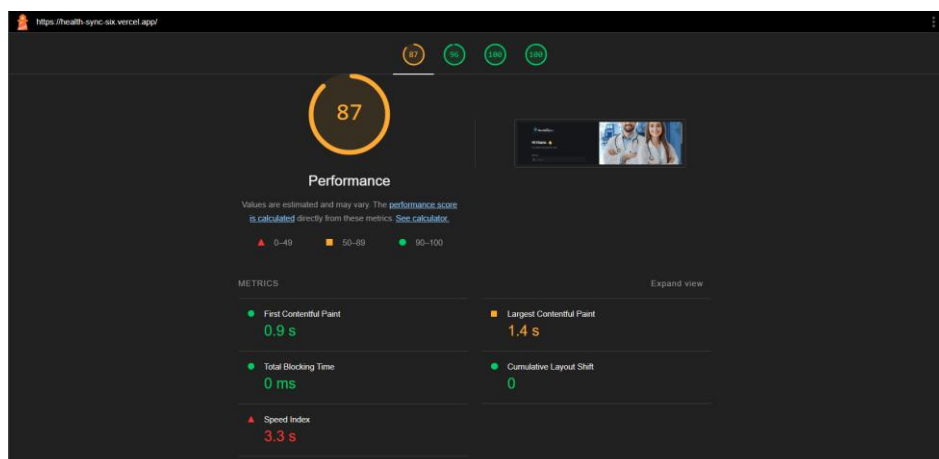
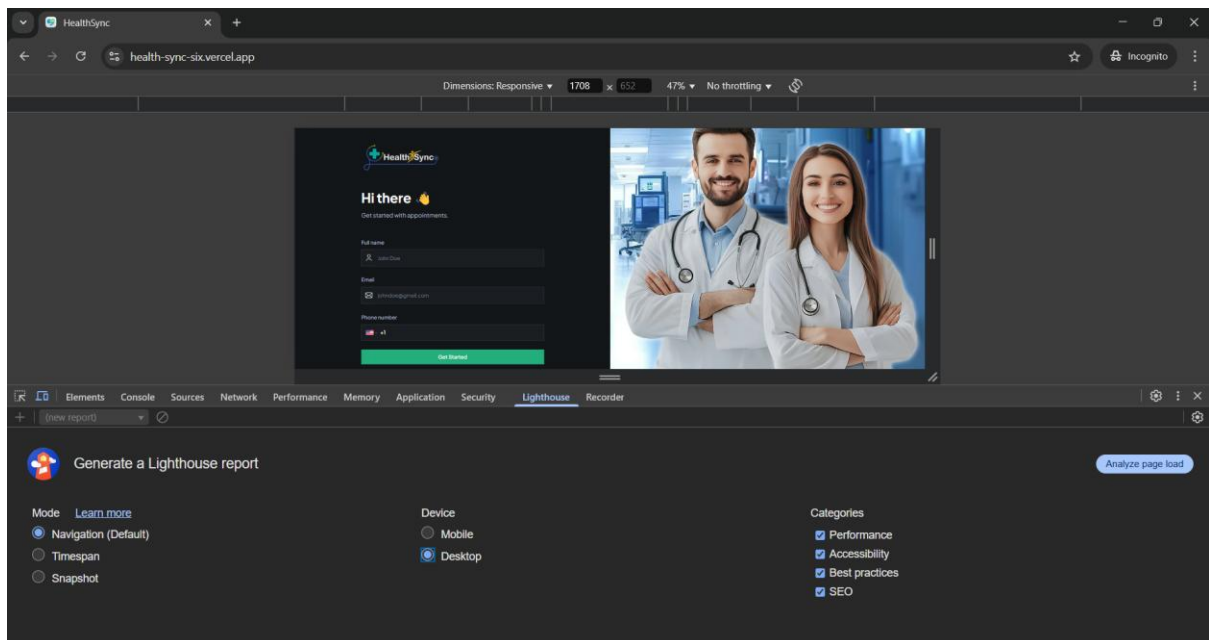


