

# **Tips & Tricks in Front-End Development**

Ire Aderinokun | forLoop #2

# About me

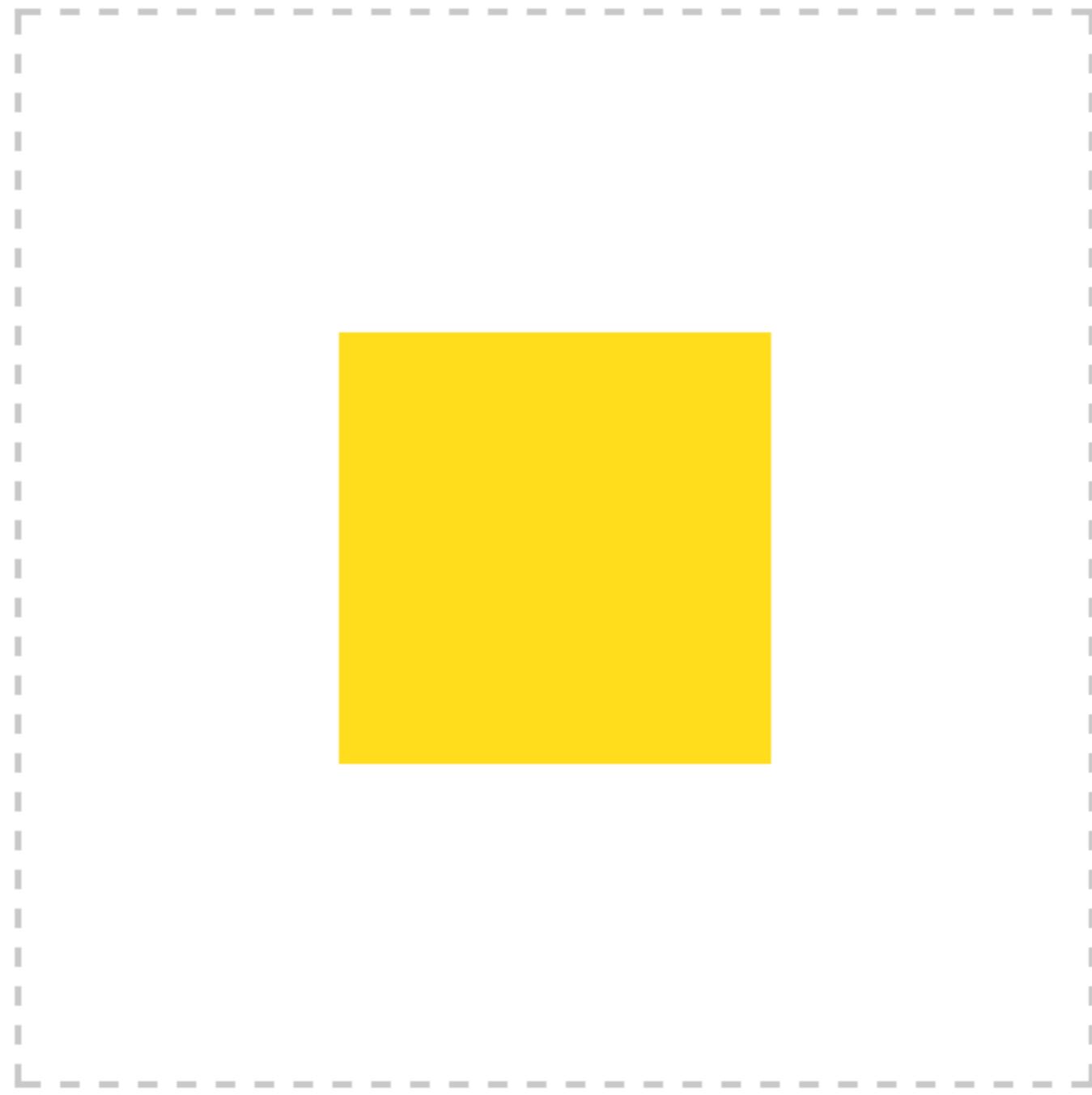
- Ire Aderinokun
- User Interface Designer and Front-End Developer
- Design+Tech, Big Cabal Media
- Writer, [www.bitsofco.de](http://www.bitsofco.de)



# How Do I...?

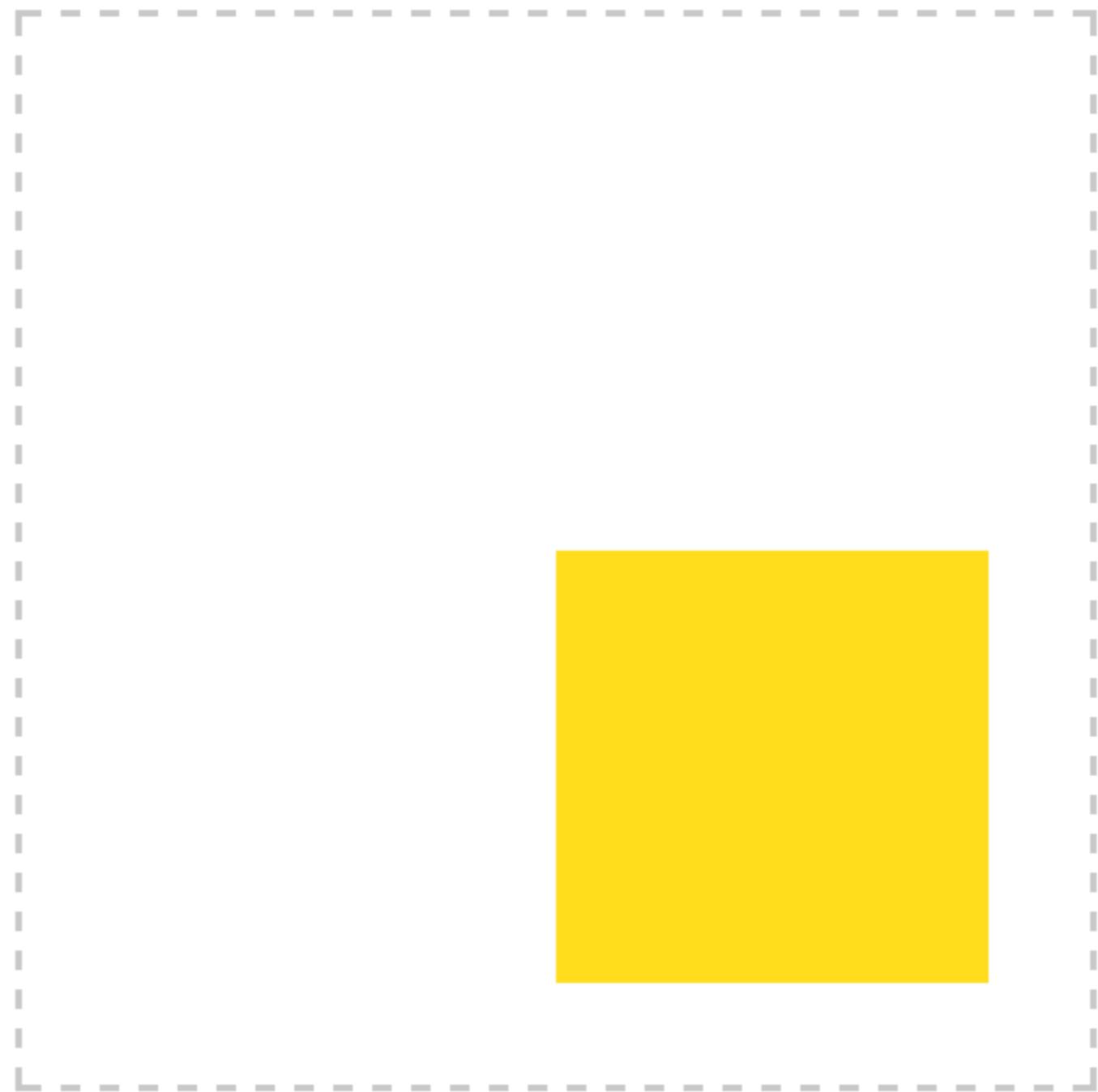
How do I...

