PUT DOWN THE JAVASCRIPT

Level Up with the Fundamentals of Web Development

PUSH START

@colbyfayock

Colby Fayock

Developer Advocate

applitools

@colbyfayock

Mark

Luke

Mark

Bootcamp A

4 week crash course

Become a Javascript ninja

Hot and popular libraries and frameworks like React & Redux

Luke

Bootcamp B

8 week intensive course

Build a website from scratch with HTML and CSS

Learn about how Javascript works and using it to make your website dynamic

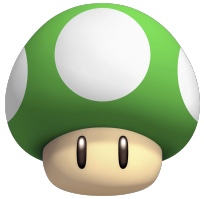
1up, Inc

Jr Front End Dev

Work with the engineering team to create and maintain websites

Technologies: HTML, CSS, JS, React, Redux, CSS-in-JS

Experience: 1+ years



1up, Inc

About Services

We 1up the competition

We at 1up, Inc care deeply about our customer's needs. We guarantee satisfaction with all of our ups.

Mark

Solution A

Bootstrap a new app

Use React as the framework

CSS-in-JS for styling

Luke

Solution B

Create an HTML file

Put together the page with HTML

Style everything with CSS

Solution A

Mark

Solution B

Luke

1up, Inc

1up, Inc

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```
➜  my-test-app npm install react
npm WARN saveError ENOENT: no such file or directory, open '/Users/colby/package.json'
npm WARN enoent ENOENT: no such file or directory, open '/Users/colby/package.json'
```

```
→  my-test-app npm install react
npm WARN saveError ENOENT: no such file or directory, open '/Users/colby/package.json'
```

```
10    <div id="root"></div>
11
12    <script src="https://unpkg.com/react@16/umd/react.development.js" crossorigin></script>
13    <script src="https://unpkg.com/react-dom@16/umd/react-dom.development.js" crossorigin></script>
14    <script>
15    const MyApp = () => {
16      return (
17        <div>
18          Hello world!
19        </div>
20      );
21    }
22    const domContainer = document.querySelector('#root');
23    ReactDOM.render(MyApp, domContainer);
24    </script>
```

```
→  my-test-app npm install react
npm WARN saveError ENOENT: no such file or directory, open '/Users/colby/package.json'
```

```
10    <div id="root"></div>
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14    <script>
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16      return (
17        <div>
18          Hello world!
19        </div>
20      );
21    }
22    const domContainer = document.querySelector('#root');
23    ReactDOM.render(MyApp, domContainer);
24    </script>
```

```
react-devtools-faq
Uncaught SyntaxError: Unexpected token '<'                    index.html:17
>
```

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```
➜  my-test-app npm install react
npm WARN saveError ENOENT: no such file or directory, open '/Users/colby/package.json'
```

```
10      <div id="root"></div>
11
12
13
14    <script src="https://unpkg.com/babel-standalone@6/babel.min.js"></script>
15    <script type="text/babel">
16    const MyApp = () => {
17      return (
18        <div>
19          Hello world!
20        </div>
21      );
22    }
23    const domContainer = document.querySelector('#root');
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```

```
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18        <div>
19          Hello world!
20        </div>
21      );
22    }
23    const domContainer = document.querySelector('#root');
24    ReactDOM.render(MyApp, domContainer);
```

```
precompile your scripts for production - https://babeljs.io/docs/setup/

▶Warning: Functions are not valid as a React child. react-dom.development.js:82
This may happen if you return a Component instead of <Component /> from render.
Or maybe you meant to call this function rather than return it.
```

```
→ my-test-app npm install react
```

```
<script type="text/babel">
const MyApp = () => {
  return (
    <div>
      <div className="nav">
        <h1>1up, Inc</h1>
      </div>
    </div>
  );
}
```

```
→  my-test-app npm install react
npm WARN saveError ENOENT: no such file or directory, open '/Users/colby/package.json'
```

