



# 7 Developer Tools secrets that shouldn't be secrets

---

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@codepo8



1


Console is  
much more  
than `log()`!

```
console.log(`🧢's 🪵 ⭐ 📅... ${new Date().getTime()}`)
```

```
Welcome Elements Console Sources Network >> + 4 161 99+
top Filter Default levels 99+ 14 hidden
removeToken called by getToken cnn-header-second-react.min.js:20
Sending: https://analytics.twitter.com/i/adsct?type=javascript&version=2.0.3&p_id=Tw...tr.conversion.loadPix uwt.js:1
els&tw_document_href=https%3A%2F%2Fedition.cnn.com%2F
Building an script pixel with URL: https://analytics.twitter.com/i/adsct?type=javascript&version=2.0.3&p_i uwt.js:1
d=Tw...tr.conversion.loadPixels&tw_document_href=https%3A%2F%2Fedition.cnn.com%2F
Sending: //t.co/i/adsct? uwt.js:1
type=javascript&version=2.0.3&p_id=Twitter&p_user_id=0&txn_id=nyutn&events=%5B%5B%22pageview%22%2Cnull%5D%5D&tw_sale
amount=0&tw_order_quantity=0&tw_iframe_status=0&tw_document_href=https%3A%2F%2Fedition.cnn.com%2F
Building an image pixel with URL: //t.co/i/adsct? uwt.js:1
type=javascript&version=2.0.3&p_id=Twitter&p_user_id=0&txn_id=nyutn&events=%5B%5B%22pageview%22%2Cnull%5D%5D&tw_sale
amount=0&tw_order_quantity=0&tw_iframe_status=0&tw_document_href=https%3A%2F%2Fedition.cnn.com%2F
▶ [ZionBridge.storeEventData] Error Message: Cannot read properties of undefined (reading 'id') cnn-header-second-react.min.js:19
▶ [GPT] Invalid arguments: PubAdsService.setTargeting('sendHHID', null). pubads_impl 2021083001.js:6
6 Tracking Prevention blocked access to storage for <URL>..
view percentage : 99.98372713662697 script.js:1
GPTRenderComplete Event: script.js:1
▶ WF {slot: we, serviceName: 'publisher_ads', isEmpty: true, slotContentChanged: true, size: null, ...}
GPTRenderComplete Event: script.js:1
▶ WF {slot: we, serviceName: 'publisher_ads', isEmpty: true, slotContentChanged: true, size: null, ...}
▶ [GPT] Invalid arguments: PubAdsService.setTargeting('sendHHID', null). pubads_impl 2021083001.js:6
Tracking Prevention blocked access to storage for https://ad.doubleclick.net/ddm/ad/xkwfnigsoc edition.cnn.com/:1
e/lfhbglgjhj/:ord=1630610411186?.
GPTRenderComplete Event: script.js:1
▶ WF {slot: we, serviceName: 'publisher_ads', isEmpty: true, slotContentChanged: true, size: null, ...}
Tracking Prevention blocked access to storage for https://ad.doubleclick.net/ddm/ad/xkwfnigsoc edition.cnn.com/:1
e/lfhbglgjhj/:ord=1630610411186?.
[Intervention] Images loaded lazily and replaced with placeholders. Load events are deferred. See edition.cnn.com/
https://go.microsoft.com/fwlink/?linkid=2048113
▶ [GPT] Invalid arguments: PubAdsService.setTargeting('sendHHID', null). pubads_impl 2021083001.js:6
GPTRenderComplete Event: script.js:1
▶ WF {slot: we, serviceName: 'publisher_ads', isEmpty: true, slotContentChanged: true, size: null, ...}
▶ Uncaught TypeError: Cannot read properties of undefined (reading 'CNN International Edition') VM7:1
at <anonymous>:22:42
at <anonymous>:23:19
at <anonymous>:45:3
at HTMLSpanElement.replaceChild (script.js:1)
at WriteStream._insertCursor (controltag.js.a1705c...0c202ff70908fc042:5)
at WriteStream._writeScriptToken (controltag.js.a1705c...0c202ff70908fc042:5)
at WriteStream._handleScriptToken (controltag.js.a1705c...0c202ff70908fc042:5)
at WriteStream._writeImpl (controltag.js.a1705c...0c202ff70908fc042:5)
at WriteStream.write (controltag.js.a1705c...0c202ff70908fc042:5)
at runStream (controltag.js.a1705c...0c202ff70908fc042:5)
▶ ▶ {idv: 'no identifier found for user'} VM3:1
Tracking Prevention blocked access to storage for https://gum.criteo.com/syncframe?origin=publishertag& (index)
topUr=edition.cnn.com...edition.cnn.com%22,%22cw%22:true,%22ifa%22:{%22origin%22:0},{%22lsw%22:true}.
The resource https://www.googletagservices.com/tag/js/gpt.js was preloaded using link preload but not (index)
used within a few seconds from the window's load event. Please make sure it has an appropriate `as`
value and it is preloaded intentionally.
```

Noise!

# Filter Console messages

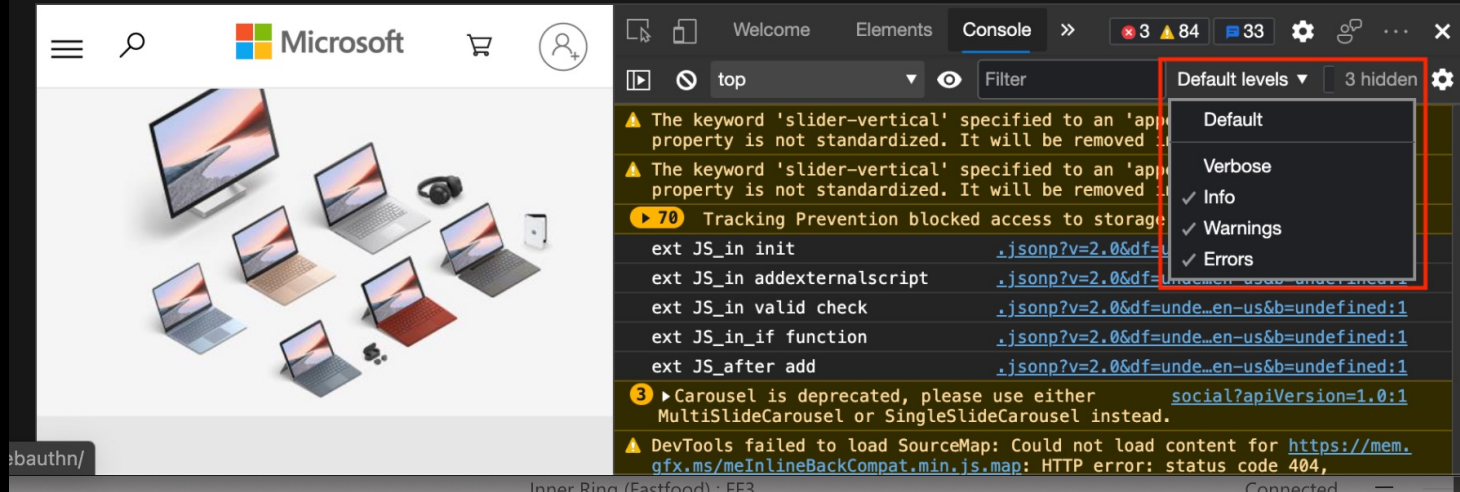
04/13/2021 • 3 minutes to read • 

When you surf the web, you may find the **Console** is flooded with all kinds of information. Often the information isn't relevant to you. Such as information about the live project that another developer logged while you debug. Or more information about violations and warnings about the performance of the current site that you aren't able to change. It makes sense to use the filter options of **Console** to reduce the noise.

## Filter by log level

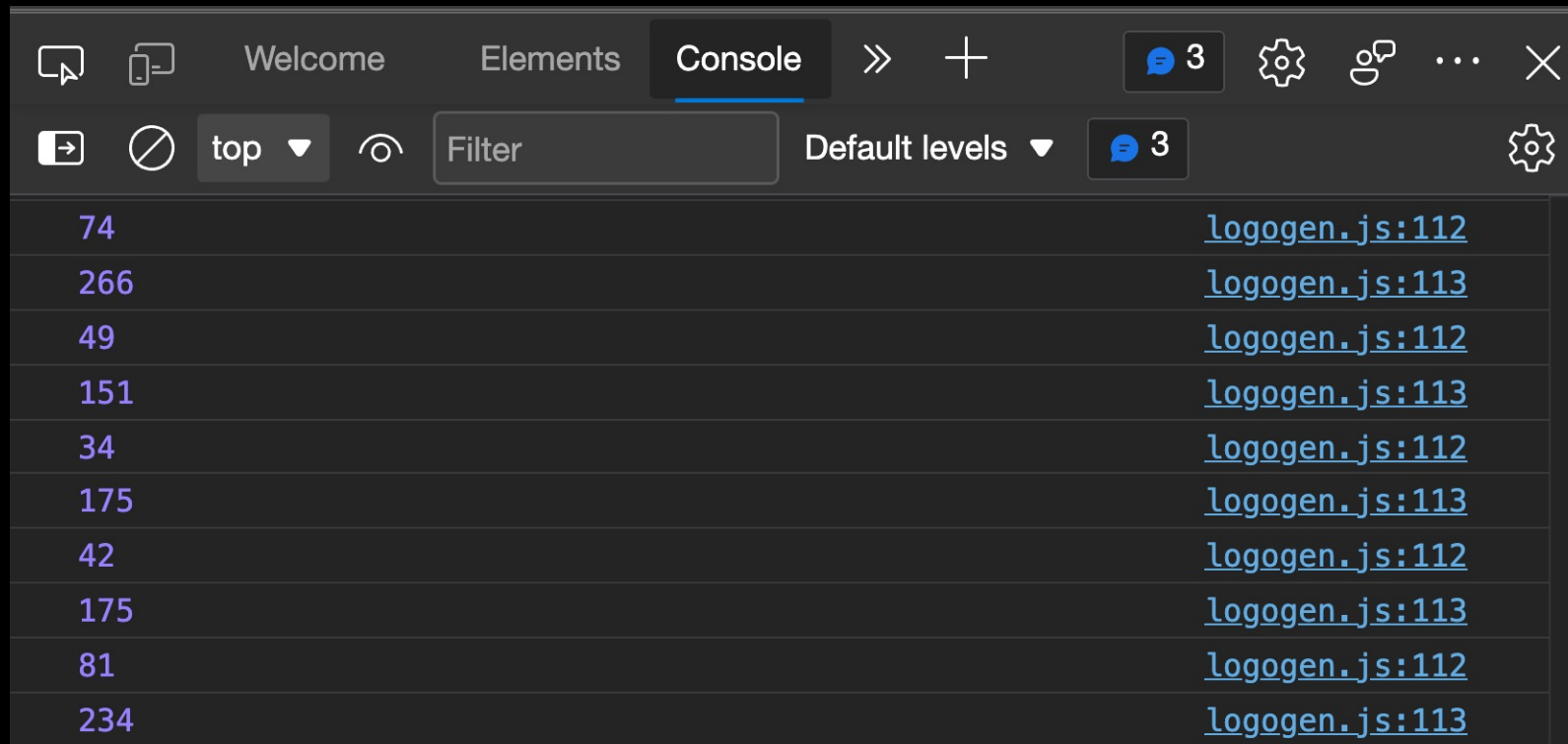
Each method of the `console` object has a severity level attached to it. The severity levels are **Verbose**, **Info**, **Warning**, or **Error**. Display the severity levels in the [API documentation](#). For example, `console.log()` is an **Info**-level message, but `console.error()` is an **Error**-level message.

To filter messages in the **Console**, use the **Log Level** dropdown menu. You may toggle the state of each level. To turn off each level, remove the checkmark next to each.



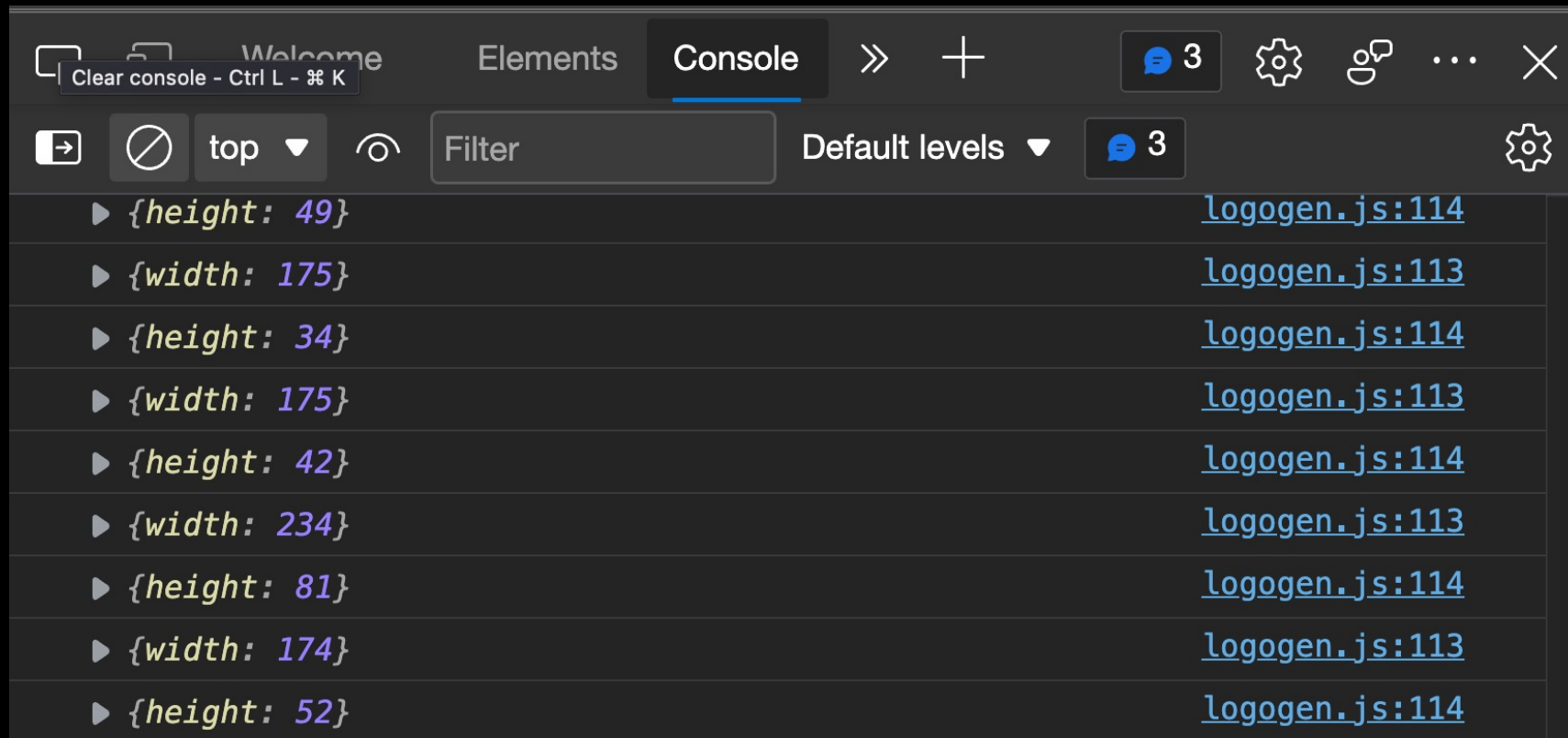
# What is that?

```
console.log(width);  
console.log(height);
```



# Simple trick: use the curls!

```
console.log({width});  
console.log({height});
```



# Adding to your vocabulary

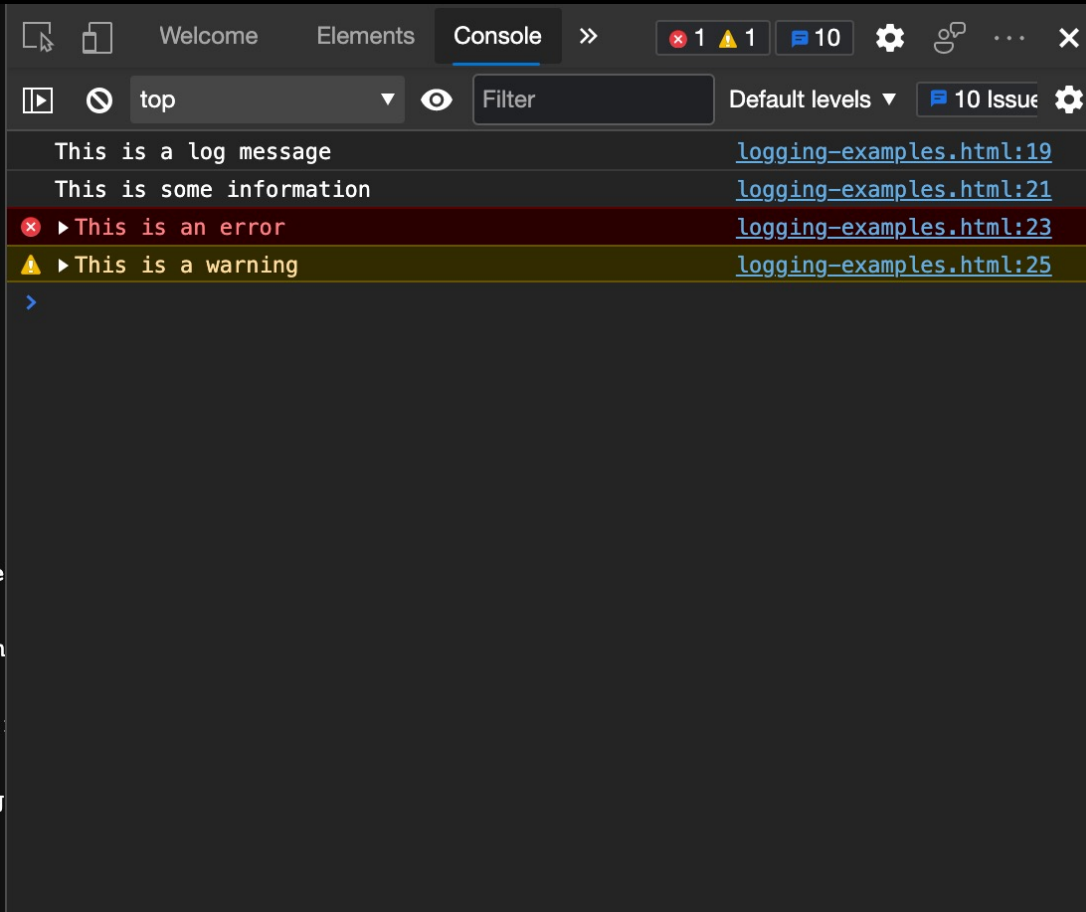
## Console demos: log, info, error, warn

There is nothing to see here, you need to open the Developer Tools and check the console for the output.