# **Centre an Element Both Horizontally and Vertically?**



# 2D Transforms

```
101
102 .parent {
103     position: relative;
104 }
105
106 .child {
107     position: absolute;
108     top: 50%;
109     left: 50%;
110
111 }
112
```

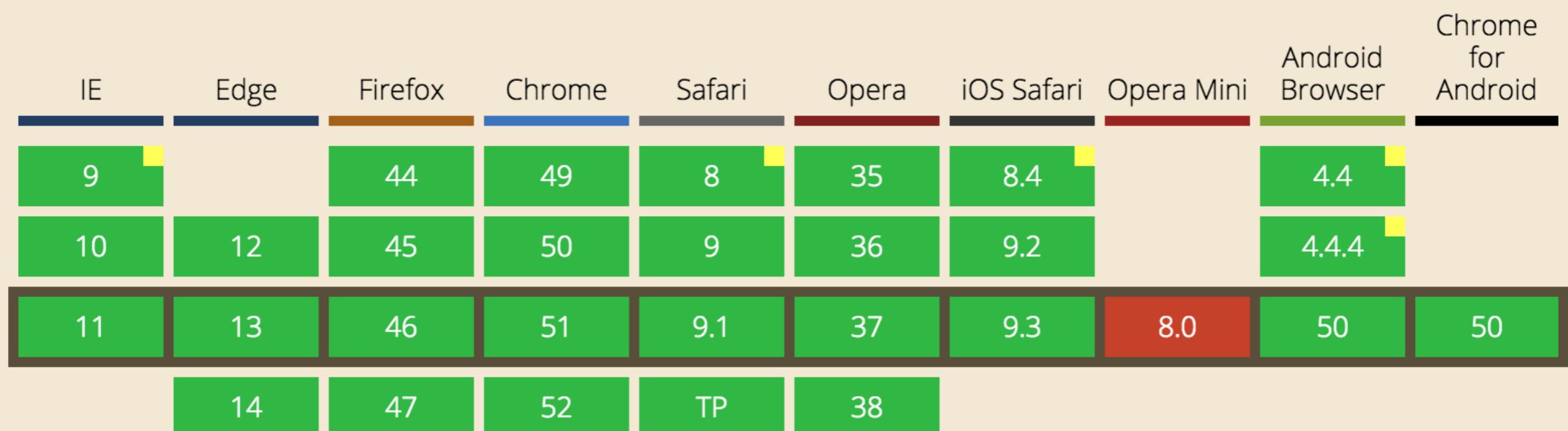


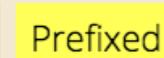
# 2D Transforms

```
101
102 .parent {
103     position: relative;
104 }
105
106 .child {
107     position: absolute;
108     top: 50%;
109     left: 50%;
110     transform: translate(-50%, -50%);
111 }
112
```

## CSS3 2D Transforms

Method of transforming an element including rotating, scaling, etc. Includes support for `transform` as well as `transform-origin` properties.



  Partial Support  Prefixed

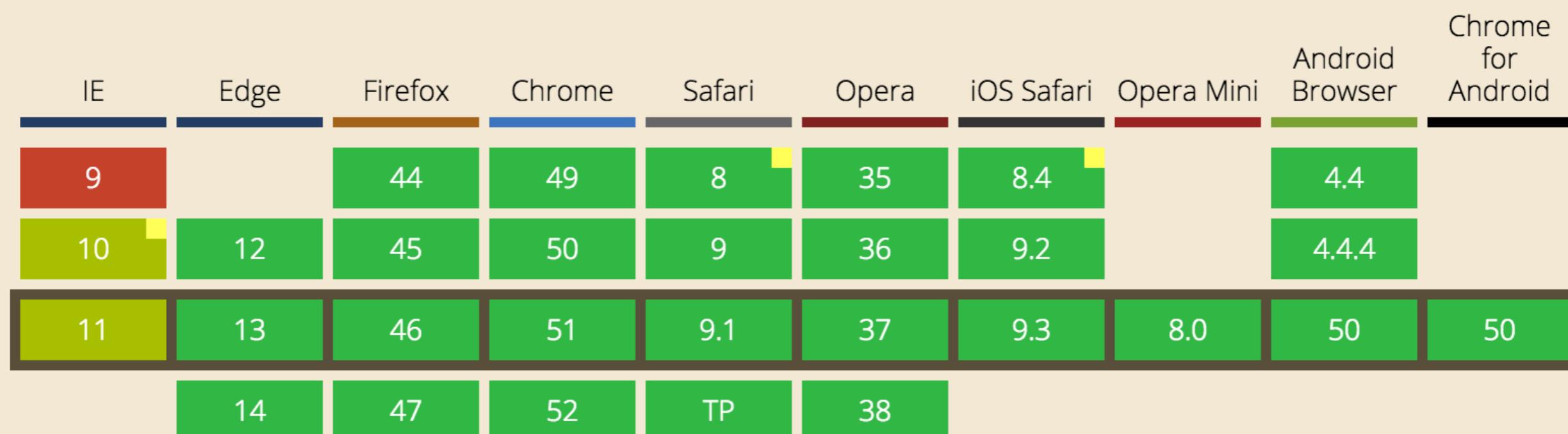
Global: 89.52% + 0% = 89.52%

# Flexbox

```
87  
88  
89 .parent {  
90   width: 500px;  
91   height: 500px;  
92   border: 3px dashed rgb(200,200,200);  
93  
94   display: flex; /* Make the parent a flex item */  
95   justify-content: center; /* center horizontally */  
96   align-items: center; /* center vertically */  
97 }  
98  
99
```

## Flexible Box Layout Module

Method of positioning elements in horizontal or vertical stacks. Support includes the support for the all properties prefixed with `flex` as well as `display: flex`, `display: inline-flex`, `align-content`, `align-items`, `align-self`, `justify-content` and `order`.



  Partial Support  Prefixed

Global: 76.38% + 17.65% = 94.03%

How do I...

