

# A modern web setup for static sites

with a sprinkle of JavaScript

# Who am I?

---



## ING

Working on Design Systems  
Maintaining Lion (Library of white label  
Web Components)

## Open Source

Founder of Open Web Components  
Co-Founder of Modern Web  
Part of the W3C Web Components  
Community Group

**Thomas Allmer (@daKmoR)**  
Loves the Web ❤️

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From nothing to the web  
we have today

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What should our app do and  
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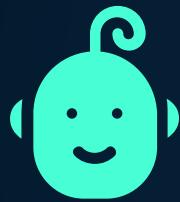
Lift off



**How it all started**

# 1993 (28 years ago)

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**Kid**

Playing in the garden



**Access to a computer**

Knew no one with a computer

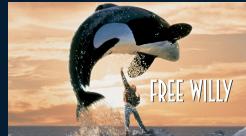


**Access to Internet**

Basically non existing  
Europe ~0.4%

# 1993 (28 years ago)

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## Movies

Jurassic Park & Free Willy



## Microsoft Windows

Version 3.1



## HTML

HTML 1

# 1996 (25 years ago)

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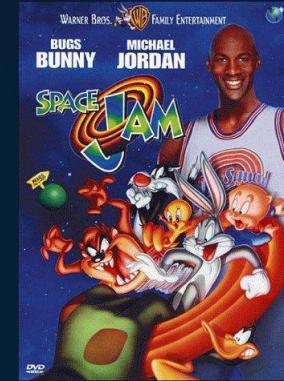
## My first PC

My dad got an old one from  
a friend  
Installed Windows 3.11 with  
many floppy disks



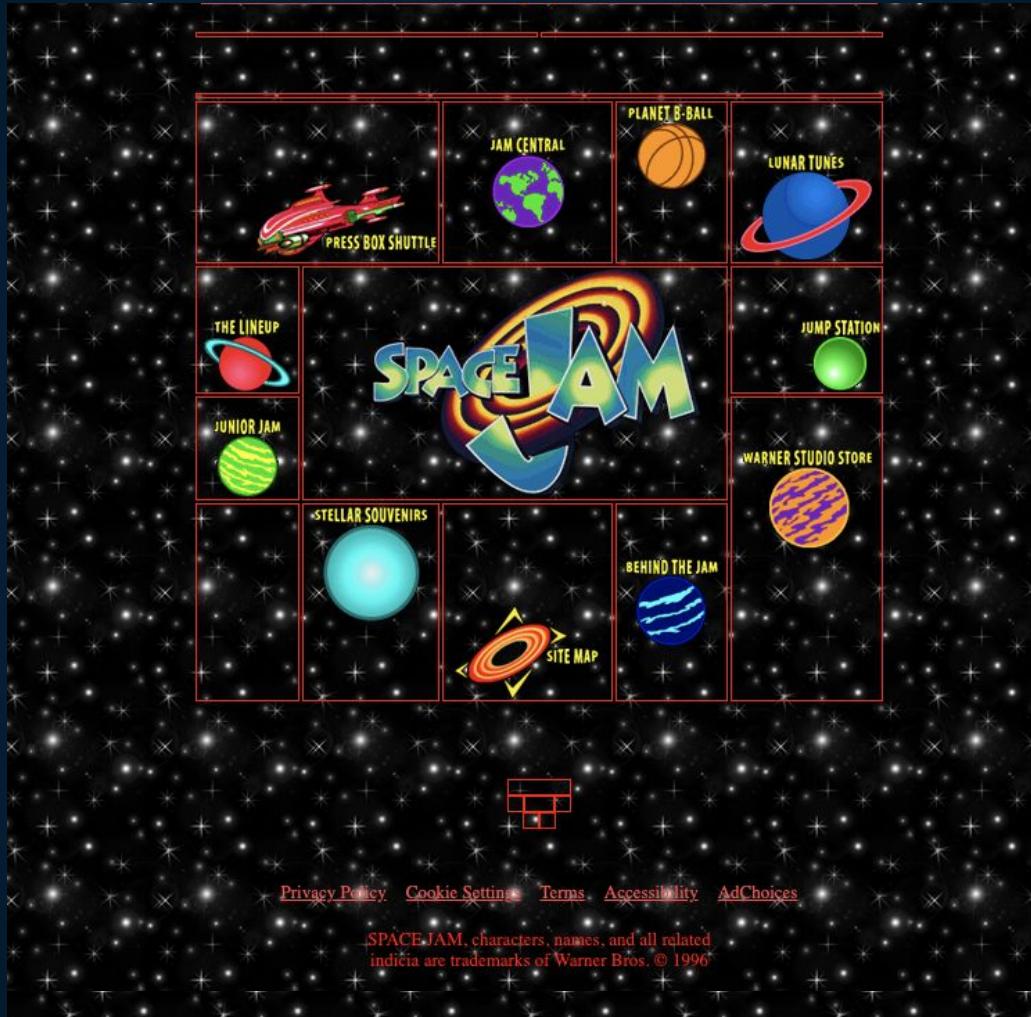
## Access to Internet

is growing  
Europe ~2.8%



## Space Jam

Website still live & working  
<https://www.spacejam.com/1996/>

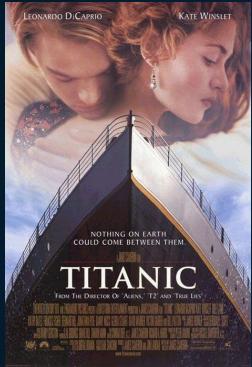


[Privacy Policy](#) [Cookie Settings](#) [Terms](#) [Accessibility](#) [AdChoices](#)

SPACEJAM, characters, names, and all related  
indicia are trademarks of Warner Bros. © 1996

# 1997 (24 years ago)

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**Titanic**  
made ~1800 million USD  
worldwide  
did not have a website



## Access to Internet

doubled in 1 year  
Europe ~5.1%



**HTML**  
HTML 4

# 2001 (20 years ago)

---



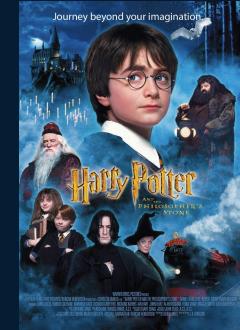
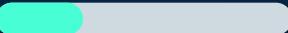
## Laptop at school

I was at a "laptop class"



## Access to Internet

is growing rapidly  
Europe ~25%



## Movie Series

Lord of the Rings I  
Harry Potter I  
no (dedicated) websites

# 2001 (20 years ago)

---



## CSS 1+2

CSS exists since 1996 but adoption & support is slow



## IE6

August 2001 IE6 was born in a 80%+ dominant IE market and it would keep it for the next decade

