
- 32 - Kawasaki Ninja2
- 46 - Bmw 314
- 49 - bmw m4
- 1053 - Toyota Corolla
- 1054 - Honda Beat 110

Vehicle Information

**29 - Kawasaki Ninja**

**11.00€**  
**Floor Price: 10.45€**

Date of Production:  
**02/05/2024**

Cubic Capacity **6**

Transmission: **Automatic**

Body Type: **Standard**

Mileage (km): **567**

Color: **Green**

Engine: **Electric**

Fuel: **Battery**

Condition: **New**

Wind shield: **True**

Box attached: **False**



< 2 > Delete Sell

Manage Vehicles

# Manage Vehicles

+Add vehicle

Search:  

Results:

- 18 - Yamaha YZF-R1
- 3216 - Yamaha Continental GT
- 3235 - Yamaha RR 300
- 3293 - Yamaha Bonneville

Vehicle Information

**18 - Yamaha YZF-R1**

**17,000.00€** **Floor Price: 17,000.00€**

Date of Production: **10/11/2022**

Cubic Capacity **1500**

Transmission: **Manual**

Body Type: **Cruiser**

Mileage (km): **5**

Color: **Blue**

Engine: **Internal\_Combustion**

Fuel: **Gas**

Condition: **New**

Wind shield: **True**

Box attached: **False**



Delete Sell

## Add Vehicle

The add vehicle page allows the user to add new vehicles to the system. If all fields are populated with information and successfully validated, the vehicle will be added, otherwise the system will notify the user of an error.

■ Add\_Vehicle\_Page

### Add Vehicle

Select Vehicle Type: 

Car

Brand:  (highlighted with a red box)

Model: Test

Date of Production: Tuesday , May 7, 2024

Engine Power: 121

Transmission: Manual

Body Type: Coupe

Mileage (km): 56000

Color: Black

Engine: Internal\_Combustion

Fuel Type: Gas

Price: 20000

Steering Wheel: Left\_Hand

Condition: Used

Doors: 4

Not all fields are populated with data

OK

Test Image

https://qph.cf2.quoracdn.net/main-qimg-d569cf7f25fcf6fefc119d647cc6af2e-lq

Test Image

Add

■ Add\_Vehicle\_Page

### Add Vehicle

Select Vehicle Type: 

Car

Brand: Test

Model: Test

Date of Production: Tuesday , May 7, 2024

Engine Power: 120

Transmission: Manual

Body Type: Coupe

Mileage (km): 56000

Color: Black

Engine: Internal\_Combustion

Fuel Type: Gas

Price: 20000

Steering Wheel: Left\_Hand

Condition: Used

Doors: 5

Image URL:

https://qph.cf2.quoracdn.net/main-qimg-d569cf7f25fcf6fefc119d647cc6af2e-lq

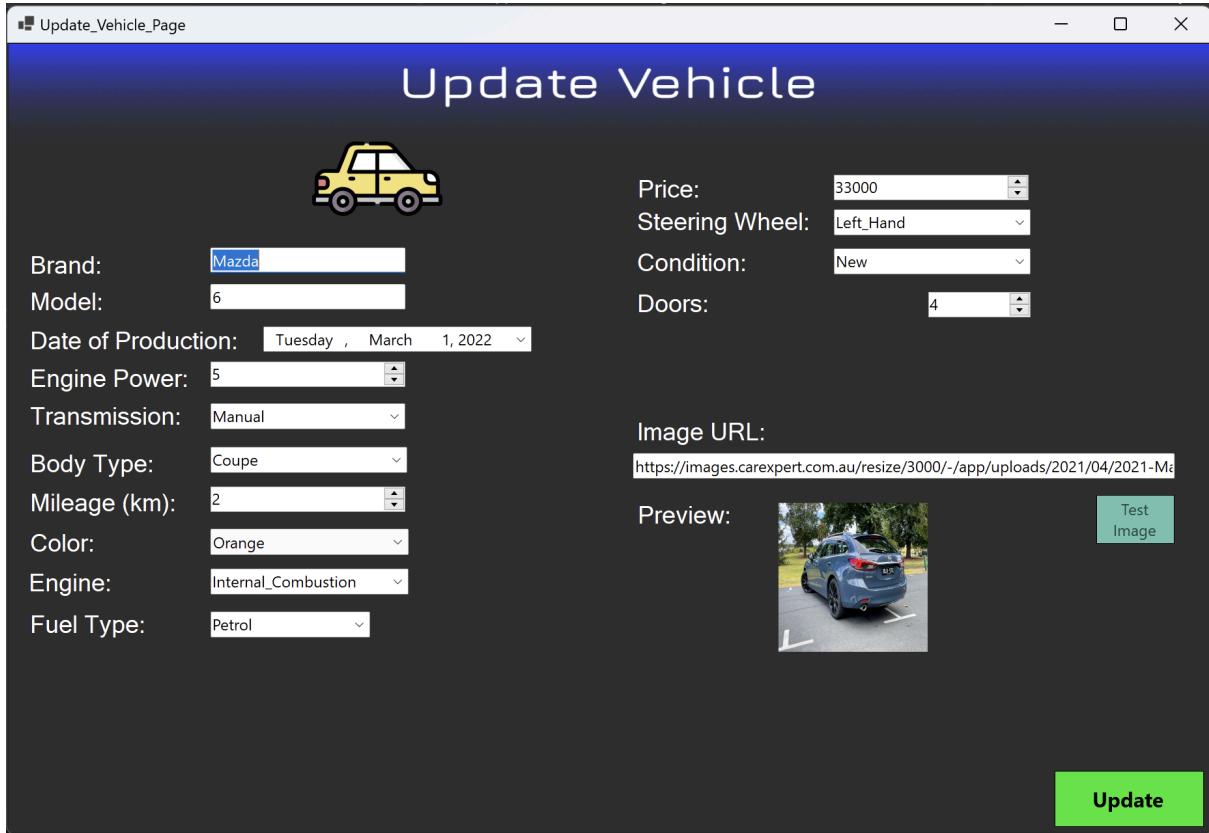
Preview: 

