Team site: <https://github.com/eliskin/ColorFriendly>

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Summary

The extension is designed to change the colors of all the non-image HTML elements to be easier to read for those with colorblindness by going through all the elements of the webpage and changing the color values. There will be options to change the colors for red green or blue green colorblindness. There won’t be any options for those with full colorblindness as there are not ways to change the colors to make it easier for them to read the page. The extension will always be running in the background and will change page colors automatically. To change the settings, the user will click the icon in the browser which will generate a drop down menu, and then click a check box for the type of color blindness. Once they have the page will fade the colors to the correct setting.

Technical

There will be functionality added to the API that will get a list of all elements of the same type on a webpage. This would simplify the programming of the extension as, for example, it could get all of the hyperlinks on the webpage and change all of those colors so that they are uniform. The extension will look at the color values of all the elements and would then alter the values so that it would be easier to read but not so much that the page loses its aesthetic value. These new values would be saved and then compared to the old values of the page. It would then slowly over the course of about 3 seconds incrementally increase or decrease values to give a fading effect. If there is a problem with programming the new API functions then it would be possible to have the extension iterate through the webpage’s DOM tree and change element colors that way. This means that our program is not entirely dependent on the API functions and so we have a backup plan if we are unable to get the extra credit work done.