

Todo List Performance Analysis

The goal of this performance analysis is to compare the todo app with a competitor in order to understand how to improve our todo list app. The analysis of the todo apps will be completed using chrome's developer tool's auditing feature called lighthouse.

Performance Issues

- The use of http/1 increases the load time by approximately 0.6s.
- Vulnerable to security issues due to not using https.
- The use of old format images increase the load time by 0.63s.
- The use of jQuery files are causing longer loading time - 0.5s.
- Image elements do not have width and height.
- The adds block the progress of the other content being loaded, causing a delay in loading the app's content.
- The unused google api's and fonts are causing longer loading times.
- Missing <meta name="viewport"> tag with width or initial-scale can cause a delay of 300ms as the web site is not mobile-friendly

Improvements

- http/2 should be used instead of http/1 since http/2 takes advantage of binary headers and multiplexing to increase the load time by approximately 0.5s.
- The use of https can improve security.
- Establish a specified width and height in order to reduce cumulative layout shifts.
- Instead of using document.write to add content to the html use the JavaScript DOM to select and add content to the selected elements to ensure faster load times.
- Only 3rd party resources which are being used should be kept in order to make a more succinct application which loads faster.
- Allow text to appear in generic font until the actual fonts have loaded.
- The advertisements need to be loaded last and the web content first to shorten the time in which the web page becomes fully visible to the user. Also, the use of i-frames for ads should be avoided as they increase the load time of the ad. An alternative could be to use the quicker Ajax Api calls to retrieve the ads.

Additional Improvements Regarding Accessibility and Best Practices

- Increase the contrast of the completed list items' text so the completed list items will be more readable.
- Image elements should have alt attributes and frame elements should have labels so those using screen readers are able to better understand the images and frame elements purpose

-Include a language attribute to alert the screen reader to the verbal language the application is using so the screen reader reads the application's text correct

Conclusion

The competitor's todo app could make numerous changes to decrease load times and make the application more useable. Our todo app by comparison has faster loading times, but there is still areas for improvement such as reducing the size of our JavaScript and CSS files. Moreover, our application's user interface is more readable and understandable but lacks some of the options of our competitor's app such as the ability to create multiple lists.