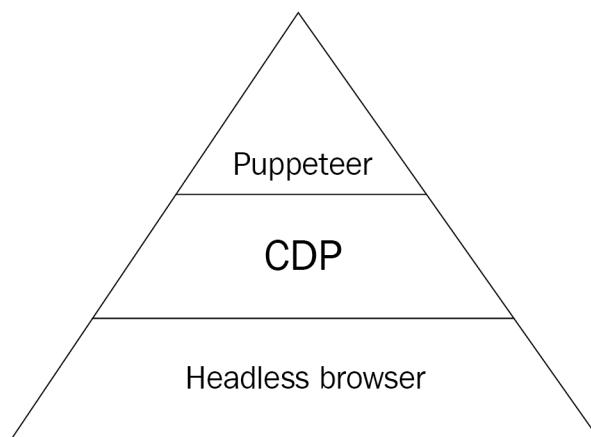
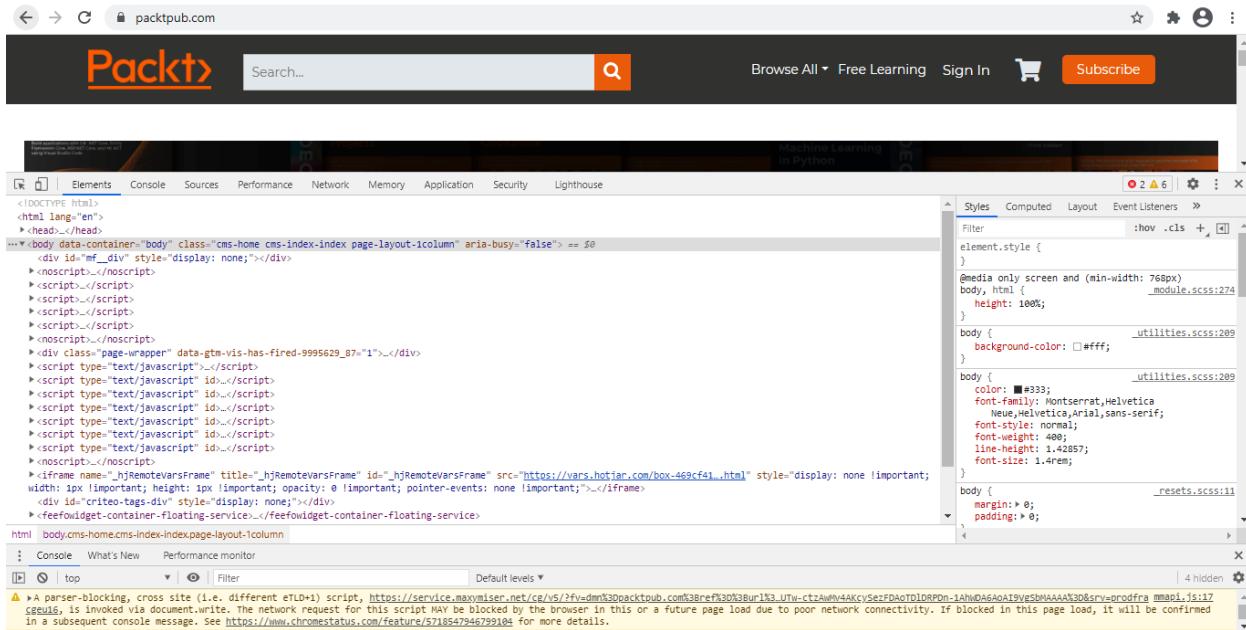
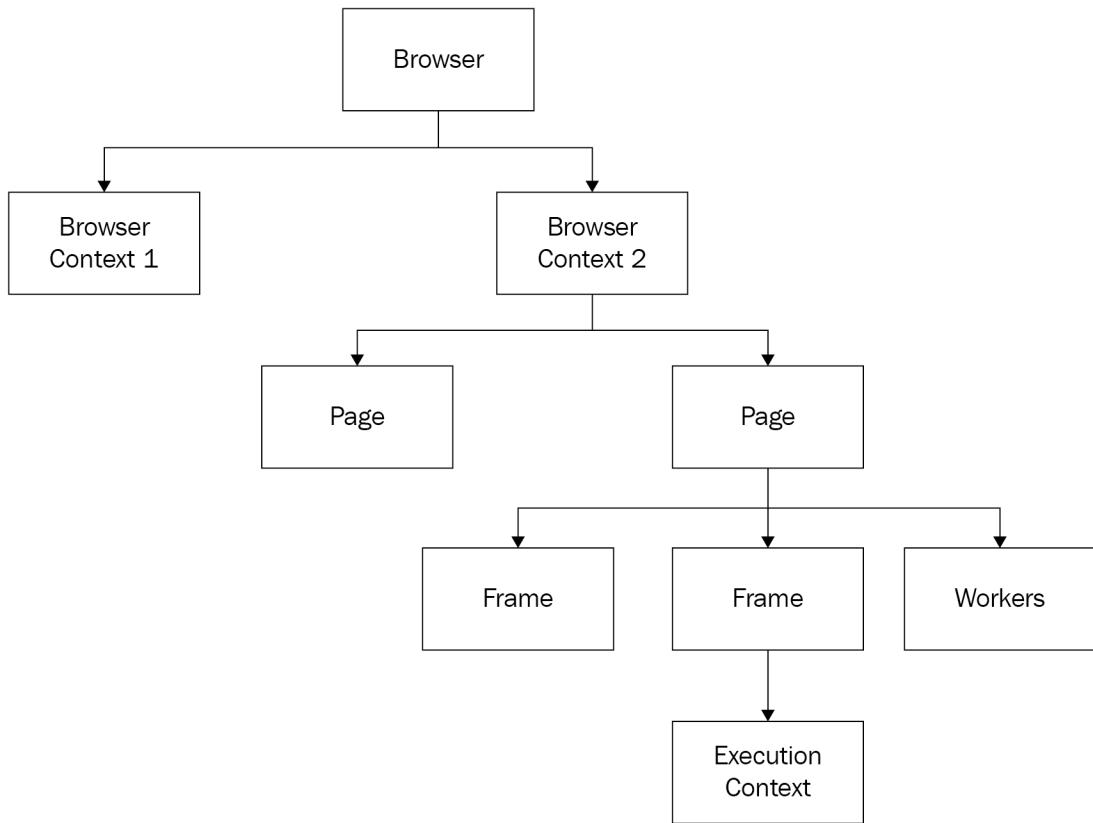
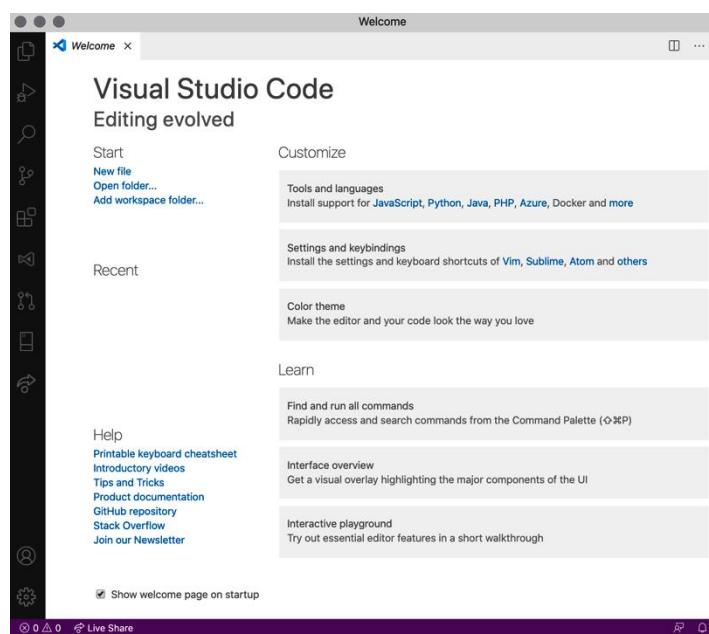
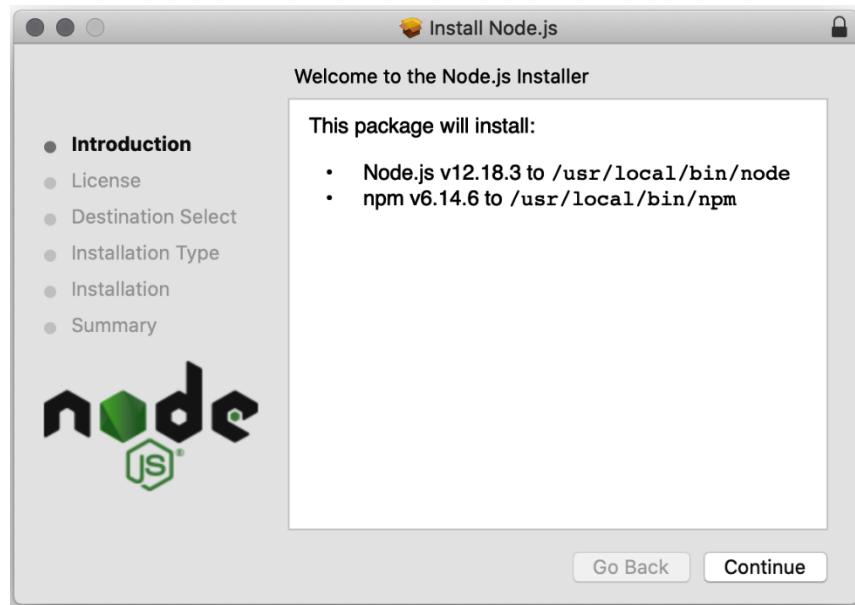
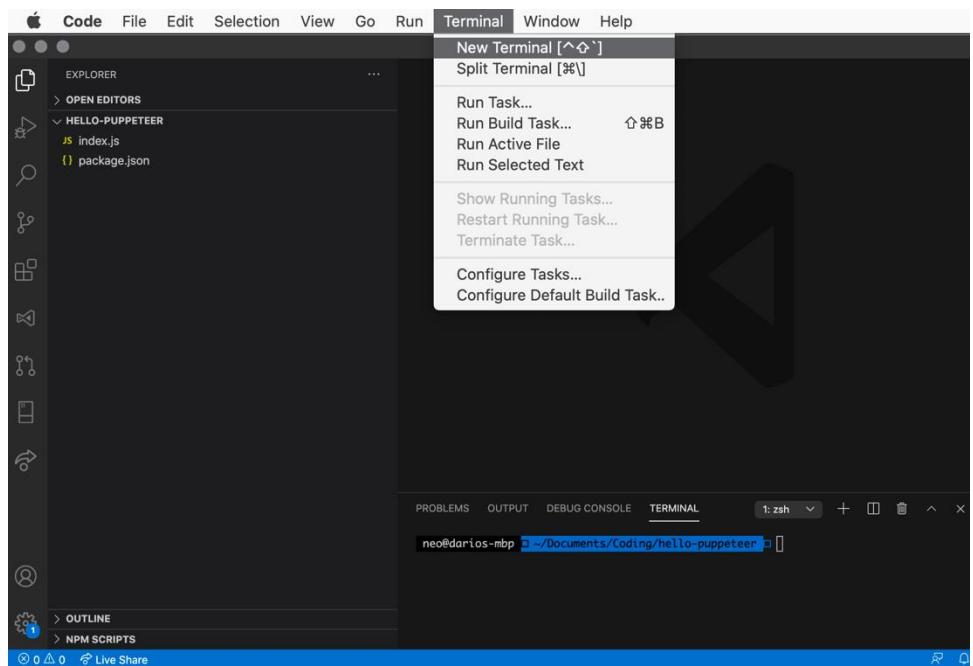


