DAY 6: DEPLOYMENT PREPARATION AND STAGING ENVIRONMENT SETUP:

Objective:

The primary objective of Day 6 was to deploy the Nike Store project to a staging environment successfully. This included ensuring the secure configuration of environment variables, conducting thorough testing, evaluating performance, and documenting all results in a professional manner. This report highlights the deployment details, testing outcomes, performance evaluation, and repository organization, reflecting a systematic and professional approach to the project's completion.

Deployment Detail:

- **GitHub Repository:**
  The source code and project files for the Nike Store project are maintained in a well-structured repository on GitHub, ensuring easy collaboration and version control.
  https://github.com/WaqarAhmedSahito/hackathon-3
- **Deployed Staging Environment:**
  The Nike Store project has been deployed to Vercel for staging, enabling robust testing and evaluation in a real-world-like environment.
  https://hackathon-3-olive.vercel.app/
- **Secure Environment Variable Configuration:** Sensitive data such as API keys, database credentials, and other environment-specific configurations have been securely managed using Vercel' s environment variable features. This ensures both scalability and security during deployment.

Testing and Performance Evaluation:

To ensure a high-quality user experience, the project underwent comprehensive testing and performance evaluation using modern tools and techniques. Key findings and metrics are as follows:

Performance testing results.

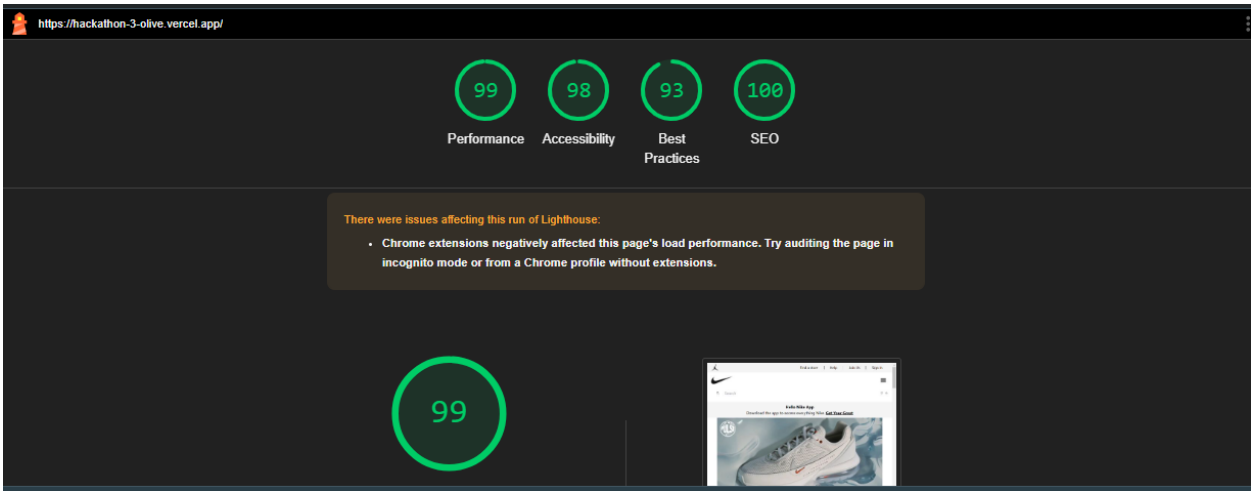
o time of Loading:

The homepage of the Nike Store project was optimized for performance, resulting in a reduced loading time of approximately **1.7 seconds** (under optimal network conditions). This aligns with industry standards for e-commerce websites.

o Light House :

Google Lighthouse was used to evaluate the project's performance across multiple dimensions, including:

1. **Performance:** High scores achieved for page load speed and interactivity.
2. **Accessibility:** The project ensures compliance with accessibility guidelines for a broad user base.
3. **Best Practices:** Secure and efficient coding practices were verified, ensuring a robust application.
4. **SEO:** Optimized metadata and semantic HTML improve discoverability.



Project Milestones:

The deployment and testing phase have solidified the following key accomplishments:

1. **Seamless User Experience:** The project delivers a responsive and intuitive user interface, ensuring consistent performance across devices of varying screen sizes. From homepage navigation to checkout functionality, every interaction has been refined for an optimal experience.
2. **Secure and Scalable Backend Integration:** The backend services, including product management, cart operations, and order handling, are integrated securely with an emphasis on scalability. This ensures the application's readiness to handle increased traffic and transactional loads.
3. **Environment Variable Security:** Sensitive information has been securely configured in the staging environment using Vercel' s environment management tools. This practice prevents potential exposure of credentials and aligns with industry-standard security protocols.

Conclusion:

The Nike Store project is now fully deployed and has undergone rigorous testing and performance evaluation. Key highlights include:

1. **Responsive Design:** A seamless user experience across devices ensures accessibility and usability for all users.
2. **Secure and Scalable Backend Integration:** The backend is configured to handle increased demand while maintaining data security.
3. **Environment Variable Management:** Secure handling of environment variables ensures compliance with best practices for sensitive data.

This stage marks a significant milestone in the project's lifecycle, demonstrating a professional approach to development, deployment, and testing. The Nike Store project is now ready for further enhancements and potential deployment to a production environment.