
DAY-5 --Project Testing and Optimization Report

Project Name: Hekto Marketplace

1. Functional Testing

What Was Done:

- Validated key functionalities, including:
 - Product listing.
 - Search filters.
 - Cart operations.
 - User profile management.
 - Dynamic routing.

Results:

- All functional test cases passed successfully.

Status:

- Functional testing was **successful**.
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2. Error Handling

What Was Done:

- Implemented error-handling measures, including:
 - Try-catch blocks for managing API errors.
 - Fallback UI for handling empty responses.
 - Form input validation to ensure data integrity.

Results:

- Error handling is functioning as intended.
- Issue Identified:** Fallback UI for empty responses is not fully operational and requires further improvements.

Status:

- Error handling is **effective**, with minor pending improvements.
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3. Performance Optimization

What Was Done:

- Key optimizations implemented:
 - Optimized image sizes for faster loading.
 - Enabled lazy loading to prioritize visible content.
 - Removed unused or redundant code to reduce overhead.
 - Added browser caching for static resources.

Results:

- Initial page load time was **reduced from 5 seconds to 1.30 seconds**, a significant improvement.

Status:

- Performance optimizations were **successful**.
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4. Cross-Browser and Device Testing

What Was Done:

- Verified consistent rendering across major browsers, including:
 - Chrome, Firefox, Safari, and Edge.
- Tested responsiveness on multiple devices:
 - Desktop, tablet, and mobile devices.

Results:

- All tests for cross-browser and device compatibility were successfully passed.

Status:

- Cross-browser and device testing was **successful**.
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5. Security Testing

What Was Done:

- Implemented critical security measures:
 - Prevented SQL injection and XSS attacks by validating inputs.

- Ensured all communications occurred over HTTPS.
- Securely stored sensitive information in `.env.local`.

Results:

- Security measures were successfully validated and no vulnerabilities were identified.

Status:

- Security testing was **successful**.
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6. User Acceptance Testing (UAT)

What Was Done:

- Simulated real-world user actions and scenarios to evaluate usability.
- Gathered feedback from test users and incorporated it into the project.

Results:

- User workflows were seamless, and usability improvements were made based on feedback.

Status:

- User acceptance testing was **successful**, with iterative improvements implemented.
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7. Summary of Testing Results

<u>Testing Area</u>	<u>Status</u>	<u>Key Notes</u>
Functional Testing	Successful	All functional test cases passed.
Error Handling	Partially Successful	Fallback UI requires additional work.
Performance Optimization	Successful	Page load time reduced to 1.30 seconds.
Cross-Browser Testing	Successful	Compatible across all tested browsers/devices.
Security Testing	Successful	HTTPS, input validation, and secure storage.
User Acceptance Testing	Successful	Feedback was incorporated for improvements.

8. Test Report Access

- **Test Report File:**
 - **Complete Documentation**
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9. DAY 5 Checklist

Task		Status
Functional Testing:	All tests passed.	✓
Error Handling:	try-catch blocks implemented; fallback UI pending.	✓
Performance Optimization:	Page load time improved from 5 seconds to 1.30 seconds.	✓
Cross-Browser Testing:	Successful across browsers/devices.	✓
Security Testing:	HTTPS, input validation, and secure storage.	✓
User Acceptance Testing:	Feedback incorporated.	✓
Documentation:	Results documented.	✓

10. Conclusion

All critical testing areas, including functionality, error handling, performance, cross-browser/device compatibility, security, and user acceptance, were successfully addressed. Minor improvements (fallback UI) are pending and will be resolved in subsequent iterations.