```
    <div id="root"></div>

    <script src="https://unpkg.com/babel-standalone@6/babel.min.js"></script>
    <script type="text/babel">
    const MyApp = () => {
      return (
```

```
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const MyApp = () => {
  return (
    <div>
      <div className="nav">
        <h1>1up, Inc</h1>
      </div>
    </div>
  );
}
```

Oh, no!

<!DOCTYPE html> Untitled-1

```
1   <!DOCTYPE html>
2   <html lang="en">
3   <head>
4     <meta charset="UTF-8">
5     <meta name="viewport" content="width=device-width, initial-scale=1.0">
6     <title>Document</title>
7   </head>
8   <body>
9     
10  </body>
11  </html>
```

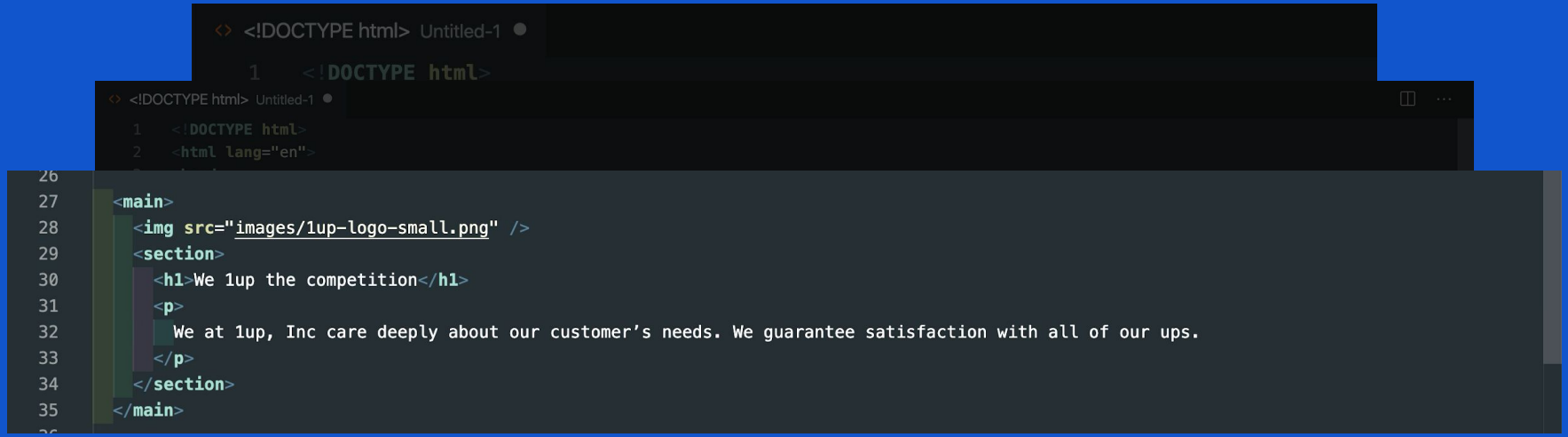
<!DOCTYPE html> Untitled-1

```
1   <!DOCTYPE html>
```

<!DOCTYPE html> Untitled-1

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
</head>
<body>

  <header>
    <p>
      <img src="images/1up-logo-small.png" />
      1up, Inc
    </p>
    <nav>
      <ul>
        <li>
          <a href="/about">About</a>
        </li>
        <li>
          <a href="/services">Services</a>
        </li>
      </ul>
    </nav>
  </header>
```



<!DOCTYPE html> Untitled-1

```html
<!DOCTYPE html>
```

<!DOCTYPE html> Untitled-1

```html
<!DOCTYPE html>
<html lang="en">
```

```html
<main>
  <img src="images/1up-logo-small.png" />
  <section>
    <h1>We 1up the competition</h1>
    <p>
      We at 1up, Inc care deeply about our customer’s needs. We guarantee satisfaction with all of our ups.
    </p>
  </section>
</main>
```

