CA – 1(G-2)

CAP – 785 (WEB PERFORMANCE OPTIMIZATION)

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Submitted By: Submitted To
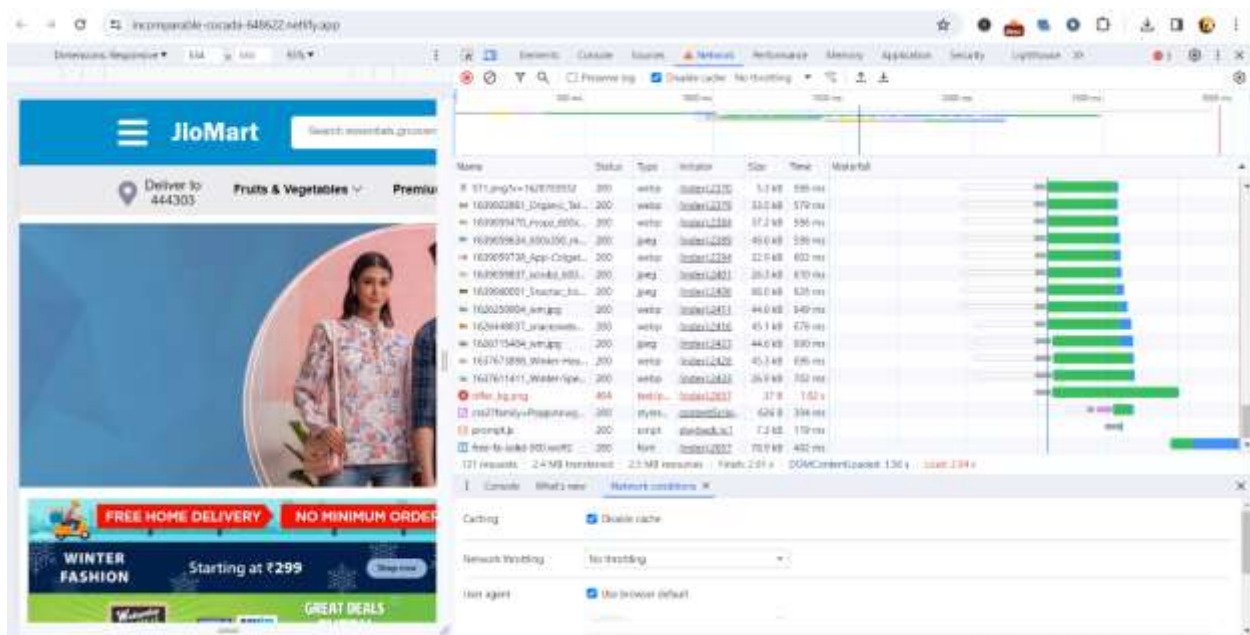
Vishal Kumar Singh   Dr.. Mukesh Kumar