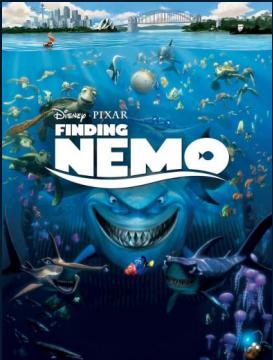


## PC sales go down

Speed is already at 2 GHz  
20 years later my Laptop has 6 Cores with 2.6 GHz  
Laptop sales are raising

# 2003 (18 years ago)

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## Finding Nemo

won the first Academy Award for Best Animated Feature for Pixar



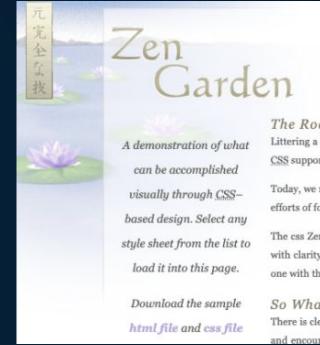
## Access to Internet

skyrocketing  
Europe ~41%



## WordPress

start of a CMS that in 2021 will powers ~40% of the top 10 million pages\*



## CSS Zen Garden

shows the power of CSS

# CSS Zen Garden



Same HTML - different CSS



Hugely different designs



Gets many contributions



Sparked love for CSS

The screenshot shows the header "Zen Garden" with a background image of a traditional Japanese garden. Below it is a section titled "The Road to Enlightenment" with text about CSS-based design. To the right is a sidebar with links to various designs and navigation options.

**Zen Garden**

*The Beauty of CSS Design*

**The Road to Enlightenment**

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the [W3C](#), [WaSP](#) and the major browser creators.

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.

**So What is This About?**

There is clearly a need for [CSS](#) to be taken seriously by graphic artists. The Zen Garden aims to excite, inspire, and encourage participation. To begin, view some of the existing designs in the list. Clicking on any one will load the style sheet into this very page. The code remains the same, the only thing that has changed is the external [.css](#) file. Yes, really.

CSS allows complete and total control over the style of a hypertext document. The only way this can be illustrated in a way that gets people excited is by demonstrating what it can truly be, once the reins are placed in the hands of those able to create beauty from structure. To date, most examples of neat tricks and hacks have been demonstrated by structurists and coders. Designers have yet to make their mark. This needs to change.

**Participation**

Graphic artists only please. You are modifying this page, so strong [CSS](#) skills are necessary, but the example files are commented well enough that even [CSS](#) novices can use them as starting points. Please see the [CSS Resource Guide](#) for advanced tutorials and tips on working with [CSS](#).

You may modify the style sheet in any way you wish, but not the [HTML](#). This may seem daunting at first if you've never worked this way before, but follow the listed links to learn more, and use the sample files as a guide.

Download the sample [html file](#) and [css file](#) to work on a copy locally. Once you have completed your masterpiece (and please, don't submit half-finished work) upload your [css](#) file to a web server under your control. [Send us a link](#) to the file and if we choose to use it, we will spider the associated images. Final submissions will be placed on our server.

update: I'm looking for translators. If you are fluent in English and another language, this is another way to get involved with the project. Please [contact me](#) for details. Existing translations are [available](#).

**Benefits**

Why participate? For recognition, inspiration, and a resource we can all refer to when making the case for [CSS](#)-based design. This is sorely needed, even today. More and more major sites are taking the leap, but not enough have. One day this gallery will be a historical curiosity; that day is not today.

**Requirements**

We would like to see as much [CSS1](#) as possible. [CSS2](#) should be limited to widely-supported elements only. The css Zen Garden is about

**select a design:**

- Gemination by Egor Klosos
- Sky by Stefan Petre
- Extreme Limits by Richard Chatfield
- Dune Temple by Marc LA Reimer
- Radio Zen by Marc LA den Heuvel
- This is Cereal by Shau Inman
- Elevation by Nigel Goodfellow
- zenlightenment by Lance Leonard

**archives:**

- [next designs »](#)
- [View All Designs](#)

**resources:**

- [View This Design's CSS](#)
- [CSS Resources](#)
- [FAQ](#)
- [Submit a Design](#)
- [Translations](#)



**A DEMONSTRATION OF WHAT CAN BE ACCOMPLISHED VISUALLY THROUGH CSS-BASED DESIGN. SELECT ANY STYLE SHEET FROM THE LIST TO LOAD IT INTO THIS PAGE.**

Download the sample [HTML file](#) and [CSS file](#)

**The Road To Enlightenment**

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by Egor Kloos

**Sky**  
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by Richard Chatfield

**Dune Temple**  
by Greg Reimer

**Radio Zen**  
by Marc LA van den Heuvel

**This is Cereal**  
by Shaun Inman

**Elevation**  
by Nigel Goodfellow

**zenlightenment**  
by Lance Leonard

**Archives**

[next designs »](#)  
[« previous designs](#)  
[view all designs](#)

**Resources**

[View This Design's CSS](#)  
[CSS Resources](#)  
[FAQ](#)  
[Submit a design](#)  
[Translations](#)



**Select a Design**

**Atlantis**  
by kevin davis

**Gothica**  
by patrick h. lauke

**Zunflower**  
by radu darvas

**memonic**  
by dave shea

**Not So Minimal**  
by dan rubin

**fleur de l'avante-garde**  
by michael switzer

**viridity**  
by laura macarthur

**Calm & Smooth**  
by cornelia lange

**Archives**

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**So what is this all about ?**

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A demonstration of what can be accomplished visually through CSS-based design. Select any style sheet from the list to load it into this page.

Download the sample [HTML FILE](#) and [CSS FILE](#)



# 2005/2007

---



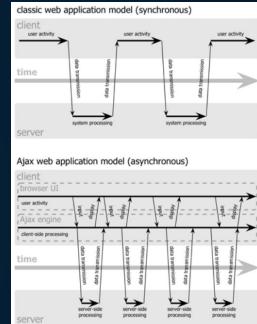
## iPhone

The first mass market mobile phone with touch  
(in 2007)



## Access to Internet

More than half Europe ~50.9%  
(in 2005)