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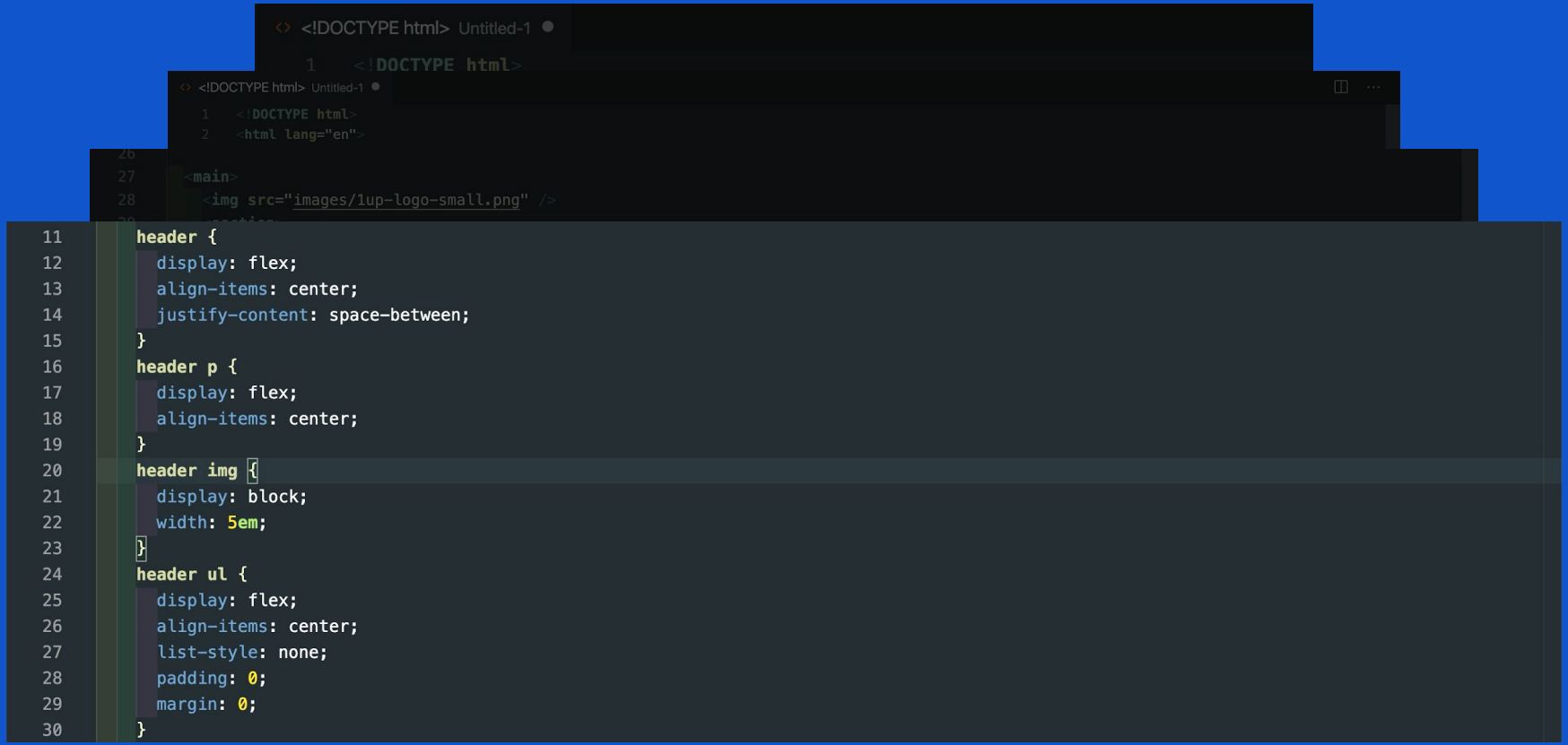

