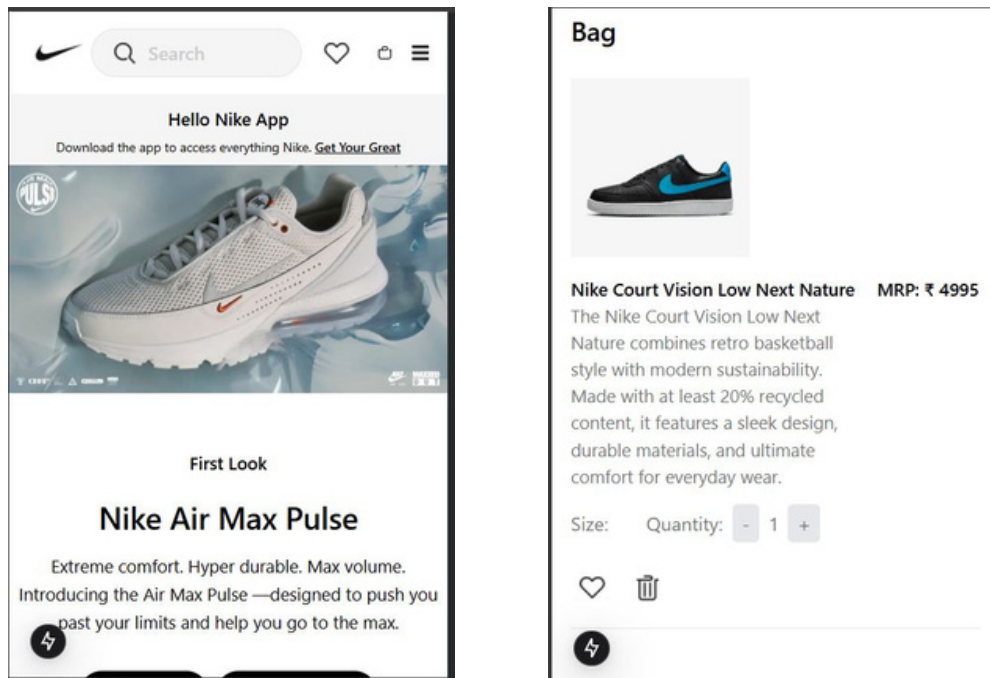
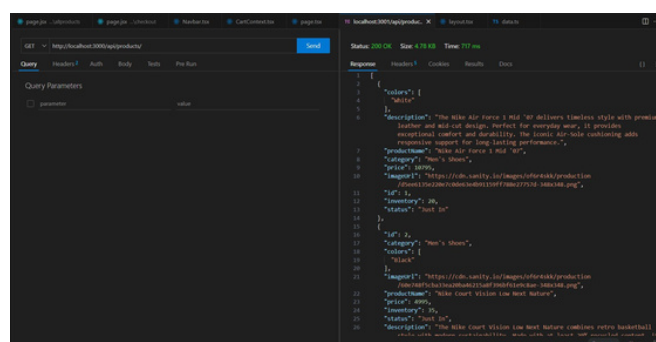
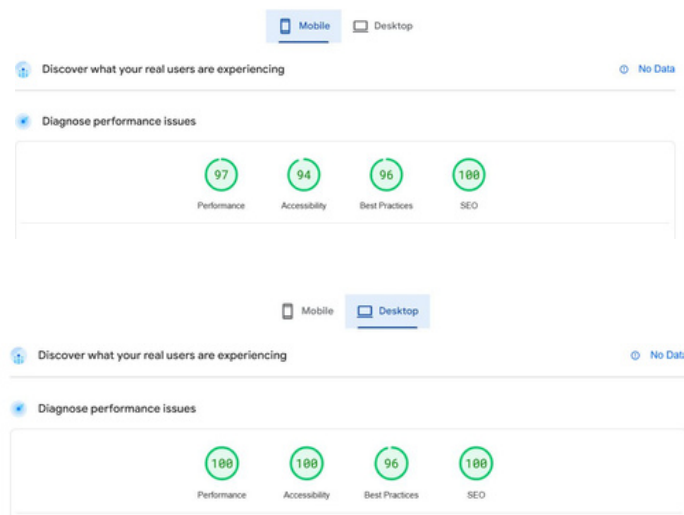


Functional Deliverables

Functional and Responsive Components



Performance And Test Results



Testing Report

Test Case ID	Test Case Description	Test Steps	Expected Result	Actual Result	Status	Severity Level	Remarks
TC001	Validate product listing page	Product Displaying	Navigate to the store page.. Verify all products are displayed with correct details .	Products displayed correctly	Passed	Low	Product displaying functionality is accurate.
TC002	Search Functionality	Enter 'Nike' in the search bar. Click the search button. Verify the displayed results.	All products containing 'nike' in their name or description should be displayed.	Search results displayed correctly	Passed	Medium	Search functionality works as expected.
TC003	Filter Functionality	Apply a filter (e.g., price range, category). Verify the displayed products match the filter criteria.	Only products matching the filter criteria should be displayed.	Filtered products displayed correctly.	Passed	Medium	Filter functionality verified.
TC004	Add to Cart	Select a product. Click the 'Add to Cart' button.. Verify the cart is updated with the selected product.	Product should be added to the cart, and the cart total should update.	Product added to the cart, and the total updated.	Passed	Medium	Add to cart functionality confirmed.

Performance Optimization Steps Taken

- **Image Optimization:**

Used Next.js's next/image for optimized image delivery, ensuring lazy loading and proper format selection.

- **Server-Side Rendering (SSR) and Static Site Generation (SSG):**

Used Next.js's next/image for optimized image delivery, ensuring lazy loading and proper format selection.

Security Measures Implemented

- **HTTPS Enforcement:**

Configured HTTPS using SSL/TLS certificates to ensure encrypted communication.

- **Error Handling:**

Ensured sensitive information is not exposed in error messages.

Logged errors securely for debugging without revealing them to users.

Challenges Faced and Resolutions Applied

- **Slow Initial Page Load Times:**
 - **Challenge:** The site's initial load time was high due to unoptimized assets and large bundles.
 - **Resolution:** Implemented dynamic imports, asset compression, and lazy loading for critical assets.
- **Dynamic Routing Bugs:**
 - **Challenge:** Incorrect product details were displayed for dynamic routes.
 - **Resolution:** Fixed route configurations and added error handling to ensure the correct product is fetched.