# Lighthouse Audit Results:

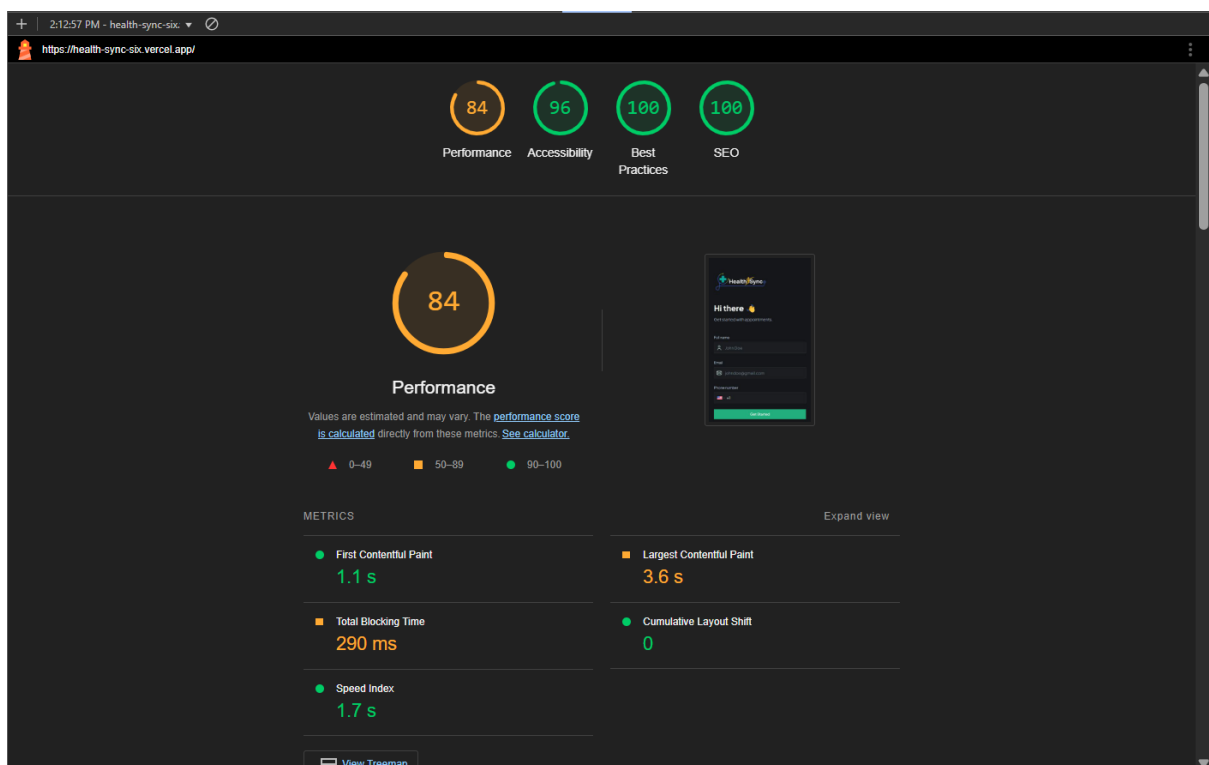
Lighthouse was used to generate a detailed audit of the website based on five key performance indicators:

- **Performance:** Measures loading speed, interaction responsiveness, and rendering efficiency.
- **Accessibility:** Evaluates how well the website supports users with disabilities.
- **Best Practices:** Checks for common web development errors and security issues.
- **SEO:** Analyses how well the site is optimized for search engines.
- **Progressive Web App (PWA) Compliance:** Determines if the site meets PWA standards for offline functionality and responsiveness.



## Key Metrics & Observations:

- **First Contentful Paint (FCP): 0.9s** (*Good – Content appears quickly*)
- **Largest Contentful Paint (LCP): 1.4s** (*Good – Within optimal range but can be further optimized*)
- **Total Blocking Time (TBT): 0ms** (*Excellent – No delays in responsiveness*)
- **Cumulative Layout Shift (CLS): 0** (*No unexpected layout shifts, ensuring a stable user experience*)
- **Speed Index: 3.3s** (*Needs improvement – Slower than recommended for a smooth experience*)



## Key Metrics & Observations:

- **First Contentful Paint (FCP): 1.1s** – The page starts displaying content quickly.
- **Largest Contentful Paint (LCP): 3.6s** – Loading the main content takes longer than recommended.
- **Total Blocking Time (TBT): 290ms** – Some delay due to JavaScript execution, which should be reduced for better responsiveness.
- **Cumulative Layout Shift (CLS): 0** – No unexpected layout shifts, ensuring a stable user experience.
- **Speed Index: 1.7s** – Page content is displayed fairly quickly.