Select **Control** + **Shift** + **J** (Windows, Linux) or **Command** + **Option** + **J** (macOS).

### Source Code

```
// prints the text to the console as a log message
console.log('This is a log message')
// prints the text to the console as an information
console.info('This is some information')
// prints the text to the console as an error
console.error('This is an error')
// prints the text to the console as a warning
console.warn('This is a warning')
```



```
function first(name) { second(name); }
function second(name) { third(name); }
function third(name) {
  if (!name) {
    console.error(`Name isn't defined :(`)
  } else {
    console.assert(
      name.length <= 8,
      `"${name}" is not less than eight letters`
    );
  }
}
first();
first('Console');
first('Microsoft Edge Canary');
```

console.error() and  
console.assert()

```
✖ ▼Name isn't defined :( error-assert.html:21
  third    @ error-assert.html:21
  second   @ error-assert.html:18
  first     @ error-assert.html:17
  (anonymous) @ error-assert.html:29
```

```
✖ ▼Assertion failed: "Microsoft Edge Canary is not less than eight letters" error-assert.html:23
  third    @ error-assert.html:23
  second   @ error-assert.html:18
  first     @ error-assert.html:17
  (anonymous) @ error-assert.html:31
```

>

```
console.trace() >  
console.log("called")
```

```
function here() {there()}  
function there() {everywhere()}  
function everywhere() {  
    console.trace();  
}  
here();  
there();
```

```
▼ console.trace trace.html:19  
  everywhere @ trace.html:19  
  there      @ trace.html:17  
  here       @ trace.html:16  
  (anonymous) @ trace.html:21  
  
▼ console.trace trace.html:19  
  everywhere @ trace.html:19  
  there      @ trace.html:17  
  (anonymous) @ trace.html:22
```

>

# console.group()

```
console.group("Passengers: Heart of Gold");
console.log('Zaphod');
console.log('Trillian');
console.log('Ford');
console.log('Arthur');
console.log('Marvin');
console.groupCollapsed("Hidden");
console.log('(Frankie & Benjy)');
console.groupEnd("Hidden");
console.groupEnd("Passengers: Heart of Gold");

let technologies = {
  "Standards": ["HTML", "CSS", "SVG", "ECMAScript"],
  "Others": ["jQuery", "Markdown", "Textile", "Sass", "Pug"]
}
for (tech in technologies) {
  console.groupCollapsed(tech);
  technologies[tech].forEach(t => console.log(t));
  console.groupEnd(tech);
}
```

| ▼ Passengers: Heart of Gold |             |
|-----------------------------|-------------|
|                             | Zaphod      |
|                             | Trillian    |
|                             | Ford        |
|                             | Arthur      |
|                             | Marvin      |
|                             | ▶ Hidden    |
|                             | ▶ Standards |
|                             | ▶ Others    |
| ⌵                           |             |

| ▼ Passengers: Heart of Gold |                   |
|-----------------------------|-------------------|
|                             | Zaphod            |
|                             | Trillian          |
|                             | Ford              |
|                             | Arthur            |
|                             | Marvin            |
|                             | ▼ Hidden          |
|                             | (Frankie & Benjy) |
|                             | ▶ Standards       |
|                             | ▼ Others          |
|                             | jQuery            |
|                             | Markdown          |
|                             | Textile           |
|                             | Sass              |
|                             | Pug               |
| >                           |                   |

```
// get all the h1, p and script elements
let contentElements = document.querySelectorAll(':is(h1,p,script)');
// display the elements as an unfiltered table
console.table(contentElements)
// display only relevant columns
console.table(contentElements,['nodeName', 'innerText', 'offsetHeight'])
```

console.table()

[logging-with-table.html:37](#)

| (... a... t... l... t... d... h... a... d... s... a... c... i... i... o... o... o... o... o... s... i... |    |    |    |      |    |      |    |      |      |    |   |      |    |     |      |   |      |      |      |      |
|--|----|----|----|------|----|------|----|------|------|----|---|------|----|-----|------|---|------|------|------|------|
| 0  | "" | "" | "" | t... | "" | f... | "" | f... | t... | "" | " | f... | "" | bod | 21   | 8 | 3... | 78   | C... | "... |
| 1  | "" | "" | "" | t... | "" | f... | "" | f... | t... | "" | " | f... | "" | bod | 1... | 8 | 3... | 57   | C... | "... |
| 2  | "" | "" | "" | t... | "" | f... | "" | f... | t... | "" | " | f... | "" | bod | 1... | 8 | 3... | 42   | C... | "... |
| 3  |    | "" | "" | t... | "" | f... | "" | f... | t... | "" | " | f... | "" | bod | 2... | 8 | 3... | 4... | C... | "... |

► NodeList(4)

[logging-with-table.html:39](#)

| (index) | nodeName | innerText           | offsetHeight |
|---------|----------|---------------------|--------------|
| 0       | "H1"     | "Console demos: ... | 78           |
| 1       | "p"      | "There is nothin... | 57           |
| 2       | "p"      | "Select Control+... | 42           |
| 3       | "SCRIPT" | "let technologi...  | 465          |

► NodeList(4)

>

# Blinging it up: `$()` and `$$()`

```
$$('a').map(a => {  
  return {url: a.href, text: a.innerText}  
})
```

`{...}, {...}, {...}, ...]`

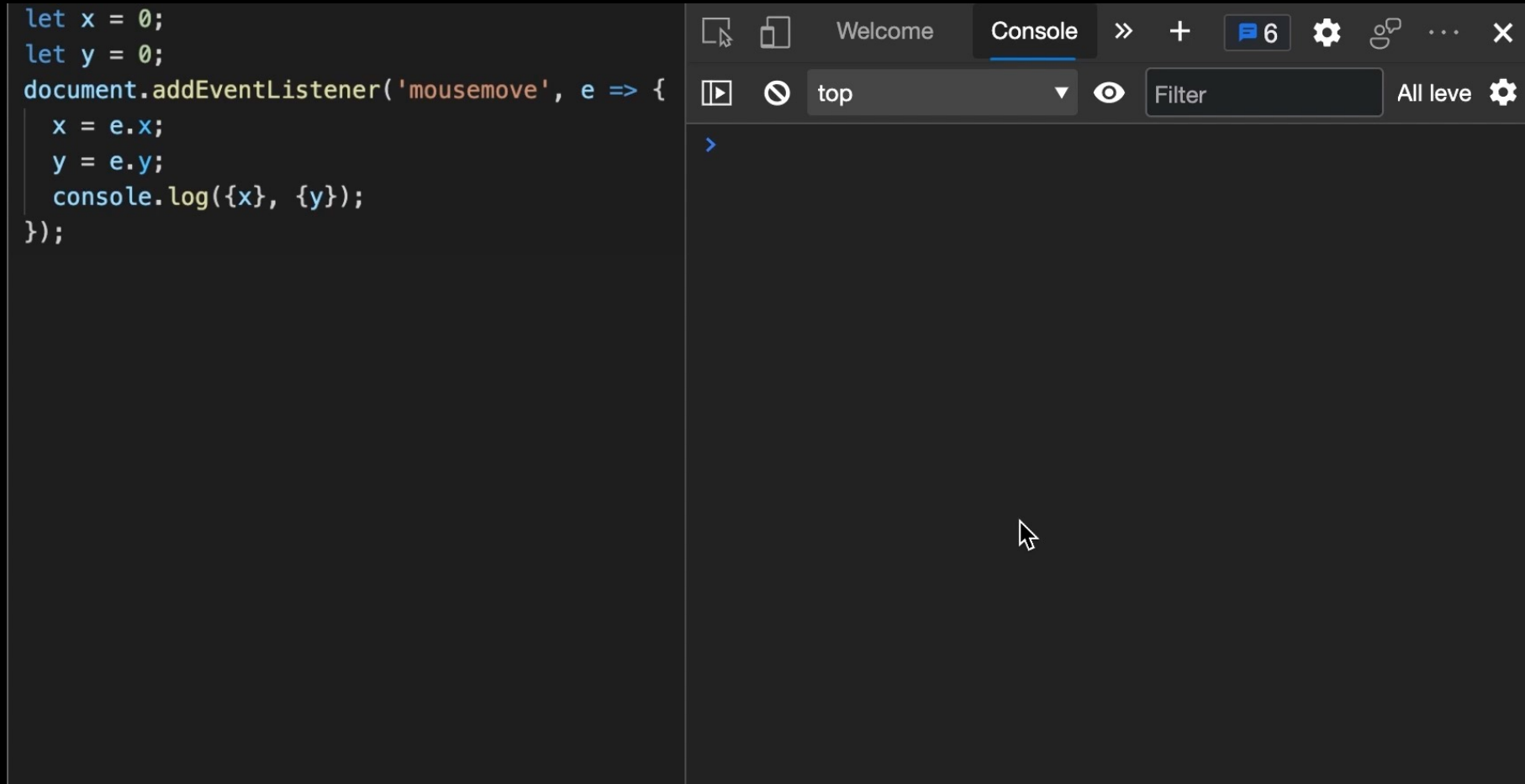
▼ [0 ... 99]

- ▶ 0: {url: "https://docs.microsoft.com/en-us/microsoft-edge/devtools-g...
- ▶ 1: {url: "https://www.microsoft.com/", text: ""}
- ▶ 2: {url: "https://docs.microsoft.com/en-us/", text: "← ...
- ▶ 3: {url: "https://docs.microsoft.com/en-us/documentation", text: "← ...
- ▶ 4: {url: "https://docs.microsoft.com/en-us/learn/", text: "← ...
- ▶ 5: {url: "https://docs.microsoft.com/en-us/answers/products/", text: ...
- ▶ 6: {url: "https://docs.microsoft.com/en-us/samples/browse/", text: "...
- ▶ 7: {url: "https://docs.microsoft.com/en-us/documentation", text: "Do...
- ▶ 8: {url: "https://docs.microsoft.com/en-us/learn/", text: "Learn"}
- ▶ 9: {url: "https://docs.microsoft.com/en-us/answers/products/", text: ...
- ▶ 10: {url: "https://docs.microsoft.com/en-us/samples/browse/", text: ...
- ▶ 11: {url: "https://docs.microsoft.com/en-us/microsoft-edge/devtools-...
- ▶ 12: {url: "https://docs.microsoft.com/profile", text: "Profile"}
- ▶ 13: {url: "https://docs.microsoft.com/profile", text: "Bookmarks"}



# You can log without source access

# Live expressions



The image shows a screenshot of a web development IDE. On the left is a code editor with the following JavaScript code:

```
let x = 0;  
let y = 0;  
document.addEventListener('mousemove', e => {  
  x = e.x;  
  y = e.y;  
  console.log({x}, {y});  
});
```

On the right is a console panel. The top bar of the console shows tabs for 'Welcome' and 'Console', with 'Console' being the active tab. To the right of the tabs are icons for a message box (showing '6'), settings, and other controls. Below the tabs, there is a dropdown menu set to 'top', a search icon, a text input field labeled 'Filter', and a button labeled 'All leve' (likely 'All levels'). The main area of the console is currently empty, showing only a blue prompt character '>'. A mouse cursor is visible over the console area.

Terrier - Russell



Click for more dogs!

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Written by [Chris Heilmann](#) using a lot of `fetch()`.

Published on [GitHub](#).

# Logpoints!

Page

>>

...

⏪

walkies.js x

▼ top

▼ cloud codepo8.github

▼ folder dog-browser

file (index)

file walkies.js

file treats.css

▶ cloud images.dog.ceo

```
44 const getdog = _ => {
45   button.classList.remove('error');
46   button.classList.add('loading');
47   fetch(url)
48     .then(response => {
49       if (response.ok) {
50         return response.json();
51       } else {
52         button.classList.remove('loading');
53         button.classList.add('error');
54       }
55     })
56     .then((data) => {
57       imagecontainer.src = `${data.message.split('/')
58         .length-2}
59         > ucfirst(b))
60         - ');
61         text = bits;
```

Add breakpoint

Add conditional breakpoint...

Add logpoint...

Never pause here

Mark script as Library Code

```
67 button.addEventListener('click', getdog
68
69 document.querySelector('form').addEvent
70   e.preventDefault();
71
72
```

Dog breed:

Terrier - Russell



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Page

>>

...



walkies.js x

▼ top

▼ codepo8.github

▼ dog-browser

(index)

walkies.js

treats.css

► images.dog.ceo

```
44 const getdog = _ => {
45   button.classList.remove('error');
46   button.classList.add('loading');
47   fetch(url)
48   .then(response => {
49     if (response.ok) {
50       return response.json();
51     } else {
52       button.classList.remove('loading')
53       button.classList.add('error');
54     }
55   })
56   .then((data) => {
57     imagecontainer.src = `${data.message}
```

Logpoint

▼ {data}

```
58   let bits = data.message.split('/');
59   bits = bits[bits.length-2]
60     .split('-')
61     .map(b => ucfirst(b))
62     .join(' - ');
63   breedinfo.innerText = bits;
64   })
65   };
66
67   button.addEventListener('click', getdog
```

Dog breed:

Terrier - Russell



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Page

>>

...



walkies.js x

▼ top

▼ cloud codepo8.github

▼ folder dog-browser

file (index)

file walkies.js

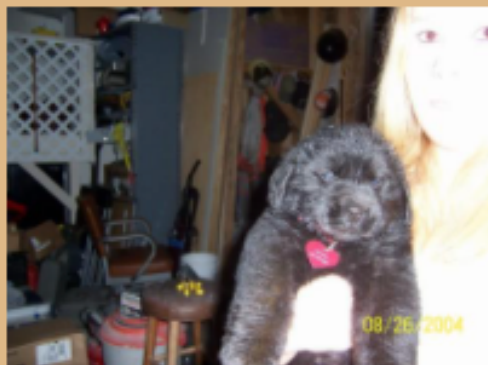
file treats.css

▶ cloud images.dog.ceo

```
44 const getdog = _ => {
45   button.classList.remove('error');
46   button.classList.add('loading');
47   fetch(url)
48   .then(response => {
49     if (response.ok) {
50       return response.json();
51     } else {
52       button.classList.remove('loading')
53       button.classList.add('error');
54     }
55   })
56   .then((data) => {
57     imagecontainer.src = `${data.message
58     let bits = data.message.split('/');
59     bits = bits[bits.length-2]
60       .split('-')
61       .map(b => ucfirst(b))
62       .join(' - ');
63     breedinfo.innerText = bits;
64   })
65   });
66
67 button.addEventListener('click', getdog
68
69 document.querySelector('form').addEvent
70   e.preventDefault();
71
72
```

Dog breed:

Newfoundland



Click for more dogs!

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Published on [GitHub](#).

