

Beta: Progress Report

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December 18, 2020

Vision

Our vision of unifying content and styling natively has not changed with this sprint. Our goal is to develop a tech demo of a language for the web which brings together CSS and HTML and absolves javascript of the responsibility of having to do everything. We also aim to improve styling in the web by integrating constraints with our language. project to consist of two main parts:

1. Designing and Parsing the Language
2. Creating a Dummy Browser to Display the Result of the Language

Progress

We spent this sprint finishing up implementing existing features, polishing, adding text rendering, and some nice-to-haves.

On the finishing up end, we finished implementing the constraint solver and style tree builder. This had ended up being a lot more work than we had expected, so we are happy to have been able to finish it this sprint.

We also implemented text rendering, which was challenging in a similar way to first setting up the window - there are very many ways to do it, each very different with their own upsides and downsides. After trying multiple solutions, we settled on one that we were happy with.

We also added a couple miscellaneous items like support for color hex codes and trait aliases.

Activity

Andrei

1. Implemented text rendering
2. Expanded parser to add aliase and hex code support
3. Wrote the progress report

Mike

1. Finished support for full constraint styling capability
2. Polished the render tree module

Productivity

We had yet again underestimated the challenges ahead of us. Adding text rendering and finishing the constraint styling alone was as much work as we had expected the more complete end of good scope to be, so we're very happy with having done that but also implementing additional parser features.

Grade

Given the difficulty of finishing the render tree and adding text rendering, we think our work would be accurately reflected by an excellent scope grade. Although we had not implemented some of the features we had hoped to have done for excellent scope, such as built-in tags and functions, we think the work required to add the features that we did was comparable. We chose to add these features rather than the ones we outlined as goals in our previous progress report because we felt they were more important for a working demo.

Possible Next Steps

There are more possible next steps than one can possibly enumerate! To no one's surprise, implementing a browser is an insane amount of work, and there is always more to be done.

If we were interested in fleshing this out to be a complete language, there is a lot that could be done, such as adding support for various data types specifying size and conversion between them, built-in traits that specify styling and positioning functionality, as well as support for functions and variables.

One could also keep trying to innovate with the syntax and semantics of the language, as there are always improvements to be had in the design of any system.

Overall, though, we had achieved the progress required for a complete and fully-functional tech demo of the features that are unique to our design and idea, and we are happy with it.