# 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:

http://www.example.com

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

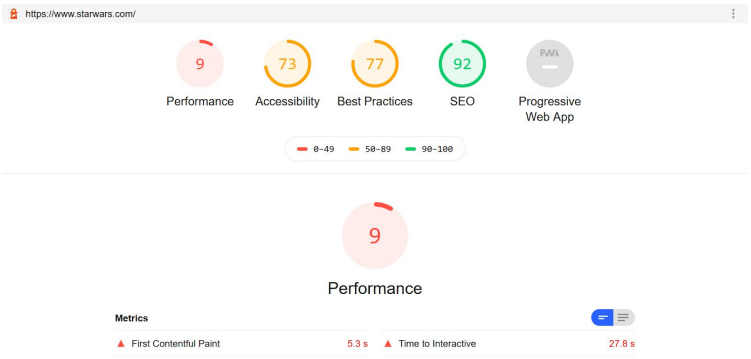
Now, let's use Lighthouse to generate a report on how well the website is doing. Since we haven't quite learned about code yet, some of the terminology we'll see might not be familiar to us. That's okay, do your best to read up!

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:

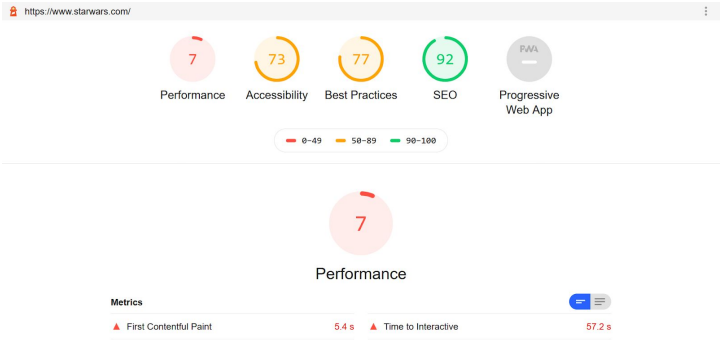
- 0 to 49 (red): Poor
- 50 to 89 (orange): Needs Improvement
- 90 to 100 (green): Good

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




Mobile



## 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?

The first metric I chose is Time to Interactive. This measures the amount of time it takes for a site to become fully interactive. It is 27.8 (poor) on desktop and 57.2 (poor) on mobile. The Time to Interactive is much slower on mobile. The second metric is Speed Index which is how quickly the contents of a page are visibly populated. On desktop the score is 9.7s (poor) and on mobile it is 34.3s (poor). Once again it takes longer on the mobile version.

## 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

Properly size images: Some images are two large and can be resized to save data.

Remove unused JavaScript: Removes unused script to reduce bytes consumed by activity.

Serve images in next-gen formats: Some image formats can provide better compression meaning faster downloads.

Mobile

Defer offscreen loading times: Consider loading hidden and offscreen images when needed instead of in advance to improve performance.

Properly size images: Resize images to load better on a mobile layout and take up less data.

Efficiently encode images: Optimize images to load faster and use less cellular data.

# 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 | #9E4500 | 6.35:1 | AA | Direct Sunlight |
| #AAAAAA | #151515 | 7.86:1 | AAA | None |
| #FFFFFF | #106AE0 | 5.05:1 | AA | Cataracts, Low Vision, Direct Sunlight |

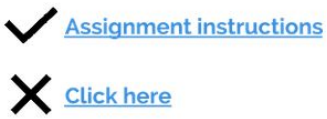
## Keyboard Navigation

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:

The arrows will only navigate by scrolling but will not highlight anything while doing so. TAB, SHIFT+TAB, and ENTER all work to highlight and interact with links, but it is not always clear what is being highlighted especially when the screen moves to a new section. All links and interactive options can be reached with keyboard navigation.

## Descriptive Links

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




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.

A few buttons on the website simply say "explore" when they lead to new pages or articles. I would recommend switching the button to explain where it is taking the individual such as "shop" or "news". All the links on the mobile version are sufficiently sized and easy to click.

## 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 by how much thought went into the background colors and the font. The contrast works well as for the most part each combination was easy to see with the exception of one. The website performed about as well as I expected for a major brand like Star Wars it seems like they put the time and effort in to make it accessible. It was interesting to see how much slower the mobile version would run, and there is still room to improve performance.

## 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