Test Image

Add

## Update Vehicle

The update vehicle page allows the user update the current characteristics of a vehicle  
(when the page is opened, current characteristics are automatically provided)

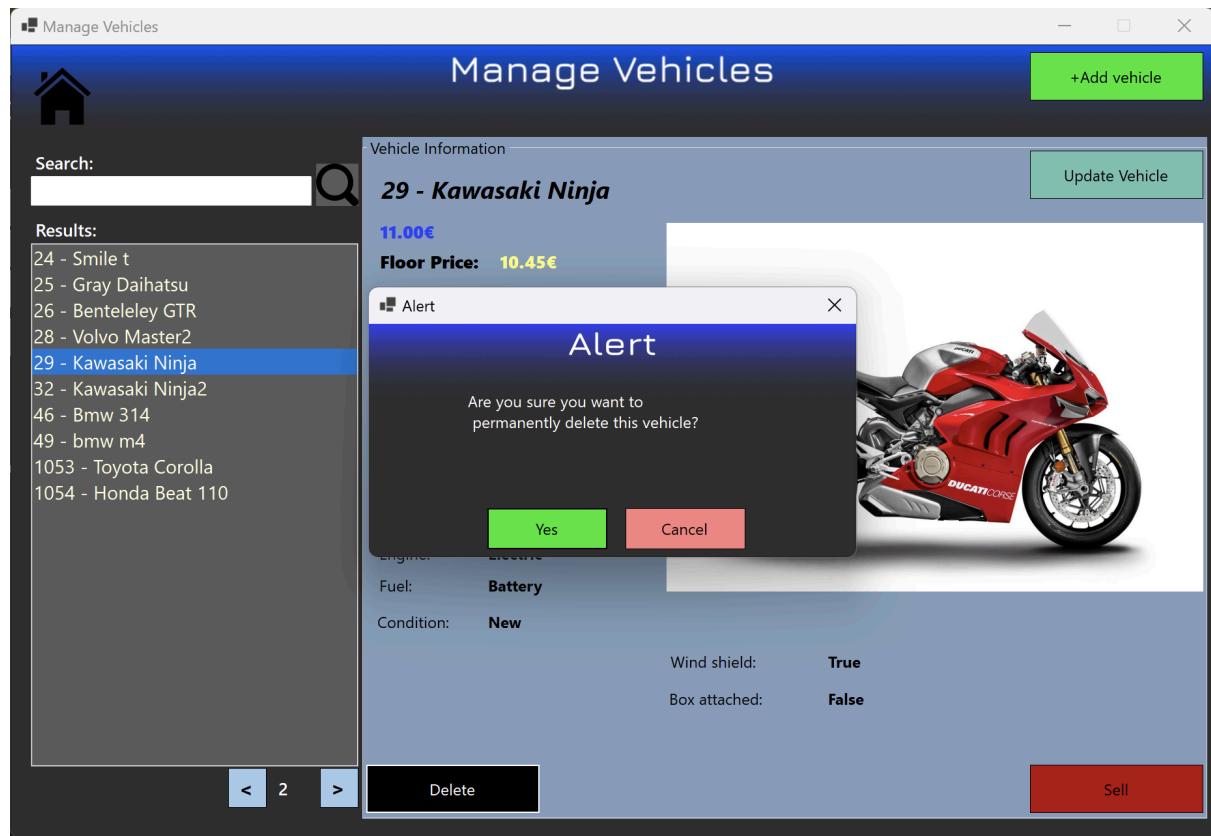


The screenshot shows a web-based application titled "Update Vehicle". At the top left is a small yellow car icon. The main title "Update Vehicle" is centered at the top. Below the title, there is a form with the following fields:

Brand:	Mazda	Price:	33000
Model:	6	Steering Wheel:	Left_Hand
Date of Production:	Tuesday , March 1, 2022	Condition:	New
Engine Power:	5	Doors:	4
Transmission:	Manual	Image URL:	
Body Type:	Coupe	<a href="https://images.carexpert.com.au/resize/3000/-/app/uploads/2021/04/2021-Mazda-3-1.5-L-100kW-AT-1000x667.jpg">https://images.carexpert.com.au/resize/3000/-/app/uploads/2021/04/2021-Mazda-3-1.5-L-100kW-AT-1000x667.jpg</a>	
Mileage (km):	2	Preview:	
Color:	Orange	Test Image	
Engine:	Internal_Combustion		
Fuel Type:	Petrol	Update	

