

Test Plan Document

1. Introduction

1.1 Purpose

This document outlines the testing strategy for ensuring the quality and functionality of the Online Car Showroom application.

1.2 Scope

This test plan covers unit testing, integration testing, and system testing, focusing on both functional and non-functional aspects of the application.

1.3 Planning (Roadmap)

Testing activities will run parallel to the development phase, ensuring each phase is thoroughly tested before moving to the next stage.

1.4 Testing Tools Used

Choosing the testing tools for an online car showroom application involves considering various testing needs, such as functional testing, performance testing

- Junit: For functional testing of the user interface and end-to-end testing.
- Selenium: For functional testing of the user interface and end-to-end testing.
- Postman: Postman is a popular API testing tool that allows you to test API's endpoints

1.5 Test Environment

- Development Server: Dedicated server hosting the Spring Boot application.
- Database: MySQL for development and testing.
- Browsers: Google Chrome, Mozilla Firefox, Microsoft Edge.
- Operating Systems: Windows, macOS, Linux.
- Java Environment: Tested on the specified Java 11 version used in development.
- Spring Boot: Utilized for building and running the application.

2. Unit Testing Plan

2.1 Modules Identified for Testing:

- Admin authorization and authentication
- Admin Management
- User Authentication & Authorization
- Car Purchase Management
- Test Drive Management
- User Profile updation
- User reviews and ratings

2.2 Unit Test Plan

- Admin Authentication & Authorization

Sl No	Test Id	Test Description	Input	Expected output	Actual output	Test Result
1	AD01	Admin registration with valid data	Valid email, username, password	Successful registration	[Actual Registration Output]	Pass/Fail
2	AD02	Successful login with valid credentials	Valid username, password	Redirect to admin dashboard	[Actual Redirect Page]	Pass/Fail
3	AD03	Login with incorrect username	Invalid username	Error message: "Invalid username"	[Actual Error Message]	Pass/Fail
4	AD04	Login with incorrect password	Valid username, incorrect password	Error message: "Incorrect password"	[Actual Error Message]	Pass/Fail
5	AD05	Login with incorrect username and password	Invalid username and password	Error message: "Incorrect username and password"	[Actual Error Message]	Pass/Fail

- Admin Management

Sl No	Test Id	Test Description	Input	Expected output	Actual output	Test Result
1	AM01	Add a new car to the inventory	Car details, including make, model, and specifications	Success message for adding the car to the inventory	[Actual Car Added to Inventory]	Pass/Fail
2	AM02	Edit existing car details in the inventory	Select a car and modify details	Success message for updating the car information	[Actual Car Information Updated]	Pass/Fail
3	AM03	Remove a car from the inventory	Select a car and click on the delete option	Success message for removing the car from the inventory	[Actual Car Removed from Inventory]	Pass/Fail
4	AM04	View and manage customer orders	Access the order management section	List of customer orders with status and details	[Actual Order Management Display]	Pass/Fail

- User Authentication & Authorization

SIN o	Test Id	Test Description	Input	Expected output	Actual output	Test Result
1	UA01	User registration with valid data	Valid email, username, password	Successful registration	[Actual Registration Output]	Pass/Fail
2	UA02	Successful login with valid credentials	Valid username, password	Redirect to user dashboard	[Actual Redirect Page]	Pass/Fail
3	UA03	Login with incorrect username	Invalid username	Error message: "Invalid username"	[Actual Error Message]	Pass/Fail
4	UA04	Login with incorrect password	Valid username, incorrect password	Error message: "Incorrect password"	[Actual Error Message]	Pass/Fail

5	UA05	Login with incorrect username and password	Invalid username and password	Error message: "Incorrect username and password"	[Actual Error Message]	Pass/Fail
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- Car Purchase Management

