Site Audit Project

Lighthouse

Start by making a copy of this document. You can use Google Docs (go to File -> Make a copy) or copy the text to the text editor of your choice.

Let's get some practice auditing a site for accessibility. We can use a tool like Lighthouse, which has browser extensions for Firefox and Chrome. Install one of these extensions. This is often a step we'll complete after implementation and right before taking the site live.

Website Selection

Pick a website from the following list:

- http://www.cabq.gov/
- https://www.unm.edu/
- https://www.ecoleducasse.com/en
- https://www.benefit-plus.eu/en/
- https://www.risenation.com.au/
- https://elrayotequila.com/
- https://www.starwars.com/
- https://www.nhl.com/
- https://www.shadylakesfishing.com/
- https://glorybee.com/honey
- https://www.dickssportinggoods.com/
- https://academicjournals.org/
- https://www.mercari.com/
- https://www.foodnetwork.com/

List the website you chose here:

https://www.unm.edu/

For whichever site you chose, please only consider the link provided; you don't have to analyze multiple pages on the same site.

Generate Report, Scores

Now, let's use Lighthouse to generate a report on how well the website is doing. Since we haven't quite learned about code yet, some of the terminology we'll see might not be familiar to us. That's okay, do your best to read up!

On your Lighthouse report, you'll see four main categories: Performance, Accessibility, Best Practices, and SEO. Each one is given a score, and a score falls in the following ranges:
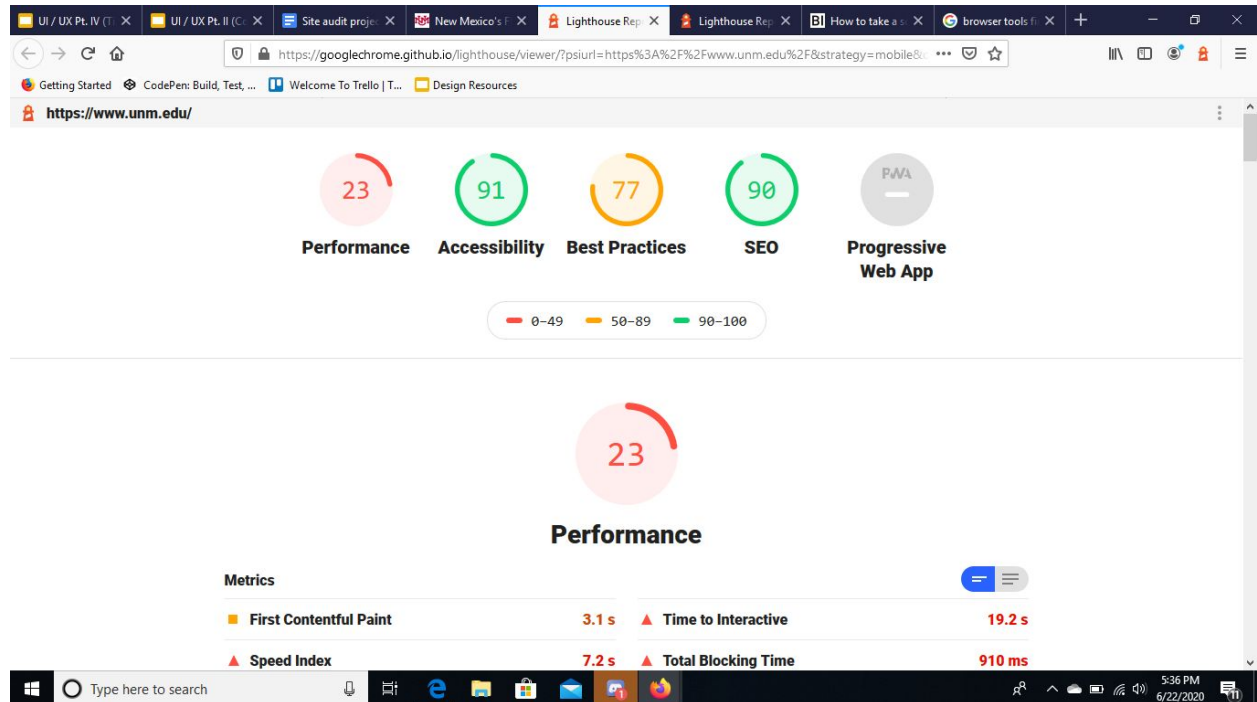
- 0 to 49 (red): Poor
- 50 to 89 (orange): Needs Improvement
- 90 to 100 (green): Good