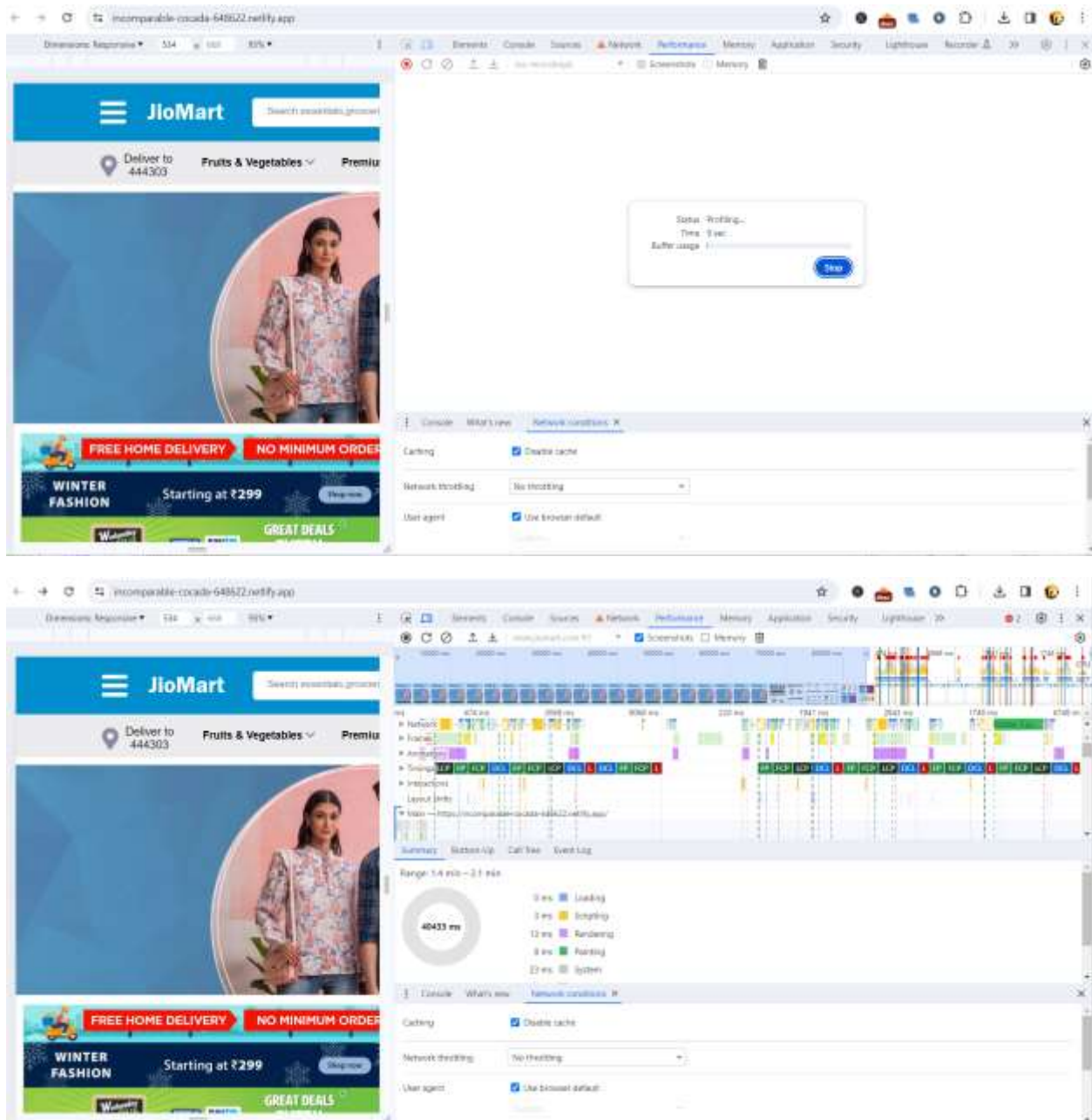1. Browser Audit:

• For the Brower audit we must open the website in the Brower and click right-click in the browser and go to the inspect option

• In the inspect section there is an option for Network there will be all the website assets and the time taken to load the assets.

• Click on Disable Cache

• As given Image below:

Then Click on the Performance option and analyze the asset speed to load in the web browser.