**Make sure an image  
always fills it's container?**

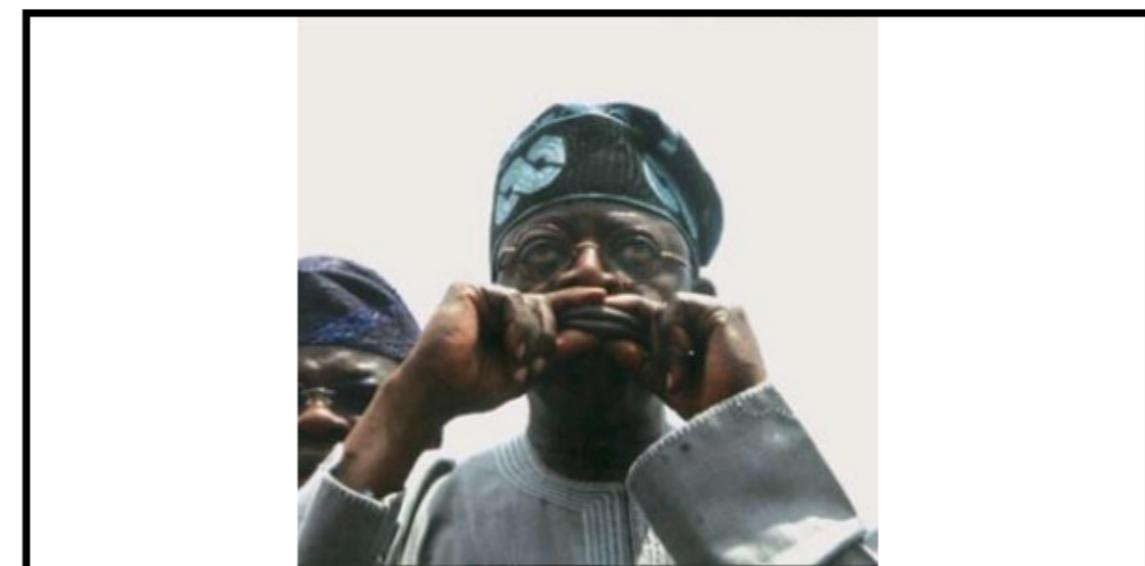
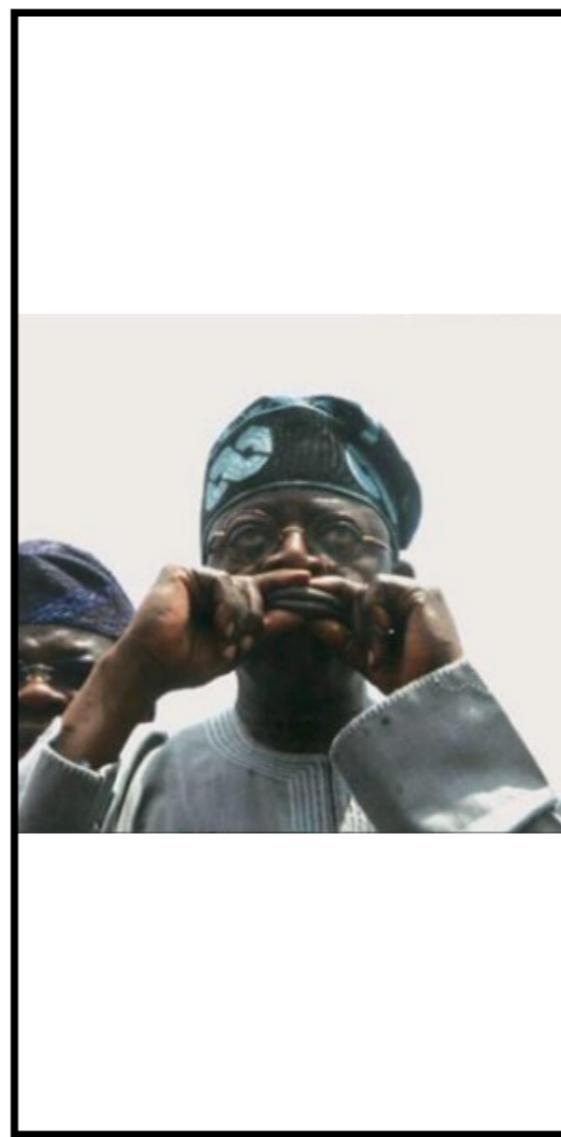
# **object-fit**

- fill
- contain
- cover

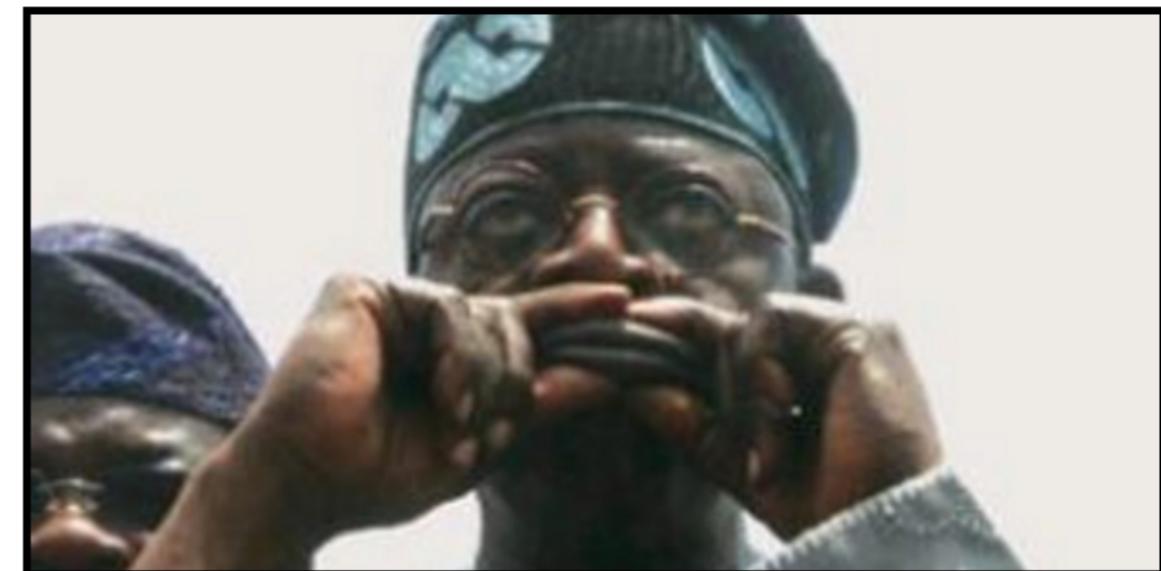
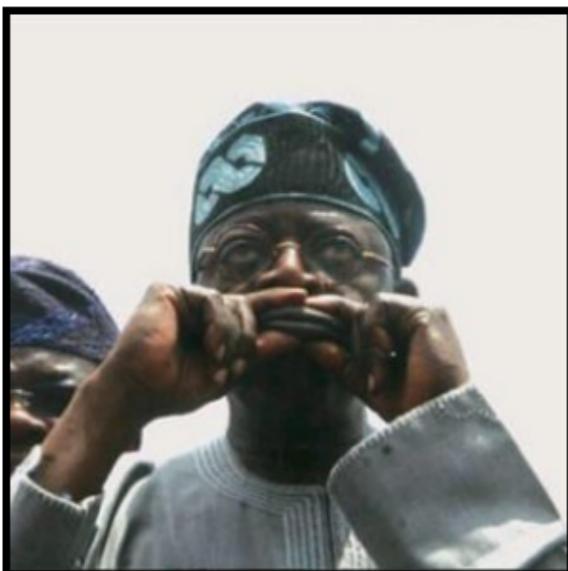
# **object-fit: fill;**