# Chapter 01: Getting started with Puppeteer











WIKIPEDIA  
The Free Encyclopedia

Main page  
Contents  
Current events  
Random article  
About Wikipedia  
Contact us  
Donate

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Tools  
What links here  
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Special pages  
Permanent link  
Page information  
Cite this page  
Wikidata item

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Article Talk

Read Edit View history

Search Wikipedia



# "Hello, World!" program

From Wikipedia, the free encyclopedia

*"Hello World"* redirects here. For other uses, see [Hello World \(disambiguation\)](#).

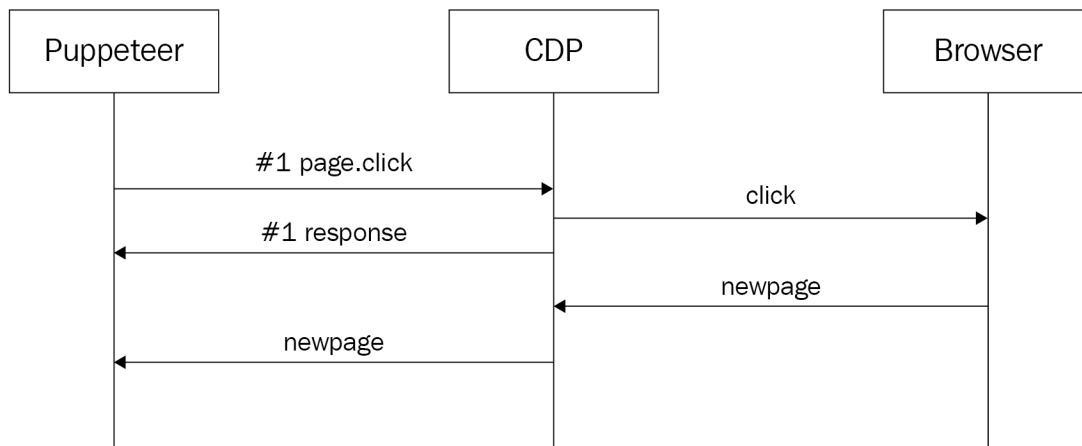
A **"Hello, World!" program** generally is a [computer program](#) that outputs or displays the message "Hello, World!". Such a program is very simple in most [programming languages](#), and is often used to illustrate the basic [syntax](#) of a programming language. It is often the first program written by people learning to code.<sup>[1][2]</sup> It can also be used as a [sanity test](#) to make sure that a computer language is correctly installed, and that the operator understands how to use it.