• Click on the record option and perform the performance.
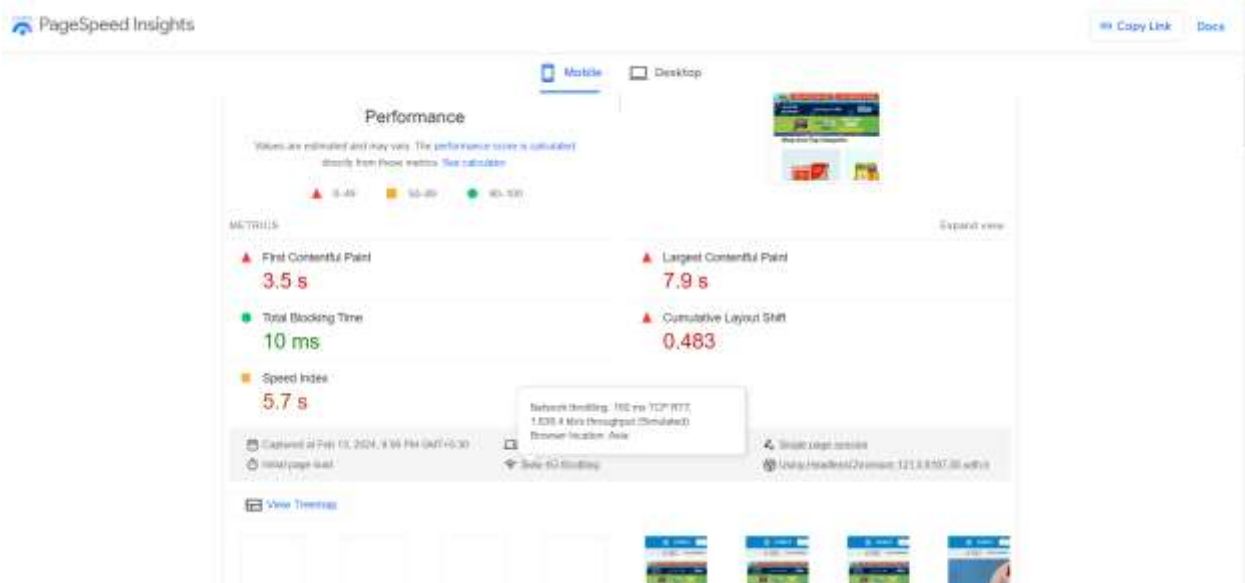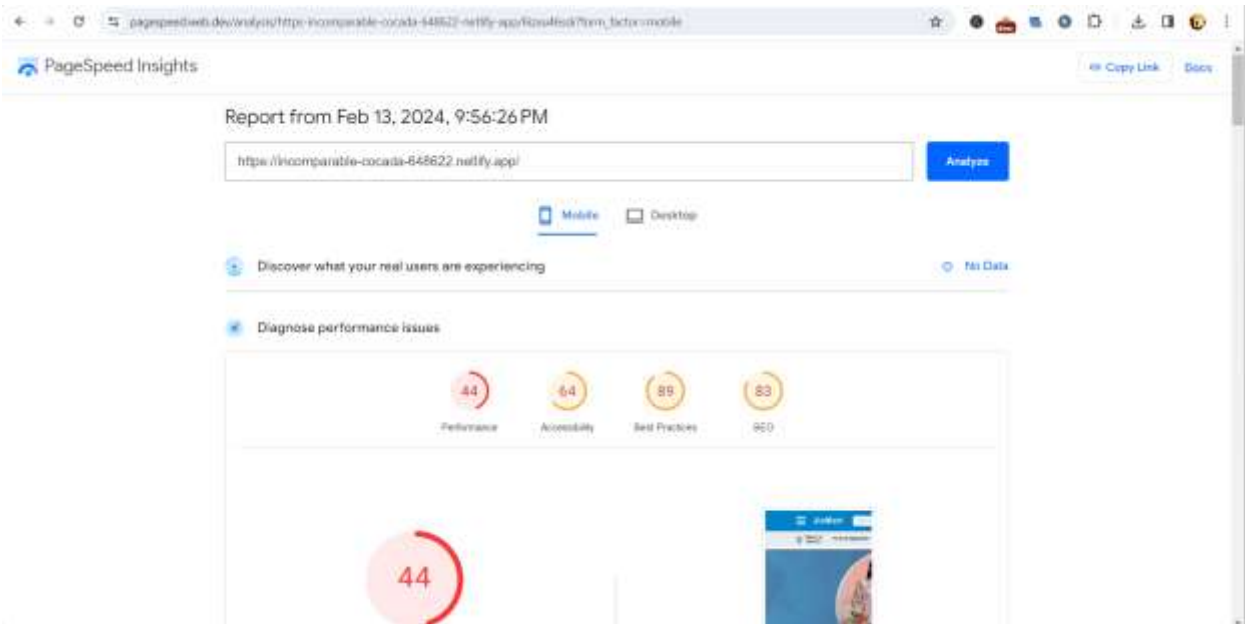
• As Image given Image below:

Here is showing that how many assets like Js files, CSS files are taken to load in the website.

2. Page Speed Insight:

• It is a tool for analysis this website speed performance etc.

• These tools Diagnose the Performance Issue of the Website.

• There are two performance reports 1 for Mobile and 2nd for Desktop User

Performance image for Mobile Users:

PageSpeed Insights   Copy Link   Docs

Report from Feb 13, 2024, 9:56:26 PM

| https://incomparable-cocada-648622.netlify.app/ | Analyze |

📱 Mobile   🖥 Desktop

🔄 Discover what your real users are experiencing   ○ No Data

✓ Diagnose performance issues

(44) Performance   (64) Accessibility   (89) Best Practices   (83) SEO

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PageSpeed Insights   Copy Link   Docs

📱 Mobile   🖥 Desktop

Performance

Values are estimated and may vary. The performance score is calculated
directly from these metrics. See calculator.

