

Day 6 Testing Report – Deployment Preparation and Staging Environment Setup

Objective:

The objective of **Day 6** was to prepare the **Comforty One** marketplace for deployment by setting up a **staging environment**, conducting rigorous **staging tests**, and ensuring a **smooth transition** to a production-ready state. This phase involved configuring hosting platforms, managing environment variables securely, testing system stability, and documenting all findings.

1. Staging Environment Setup & Configuration:

To deploy the marketplace efficiently, we followed a structured approach:

✓ Hosting Platform Selection:

- **Chosen Platform:** Vercel (Recommended for seamless Next.js deployment).
- **Alternative Considerations:** Netlify was evaluated but not used due to better integration of Vercel with Next.js.

✓ Repository Connection:

- **GitHub Repository** successfully linked to **Vercel**.
- Configured **build & deployment settings** to ensure smooth staging deployments.

✓ Environment Variable Configuration:

- Set up **.env** files securely and added necessary **API keys** on the hosting platform.
- Ensured **database credentials & third-party API keys** were safely stored and not exposed in client-side code.

✓ Deployment to Staging Environment:

- Deployed the application to **Vercel's staging environment**.
- Verified the **build process** and ensured no errors occurred.
- Checked that all **frontend and backend services** functioned as expected.

2. Staging Environment Testing:

To confirm the readiness of the staging environment, multiple **testing strategies** were applied:

◆ Functional Testing:

Validated that all core functionalities worked as expected.

Test Case ID	Test Description	Steps to Reproduce	Expected Result	Actual Result	Status	Remarks
TC001	Product Listing Verification	Open product page & check listings	Products should display correctly	Products displayed correctly	✓ Passed	No issues found
TC002	Cart Functionality	Add a product to the cart and verify	Cart should update correctly	Cart updated correctly	✓ Passed	Works as expected
TC003	Checkout Process	Proceed to checkout and fill details	Payment should process	Payment processed successfully	✓ Passed	No issues found
TC004	User Registration	Create a new user account	Account should be created	Account created successfully	✓ Passed	Registration working fine
TC005	Login & Authentication	Login with valid credentials	User should log in successfully	User logged in without issues	✓ Passed	Secure authentication verified

◆ Performance Testing:

Used **Lighthouse** and **GTmetrix** to measure performance.

Metric	Expected Score	Actual Score	Status
Page Load Time	Below 3 seconds	2.8s	✓ Passed
Lighthouse Performance Score	Above 90%	92%	✓ Passed
Time to Interactive	Below 4 seconds	3.6s	✓ Passed
First Contentful Paint (FCP)	Below 2 seconds	1.8s	✓ Passed

Security Testing:

- **Input Validation:** All input fields were tested for **SQL injection**, **XSS attacks**, and **unauthorized access**. No vulnerabilities found.
- **HTTPS Verification:** Ensured **SSL/TLS encryption** was active and data transmission was secure.
- **API Key Security:** Verified that sensitive API keys were **not exposed in the frontend code**.

◆ Responsiveness Testing:

Checked the site on different screen sizes:

Device	Expected Behaviour	Actual Result	Status
Mobile (iPhone 12)	Responsive layout, proper spacing	✓ Works perfectly	✓ Passed
Tablet (iPad Air)	Adjusted UI elements correctly	✓ Responsive	✓ Passed
Desktop (1440px)	Full functionality without layout shifts	✓ Works as expected	✓ Passed

3. Bug Fixes & Issue Resolution:

- Fixed **minor UI glitches** related to spacing in the product grid layout.

- Resolved an issue where **API responses were taking slightly longer** due to unoptimized queries.
 - Optimized **lazy loading** for images, reducing load time by **15%**.
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4. Documentation Updates & Repository Management:

- ✓ Created a **README.md** file summarizing the full **6-day development process**.
 - ✓ Organized all **test reports, CSV files, and deployment guides** in GitHub.
 - ✓ Structured repository with **clear folder hierarchy** for easy navigation.
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5. Final Results & Next Steps:

🎯 Expected Outcomes Achieved:

- ✓ Fully deployed staging environment for **Comforty One**.
- ✓ Environment variables secured.
- ✓ Performance and security optimizations applied.
- ✓ Staging test results documented.
- ✓ Organized GitHub repository with complete documentation.

🚀 Next Steps:

- Conduct **final User Acceptance Testing (UAT)** with stakeholders.
 - Monitor **staging performance** for 24-48 hours before production release.
 - Prepare **final deployment strategy** for production launch.
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Conclusion:

Day 6 successfully ensured that **Comforty One** is **deployment-ready** with a secure, optimized, and functional **staging environment**. The application performed well in **testing scenarios**, met **performance benchmarks**, and adhered to **security standards**. The next phase will involve **finalizing the deployment and launching the marketplace to production**. 🚀

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