# **object-fit: contain;**

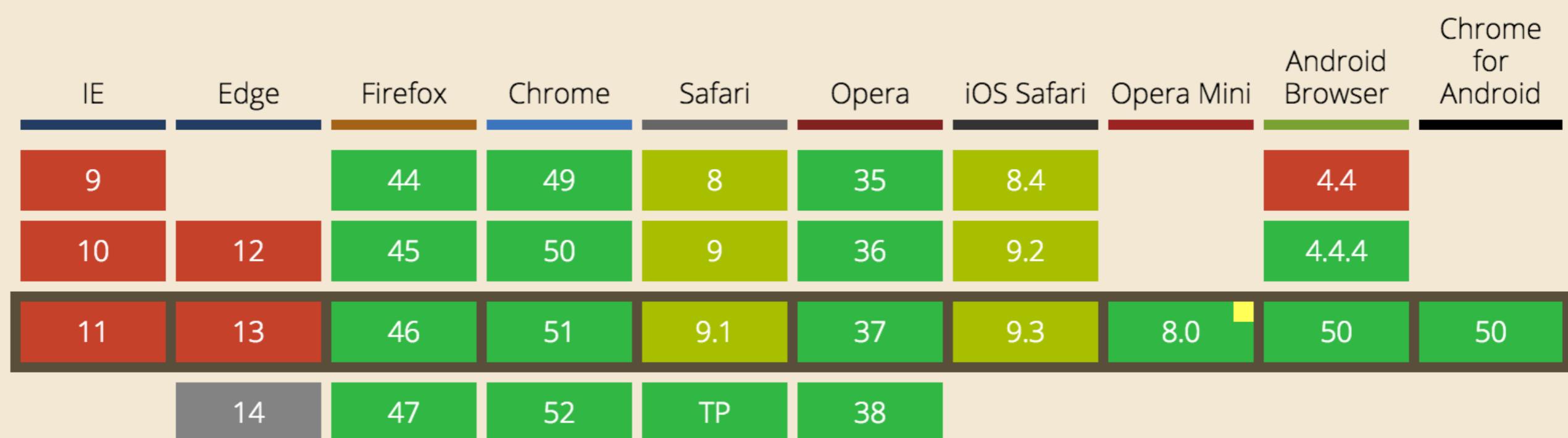


# **object-fit: cover;**



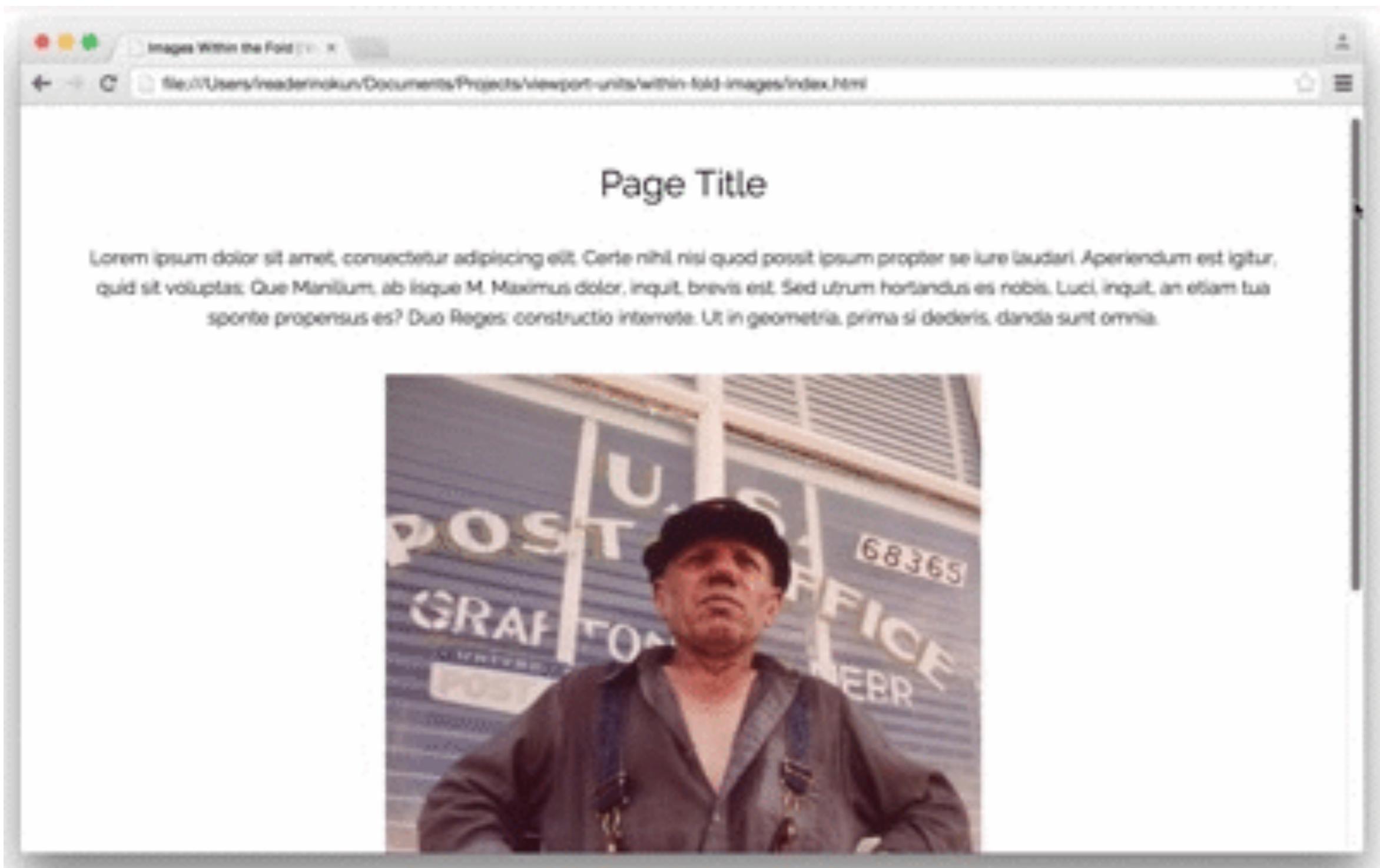
## CSS3 object-fit/object-position

Method of specifying how an object (image or video) should fit inside its box. object-fit options include "contain" (fit according to aspect ratio), "fill" (stretches object to fill) and "cover" (overflows box but maintains ratio), where object-position allows the object to be repositioned like background-image does.



How do I...

**Make sure an image is  
always visible within the  
viewport?**



# Viewport Units

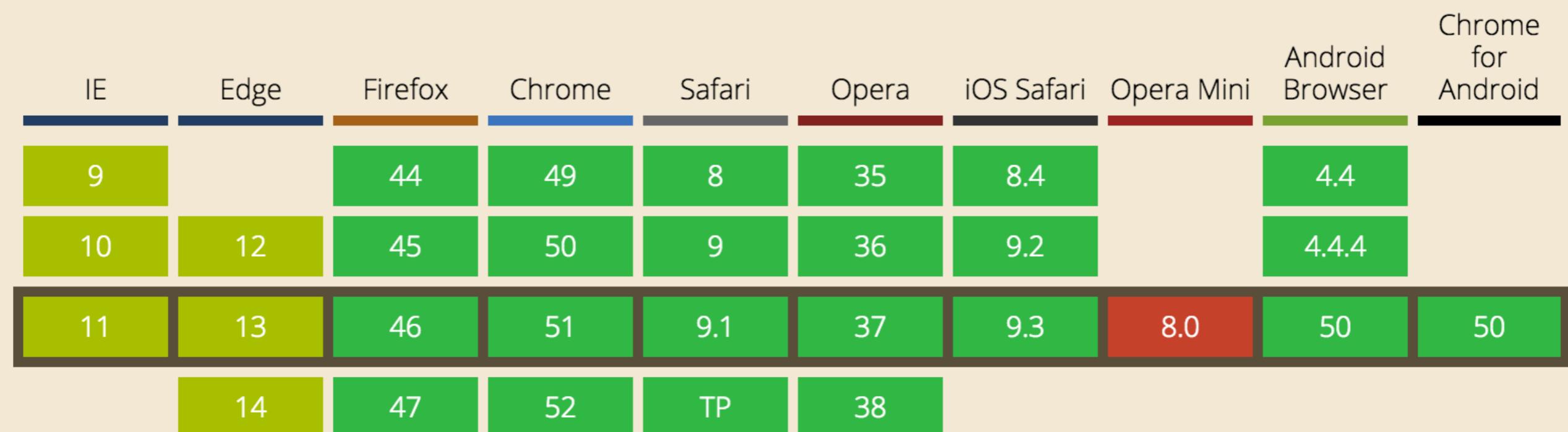
- vh
- vw
- vmin
- vmax

# Viewport Units

```
157  
158  
159  
160 img {  
161     max-height: 90vh;  
162     width: auto;  
163     max-width: 100%;  
164 }  
165  
166
```

## Viewport units: vw, vh, vmin, vmax

Length units representing 1% of the viewport size for viewport width (vw), height (vh), the smaller of the two (vmin), or the larger of the two (vmax).