▲ 0-49   ■ 50-89   ● 90-100

METRICS   Expand view

▲ First Contentful Paint
3.5 s

▲ Largest Contentful Paint
7.9 s

● Total Blocking Time
10 ms

▲ Cumulative Layout Shift
0.483

■ Speed Index
5.7 s

Network throttling: 150 ms TCP RTT,
1,638.4 Kb/s throughput (Simulated)
Browser location: Asia

📅 Captured at Feb 13, 2024, 9:56 PM GMT+5:30   🖥   ⚡ Single page session
⏱ Initial page load   📶 Slow 4G throttling   🌐 Using HeadlessChromium 121.0.6167.85 with v

⊞ View Treemap

📱 **Mobile**   🖵 Desktop

Show audits relevant to: **All** FCP LCP TBT CLS

DIAGNOSTICS

⚠ Avoid large layout shifts — 17 elements found   ⌄

⚠ Largest Contentful Paint element — 7,900 ms   ⌄

⚠ Eliminate render-blocking resources — Potential savings of 1,820 ms   ⌄

⚠ Serve images in next-gen formats — Potential savings of 607 KiB   ⌄

⚠ Properly size images — Potential savings of 210 KiB   ⌄

🟧 Image elements do not have explicit width and height   ⌄

🟧 Reduce unused CSS — Potential savings of 12 KiB   ⌄

🟧 Efficiently encode images — Potential savings of 39 KiB   ⌄

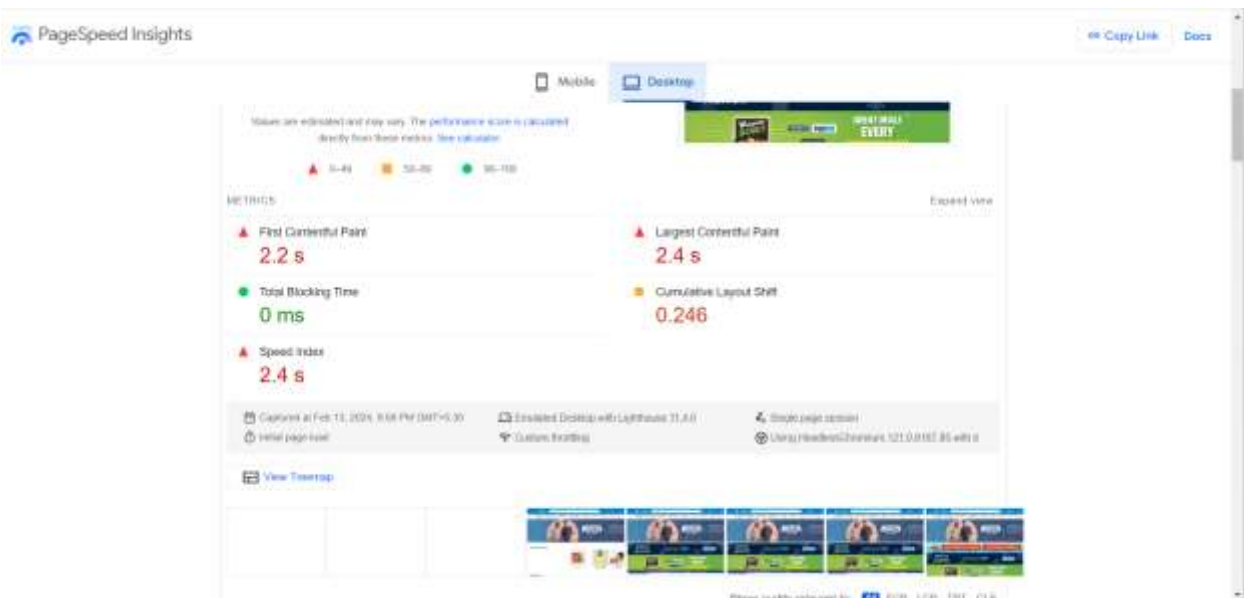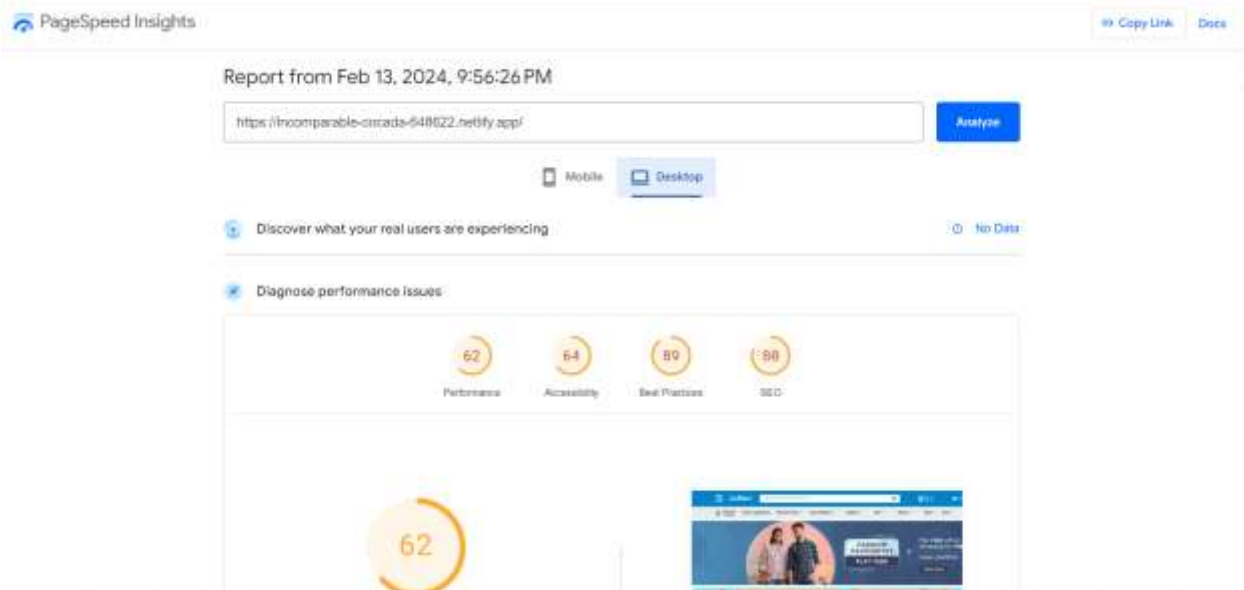
📱 **Mobile**   🖵 Desktop