## Delete Vehicle

Deleting a vehicle permanently removes the selected vehicle from the Sam Auto's system. That is why, actor is asked for a second confirmation



## Sell Vehicle

The sell vehicle page gives the user the opportunity to sell a car. When navigated to this page, the user has to choose the final selling price,a payment method and a buyer. When sold, the vehicle goes to the archive page. If the buyer is unknown to the system a new profile should be created through the web application sign up page

The screenshot shows the 'Sell Vehicle' page with the following interface elements:

- Choose Selling Price:** Radio buttons for "Default Price" (selected) and "Other price". Below is the value "€ 33,000.00". A "Confirm" button is located to the right.
- Final Price:** Displayed as "€ 39,600.00".
- Choose Payment Method:** Radio buttons for "Bank Transfer" (selected), "Cash", "Credit Card", and "Debit Card". A "Confirm" button is located to the right.
- Search:** An input field with placeholder text.
- Results:** A list of search results:
  - test@gmail.com - TestFName TestLName
  - testd@gmail.com - testFName testFname
  - emily@example.com - Emily Example
  - test5@gmail.com - testFName testFname** (highlighted in blue)
  - test6@gmail.com - testFName testFname
  - test7@gmail.com - testFName testFname
  - test8@gmail.com - testFName testFname
  - test9@gmail.com - testFName testFname
  - test10@gmail.com - testFName testFname
  - test11@gmail.com - testFName testFname
- Customer Information:** A modal window showing details for the selected result:
  - First Name: **testFName**
  - Last Name: **testFname**
  - Email: **test5@gmail.com**
  - Phone Number: **123456789**
- Sell:** A large green button at the bottom right of the modal.

## Sales & Archive

The sales and archive page gives the user access to the archive of the company where the information of all sold vehicles is kept, including selling date, payment method, selling price and buyer. Opportunity to search and navigate within the pages is also available

### Archive

Search:

Results:

- 1 - Toyota Camry
- 2 - Honda Accord
- 3 - Ford Fusion
- 4 - Chevrolet Malibu
- 5 - Nissan Altima
- 6 - Kia Optima
- 7 - Hyundai Sonata
- 8 - Subaru Legacy
- 12 - Mercedes-Benz Sprinter
- 22 - asddddd asd

Vehicle Information

**1 - Toyota Camry**

**36310.00€**

Buyer: emily@example.com  
Selling Date: 12/02/2024  
Payment type: Bank transfer  
Date of Production:  
**01/01/2022**  
Engine Power: 180  
Transmission: Automatic  
Body Type: Sedan  
Mileage (km): 10000  
Color: Red  
Engine: Internal\_Combustion Steering Wheel: Left\_Hand  
Fuel: Petrol Number of doors: 4  
Condition: New



1 >

## Manage Customers

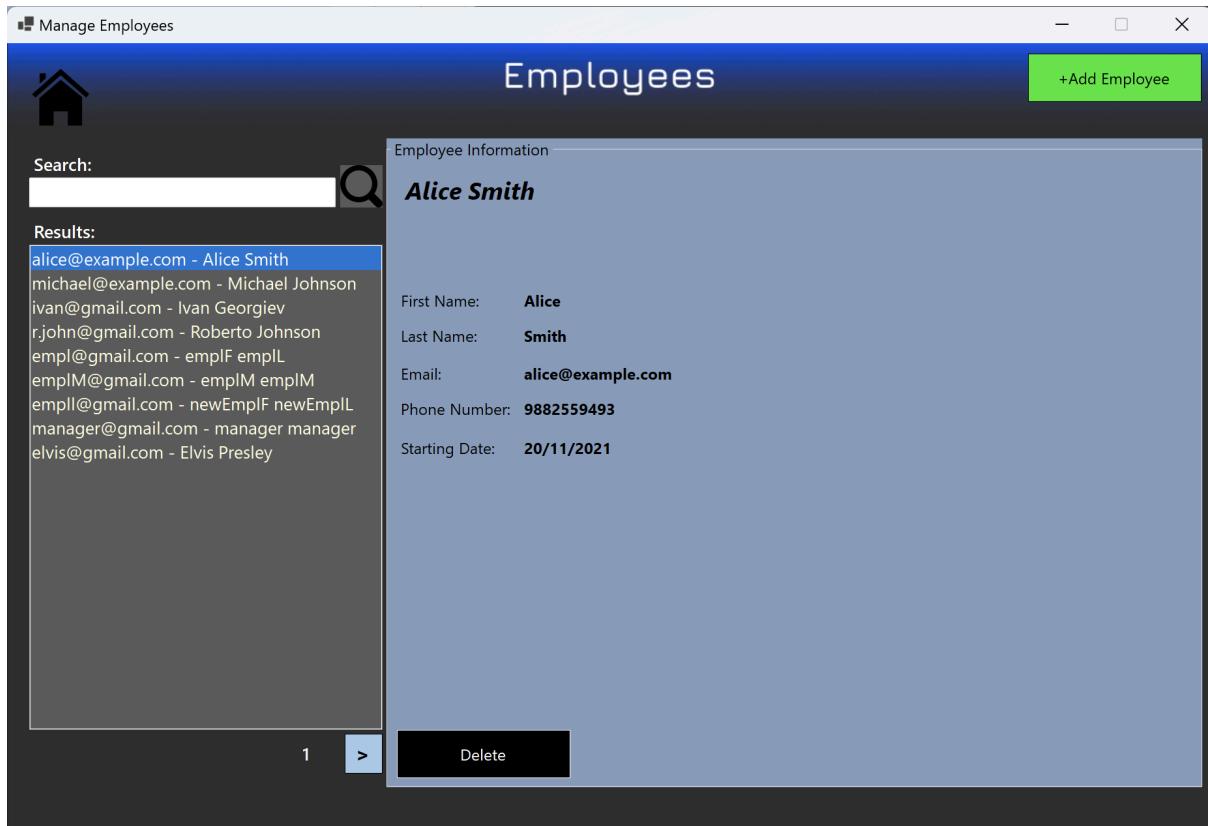
The customer manager page allows the user to browse through all identified customers having the opportunity to navigate forward and backward within the pages and search with a filtering criteria. An overview of bough vehicles, if any, and saved for buying, if any, for the selected customer is also provided. What's more the user is allowed to promote customers to "loyal client"