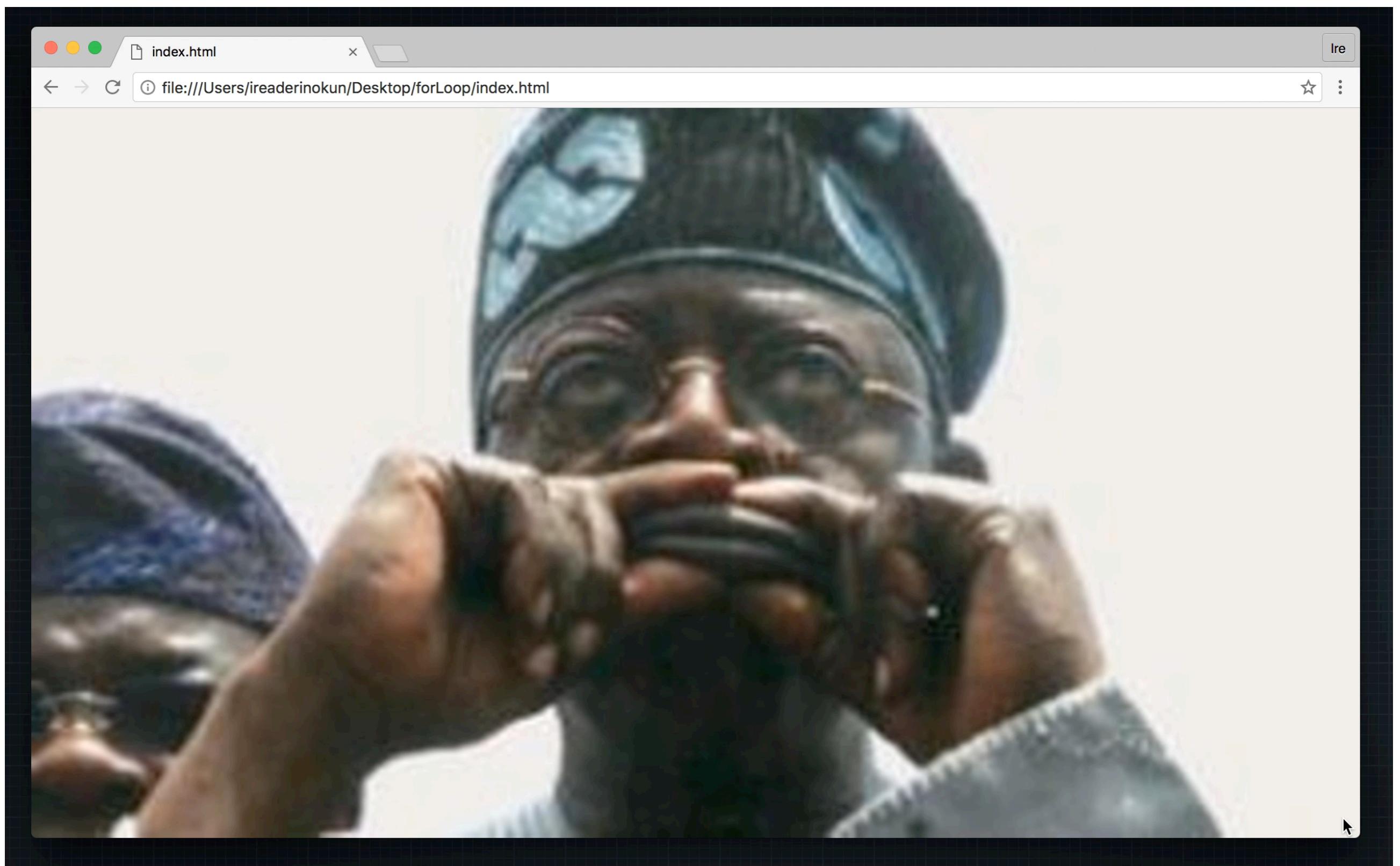


  Partial Support

Global: 69.44% + 8.82% = 78.26%

How do I...

**Make a fixed fullscreen  
background image responsive?**



# background Property & Viewport Units

```
128  
129  
130 .hero {  
131     background-image: url(img.jpg);  
132     background-position: center;  
133     background-repeat: no-repeat;  
134     background-attachment: fixed;  
135     background-size: cover;  
136     height: 100vh;  
137 }  
138
```

How do I...

# **Handle visited vs. unvisited links?**

## Crypt ✓ Seen

A Hollywood hacking simulation game with a functional, playable prototype.

## Design & Code ✓ Seen

Several iterations of design work on a non-profit and a hackthon.

## Slaughterhouse 22

A time-jumping war story mashup.  
Two of my favorite books, combined.

## Rendezvous ✓ Seen

Helping people make new friends.  
An app and a platonic pickup bar.

# a:visited

```
123  
124 a:visited {  
125     color: red;  
126 }  
127  
128 /* Doesn't work :( */  
129 a:visited:after {  
130     content: 'Visited!';  
131 }  
132  
133
```

# localStorage

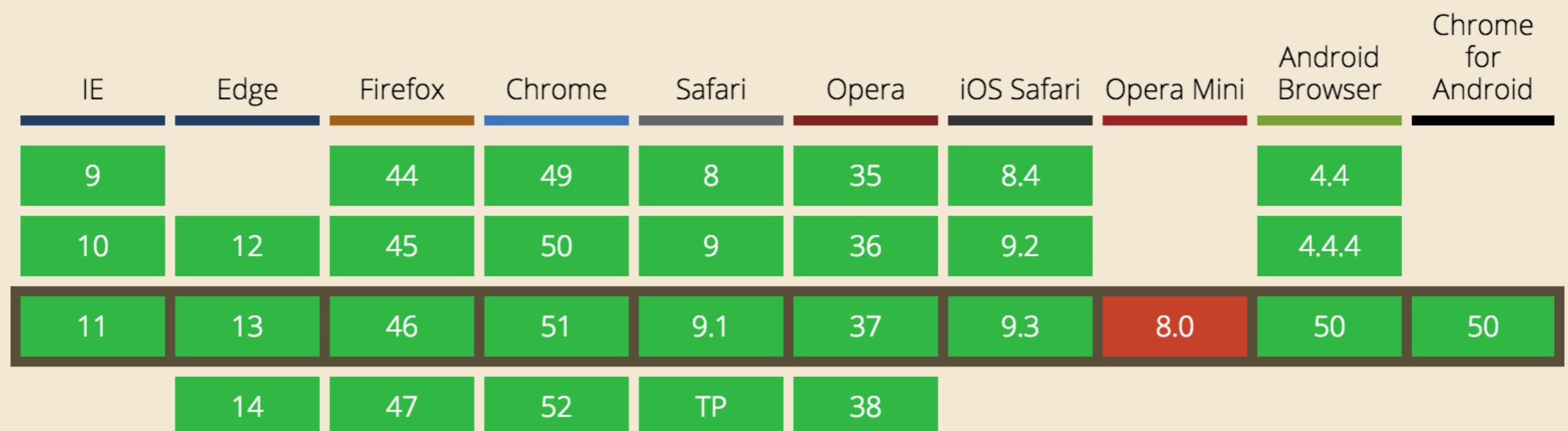
```
// http://joelcalifa.com/blog/revisiting-visited
localStorage.setItem('visited-' + window.location.pathname, true);
var links = document.getElementsByTagName('a');
for (i=0;i<links.length;i++) {
  var link = links[i];
  if (link.host == window.location.host
    && localStorage.getItem('visited-' + link.pathname + '/')) {
    link.dataset.visited = true;
  }
}
```

<http://joelcalifa.com/blog/revisiting-visited/>

```
a[data-visited] {  
    border-bottom: 1px dashed purple;  
}  
  
a[data-visited]:after {  
    content: ' (Seen)';  
}
```

## Web Storage - name/value pairs

Method of storing data locally like cookies, but for larger amounts of data (sessionStorage and localStorage, used to fall under HTML5).



  Partial Support

Global: 90.28% + 0.05% = 90.33%

How do I...

# **Deal with broken images?**

Broken images are ugly.



This image is broken! Ugly, isn't it?