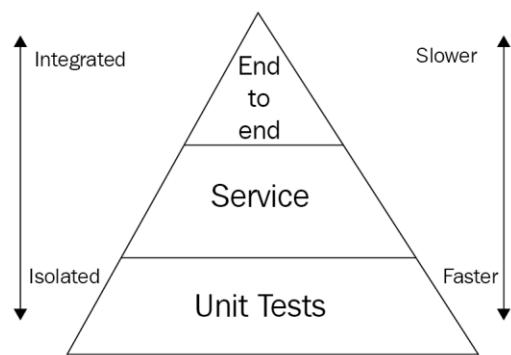
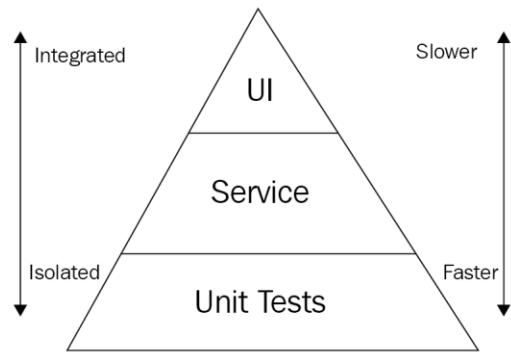
A "Hello, World!" message being displayed through long-exposure light painting with a moving strip of LEDs

## Contents [hide]

- 1 History
- 2 Variations
- 3 Time to Hello World
- 4 See also
- 5 References
- 6 External links



# Chapter 02: Automated Testing and Test runners



≡ Menu

AMERICAN EXPRESS

Contact Us Log Out



Good evening, CEIWS Member Since 2006  
American Express® Platinum Card (-91001)

Your Statement Payments Profile & Prefere... Card Management Information & Help My Accounts (1)

≡ Menu

AMERICAN EXPRESS

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Good evening, CEIWS Member Since 2006  
American Express® Platinum Card (-91001)

American Express®  
Platinum Card

Your Statement Payments Profile & Prefere... Card Management Information & Help My Accounts (1)

≡ Menu

AMERICAN EXPRESS

Contact Us Log Out



Good evening, CEIWS Member Since 2006  
American Express® Platinum Card (-91001)

Your Statement Payments Profile & Prefere... Card Management Information & Help My Accounts (1)

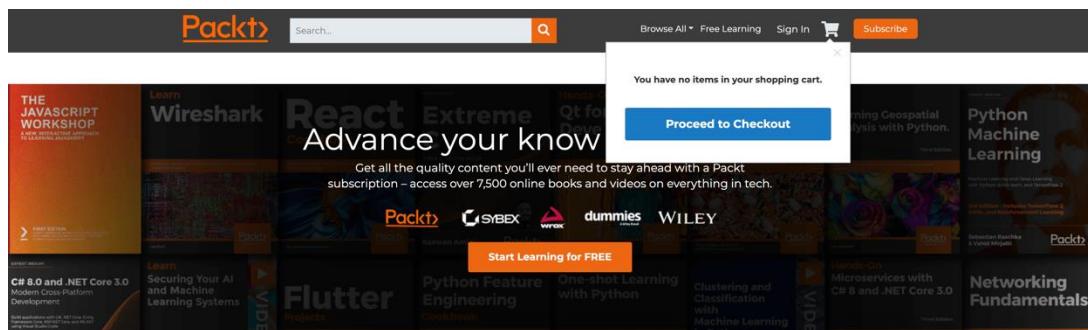
```
/Code/OurFirstTestProject ➔ npm test

> OurFirstTestProject@1.0.0 test /Users/neo/Library/Mobile Documents/com~apple~CloudDocs/Docs/Books/Up and running with Puppeteer/Ch2/Code/OurFirstTestProject
> mocha --timeout 30000

  Home page header
    ✓ Title should have Packt name
    ✓ Title should mention Books

  2 passing (5s)
```

```
/Code/OurFirstTestProject ➤ npm test
  ✓ Home page header Title should have Packt name: 6ms
  ✓ Home page header Title should mention Books: 3ms
  2 passing (5s)
```



```
ning with Puppeteer/CH2/Code/OurFirstTestProject
> mocha --timeout 30000 --reporter=list
```

✓ Home page header Title should have Packt name: 13ms  
✓ Home page header Title should mention Books: 2ms

```
2 passing (5s)
```

# Chapter 03: Navigating through a website

```
MacBook Pro 13.3" ME662 (2013) 10 left in stock 3.0GHz Dual-core Haswell Intel Core i5 Turbo Boost up to 3.2 GHz, 3MB L3 cache 8GB (two 4GB SO-DIMMs...) $2399 Add to cart
```

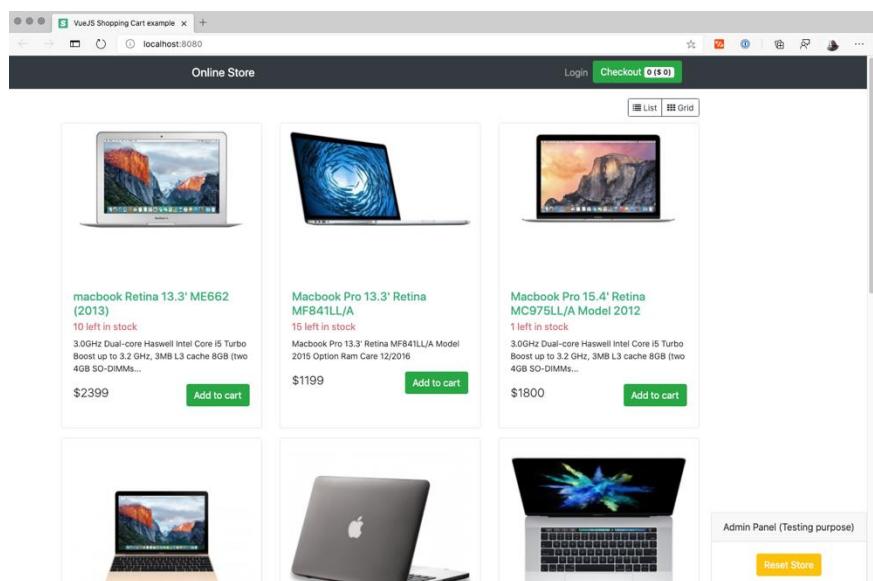
```
MacBook Pro 13.3" Retina MF841LL/A 15 left in stock MacBook Pro 13.3" Retina MF841LL/A Model 2015 Option Ram Care 12/2016 $1199 Add to cart
```

```
MacBook Pro 15.4" Retina MC975LL/A Model 2012 1 left in stock 3.0GHz Dual-core Haswell Intel Core i5 Turbo Boost up to 3.2 GHz, 3MB L3 cache 8GB (two 4GB SO-DIMMs...) $1800 Add to cart
```

```
Admin Panel (Testing purpose)
```