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Solution A

Mark

Solution B

Luke

1up, Inc

1up, Inc

About Services

We 1up the competition

@colbyfayock

Solution B

Luke

1up, Inc

About Services

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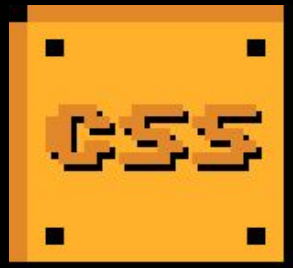

Starting with the basics

HTML

Hypertext Markup Language

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Document</title>
</head>
<body>
    <h1>Hello, world. It'sa me!</h1>
</body>
</html>
```

React / JSX

```
1  import React from 'react';
2
3  const MyPage = () => {
4    return (
5      <h1>Hello, world. It'sa me!</h1>
6    )
7  }
8
9  export default MyPage;
```

Compiled HTML

```
gtag('js', new Date());</script><style>.async-hide { opacity: 0 !important }</style><script>(fun
{s.className+=' '+y;h.start=1*new Date;
h.end=i=function(){s.className=s.className.replace(RegExp(' ?'+y),'')};
(a[n]=a[n]||[]).hide=h;setTimeout(function(){i();h.end=null},c);h.timeout=c;
})(window,document.documentElement,'async-hide','dataLayer',500,{'GTM-NJ75NM':true});</script><s
28076707-1', {"optimize_id":"GTM-MF4ZKBR"});</script><script>(function(w,d,s,l,i){w[l]=w[l]||[];
new Date().getTime(),event:'gtm.js'});var f=d.getElementsByTagName(s)[0],
j=d.createElement(s),dl=l!='dataLayer'?'&l='+l:'';j.async=true;j.src=
'https://www.googletagmanager.com/gtm.js?id='+i+dl+'&gtm_cookies_win=x';f.parentNode.insertBefor
})(window,document,'script','dataLayer', 'GTM-NJ75NM');</script><link as="script" rel="preload"
b319c86f02de5ec43924.js"/><link as="script" rel="preload" href="/framework-8e210829bcc33c32949c.
rel="preload" href="/532a2f07-05d0124221769214927b.js"/><link as="script" rel="preload" href="/a
<link as="script" rel="preload" href="/styles-dae9ed5f9ccc5d832e2f.js"/><link as="script" rel="p
723ebac6e6cf64f05011.js"/><link as="script" rel="preload" href="/5e2a4920-9137fe65eee67519368e.j
rel="preload" href="/37272d1faf3f5a324dd7a8eed57e2d6b70c2dab2-763d03f360d41cd8a342.js"/><link as
href="/component---src-pages-index-js-ccb8ffb8baa20a7c0764.js"/><link as="fetch" rel="preload" h
data.json" crossorigin="anonymous"/><link as="fetch" rel="preload" href="/page-data/app-data.jso
</head><body class="home"><noscript><iframe
  src="https://www.googletagmanager.com/ns.html?id=GTM-NJ75NM&gtm_cookies_win=x"
  height="0"
  width="0"
  style="display: none; visibility: hidden"
></iframe></noscript><div id="___gatsby"><div style="outline:none" tabindex="-1" id="gatsby-focu
class="header container" role="navigation"><div class="content"><div class="row"><div class="hea
current="page" class="" href="/">Colby Fayock</a><span class="tagline">A UX Designer &amp; Front
</div><div class="header-social"><ul class="social-icons"><div><li class="social-icons-twitter">
href="http://twitter.com/colbyfayock" rel="me"><svg stroke="currentColor" fill="currentColor" st
512" height="1em" width="1em" xmlns="http://www.w3.org/2000/svg"><path d="M459.37 151.716c.325 4
138.72-105.583 298.558-298.558 298.558-59.452 0-114.68-17.219-161.137-47.106 8.447.974 16.568 1.
16.568 130.274-44.832-46.132-.975-84.792-31.188-98.112-72.772 6.498.974 12.995 1.624 19.818 1.62
3.573-48.081-9.747-84.143-51.98-84.143-102.985v-1.299c13.969 7.797 30.214 12.67 47.431 13.319-28
87.391 0-19.492 5.197-37.36 14.294-52.954 51.655 63.675 129.3 105.258 216.365 109.807-1.624-7.79
57.828 46.782-104.934 104.934-104.934 30.213 0 57.502 12.67 76.67 33.137 23.715-4.548 46.456-13.
24.366 44.833-46.132 57.827 21.117-2.273 41.584-8.122 60.426-16.243-14.292 20.791-32.161 39.308-
er</span></a></li><li class="social-icons-youtube"><a href="https://youtub
fill="currentColor" stroke-width="0" viewBox="0 0 576 512" height="1em" wi
```