○ Initial server response time was short — Root document took 200 ms   ⌄

○ Minimizes main-thread work — 1.7 s   ⌄

○ Avoid long main-thread tasks — 4 long tasks found   ⌄

○ JavaScript execution time — 0.1 s   ⌄

○ Minimize third-party usage — Third-party code blocked the main thread for 0 ms   ⌄

○ Avoids enormous network payloads — Total size was 2,373 KiB   ⌄

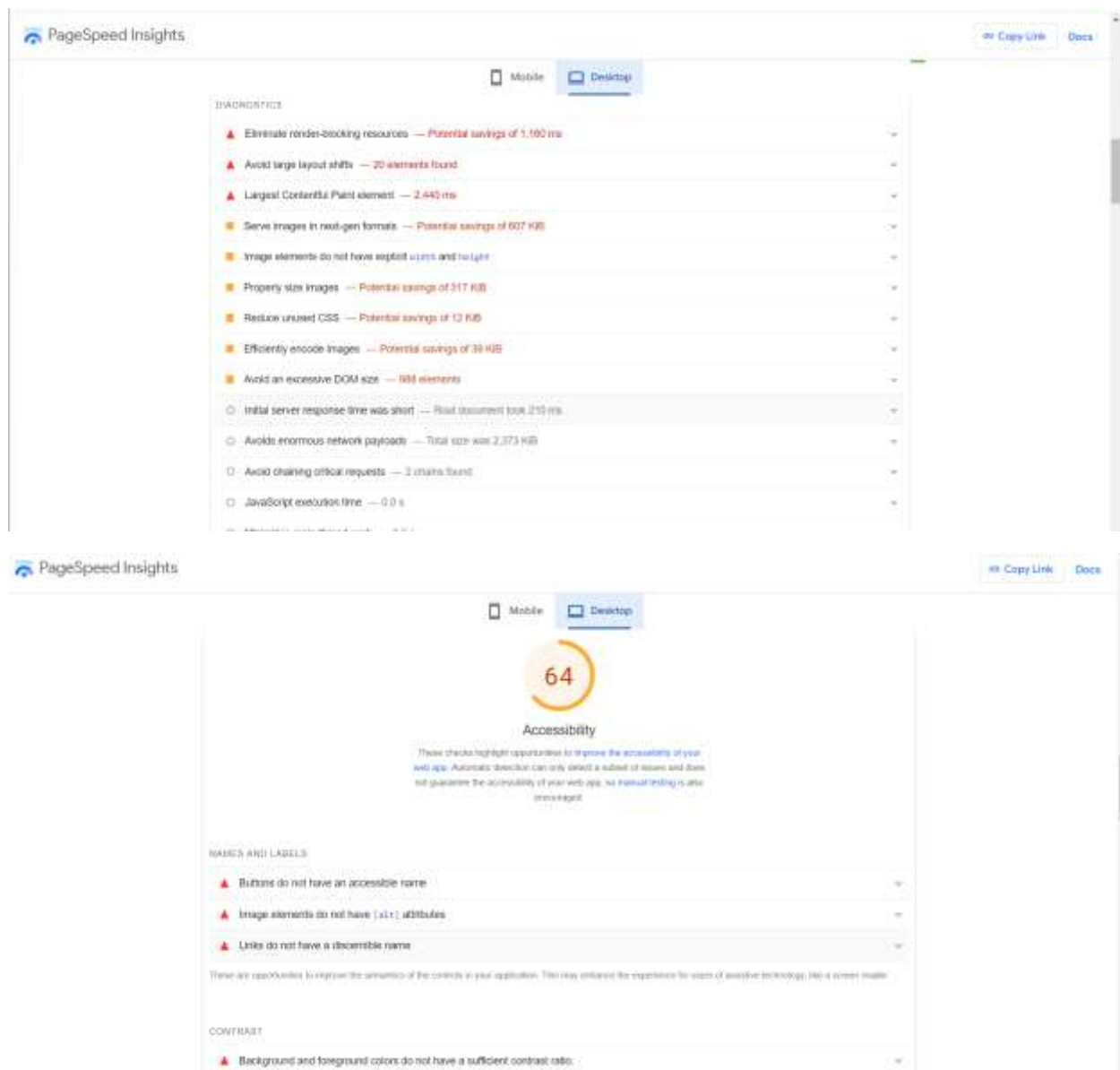○ Avoid chaining critical requests — 2 chains found   ⌄