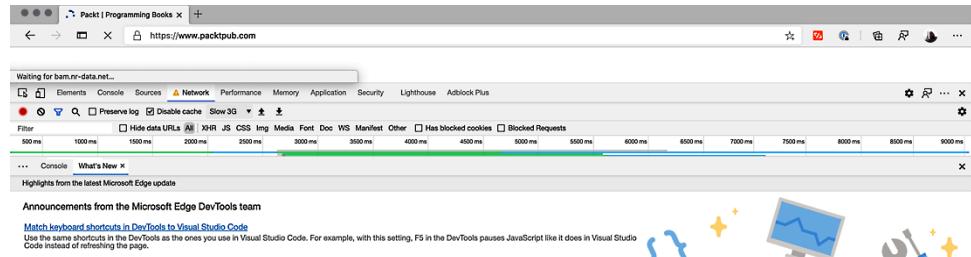
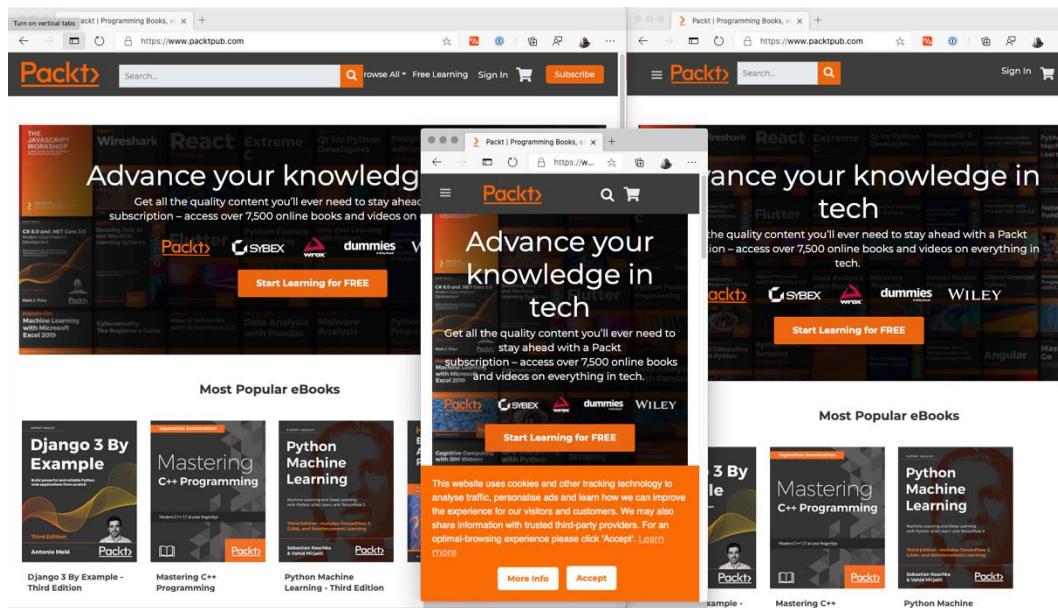
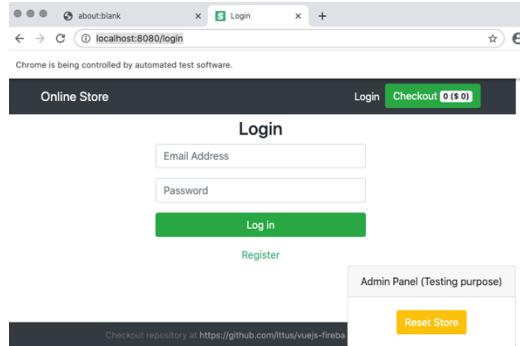
```
Reset Store
```

```
> vue-cli-service serve "private": true,  
INFO Starting development server...  
98% after emitting CopyPlugin  
View Group Action Share Add Tags  
DONE Compiled successfully in 5003ms  
Name  
- Screen Shot 2020-09-18 at 16.12.12  
App running at:  
- Local: http://localhost:8080/  
- Network: http://192.168.86.64:8080/  
Note that the development build is not optimized.  
To create a production build, run npm run build.
```