```
<body class="home">
    <noscript>
        <iframe src="https://www.googletagmanager.com/ns.html?id=GTM-NJ75NM&gtm_cookies_win=x"
    </noscript>
    <div id="___gatsby">
        <div style="outline:none" tabindex="-1" id="gatsby-focus-wrapper">
            <div>
                <nav class="header container" role="navigation">
                    <div class="content">
                        <div class="row">
                            <div class="header-logo">
                                <h1 class="h1">
                                    <a aria-current="page" class="" href="/">Colby Fayock</a>
                                    <span class="tagline">A UX Designer &amp;amp;Front End Engineer
                                </h1>
                            </div>
                            <div class="header-social">
                                <ul class="social-icons">
                                    <div>
                                        <li class="social-icons-twitter">
                                            <a href="http://twitter.com/colbyfayock" rel="me">
                                                <svg stroke="currentColor" fill="currentColor"
                                                    <path d="M459.37 151.716c.325 4.548.325 9.0
                                                </svg>
                                                <span class="ir">Twitter</span>
                                            </a>
                                        </li>
                                        <li class="social-icons-youtube">
                                            <a href="https://youtube.com/colbyfayock" rel="me">
                                                <svg stroke="currentColor" fill="currentColor"
                                                    <path d="M549.655 124.083c-6.281-23.65-24.7
                                                </svg>
                                                <span class="ir">Youtube</span>
                                            </a>
                                        </li>
                                        <li class="social-icons-eggheadio">
                                            <a href="https://egghead.io/instructors/colby-fayoc
```

CSS

Cascading Style Sheets

```
7     <style>
8       h1 {
9         color: red;
10        font-size: 30px;
11        text-transform: uppercase;
12      }
13    </style>
14  </head>
15  <body>
16    <h1>Hello, world. It'sa me!</h1>
```

React + CSS

```
import 'assets/stylesheets/application.scss';

const MyPage = () => {
  return (
    <>
      <h1>Hello, world. It'sa me!</h1>
    </>
  )
```

```
<style jsx global>{`
  h1 {
    color: red;
    font-size: 30px;
    text-transform: uppercase;
  }
`}</style>
<h1>Hello, world. It'sa me!</h1>
```

```
const useStyles = createUseStyles({
  h1: {
    color: 'red',
    fontSize: 30,
    textTransform: 'uppercase'
  }
```

```
const Title = styled.h1`
  color: red;
  font-size: 30px;
  text-transform: uppercase;
`;

const MyPage = () => {
```

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Compiled CSS

```
}

@media (max-width: 37.5em) {
    .article-header {
        padding:0 0 4em
    }
}

.article-header h1 {
    font-size: 4.08em;
    text-align: center;
    margin-bottom: 0
}

@media (max-width: 37.5em) {
    .article-header h1 {
        font-size:3em
    }
}

.article-content-body {
    margin-bottom: 2em
}

.article-content-body h2:first-child,.article-content-body h3:first-child,.article-content-b
    margin-top: 0
}

.article-content-body img {
    display: block;
    margin-left: auto;
    margin-right: auto
}