## Introduction of AJAX

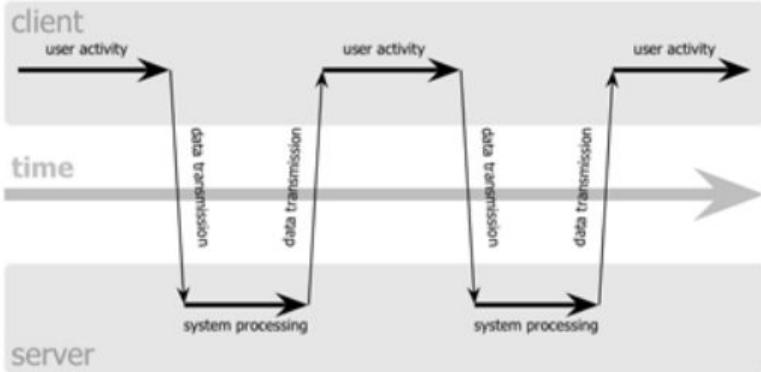
Revolutionizes App Structures



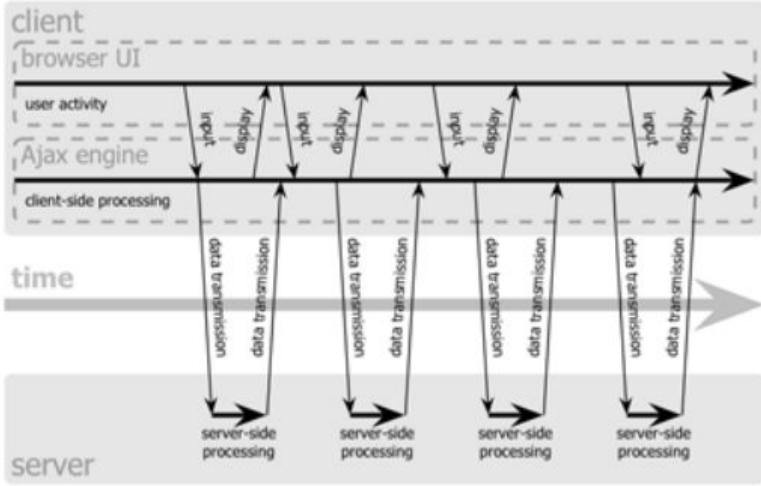
“Ajax vastly improved user experience by allowing web pages to feel more like native desktop apps.”

— T.J. DeGroat

## classic web application model (synchronous)



## Ajax web application model (asynchronous)



# AJAX

Breaks up communication



Feels more like an app



Elevates JS usage



# 2008 (13 years ago)

---



## The Dark Knight

Marks the rise of "dark" movies



## Access to Internet

Unstoppable  
Europe ~64.2%



## HTML5

The latest iteration still used today

# THE WEB

---



**HTML**  
provides the basic structure and content of websites.



**CSS**  
is used to control presentation, formatting, and layout.



**JavaScript**  
is used to control the behavior of different elements.

# 2013 (8 years ago)

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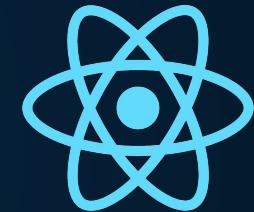
## Frozen

An instant kid favorite



## Access to Internet

Basically everywhere  
Europe ~75.7%



## React

Facebook open sources a now very popular framework using a virtual dom

# Frontend become more complex



Responsive Design



Multiple image sizes and formats



Social media images



Progressive Web App



Support Offline



Animations, Touch, feel native



Accessibility



SEO, Live Collaboration, ...



# Setup Goals

0 0 0

My App

Header + Logo

Home  
Calculate  
About

# Welcome

to our site

## Calculate

We convert Euros into  
Dollars for you

Dollar:

is EUR 5.26

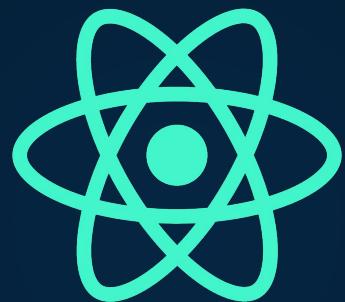
With a rate of 113 last updated on 2021-05-05

static content as home

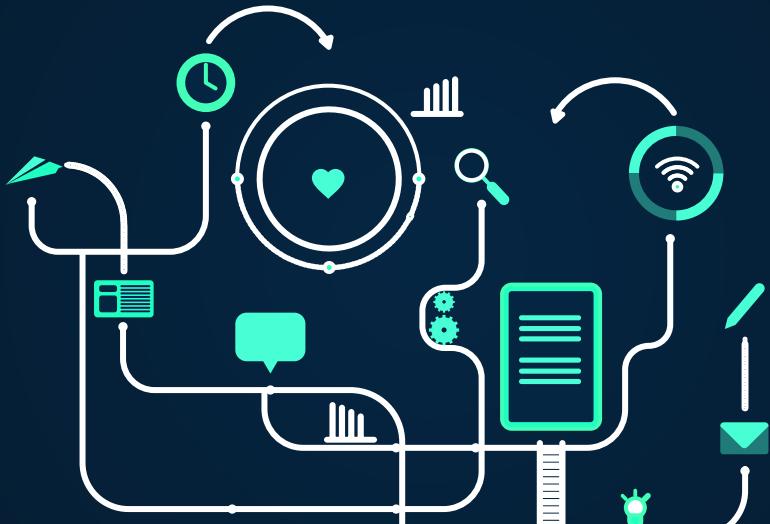
# Goals

-  Source works in browser
-  Performance
-  Debugging
-  App feeling
-  No repetitive code