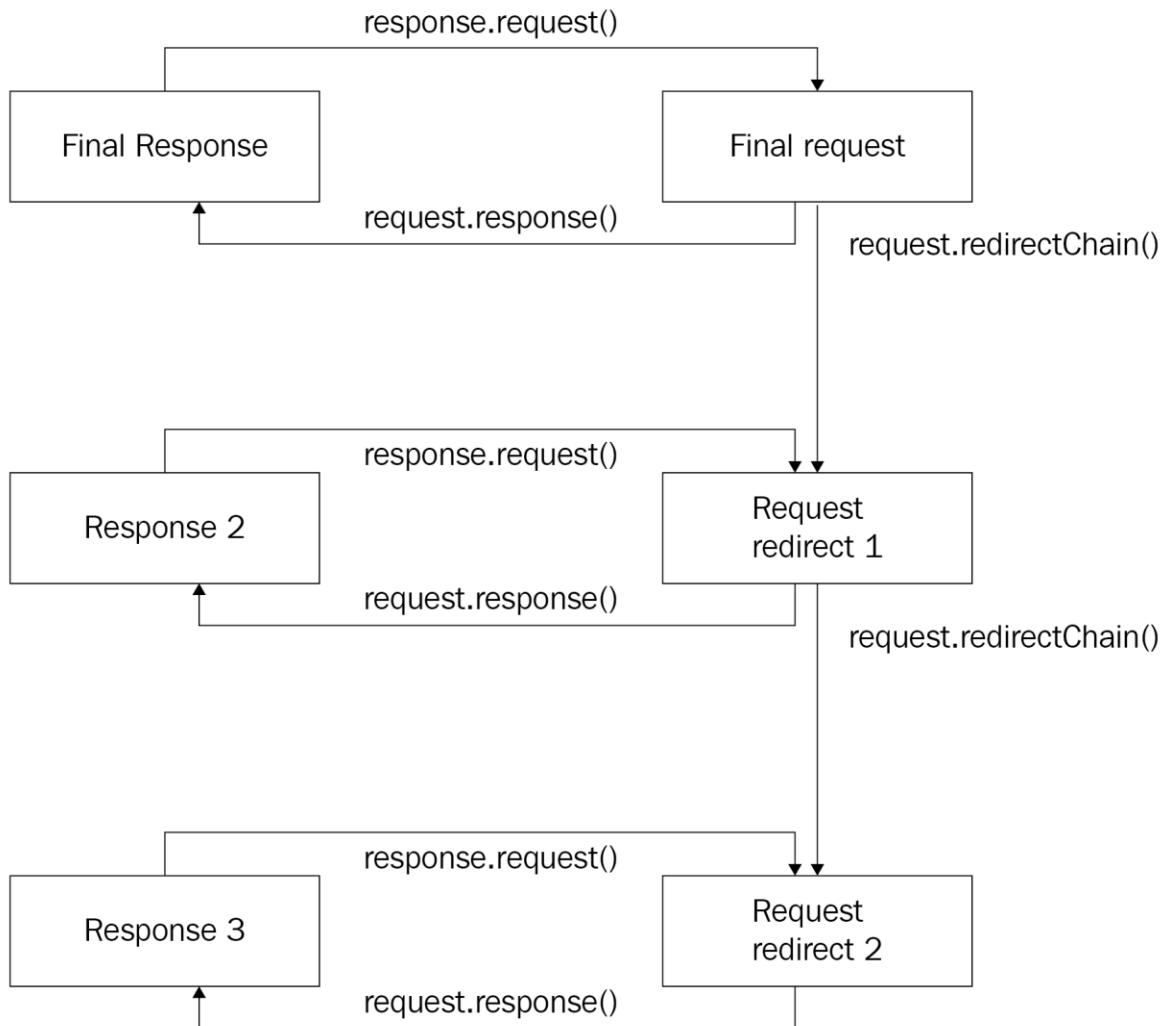


A screenshot of a web browser window. The address bar shows 'localhost:8080/login'. The page content is a login form for an 'Online Store'. It includes fields for 'Email Address' and 'Password', a green 'Log in' button, and a 'Register' link. In the bottom right corner, there is a button labeled 'Admin Panel (Testing purpose)'. At the very bottom of the page, there is a footer message: 'Checkout repository at <https://github.com/ittus/vuejs-firebase>' and a yellow 'Reset Store' button.



Name	Headers	Preview	Response	Initiator	Timing	Cookies
calendar.min.css						
styles.min.css						
custom.css						
animate.min.css						
cookies.min.css						
geop-banner.min.css						
owl.carousel.min.css						
packlandingage.min.css						
font-awesome.min.css						
animate.min.css						
bootstrap-tiny.min.css						
styles-m.min.css						
animate.min.css						
algolasearch.min.css						
customalgolia.min.css						

357 requests 5.8 MB transferred 11.8 MB resources



## Create a new repository

A repository contains all project files, including the revision history. Already have a project repository elsewhere? [Import a repository](#).

### Repository template

Start your repository with a template repository's contents.

No template ▾

Owner \*



kblok ▾

Repository name \*

ch3-demo



Great repository names are short and memorable. Need inspiration? How about [upgraded-waddle](#)?

Description (optional)

Public

Anyone on the internet can see this repository. You choose who can commit.

Private

You choose who can see and commit to this repository.

Initialize this repository with:

Skip this step if you're importing an existing repository.

Add a README file

This is where you can write a long description for your project. [Learn more](#).

Add .gitignore

Choose which files not to track from a list of templates. [Learn more](#).

.gitignore template: Node ▾

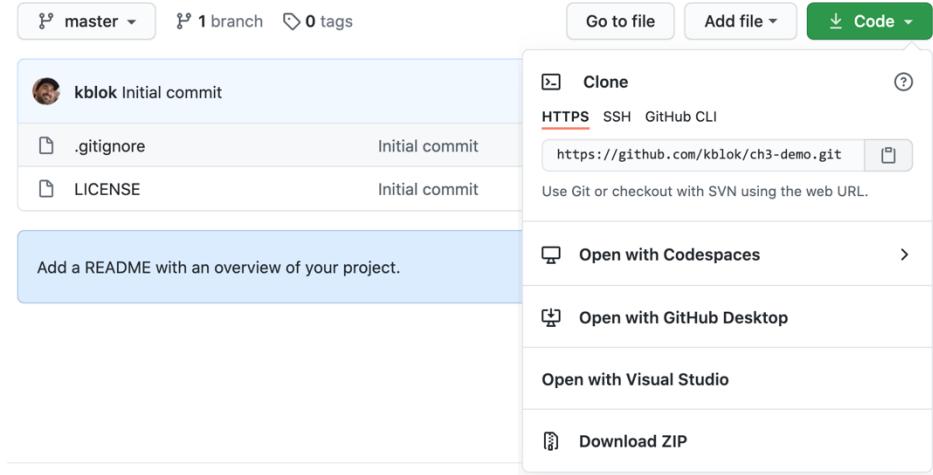
Choose a license

A license tells others what they can and can't do with your code. [Learn more](#).

License: MIT License ▾

This will set master as the default branch. Change the default name in your [settings](#).

Create repository



Fix color by kblok · Pull Request

https://github.com/kblok/ch3-demo/pull/5/files

Pull requests Issues Marketplace Explore

**kblok / ch3-demo** Private

Unwatch 1 Star 0 Fork 0

Code Issues Pull requests 1 Actions Projects Wiki Security Insights

## Fix color #5

Open kblok wants to merge 1 commit into master from kblok-patch-1

Conversation 0 Commits 1 Checks 1 Files changed 1 +2 -2

Changes from all commits File filter... Jump to... Review changes

0 / 1 files viewed Viewed ...

4 vuejs-firebase-shopping-cart/src/assets/styles/custom.scss

```
@@ -1,7 +1,7 @@
 1   .btn-warning {
 2 -   color: #fff;
 2 +   color: #ffe;
 3   &:hover {
 4 -   color: #fff;
 4 +   color: #ffe;
 5   }
 6   }
 7 }
```

The screenshot shows the GitHub Checks interface for a pull request titled "Fix color by kblok · Pull Req". The main header includes standard browser controls and the URL <https://github.com/kblok/ch3-demo/pull/5/checks>. Below the header, there are tabs for "Conversation" (0), "Commits" (1), "Checks" (1), and "Files changed" (1). A status summary at the top right indicates "+2 -2" with green and red bars.

The "Checks" tab is selected, displaying a single check named "Update custom.scss 698813c". This check is categorized under "CI" and triggered "on: pull\_request". The check status is "succeeded 6 minutes ago in 2m 20s". A "Re-run jobs" button is available next to the status.