.article-meta {
    color: #747a80;
```

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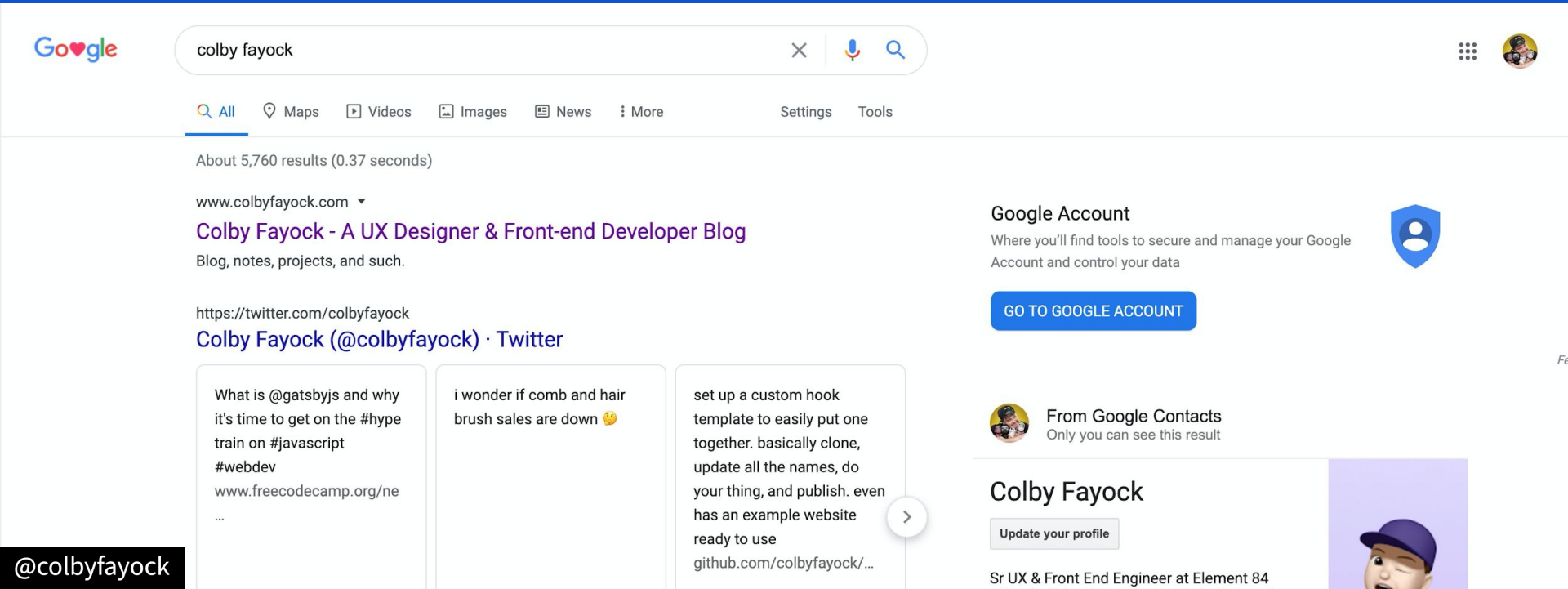
LEVEL UP

SEO

Search Engine Optimization



HTML Page Outline

```
* Super Mario Bros. Switch Games
  * Mario
    * Mario Karty 8 Deluxe
    * Super Mario Party
    * Mario Tennis Aces
  * Luigi
    * Luigi's Mansion 3
```

```
<h1>Super Mario Bros. Switch Games</h1>
<h2>Mario</h2>
<h3>Mario Karty 8 Deluxe</h3>
<h3>Super Mario Party</h3>
<h3>Mario Tennis Aces</h3>
<h2>Luigi</h2>
<h3>Luigi's Mansion 3</h3>
```

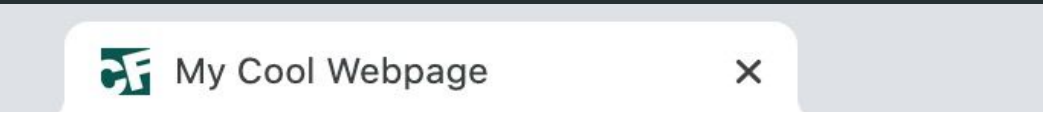
Image Alt