**React App**



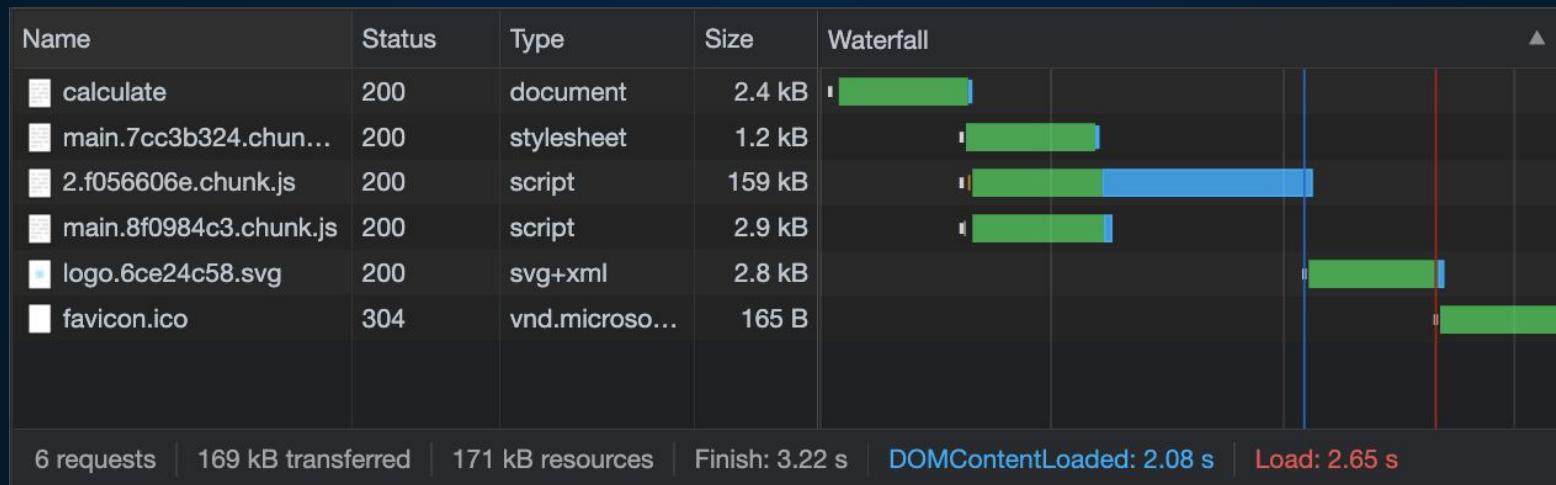
A screenshot of a web development environment, likely Microsoft Edge DevTools, showing a code editor and a browser preview. The code editor displays a component template with a navigation bar and a main content area. A tooltip or dropdown menu is open over the word 'About' in the navigation bar, listing several suggestions related to the component 'About'. The browser preview shows a simple 'Welcome' page with a link to the calculator.

```
<div>
  <ul>
    <li><a href="/calculator">Calculator</a></li>
    <li><a href="/about">About</a></li>
  </ul>
</div>

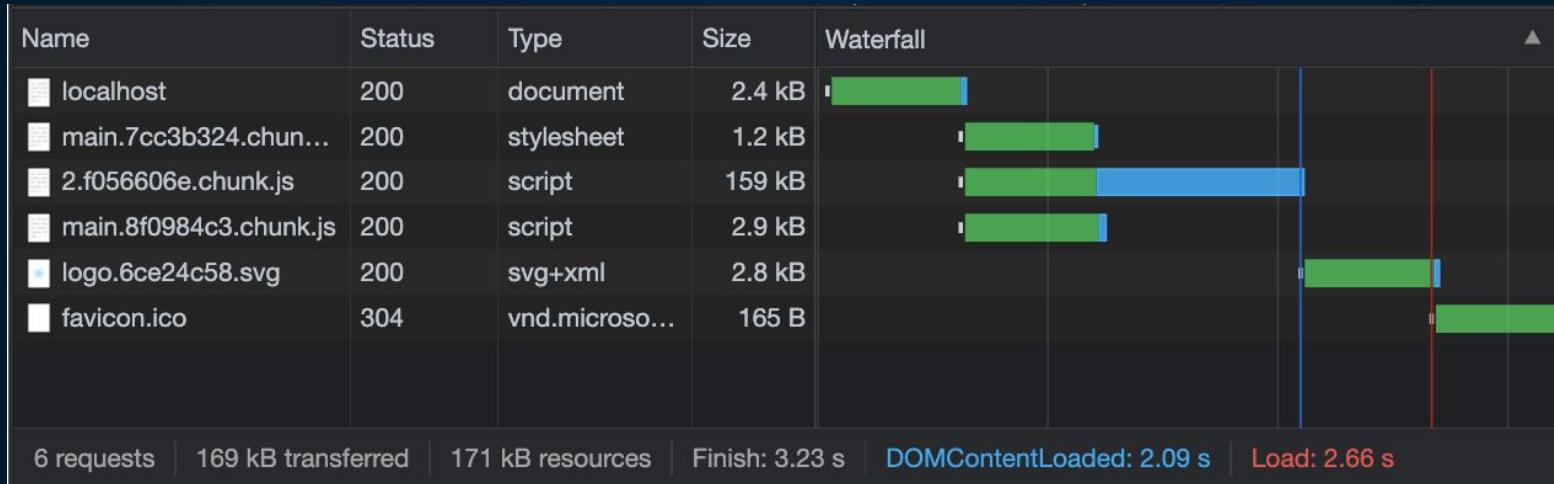
<main>
  <Route path="/" component={Home} />
  <Route path="/about" component={About}>
    <About />
    <About />
    <About />
    <About />
    <About />
    <About />
  </Route>
</main>

Function Home() {
  return (
    <div>
      <h1>Welcome</h1>
      <p>To this page that offers a calculator</p>
    </div>
  )
}
```

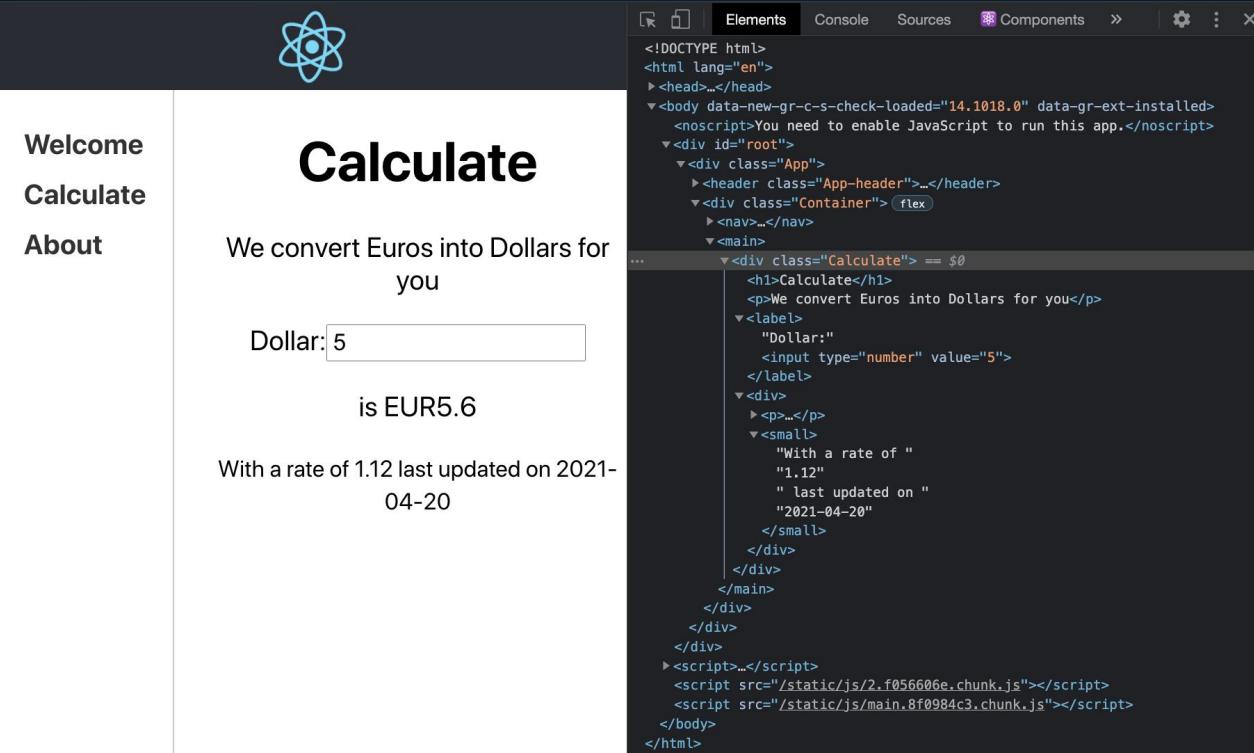
# Calculate Page



# Welcome Page



# Browser Tools



The screenshot shows a browser window with a developer tools overlay. The main content area displays a simple web application titled "Calculate". The app converts Euros into Dollars. A sidebar on the left lists "Welcome", "Calculate", and "About". The main content includes a heading "Calculate", a sub-heading "We convert Euros into Dollars for you", a form field "Dollar: 5", and a result "is EUR5.6". Below the result, a note states "With a rate of 1.12 last updated on 2021-04-20". The developer tools' "Elements" tab is active, showing the DOM structure of the page. The DOM tree starts with the `<!DOCTYPE html>` declaration and includes elements like `<html>`, `<head>`, `<body>`, and various components such as `<App>`, `<Container>`, `<main>`, and `<Calculate>`. The selected element in the tree is the `<Calculate>` component, which contains the converted value "is EUR5.6". The developer tools also show script tags at the bottom of the body.