Sl No	Test Id	Test Description	Input	Expected output	Actual output	Test Result
1	CP01	Add a car to the cart	Click on "Add to Cart" button for a selected car	Car is successfully added to the shopping cart	[Actual Car Added to Cart]	Pass/Fail
2	CP02	Remove a car from the cart	Click on "Remove" button in the shopping cart	Car is removed from the shopping cart	[Actual Car Removed from Cart]	Pass/Fail
3	CP03	View and verify items in the cart	Navigate to the shopping cart and review the selected cars	List of selected cars with details is displayed	[Actual Cart Contents]	Pass/Fail
4	CP04	Proceed to checkout	Click on "Proceed to Checkout" button in the shopping cart	User is directed to the checkout page	[Actual Checkout Page]	Pass/Fail
5	CP05	Select payment method	Choose a payment method from available options	Payment method is selected and displayed	[Actual Payment Method Selected]	Pass/Fail
6	CP06	Enter billing and shipping details	Provide necessary information for billing and shipping	Billing and shipping details are entered	[Actual Entered Details]	Pass/Fail
7	CP07	Confirm and place the order	Click on "Place Order" button after verifying details	Order is successfully placed and confirmed	[Actual Order Confirmation]	Pass/Fail

8	CP08	View order details after purchase	Navigate to the order history or confirmation page	Detailed order summary is displayed	[Actual Order Details]	Pass/Fail
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- User Profile Updation

Sl No	Test Id	Test Description	Input	Expected output	Actual output	Test Result
1	PU01	Update profile with valid information	Modify name, email, and other details	Profile is successfully updated with new information	[Actual Updated Profile]	Pass/Fail
2	PU02	Attempt to update with invalid email format	Enter an email with an incorrect format	Error message: "Invalid email format"	[Actual Error Message]	Pass/Fail
3	PU03	Change password successfully	Provide current password and set a new password	Password is updated successfully	[Actual Password Updated]	Pass/Fail
4	PU04	Attempt password change with weak password	Set a new password that doesn't meet strength criteria	Error message: "Password must meet requirements"	[Actual Error Message]	Pass/Fail

- User Reviews & Ratings

Sl No	Test Id	Test Description	Input	Expected output	Actual output	Test Result
1	UR01	Submit a review with valid details	Provide a rating, write a detailed review, and submit	Review and rating are successfully submitted	[Actual Review Submission]	Pass/Fail

2	UR02	Attempt to submit a review without a rating	Write a review without providing a rating	Error message: "Please provide a rating for your review"	[Actual Error Message]	Pass/Fail
3	UR03	Attempt to submit an empty review	Submit the review form without entering any text	Error message: "Please enter a review before submitting"	[Actual Error Message]	Pass/Fail
4	UR04	Submit a review with the maximum character limit	Enter a lengthy review within the character limit	Review is accepted and displayed	[Actual Review Displayed]	Pass/Fail
5	UR05	Rate a product with the highest rating	Provide the maximum rating (e.g., 5 stars)	Rating is recorded as the maximum value (e.g., 5 stars)	[Actual Rating Recorded]	Pass/Fail
6	UR06	Rate a product with the lowest rating	Provide the minimum rating (e.g., 1 star)	Rating is recorded as the minimum value (e.g., 1 star)	[Actual Rating Recorded]	Pass/Fail
7	UR07	Edit a submitted review	Modify the text or rating of an already submitted review	Updated review is displayed and recorded	[Actual Updated Review Displayed]	Pass/Fail
8	UR08	View reviews and ratings for a product	Navigate to the product page and access the reviews section	List of reviews and ratings for the product is displayed	[Actual Reviews Displayed]	Pass/Fail
9	UR09	Delete a submitted review	Click on the delete or remove option for a submitted review	Review is successfully deleted	[Actual Review Deleted]	Pass/Fail

3. Integration Test Plan

3.1 Methodology Used

Bottom-up methodology will be employed to identify integration points and validate data flow and interactions between modules.

3.2 Approach

- Identify integration points.
- Develop integration test cases.

4. System Testing / User Acceptance Test

4.1 Testing Methodology

- System testing will cover end-to-end scenarios.
- User acceptance testing will involve end-users to ensure alignment with user expectations, using black-box testing.

4.2 Description

- Conduct system testing to verify the application meets specified requirements.
- User acceptance testing ensures the application meets user expectations.

Conclusion

This test plan is a guide for testing activities, ensuring the Online Car Showroom application meets quality standards and user expectations. It will be updated as the project progresses.