The detailed log for the "Run Site Test Code" step is shown, starting with a note about the development build being not optimized and instructions to run `npm run build` for a production build. The log then lists several test cases:

```
605
606 Note that the development build is not optimized.
607 To create a production build, run npm run build.
608
609
610 > CH3@1.0.0 test /github/workspace
611 > mocha --timeout 30000 --reporter=list
612
613
614 Admin Page Should redirect to the login page:
615 ✓ Admin Page Should redirect to the login page: 215ms
616 Login Page Should have the right title:
617 ✓ Login Page Should have the right title: 11ms
618 Login Page It should persist the user:
619 ✓ Login Page It should persist the user: 1835ms
620
621 3 passing (4s)
622
623 Successfully ran 'sh ./github/workflows/test.sh'
```

Below the log, two additional steps are listed:

- > ✓ Post Run actions/checkout@master 0s
- > ✓ Complete job 0s

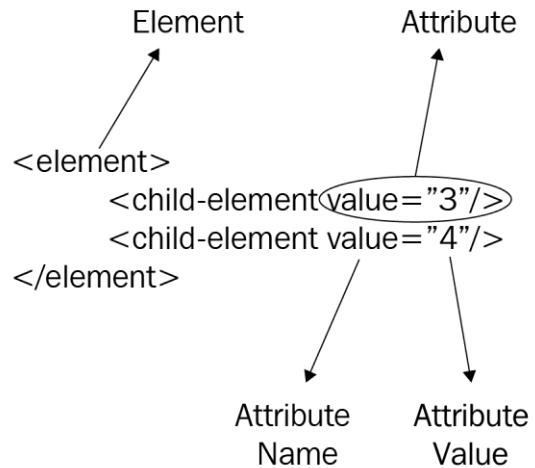
This screenshot shows the GitHub interface for merging a pull request. At the top left is a green circular icon with a gear and two circles. To its right, the message "All checks have passed" is displayed, along with "1 successful check". A "Hide all checks" link is located in the top right corner of this section.

Below this, a list of checks is shown:

- ✓ CI / Test (push) Successful in 2m [Details](#)
- ✓ This branch has no conflicts with the base branch [Merging can be performed automatically.](#)

At the bottom left is a green button labeled "Merge pull request". To its right, a note says "You can also [open this in GitHub Desktop](#) or view [command line instructions](#)."

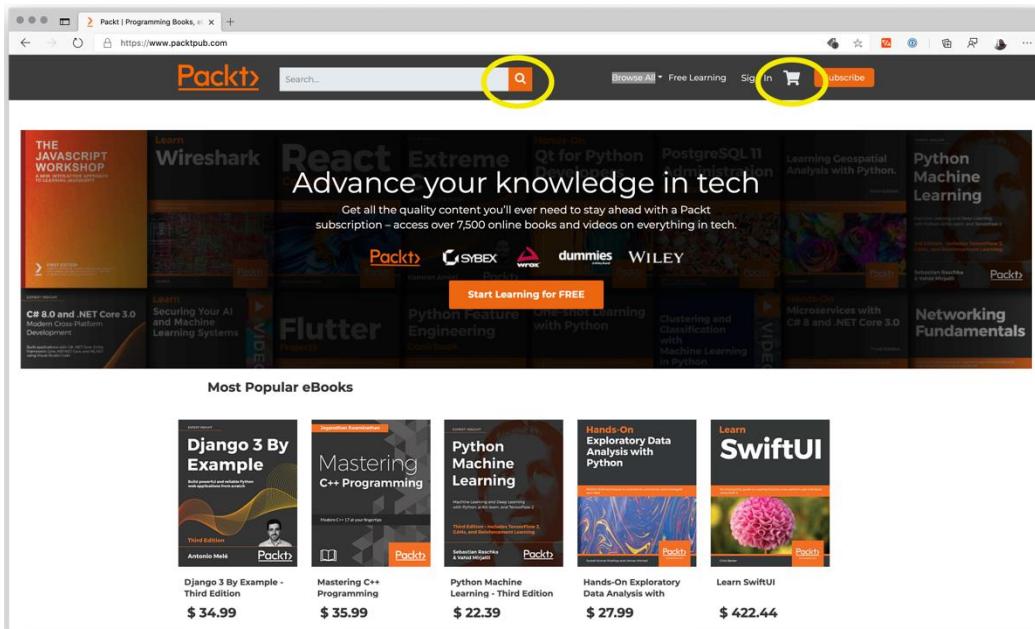
# Chapter 04: Interacting with a page

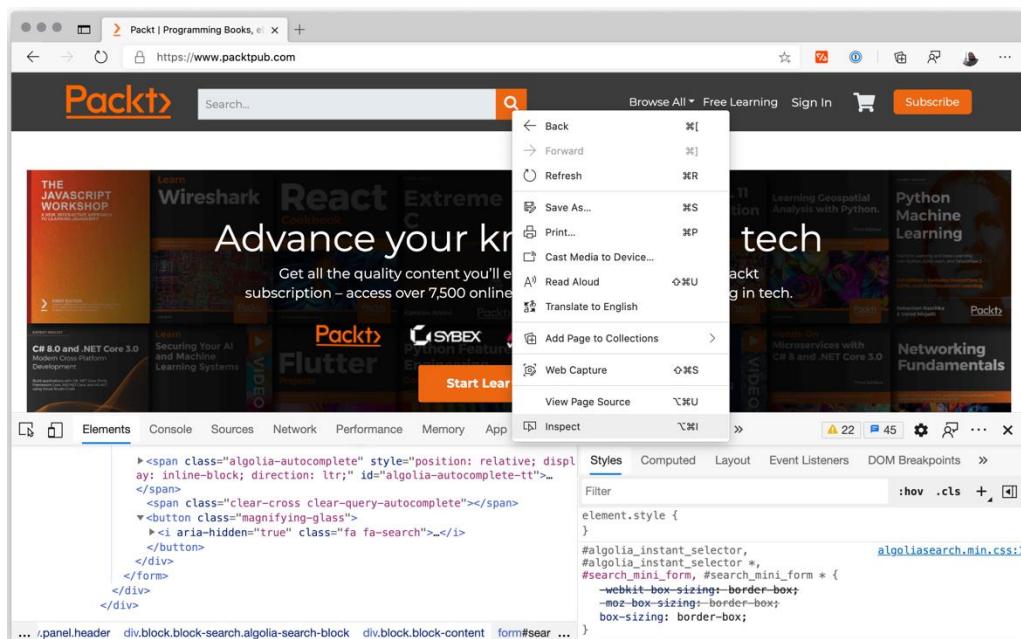
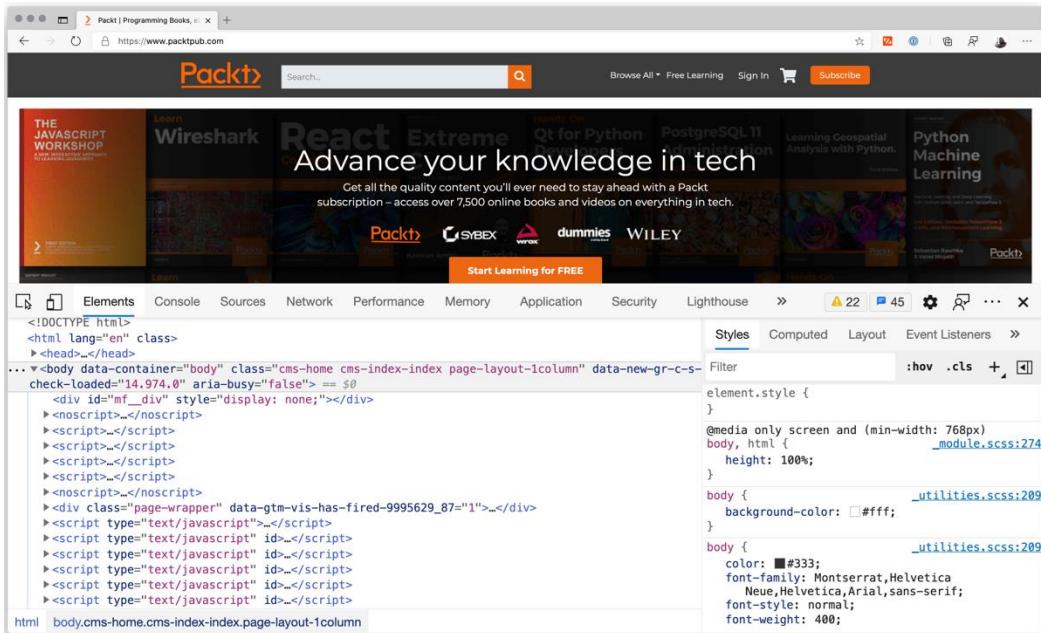


```
<html>
  <body text="red">
    <div><span>hello world</span>
  </body>
</html>
```