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body data-new-gr-c-s-check-loaded="14.1018.0" data-gr-ext-installed>
    <noscript>You need to enable JavaScript to run this app.</noscript>
    <div id="root">
      <div class="App">
        <header class="App-header">...</header>
        <div class="Container" flex>
          <nav>...</nav>
          <main>
            <div class="Calculate" style="border: 1px solid #ccc; padding: 10px; border-radius: 5px; margin-bottom: 10px">
              <h1>Calculate</h1>
              <p>We convert Euros into Dollars for you</p>
              <label>
                "Dollar:"<br/>
                <input type="number" value="5">
              </label>
              <div>
                <p>...</p>
                <small>
                  "With a rate of "<br/>
                  "1.12"<br/>
                  " last updated on "<br/>
                  "2021-04-20"
                </small>
              </div>
            </div>
          </main>
        </div>
      </div>
    </div>
    <><script>...</script>
      <script src="/static/js/2.f056606e.chunk.js"></script>
      <script src="/static/js/main.8f0984c3.chunk.js"></script>
    </body>
</html>
```

# Browser Tools

The screenshot shows a browser window with a dark theme. On the left, a sidebar menu has three items: "Welcome", "Calculate", and "About". The main content area features a logo of a blue atom icon above the word "Calculate". Below it is a message: "We convert Euros into Dollars for you". A text input field contains "Dollar: 50". Below the input, the text "is EUR56" is displayed. At the bottom, a note says "With a rate of 1.12 last updated on 2021-04-20".

The right side of the browser shows the React DevTools interface. The "Components" tab is selected, displaying a tree of components. The "Calculate" component is highlighted. The "props" section shows the following state:

```
history: {action: "PUSH", block: f block() {}, createHref: f...}
location: {hash: "", key: "2j5q6q", pathname: "/calculate", s...}
match: {isExact: true, params: {...}, path: "/calculate", ur...}
staticContext: undefined
new entry: ""

state
limit: 100
value: 50
```

# Browser Debugging

The screenshot shows a browser developer tools interface with two main panes: 'Sources' and 'Console'.

**Sources:** This pane displays the file structure and code for 'Calculate.js'. It includes an 'onInput' event handler and a 'render' function. A 'debugger;' statement is present in the 'render' function. The code is color-coded for syntax highlighting.

```
JS dollarToEuro.js      JS Calculate.js M X ⏪ ⏭ ...  
finished > src > JS Calculate.js > Calculate > render  
  onInput(event) {  
    this.setState({ value: event.target.value });  
  }  
  
  render() {  
    debugger;  
    return (  
      <div  
        className={  
          this.state.value > this.state.limit  
            ? "Calculate aboveLimit"  
            : "Calculate"  
        }  
      >  
      <h1>Calculate</h1>  
      <p>We convert Euros into Dollars for you</p>  
    );  
  }  
}
```

**Console:** This pane shows a stack trace and source code for 'main.chunk.js'. The stack trace includes frames for 'Calculate.js' and 'main.chunk.js'. The source code for 'main.chunk.js' is displayed, showing various component definitions and a 'debugger;' statement.

```
Console Sources Components > ⚙️ ⏪ ⏭  
main.2e7834f4be...hot-update.js main.chunk.js x >  
453   this.setState(  
454     value: event.target.value  
455   );  
456 }  
457  
458 render() {  
459   debugger;  
460   return /*#__PURE__*/Object(react_jsx_dev_runtime  
461     className: this.state.value > this.state.limit  
462     children: /*#__PURE__*/Object(react_jsx_dev_r  
463       children: "Calculate"  
464     ), void 0, false, {  
465       fileName: _jsxFileName,  
466       lineNumber: 26,  
467       columnNumber: 9  
468     }, this), /*#__PURE__*/Object(react_jsx_dev_r  
469     children: "We convert Euros into Dollars for  
470     ", void 0, false, {  
471       fileName: _jsxFileName,  
472       lineNumber: 28,  
473       columnNumber: 9  
474     }, this), /*#__PURE__*/Object(react_jsx_dev_r  
475     children: ["Dollar:", /*#__PURE__*/Object(re  
476       type: "number",  
477       value: this.state.value,  
478       onInput: this.onInput  
479     ), void 0, false, {  
480       fileName: _jsxFileName,  
481       lineNumber: 32,  
482       columnNumber: 11  
483     }, this)]  
484   ), void 0, true, {  
485     fileName: _jsxFileName,  
486     lineNumber: 30,  
487     columnNumber: 9  
488 }
```

\*disabled/or broken sourcemaps



Source works in browser



Performance



Debugging



App feeling

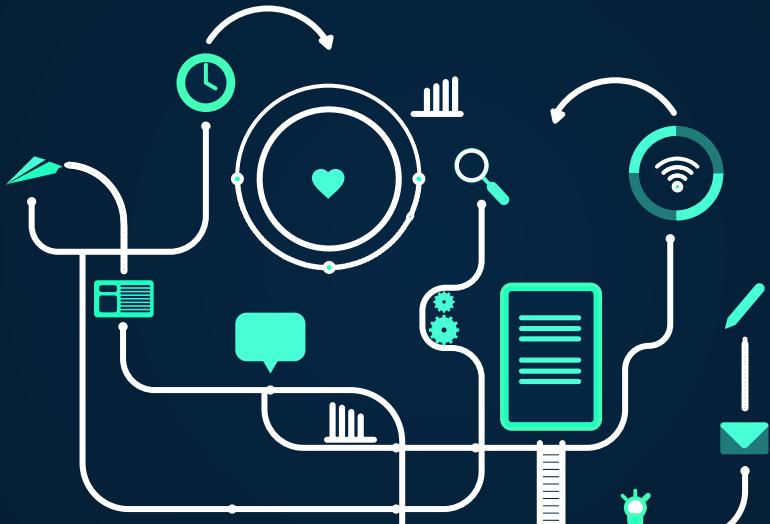


No repetitive code





**Lit App**

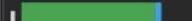
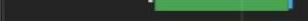
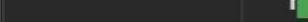
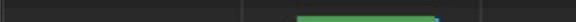
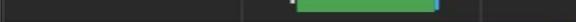