The screenshot shows a Windows application window titled "Manage Customers". The main title bar says "Customers". On the left, there is a search bar with placeholder text "Search:" and a magnifying glass icon. Below it is a "Results:" section containing a list of email addresses and names, with "emily@example.com - Emily Example" highlighted. To the right, a "Customer Information" panel displays details for "Emily Example": First Name: **Emily**, Last Name: **Example**, Email: **emily@example.com**, and Phone Number: **123456789**. Above the information is a "STAR MEMBER" badge. Below the information is a shopping cart icon. To the right of the cart is a red-bordered box containing a list of vehicles:  
1 - Toyota Camry  
2 - Honda Accord  
4 - Chevrolet Malibu  
5 - Nissan Altima  
6 - Kia Optima  
7 - Hyundai Sonata

This screenshot shows the same application window. The search bar now contains "testFName testFname". The results list includes "test5@gmail.com - testFName testFname" which is highlighted. The customer information panel shows "testFName testFname" instead of "Emily Example". The "Promote" button in the top right corner of the information panel is highlighted with a red box. The rest of the interface is identical to the first screenshot.

## Manage Employees

The employee manager page allows the HR Manager to browse through all employees having the opportunity to navigate forward and backward within the pages and search with a filtering criteria. There is opportunity for adding new employees and deleting employees



## Adding Employee

The HR manager can add new employees and new managers (new managers are added by checking the checkbox “Add manager”)

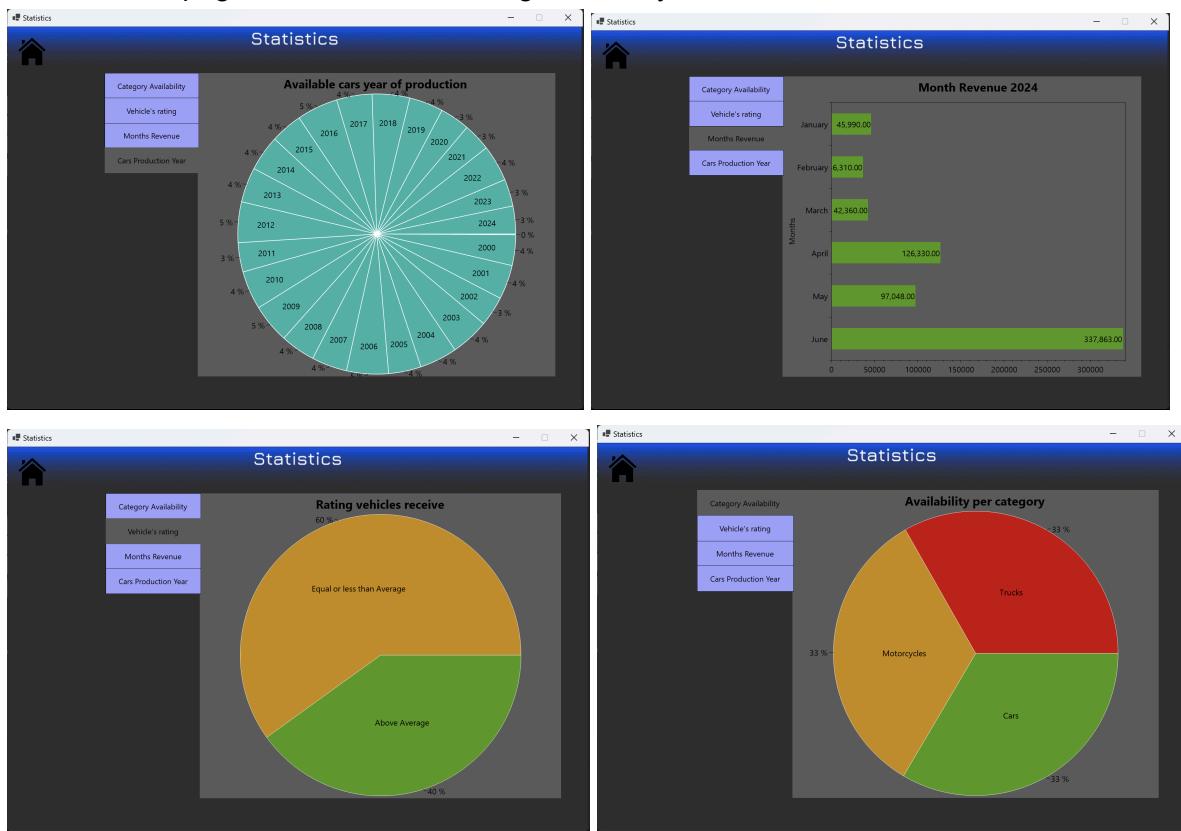
A screenshot of a Windows application window titled "Add Employee". The window contains fields for entering employee information:

