Day 5 - Testing and Backend Refinement - MORENT

1. Testing Report

Test Case ID: TC001
Test Case Description: Validate search bar functionality
Test Steps: Go to homepage > Enter keyword in search bar > Press Enter
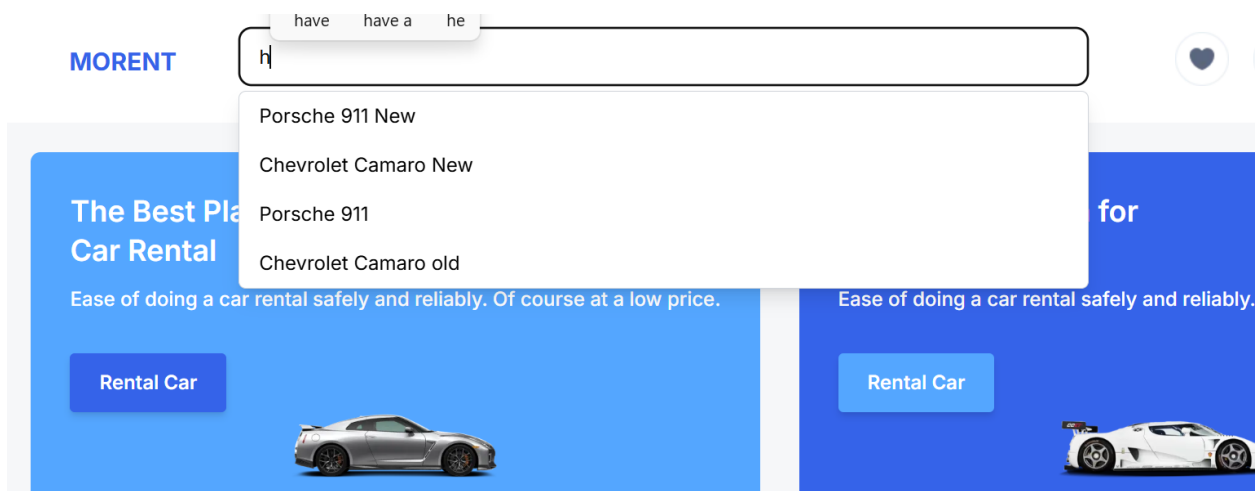**Expected Result:** Search suggestions, the product on click
Actual Result: Got suggestions, and the required product
Status: Passed
Severity Level: High
Assigned To: -
Remarks: Fine

Test Case ID: TC002

Test Case Description: Validate product listing on the homepage

Test Steps: Navigate to homepage > Check if product listings are displayed

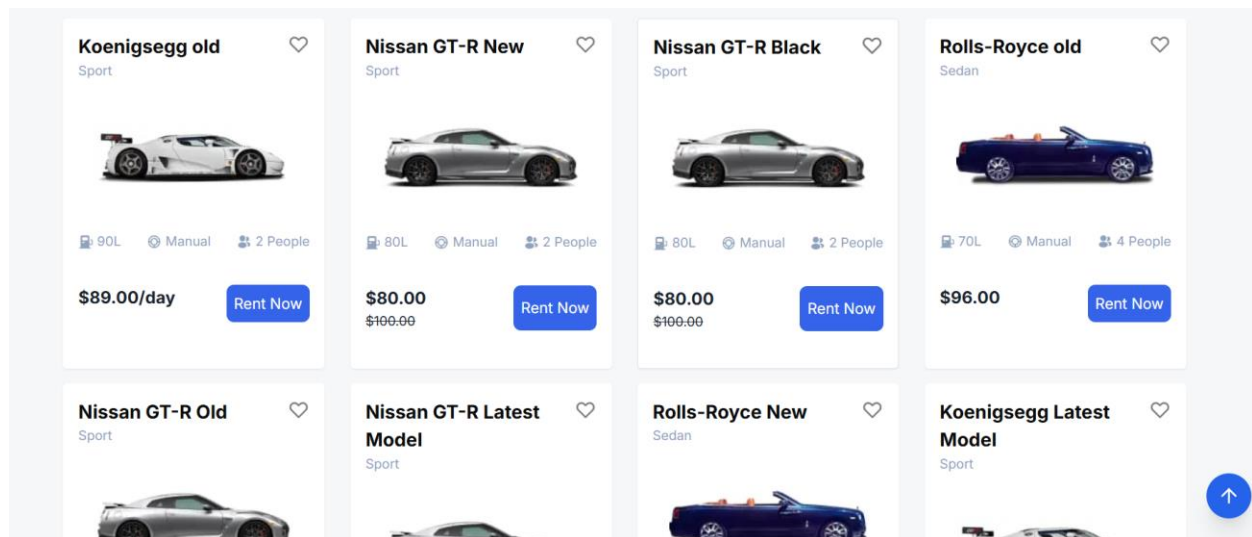**Expected Result:** All products are listed with relevant details