## **2 Facts about <img>**

1. We can apply typography-related styling to the <img> element
2. The <img> element is a “replaced element”

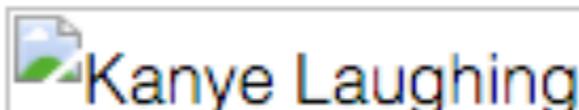
# Styling the alt Text

```
187  
188  
189 img {  
190   font-family: 'Helvetica';  
191   font-weight: 300;  
192   line-height: 2;  
193   text-align: center;  
194 }  
195  
196  
197
```

# Styling the Pseudo-Elements

```
203  
204 img:before {  
205     content: "We're sorry, the image below is broken :(;"  
206     display: block;  
207     margin-bottom: 10px;  
208 }  
209  
210 img:after {  
211     content: "(url: " attr(src) ")";  
212     display: block;  
213     font-size: 12px;  
214 }  
215  
216
```

We're sorry, the image below is broken :(



(url: <http://bitsofco.de/broken.jpg>)

 Broken Image of Kanye Laughing

 Kanye Laughing

Browser	Alt Text	:before	:after
Chrome (Desktop and Android)	✓	✓	✓
Firefox (Desktop and Android)	✓	✓	✓
Opera (Desktop)	✓	✓	✓
Opera Mini	✓ **	✗	✗
Safari (Desktop and iOS)	✓ *	✗	✗
iOS Webview (Chrome, Firefox, others)	✓ *	✗	✗

\* The alt text will only show if the width of the image is large enough to accommodate it. If no width is specified for the img, the alt text may not be displayed at all

\*\* Font styling not applied

How do I...

# **Deal with empty states?**

```
17  
18  
19    <div><!-- Use JavaScript to add Content --></div>  
20  
21
```

# :empty

```
16  
17 <div></div> ✓  
18  
19 <div> </div>  
20  
21 <div><!-- --></div> ✓  
22  
23  
24
```

# :empty

```
151
152  div:empty {
153    display: none;
154  }
155
156  /* or hide any empty elements */
157  *:empty {
158    display: none;
159  }
160
161  /* or add a message to eny empty elements */
162  *:empty:after {
163    content: "There's nothing here yet!";
164  }
165
166
```

How do I...

# **Make embedded content responsive?**

# Fixed Dimensions



# position: absolute;

```
.video-container {  
    position: relative;  
    padding-bottom: 56.25%;  
    padding-top: 35px;  
    height: 0;  
    overflow: hidden;  
}  
  
.video-container iframe {  
    position: absolute;  
    top: 0;  
    left: 0;  
    width: 100%;  
    height: 100%;  
}
```

break a responsive layout if you don't add some extra CSS to fix things.

## Responsive Video

I'm using a [Lego video](#) as that's what gets viewed on YouTube the most in my house – I have two small boys!



If you resize the browser window, the video will resize with you.



# Fluid Dimensions

The (Unofficial) CanIUse Embedder

caniuse.bitsofco.de

## Examples

Default:

Viewport units: vw, vh, vmin, vmax [↗](#)

Length units representing 1% of the viewport size for viewport width (vw), height (vh), the smaller of the two (vmin), or the larger of the two (vmax).

IE	Edge	Firefox	Chrome	Safari	Opera	iOS Safari	Opera Mini	Android Browser	Chrome for Android
9		44	49	8	35	8.4		4.4	
10	12	45	50	9	36	9.2		4.4.4	
11	13	46	51	9.1	37	9.3	8.0	50	50
	14	47	52	TP	38				

Global: 69.44% + 8.82% = 78.26%

✓ ✗ Partial Support

Data from [caniuse.com](#) | Embed from [caniuse.bitsofco.de](#)

Only showing current and future versions:

CSS Variables (Custom Properties) [↗](#)

Permits the declaration and usage of cascading variables in stylesheets.

# postMessage API

```
10
11 // On resize of the window, recalculate the height of the main element, and pass to the
12 // parent document again
13 window.onresize = function() {
14     var newDocumentHeight = document.getElementsByClassName('main-element')[0].scrollHeight;
15
16     // If difference between current height and new height is more than 10px
17     if ( heightDiff > 10 | heightDiff < -10 ) {
18
19         documentHeight = newDocumentHeight;
20         message = 'documentHeight:' + documentHeight;
21         parent.postMessage(message, '*');
22     }
23
24 } ;
25
```

iframe.js

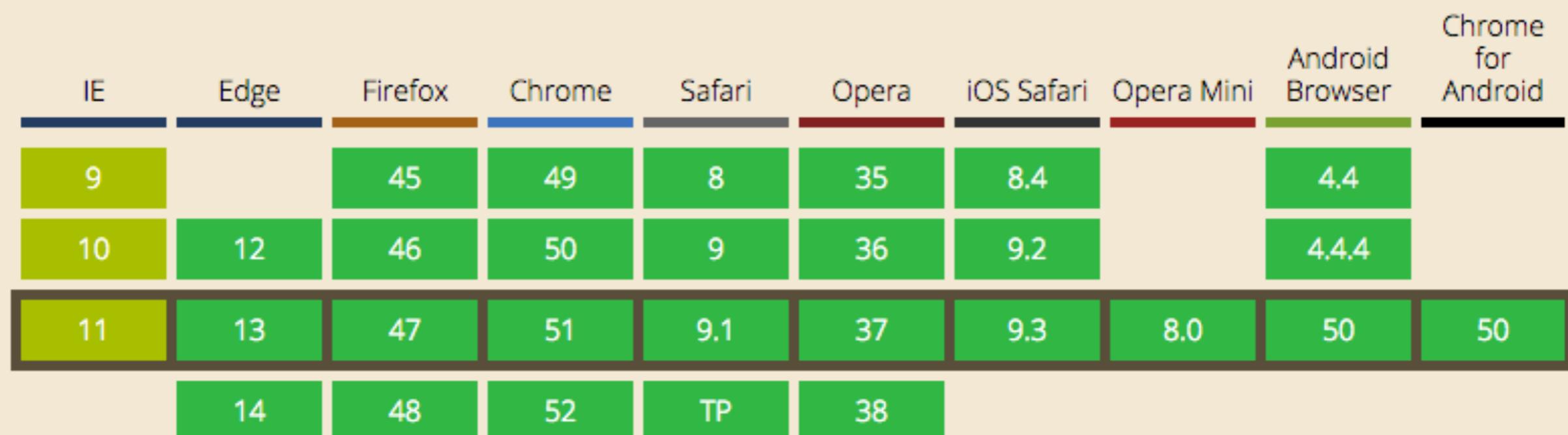
# postMessage API

```
7
8 eventer(messageEvent, function(e) {
9
10    // Check that message being passed is the documentHeight
11    if ( (typeof e.data === 'string') && (e.data.indexOf('documentHeight') > -1) ) {
12
13        var height = e.data.split('documentHeight:')[1],
14        height = parseInt(height) + 50; // add a bit of extra space
15
16        // Change height of iframe
17        document.getElementById('myIframe').height = height + 'px';
18
19    }
20 }, false);
```

