# DAY 6 - DEPLOYMENT PREPARATION AND STAGING ENVIRONMENT SETUP

Mehdi Abbas – 00461734

#### **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.

#### **3. Staging Environment Testing**

##### **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.