First name:	Employee	Email:	empl@gmail.com
Last name:	LastName	Phone number:	345678923
Secret question:	What city was your mother born in?	Password:	***** <input type="checkbox"/>
Answer:	Amsterdam	Confirm Password:	*****
Starting Date:	Thursday , June 13, 2024	<input checked="" type="checkbox"/> Add Manager	Add

The "Add Manager" checkbox is highlighted with a red rectangle. The "Add" button is located at the bottom right.

## Statistics

The statistics page allows the HR Manager to analyse sales and vehicles data



## Account page

All staff members are able to change their personal account information from the my account page

The screenshot shows the "My Account" page with the following fields:

First name:	John	Email:	john@example.com
Last name:	Doe	Phone number:	1234567890
Secret question:	What is the name of your first pet?	Password:	*****
Answer:	Rockie	Confirm Password:	*****

A green "Save" button is located at the bottom right of the form.

# Web application

## Log In

This page allows all customers to log in by entering their personal credentials and if they are known to the system it will allow them to move further, otherwise the system will print an error message

The screenshot shows a web browser window for a login page titled "Sam Auto". The main content area is a "Log In" form with fields for "Email" (containing "test@gmail.com") and "Password" (containing "\*\*\*\*\*"). Below the password field is a "Forgot password?" link. A "Log In" button is at the bottom of the form. To the left of the form is a logo featuring a car silhouette and the text "Sam Auto". At the bottom of the page, there is a teal-colored footer bar with sections for "ADDRESS", "WORKING HOURS", and "INFORMATION FOR AVAILABLE EQUIPMENT AND VEHICLES", along with contact details like phone numbers and an email address.

The screenshot shows a web browser window for a login page titled "Sam Auto". The main content area is a "Log In" form with fields for "Email" (containing "test@gmail.com") and "Password" (containing "Input password"). Above the password field is an error message: "User with provided username and password does not exist". Below the password field is a "Forgot password?" link. A "Log In" button is at the bottom of the form. To the left of the form is a logo featuring a car silhouette and the text "Sam Auto". At the bottom of the page, there is a teal-colored footer bar with sections for "ADDRESS", "WORKING HOURS", and "INFORMATION FOR AVAILABLE EQUIPMENT AND VEHICLES", along with contact details like phone numbers and an email address.

## Forgot Password

The system allows customers to log in even if they have forgotten their account password. By answering a predefined secret question, they can also log in and update the account info

The screenshot shows a web browser window for a website named "Sam Auto". The title bar says "Forgot Password - WebApplication" and the URL is "https://localhost:7085/ForgotPassword". The main content area has a dark blue header with the "Sam Auto" logo, which features a stylized car icon and the text "Sam Auto". Below the header is a navigation bar with links: Catalogue, Search, My Garage, My Profile, and About Us. The main section is titled "Forgot Password". It contains three input fields: "Email:" with the value "test@gmail.com", "Secret Question:" with a dropdown menu showing "What is the name of your first pet?", and "Answer to secret question:" with the value "Jocke". A "Submit" button is located below these fields. At the bottom of the page, there are three columns of information: "ADDRESS", "WORKING HOURS", and "INFORMATION FOR AVAILABLE EQUIPMENT AND VEHICLES". The "ADDRESS" column includes the address "BULGARIA, SOFIA 1618, Okolovrastno Shose", phone numbers "TEL: +359 / 2 8787863; +359 / 2 2536488", and mobile numbers "GSM: +359 / 888-987898; +359 / 886-457629". The "WORKING HOURS" column lists "MONDAY-FRIDAY 09:00A.M. - 06:30P.M." and "SATURDAY/SUNDAY: 10:30A.M. - 06:00P.M.". The "INFORMATION FOR AVAILABLE EQUIPMENT AND VEHICLES" column lists three mobile numbers: "GSM: +359 / 888-129837", "GSM: +359 / 886-917463", and "GSM: +359 / 885-738575", followed by the email "E-MAIL: SAM@AUTO.COM".

