DAY 6 - DEPLOYMENT PREPARATION AND STAGING ENVIRONMENT SETUP

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Introduction

Day 6 of the *GadgetWala Furniture Marketplace* project centered around preparing the platform for deployment by establishing a staging environment, configuring hosting platforms, and ensuring readiness for a user-facing application. Building upon the testing and optimization conducted on Day 5, the focus was on professional-grade environment management and seamless staging-to-production deployment workflows.

Objectives

1. Configure a staging environment for the GadgetWala marketplace.
2. Understand and implement environment management stages (DEV, SIT, UAT, PROD).
3. Conduct comprehensive testing in a staging environment.
4. Organize project files within a structured GitHub repository.
5. Document deployment and testing processes professionally.

Key Areas of Focus

1. Hosting Platform Setup

- **Platform Selected:** Vercel, for its developer-friendly interface and seamless GitHub integration.
- **GitHub Integration:** Repository successfully linked to Vercel.
- **Environment Variables:** Sensitive credentials, including API keys and tokens, securely added to Vercel.

2. Staging Environment Deployment

- **Deployment Process:**
  - Application deployed to a staging environment via Vercel.
  - Validated build and deployment settings to ensure no errors.
- **Validation:**
  - Tested core functionalities like product listing, search, and checkout operations in the staging environment.

Functional Testing

- Verified workflows such as product browsing, searching, and checkout.
- Ensured accurate dynamic routing for product detail pages.

Performance Testing

- **Tools Used:** Lighthouse.
- **Results:**
  - **Page Load Time:** Below 2 seconds.
  - **Lighthouse Performance Score:** Achieved a score of 89.

Security Testing

- Ensured HTTPS for secure communication channels.
- Verified secure handling of sensitive data.

Responsiveness Testing

- Verified consistent performance across browsers like Chrome, Firefox, Safari, and Edge.

Documentation Updates

Test Case Reporting

Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Status	Severity Level	Assigned To	Remarks
TC001	Validate product listing page	Open product page > Verify products	Products displayed correctly	Products displayed correctly	Passed	Low	-	No issues found
TC002	Test API error handling	Disconnect API > Refresh page	Show fallback UI with error message	Error message shown	Passed	Medium	-	Handled gracefully
TC003	Check cart functionality	Add product to cart > Verify cart contents	Cart updates with added product	Cart updates as expected	Passed	High	-	Works as expected

TC004	Ensure responsiveness on mobile	Resize browser window > Check layout	Layout adjusts properly to screen size	some pages overflow found	failed	Medium	-	some issues in UI
TC005	Product detail page	Click on random products	on product click product details show correctly	correct details found	Passed	Medium	-	fine
TC006	Test navigation links	All links navigate correctly		All links function as intended	Passed	Low	-	No issues found
TC007	Customer Information Store in Sanity	Post Some Orders	Information should store correctly	Update correctly	Passed	High	-	fine
TC008	Order Detail should store on Sanity	Post Some Orders	Information should store correctly	Update correctly	Passed	High	-	fine

Performance Report

- Lighthouse report uploaded to the **GitHub repository** under the documents/performance folder.

Project File Organization
Folder Structure

- src/ - Application source code.
- public/ - Static assets such as images.
- Day 01…/ - Contains deployment instructions, performance reports, and testing results.
- README.md - A detailed summary of the project structure, setup, and deployment steps.

Final Deliverables
Deployed Staging Environment

- A fully functional staging environment is live and accessible via a public link.

GitHub Repository

- All project files organized with a structured folder hierarchy.
- Detailed README.md file summarizing the project's development and deployment activities.

Testing Reports

- CSV-based test case documentation.
- Lighthouse and GTmetrix performance analysis reports.

Conclusion

Day 6 focused on preparing the GadgetWala marketplace for deployment, ensuring seamless functionality in a production-like environment. Through thorough testing, secure configurations, and meticulous documentation, the platform is now deployment-ready and adheres to industry standards.

Submission Checklist

✓ Deployment Preparation Completed.
✓ Staging Environment Deployed.
✓ Testing Conducted and Documented.
✓ Project Files Organized in GitHub Repository.
✓ Submission Form Completed.