parent.js

## Cross-document messaging

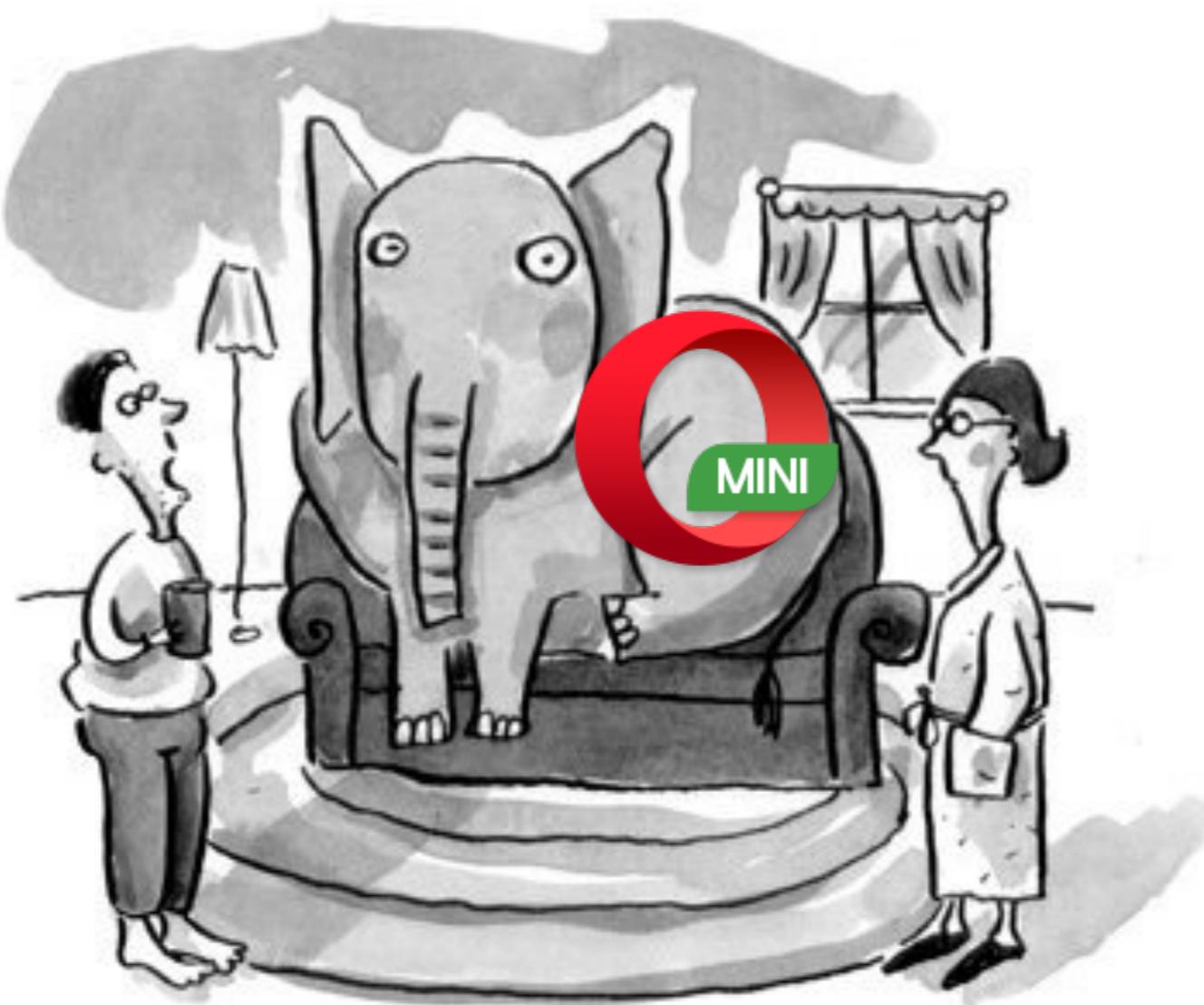
Method of sending information from a page on one domain to a page on a different one (using `postMessage`)



  Partial Support

Global: 88.12% + 7.23% = 95.35%

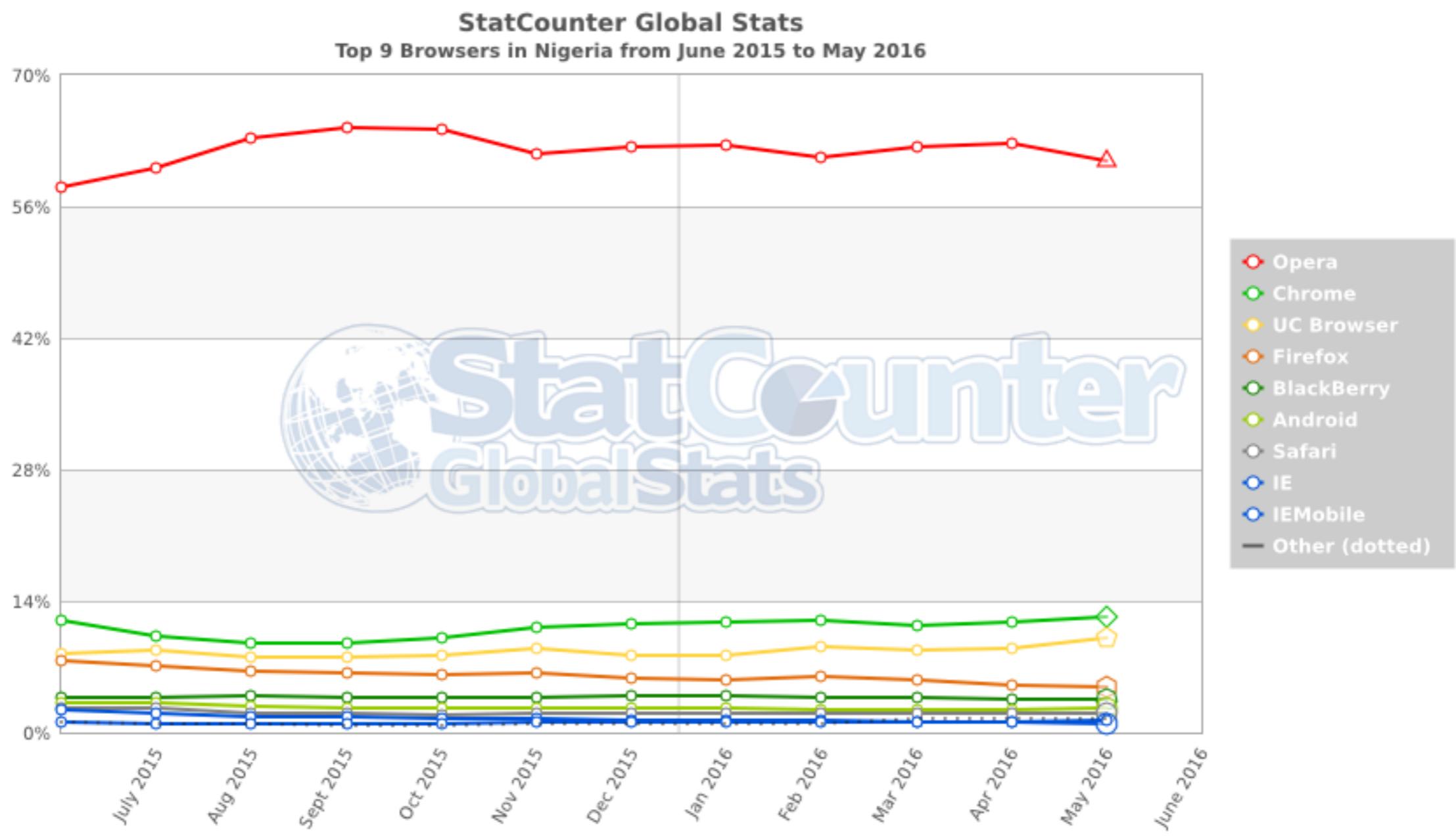
Let's talk about  
*that* Browser



**What ~~elephant~~**  
browser?

Tomassi

# 60% of users are on Opera Mini



# **What's the deal with Opera Mini?**

- High vs Extreme Savings Mode
- Uses the Presto rendering engine
- Limited support for many HTML, CSS, and Javascript features
- Javascript is executed on the server, not the client



**KUKU KILL ME**

# **Some Tips**

# Start with Semantic HTML

```
64
65  <header>
66      <h1>Site Title</h1>
67  </header>
68  <main>
69      <h2>Page Title</h2>
70      <p>Page Content</p>
71  </main>
72  <aside>
73      <nav>
74          <ul>
75              <li><a href="page.html">Page</a></li>
76              <li><a href="page.html">Page</a></li>
77          </ul>
78      </nav>
79  </aside>
80  <footer>
81      <small>Credits</small>
82  </footer>
83
```