Actual Result: Products listed as desired

Status: Passed

Severity Level: Low

Assigned To: -

Remarks: Successful

Test Case ID: TC003

Test Case Description: Check dynamic product details page rendering

Test Steps: Select a product from the listing > Verify the product details page

Expected Result: Correct product details (name, price, description) are shown

Actual Result: Product details shown

Status: Passed

Severity Level: Low

Assigned To: -

Remarks: Successful

Test Case ID: TC004
Test Case Description: Verify cross-browser compatibility
Test Steps: Open the website in different browsers > Check for layout consistency
Expected Result: Website renders correctly in all major browsers
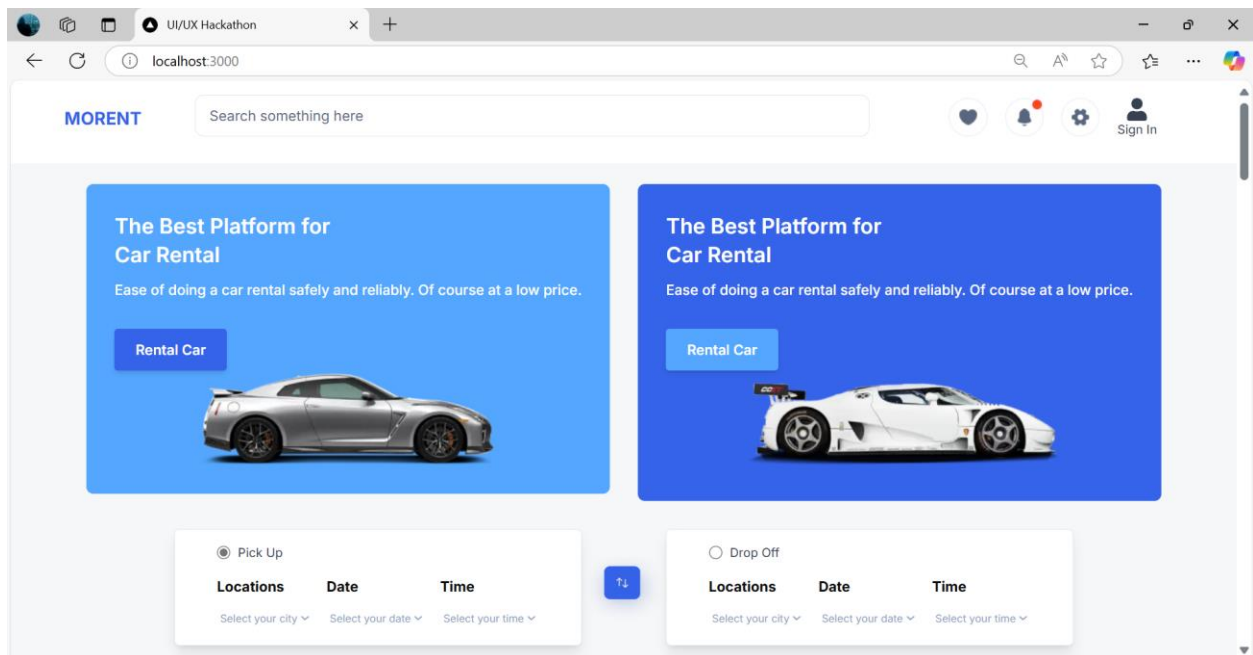**Actual Result:** Layout was presentable
Status: Passed
Severity Level: Medium
Assigned To: -
Remarks: Fine

