PRODUCT REQUIREMENT DOCUMENT

Overview

The product is a website for a car dealership, that does the following:

- Provide a platform for the dealership to advertise and sell their cars
- Allow customers to easily find information about the cars and request test drives
- Target customers who are in the market for a new car

Key Features

- Car listings with details such as make, model, year, price, and photos that can be updated by the dealer
- Test drive request form for customers to fill out
- Admin dashboard for the dealer to view and manage test drive requests and update car listings
- Responsive design optimized for viewing on different devices
- Filtering functionality for customers to filter their search for specific makes and models
- Tool that will allow customers to compare details between two or more cars

Target Audience

- Individuals comfortable with using online platforms to research and purchase products
- Individuals in need of a new car for personal use looking for the right fit for their needs and budget
- Families looking to purchase a new car to meet their growing transportation needs
- Car enthusiasts interested in test driving the latest models and technologies
- Customers looking for a reliable and efficient alternative to their current car

Problems Solved by the Car Dealership Website

- Lack of centralized platform for dealership to advertise and sell cars
- Difficulties for dealership in managing and promoting inventory
- Lack of convenience and ease of access for customers to find information and request test drives

Importance

- Helps dealership effectively manage and promote inventory
- Reaches wider audience of potential customers
- Provides convenient and user-friendly platform for customers to find information and request test drives
- Makes car buying process smoother and more efficient for customers

Theme 1: Buyers Experience

Epic 1: Buyers can easily sign up and sign in securely to the website

User Story 1:

As a customer, I want to be able to able to sign up and login to the website

Tasks:

- Develop a customer sign up form to enter username (must be email format) and password
- Develop a customer sign in form to enter username and password
- Prevent login attempts

Acceptance Criteria:

- When users click on sing up they are presented with user name and password entry, phone number and address.
- Only unique emails are accepted.
- Entering wrong information such wrongly formatted email or phone number is immediately presented to the users
- When users click sign in, they are correctly authenticated or asked to sign up
- No robots or automated ways of sign in are allowed

Epic 1: Buyers can easily search and view the right car on the lot

User Story 1:

As a customer, I want to be able to search for cars on the lot by specific criteria, so that I can find the right car that meets my needs and budget

Tasks:

- Develop a search bar with filters for make, model, year, price range, and other relevant criteria
- Display the search results on the website, including relevant information such as car make, model, year, price, and image
- Sort the search results by different criteria such as price, year, or make
- Add the ability to click on a car and view the details, all the details that are available, when something is not available, there is a text showing that it is not available.

Acceptance Criteria:

- When clicking on the search bar, the customer can enter all the filters available, when no filtered is entered, all available cars are returned. Customers may enter wrong values and the system guides the user to enter the correct information
- When clicking on search results, the users are able to sort them by all available criteria
- When clicking a search result, the users are able to view all the details available
- The results look good on all screens, mobile, tablet and laptop browsers

User Story 2:

As a customer, I want to schedule a test drive for the car that I like and change the appointment at any time.

Tasks:

- Check if the customer is logged in, if not, request the user to login or sign up with email address and password
- Create a form for requesting a test drive
- Implement functionality for storing test drive requests
- Implement functionality to view, edit, cancel or update the test drive request
- Implement functionality to send email for the customer to confirm selection of the test drive

Acceptance Criteria:

- If customers try to schedule without logging in, the website shows login/sign up screen
- Only unique emails are allowed, if an email is already used by another user, the system tells me to use a different email as the current one exists, or asks me to login since that user might have already signed up
- Sign in screen requests email and password
- When customers select the test drive request, available dates are presented for the customer to pick only from available date, not available dates are not selectable
- The customers are presented with a form to enter their information, name, address, contact information including phone number and email address
- The customer receives an email notification of the confirmation of the appointment

Epic 2: Customers can have a seamless viewing experience on the website

User Story 1:

As a customer, I want the website to be optimized for viewing on different devices, so that I can easily find information about the cars on the lot no matter where I am

Tasks:

- Develop a responsive design for the website that adapts to different screen sizes and devices
- Support a range of browsers including safari and chrome

Acceptance Criteria:

- The website adjusts to fit the screen size of the device being used
- The layout and design of the website remain consistent across browsers
- Customers can access all features and functionality of the website on any device

User Story 2:

As a customer, I want the website to have a smooth and fast loading time, so that I can quickly find the information I need about the cars on the lot

Tasks:

- Optimize all images, videos, and other media files to reduce file size and improve page load time
- Minimize the use of large JavaScript files and use techniques such as lazy loading to improve page load speed
- Use a content delivery network (CDN) to improve website performance by caching static content and distributing it to users from servers closer to their location
- Use a website speed optimization tool to identify areas for improvement and implement changes to improve website speed
- Monitor website performance and make ongoing improvements to maintain a fast loading time

Acceptance Criteria:

- The website has a fast and responsive loading time on all devices
- The website uses optimized images and efficient code to ensure a smooth user experience
- Customers can quickly access and navigate through the different sections of the website without encountering any delays or lag

Theme 2: Car Dealership Experience

Epic 1: Dealership Secured Login

User Story 1:

As a car dealership, I want to be login and secure access to my website

Tasks:

- Create a login screen for the dealership to enter their username and password
- Prevent access to the website by robots

