

Day 6 Testing Report – Deployment Preparation and Staging Environment Setup

Objective:

The goal of **Day 6** was to prepare the **Furniture Web** marketplace for deployment by setting up a **staging environment**, performing thorough **testing**, and ensuring all components work seamlessly before moving to production. This step focused on configuring hosting platforms, managing environment variables securely, testing system performance, and documenting all findings for a smooth deployment process.

1. Staging Environment Setup & Configuration:

A systematic approach was followed to deploy the marketplace efficiently.

✓ Hosting Platform Selection:

- **Selected Platform:** Vercel (preferred due to its easy Next.js integration).
- **Alternative Considered:** Netlify was an option but not chosen due to Vercel's better compatibility with our tech stack.

✓ Repository Connection:

- **Successfully linked GitHub repository to Vercel** for continuous deployment.
- Configured **build and deployment settings** to avoid issues during staging.

✓ Secure Environment Variable Configuration:

- Added essential **API keys, database credentials, and third-party integrations** in `.env` files.
- Ensured **secure storage** of sensitive information within the hosting platform.

✓ Deployment to Staging Environment:

- Deployed the project to **Vercel's staging environment** without errors.
 - Verified that both the **frontend and backend services** worked correctly.
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2. Staging Environment Testing:

Multiple **testing strategies** were executed to validate the application's functionality and security.

◆ Functional Testing:

All major features were tested to confirm they worked as expected

Test Case ID	Steps to Reproduce	Expected Output	Actual Output	Status	Remarks
TC001	Navigate to product page	Display product listings	Products displayed correctly	✓ Passed	No issues
TC002	Add item to cart & view cart	Cart updates correctly	Cart updated successfully	✓ Passed	Functions properly
TC003	Fill details and place an order	Order processed successfully	Payment processed smoothly	✓ Passed	No delays observed
TC004	Sign up & log in	User can access account	Authentication works	✓ Passed	Secure login verified
TC005	Resize window, switch devices	Layout adjusts properly	Layout adapts correctly	✓ Passed	Mobile-friendly UI confirmed

◆ Performance Testing:

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

Metric	Target Score	Actual Score	Status
Page Load Time	Under 3 seconds	2.7s	✓ Passed
Lighthouse Performance	90%+	93%	✓ Passed
Time to Interactive	Below 4 seconds	3.4s	✓ Passed
First Contentful Paint (FCP)	Less than 2 seconds	1.7s	✓ Passed

◆ Security Testing:

- **Input Validation:** Ensured all input fields are protected against **SQL injection, XSS, and unauthorized access.**
- **SSL/HTTPS Verification:** Checked that the site uses **HTTPS encryption** to secure data transfers.
- **API Key Protection:** Verified that sensitive **API keys are hidden** and not accessible from the client-side.

◆ Mobile & Responsive Testing:

Tested across different screen sizes and devices.

Device Type	Expected Behavior	Actual Result	Status
Mobile (iPhone 13)	Fully responsive layout	✓ Works perfectly	✓ Passed
Tablet (iPad Mini)	Adaptive UI & no layout shifts	✓ Responsive	✓ Passed
Desktop (1920px)	Smooth navigation and performance	✓ Functions properly	✓ Passed

3. Issues Identified & Fixes Applied:

- Resolved **alignment issues** in the product grid layout.
 - Improved **API response time** by optimizing backend queries.
 - Implemented **lazy loading** for images, reducing page load time by **20%**.
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4. Documentation Updates & Repository Organization:

- ✓ Created **README.md** summarizing the full **6-day development process**.
 - ✓ Organized **test reports, CSV files, and deployment guidelines** in GitHub.
 - ✓ Established a **clear folder hierarchy** to maintain code clarity.
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5. Final Results & Next Steps:

🏆 Key Achievements:

- ✓ Fully functional **staging environment** deployed for **Furniture Web**.
- ✓ Secure and optimized **environment variable configuration**.
- ✓ Successfully passed **functional, performance, and security testing**.
- ✓ Staging test results documented in **CSV format**.
- ✓ Organized **GitHub repository** with all necessary project files.

🚀 Next Steps:

- Conduct **User Acceptance Testing (UAT)** to gather feedback from stakeholders.
 - Monitor **staging performance and error logs** for the next 48 hours.
 - Plan and execute the **final deployment** to a live production environment.
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Conclusion:

The **Furniture Web** marketplace has successfully passed **staging deployment and testing**, ensuring it is **secure, optimized, and fully functional** before the

final launch. With a strong foundation in place, the focus now shifts to **final user testing and production deployment** to make the marketplace live. 🚀

Shamrat