Test Case ID: TC005

Test Case Description: Check responsiveness on different screen sizes

Test Steps: Open website on mobile, tablet, and desktop views > Verify layout and element resizing
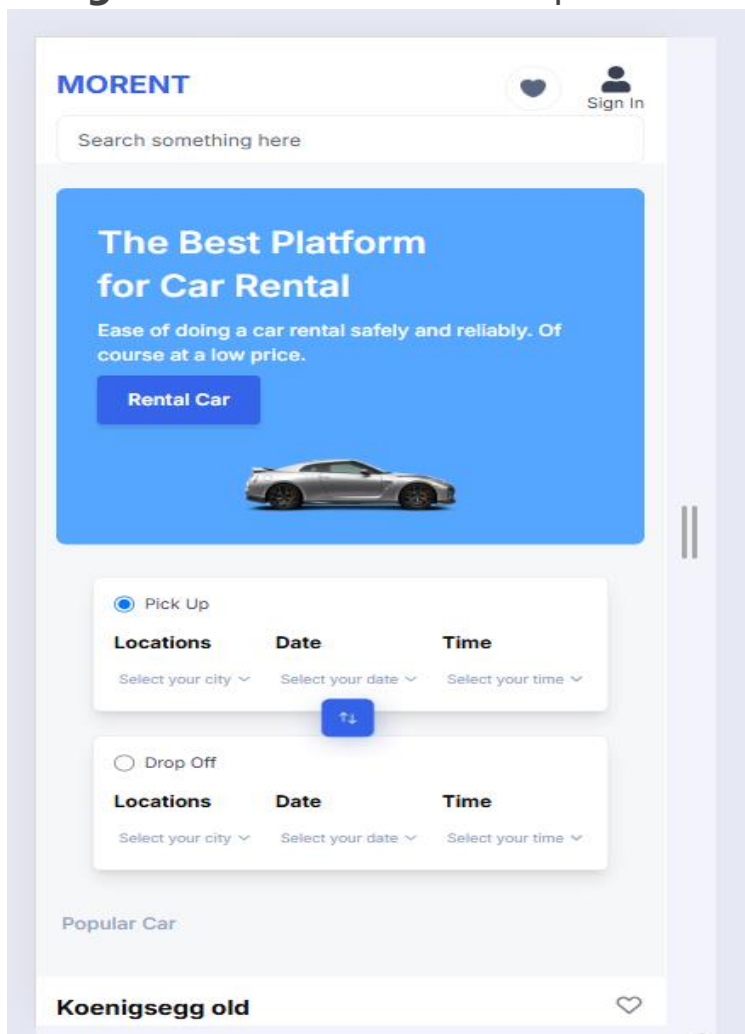
Expected Result: Website is fully responsive across all screen sizes

Actual Result: Website was Responsive

Status: Passed

Severity Level: Low

Assigned To: -**Remarks:** Responsive

Test Case ID: TC007

Test Case Description: Verify checkout process flow

Test Steps: Rent Now > Proceed to checkout > Complete payment steps

Expected Result: Checkout completes successfully with a confirmation message

Actual Result: Checkout UX is smooth
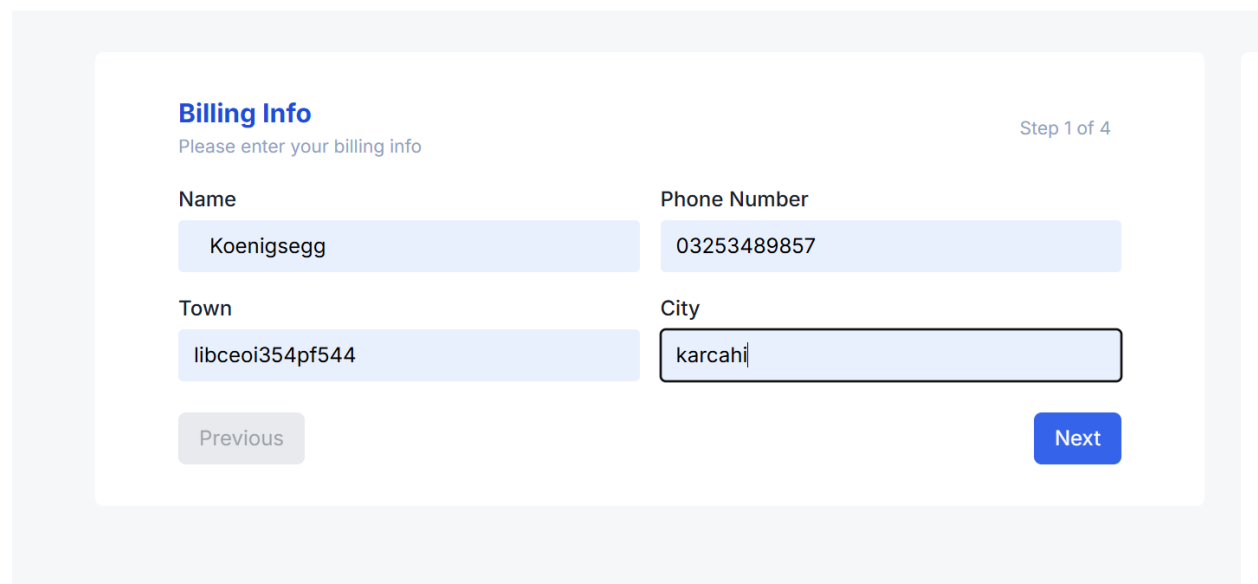
Status: Passed

Severity Level: Low

Assigned To: -

Remarks: Smooth

1.

2.

Rental Info
Please select your rental date

🔵 Pick - Up

Location

karachui

Date

01/17/2025

Time

01:20 AM 🕐

⚪ Drop - Off

Location

|||||||||||

Date

02/17/2025

Time

01:23 AM 🕐

Previous   Next

3.

