

# Hackathon Project Report - Day 5 & 6

## Project Overview

On the fifth and sixth day of the hackathon, the focus was on finalizing the project and deploying it to production. The project, a general e-commerce website, was built using **Next.js** and **Tailwind CSS**.

This website includes key features such as:

- Add to Cart functionality
- Checkout process
- Product Filtering
- Dynamic Routing

Additionally, **Sanity.io** was used as the content management system, and data was fetched using **GROQ queries** to ensure seamless integration between the backend and frontend.

## Deployment Process

The deployment process was carried out using **Vercel**, which is well-suited for Next.js applications. Here are the steps followed during deployment:

1. **Environment Variables:** All sensitive keys and configurations, such as API keys for Sanity and other dependencies, were added as environment variables in the Vercel dashboard to ensure security.
2. **Build and Optimization:** The project was optimized for production by running the next build command locally to identify and resolve any potential issues before deployment.
3. **Live Deployment:** The project was pushed to a GitHub repository, which was then connected to Vercel for automatic deployment. Vercel's intuitive interface allowed for a smooth setup and deployment process.
4. **Testing the Live Application:** Once the project was deployed, thorough testing was conducted to ensure that all features, including dynamic routing, filtering, and the checkout process, worked seamlessly on the live site.

## Challenges Encountered

Despite successful deployment, several challenges were faced during the final stages of the project:

### 1. Dynamic Routing Challenges

While implementing dynamic routing for individual product pages, retrieving the correct **ID** from Sanity proved to be complex. There were issues with passing the ID as a parameter in the URL, which led to misaligned data being fetched for certain products.

**Solution:** Additional validation and debugging were performed to ensure the IDs matched correctly, and fallback mechanisms were added to handle invalid IDs gracefully.

### 2. Checkout Process Issues

Integrating the checkout functionality with **Sanity** posed some challenges when sending data back to the CMS. The GROQ queries occasionally returned errors due to schema mismatches or invalid data formats.

**Solution:** The schema in Sanity was updated to ensure compatibility with the data being sent. Moreover, error-handling logic was added in the frontend to catch and display meaningful messages to users in case of failures.

### 3. Deployment Errors

During the deployment process, some runtime errors surfaced that were not present during local testing. These included issues with missing environment variables and improper handling of production-only features.

**Solution:** All environment variables were double-checked and added correctly in Vercel. Additional logging was implemented to catch these errors in the production environment.

### Conclusion

Day 5 was a significant milestone as the project went live. Despite the challenges encountered, the deployment was completed successfully, and the e-commerce website is now functional and accessible to users. The experience provided valuable insights into debugging and deploying a full-stack application in a real-world scenario.