Acceptance Criteria:

- Only valid credentials allow access to the website
- Automated login attempts are blocked

Epic 2: Customers Data Management

User Story 1:

As a car dealership, I want to be able to view and manage customer test drive requests, so that I can schedule test drives with customers effectively

Tasks:

- Store unique customer email when creating a test drive
- Create a user interface for the dealership to view test drive requests
- Store customer test drive requests in a database by email
- Add fields for the dealership to mark test drives as scheduled or completed
- Provide a search feature for the dealership to find specific test drive requests

Acceptance Criteria:

- The dealership is able to view test drive requests
- The dealership is able to find specific test drive requests using the search feature
- The dealership is able to see modification to test drives and ensure customers received email notifications

User Story 2:

As a car dealership, I want to be able to store customer information, so that we can easily keep track of customer preferences and previous interactions

Tasks:

- Store customer information in a database

- Add fields for the dealership to update and view customer information
- Provide a search feature for the dealership to find specific customer information

Acceptance Criteria:

- Customer information is stored in the database
- The dealership is able to update and view customer information
- The dealership is able to find specific customer information using the search feature

Epic 3: Car Inventory Management

User Story 1:

As a car dealership, I want to be able to easily update the details of cars in our inventory, so that our customers have accurate information about the cars on the lot

Tasks:

- Create a user interface for the dealership to access and update car information
- Implement a system to store the car information in a database
- Add fields for updating the car details such as price, status, and description
- Provide a preview feature for the dealership to view changes before updating the information on the website

Acceptance Criteria:

- The dealership is able to access and update the car information
- The updated information is accurately displayed on the website
- The dealership is able to preview changes before updating the information
- The updated information is stored in the database correctly

User Story 2:

As a car dealership, I want to see a dashboard to view the status of my business

Tasks:

- Add information on the dashboard to display sales in $ by day/month/year
- Add information to display sales by number of cars sold by day/month/year
- Add information to display sales by number of customers
- Add information to display scheduled test drives for the day/month/year

Acceptance Criteria:

- When the dealer selects the dashboard, correct information is displayed
- When the dealer selects the dashboard, the correct number of cars sold by is displayed
- When the dealer selects the dashboard, the correct number of customers is displayed
- When the dealer selects the test drives, the correct number of test drives is displayed

Key Non-Functional Requirements

- **Scalability**: The main focus of scalability is managing growth. The website must be able to scale up and down with ease and be built with scalability in mind. The website should manage an increase in users and load without interfering with the experience of the end users.
- **Security**: the website should be secure and preserve the sensitive information of the users such as email and password. Security is a very crucial requirement for cybersecurity and the prevention of user information exposure. It is required for data protection and authentication.
- **Performance**: the website must effectively respond to user input and quickly loads its content and display it in a web browser. No function should take more than 1 second to display.
- **Availability**: the website should always be available 24/7, in case of maintenance, or availability issues, the website should clearly inform the user to return at a different time
- **Reliability:** The website displays accurate and up to date information at all times
- **Usability**: the website should be accessible and easy to navigate and use on all devices and browsers that are common and supported by the website, if a browser or device are not supported, it should be clear to the user
- **Maintainability**: the website should be easy to maintain, upgrade, and configure. If there are problems in the website, the administrators should be able to use logs to determine what the problem is at any time
- **Compliance**: the website should comply with relevant standards, regulations, and laws.
- **Localization**: The website should support English language only

Testability

Testing Requirements:

- Functionality testing: to ensure that the website performs all the functionalities as intended and as described in the user stories, such as searching for cars, viewing details of a car, submitting a test drive request, updating car listings by the dealer, etc.
- Usability testing: to evaluate the user experience of the website and verify that it is easy to navigate, and that all information is clearly presented to the user.
- Performance testing: to verify that the website can handle high traffic and perform optimally, even under heavy loads.
- Security testing: to assess the website's security measures and ensure that user data and sensitive information is protected against potential threats such as hacking, data breaches, and unauthorized access.
- Cross-browser compatibility testing: to verify that the website is compatible with different browsers, such as Safari, Chrome, Firefox, etc.
- Responsiveness testing: to verify that the website is optimized for viewing on different devices, such as desktop computers, laptops, smartphones, and tablets.

Testing Methods:

- Manual testing: involves manual testing by a QA engineer to verify that the website functions as intended and meets the testing requirements
- Automated testing: involves the use of automated testing tools to run tests on the website and verify that it functions as intended. Automated testing can save time and increase efficiency
- Unit testing: unit tests can be written to test the functionality of individual components, such as the form for requesting a test drive, to ensure that they are working correctly
- Functional testing: testing the search functionality, form submissions, and the display of car listings
- Regression testing: testing form submissions, search functionality, and the display of car listings after updates have been made to the site
- Security testing: testing for vulnerabilities in the form submissions, user authentication, and data storage systems
- Performance testing: testing the site's response time and load time, as well as its ability to handle large numbers of simultaneous users

Rollout Plan

- The product will be deployed on a cloud-based platform (AWS, Azure, or GCP), with support for major web browsers (Safari and Chrome).
- A phased rollout approach will be used, with initial release to a limited number of users, followed by a wider release as testing is completed and feedback is gathered, followed by 100% rollout