Hackathon Project Report - Day 5

Project Overview

On the fifth 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.