```
JS lit-calculate.js > ...
  class LitCalculate extends HTMLElement {
    connectedCallback() {
      this.innerHTML = 'test lit';
    }
  }
  customElements.define('lit-calculate', LitCalculate);
```

pare and boil.

mv add v1.2.4  
warning: /usr/include/bits/ No license field  
warning: /usr/include/sys/types.h No license field  
No license file found.  
• Re-enforcing restrictions...  
• Re-enforcing packages...  
• Blocking dependencies...

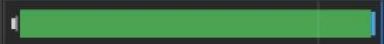
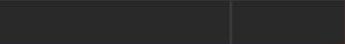
# Calculate Page

| Name                | Status              | Type              | Size           | Waterfall  |
|---------------------|---------------------|-------------------|----------------|--|
| calculate/          | 200                 | document          | 1.5 kB         |  |
| style.css           | 200                 | stylesheet        | 1.4 kB         |  |
| lit-calculate.js    | 200                 | script            | 1.7 kB         |  |
| logo.svg            | 200                 | svg+xml           | 2.8 kB         |  |
| index.js            | 200                 | script            | 350 B          |  |
| dollarToEuro.js     | 200                 | script            | 355 B          |  |
| rate.json           | 200                 | script            | 273 B          |  |
| reactive-element.js | 200                 | script            | 6.3 kB         |  |
| lit-html.js         | 200                 | script            | 7.7 kB         |  |
| lit-element.js      | 200                 | script            | 1.5 kB         |  |
| css-tag.js          | 200                 | script            | 1.7 kB         |  |
| 11 requests         | 25.5 kB transferred | 23.1 kB resources | Finish: 2.99 s | DOMContentLoaded: 3.00 s   |
| Load: 2.99 s        |                     |                   |                |  |



|            |                    |                  |                |                          |              |
|------------|--------------------|------------------|----------------|--------------------------|--------------|
| 6 requests | 169 kB transferred | 171 kB resources | Finish: 3.22 s | DOMContentLoaded: 2.08 s | Load: 2.65 s |
|------------|--------------------|------------------|----------------|--------------------------|--------------|

# Welcome Page

| Name      | Status | Type       | Size   | Waterfall   |
|-----------|--------|------------|--------|---|
| localhost | 200    | document   | 949 B  |   |
| style.css | 200    | stylesheet | 1.4 kB |  |
| logo.svg  | 200    | svg+xml    | 2.8 kB |  |

3 requests | 5.2 kB transferred | 4.5 kB resources | Finish: 1.17 s | DOMContentLoaded: 588 ms | Load: 1.18 s



|  |            |                    |                  |                |                          |              |
|--|------------|--------------------|------------------|----------------|--------------------------|--------------|
|  | 6 requests | 169 kB transferred | 171 kB resources | Finish: 3.23 s | DOMContentLoaded: 2.09 s | Load: 2.66 s |
|--|------------|--------------------|------------------|----------------|--------------------------|--------------|

# Browser Tools

The screenshot shows a browser window with a dark theme. On the left is a sidebar with links: 'Welcome', 'Calculate', and 'About'. The main area has a title 'Calculate' and a subtitle 'convert Euros into Dollars for you'. Below that is a form with 'Dollar: 5' and output 'is EUR \$ 5.6'. A note at the bottom says 'With a rate of 1.12 last updated on 2021-04-20'. To the right is the browser's developer tools open to the 'Elements' tab. The DOM tree shows the structure of the application. A specific element, a shadow-root for a custom element 'lit-calculate', is selected. At the bottom, the 'Styles' tab is active, showing the CSS rules for the selected element. One rule is highlighted: ':host { display: block; border: 1px solid green; margin: 10px; }'. Other tabs include 'Computed', 'Layout', 'Event Listeners', and 'DOM Breakpoints'.

```
<html>
  > <head>...</head>
  > <body data-new-gr-c-s-check-loaded="14.1018.0" data-gr-ext-installed>
    > <div class="App">
      > <header class="App-header">...</header>
      > <div class="Container" flex>
        > <nav>.</nav>
        > <main>
          > <div>
            > <h1>Calculate</h1>
            > <p>We convert Euros into Dollars for you</p>
          > ...
          > <lit-calculate> == $0
            > #shadow-root (open)
              > !---->
              > <label>...</label>
              > <div>...</div>
            </lit-calculate>
          </div>
        </main>
      </div>
    </div>
  </body>
</html>
```

html body div.App div.Container main div lit-calculate

Styles Computed Layout Event Listeners DOM Breakpoints >

Filter :hover .cls + □

```
:host {
}
:host {
  display: block;
  border: 1px solid green;
  margin: 10px;
}
```

# Browser Tools

The screenshot shows a browser window with a "Calculate" application and its corresponding developer tools interface.

**Application View:**

- Header:** Shows a logo and navigation links: Welcome, Calculate, About.
- Main Content:** A heading "Calculate" and a subtext "We convert Euros into Dollars for you".
- Form:** An input field labeled "Dollar:" containing "50". Below it, the result "is EUR \$ 56" is displayed.
- Text:** "With a rate of 1.12 last updated on 2021-04-20"

**Developer Tools - Elements Tab:**

- Shows the DOM structure of the page, starting with <html> and <body>.
- A specific element, <lit-calculate>, is highlighted.
- The element contains a shadow root with a label and a div.

**Developer Tools - Console Tab:**

- Shows the following JavaScript console output:

```
> $0.limit = 100
< 100
> $0.value = 50
< 50
>
```



Source works in browser



Performance



Debugging



App feeling

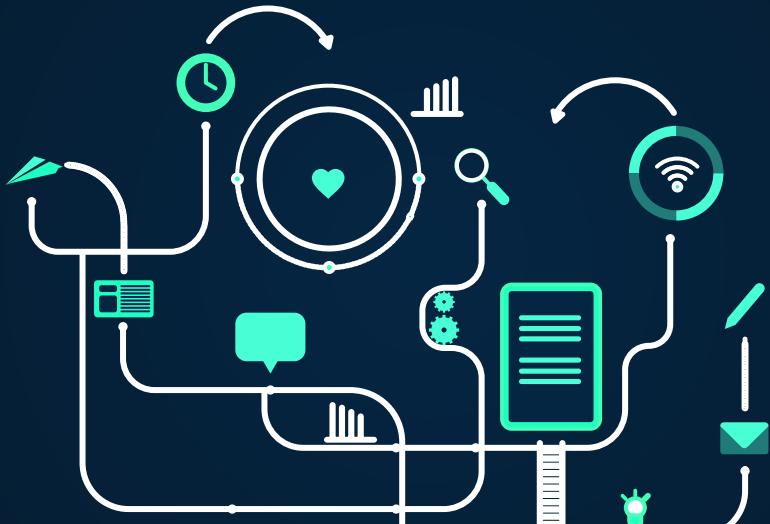


No repetitive code



# 11ty

## Static Site Generator



A screenshot of a web development environment, likely Microsoft Visual Studio Code, showing the following components:

- EXPLORER**: Shows the project structure for a React application named "TITY-APP". The files listed include package.json, index.html, App.js, App.css, logo.svg, AppHeader.js, Content.js, Welcome.js, Calculate.js, and About.js.
- OPEN EDITORS**: Displays the content of index.html. The code includes a header section with a logo and navigation links for Welcome, Calculate, and About.
- BROWSER PREVIEW**: Shows a local development server at port 3001. The page title is "Welcome" and the content is "To this page that offers a calculator". On the right, a sidebar shows the navigation links: Welcome, Calculate, and About.
- PAGE Footer**: Shows standard browser navigation buttons (Back, Forward, Stop, Refresh) and links for Live Share, Watch, New, and Address.