```
<img src="/image/01293u501823y532.jpg" />
```

```
<img src="/image/01293u501823y532.jpg" alt="Mark and Luke storming the castle" />
```

<title>

```
<title>My Cool Webpage</title>
```



www.colbyfayock.com › 2014/07 › interesting-blog

My Cool Web Page

Jul 8, 2014 - This is a blog post that's really intere

has many interesting things.

```
<title>Interesting Blog Post – My Cool
```

www.colbyfayock.com › 2014/07 › interesting-blo

Interesting Blog Post - My Cool W

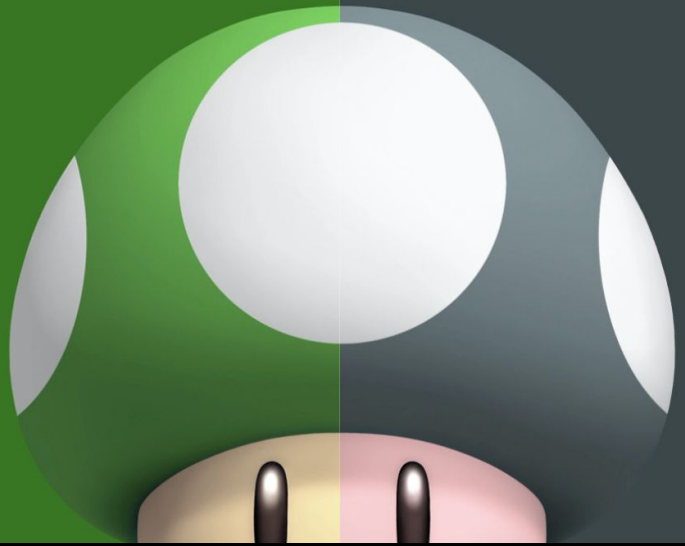
Jul 8, 2014 - This is a blog post that's really inter

has many interesting things.

ACCESSIBILITY

Accessibility

No Simulation | Yellow-Blue Color Blindness | Red-Green Color Blindness | Total Color Blindness



We 1up the competition

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Simulated with Web Disability Simulator from Metamatrix

HTML Page Outline

```
* Super Mario Bros. Switch Games
  * Mario
    * Mario Karty 8 Deluxe
    * Super Mario Party
    * Mario Tennis Aces
  * Luigi
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```
<h1>Super Mario Bros. Switch Games</h1>
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<h3>Super Mario Party</h3>
<h3>Mario Tennis Aces</h3>
<h2>Luigi</h2>
<h3>Luigi's Mansion 3</h3>
```

Image Alt

```
<img src="/image/01293u501823y532.jpg" />
```

```
<img src="/image/01293u501823y532.jpg" alt="Mark and Luke storming the castle" />
```

Lists

```
<div className="nav">
  <div><a href="#">Link 1</a></div>
  <div><a href="#">Link 2</a></div>
  <div><a href="#">Link 3</a></div>
</div>
```

```
<ul className="nav">
  <li><a href="#">Link 1</a></li>
  <li><a href="#">Link 2</a></li>
  <li><a href="#">Link 3</a></li>
</ul>
```

SIMPLICITY

```
const MyComponent = () => {
  const defaultWidth = 800;
  const defaultHeight = 600;
  const ratio = defaultHeight / defaultWidth;

  const [dimensions, setDimensions] = useState({
    width: defaultWidth,
    height: defaultHeight
  });

  function handleOnWindowResize() {
    const width = window.innerWidth;
    const height = width * ratio;
    setDimensions({
      width,
      height
    });
  }

  useEffect(() => {
    window.addEventListener('resize', handleOnWindowResize);
    return () => {
      window.removeEventListener('resize', handleOnWindowResize);
    }
  }, []);

  const styles = {
    backgroundImage: url('/my-image.jpg'),
    ...dimensions
  }

  f={ref} style={styles} />;
```

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Simplicity