## Select a maintenance drone:

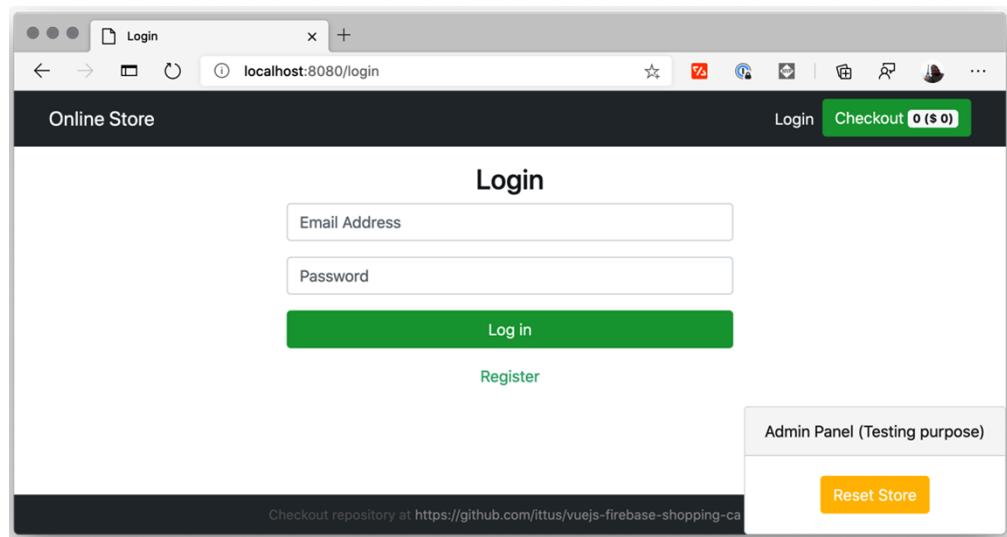
- Huey
- Dewey
- Louie

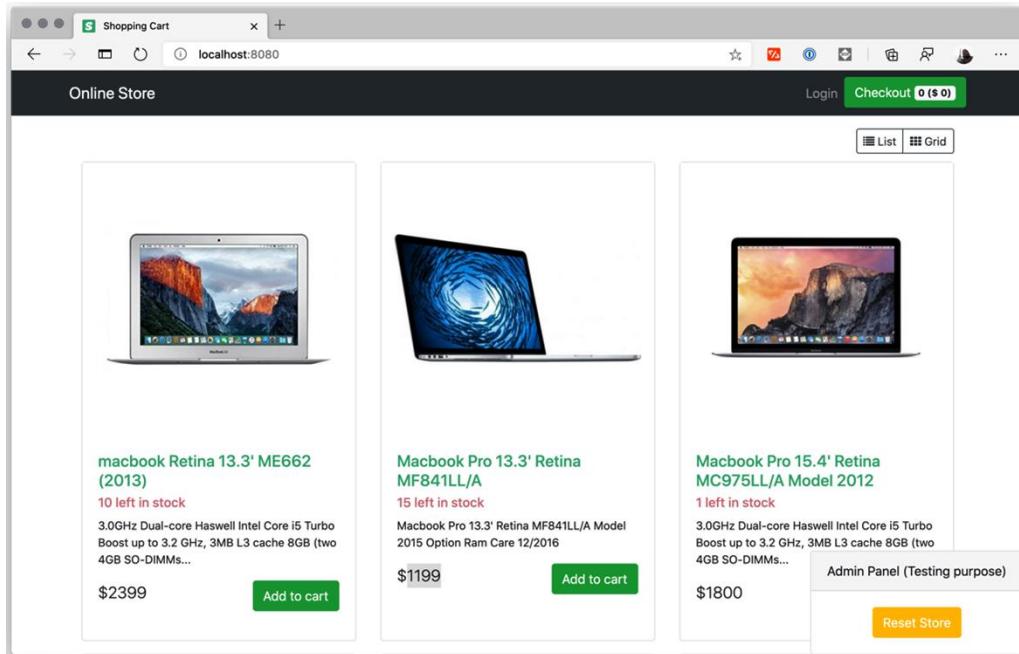




Screenshot of the Chrome DevTools Console tab. The console shows the following code:

```
> document.getElementById('search')
< input id="search" type="text" name="q" class="input-text algolia-search-input aa-input" autocomplete="off" spellcheck="false" autocorrect="off"
autocapitalize="off" placeholder="Search..." role="combobox" aria-autocomplete="list" aria-expanded="false" aria-labelledby="search" aria-owns="algolia-autocomplete-listbox-0" dir="auto" style="position: relative; vertical-align: top;">
```





```

<div data-v-ae4ae6fc class="mb-3 col-sm-6 col-md-4 item" data-test-product-id="1"> == $0
  <div data-v-ae4ae6fc class="thumbnail card">
    <div data-v-ae4ae6fc class="img-event intrinsic">
      
    </div>
    <div data-v-ae4ae6fc class="card-body">
      <h5 data-v-ae4ae6fc class="card-title">...</h5>
      <h6 data-v-ae4ae6fc class="card-subtitle mb-2 remain">15 left in stock</h6>
      <p data-v-ae4ae6fc class="card-text truncate">Macbook Pro 13.3' Retina MF841LL/A Model 2015 Option Ram Care 12/2016</p>
    <div data-v-ae4ae6fc class="row">
      <p data-v-ae4ae6fc class="col-6 lead">$1199</p>
      ><p data-v-ae4ae6fc class="col-6">...</p>
    </div>
  </div>
</div>

<div data-v-ae4ae6fc class="mb-3 col-sm-6 col-md-4 item" data-test-product-id="2">
  <div data-v-ae4ae6fc class="thumbnail card">
    <div data-v-ae4ae6fc class="img-event intrinsic">...</div>
    <div data-v-ae4ae6fc class="card-body">
      <h5 data-v-ae4ae6fc class="card-title">...</h5>
      <h6 data-v-ae4ae6fc class="card-subtitle mb-2 remain" data-test-stock="15">15 left in stock</h6>
      <p data-v-ae4ae6fc class="card-text truncate">Macbook Pro 13.3' Retina MF841LL/A Model 2015 Option Ram Care 12/2016</p>
    <div data-v-ae4ae6fc class="row">
      <p data-v-ae4ae6fc class="col-6 lead" data-test-price>$1199</p>
      ><p data-v-ae4ae6fc class="col-6">...</p>
    </div>
  </div>
</div>

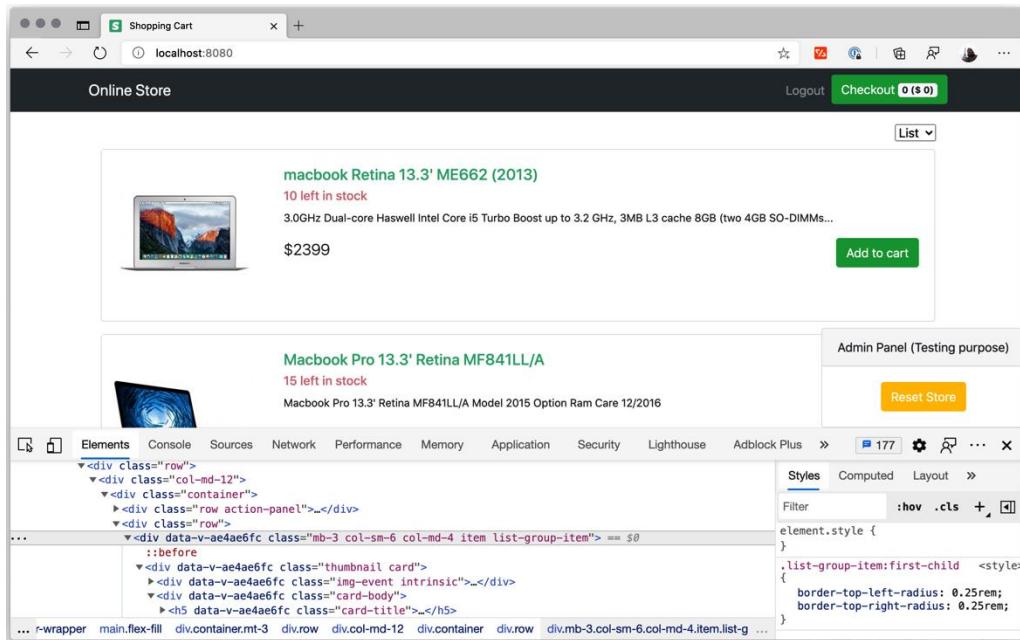
```



```

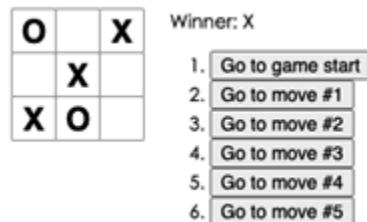
▼<div class="row action-panel">
  ▼<div class="col-12">
    ▼<div class="btn-group btn-group-sm pull-right">
      ▼<select id="#viewMode">
        <option value="list">List</option> == $0
        <option value="grid">Grid</option>
      </select>
    </div>
  </div>
  ▼<div class="row">...</div>
</div>

```



The screenshot shows a Google Sheets spreadsheet window. The title bar reads "Untitled spreadsheet - Google Sheets". The URL in the address bar is <https://docs.google.com/spreadsheets/d/1fPqXffBLTbUGeO3jSnmf-ygf5VHS895HLBa07ieTMD8/edit#gid=0>. The spreadsheet has a single sheet named "Sheet1". The first cell, A2, is selected and highlighted with a blue border. The rest of the grid is empty. The top menu bar includes File, Edit, View, Insert, Format, Data, Tools, Add-ons, and Help. The right side of the interface features various icons for sharing, comments, and other Google services.