6 Navigated to <https://codepo8.github.io/dog-browser/>

▶ `{data: {...}}`

[VM5127:1](#)

▶ `{data: {...}}`

[VM5128:1](#)

▼ `{data: {...}}`

[VM5129:1](#)

▼ data:

message: "https://images.dog.ceo/breeds/bullterrier-st..."  
status: "success"

▶ `[[Prototype]]`: Object

▶ `[[Prototype]]`: Object

▶ `{data: {...}}`

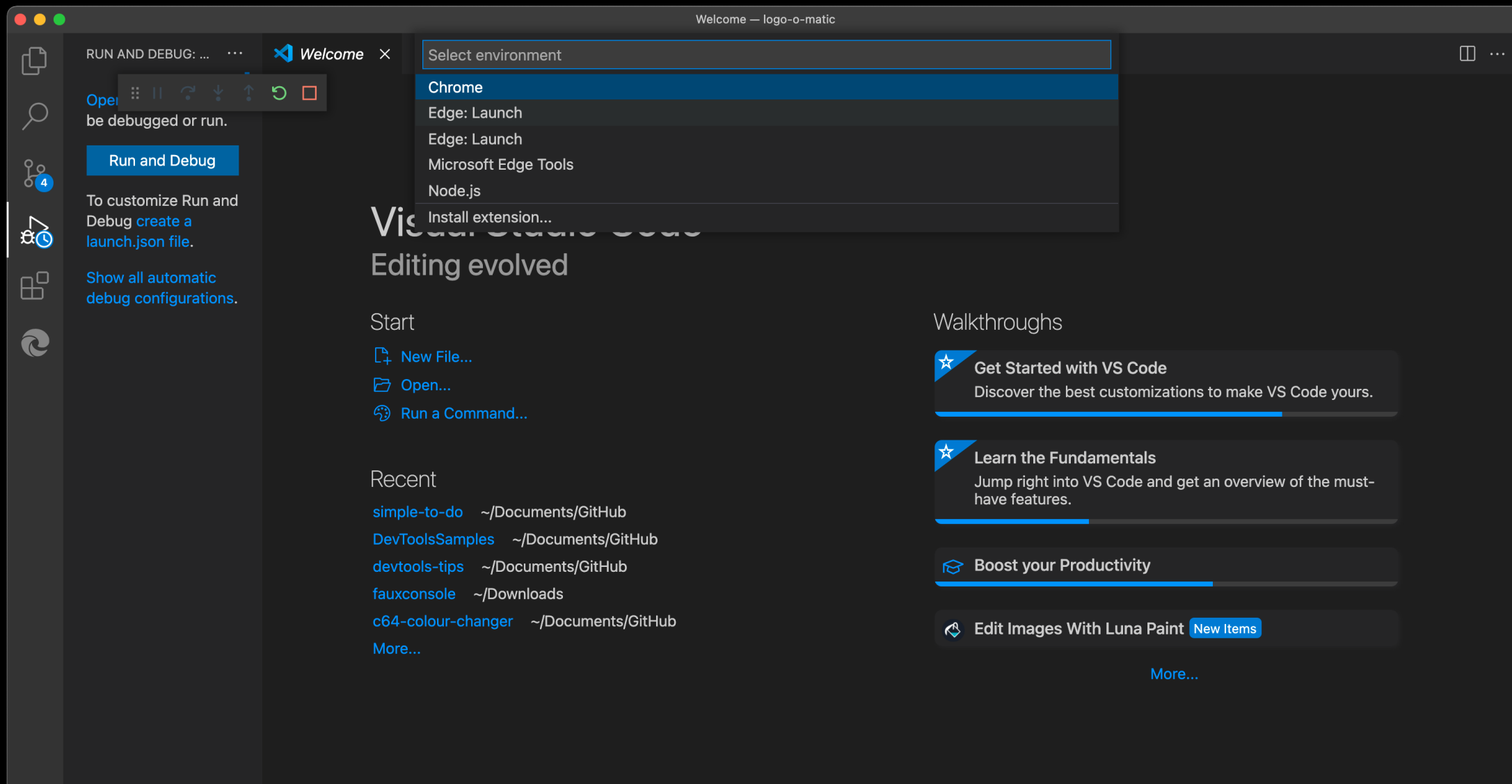
[VM5130:1](#)

>

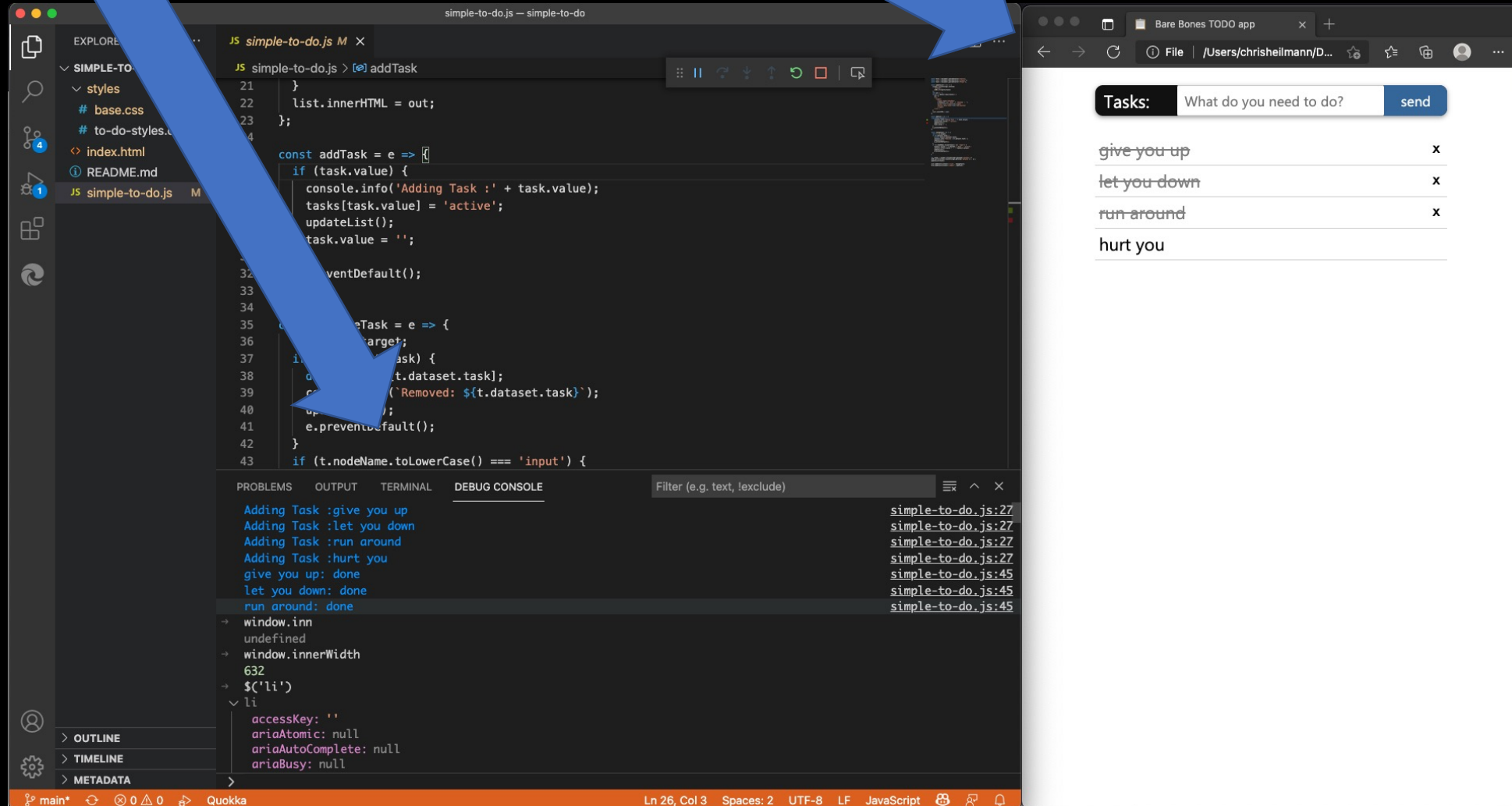


# You can log outside the browser!

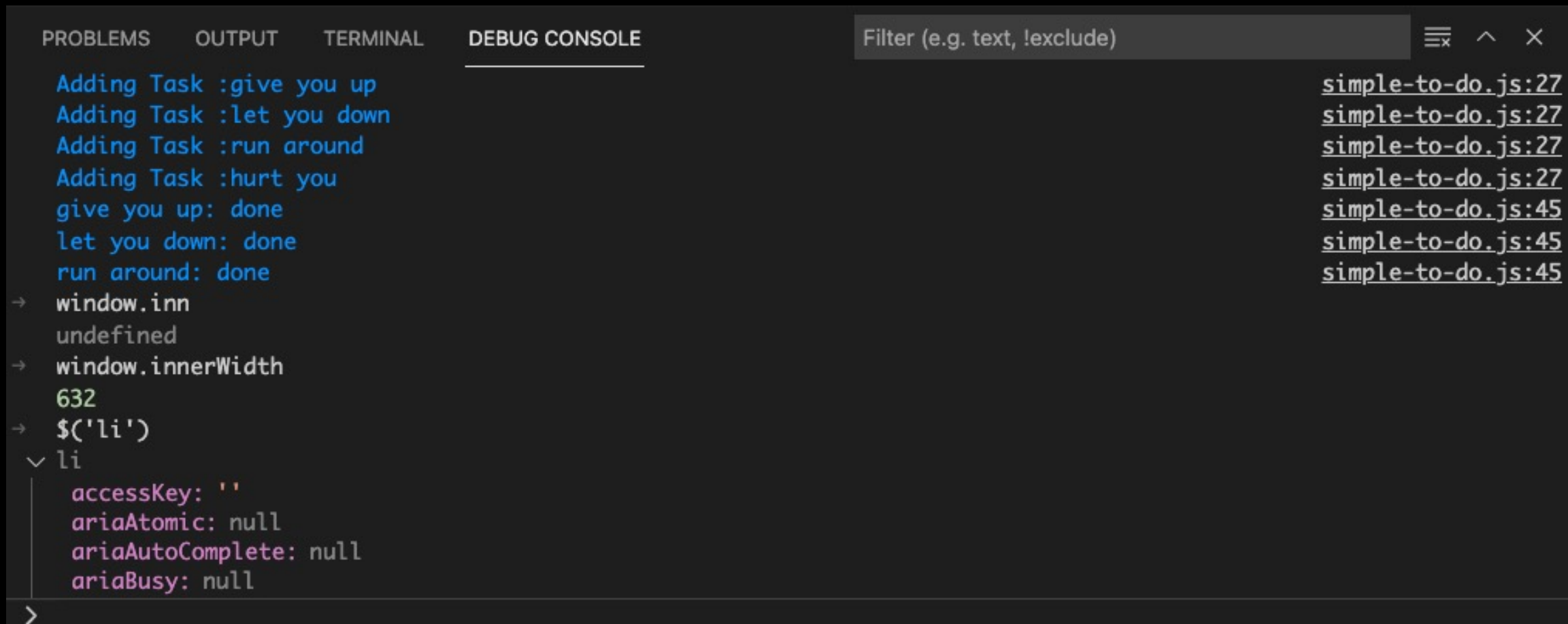
# Using the debugger in VS Code...






# Dedicated browser instance and console!



# Console in VS Code!



The image shows the VS Code interface with the 'DEBUG CONSOLE' tab selected. The console displays a series of log messages in blue text, followed by a series of console.log statements in green text. The last statement, `li`, is expanded to show its properties in a tree view. To the right of the console, a filter bar is visible with the text 'Filter (e.g. text, !exclude)'. Below the filter bar, a list of log messages is shown, each with a file path and line number: `simple-to-do.js:27`, `simple-to-do.js:27`, `simple-to-do.js:27`, `simple-to-do.js:27`, `simple-to-do.js:45`, `simple-to-do.js:45`, and `simple-to-do.js:45`.

```
PROBLEMS OUTPUT TERMINAL DEBUG CONSOLE Filter (e.g. text, !exclude)   
```

Adding Task :give you up  
Adding Task :let you down  
Adding Task :run around  
Adding Task :hurt you  
give you up: done  
let you down: done  
run around: done  
→ window.inn  
undefined  
→ window.innerWidth  
632  
→ \$('li')  
✓ li  
  accessKey: ''  
  ariaAtomic: null  
  ariaAutoComplete: null  
  ariaBusy: null  
>

`simple-to-do.js:27`  
`simple-to-do.js:27`  
`simple-to-do.js:27`  
`simple-to-do.js:27`  
`simple-to-do.js:45`  
`simple-to-do.js:45`  
`simple-to-do.js:45`

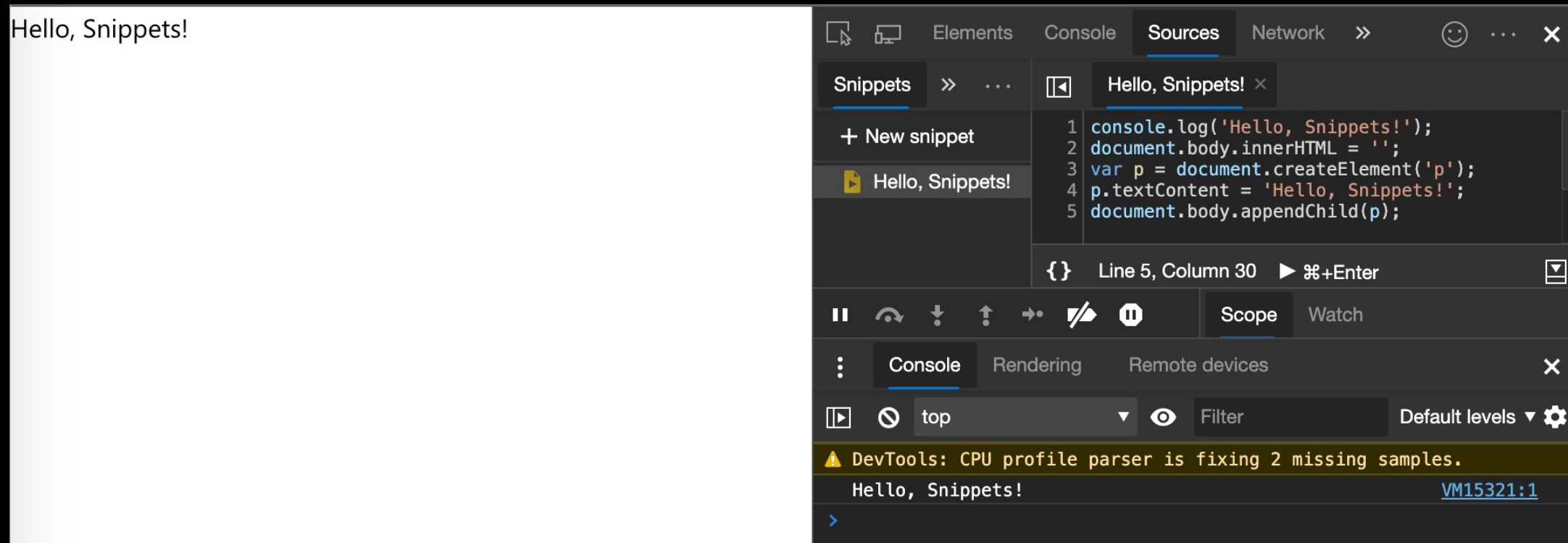


# You can inject code into any site!

## Snippets and overrides

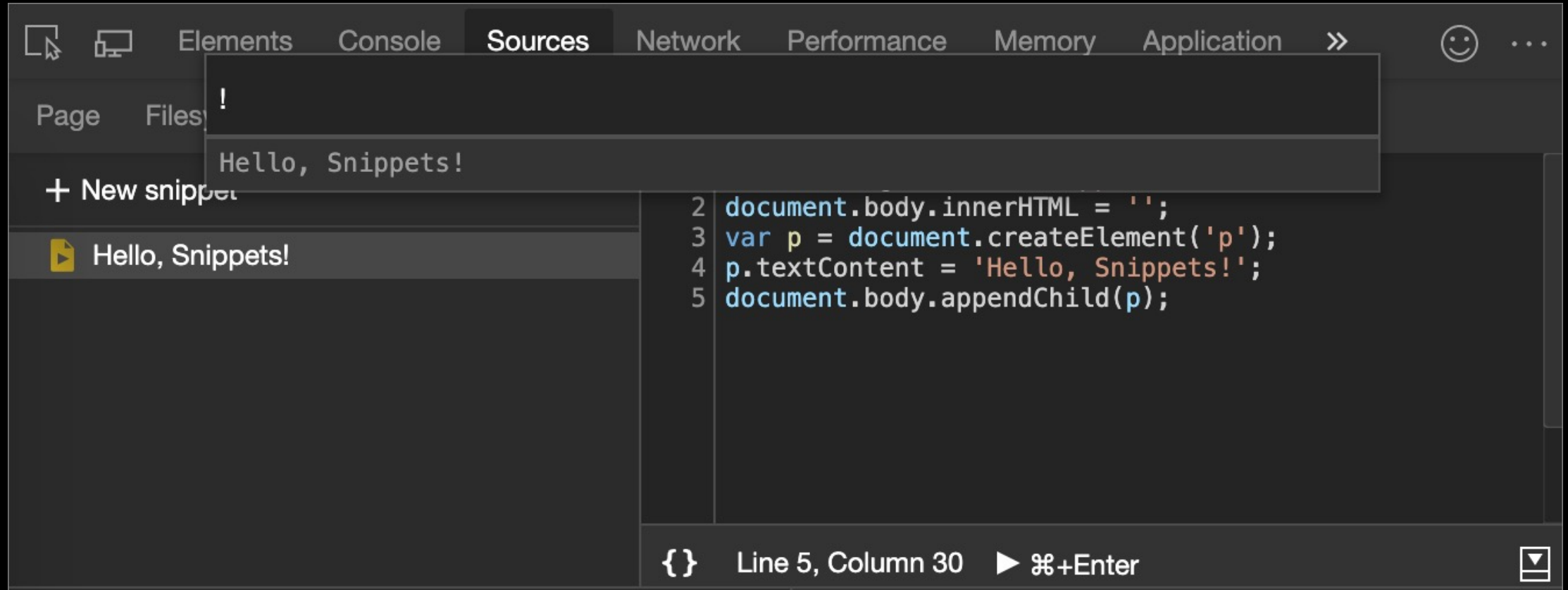
```
let out = '';
$$('#main [id]').filter(
  elm => {return elm.nodeName.startsWith('H')}
).forEach(elm => {
  out += elm.innerText + "\n" +
    document.location.href + '#' +
    elm.id + "\n";
});
console.log(out);
```

# Snippets



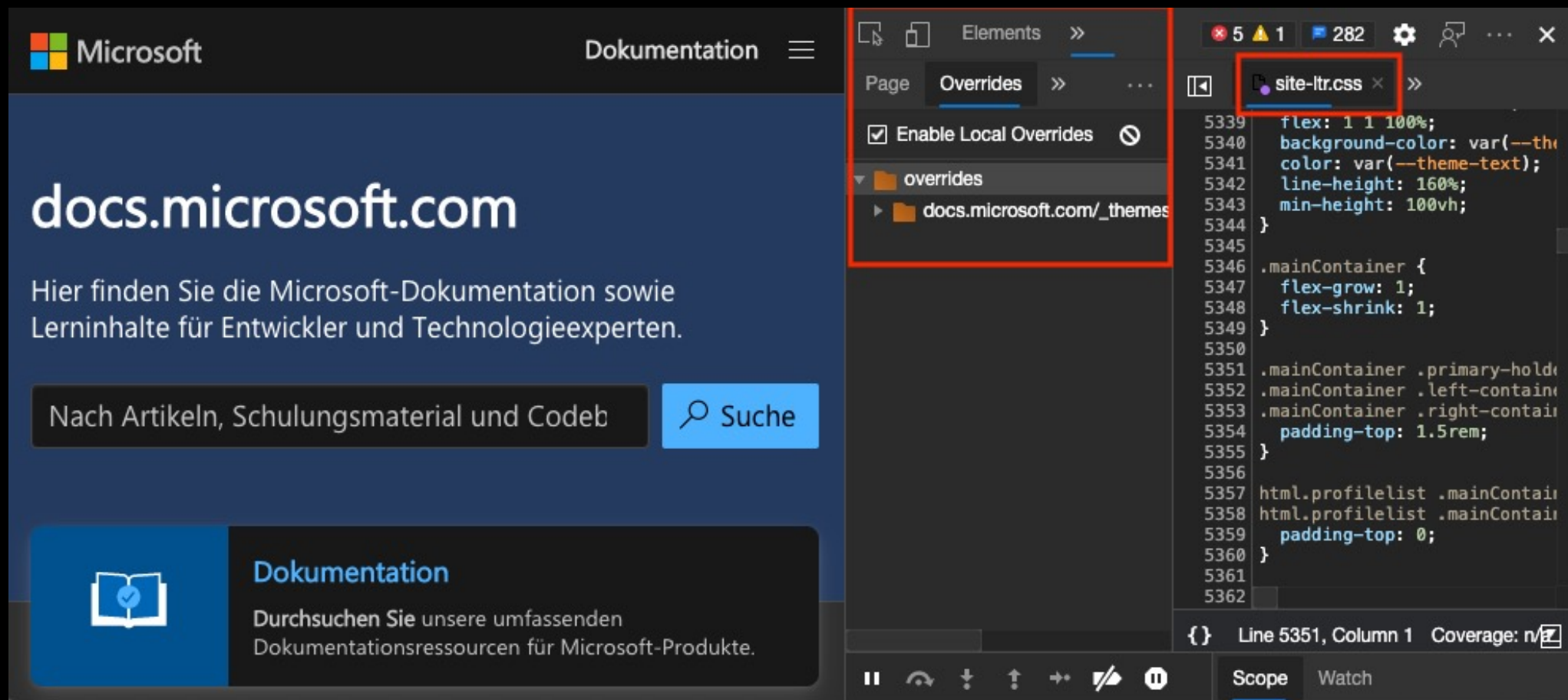
<https://docs.microsoft.com/microsoft-edge/devtools-guide-chromium/javascript/snippets>

# Run snippets from the command menu



<https://docs.microsoft.com/microsoft-edge/devtools-guide-chromium/javascript/snippets>

# Overrides



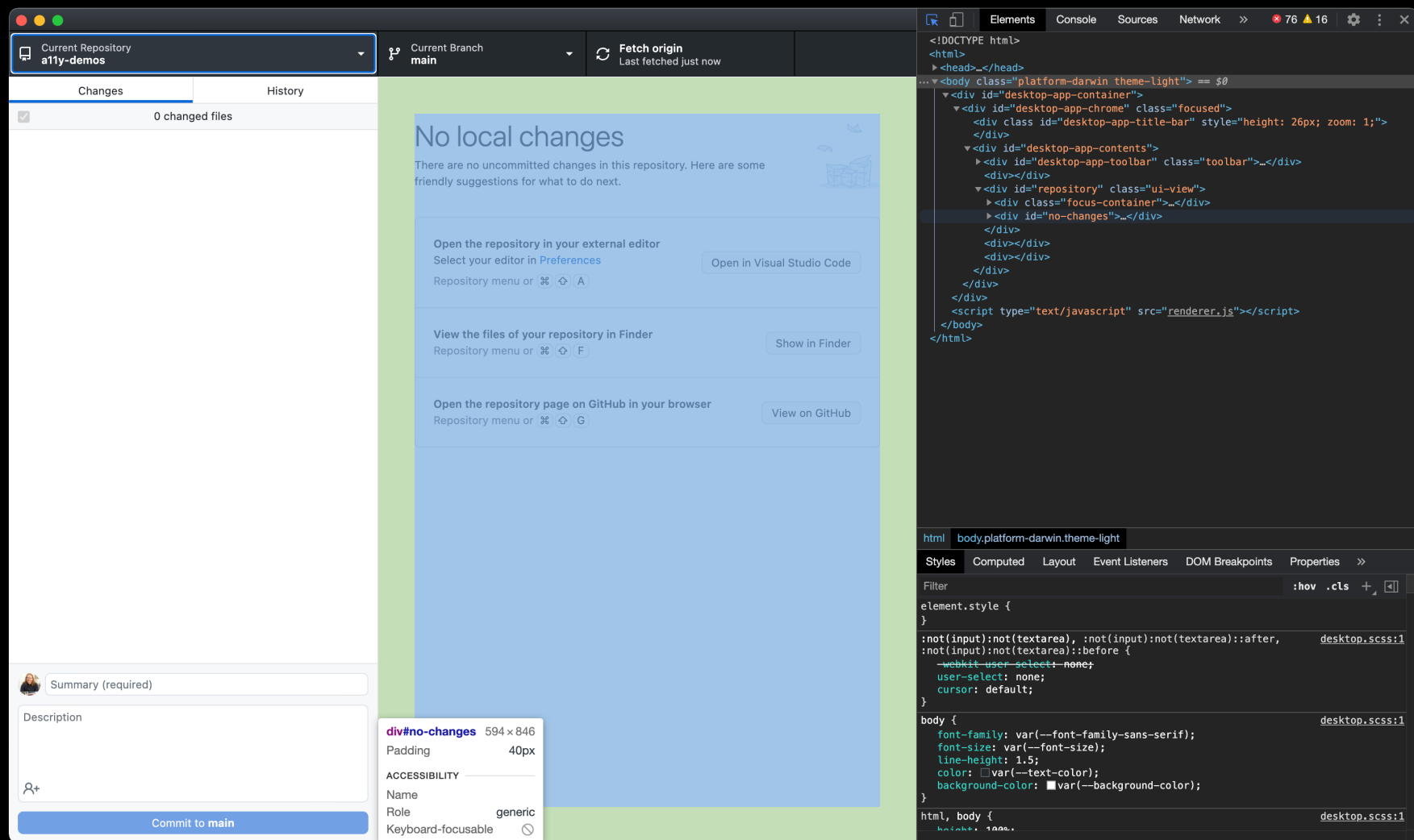
<https://docs.microsoft.com/microsoft-edge/devtools-guide-chromium/javascript/overrides>



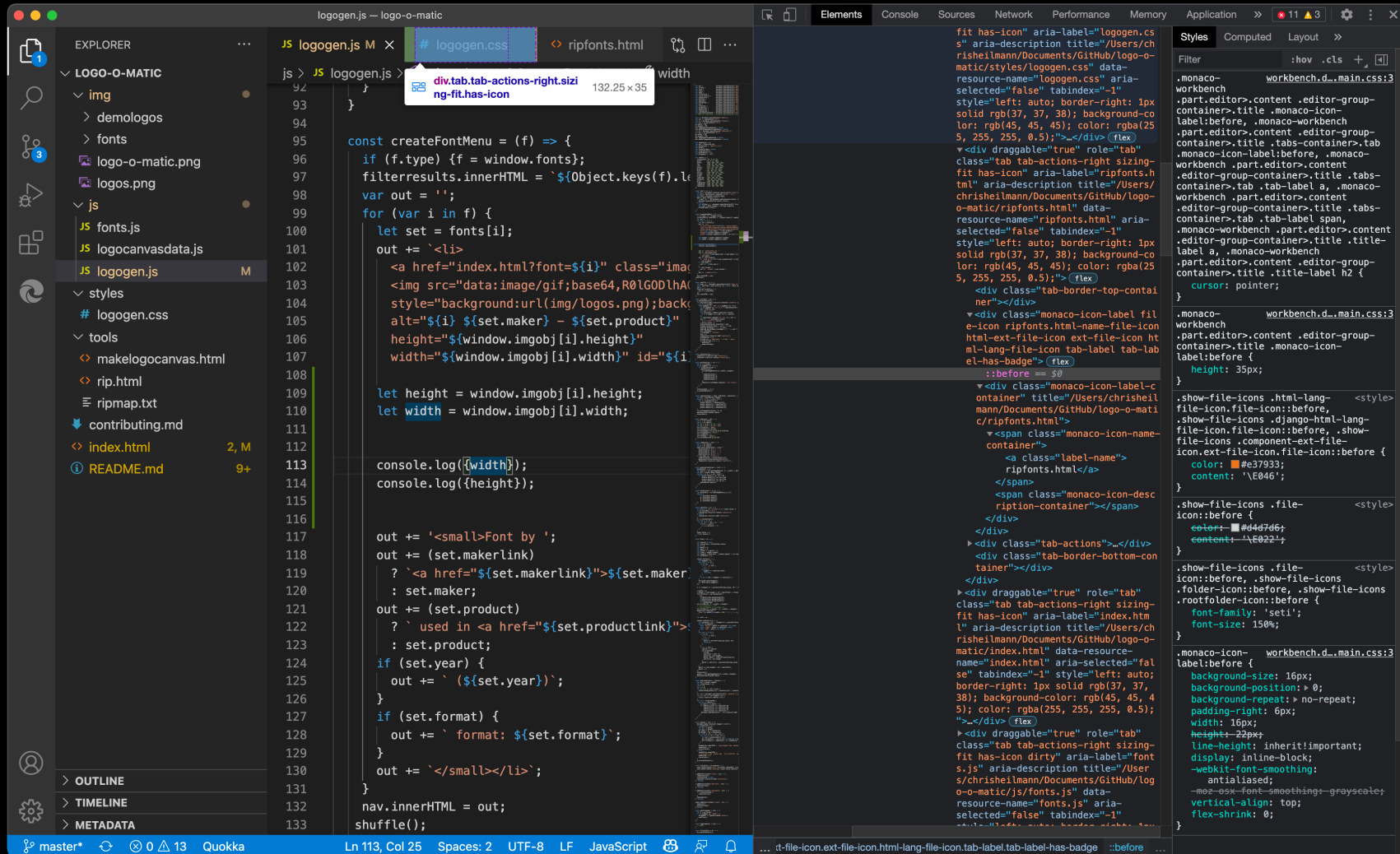
5

You can inspect  
and debug  
much more than  
you know!

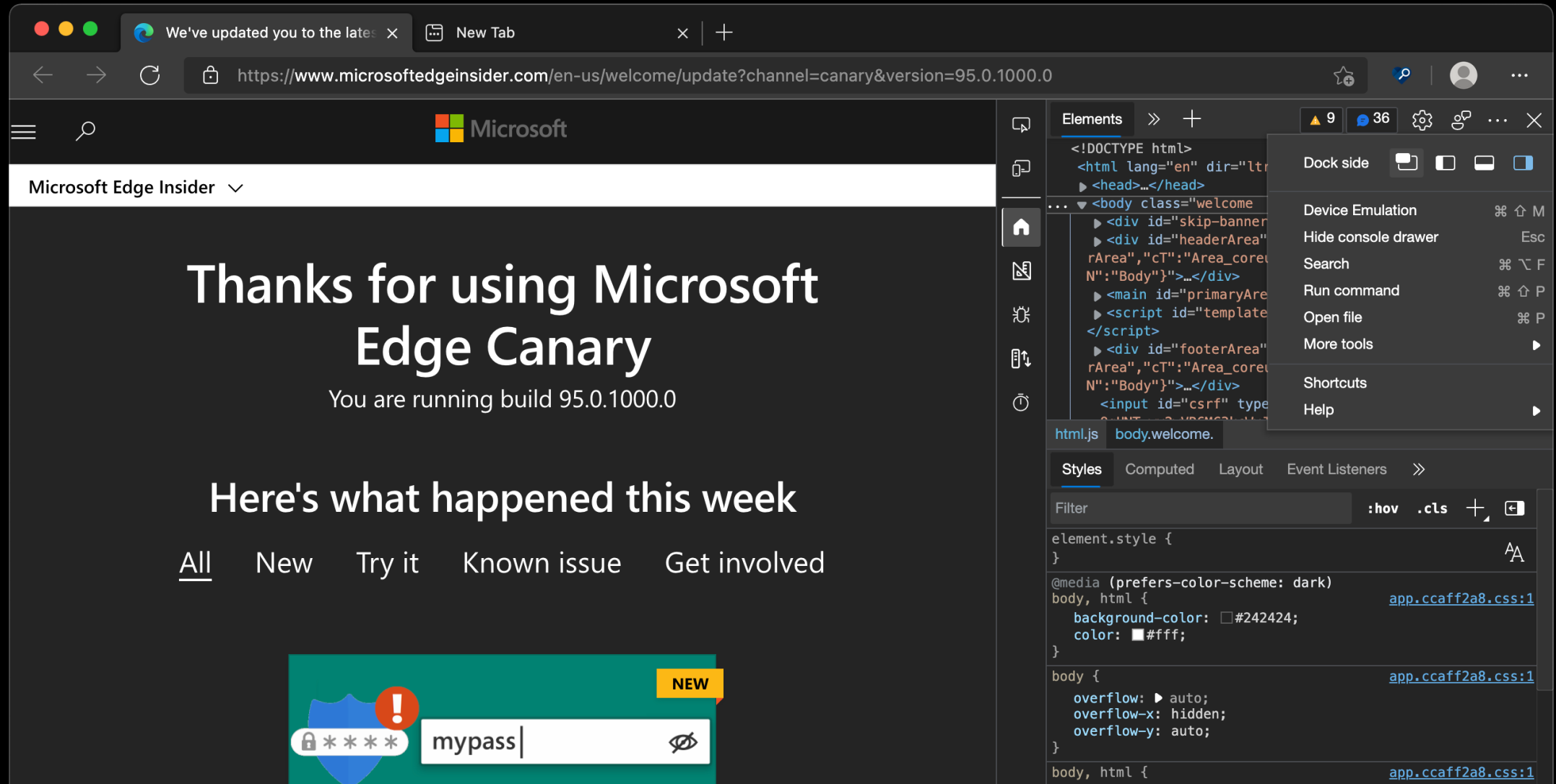
# GitHub Desktop...



# Visual Studio Code



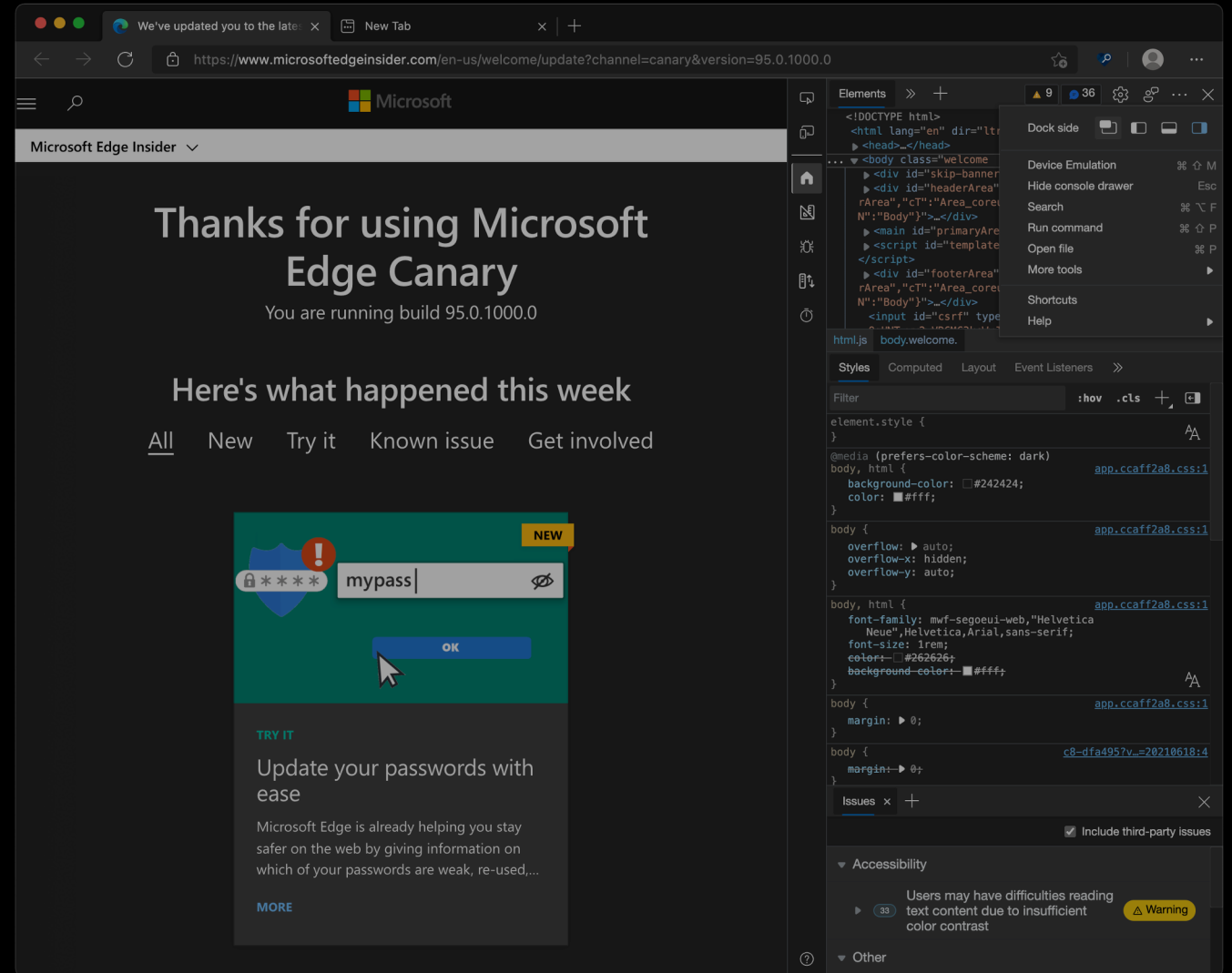
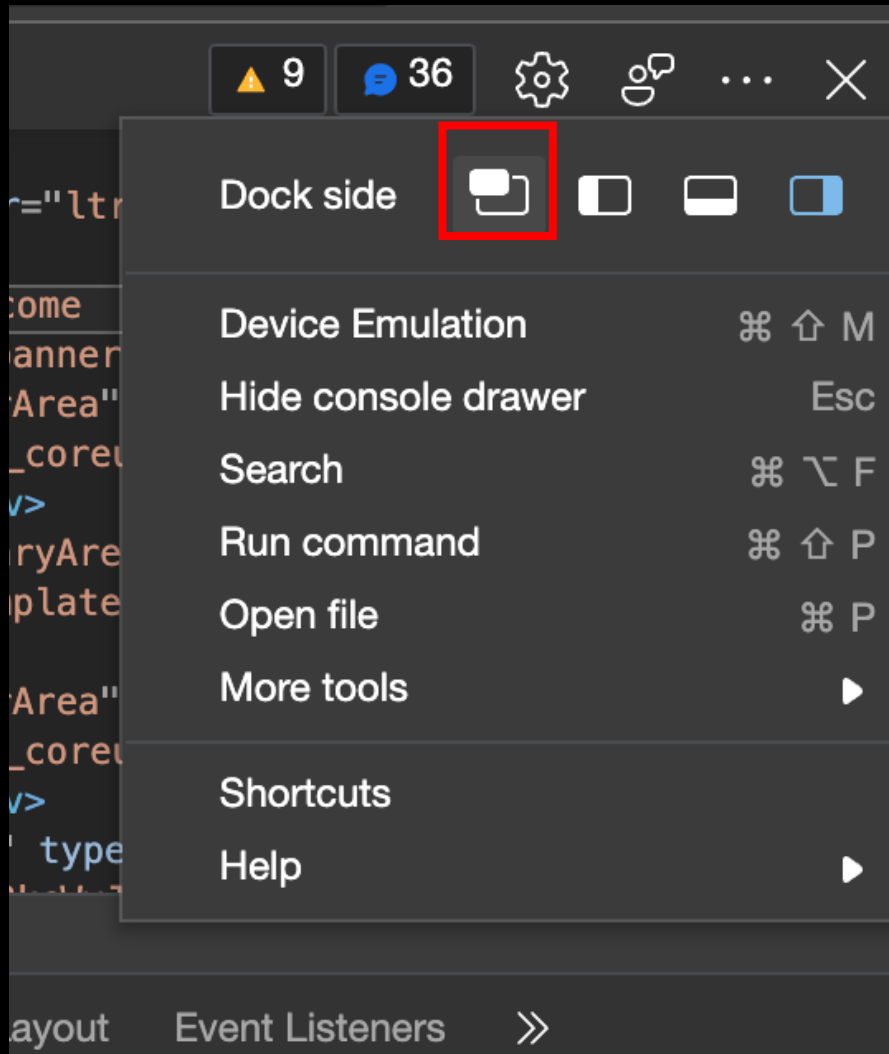
# Browser DevTools?



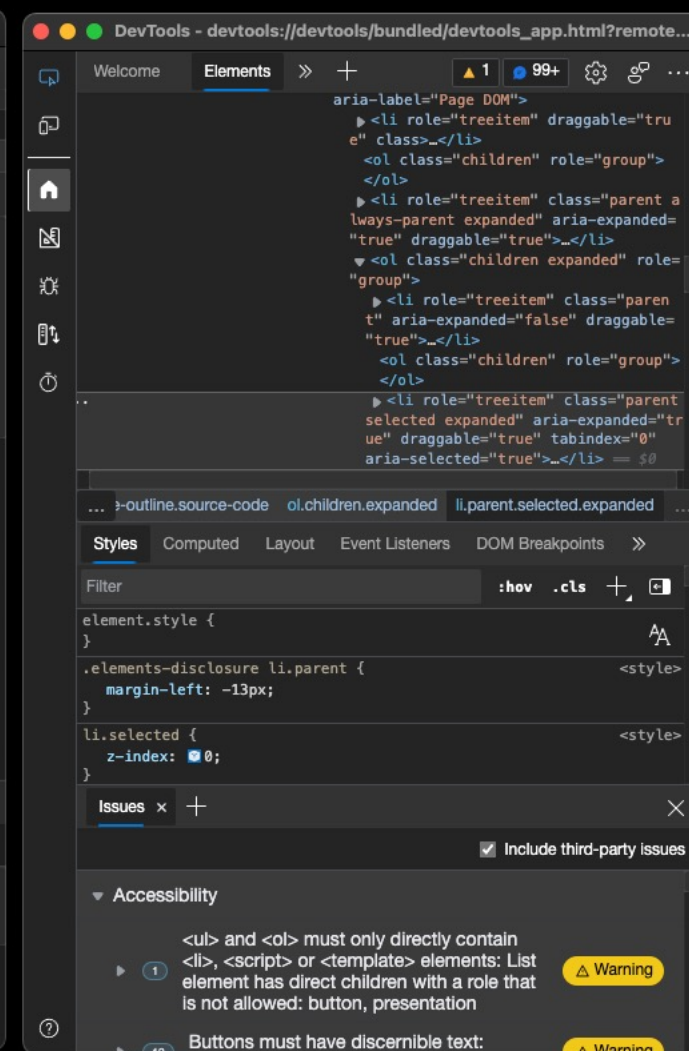
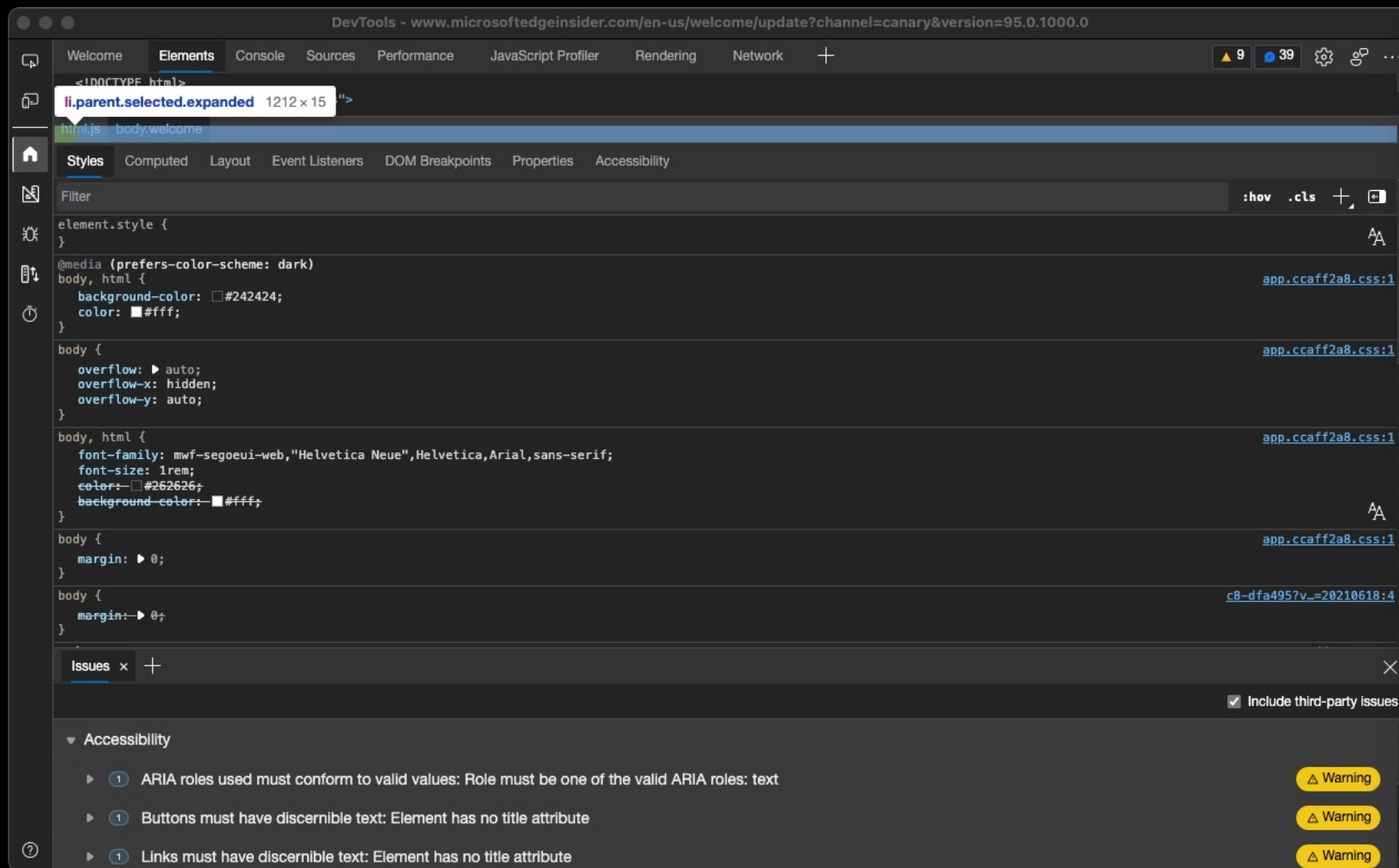
The image shows a screenshot of the Microsoft Edge Canary browser interface. The address bar displays the URL `https://www.microsoftedgeinsider.com/en-us/welcome/update?channel=canary&version=95.0.1000.0`. The page content includes the Microsoft logo, the text "Microsoft Edge Insider", and a large heading "Thanks for using Microsoft Edge Canary" followed by "You are running build 95.0.1000.0". Below this is a section titled "Here's what happened this week" with links for "All", "New", "Try it", "Known issue", and "Get involved". At the bottom, there is a security notification banner with a shield icon, a red exclamation mark, and a password field containing "mypass".

On the right side, the browser's DevTools panel is open, showing the "Elements" tab. The DOM tree displays the HTML structure of the page, including the `<body>` element and its children. A context menu is visible over the `<body>` element, listing options such as "Dock side", "Device Emulation", "Hide console drawer", "Search", "Run command", "Open file", "More tools", "Shortcuts", and "Help". The "Styles" tab is also visible, showing the default styles for the selected element.

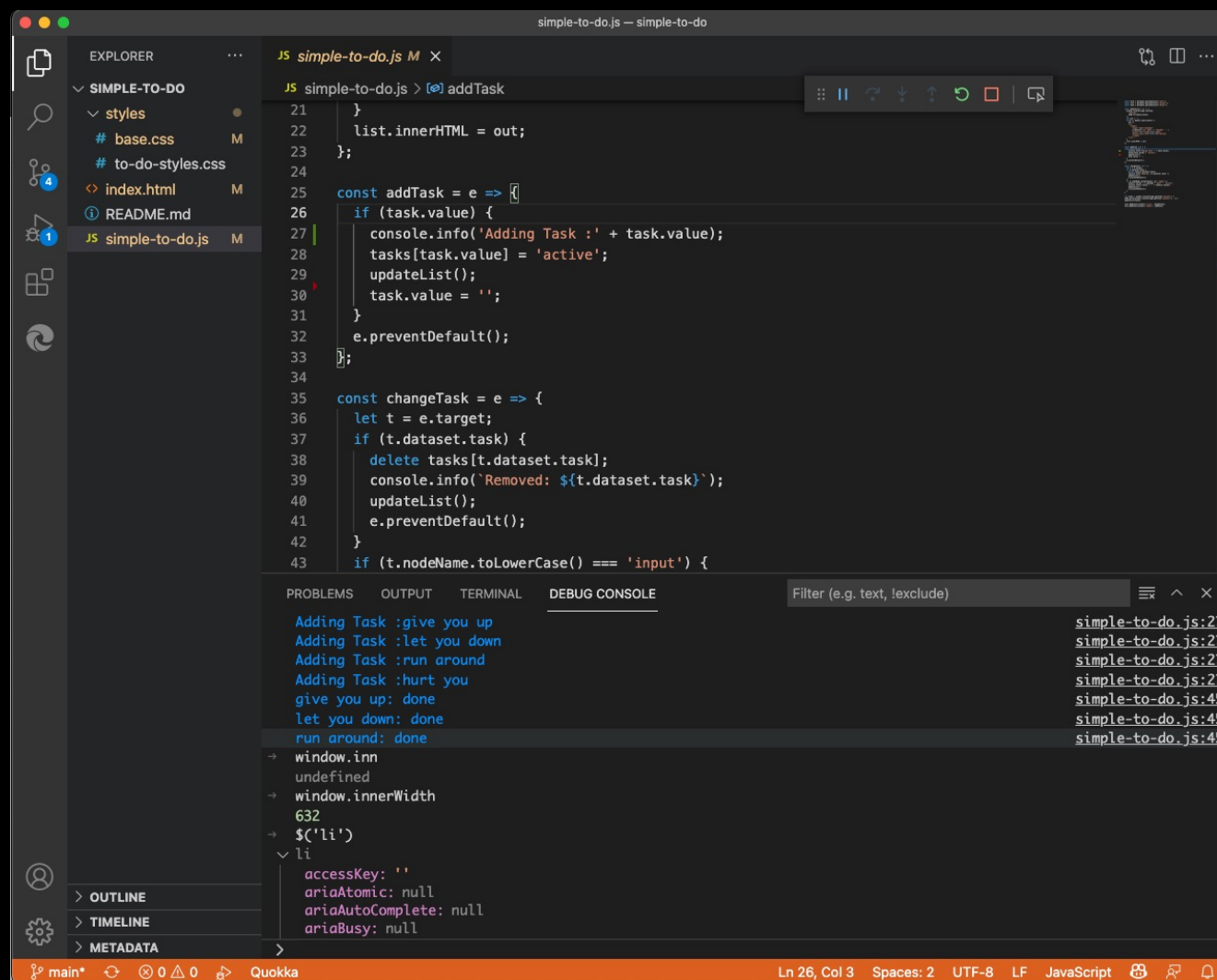
# Browser DevTools?



# Inspect DevTools with DevTools...



# DevTools in VS Code?



# Dedicated browser instance and console!

The image shows a development environment with VS Code on the left and a browser on the right. A large blue arrow points from the text 'Dedicated browser instance and console!' to the browser window. Another blue arrow points from the text to the VS Code editor, specifically to the console output.

**VS Code Editor:**

- File Explorer: SIMPLE-TO-DO, styles, # base.css, # to-do-styles, index.html, README.md, JS simple-to-do.js
- Editor: JS simple-to-do.js, AddTask
- Code Snippets:

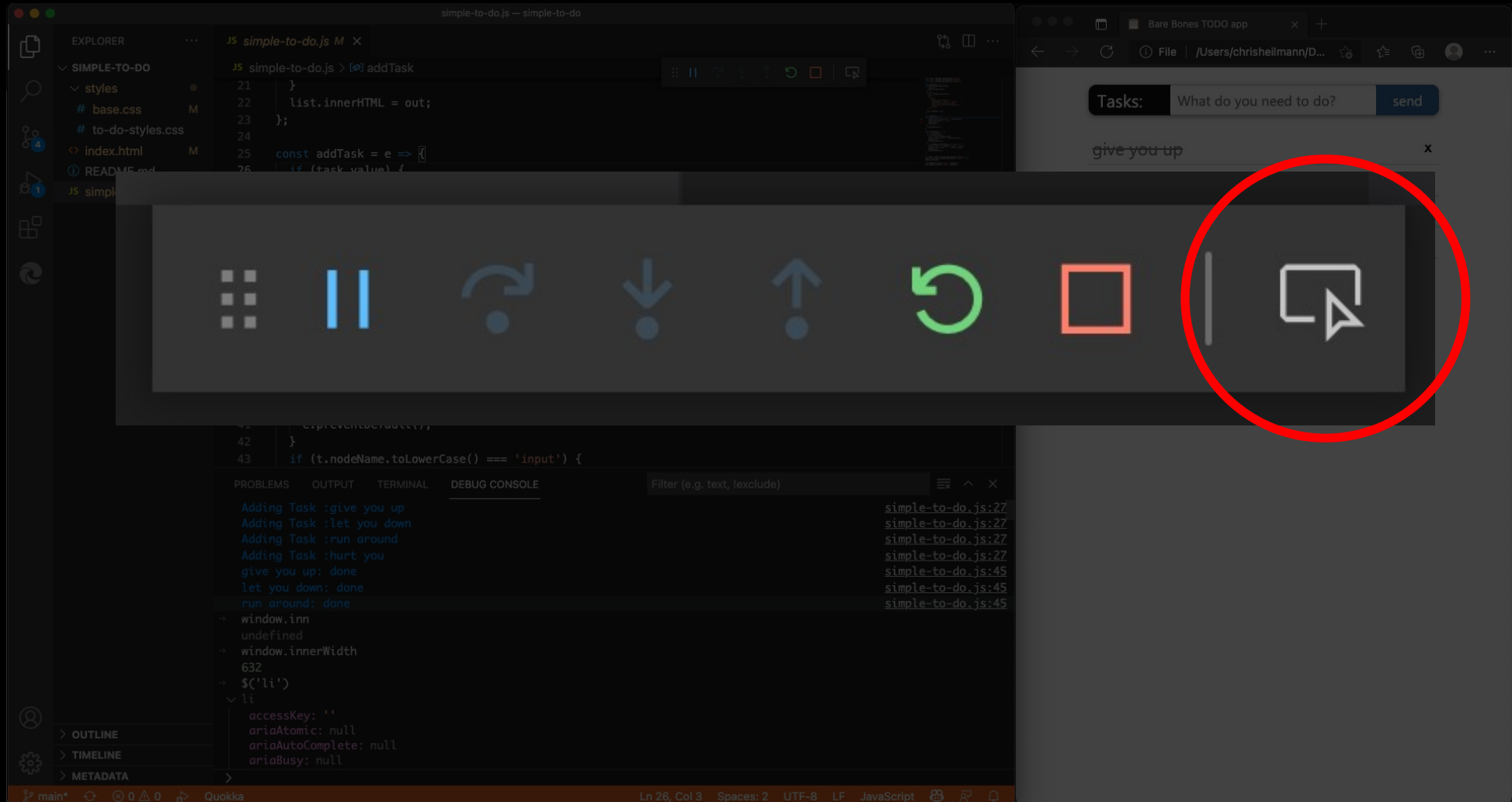
```
21 }
22 list.innerHTML = out;
23 };
24
25 const addTask = e => {
26   if (task.value) {
27     console.info('Adding Task : ' + task.value);
28     tasks[task.value] = 'active';
29     updateList();
30     task.value = '';
31   }
32   e.preventDefault();
33 }
34
35 const removeTask = e => {
36   const target = e.target;
37   if (target.tagName === 'LI') {
38     const task = target.dataset.task;
39     console.info('Removed: ${task}');
40     tasks[task] = 'removed';
41     e.preventDefault();
42   }
43   if (target.nodeName.toLowerCase() === 'input') {
```
- DEBUG CONSOLE:

```
Adding Task :give you up
Adding Task :let you down
Adding Task :run around
Adding Task :hurt you
give you up: done
let you down: done
run around: done
window.inn
undefined
window.innerWidth
632
$('li')
li
  accessKey: ''
  ariaAtomic: null
  ariaAutoComplete: null
  ariaBusy: null
```

**Browser (Bare Bones TODO app):**

- Address Bar: File | /Users/chrisheilmann/D...
- Form: Tasks: What do you need to do? send
- List:
  - give you up x
  - let you down x
  - run around x
  - hurt you

# Going the next step...



Edge DevTools — simple-to-do

EXPLORER

SIMPLE-TO-DO

styles

base.css

to-do-styles.css

index.html

README.md

JS simple-to-do.js

JS simple-to-do.js

```
21 }
22 list.innerHTML = out;
23 };
24
25 const addTask = e => {
26   if (task.value) {
27     console.info('Adding Task : ' + task.value);
28     tasks[task.value] = 'active';
29     updateList();
30     task.value = '';
31   }
32   e.preventDefault();
33 };
34
35 const changeTask = e => {
36   let t = e.target;
37   if (t.dataset.task) {
38     delete tasks[t.dataset.task];
39     console.info('Removed: ' + t.dataset.task);
40     updateList();
41     e.preventDefault();
42   }
43   if (t.nodeName.toLowerCase() === 'input')
```

PROBLEMS

OUTPUT

TERMINAL

DEBUG CONSOLE

```
Adding Task :give you up
Adding Task :let you down
Adding Task :run around
Adding Task :hurt you
give you up: done
let you down: done
run around: done
→ window.inn
undefined
→ window.innerWidth
632
→ $('li')
li
  accessKey: ''
  ariaAtomic: null
  ariaAutoComplete: null
  ariaBusy: null
```

OUTLINE

TIMELINE

METADATA

Edge DevTools

Elements

Network

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body> = $0
    <form>...</form>
    <script src="simple-to-do.js"></script>
  </body>
</html>
```

html

body

Styles

Computed

Layout

Event Listeners

Properties

Filter

```
element.style {
}
body {
  font-size: calc(1em + 1vw);
  font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
}
body {
  display: block;
}
```

Filter (e.g. text, exclude)

```
simple-to-do.js:27
simple-to-do.js:27
simple-to-do.js:27
simple-to-do.js:27
simple-to-do.js:45
simple-to-do.js:45
simple-to-do.js:45
```

Bare Bones TODO app

Tasks:

What do you need to do?

send

give you up

x

let you down

x

run around

x

hurt you

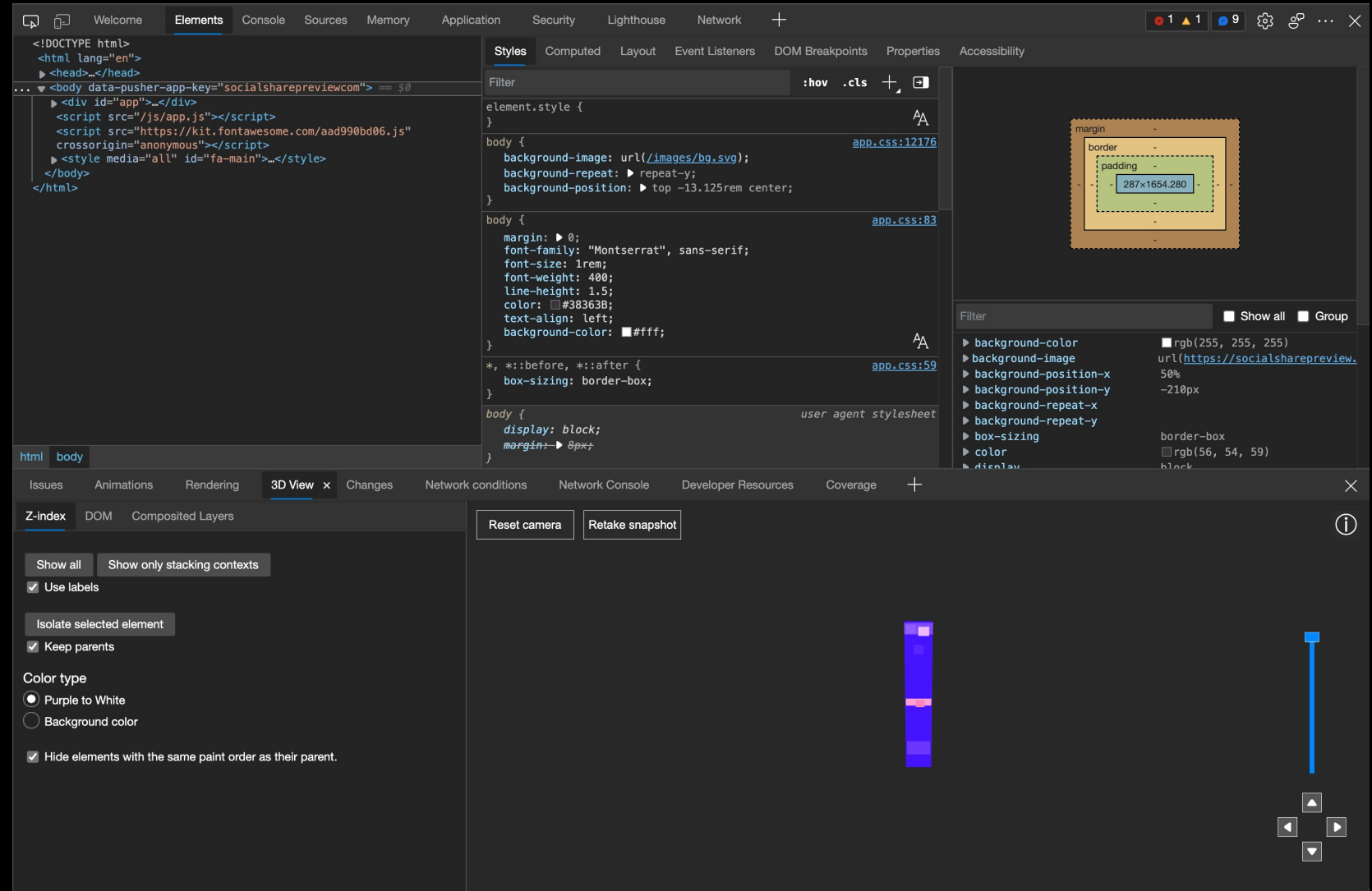
form

446.39 x 221.22



Some dirty  
secrets...

People use  
only a small  
fraction of  
Devtools.



Filter by title

Microsoft Edge Developer documentation





> Accessibility

> DevTools

- DevTools overview
- > What's new
- > Tutorials
  - > For beginners
    - Open DevTools**
    - Get started with HTML and the DOM
    - Get started viewing and changing the DOM
    - Get started with CSS
    - Get started with viewing and changing CSS
    - Get started with debugging JavaScript
    - Get started with analyzing runtime performance
    - View page resources
    - Edit files with Workspaces
    - Inspect network activity
    - Optimize website speed
  - > Remote debugging
  - > How-to guides
  - > Concepts

Download PDF

# Open Microsoft Edge DevTools

07/01/2021 • 2 minutes to read •    

There are many ways to open Microsoft Edge DevTools, helping you quickly access different parts of the DevTools UI.

## Open Microsoft Edge DevTools

To open DevTools, use either of the following options.

- Use the Microsoft Edge UI.
  - Choose the **Settings and more (...)** icon > **More Tools** > **Developer Tools**.
- Use the keyboard.
  - Select **F12** or **Control + Shift + I** (Windows, Linux) or **Command + Option + I** (macOS).

For more information, navigate to [Microsoft Edge DevTools keyboard shortcuts](#).

Is this page helpful?

Yes No

### In this article

#### Open Microsoft Edge DevTools

Open the Elements panel to inspect the DOM or CSS

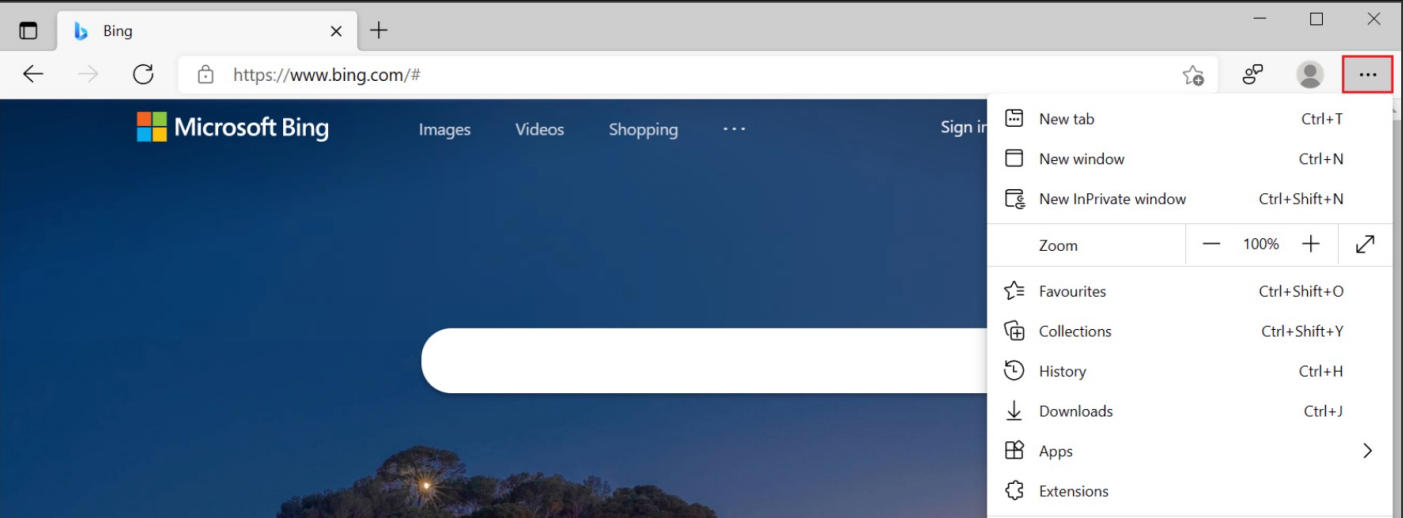
Open the Console panel

Open the previous panel

Auto-open DevTools on every new tab

Toggle the F12 keyboard shortcut on or off

Getting in touch with the Microsoft Edge DevTools team



Developer tools  
should not  
expect people to  
be experts but  
turn them into  
experts over time.

# Sorting tools into use cases



Elements

Console

Sources

Performance

JavaScript Profiler

Network

Rendering

+

20

99+

<!DOCTYPE html>  
<html lang="de-de" dir="ltr" class="js exp-10718 exp-10718T1">  
 <head data-info="{"v":1.0.7914.42211,"a":"0f2b4e96-0277-40ba-a5c9-1cd0f91502a0","cn":"OneDeployContainer","az":{"did:92e7dc58ca2143cfb2c818b047cc5cd1,"rid":OneDeployContainer,"sn":marketingsites-prod-odnortheurope,"dt":2018-05-03T20:14:23.4188992Z,"bt":2021-09-02T07:27:02.000000Z}},"ddpi":1,"dpi":1,"dp":1,"dg":"uplevel.web.pc.webkit.chrome","th":"default","m":"de-de","l":"de-de","mu":"de-de","rp":"/de-de/","f":"atperf680t2,10718t1,11030c,12775c,tasmigration010,cartemberpl,disablenorefunds,daconvertenabled,enablescalettmetadata,redirecttogarrison,"bh":{}}}></head>  
 <body class="p\_mscom s\_mscomhp fltfeature.atperf680t2 fltfeature.10718t1 fltfeature.11030c fltfeature.12775c fltfeature.tasmigration010 fltfeature.cartemberpl fltfeature.disablenorefunds fltfeature.daconvertenabled fltfeature.enablescalettmetadata fltfeature.redirecttogarrison\_d\_uplevel\_d\_web\_d\_pc\_d\_webkit\_d\_chrome\_c\_web\_d\_pc" data-bgcolor="#FFFFFF" style data-has-accent-color="false"> == \$0  
 <noscript></noscript>  
 <div role="presentation" id="headerArea" data-m="{"cn":"headerArea 1","ct":"Area\_coreuiArea","id":"a1Body","sn":1,"an":"Body"}" class="x-hidden-print uhf"></div>  
 <script>window.performance && performance.mark && performance.mark("MainAreaBegin")</script>  
 <section id="primaryArea" role="main" tabindex="-1" style="outline: none" data-m="{"cn":"primaryArea 1","ct":"Area\_coreuiArea","id":"a2Body","sn":2,"an":"Body"}"></section>  
 <script>window.performance && performance.mark && performance.mark("MainAreaEnd")</script>  
 <script></script>  
 <div role="presentation" id="footerArea" data-m="{"cn":"footerArea 1","ct":"Area\_coreuiArea","id":"a3Body","sn":3,"an":"Body"}" class="x-hidden-print uhf"></div>  
 <script></script>  
 <script></script>  
 <script></script>  
 <script></script>  
 <script></script>  
 <iframe sandbox="allow-scripts allow-same-origin" title="Adobe ID Syncing iFrame" id="destination\_publishing\_iframe\_mscom\_0" name="destination\_publishing\_iframe\_mscom\_0\_name" src="https://mscom.demdex.net/dest5.html?d\_nsaid=0&https%3A%2F%2Fwww.microsoft.com" style="display: none; width: 0px; height: 0px;" class="aamIframeLoaded"></iframe>  
 <iframe src="https://www.microsoft.com/de-de/mscomhp/onerf/MeSilentPassport" width="0" height="0" border="0" frameborder="0" style="display: none;"></iframe>  
 <iframe id="mecontrol-iframe-0" sandbox="allow-forms allow-scripts allow-same-origin" src="https://login.live.com/me.srf?wa=wsignin1.0&wreply=http%3A%2F%2Fwww.microsoft.com&uaid=53132c62-e19e-4f83-0283-60078cb6140d&partnerId=mshomepage" style="display: none;"></iframe>  
 <script src="https://www.microsoft.com/library/svy/broker-config.js?1630974979490"></script>  
 <script src="https://cdnssl.clicktale.net/www/tc/ls\_CS.js"></script>  
 <cs-native-frame-holder hidden></cs-native-frame-holder>  
 <iframe src="https://cdnssl.clicktale.net/uxa/xdframe-single-domain-1.1.0.html?pid=2422&cookieNames=\_cs\_id,\_cs\_s,\_cs\_cvars,\_cs\_ex" hidden title="Intentionally blank"></iframe>  
 </body>  
</html>

body.p\_mscom.s\_mscomhp.fltfeature\atperf680t2.fltfeature\10718t1.fltfeature\11030c.fltfeature\12775c.fltfeature\tasmigration010.fltfeature\cartemberpl.fltfeature\disablenorefur ...

Styles

Computed

Layout

Event Listeners

DOM Breakpoints

Properties

Accessibility

iter

:hov .cls +

ement.style {

dy {

font-size: 15px;

font-family: Segoe UI, Segoe UI, "Helvetica Neue", Helvetica, Arial, sans-serif;

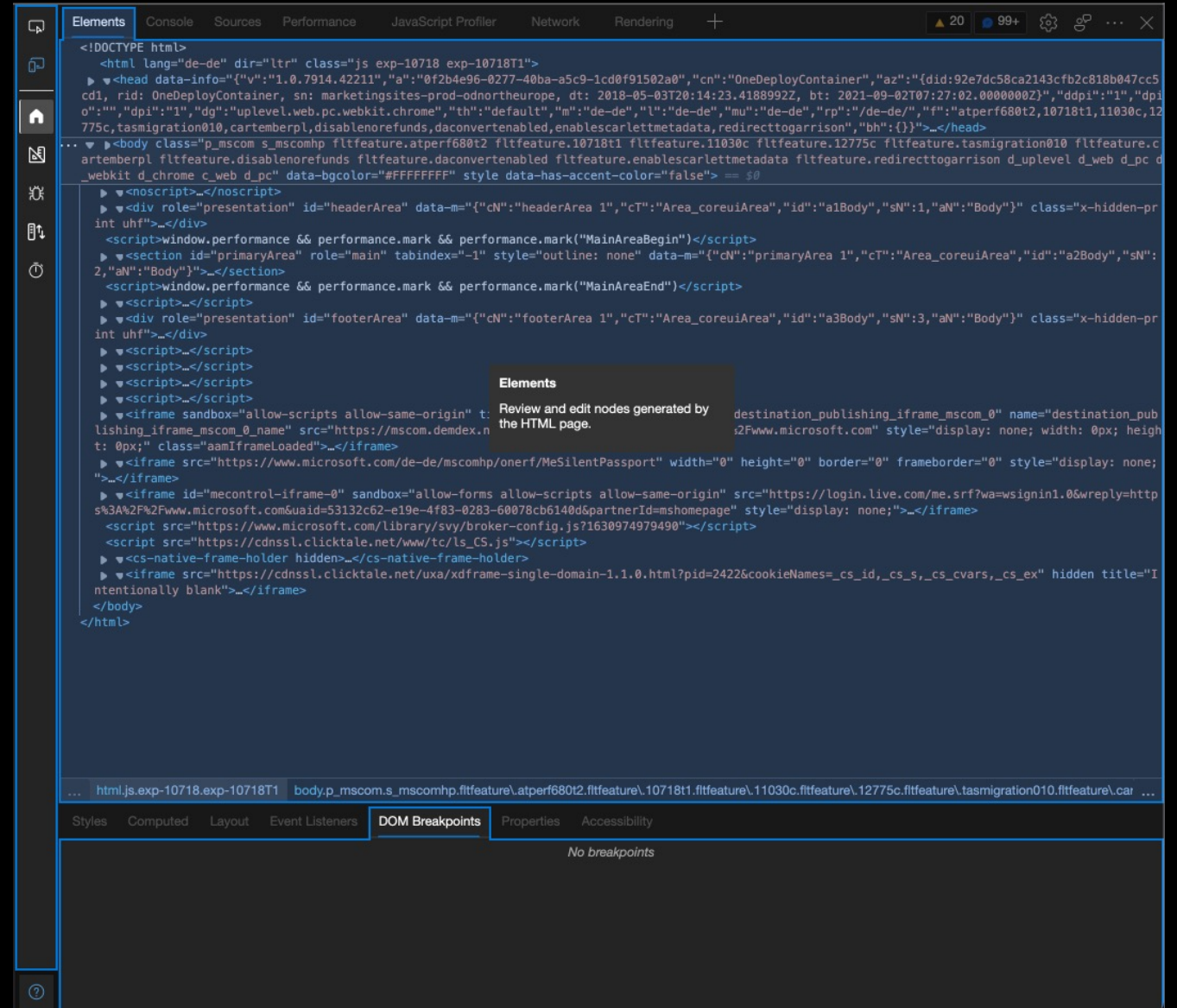
min-width: 320px;

color: #000;

background-color: #fff;

social?apiV\_base=true:4

# Providing in-context explanations



The screenshot displays the 'Elements' panel of a web browser's developer tools. The panel shows the HTML structure of a page, including the DOCTYPE, head, and body elements. A tooltip is visible over a script element, providing a review and edit link. The tooltip text reads: 'Review and edit nodes generated by the HTML page.' The main panel shows the following HTML structure:

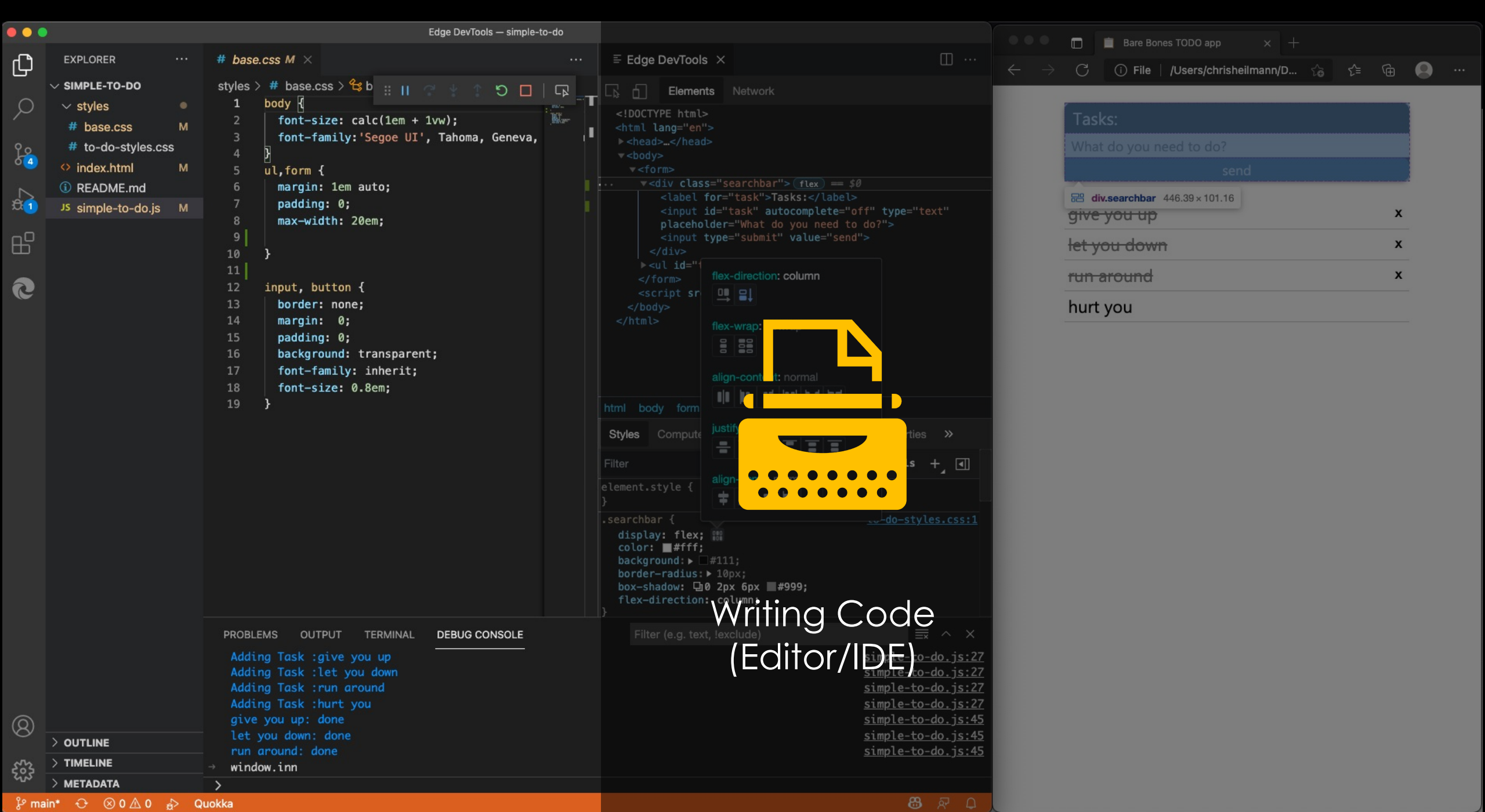
```
<!DOCTYPE html>
<html lang="de-de" dir="ltr" class="js exp-10718 exp-10718T1">
  <head data-info="{"v":1.0.7914.42211,"a":0f2b4e96-0277-40ba-a5c9-1cd0f91502a0,"cn":OneDeployContainer,"az":{"did":92e7dc58ca2143cfb2c818b047cc5cd1,"rid":OneDeployContainer,"sn":marketingsites-prod-odnortheurope,"dt":2018-05-03T20:14:23.4188992Z,"bt":2021-09-02T07:27:02.000000Z,"ddpi":1,"dpi":1,"dp":1,"dg":uplevel.web.pc.webkit.chrome,"th":default,"m":de-de,"l":de-de,"mu":de-de,"rp":/de-de/,"ff":atperf680t2,10718t1,11030c,12775c,tasmigration010,artemberpl,disablenorefunds,daconvertenable,enablescarlettmetadata,redirecttogarrison,"bh":{}}}>
    <body class="p_mscom s_mscomhp fltfeature.atperf680t2 fltfeature.10718t1 fltfeature.11030c fltfeature.12775c fltfeature.tasmigration010 fltfeature.artemberpl fltfeature.disablenorefunds fltfeature.daconvertenable fltfeature.enablescarlettmetadata fltfeature.redirecttogarrison d_uplevel d_web d_pc d_webkit d_chrome c_web d_pc" data-bgcolor="#FFFFFF" style data-has-accent-color="false">
      <script>
      <div role="presentation" id="headerArea" data-m="{"cn":headerArea 1,"ct":Area_coreuiArea,"id":a1Body,"sn":1,"an":Body}" class="x-hidden-pr
      <script>window.performance && performance.mark && performance.mark("MainAreaBegin")</script>
      <section id="primaryArea" role="main" tabindex="-1" style="outline: none" data-m="{"cn":primaryArea 1,"ct":Area_coreuiArea,"id":a2Body,"sn":2,"an":Body}"}>
      <script>window.performance && performance.mark && performance.mark("MainAreaEnd")</script>
      <div role="presentation" id="footerArea" data-m="{"cn":footerArea 1,"ct":Area_coreuiArea,"id":a3Body,"sn":3,"an":Body}" class="x-hidden-pr
      <script>
      <script>
      <script>
      <script>
      <iframe sandbox="allow-scripts allow-same-origin" t:
      <iframe src="https://www.microsoft.com/de-de/mscomhp/onerf/MeSilentPassport" width="0" height="0" border="0" frameborder="0" style="display: none;
      <iframe id="mecontrol-iframe-0" sandbox="allow-forms allow-scripts allow-same-origin" src="https://login.live.com/me.srf?wa=wsignin1.0&wreply=http
      <script src="https://www.microsoft.com/library/svy/broker-config.js?1630974979490"></script>
      <script src="https://cdnssl.clicktale.net/www/tc/ls_CS.js"></script>
      <cs-native-frame-holder hidden></cs-native-frame-holder>
      <iframe src="https://cdnssl.clicktale.net/uxa/xdframe-single-domain-1.1.0.html?pid=2422&cookieNames=_cs_id,_cs_s,_cs_cvars,_cs_ex" hidden title="I
      </body>
    </html>
```

The tooltip text is: 'Review and edit nodes generated by the HTML page.'

The bottom of the developer tools shows the 'DOM Breakpoints' tab, which is currently empty, indicating no breakpoints are set.



We're not yet fully  
integrated into the  
development process  
and there is one big gap!



Edge DevTools — simple-to-do

EXPLORER

- SIMPLE-TO-DO
  - styles
    - # base.css M
    - # to-do-styles.css
  - index.html M
  - README.md
  - JS simple-to-do.js M

# base.css M

```
1 body {  
2   font-size: calc(1em + 1vw);  
3   font-family: 'Segoe UI', Tahoma, Geneva,  
4 }  
5 ul, form {  
6   margin: 1em auto;  
7   padding: 0;  
8   max-width: 20em;  
9 }  
10  
11  
12 input, button {  
13   border: none;  
14   margin: 0;  
15   padding: 0;  
16   background: transparent;  
17   font-family: inherit;  
18   font-size: 0.8em;  
19 }
```

Edge DevTools

Elements

```
<!DOCTYPE html>  
<html lang="en">  
  <head>...</head>  
  <body>  
    <div class="searchbar"> (flex) = $0  
      <label for="task">Tasks:</label>  
      <input id="task" autocomplete="off" type="text"  
        placeholder="What do you need to do?">  
      <input type="submit" value="send">  
    </div>  
    <ul id="...>  
      <li>give you up</li>  
      <li>let you down</li>  
      <li>run around</li>  
      <li>hurt you</li>  
    </ul>  
  </body>  
</html>
```

Styles

```
.searchbar {  
  display: flex;  
  color: #fff;  
  background: #111;  
  border-radius: 10px;  
  box-shadow: 0 2px 6px #999;  
  flex-direction: column;  
  flex-wrap: nowrap;  
  flex-direction: column;  
}
```

DEBUG CONSOLE

```
Adding Task :give you up  
Adding Task :let you down  
Adding Task :run around  
Adding Task :hurt you  
give you up: done  
let you down: done  
run around: done  
window.inn
```

main\* 0 0 0 Quokka

Checking if it works  
(Browser)

Bare Bones TODO app

File | /Users/chrisheilmann/D...

Tasks:

What do you need to do?

send

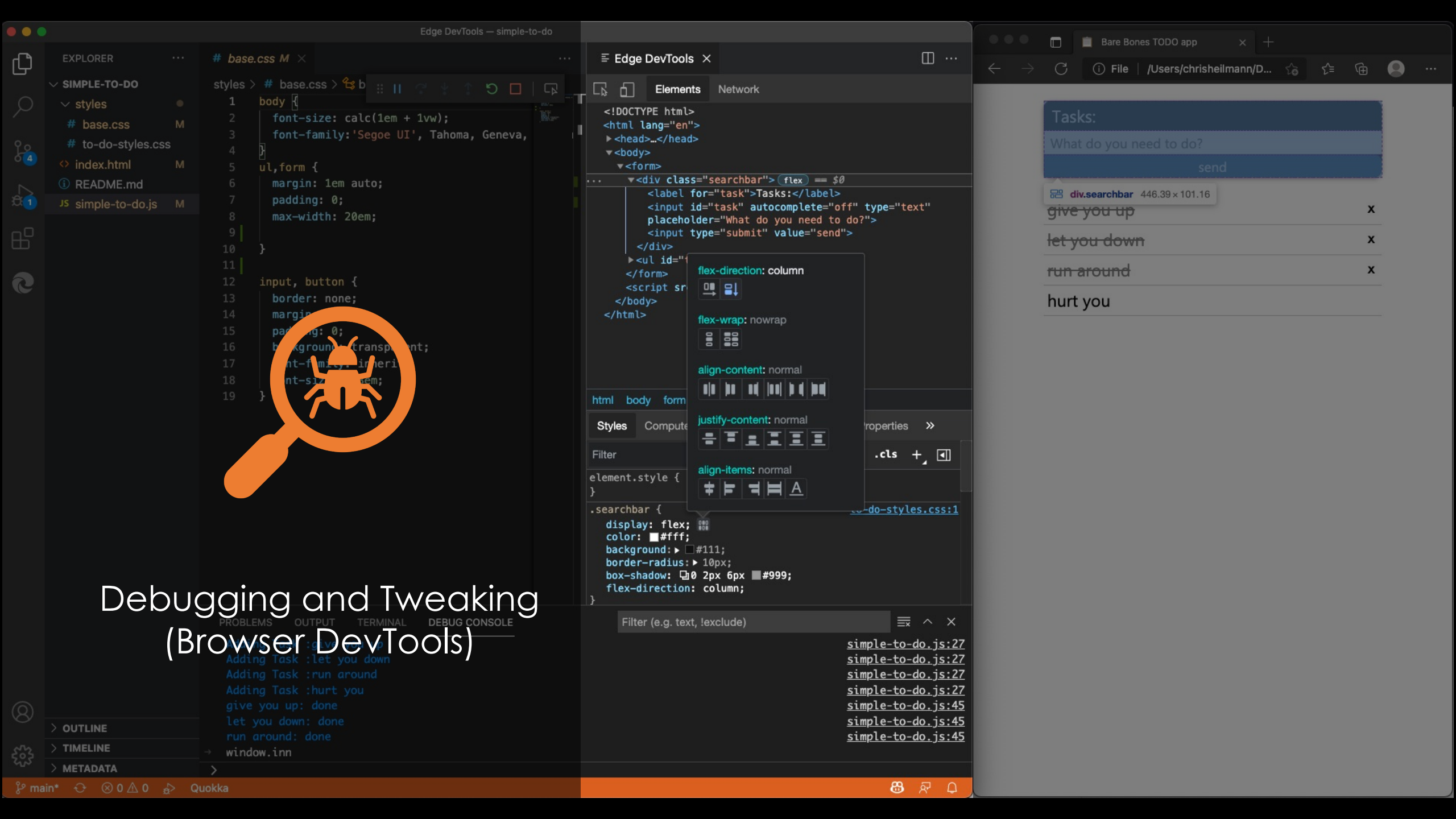
div.searchbar 446.39 x 101.16

give you up x

let you down x

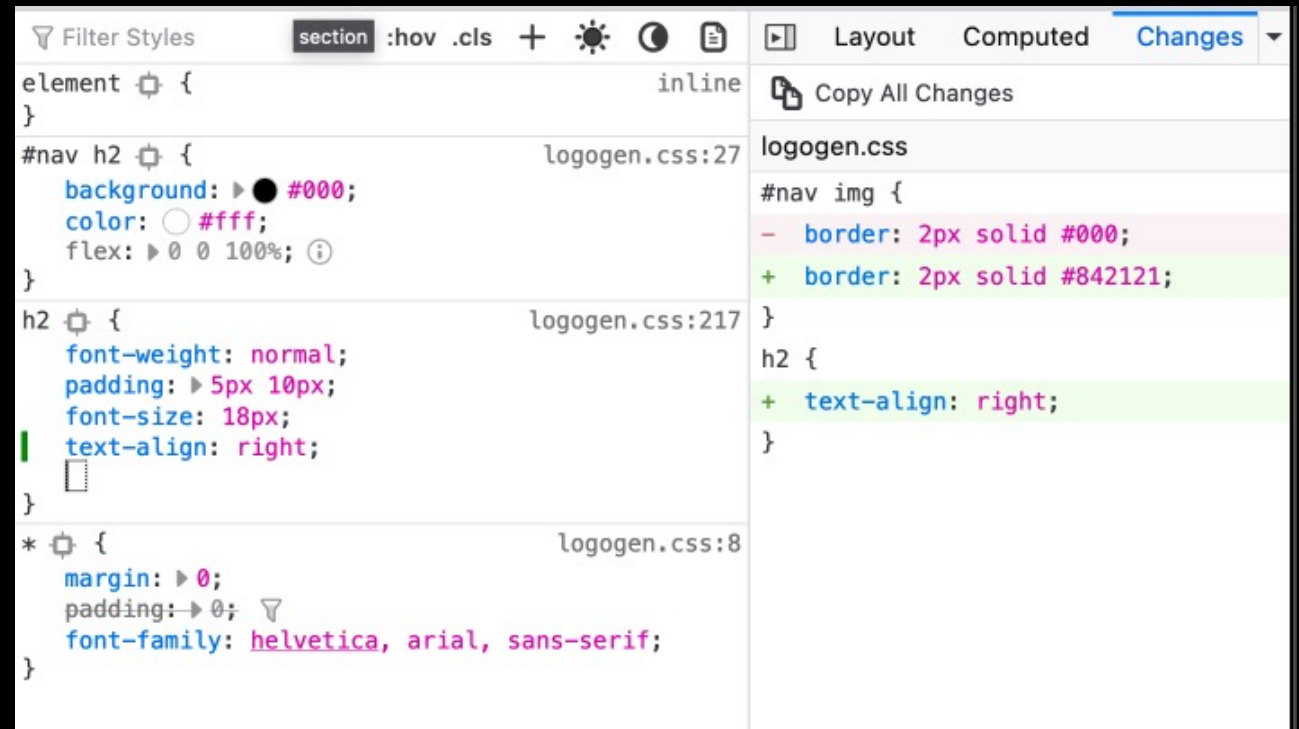
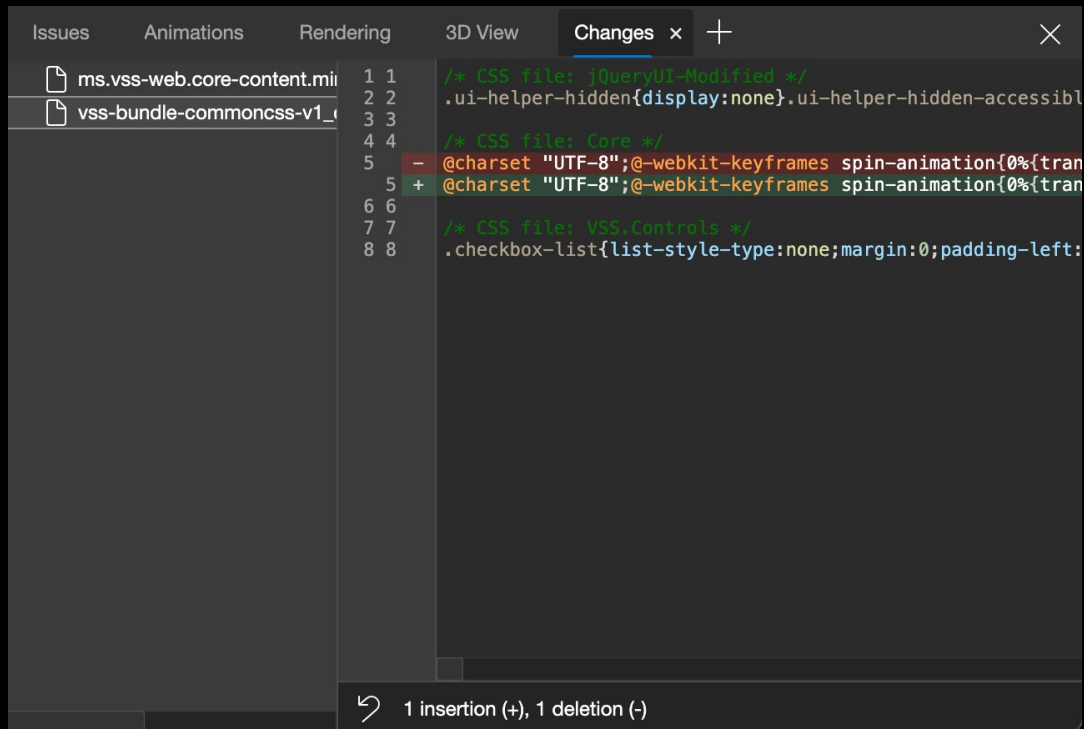
run around x

hurt you



# Debugging and Tweaking (Browser DevTools)

# Done with changes, now what?



# CSS mirror editing (open to feedback)

## CSS MIRROR EDITING

CSS mirror editing is an experimental feature that automatically applies changes made in the DevTools panel to CSS files in your workspace.

Mirror editing is currently ON.

[Toggle Mirror Editing Off](#)

Please help us improve this feature by [leaving feedback here](#).

GE TOOLS ...

nes TODO app http...

DITING

iting is an feature that applies changes evTools panel to our workspace.

is currently ON.

[Mirror Editing Off](#)

s improve this [leaving feedback here](#).

```
# base.css
1  .searchbar {
2    display: flex;
3    color: #fff;
4    background: green;
5    border-radius: 10px;
6    box-shadow: 0 2px 6px #999;
7    flex-direction: column;
8  }
9
10 p {
11   line-height: 1.23;
12 }
13 .searchbar label, .searchbar i
14   flex-grow: 1;
15   padding: .2em .5em;
16 }
17 .searchbar input[type="submit"]
18   background: #369;
19   color: #f8f8f8;
20   border-radius: 10px;
21   border-top-left-radius: 0;
22   border-bottom-left-radius:
23 }
24 .searchbar input[type="text"]
25   flex-grow: 3;
26   background: #fff;
27   border: 1px solid #ccc;
28   border-width: 1px 0;
29 }
30 li {
31   list-style: none;
32   padding: 5px;
33   line-height: 1.3;
34   position: relative;
```

```
# to-do-styles.css
1  .searchbar {
2    display: flex;
3    color: #fff;
4    background: green;
5    border-radius: 10px;
6    box-shadow: 0 2px 6px #999;
7    flex-direction: column;
8  }
9
10 p {
11   line-height: 1.23;
12 }
13 .searchbar label, .searchbar i
14   flex-grow: 1;
15   padding: .2em .5em;
16 }
17 .searchbar input[type="submit"]
18   background: #369;
19   color: #f8f8f8;
20   border-radius: 10px;
21   border-top-left-radius: 0;
22   border-bottom-left-radius:
23 }
24 .searchbar input[type="text"]
25   flex-grow: 3;
26   background: #fff;
27   border: 1px solid #ccc;
28   border-width: 1px 0;
29 }
30 li {
31   list-style: none;
32   padding: 5px;
33   line-height: 1.3;
34   position: relative;
```

Edge DevTools x

Elements Network >> +

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <form>
      <div class="searchbar"> (flex) == $0
        <label for="task">Tasks:</label>
        <input id="task" autocomplete="off"
          type="text" placeholder="What do you
            need to do?">
        <input type="submit" value="send">
      </div>
      <ul id="tasks"></ul>
    </form>
  </body>
</html>
```

html body form div.searchbar

Styles Computed Layout >>

Filter :hov .cls +

```
element.style {
}

.searchbar {
  display: flex;
  color: #fff;
  background: green;
  border-radius: 10px;
  box-shadow: 0 2px 6px #999;
  flex-direction: column;
}

p {
  line-height: 1.23;
}

div {
  display: block;
}

Inherited from body
```

main\* 0 0 0 Launch Edge against localhost (simple-to-do) Quokka

Edge DevTools — simple-to-do

index.html M # base.css # to-do-styles.css

```
11 <body>
12
13 <form>
14   <div class="searchbar">
15     <label for="task">Tasks:</label>
16     <input id="task" autocomplete="off" type="text" value="What do you need to do?">
17     <input type="submit" value="send">
18   </div>
19   <ul id="tasks"></ul>
20 </form>
21
22 <script src="simple-to-do.js"></script>
23 </body>
24 </html>
```

Edge DevTools

Elements

```
<!DOCTYPE html>
<html lang="en">
  <head>...</head>
  <body>
    <form>
      <div class="searchbar"> flex == $0
        <label for="task">Tasks:</label>
        <input id="task" autocomplete="off" type="text"
          placeholder="What do you need to do?">
        <input type="submit" value="send">
      </div>
      <ul id="tasks"></ul>
    </form>
  </body>
</html>
```

html body form div.searchbar

Styles

Computed Layout Event Listeners Properties

Filter :hov .cls +

```
element.style {
}

.searchbar {
  display: flex;
  color: #fff;
  background: #111;
  border-radius: 10px;
  box-shadow: 0 2px 6px #999;
}

div {
  display: block;
}

Inherited from body
body {
  font-size: calc(1em + 1vw);
  font-family: 'Segoe UI', Tahoma, Geneva, Verdana, sans-serif;
}
```

Bare Bones TODO app

localhost:8080

Microsoft Edge is being controlled by automated test software.

Tasks: What do you need to do? send



7

You're the  
audience and  
the clients of  
Developer Tools!



Good products  
thrive on input

# In context feedback tools

## ✓ CSS MIRROR EDITING

CSS mirror editing is an experimental feature that automatically applies changes made in the DevTools panel to CSS files in your workspace.

Mirror editing is currently ON.

[Toggle Mirror Editing Off](#)

Please help us improve this feature by [leaving feedback here](#).

## ✓ HELPFUL LINKS

[Documentation](#)

[Report a Bug](#)

[Request a Feature](#)

# Open source on GitHub!

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microsoft / vscode-edge-devtools

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Actions

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Settings

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is:issue is:open

Labels 20

Milestones 1

New issue

| <input type="checkbox"/> | 30 Open   | 166 Closed  | Author   | Label | Projects | Milestones | Assignee | Sort |
|--------------------------|---|-------------|----------|-------|----------|------------|----------|------|
| <input type="checkbox"/> | <div>URL is not changing</div>  | bug         |          |       |          |            |          | 2    |
|                          | #491 opened 2 days ago by renushreeg  |             |          |       |          |            |          |      |
| <input type="checkbox"/> | <div>CSS style not working</div>  |             |          |       |          |            |          |      |
|                          | #490 opened 3 days ago by FiefieBez   |             |          |       |          |            |          |      |
| <input type="checkbox"/> | <div>When launching using the debugger extension does not correctly attach until the 3rd of 4th try.</div>  | bug         |          |       |          |            |          |      |
|                          | #488 opened 7 days ago by vidorteg  |             |          |       |          |            |          |      |
| <input type="checkbox"/> | <div>Microsoft Edge could not be found. Ensure you have installed Microsoft Edge and that you have selected 'default' or the appropriate version of Microsoft Edge in the extension settings panel.</div> |             |          |       |          |            |          | 1    |
|                          | #486 opened 11 days ago by bagus-stimata  |             |          |       |          |            |          |      |
| <input type="checkbox"/> | <div>screencast with support for responsive mode, also auto reload</div>  | enhancement | tracked  |       |          |            |          | 1    |
|                          | #485 opened 11 days ago by Dev2212  |             |          |       |          |            |          |      |
| <input type="checkbox"/> | <div>Please allow an option to toggle the DevTools panel independently from the screencast</div>  | enhancement | feedback |       |          |            |          | 2    |

Welcome

Elements

Console

>>

+

22

⚙️

🗨️

⋮

✕

html body.logged-in.env-production.page-responsive.intent

Styles

Computed

Layout

Event List

Series

Accessibility

Filter

:hov .cls

element.styl

base.scss:16

systemFont

al,sans-

r

default)

vas-defa

A

scss:20

.scss:3

ox;

body { user agent stylesheet

height

2080 16px

margin

-

border

-

padding

-

- 1032x2089.160 -

-

-

Filter

☐ Show all☐ Group

▶ background-color

▶ box-sizing

▶ color

▶ color-scheme

▶ display

▶ font-family

▶ font-size

■ rgb(13, 17, 23)

border-box

■ rgb(201, 209, 217)

dark

block

-apple-system, system-ui, "Sego

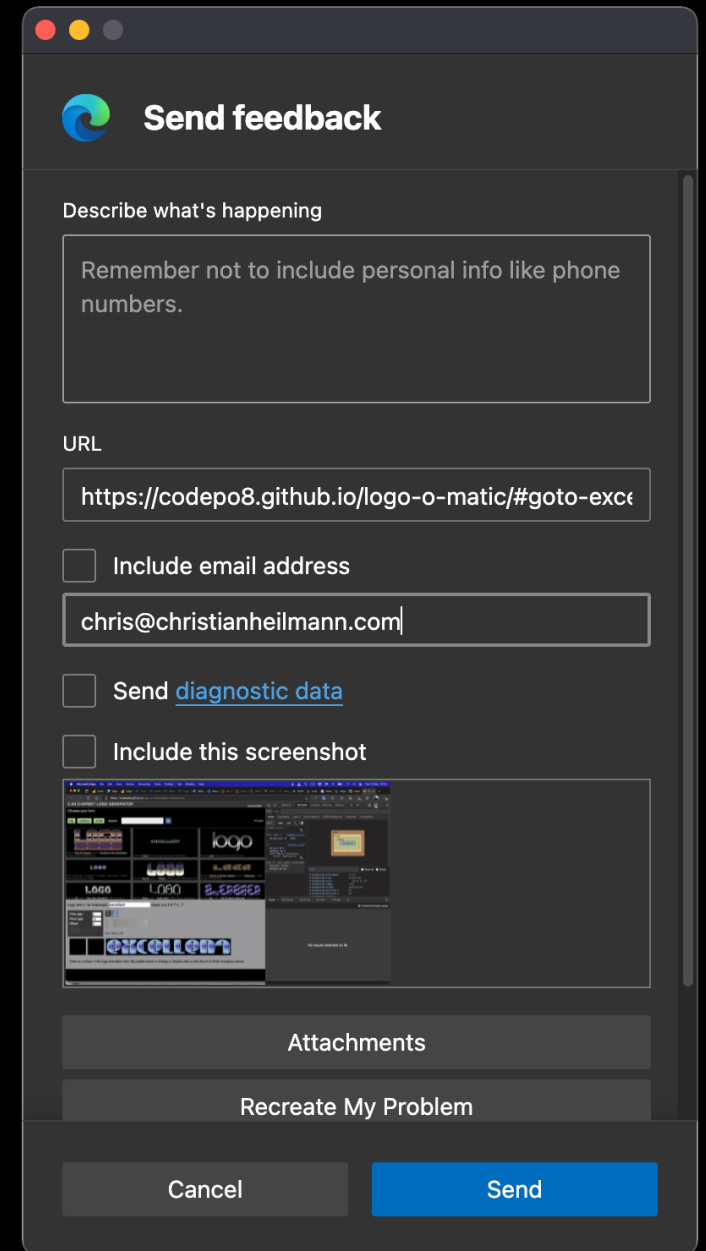
14px

2080 16px



# 90% on the way...

- Shows what URL the issue happened on
- Takes a screenshot to include
- Offers to also send diagnostic data
- Offers you to provide an email for more questions
- Allows for attachments and info how to recreate the issue.
- **We check this daily!**



**Send feedback**

Describe what's happening

Remember not to include personal info like phone numbers.

URL

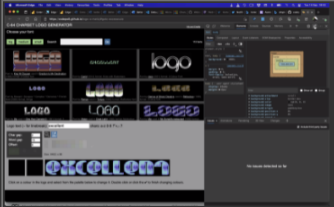
<https://codepo8.github.io/logo-o-matic/#goto-excellem>

☐ Include email address

[chris@christianheilmann.com](mailto:chris@christianheilmann.com)

☐ Send [diagnostic data](#)

☐ Include this screenshot



Attachments

Recreate My Problem

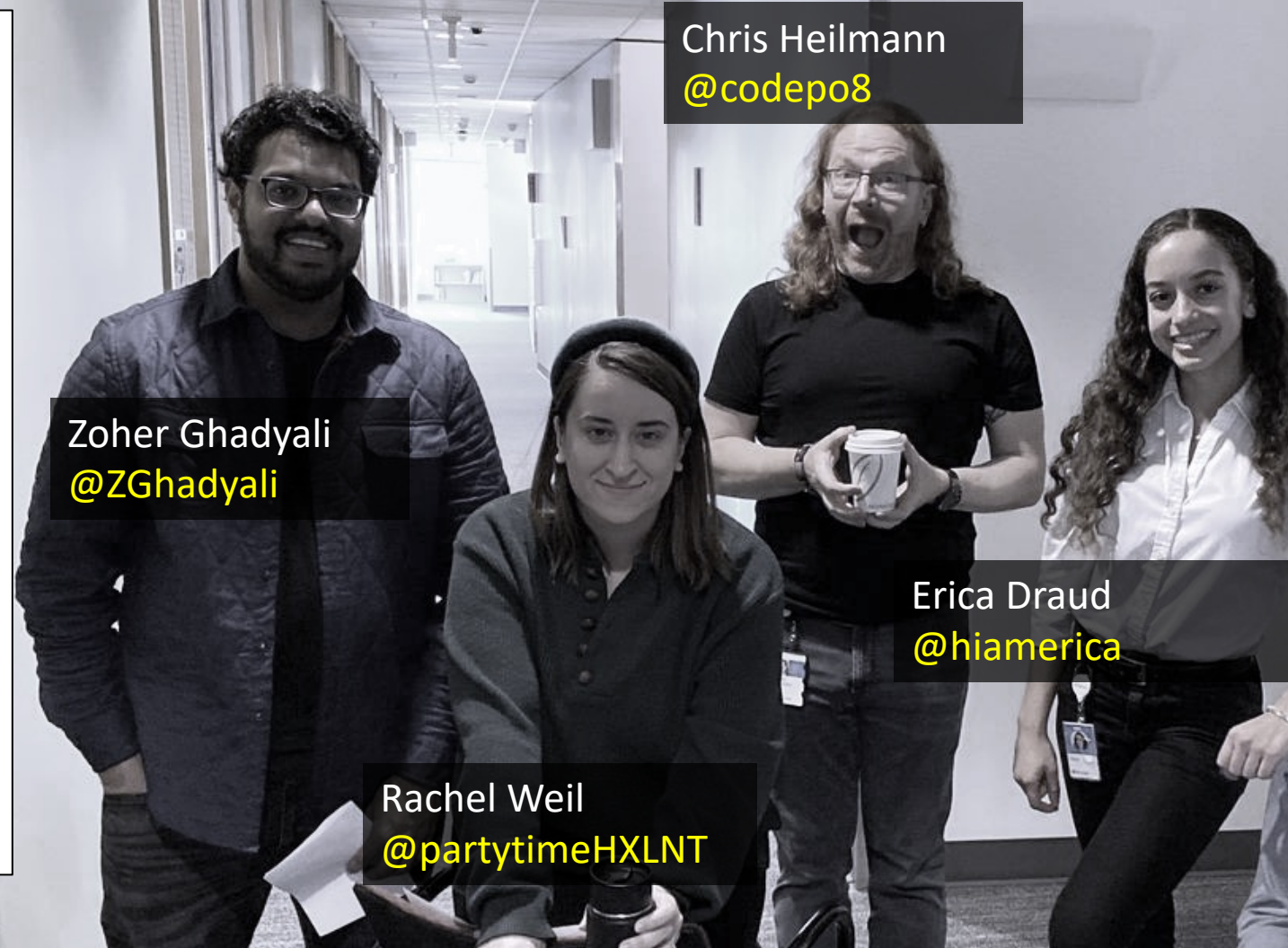
Cancel Send

# THANKS!

## Developer Tools Edge PM Team @EdgeDevTools



[aka.ms/7-devtools-secrets](https://aka.ms/7-devtools-secrets)



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