```
const MyComponent = () => {
  const styles = {
    width: '100%',
    height: 0,
    backgroundImage: url('/my-image.jpg'),
    backgroundSize: 'cover',
    paddingTop: `${(800/600)*100}%`
  }

  return <div style={styles} />;
}

export default MyComponent;
```

Get Interactive with Native HTML

```
<label>My Favorite Color</label>
<input type="text" name="color" list="colors" />
<datalist id="colors">
  <option value="Magenta" />
  <option value="Purple" />
```

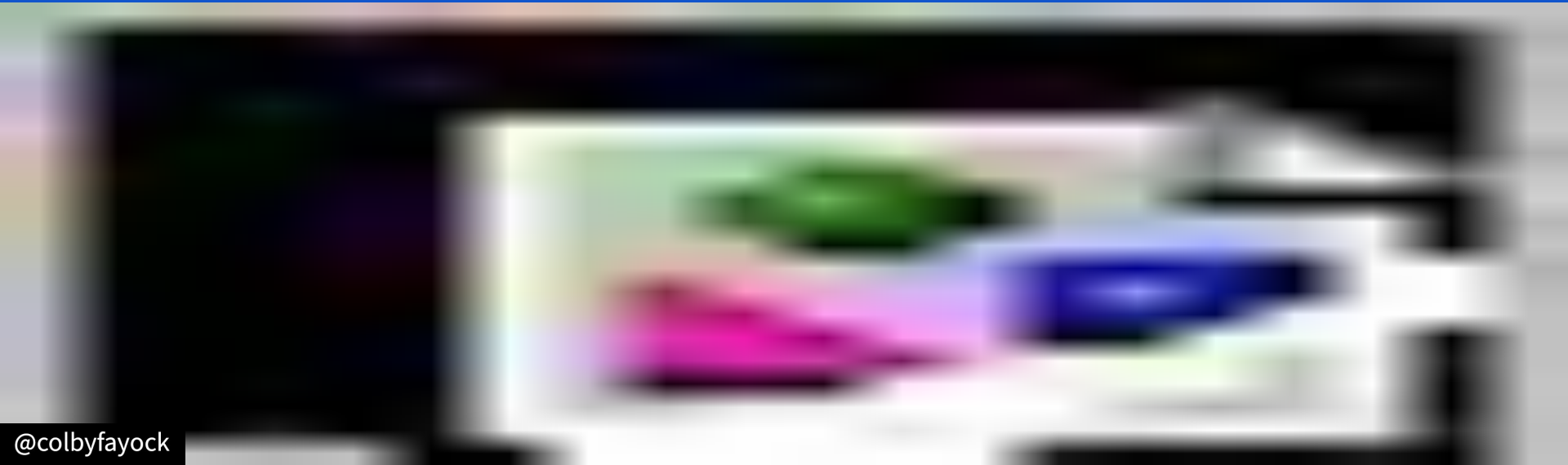
Loading Without the Load

```
.loading {
  background: linear-gradient(90deg, #eff1f1 30%,
  background-size: 400%;
  animation: loading 1.2s ease-in-out infinite;
}

@keyframes loading {
  0% {
    background-position: 100% 50%;
  }
  100% {
    background-position: 0 50%;
  }
}
```


@colbyfayock

Responsive Text



YOU WIN!

FROM DESIGN TO DEVELOPMENT

CRASH COURSE

fromdesignto.dev

@colbyfayock

GAME OVER

Colby Fayock

Developer Advocate

applitools @colbyfayock

colbyfayock.com/jsnation-fundamentals