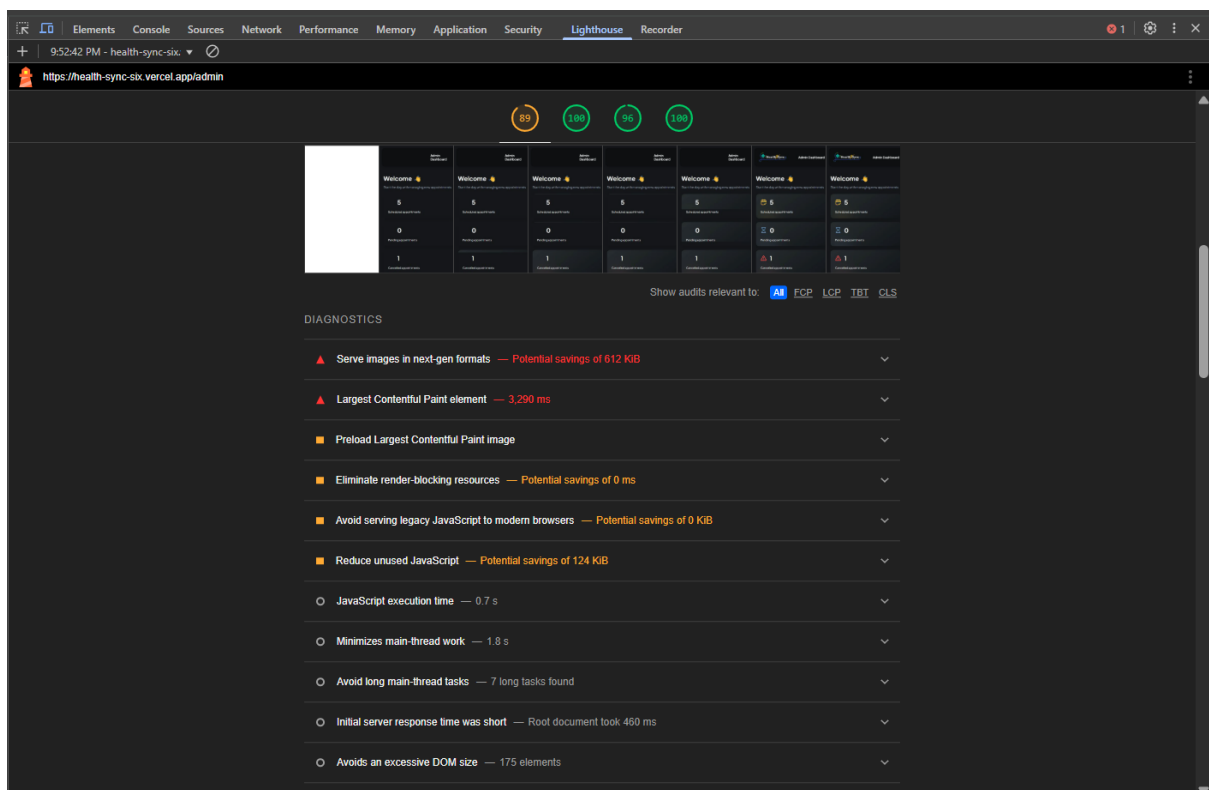
## Areas for Improvement:

### 1. Improve Largest Contentful Paint (LCP):

- Optimize the largest content element, such as images or text.
- Use caching and preloading techniques to speed up loading.
- Minimize render-blocking resources like CSS and JavaScript.

### 2. Reduce Total Blocking Time (TBT):

- Optimize JavaScript execution to avoid delays.
- Reduce unnecessary third-party scripts.
- Use code splitting and lazy loading to improve efficiency.