## Sign Up

This page allows all customers to sign up and identify themselves to the system (create an account). If all fields are correctly populated with data, the system is going to create the new account, otherwise the system will notify for an error

The screenshot shows a web browser window for a "Sam Auto" application. The title bar reads "SignUp - WebApplication\_Sam". The address bar shows the URL "https://localhost:7085/SignUp". The main content area has a dark blue header with the "Sam Auto" logo on the left. Below the header is a navigation bar with links: Catalogue, Search, My Garage, My Profile, and About Us. The central part of the page is titled "Sign Up". It contains a form with the following fields:

- First Name:
- Last Name:
- Email:
- Phone:
- Secret Question:
- Answer to secret question:
- Password:
- Confirm Password:

At the bottom of the form are two buttons: "Sign Up" and "Already have an account? [Log In](#)". The footer of the page is teal-colored and contains the following information:

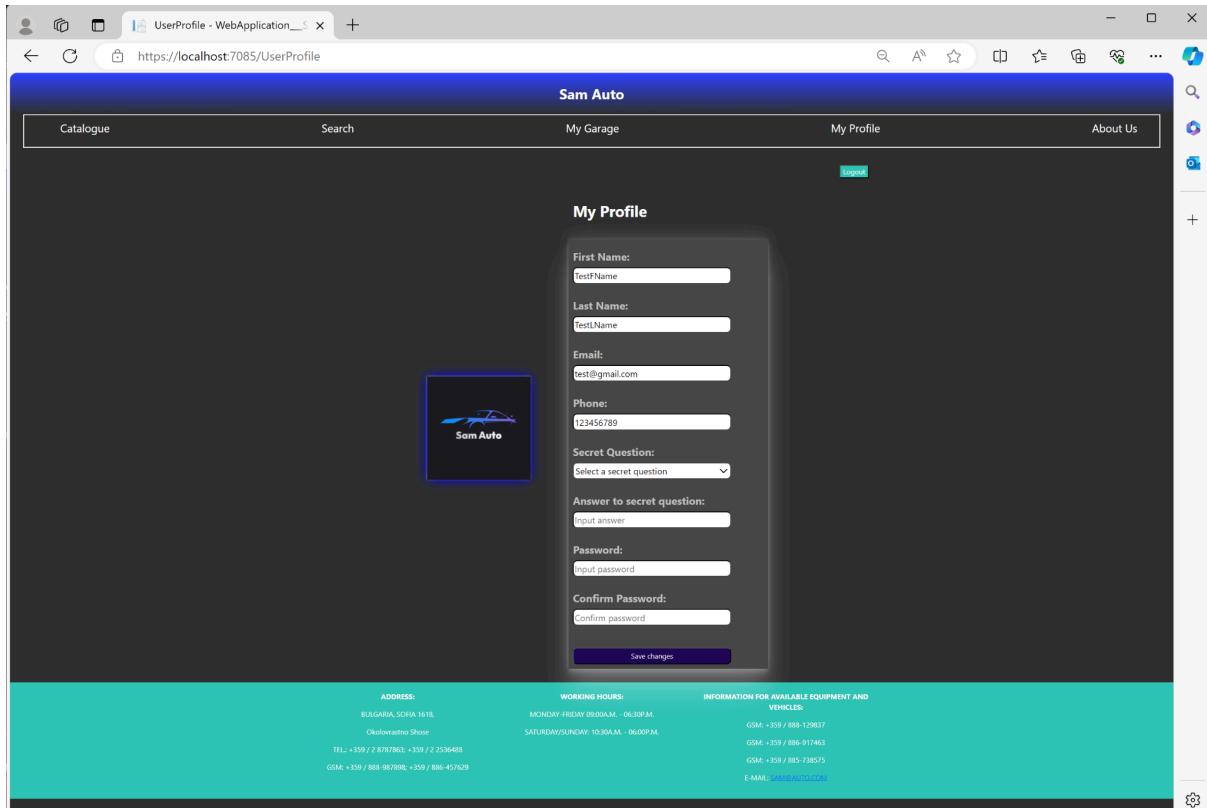
**ADDRESS:**  
BULGARIA, SOFIA 1618,  
Okolovaztvo Shose  
TEL: +359 / 2 8797863; +359 / 2 2536488  
GSM: +359 / 888 987898, +359 / 886 417629

**WORKING HOURS:**  
MONDAY-FRIDAY 0900AM - 06:30PM.  
SATURDAY/SUNDAY: 10:30AM - 06:00PM.

**INFORMATION FOR AVAILABLE EQUIPMENT AND VEHICLES:**  
GSM: +359 / 888 129837  
GSM: +359 / 886 917463  
GSM: +359 / 885 738575  
E-MAIL: [SAMAUTOSOFT.COM](mailto:SAMAUTOSOFT.COM)

## Account page

This page allows all customers, after they have been identified, to edit their account information, except for the first and last name



The screenshot shows a web browser window titled "UserProfile - WebApplication\_5" with the URL "https://localhost:7085/UserProfile". The page is titled "Sam Auto" and features a dark-themed header with navigation links: Catalogue, Search, My Garage, My Profile (which is active), and About Us. A "Logout" link is located in the top right corner of the header.

The main content area is titled "My Profile" and contains a form for editing personal information. The form fields include:

- First Name:
- Last Name:
- Email:
- Phone:
- Secret Question:
- Answer to secret question:
- Password:
- Confirm Password:

A "Save changes" button is located at the bottom of the form. Below the form, there is a teal-colored footer section containing address, working hours, and contact information.

**ADDRESS:**  
BULGARIA, SOFIA 1618,  
Okolostrato Shose  
TEL: +359 / 2 878786; +359 / 2 2536468  
GSM: +359 / 888 987898; +359 / 886 457629

**WORKING HOURS:**  
MONDAY-FRIDAY 09:00AM - 06:00PM.  
SATURDAY/SUNDAY: 10:00AM - 06:00PM.

**INFORMATION FOR AVAILABLE EQUIPMENT AND VEHICLES:**  
GSM: +359 / 888 129837  
GSM: +359 / 886 917463  
GSM: +359 / 885 738575  
E-MAIL: [AVAILABLE\\_EQUIPMENT@SAM-AUTO.COM](mailto:AVAILABLE_EQUIPMENT@SAM-AUTO.COM)

## Catalogue

This catalogue page allows all users to browse through all available vehicles, by using the navigation bar at the bottom of the page. If logged in, the user is allowed to bookmark vehicles. It allows the user to see the 10 best rated vehicles and the 10 most recently added. All users are allowed to see more details for each vehicle shown.

Screenshot of the Sam Auto homepage showing the catalogue section. The top navigation bar includes links for All Vehicles, Search, My Garage, My Profile, and Contact. Below the navigation is a search bar with two buttons: "Top 10 Recently Added" and "Top Rated Vehicles", both of which are highlighted with red boxes. The main content area displays three vehicle cards:

- Mazda - 6** (02/05/2024)  
Type: Coupe, Year of production: 01/03/2022, Rating: ★ 4/5, Color: Orange  
Price: 33,000.00€ [Bookmark](#) [Unbookmark](#) [Show more](#)
- Volkswagen - Passat** (01/12/2022)  
Type: Cabriolet, Year of production: 01/07/2021, Rating: ★ 1/5, Color: Purple  
Price: 29,000.00€ [Bookmark](#) [Unbookmark](#) [Show more](#)
- TestBasd - TestMasd** (02/05/2024)  
Type: SUV  
Price: 11.00€ [Bookmark](#) [Unbookmark](#)

Screenshot of the Sam Auto homepage showing the catalogue section for recently added vehicles. The URL is https://localhost:7085/?CurrentPage=6. The page displays four vehicle cards:

- BMW - X1** (10/12/2006)  
Year of production: 10/12/2006, Rating: ★ 2/5, Color: Orange  
Price: 12,012.00€ [Show more](#)
- Alfa Romeo - X3** (10/08/2021)  
Type: SUV, Year of production: 02/10/2005, Rating: ★ 3/5, Color: Cyan  
Price: 39,737.00€ [Show more](#)
- Ferrari - Forester** (09/09/2020)  
Type: Cabriolet, Year of production: 01/11/2005, Rating: ★ 2/5, Color: Silver  
Price: 11,859.00€ [Show more](#)
- Cadillac - Equinox** (07/11/2020)  
Type: Coupe, Year of production: 13/09/2019, Rating: ★ 3/5, Color: Turquoise  
Price: 11,859.00€ [Show more](#)

The bottom of the page features a navigation bar with page numbers (1, 5, 6, 7, ..., 121, ...) highlighted with a red box, and a footer with address, working hours, equipment information, and contact details.

## Car Preview

The Car Preview page gives detailed information for all the characteristics of the selected vehicle. If the user is logged in, there is the opportunity to bookmark vehicle, or unbookmark, if already bookmarked, to rate it and to save it for buying

This screenshot shows a desktop browser window displaying a car preview page for a Volvo RF200 truck. The page has a dark blue header with the title 'Sam Auto'. Below the header is a navigation bar with links for Catalogue, Search, My Garage, My Profile, and About Us. The main content area features a large image of the truck, its production date (28/05/2024), and its price (Volvo - RF200 200,500.00€). To the right of the image is a table of vehicle specifications. At the top right of the content area are three buttons: 'Bookmark' (highlighted with a red box), 'Rate' (highlighted with a red box), and 'Save for buying' (highlighted with a red box). The browser's address bar shows the URL <https://localhost:7085/CarView?id=1063>.

Type	Tracktor_Trailer
Date of prodution	15/06/2023
Rating	★ 2/5
Color	White
Engine	Hybrid
Engine Power	560
Fuel	Diesel
Transmission	Automatic
Mileage	500203
Condition	New
Steering Wheel	Left_Hand

//Mobile version

This screenshot shows a mobile browser window displaying the same car preview page for a Volvo RF200 truck. The layout is adapted for a smaller screen, with the vehicle image taking up more space at the top. The 'Save for buying' button is also highlighted with a red box. The browser's address bar shows the URL <https://localhost:7085/CarView?id=1063>.