```
<div><h1>Welcome</h1><p>To this page that offers a calculator</p><ul><li><a href="#">Welcome</a></li><li><a href="#">Calculate</a></li><li><a href="#">About</a></li></ul></div>
```



11ty



Source works in browser



Performance



Debugging



App feeling



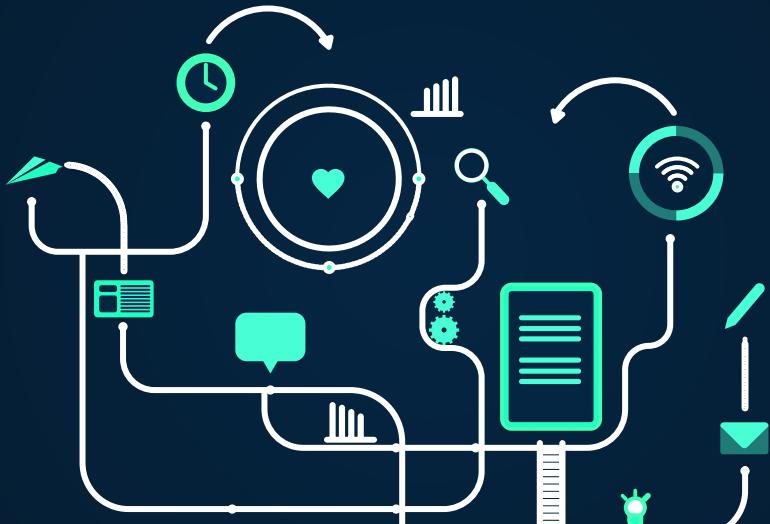
No repetitive code

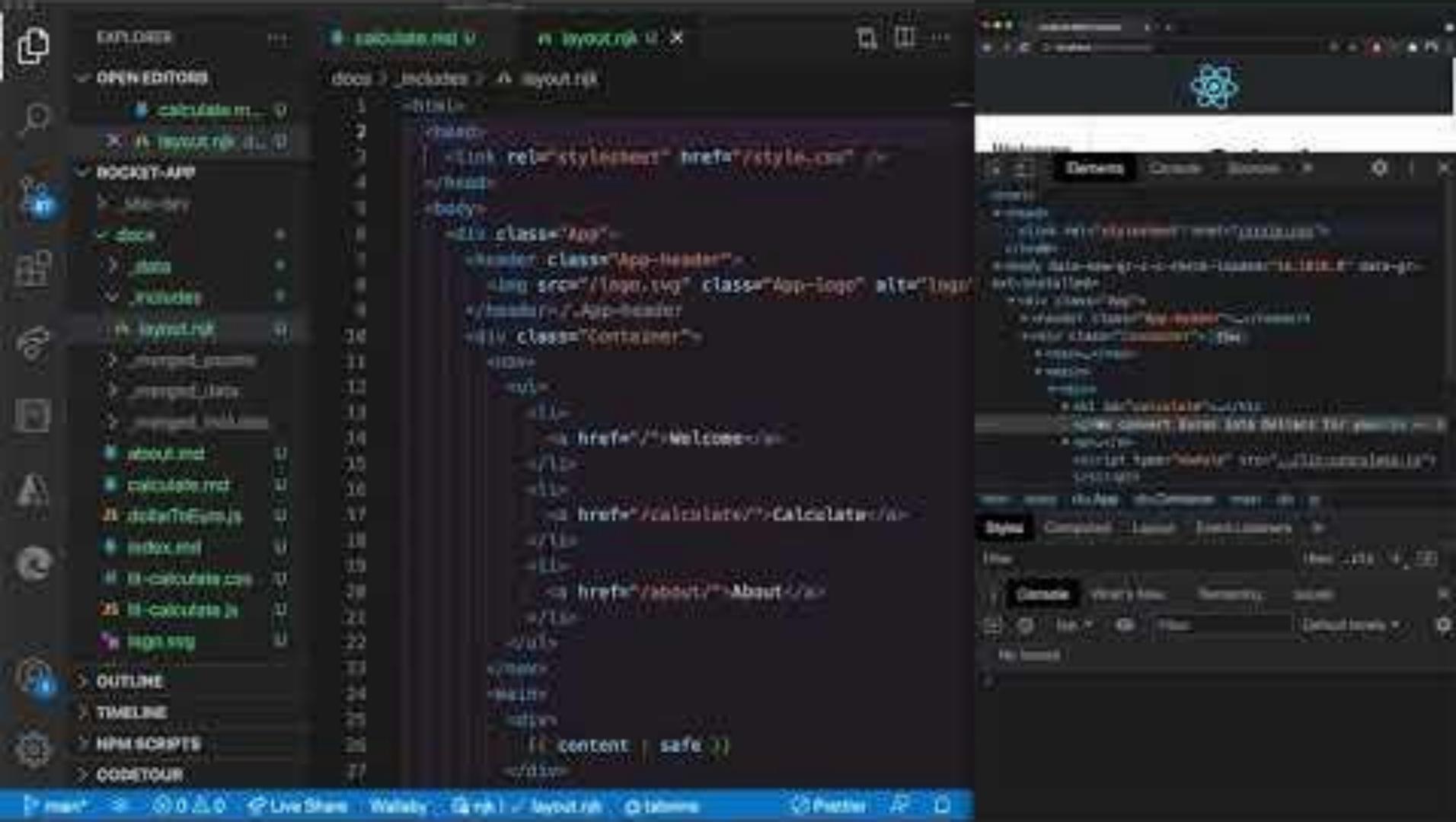


1: JavaScript yes, Markdown no ("simple" abstraction for html)



# Rocket





# Calculate Page

| Name         | Status              | Type              | Size           | Waterfall   |
|--------------|---------------------|-------------------|----------------|---|
| calculate/   | 200                 | document          | 1.2 kB         |  |
| 896e6a76.css | 200                 | stylesheet        | 1.5 kB         |  |
| 710e0f5c.svg | 200                 | svg+xml           | 3.0 kB         |  |
| 81b73d5e.js  | 200                 | script            | 23.9 kB        |  |
| favicon.ico  | 404                 | text/plain        | 153 B          |  |
| 5 requests   | 29.7 kB transferred | 28.3 kB resources | Finish: 1.96 s | DOMContentLoaded: 1.36 s  |
|              |                     |                   |                | Load: 1.38 s  |



|             |                     |                   |                |                          |              |
|-------------|---------------------|-------------------|----------------|--------------------------|--------------|
| 11 requests | 25.5 kB transferred | 23.1 kB resources | Finish: 2.99 s | DOMContentLoaded: 3.00 s | Load: 2.99 s |
|-------------|---------------------|-------------------|----------------|--------------------------|--------------|

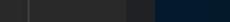


|            |                    |                  |                |                          |              |
|------------|--------------------|------------------|----------------|--------------------------|--------------|
| 6 requests | 169 kB transferred | 171 kB resources | Finish: 3.22 s | DOMContentLoaded: 2.08 s | Load: 2.65 s |
|------------|--------------------|------------------|----------------|--------------------------|--------------|



# Welcome Page



| Name         | Status | Type       | Size   | Waterfall   | ▲ |
|--------------|--------|------------|--------|---|---|
| 127.0.0.1    | 200    | document   | 1.1 kB |  |   |
| 896e6a76.css | 200    | stylesheet | 1.5 kB |  |   |
| 710e0f5c.svg | 200    | svg+xml    | 3.0 kB |  |   |
| favicon.ico  | 404    | text/plain | 153 B  |  |   |

4 requests | 5.7 kB transferred | 4.6 kB resources | Finish: 1.77 s | DOMContentLoaded: 677 ms | Load: 1.19 s



|            |                    |                  |                |                          |              |
|------------|--------------------|------------------|----------------|--------------------------|--------------|
| 3 requests | 5.2 kB transferred | 4.5 kB resources | Finish: 1.17 s | DOMContentLoaded: 588 ms | Load: 1.18 s |
| 6 requests | 169 kB transferred | 171 kB resources | Finish: 3.23 s | DOMContentLoaded: 2.09 s | Load: 2.66 s |



Source works in browser



Performance



Debugging



App feeling



No repetitive code



11ty



1: JavaScript yes, Markdown no ("simple" abstraction for html)

2: currently only offline for visited - sending parts of html is planned

# Link Checking

---

