Performance Audit Report

Website: - <https://todolistme.net>

Test base: - Google Chrome

- Fast 3G Network

- 4x slowdown

Performance: - 79 %

Page load time: - 6.5 seconds

### Opportunities to improve performance:

* Serving images in next-gen formats:

We can achieve 2.18 seconds faster page load by compressing texture.png into JPEG 2000, JPEG XR or WebP.

* Minifying JavaScript:

1.1 seconds faster page load by using UglifyJS on jquery-ui.js - reduce payload sizes and script parse time

* Eliminating render blocking resources:

0.63 seconds faster page load by applying techniques such as cleaning up our JavaScript files from unused data that is unnecessary to render and also we can save load time by applying a *font-display: swap;* css rule for the font-family selector. This ensures that text remains visible during webfont load.

* Pre-connect to required origins:

0.32 seconds can be saved by establishing a pre-connection in the head of our html file to all the third party connections such as Twitter or Facebook, eg. <link rel=“preconnect” href=“<https://facebook.com>">

This will ensure that we do not have to wait for connection.

* Removing unused CSS:

0.17 seconds can be saved from loading time by removing unused css rules from the stylesheet.

After comparing this performance to our own todo app, I have discovered that our app is much faster and has a better overall performance of 99%. However, this still could be improved by removing render blocking resources from our codebase.

- base.css does seem to be a template css from the web written by a third party and almost 75% of the code is unused.

- index.css also has 50% unused css rules on the initial page load.

These codes should be split up and make them required when they are really needed. This way we could achieve 0.3 seconds improvement in page load time.

If we wanted to scale our own app up some day, then we have to bear in mind the following:

- we need to keep the size of any images as low as possible using next-generation formats,

- if we have links to other third party sites, we need to establish a pre-connection to those sites in the head of our html document,

- minifying our JavaScript code using UglifyJS or other tools,

- and also, we need to keep track of any other render blocking resources eg. third party fonts, unused css rules or unnecessarily too long JavaScript code.