# Provide Sensible Fallbacks or Alternatives

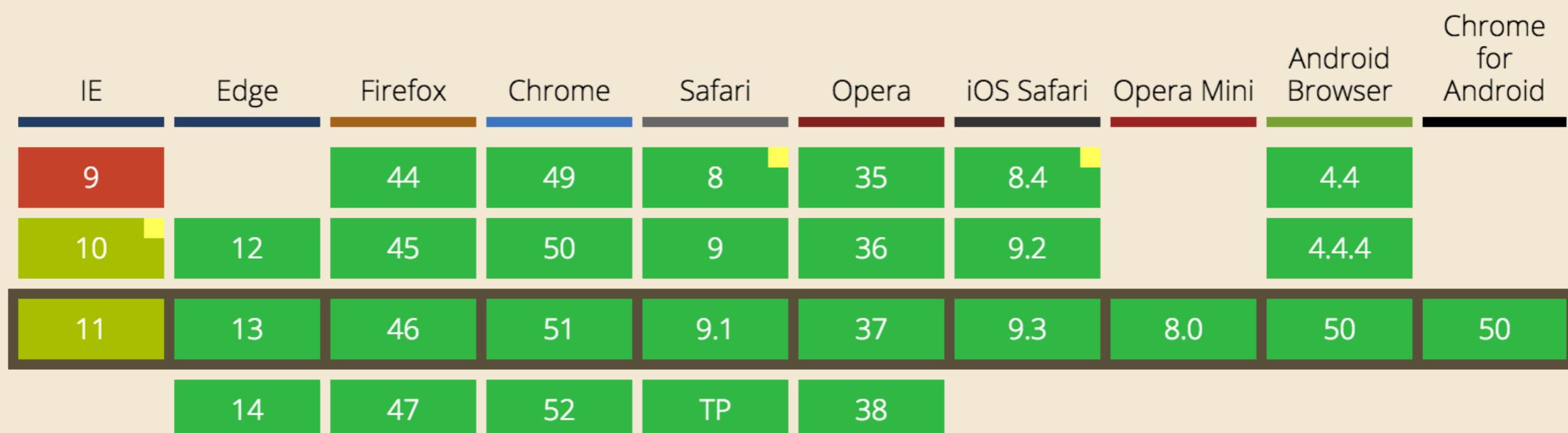


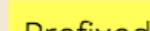
Web Fonts	System Fonts
Icon Fonts	SVG or Images
Gradients	Solid Background Colours
Animations	Meaningful Initial Frame

# Flexbox is your Friend

## Flexible Box Layout Module

Method of positioning elements in horizontal or vertical stacks. Support includes the support for the all properties prefixed with `flex` as well as `display: flex`, `display: inline-flex`, `align-content`, `align-items`, `align-self`, `justify-content` and `order`.



  Partial Support  Prefixed

Global: 76.38% + 17.65% = 94.03%

**Don't put a question mark  
where God puts a period.**

# Use SVG

```
3  
4  
5 <svg fill="#000000" height="24" viewBox="0 0 24 24" width="24" xmlns="http://www.w3.org/2000/svg">  
6   <path d="M0 0h24v24H0z" fill="none"/>  
7   <path d="M12 22c1.1 0 2-.9 2-2h-4c0 1.1.9 2 .2  
8     2zm6-6v-5c0-3.07-1.63-5.64-4.5-6.32V4c0-.83-.67-1.5-1.5-1.5s-1.5.67-1.5  
9     1.5v.68C7.64 5.36 6 7.92 6 11v5l-2 2v1h16v-1l-2-2zm-2 1H8v-6c0-2.48  
10    1.51-4.5 4-4.5s4 2.02 4 4.5v6z"/>  
11 </svg>
```



# Test Without Javascript

- *Can the user complete the **main purpose** of the site without javascript enabled?*

teaches

**Opera Mini ~~forces~~ us to practice  
Progressive Enhancement**

# Workflow Tips

**ONE DOES NOT SIMPLY**

**WRITE VANILLA HTML/CSS/JAVASCRIPT**



**Babel**  
@babeljs



Follow

"What are you doing?"

"My code is compiling"

"The language you code doesn't need to  
compile"

"WELL WE MADE IT COMPILE ANYWAYS!"

#babeljs

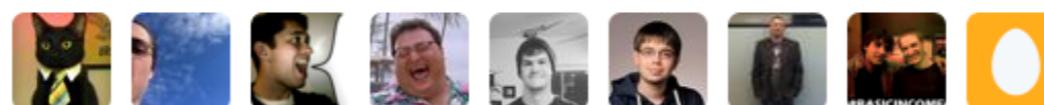
---

RETWEETS

**366**

LIKES

**420**



---

11:08 PM - 24 Mar 2016

# THE FRONT-END SPECTRUM



**CSS**

-A-



**PostCSS**

*Sass*

**cssnext {** / / /

# JavaScript

BABEL

jQuery  
*write less, do more.*



ESLint

# Automation



# Other



## Browsers



Google Chrome



Google Chrome Canary



Safari



Safari Technology Preview



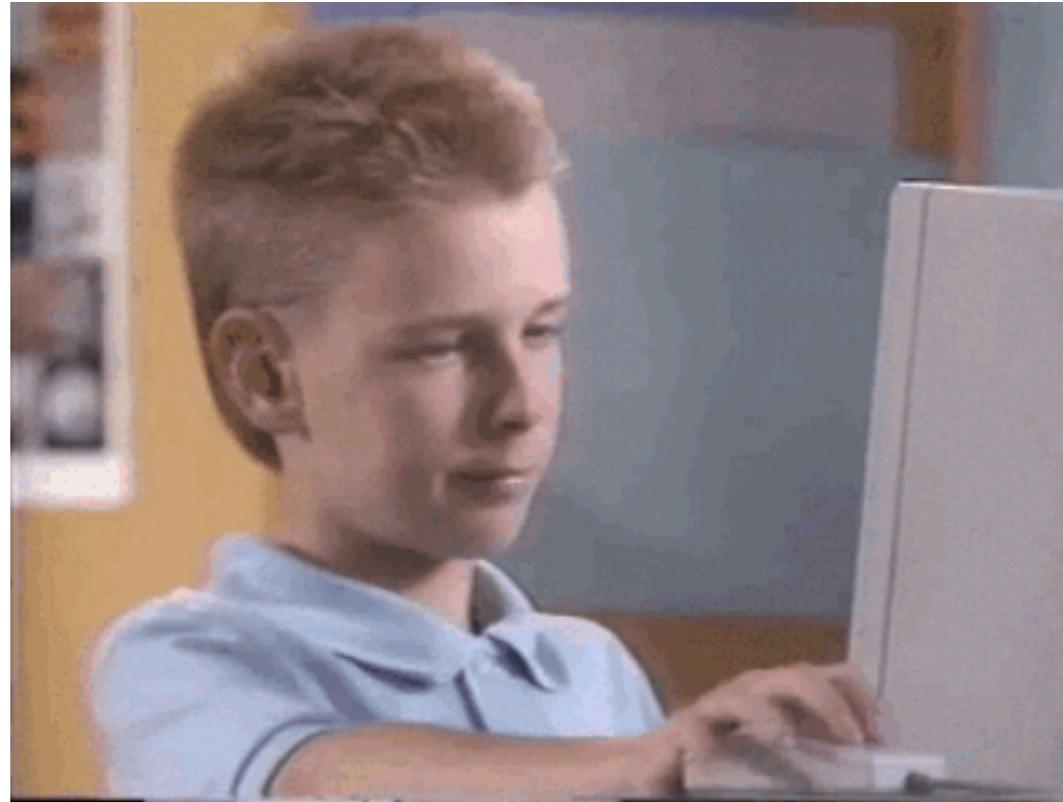
Firefox



Firefox Developer Edition



Opera Internet Browser



# Thanks!

[www.ireaderinokun.com](http://www.ireaderinokun.com)

[www.bitsofco.de](http://www.bitsofco.de)

@ireaderinokun