Payment Method
Please enter your Payment Method

◉ **Credit Card**   VISA ⬤⬤

Card Name   **Card Holder**

Card Name   Card Holder

Expiration Date   **CVC**

MM/YY   CVC

○ **PayPal**   *P* PayPal

○ **Bitcoin**   ⓑ*bitcoin*

Previous   Next

4.

Confirmation
We are getting to the end. Just a few clicks and your rental is ready!

☐ I agree to receive marketing emails from the brand.

☐ I agree to the terms and conditions.

Rent Now

Previous

5.
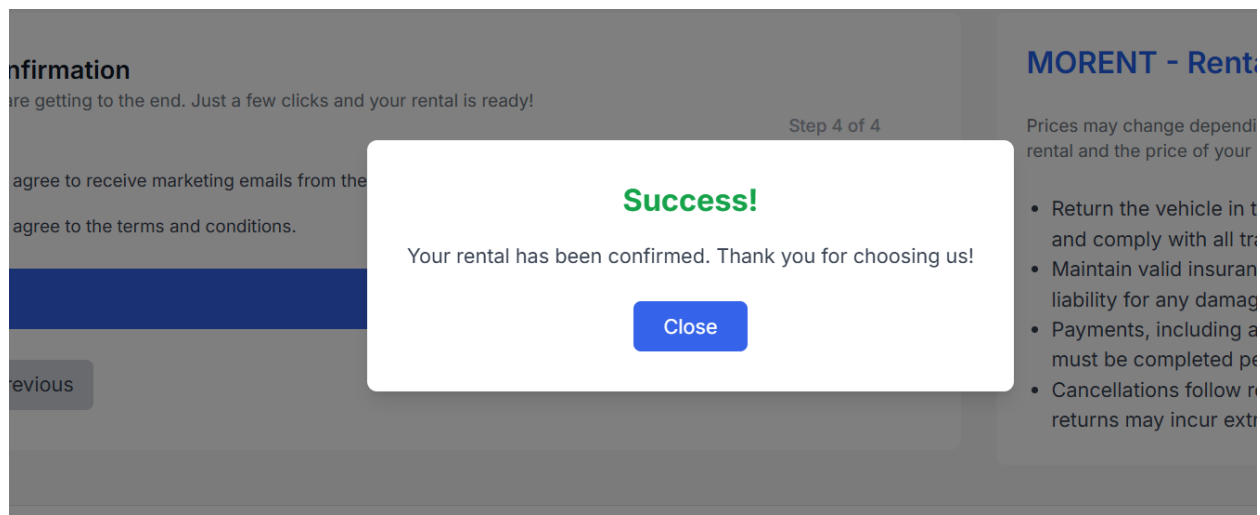
EXCELSHEET: (attached in the repo)

Local and field metrics

Largest Contentful Paint (LCP) ⑦

0.57 s   —

Local   Field 75th percentile

Your local LCP value of **0.57 s** is good.

LCP element   p.font-PlusJakartaSans.text-left...

Cumulative Layout Shift (CLS)

0.01   —

Local   Field 75th percentile

Your local CLS value of **0.01** is good.

Worst cluster 1 shift

Interaction to Next Paint (INP)

0 ms   —

Local   Field 75th percentile

Your local INP value of **0 ms** is good.

2. Performance Optimization Steps Taken

To ensure optimal performance, the following steps were taken:

1. **Code Minification:** JavaScript, CSS, and HTML files were minified to reduce file sizes and improve load times.
2. **Image Optimization:** Images were compressed and converted to modern formats (e.g., WebP) to reduce load times without compromising quality.
3. **Lazy Loading:** Implemented lazy loading for images and non-critical resources to improve initial page load performance.
4. **Caching:** Enabled browser caching and server-side caching to reduce server load and improve response times.

3. Security Measures Implemented

The following security measures were implemented to protect the application:

1. **Input Validation:** Implemented server-side and client-side input validation
2. **Authentication and Authorization:** Used secure authentication mechanisms
3. **Regular Security Audits:** Conducted regular security audits and vulnerability assessments to identify and address potential risks.

4. Challenges Faced and Resolutions Applied

Challenge 1: Cross-Browser Compatibility Issues

Description: The website layout was inconsistent across different browsers (e.g., Chrome, Firefox, Safari).
Resolution: Used CSS prefixes and to ensure consistent rendering across browsers. Conducted extensive testing on multiple browsers and devices.

Challenge 2: Slow Page Load Times

Description: Initial page load times were high, especially on mobile devices.
Resolution: Implemented lazy loading, optimized images, and enabled caching.

Conclusion

The test execution and optimization process was successful, with all test cases passing and significant improvements in performance and security. The challenges faced were addressed effectively, ensuring a robust and user-friendly application.