

RECONSIDERING OPEN WEB TOOLING

Three red megaphones are mounted on a silver pole. The background is a sunset sky with orange, yellow, and blue hues.

Chris Heilmann @codepo8 – HalfStack London 2019

A man with long, wavy reddish-brown hair, a beard, and glasses is looking directly at the camera. He is wearing a black t-shirt. The background is an office with a window with blinds, a desk lamp, and a bulletin board with various papers and a 'DEV' sign.

Chris Heilmann
@codepo8

WALKING IN MY SHOES...

CONSTRUCTION TIME AGAIN

Zoher Ghadyali
[@ZGhadyali](#)

Erica Draud
[@hiamerica](#)

Rachel Weil
[@partytimeHXLNT](#)

Brendyn Alexander
[@webrendyn](#)



MORE THAN A PARTY

ENABLE WEB DEVELOPERS TO BE MORE
PRODUCTIVE AS THEY CREATE AND
MAINTAIN THEIR WEB SITES AND APPS

EVERYTHING COUNTS

Performance

Security

Accessibility

Interoperability

App-readiness

Maintenance/Automation

POLICY OF TRUTH

Performance

Security

Accessibility

Interoperability

App-readiness

Maintenance/Automation



SUFFER WELL...



TIME?

LUST?

SHAKE THE DISEASE...

A PAIN THAT I'M USED TO...

Performance

Security

Accessibility

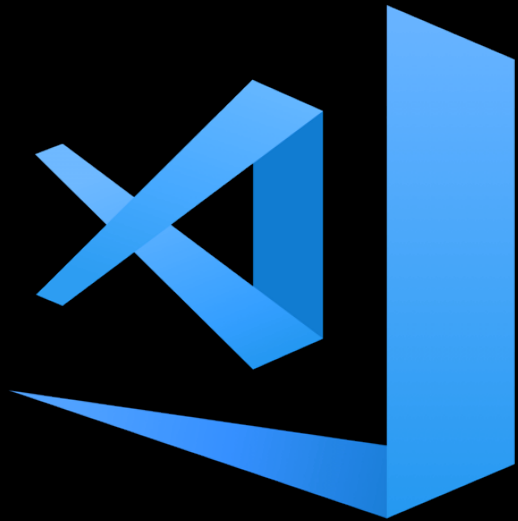
Interoperability

App-readiness

Maintenance/Automation

GET THE BALANCE RIGHT

DEVELOP



DEBUG



LEARN + IMPROVE

 MDN web docs
[moz://a](https://developer.mozilla.org/)

WEB AND OTHER
COMMUNICATION
CHANNELS

PLEASURE LITTLE TREASURE



webhint.io

Api >

Concepts >

Configurations >

Configuring Webhint >

Connectors >

Development Flow Integration
>

Extensions >

Formatters >

Hints ▾

[AMP HTML validator](#)

[Avoid CSS limits](#)

[Avoid HTTP redirects](#)

[axe accessibility check](#)

[Babel configuration hint set](#)

[Compatibility of CSS, HTML and JavaScript features](#)

[Correct `Content-Type` header](#)

[Correct manifest extension](#)

[Correct viewport](#)

[Disallowed HTTP headers](#)



Performance

No one likes to wait while a website loads. Validate that you are using the right compression, cache strategy and more to make your site (re)load faster.

[9 Hints](#)

[View All >](#)



Pitfalls

Sometimes the web platform works in odd ways, often for good reasons. This can still result in hours spent debugging unexpected behavior. These hints warn you about common gotchas now to save you time later.

[4 Hints](#)

[View All >](#)



Security

Browsers are one of the main vectors for attacks. The web platform has many features that allow you to mitigate the risks. Are you doing everything you can to keep your users safe?

[10 Hints](#)

[View All >](#)



Development

Web developers use a wide variety of tools: bundlers, transpilers, optimizers... But sometimes there can be problems when using them together or the configuration might not be the most optimal. Let us take care of this for you!

[13 Hints](#)

[View All >](#)



PWA

Progressive Web Apps allow your users to have a more immersive experience within your site. Make sure your PWA looks the best no matter the platform of your users.

[6 Hints](#)

[View All >](#)



Compatibility

The web has been around for decades and it can be accessed from many different devices and form factors, old and new. These hints help you make your sites more compatible so your users can have a better experience no matter how they visit you.