```
$ npx rocket lint
Rocket executes lintCommand of RocketLint
Copied 174 files / Wrote 176 files in 37.36 seconds (212.3ms each, v0.11.1)
⌚ Checking if all internal links work...
🔥 Found a total of 176 files to check!
🔗 Found a total of 19848 links to validate!

✅ All internal links are valid. (executed in 0s 724.703479ms)
```

# Presets

```
import { rocketLaunch } from '@rocket/launch';
import { rocketSearch } from '@rocket/search';

export default {
  presets: [rocketLaunch(), rocketSearch()],
};
```

# Presets

The screenshot shows a mobile-style interface for a currency converter. At the top, there's a navigation bar with a menu icon, 'About' and 'Calculate' buttons, and a search icon. The main title is 'Currency: Dollar To Euro'. Below it, a sub-instruction says 'We convert Euros into Dollars for you'. A form field contains 'Dollar: 5' and the result 'is EUR \$ 5.6' is displayed below it. A note at the bottom states 'With a rate of 1.12 last updated on 2021-04-20'. At the very bottom, there's a footer with a GitHub edit link.

Currency: Dollar To Euro

We convert Euros into Dollars for you

Dollar: 5

is EUR \$ 5.6

With a rate of 1.12 last updated on 2021-04-20

Caught a mistake or want to contribute to the documentation? [Edit this page on GitHub!](#)

This screenshot is identical to the first one, but the entire input ('Dollar: 5') and output ('is EUR \$ 5.6') area is highlighted with a green border, indicating it is selected or focused.

Currency: Dollar To Euro

We convert Euros into Dollars for you

Dollar: 5

is EUR \$ 5.6

With a rate of 1.12 last updated on 2021-04-20

Caught a mistake or want to contribute to the documentation? [Edit this page on GitHub!](#)

This screenshot is identical to the first one, but only the input field ('Dollar: 5') is highlighted with a green border, while the output ('is EUR \$ 5.6') is not highlighted.

Currency: Dollar To Euro

We convert Euros into Dollars for you

Dollar: 5

is EUR \$ 5.6

With a rate of 1.12 last updated on 2021-04-20

Caught a mistake or want to contribute to the documentation? [Edit this page on GitHub!](#)

# Generates Social Media Images

---



# Simulator



Sizes / Devices



Dark Mode / Locale



Open in new window for dev

The screenshot shows the Simulator's configuration interface. At the top, there is a preview window titled "Pixel 2 - 216x411" containing a "DemoElement" card with the following text:  
Hello I am DemoElement 🎉  
• My purpose is to demonstrate how an element can adopt to different environments  
• I like android  
• My mother languages is de  
• I feel very comfortable in the light

Below the preview is a "Settings" section with the following options:

- Platform**: A radio button group with "Web" (disabled), "Android" (selected), and "iOS".
- Viewport**: A dropdown menu showing "Pixel 2" and "Galaxy S5".
- Fit height to content**: A toggle switch.
- Visual**: A radio button group with "Light" (selected) and "Dark".
- Apply distance to edge**: A toggle switch.
- Global**: A toggle switch.
- Localization**: A dropdown menu set to "German".

lion-web.netlify.app/components/inputs/combobox/examples/

Lion

Code

Open simulation in new window

Enable device simulation

Whatsapp example shows:

- advanced styling
- how to match/highlight text on multiple rows of the option (not just choiceValue)
- how to animate options

## Google Search

Google

Apple

Artichoke

Asparagus

Banana

Beets

Google Search

I'm Feeling Lucky

Report inappropriate predictions

device simulation

Open simulation in new window

Google Search example shows:

- advanced styling

# Responsive Images

```
![Test Run Screenshot](./images/check-html-links-screenshot.png)
```



```
<picture>
  <source
    type="image/avif"
    srcset="../../014b520c.avif 600w, ../../2eeb08a5.avif 900w"
    sizes="(min-width: 1024px) 820px, calc(100vw - 40px)"
  />
  <source
    type="image/jpeg"
    srcset="../../88990cf2.jpeg 600w, ../../d5fcfd4c.jpeg 900w"
    sizes="(min-width: 1024px) 820px, calc(100vw - 40px)"
  />
  
</picture>
```

# Frontend become more complex



Responsive Design



Support Offline



Multiple image sizes and formats



Animations, Touch, feel native



Social media images



Accessibility



Progressive Web App



SEO, Live Collaboration, ...

# Key Takeaways

---



## Build Websites

= HTML + CSS  
Sprinkle in JavaScript  
ONLY where needed



## "Buildless" Development

Less abstractions  
The modern browser is  
all you need



## Optimize for Production

To enable the fastest  
experience possible  
on ALL pages



# THANKS!

Does anyone have any question?

<https://open-wc.org>

<https://modern-web.dev>

<https://rocket.modern-web.dev>

<https://lion-web.netlify.app/>

 @daKmoR

# CREDITS

- Presentation template by Slidesgo
- Icons by Flaticon
- Infographics by Freepik
- Images created by Freepik
- Author introduction slide photo created by Freepik
- Text & Image slide photo created by Freepik