**Hackathon Day 6**

**Deployment Preparation and Staging Environment Setup**

**Overview:**

Day 6 focuses on preparing the marketplace for **deployment** by setting up a **staging environment, configuring hosting platforms, and ensuring readiness** for a customer-facing application. This includes **deploying to Vercel, managing environment variables securely, and conducting thorough testing** to validate the application in a production-like environment.

**1. Deployment Preparation**

**Platform Used:**

* **Vercel**

**Hosting Platform Setup:**

* **Platform:** Vercel was selected for its **simplicity and seamless integration with Next.js**.
* **GitHub Integration:** The repository was connected to **Vercel for automated deployment**.
* **Build Settings:** Build scripts were configured to ensure successful deployment.

**Environment Variable Configuration:**

* Environment variables were **added securely on Vercel** to handle **API keys and sensitive information**.

**2. Staging Environment Setup**

**Deployment Process:**

* **Staging Environment Link:** [E-commerce Website by Saad](https://e-commerce-websitebysaad.vercel.app/)
* **Build Status:** ✅ **Successful without errors**

Steps completed:  
✅ The application was deployed to a **staging environment using Vercel**.  
✅ **Deployment logs were monitored** to ensure successful builds.  
✅ **Basic functionality and responsiveness were verified** on the staging environment.  
✅ **Sanity Cross-Origin Configuration:** The Vercel deployment link was **added to the allowed origins in Sanity** to enable fetching products without **CORS issues**.

**Staging Validation:**

The application was **tested in the staging environment** to ensure all components, including **API integrations and UI**, functioned as expected.

**3. Staging Environment Testing**

**Functional Testing**

| **Test Case ID** | **Description** | **Steps** | **Expected Result** | **Actual Result** | **Status** | **Remarks** |
| --- | --- | --- | --- | --- | --- | --- |
| TC001 | Validate product listing | Open product page | Products displayed | Products displayed | ✅ Passed | No issues found |
| TC002 | Test API error handling | Disconnect API and refresh page | Show fallback message | Fallback message shown | ✅ Passed | Handled well |
| TC003 | Check cart functionality | Add item to cart | Cart updates correctly | Cart updates correctly | ✅ Passed | Works as expected |
| TC004 | Test responsive layout | Resize browser window | Layout adjusts properly | Layout adjusts properly | ✅ Passed | Responsive verified |

**Performance Test Results**

* **Tool Used:** GTmetrix
* **Performance Metrics:**
  + **Page Load Time:** ⚡ 240ms
  + **Performance Score:** 🟢 **100%**
* **Recommendations:** Optimize **image sizes further** for improved performance.

**Conclusion**

✅ **Day 6 successfully marked the completion of the deployment preparation phase.**  
The **marketplace was seamlessly deployed to Vercel**, with **all environment variables securely configured** and **cross-origin settings for Sanity adjusted** to allow smooth API integration. **Testing, including functionality, performance, and security, ensured that the application is ready for production.**

The use of **GTmetrix provided valuable insights into optimizing performance**, ensuring **fast load times and a smooth user experience** before full deployment. 🚀