These colors stay consistent in terms of category throughout Lighthouse. Provide the scores of the site you've chosen here (screenshot is great) for **both the desktop and mobile versions**:

Desktop:
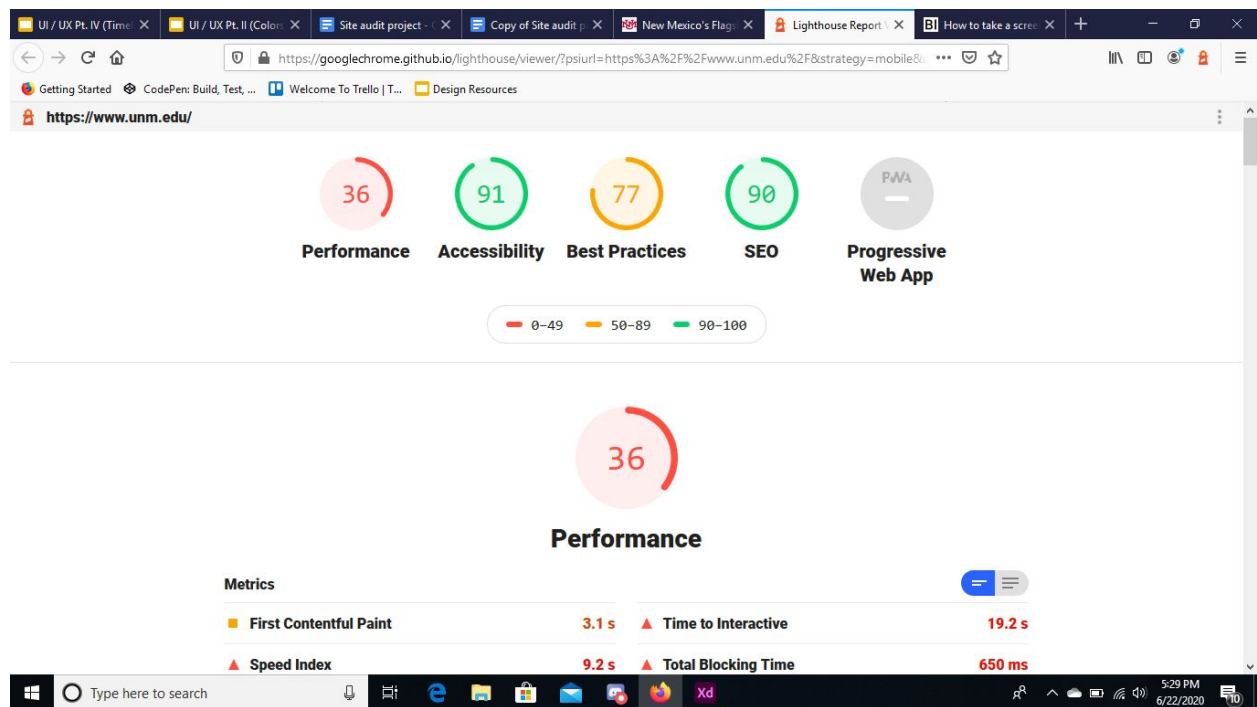
Metrics

You'll start off by seeing the results of specific tests. This section is sometimes called **Metrics, Field Data,** or **Lab Data**. Pick two of the metrics included here. Define what the metric is measuring and provide their values for the desktop version of the site you've chosen along with the classification (poor / needs improvement / good). How do the metrics you've chosen change for the mobile version?

Speed index: 650 ms   POOR
Efficiently encode images: 12.9s   POOR

Opportunities

The **Opportunities** section has detailed suggestions and documentation on how to implement them. Provide the top three items from this section for the desktop version. Then, provide the top three items for the mobile version. For each item, say what it is and how to fix it. If two or more of these items are too similar (e.g. "Remove unused JavaScript" and "Remove CSS"), continue down the list until you provide three unique opportunities.

