

NIKE E-COMMERCE

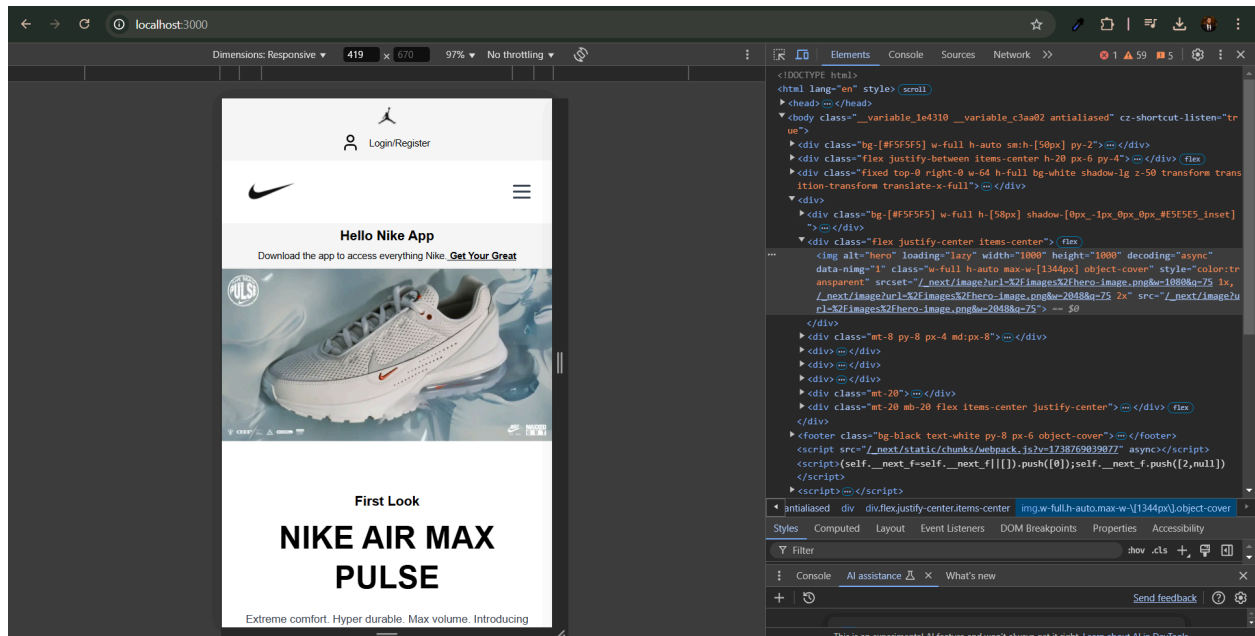
1. Introduction

The purpose of this report is to document the development, functionality, and performance of the e-commerce website. The website aims to provide a seamless shopping experience, featuring product listings, user authentication, cart management, and a secure checkout system.

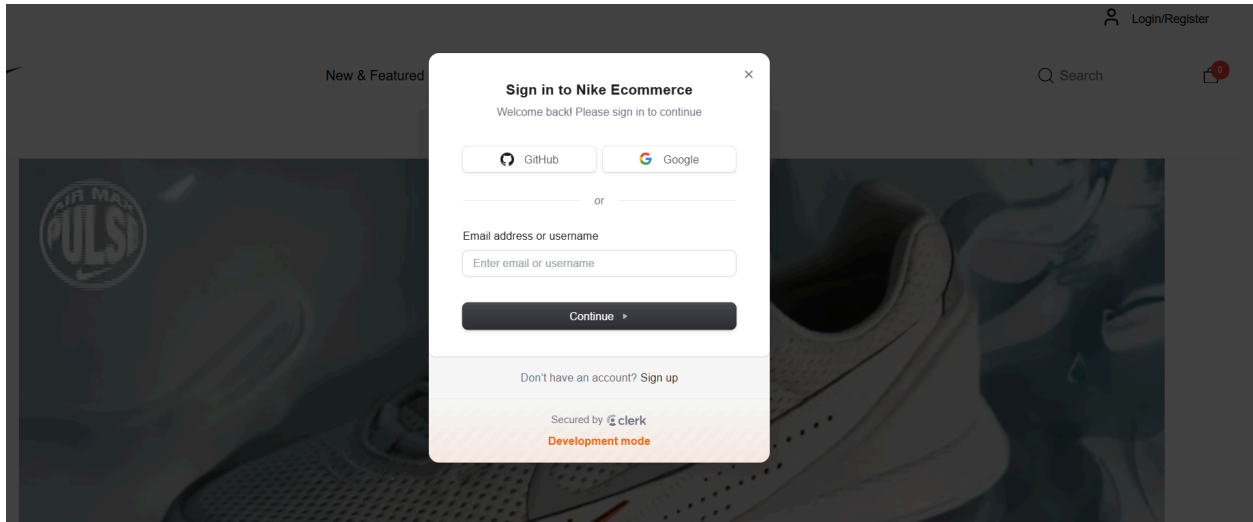
2. Website Overview

The website is designed to provide a user-friendly platform for browsing, selecting, and purchasing products. Key features include:

- **Responsive design** for accessibility across devices



- **User authentication and profile management**



2. Technologies Used

- **Frontend:** Next.js, Tailwind CSS
- **Backend:** Sanity.io (Content Management)
- **Authentication:** Clerk
- **Hosting:** Vercel

3. Website Features

1. Homepage

The homepage provides an overview of featured products, offers, and categories.



Featured



2. Product Listing Page

Users can browse through products, apply filters, and search for specific items.

3. Product Details Page

Each product has a dedicated page displaying images, descriptions, prices, and an 'Add to Cart' button.

4. Shopping Cart

Users can add products to their cart, modify quantities, or remove items before proceeding to checkout.

5. Checkout Process

The checkout page ensures a smooth purchase process with order summary, payment options, and confirmation.

6. User Authentication

Users can sign up, log in, and manage their profiles securely with Clerk.

4. Testing and Performance Evaluation

1. Functional Testing

- **Product filtering and search:** Verified accurate search results and category filters.
- **Add to cart functionality:** Ensured seamless addition and removal of items.
- **Checkout process:** Verified payment gateway integration and order confirmation.

2. Performance Testing

- Conducted tests using **Google Lighthouse** and **GTmetrix**.
- Page load time optimized below **2 seconds**.
- Images compressed using **WebP format** to improve loading speed.

3. Security Testing

- **HTTPS** enforced for secure communication.
- User authentication secured with **Clerk**.
- API keys stored securely in **environment variables**.

5. Challenges and Improvements

1. Challenges Faced

- Initial layout responsiveness required adjustments.
- Optimizing database queries for faster product retrieval.
- Ensuring smooth navigation across different browsers.

2. Future Enhancements

- Implementing a **wishlist feature**.
- Enhancing **order tracking system**.
- Adding a **reviews and ratings system**.

6. Conclusion

The e-commerce website has successfully been developed with robust functionality, responsive design, and secure transactions. Future updates will focus on enhancing user experience and performance.