Creating a high-level test plan for a rent a car functionality involves outliing the key objectives, scope, and testing approach for this feature.

Rent a Car Functionality

1. Introduction

Objective:

To ensure that the rent the car functionality of the application works as intended, providing users with an error-free experience.

Scope:

This test plan covers testing of the entire car rental process, from selecting a car to payment and confirmation.

Testing Approach:

Functional testing, usability testing, performance testing, security testing, and compatibility testing will be conducted.

2. Features to be Tested:

- User registration and login.

- Car selection and availability.

- Rental options (duration, insurance, extras, etc)

- Booking confirmation and payment.

- Email notifications, push notifications on mobile application

- User dashboard.

- Cancellation and modification of bookings.

- Integration with third-party services (e.g., payment gateway, maps).

3. Test Environment

Operating Systems: Windows, macOS, Linux, Mobile OS (iOS, Android).

Browsers: Chrome, Firefox, Safari, Edge.

Devices: Desktop, Mobile, Tablet.

Database: Oracle

Testing Tools: Selenium for web automated testing, appium for mobile testing, JIRA for defect tracking, TestRail for test case management.

4. Test Scenarios

User Registration and Login:

- Verify that users can successfully register.

- Verify that registered users can log in.

- Verify password recovery functionality.

Car Selection

- Verify that users can browse available cars.

- Verify filtering and sorting options.

- Verify that users can view car details, including images and specifications

Booking Process

- Verify that users can select a car and rental options.

- Verify that users can proceed to payment.

- Verify that payment processing is secure and reliable.

Confirmation and Notifications

- Verify that users receive booking confirmation emails.

- Verify that booking details are accurately stored in the user's dashboard.

Cancellation and Modification

- Verify that users can cancel or modify bookings.

- Verify that refunds are processed correctly.

5. Test Execution

Manual testing for functional, usability, and security testing.

Automated testing using Selenium and appium for regression testing.

Load and performance testing using tools like JMeter to assess system performance under various loads.

6. Test Deliverables

Test cases and test scripts.

Test results and defect reports.

Test summary report.

7. Risk Assessment

Identify potential risks and their impact on testing and the application.

8. Schedule

Define the testing timeline, including milestones and deadlines.

9. Resources

- List the resources required for testing.

10. Exit Criteria

Criteria for test completion and sign-off.

11. Sign-off\*\*

Obtain sign-off from relevant stakeholders.

This high-level test plan serves as an outline for testing the Rent a Car functionality. Detailed test cases, test data, and additional test documentation will be created as part of the testing process.

**Positive Test Case: Successful User Sign-Up**

**Preconditions:**

The user is on the sign-up page.

**Test Steps:**

Given the user is on the sign-up page.

When the user fills in valid information in all required fields, including name, email, password, and phone number.

And the user clicks the "Sign Up" button.

Then the user should be successfully registered in the system.

And a confirmation message or email should be sent to the user.

And the user should be able to log in using the registered credentials.

**Expected Result:**

The user is successfully registered in the system.

**Negative Test Case: Invalid Email Format**

**Preconditions:**

The user is on the sign-up page.

**Test Steps:**

Given the user is on the sign-up page.

When the user enters an invalid email address

And the user fills in valid information in the remaining required fields.

And the user clicks the "Sign Up" button.

Then the system should detect the invalid email format and display an error message.

And the sign-up form should not be submitted

**Expected Result:**

A valid required error should be shown on the system and the user is not able to register with an in valid e-mail address.