Desktop:
1. Properly size images: Serve images that are appropriately-sized to save cellular data and improve load time.

Mobile:
1. Eliminate render-blocking resources: Resources are blocking the first paint of your page. Consider delivering critical JS/CSS inline and deferring all non-critical JS/styles.
2. Serve images in next-gen formats: Image formats like JPEG 2000, JPEG XR, and WebP often provide better compression than PNG or JPEG, which means faster downloads and less data consumption.
3. Remove unused CSS: Remove dead rules from stylesheets and defer the loading of CSS not used for above-the-fold content to reduce unnecessary bytes consumed by network activity.

Spot Checks

Next, let's do a couple spot checks for common errors in site design to get some practice. The exercises here are not exhaustive, but represent examples of good habits to design your websites around.

Contrast Checking

Let's start by checking the text and background contrast. Use the browser tools (right-click -> Inspect) to find the primary font color and background colors. Fill in the table below with the colors. Then, go to https://whocanuse.com/ and see how these color combinations perform in terms of accessibility. **AA** is the WCAG standard that is legally required for most websites. What is the minimum amount of contrast to pass the WCAG AA rating? Evaluate each pair of colors you recorded and list any vision type groups shown that the color combination receives a **fail** on. Use this information to fill out the table below, replacing the sample row as you go.

Note: include at least three and no more than five unique combinations.

Text color	Background color	Contrast level	WCAG Grading	Vision type groups failed
#FFFFFF	#1164ff	8.41:1	AAA	Cataracts, low vision
#222222	#ba0c2f	2.41:1	Fail	Regular, cataracts, low vision, protanomaly, protanopia,deuteranomaly, deuternaopia, tritanomaly, tritanopia, achromatomaly, glaucoma

| #222222	#ffffff	15.91:1	AAA	none

Keyboard Navigation

Every site should be completely navigable using only the keyboard. For the site you've chosen, try to navigate just using ←↑↓→ TAB, SHIFT+TAB, ESC, and ENTER keys. Are you able to access any functionality on the page? Can you get to any and all links? When an element is in focus during your keyboard navigation, is it visibly highlighted? If there are any videos or interactive elements, can you use them? Provide your findings below, including any elements of the site that fail this test i.e. that can't be reached by keyboard navigation alone:

➔ TAB/ SHIFT + TAB allows us to access all links/scroll through page although the links are not very visibly highlighted
➔ NAVIGATION ARROWS easily scroll the page
➔ ENTER allows users to select link
➔ ESC does not have a function, but BACKSPACE will take you to the previous page

Descriptive Links

Look at the links on the page. Are they descriptive of their contents? Here's an example of what this means:

✔ Assignment instructions

✘ Click here
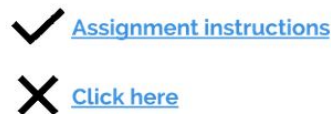
Take note of any links with text that is NOT descriptive of the link's contents. List them below along with a proposed change for the text. Additionally, check out the **mobile** version of the site. Are all of the links sufficiently large for the user to tap on? List any links that are too small on the mobile version.

Desktop: all links are descriptive; all links work
Mobile: all links are reasonably sized for optimal clickability

Conclusion

Congrats, you made it through a subset of a full site audit! Were there any surprises along the way? What was the most interesting takeaway? Did your website perform better or worse than expected? Provide your answers here (3-4 sentences at most total).

I was surprised that the UNM website failed a color test for approximately for half of the site (as the color pattern changes throughout) because I have always considered this page to be very

easy to read--however, I am not visually impaired so it is unlikely that I would have noticed this with the naked eye. While I didn't expect the color test to fail for this site, I did expect some sort of color issue due to the fact that red is so capturing.

Useful Links

- https://web.dev/performance-scoring/
- https://www.merkleinc.com/emea/blog/lighthouse-v6-guiding-your-way-fast-site
- https://altitudemarketing.com/blog/easy-guide-website-accessibility/
- https://medium.com/@krisrivenburgh/the-ada-checklist-website-compliance-guidelines-for-2019-in-plain-english-123c1d58fad9
- https://myaccessible.website/blog/wcaglevels/wcag-levels-a-aa-aaa-difference