

Deployment Preparation and Staging Environment Setup

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Report Day-6

1. Overview

This report outlines the deployment preparation and staging environment setup for our marketplace web platform. The objective is to ensure the platform is tested in a production-like setup before going live. The focus includes environment configuration, deployment, performance testing, and security validation.

2. Key Objectives

- Set up a **staging environment** to test the platform before full deployment.
 - **Configure environment variables securely** to protect sensitive data.
 - **Deploy the web platform** using Vercel for an optimized hosting solution.
 - **Conduct functional, performance, and security testing** to ensure platform stability.
 - **Organize all project files and documentation** for clarity and maintenance.
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3. Summary of Activities

3.1 Staging Environment Setup

- Chose **Vercel** as the hosting platform for seamless deployment.
- Connected the **GitHub repository** to automate version updates.
- Configured **build settings** to ensure smooth deployment without errors.

3.2 Environment Variable Configuration

- Created a **.env file** containing API keys and sensitive credentials.
- Added these variables **securely** to Vercel's environment settings.
- Verified that backend services were correctly linked and functional.

3.3 Deploying the Web Platform

- Deployed the **marketplace** to a staging environment for final testing.
- Verified that **all pages load correctly** without UI/UX issues.
- Ensured **backend services and API requests function as expected**.

3.4 Testing and Validation

Functional Testing:

- Tested product listing, cart operations, and checkout process.
- Ensured smooth authentication and user interactions using Clerk.

Performance Testing:

- Used **PageSpeed Insights** to analyze page load times and responsiveness.
- **Performance Score:** 92/100 with suggestions for optimizing image loading and reducing unused JavaScript.

4. Key Findings and Improvements

- **Deployment Success:** Staging environment is live and stable.
- **Performance Optimization Needed:** Reduce unused JavaScript, serve images in next-gen formats.
- **Security:** Verified secure API implementation and input validation.
- **Documentation:** All test results and configurations are recorded.

5. Testing Report Summary

Test Case ID	Test Description	Steps	Expected	Actual	Status	Severity	Remarks
TC001	Verify Product Page	Open product page	Page displays product details	Displayed correctly	Passed	Low	Success
TC002	Add to Cart	Click 'Add to Cart'	Product added to cart	Added	Passed	Low	Success
TC003	Price Display	Open product page	Price visible correctly	Visible	Passed	Low	Success
TC004	Empty Cart	Go to cart	Cart shows '0 items'	Shows '0 items'	Passed	Low	Success
TC005	Add Multiple to Cart	Add 2 products	Cart shows 2 items	2 items	Passed	Low	Success
TC006	Checkout Process	Proceed to Checkout	Checkout works smoothly	Completed	Passed	High	Success

- **Total test cases executed:** 6
- **Passed:** 6
- **Failed:** 0
- **Critical issues found:** 1 (*Performance optimization needed*)

6. Conclusion

This phase has ensured the project is **stable and ready for full deployment**. The staging environment is **functional**, with minor **performance and optimization improvements** required before going live. The next step involves **finalizing testing** and making necessary enhancements before the production release.