[12 Hints](#)

[View All >](#)



Accessibility

Is your site usable via the keyboard? Does your content have enough contrast to be read without issues? Everyone should enjoy your content. Let us help you!

[14 Hints](#)

[View All >](#)



Customize

Every site is different. webhint adapts its feedback when you give it more information: [ignore 3rd-party code](#), [prioritize your users' browsers](#), and control the results with minimal setup.

Create

With the help of our [contributor guide](#), you can [create new hints](#) to suit your needs.

Contribute

webhint welcomes anyone who wants to make the web a better place. [Join us on GitHub](#) to file issues and feature requests, contribute code, and improve the documentation!



Inspector Console Hints

Accessibility

- Color **Hints: 1**
[Learn why this is important and how to fix it](#)
 - Elements must have sufficient color contrast:
Element has insufficient color contrast of 3.2
(foreground color: #7a86a8, background color: #22366e, font size: 8.4pt (11.2px), font weight: normal). Expected contrast ratio of 4.5:1
<https://halfstackconf.com/london/schedule/>
- Language **Hints: 1**
- Name role value **Hints: 2**
- Sensory and visual cues **Hints: 1**
- Text alternatives **Hints: 1**
- ARIA **No issues**

Filter output Persist Logs

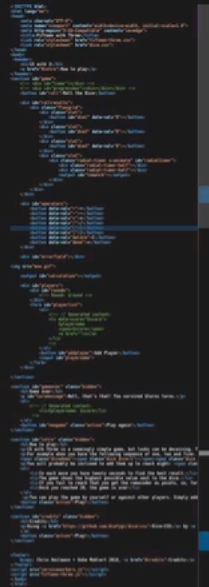
Errors Warnings Logs Info Debug CSS XHR Requests

! ▶ TypeError: a is null [\[Learn More\]](#) js:121:186

https://aks.ms/webhint4firefox
https://aks.ms/webhint4chrome
https://aks.ms/webhint4edge

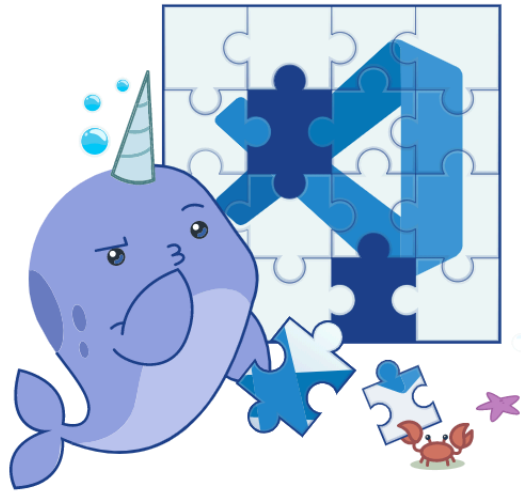
> index.html > html > body > section#game > div#operators

```
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   <meta http-equiv="X-UA-Compatible" content="ie=edge">
7   <title>Fifteen with Three</title>
8   <link rel="stylesheet" href="fifteen-three.css">
9   <link rel="stylesheet" href="dice.css">
10 </head>
11 <body>
12   <header>
13     <h1>15 with 3</h1>
14     <a href="#intro">How to play</a>
15   </header>
16   <section id="game">
17     <!-- <div id="timer"></div> -->
18     <!-- <div id="progressbar"><div></div></div> -->
19     <button id="roll">Roll the Dice</button>
20
21     <div id="rollresults">
22       <div class="flexgrid">
23         <div class="slot">
```



<https://aks.ms/webhint4code>

Hints to help you throughout the web development cycle



Develop

Use the [VS Code extension](#) to get real-time feedback in your IDE when writing code



Debug

The [browser extension](#) lets you scan a site from within your browser's DevTools.



Deliver

Use the [webhint CLI](#) in your CI/CD pipeline to analyze your site before it goes into production.

PEOPLE === PEOPLE




```

v" style="zoom: 1;"> == $0
tion">...</div>
ner">...</div>
schedule" class="blue home">...</div>
ation" class="container content-container blue blog">...</div>
class="container content-container blue blog">...</div>
chimp Signup Form -->
class="container content-container newsletter">...</div>
d_signup-->
nent" class="container content-container">...</div>
class="container content-container red social">...</div>
ext/javascript">...</script>
container">...</footer>
ajax.googleapis.com/ajax/libs/jquery/3.3.1/jquery.min.js"></script>
assets/js/script.js"></script>

```

SPEAK AND SPELL

Stile Berechnungen

Filter

element.style

zoom: 1;

}

- Abdeckung
- Änderungen
- Animationen
- DOM 3D-Ansicht
- Ebenen
- JavaScript-Profiler
- Leistungsüberwachung
- Netzwerkbedingungen
- Remote-Geräte
- Rendering
- Schnelle Quelle
- Sensoren
- Sperrung anfordern
- Suche
- WebAudio

Andockseite

Konsolen-Drawer anzeigen

Suche

Befehl ausführen

Datei öffnen

Weitere Tools

Kurzbefehle

Einstellungen

Hilfe

[style.css:66](#)

background-color: #ffffff;

[style.css:55](#)

font-family: "Europa-Light";

font-size: 16px;

font-weight: 400;

font-smoothing: antialiased;

font-style: normal;

font-variant: normal;

font-variant-ligatures: normal;

font-variant-numeric: normal;

font-variant-caps: normal;

font-variant-east-asian: normal;

font-variant-positions: normal;

}

* {

box-sizing: border-box;

}



TOLD YOU SO

Microsoft Edge has new window

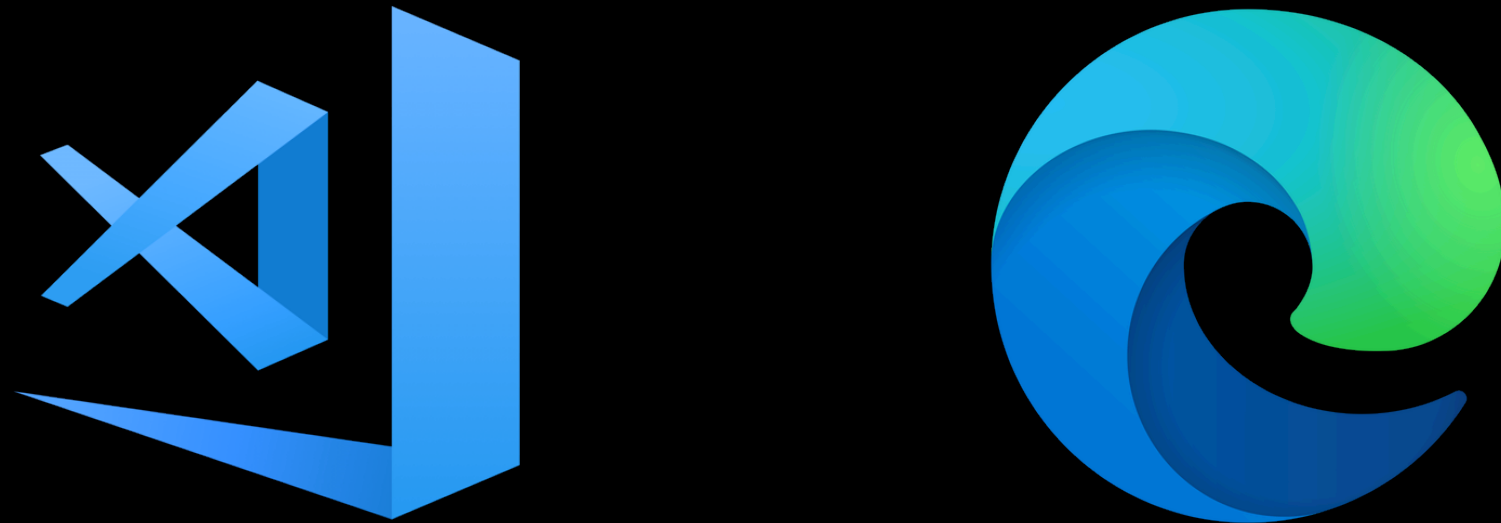
ME TO

HALFSTACK

NOW, THIS IS FUN!

Experimental content ahead!!!

THE SWEETEST CONDITION



<https://aks.ms/elements4code>

DEBUG ▶ Launch Edge

VARIABLES

WATCH

CALL STACK

BREAKPOINTS

- All Exceptions
- Uncaught Exceptions

```

.vscode > launch.json > Launch Targets > {} Launch Edge
1  {
2      // Use IntelliSense to learn about possible attributes.
3      // Hover to view descriptions of existing attributes.
4      // For more information, visit: https://go.microsoft.com/fwlink/?linkid=830387
5      "version": "0.2.0",
6      "configurations": [
7          {
8              "type": "edge",
9              "request": "launch",
10             "name": "Launch Edge",
11             "version": "beta",
12             "url": "http://localhost:3000",
13             "webRoot": "${workspaceFolder}"
14         },
15         {
16             "type": "vscode-edge-devtools.debug",
17             "request": "launch",
18             "name": "Launch Microsoft Edge and open the Elements tool",
19             "url": "http://localhost:3000",
20             "webRoot": "${workspaceFolder}",
21             "preLaunchTask": "npm: dev"
22         }
23     ]
24 }
25
26

```

Type of configuration.

<https://aks.ms/elements4code>

Add Configuration...

EXPLORER

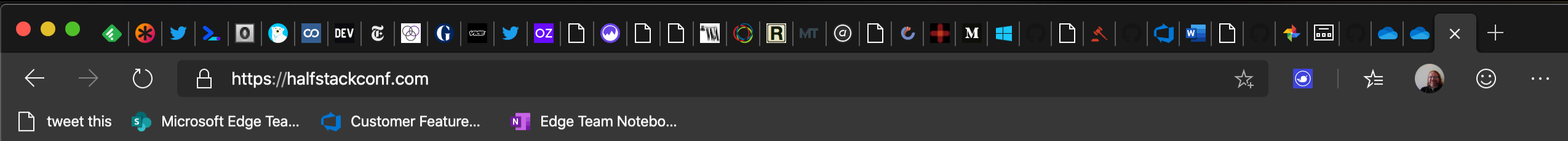
- OPEN EDITORS
 - index.html src
- WEBPACK-TYPESCRIPT-SASS-APP-BOILERP...
 - .vscode
 - launch.json
 - node_modules
 - src
 - assets
 - favicon.ico
 - index.html
 - TS index.ts
 - styles.scss
 - .gitignore
 - CHANGELOG.md
 - LICENSE
 - package-lock.json
 - package.json
 - README.md
 - JS serve.js
 - tsconfig.json
 - tslint.json
 - webpack.config.js
 - yarn.lock

OUTLINE

index.html x

```
src > <> index.html > <> html > <> body
1 <!DOCTYPE html>
2 <html>
3 <head>
4   <meta charset="UTF-8">
5   <title>Web App</title>
6 </head>
7 <body>
8   <div class="container">
9     <div class="banner container">
10      <h1>Elements for Microsoft Edge</h1>
11    </div>
12    <button id="addButton">Add a new item</button>
13    <div class="container" id="list"></div>
14  </div>
15 </body>
16 </html>
17
```

WORLD FULL OF NOTHING



HALFSTACK



WELCOME TO

```
Elements Console Sources Network Performance >> 9 ☺ ... X
<div id="navigation" class="..."/>
  <div id="container">
    <div id="intro" class="container">...</div>
  </div>
  <div id="eventsschedule" class="blue home">
    <div class="events">
      <a href="/london/" class="left dark_blue london">
        <div class="img overlay"></div>
        <div class="img" style="background-image: url('/assets/images/london_event.jpg')">
        </div>
        <h3 class="Title">London</h3>
        <h6 class="time">22nd November 2019</h6>
      <p>
        "The fifth annual HalfStack London at Cafe 1001 in the old Truman Brewery in Shoreditch. CfP deadline: 15th of July, 2019."
      </p>
      <div class="button">Book Your Tickets</div>
    </a>
    <a href="/phoenix/" class="right purple phoenix">...</a>
    <a href="/charlotte/" class="left green charlotte">...</a>
  </div>
</div>
```


ONLY WHEN I LOSE MYSELF

Home Moments Search Twitter Have an account? Log in

Ben Lesh @BenLesh

Does [@ChromeDevTools](#) have anything for figuring out the z-index heirarchy of elements in a page? I often ask myself "Why is this over this?", and it seems like maybe I'm missing some valuable tooling that's already included??? I hope? haha

cc/ [@addyosmani](#)

1:51 PM - 8 Oct 2019

2 Retweets 26 Likes

SPoooooKI Eric Lawrence @ericlaw · Oct 8

Replying to [@BenLesh](#) [@ChromeDevTools](#) [@addyosmani](#)

Like a 3d DOM View?

Microsoft Edge DevTools @EdgeDevTools

Inspired by [@FirefoxDevTools](#)' Tilt feature, we just released the 3D DOM viewer in Edge Dev/Canary builds 😊

1) Enable Developer Tools experiments in about://flag...

Show this thread

1 1 6

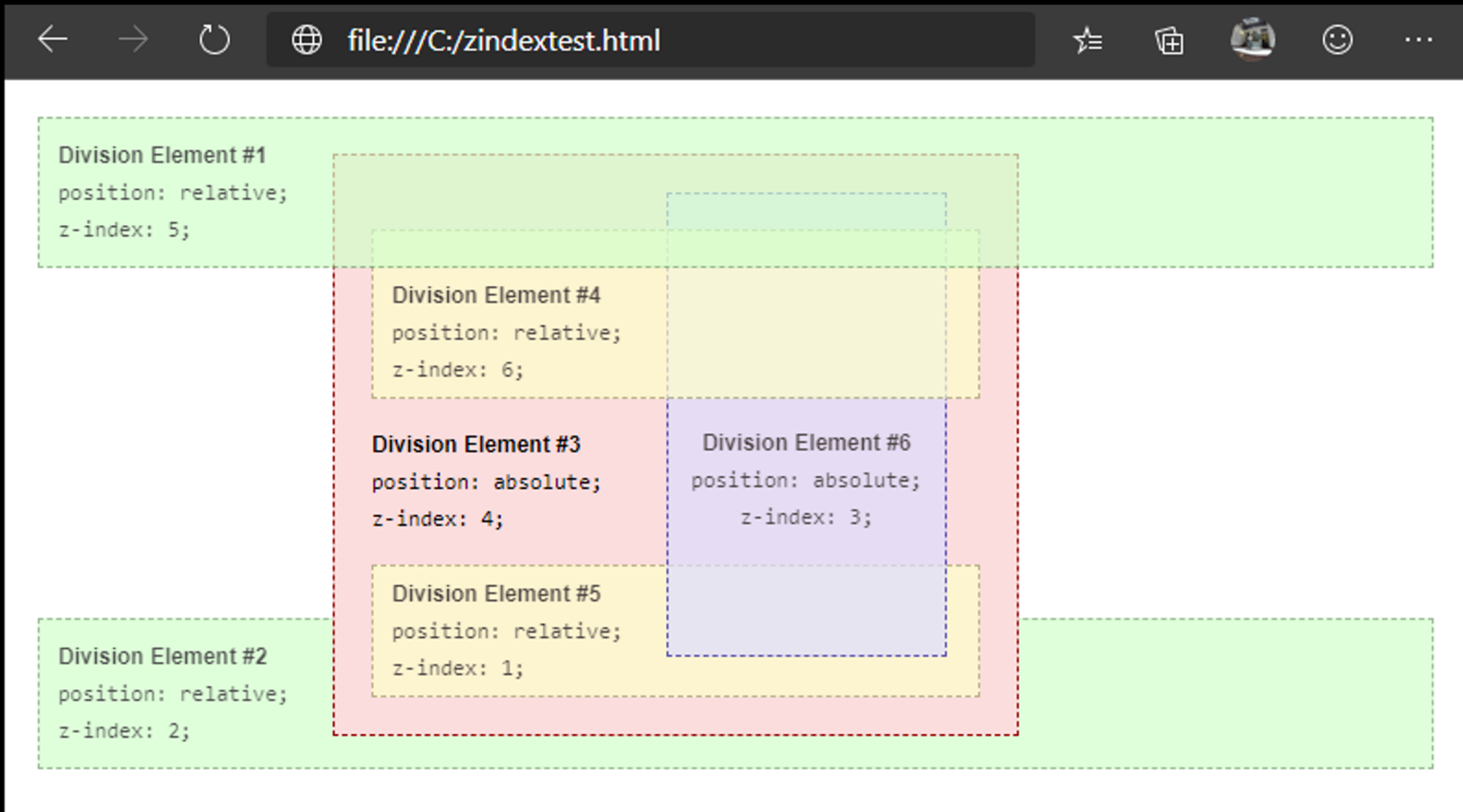
Paul Irish @paul_irish · Oct 8

Ben plz comment on the crbug that's linked from inside this thread. :)

1 3

1 more reply

© 2019 Twitter About Help Center Terms Privacy policy Cookies Ads info



- root
 - div #1, 5
 - div #2, 2
 - div #3, 4
 - div #4, 6
 - div #5, 1
 - div #6, 3

Elements Console Sources Network Performance Memory Application Security Audits

```
<html>
  <head>...</head>
  <body == $0
    <div id="div1">...</div>
    <div id="div2">...</div>
    <div id="div3">...</div>
  </body>
</html>
```

Styles Computed Event Listeners DOM Breakpoints >>

- font-style normal
- font-variant-caps normal
- font-variant-east-asian normal
- font-variant-ligatures normal
- font-variant-numeric normal
- font-weight 400
- height 1035px
- line-height 20px
- margin-bottom 0px
- margin-left 0px
- margin-right 0px
- margin-top 0px

html body

Console 3D View x

Z-index DOM

Highlight elements with stacking context

Show all elements

Show only elements with stacking context

Isolate selected element

Show all parents

Keep only parents with new stacking context

Color type

- Heatmap - Purple to White
- Heatmap - Blue to Yellow
- Heatmap - Rainbow
- Use background color

Hide elements with the same paint order as their parent.



DevTools - twitter.com/BenLesh/ x +

devtools://devtools/custom/inspector.html?ws=localhost:9222/devt...

Elements Console Sources Network Performance Memory Application Security Audits

```
<!doctype html>
<html lang="en" data-scribe-reduced-action-queue="true">
  <head>...</head>
  <body class="three-col logged-out user-style-BenLesh ms-windows PermalinkPage
no-nav-banners overlay-enabled supports-drag-and-drop" data-fouc-class-names=
"swift-loading no-nav-banners" dir="ltr"> == 50
  <div id="kb-shortcuts-msg" class="visuallyhidden">...</div>
  <script id="swift_loading_indicator" nonce>...</script>
  <noscript>...</noscript>
  <a href="#timeline" class="u-hiddenVisually focusable">Skip to content</a>
  <div id="doc" data-at-shortcutkeys="{\"Enter\": \"Open Tweet details\", \"o\": \"Expand
photo\", \"/\": \"Search\", \":\": \"This menu\", \":\": \"Next Tweet\", \"k\": \"Previous
body
```

Styles Computed Event Listeners DOM Breakpoints

margin-right	17px
margin-top	0px
overflow-x	hidden
overflow-y	hidden
position	relative
text-size-adjust	100%
unicode-bidi	isolate
width	780px

Rendered Fonts

Segoe UI — Local file (13 glyphs)

Console 3D View x

Z-index DOM

Highlight elements with stacking context

Show all elements

Show only elements with stacking context

Isolate selected element

Show all parents

Keep only parents with new stacking context

Color type

Heatmap - Purple to White

Heatmap - Blue to Yellow

Heatmap - Rainbow

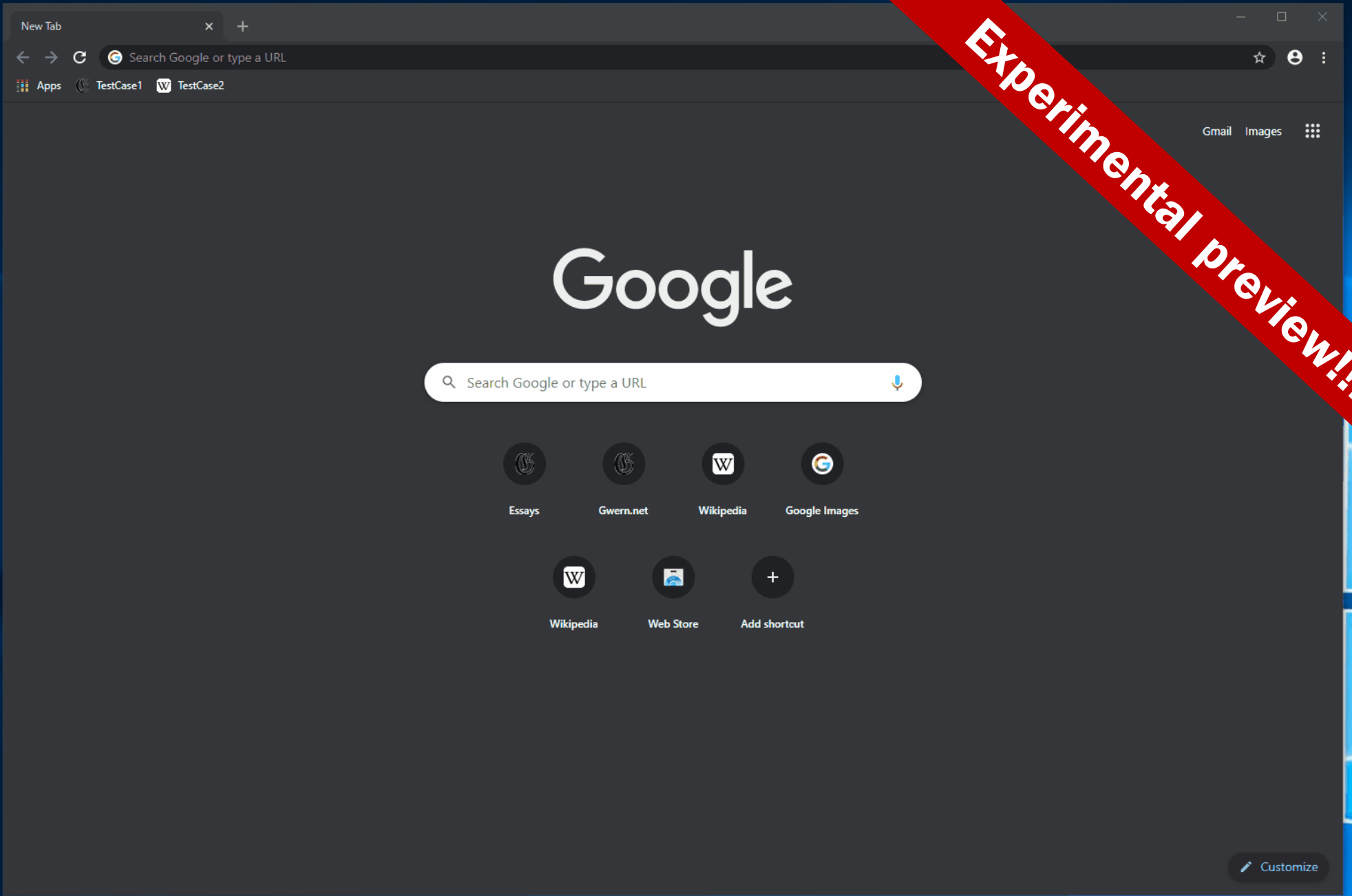
Use background color

Hide elements with the same paint order as their parent.

Reset camera Retake snapshot

z-index: 1000 z-index: 5 z-index: 3 z-index: 3 z-index: 1001 z-index: -100 z-index: auto z-index: 1002

BLACK CELEBRATION

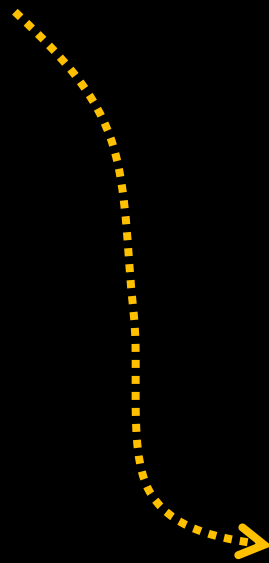


NEW LIFE



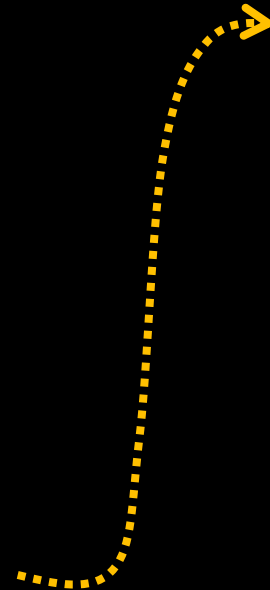
Developing

From your IDE to your bundler, type system, transpilers, and linters there are many complexities when prepping code to run in the browser



Debugging

Browser DevTools & extensions, best practice analyzers, Fiddler, and more come together to help us find & fix issues

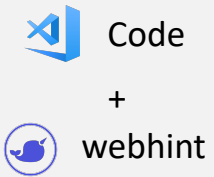


Delivering

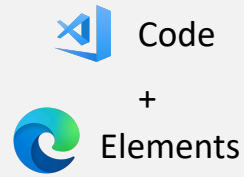
We turn to automation & testing, CI/CD systems, cloud hosting, and analytics engines to ship & ensure quality across all browsers & platforms

IF YOU WANT

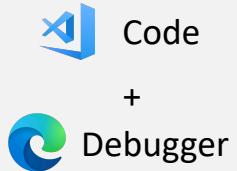
Develop



aka.ms/webhint4code

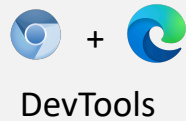


aka.ms/elements4code

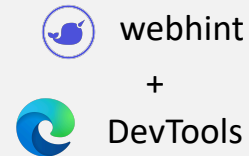


aka.ms/debugger4code

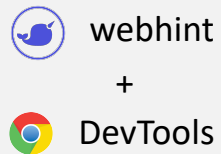
Debug



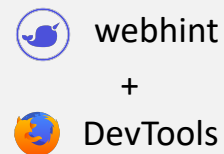
aka.ms/edgeinsider



aka.ms/webhint4edge



aka.ms/webhint4chrome



aka.ms/webhint4firefox

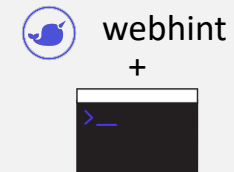
Deliver



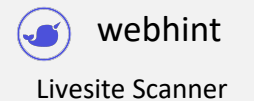
aka.ms/msedgedriver



Coming soon!



aka.ms/webhint4node



webhint.io

BLASPHEMOUS RUMOURS



BEHIND THE WHEEL



THE BOTTOM LINE

TEAM

SOMETHING TO DO

Get the new Microsoft Edge (Mac/Windows):

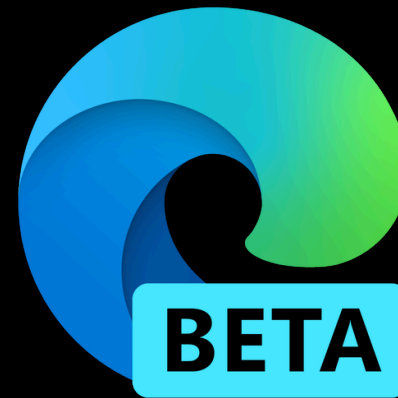
<https://aka.ms/edgeinsider>



Every Night



Every Week

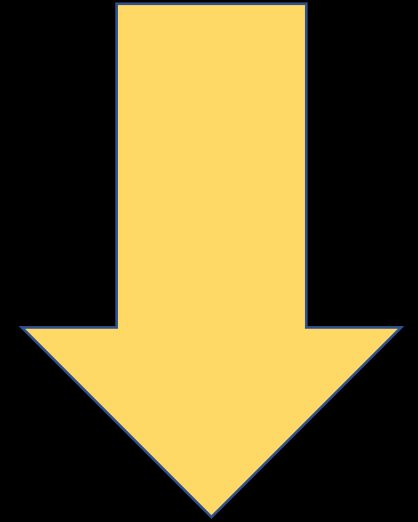


~Every Six Weeks



Mid-January for all!

JUST CAN'T GET ENOUGH...



Elements

Console

Sources

Network

Performance



! 10



```
<!doctype html>
```

```
<html>
```

```
▼<head>
```

```
  <meta name="title" content="HalfStack">
```

```
  <title>HalfStack | Open Web Conferences</title>
```

```
  <meta name="description" content="A collection of fun single-day UI-centric JS  
  conferences in relaxed environments">
```

```
  <meta name="keywords" content>
```

```
  <meta name="robots" content>
```

```
  <meta charset="utf-8">
```

```
  <meta name="language" content="English">
```



Send feedback

Describe what's happening

Remember not to include personal info such as phone numbers.

URL

<https://halfstackconf.com/>

Include email address

moo@cow.com

Send [diagnostic data](#)

Include this screenshot

Your feedback will be used to improve Microsoft's products and services. By including your email address, you agree that Microsoft can email you about your feedback. [Microsoft Privacy Statement](#)

Send

Elements

Console

```
<!doctype html>
```

```
<html>
```

```
▼ <head>
```

```
  <meta name="title" content="
```

```
  <title>HalfStack | Open Web
```

```
  <meta name="description" co
  conferences in relaxed envi
```

```
  <meta name="keywords" conte
```

```
  <meta name="robots" content
```

```
  <meta charset="utf-8">
```

```
  <meta name="language" conte
```

! 10



...



le-day UI-centric JS

SEE YOU

CHRIS HEILMANN

@CODEPO8

@EDGEDEVTOOLS

@MSEDGEDEV