The **performance score is 89**, which is good but has some areas that need optimization. The main concerns are related to image optimization, JavaScript usage, and server response time.

## Key Issues & Suggested Improvements:

### 1. Improve Largest Contentful Paint (LCP) - 3.29s:

- Optimize large elements that delay loading.
- Implement lazy loading for non-critical images.

### 2. JavaScript Optimization:

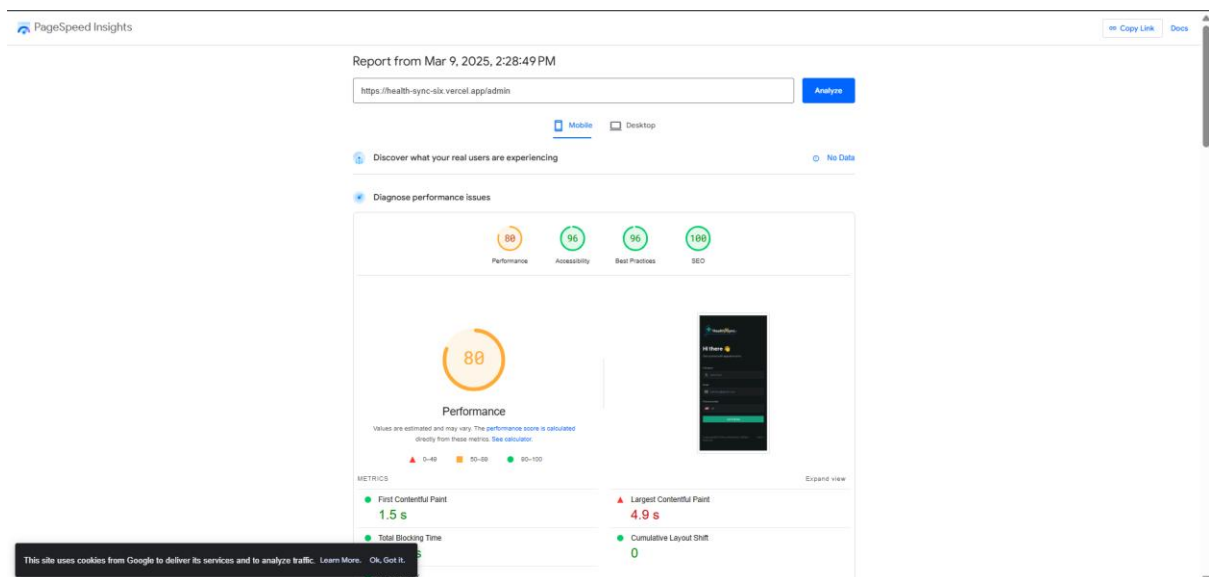
- **Reduce unused JavaScript** to save **124 KB** and improve execution speed.

- **Avoid legacy JavaScript for modern browsers** to eliminate unnecessary processing
3. **Minimize Main-Thread Work (1.8s):**
- Optimize JavaScript execution time (currently **0.7s**).
  - Reduce **long main-thread tasks (7 found)** to improve responsiveness.
4. **DOM Optimization:**
- The page has **175 elements**, which is acceptable but could be optimized for better efficiency.

## PageSpeed Insights Analysis

PageSpeed Insights was used to assess both **mobile** and **desktop** versions of the website, providing real-world performance insights based on Core Web Vitals:

1. **Largest Contentful Paint (LCP):** Measures how quickly the largest element loads.
2. **First Input Delay (FID):** Evaluates the responsiveness to user interactions.
3. **Cumulative Layout Shift (CLS):** Checks for unexpected layout shifts affecting user experience.



### Key Metrics & Observations:

- **First Contentful Paint (FCP): 1.5s** – The page starts displaying content at a reasonable speed.
- **Largest Contentful Paint (LCP): 4.9s** – The main content takes longer to load, which needs improvement.
- **Total Blocking Time (TBT): 0ms** – No major blocking issues, ensuring smooth interactivity.
- **Cumulative Layout Shift (CLS): 0** – No unexpected layout shifts, ensuring a stable page experience.