More information about the performance of your application. These numbers don't directly affect the Performance score.

PASSED AUDITS (21)   Show

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https://incomparable-cicada-648822.netlify.app/   **Analyze**

📱 Mobile   🖥 Desktop

ℹ Discover what your real users are experiencing   ⊙ No Data

✻ Diagnose performance issues

62   64   89   88
Performance   Accessibility   Best Practices   SEO

62

📱 Mobile   🖥 Desktop

Values are estimated and may vary. The performance score is calculated directly from these metrics. See calculation.

▲ 0–49   ■ 50–89   ● 90–100

METRICS   Expand view

▲ First Contentful Paint
2.2 s

▲ Largest Contentful Paint
2.4 s

● Total Blocking Time
0 ms

■ Cumulative Layout Shift
0.246

▲ Speed Index
2.4 s

📅 Captured at Feb 13, 2024, 9:56 PM GMT+5:30   🖥 Emulated Desktop with Lighthouse 11.4.0   ⚡ Single page session
⏱ Initial page load   📶 Custom throttling   ⊕ Using HeadlessChromium 121.0.0187.85 with it

🎞 View Treemap

Phase audits relevant to: FCP LCP TBT CLS

Observation for the Audit and after Page speed Insight:

Observing the results of a website audit and analysing its performance using PageSpeed

Insights, you may notice several key factors that contribute to the overall performance. Here

are some common observations and recommendations:

1. Page Load Time:

a. Recommend optimizing images, scripts, and other assets to reduce load times.

b. Suggest utilizing browser caching to store static resources locally on the user's

device.

2. Mobile Friendliness:

a. Check the mobile-friendliness.

b. implementing responsive design principles to ensure the website is accessible

and visually appealing on various devices.

3. Optimize Images:

a. highlights large image files, recommends compressing images without

compromising quality.

4. Minify CSS, JavaScript, and HTML:

a. minimizing the size of CSS, JavaScript, and HTML files to reduce the time it

takes to load the website.

b. removing unnecessary code, comments, and whitespace from these files.

Optimizing the Assets file after Observing:

Minifying CSS using the online tools for the better speed as picture given below:

• After Minifying the CSS file, it looks like a paragraph in the structure

After Optimizing the Assets then check the performance

• Host the optimized Website.

• After Optimizing the website, the performance of the website is better than the older website

below picture below:

• After optimizing the website, the assets are taking less time to load

After Optimizing image: