**Software Requirements Specification for Car Purchasing Web Application**

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# **Introduction**

## **Purpose**

The purpose of this software requirement specification is to provide a clear, documented model of the requirements for the online car purchasing web application. This system will host a huge database of vehicles, allowing vendors to advertise and market their vehicles and buyers to find the vehicles they're looking for. This document provides a

high-level description for customers who want to purchase cars. The system provides the customer a way to browse easily through various brands and price ranges. So that customer will easily reserve the car that he wants with an intuitive and easy to use portal.

## **References**

**1.2.1** Customer requirements specification.

**1.2.2** Sample in Question (SIQ).

# **Overall Description**

## **User Classes and Characteristics**

The system includes two types of users:

**Customer:** the client should be able to view and buy from the available cars on the website, The features associated with client will be discussed in detail in section **(3.1).**

**Administrator:** the administrator should be able to:

* Approve customer reservation for the car.
* Decline customer reservation for the car.
* Add car data.
* Delete car data.

## **Operating Environment**

The web application can be run on:

* Windows 10: Google Chrome (v.110.0.5481.104).
* Mozilla Firefox (v.110.0).
* Microsoft Edge (v. 110.0.1587.50).

The Internet is a basic necessity for the system to be accessed.

## **Design and Implementation Constraints**

* Web - based system / PC based.
* Unique user IDs.
* Admin features needed.

## **Assumptions**

Admin Features:

* Add the car data.
* Delete car data.
* Approve reservation.

Drop List Feature:

* Car brand.
* Price range

# **System Features**

The Purchasing car website will have 2 roles.

1. Admin
2. User

The following features will be available to these 2 different roles.

| **Admin** | **User** |
| --- | --- |
| Login & Logout | Login & Logout |
| View car list | View car list |
| View car details | View car details |
| Search | Search |
| Add car | Register |
| Delete car | Buy car |

## **Registration**

### **3.1.1 Description**

User must have an account in order to be able to view the home page. Users who don’t have an account will not be able to view or reserve any of the website products. Users can view and login to their accounts anytime in the future after their registration.

### **3.1.2 Stimulus/Response Sequences**

In the login page, users can login if they already have an account and if not, there would be a sign-up button to register his information. Upon filling all fields with the required criteria **(3.1.4)**, the account will let the user log in to his/her account and the home page is displayed.

# **3.1.3 User Registration Fields**

* First Name
* Last Name
* E-mail
* Password
* Confirm Password
* Phone
* Address
* Register Button

### **3.1.4 Functional Requirements**

**Srs-Regs-001:** Users' accounts will hold information about their first name, last name, email, password, confirm password, phone number and address.

**Srs-Regs-002:** The first name field mustn’t be blank.

**Srs-Regs-003:** The last name field mustn’t be blank.

**Srs-Regs-004:** The user should enter only valid format email that does not already exist in the database ex: email@gmail.com.

Check database link:

**Srs-Regs-005:** The user should enter a valid password as it must have at least 8 characters.

**Srs-Regs-006:** The user should confirm the password. The password should match the

previously entered password in **Srs-Regs-005.**

**Srs-Regs-007:** The phone number field mustn’t be blank.

**Srs-Regs-008:** The phone number field must accept numbers only.

**Srs-Regs-009:** The address field mustn’t be blank.

**Srs-Regs-010:** The user must be able to press on the register button.

**Srs-Regss-011:** In case the user leaves the (**Srs-Regs-002)** fieldempty, the system should appear an error message “Please fill out this field”.

**Srs-Regss-012:** In case the user leaves the (**Srs-Regs-003)** fieldempty, the system should appear an error message that “Please fill out this field”.

**Srs-Regss-013**: If the user entered an email that already exist in the database, the system should appear an error message that “This e-mail is already exist”.

**Srs-Regss-014**: If the user entered un-valid email, the system should appear an error message that “This e-mail is already exist”.

**Srs-Regs-0:** If all entered data in requirements (Srs-Regs-002, Srs-Regs-003, Srs-Regs-004, Srs-Regs-005, Srs-Regs-006, Srs-Regs-007) are correct the system will confirm registration and navigate the user to the home page.

## **Login**

### **3.2.1 Description**

Login feature will help in authentication of user and admin accounts. Users who have valid email and password can only login into respective accounts. After that users will be able to navigate to the home page successfully.

### **3.2.2 Stimulus/Response Sequences**

In the login page, users can login and admins, if they already have an account. Upon matching the required criteria, the account will let the user log in to his/her account and the home page is displayed. For the users who don’t have a registered account, there would be a sign-up button to register his information.

# **3.2.3 User Login Fields**

* E-mail Field
* Password Field
* Login Button
* Register Button

### **3.2.4 Functional Requirements**

**Srs-log-001:** user/admin must enter a valid email and password that match the existing data in the database.

Check database link:

**Srs-log-002:** Users/admins must enter their emails in the right email format (ex: “abc@mail.com”).

**Srs-log\_003:** If the mail or the password are in-valid according to (srs-log-001, srs-log-002), it’s an error that must be reported to the user/admin and this message should appear “the mail or password isn’t correct”.

**srs\_log\_004**: If the mail and password exist in the database, the system should log you in and navigate you to the “home page”

Check database link:

**srs\_log\_005:** If either of the text fields is left blank, it is an error that must be reported to the user/admin and those two messages should appear “Password is required” and “mail is required”.

## **Logout**

### **3.3.1 Description**

All users and admins will be able to logout from their accounts from the home page.

### **3.3.2 Stimulus/Response Sequences**

In the home page, users and admins can logout, then the system will navigate them to the login page again**.**

### **3.3.3 Functional Requirements**

**Srs-logout-001:** The user must be able to press on the logout button, then the user will be navigated to the “login page”.

## **View Car List**

### **3.4.1 Description**

In the home page, the users can navigate from an enormous data of available cars and each car should have the remaining amount.

### **3.4.2 Stimulus/Response Sequences**

When the user or admin login, both of them should be able to reach the home page and view all the list of the available cars**.**

### **3.4.3 Functional Requirements:**

**Srs-list-cars-001:** After login, the user will be navigated to the “home page” according to (srs-log-004), then he will be able to view all the available cars on the site.

## **3.5** **Search**

### **3.5.1 Description**

Customers can search for an item from a large catalog of available cars in the car purchasing system. Users can search through a dropdown list which upon selection, lists the car brand and price.

### **3.5.2 Stimulus/Response Sequences**

In the home page, users and admins can search by two dropdown lists to choose from the available cars by their brand or price.

### **3.5.3 Functional Requirements**

**Srs-search-001:** The user will select the car brand or price from a dropdown menu containing all cars brands or prices in the database.

**Srs-search002:** All cars matching the selected criteria according to (**Srs-search-001**), will appear for the user.

**Srs-search-003:** User can reserve any car appearing from the search in requirement according to **(Srs-search002)** by clicking on it.

**Srs-search-004:** In case no matching cars to the selected criteria on (**Srs-search-001**) a message should appear to the user “Cars from a specific brand or range of price are not available, please try another brand or range of price”

## **3.6 View Car Details**

### **3.6.1 Description**

In the view car details page, the user can know more about the chosen car information (photo, description, price. Brand, model, number of available cars for each brand) and can reserve this car through the buy button.

### **3.6.2 Stimulus/Response Sequences**

In the home page, the users can navigate from an enormous data of available Once the user chooses any of the available cars then he/she can press on the car photo which will navigate him/her to the page which includes more information about the chosen car, then the user will be able to view the car (photo, description, price. Brand, model, number of available cars for each brand).

### **3.6.3 Functional Requirements**

**Srs-detail-cars-001:**  The user will be able to view any of the available car details according to (**Srs-list-cars-001**) by pressing on any picture.

**Srs-detail-cars-002:** If the user clicked on any space around the picture, the user will not be able to view the car details page.

## **3.7 Reserve**

### **3.7.1 Description**

Once the customer proceeds to buy from the home page, there is a reservation button. Once the customer presses on it, the reservation form is visible, users' reservation form will hold information about their full name, phone number, national Id, and appointment in order to see the car. After filling in the details, the customer must click on the save button to confirm the reservation.

### **3.7.2 Stimulus/Response Sequences**

In the home page, the users can navigate from enormous data of available cars. Once the user chooses any of the available cars, then he/she could press on the buy button which is found below each car or press on the car photo which navigates the user to the car details page which also has a buy button. After that a reservation form appears to let the user enter his required data to reserve his car successfully. Finally, after the user clicks on the save feature in the reservation form a request will be sent to the admin.

### **3.7.3 Functional Requirements**

**Srs-Buy-001:** The user has to choose a car from the home page that contains all the currently available cars and press the buy button.

**Srs-Buy-002:** A form ‘ll appear on the new page.

**Srs-Buy-003:** The full name field mustn’t be blank.

**Srs-Buy-004:** The phone number field mustn’t be blank.

**Srs-Buy-005:** The phone number field must contain numbers only.

**Srs-buy-006:** The national id field must contain numbers only.

**Srs-buy-007:** The appointment field mustn’t be blank.

**Srs-Buy-008:** The user must be able to press on the save button.

**Srs-Buy-009:** The system will show a message “car is reserved successfully” on the new page.

**Srs-Buy-010:** If any of the entered data in previously mentioned requirements (**Srs-Buy-003**, **Srs-Buy-004**, **Srs-Buy-005**, **Srs-Buy-006**, **Srs-Buy-007**, **Srs-Buy-008**) aren’t valid according to the constraints, an error message should appear.

**Srs-Buy-011:** If all entered data in requirements (**Srs-Buy-003**, **Srs-Buy-004**, **Srs-Buy-005**,**Srs-Buy-006**,**Srs-Buy-007**, **Srs-Buy-008**) are correct the system will confirm reservation.

**Srs-Buy-012**: The user shall be able to go back to the home page when pressing the back button exists in the browser.

**Srs-Buy-013:** If the user presses the cancel button instead of save button, the home page displays.

## **3.8 Add Car**

### **3.8.1 Description**

Admins are authorized to add new cars to the system by simply filling out the "Add car" form which includes a photo, description, price. Brand, and model for the car.

### **3.8.2 Stimulus/Response Sequences**

In the admin home page, the admin can click on the “Add” button, a form is displayed.

and enter the details for each car such as photo, description, price. Brand, and model and after filling the form the admin will press on the “save” button to add the car to the system.

**3.8.3 Functional Requirements**

**Srs-Add-Car-001:** The admin shall be able to press on add a new car feature that exists in the car home page that the system redirects the admin to after login.

**Srs-Add-Car-002:** A form will be displayed to the admin.

**Srs-Add-Car-003:** The description field mustn’t be blank.

**Srs-Add-Car-004:** The admin shall enter a valid price which contains Positive digits only in the car price field.

**Srs-Add-Car-005:** The admin will be able to choose the car brand from a dropdown list.

**Srs-Add-Car-007:** The admin will be able to choose the car model from a dropdown list.

**Srs-Add-Car-008:** The admin shall be able to upload an image for the car by pressing the upload image button.

**Srs-Add-Car-009:** The admin shall be able to press the save button and the pop message “The car is added successfully” appears.

**Srs-Add-Car-010:** The admin shall be able to press the home button that exists in the add new car page to redirect him to the home page.

**Srs-Add-Car-011:** If the admin presses the cancel button instead of save button, the home

page displays**.**

## **3.9 Delete Car**

### **3.9.1 Description**

Admins are authorized to delete any car from the system by simply deleting the car from the “All cars” page.

### **3.9.2 Stimulus/Response Sequences**

From the admin home page, admin can display all cars through clicking on the “all cars” page which includes a delete button below each car post.

### **3.9.3 Functional Requirements**

**Srs-Del-Car-001:** The admin shall be able to press on the delete car button that exists in the car home page and redirect the admin to delete car page.

**Srs-Del-Car-002:** The admin will be able to press on the delete button that is found below each car post.

**Srs-Del-Car-003:** The system shall delete cars from the database.

**Srs-Del-Car-004:** The system shall remove the car from the currently available cars home page.

**Srs-Del-Car-005:** The system shall view a message “The car is deleted successfully” in the new page.