CarView - WebApplication\_Sam

https://localhost:7085/CarView?id=1063

# Sam Auto

Catalogue Search My Garage My Profile About Us

28/05/2024 Bookmark Rate

Volvo - RF200 200,500.00€

Tracktor\_Trailer

Rating: ★ 2/5

White Hybrid

Engine Power: 560

Fuel: Diesel

Transmission: Automatic

Mileage: 500203

Condition: New

Steering Wheel: Left\_Hand

Save for buying

Rate Volvo - RF200

★ ★ ★ ★ ★

The screenshot shows a web application interface for a car listing. At the top, there's a navigation bar with links for Catalogue, Search, My Garage, My Profile, and About Us. Below the navigation, a car listing is displayed for a 'Volvo - RF200' truck, priced at 200,500.00€. The listing includes details like 'Tracktor\_Trailer', a rating of '★ 2/5', and various technical specifications such as engine power (560), fuel type (Diesel), and transmission (Automatic). A large image of the truck is visible on the left. A modal window titled 'Rate Volvo - RF200' is open, showing five empty star icons. This modal is highlighted with a thick red border. At the bottom right of the main listing area, there's a blue button labeled 'Save for buying'.

## My Garage

In the garage page all logged in users can see the vehicles they have bookmarked and saved for buying (based on the selected filtering criteria)

Screenshot of the 'My Garage' page showing a list of vehicles. A red box highlights the 'Filter:' dropdown menu which is set to 'Saved'. The dropdown also includes an option 'Filter'.

Date	Vehicle Details	Price
25/05/2024	Mazda - 6 Type: Sedan Year of production: 09/03/2022 Rating: ★ 2/5 Color: Blue	43,205.00€
23/05/2024	Volkswagen - Passat Type: Hatchback Year of production: 01/07/2021 Rating: ★ 2/5 Color: Purple	29,000.00€
15/04/2023	Ford - F-650 Type: Flatbed Year of production: 15/12/2022 Rating: ★ 3/5 Color: Blue	28,000.00€
19/06/2021	Harley-Davidson - Sportster Type: Sport Year of production: 01/02/2023 Rating: ★ 2/5 Color:	17,000.00€

Screenshot of the 'My Garage' page showing a list of vehicles. A red box highlights the 'Filter:' dropdown menu which is set to 'Bookmarked'. The dropdown also includes an option 'Filter'.

Date	Vehicle Details	Price	Action
02/05/2024	Honda - CBR1000RR Type: Touring Year of production: 20/09/2022 Rating: ★ 3/5 Color: Magenta	18,999.00€	[Unbookmark]
28/05/2024	Honda - Rm2 Type: Scooter Year of production: 28/05/2024 Rating: ★ 3/5 Color: White	4,900.00€	[Unbookmark]
09/05/2022	Mazda - 1500 Type: Sedan Year of production: 30/11/2000 Rating: ★ 4/5 Color: Blue	48,425.00€	[Unbookmark]
18/09/2023	Ram - CR-V Type: Hatchback Year of production: 22/11/2019 Rating: ★ 2/5 Color:	20,725.00€	[Unbookmark]

## Search

From the search page customers can search within all available vehicles based on a filtering criteria

The screenshot shows a web browser window titled "Search - WebApplication\_Sam" with the URL "https://localhost:7085/Search?handler=Search". The page has a dark blue header with the title "Sam Auto" and a navigation bar with links for Catalogue, Search, My Garage, My Profile, and About Us.

The main content area contains a search form with the following fields:

- Main category: Car
- Year of Production: 2024
- Engine: Internal\_Combustion
- Max price: €42000

Below the form is a "SEARCH" button. The results section displays three vehicle listings:

- Funny - Car**  
27/04/2024 | | Sedan | 27/04/2024 | ★ 3/5 | Magenta | 500.00€  
Type: Sedan | Year of production: 27/04/2024 | Rating: ★ 3/5 | Color: Magenta
- Fancy - Car**  
27/04/2024 | | Sedan | 27/04/2024 | ★ 2/5 | Lavender | 11,000.00€  
Type: Sedan | Year of production: 27/04/2024 | Rating: ★ 2/5 | Color: Lavender
- Bentley GTR**  
27/04/2024 | | Sedan | 27/04/2024 | ★ 3/5 | Black | 30,000.00€  
Type: Sedan | Year of production: 27/04/2024 | Rating: ★ 3/5 | Color: Black

Each listing includes a "Bookmark" link and a "Show more" link.

## Contact

The contact page presents the history of Sam Auto

A screenshot of a web browser displaying the 'About us' page of the Sam Auto website. The page has a dark blue header with the 'Sam Auto' logo. Below the header is a navigation bar with links for Catalogue, Search, My Garage, My Profile, and About Us. The main content area features a heading 'About us' followed by a detailed paragraph about the company's history and services. To the right of the text is a small image of a car with the 'Sam Auto' logo.

Established in 2004 by Samuil Kozarov, Sam Auto is a renowned car dealership located in Sofia, Bulgaria. With over a decade of expertise, our dedicated team has garnered a loyal clientele, many of whom have evolved into valued customers. At Sam Auto, we specialize in high-end vehicle sales, offering a wide range of premium vehicles to meet the diverse needs of our customers. Our approach to business is characterized by professionalism, flexibility, and a commitment to customer satisfaction. We strive to make every transaction seamless and enjoyable, ensuring that each client receives personalized attention and expert guidance throughout the buying process. Trust Sam Auto for your next vehicle purchase and experience unparalleled service and quality.