W3C CSS Checker The Next Generation

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Question: Why check your CSS?

Answer: To catch mistakes.

Catch mistakes in your CSS

- Catch syntax errors
- Catch typos in CSS property names
- Catch values with the wrong datatype

Example...

There are three mistakes in the following example...

```
.ok {
   color: green;
   font-size: bold;
alert {
   color: red
   background-color: white;
   font-size: bold;
```

```
.ok {
   color: green;
   font-weight: bold;
.alert {
   color: red;
   background-color: white;
   font-size: 150%;
```

How to catch mistakes

Now: W3C CSS Validator

https://jigsaw.w3.org/css-validator



CSS Validation Service

Check Cascading Style Sheets (CSS) and (X)HTML documents with style sheets

Validate by URI

Enter the URI of a document (HTML with CSS or CSS only) you would like validated:

Address:

More Options

Check

Problems with CSS Validator

- Very old; started in 2002
- Not actively maintained any more
- Written in Java
- Hard to extend with new CSS properties

More Problems with CSS Validator

 Uses ad-hoc parser that doesn't conform to CSS Syntax spec

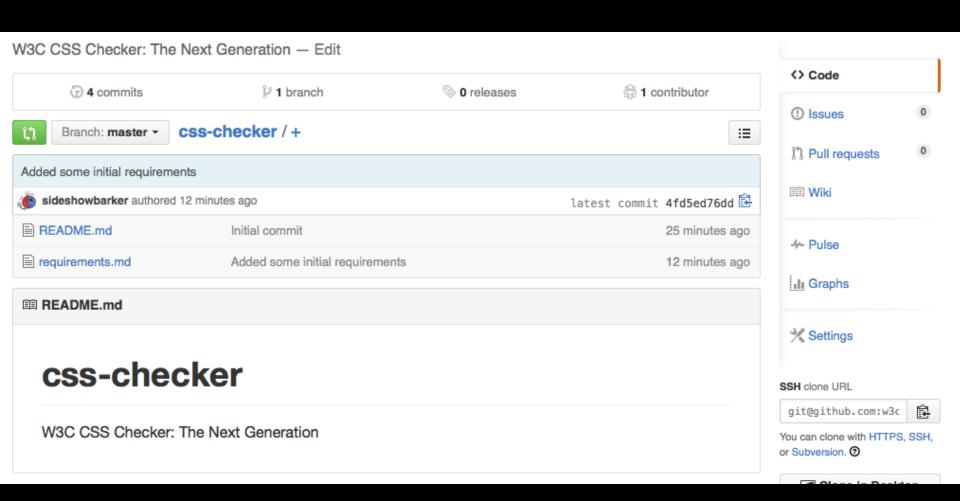
So let's make a new CSS Checker!

https://csschecker.w3.org

That URL doesn't exist yet...

...but we are already at github

https://github.com/w3c/css-checker



New CSS Checker requirements

- Use a CSS parser that conforms to the CSS Syntax spec.
- Use the right programming language.
- Make it easy to extend.

What language to use?

JavaScript + node.js?

Tab Atkins CSS parser written in JavaScript

https://github.com/tabatkins/parse-css

CSS Syntax Module Level 3

Editor's Draft, 16 July 2015

```
This version:
    http://dev.w3.org/csswg/css-syntax/
Latest version:
    http://www.w3.org/TR/css-syntax-3/
```

Previous Versions:

http://www.w3.org/TR/2014/CR-css-syntax-3-20140220/

http://www.w3.org/TR/2013/WD-css-syntax-3-20131105/

http://www.w3.org/TR/2013/WD-css-syntax-3-20130919/

www-style@w3.org with subject line "[css-syntax] ... message topic ..." (archives)

http://test.csswg.org/suites/css-syntax-3_dev/nightly-unstable/

Issue Tracking:

Feedback:

Test Suite:

GitHub

Editors:

Tab Atkins Jr. (Google) Simon Sapin (Mozilla)

Simon Sapin CSS parser written in Rust

https://github.com/servo/rust-cssparser

What is Rust?



Rust is the language that Mozilla Servo is written in

What is Mozilla Servo?

Servo is Mozilla's next-generation browser engine

Simon Sapin's rust-css-parser is the CSS parser used in Servo

For the CSS Checker, we could use the same CSS parser as a major browser engine

Next-generation browser engine, next-generation CSS Checker

Advantages of Rust

- New, modern language (2010~)
- Pure functional
- High-concurrency/parallelization (to take full advantage of multi-core CPUs)

Let me know what you think of using Rust for the next-generation CSS Checker!

Thanks!