The screenshot shows the GitHub sign-up page. The header reads "GitHub: Where the world builds". The main heading is "Built for developers". Below it, a subtext states: "GitHub is a development platform inspired by the way you work. From **open source** to **business**, you can host and review code, manage projects, and build software alongside 50 million developers." To the right, there is a sign-up form with fields for "Username", "Email", and "Password". A note below the password field says: "Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. [Learn more](#)". A large green "Sign up for GitHub" button is at the bottom of the form. At the very bottom, a small note reads: "By clicking 'Sign up for GitHub', you agree to our [Terms of Service](#) and [Privacy Statement](#). We'll occasionally send you account related emails." The footer features a cartoon illustration of a team of developers working together.



This screenshot shows the developer tools of a browser with the title "CodePen Demo". The toolbar at the top includes icons for Elements, Console, Sources, Network, Performance, Memory, Application, and more. The "Elements" tab is selected.

The main pane displays the HTML structure and the "Computed" styles for the selected element. The element tree shows:

```
<html lang="en" class=">
  <head>...</head>
  ...<body class="mouse-navigation"> == $0
    <div id="errors" style=">
      background: #c00;
      color: #fff;
      display: none;
      margin: -20px -20px 20px;
      padding: 20px;
      white-space: pre-wrap;
    "></div>
    <div id="root">
      <div class="game">
        <div class="game-board">
          ...
        </div>
      </div>
    </div>
```

The "Computed" tab shows the following styling for the body element:

- margin: 20px
- border: 1px solid black
- padding: 20px
- width: 955px
- height: 124px

On the right side of the developer tools, a detailed box model diagram is displayed, illustrating the margin, border, padding, and content areas of the selected element.

Learn how to create a hoverable dropdown menu with CSS.

## Dropdown

A dropdown menu is a toggleable menu that allows the user to choose one value from a predefined list:

```
<button class="dropdown">Dropdown</button>
<div class="dropdown-content">
  <a href="#">Link 1</a>
  <a href="#">Link 2</a>
```

### Overable Dropdown

Create a dropdown menu that appears when the user moves the mouse over an element.

Step 1) Add HTML:

**Example**

**COLOR PICKER**

**SHOP**

**HOW TO**

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

DONE | Compiled successfully in 3200ms

✓ 1: zsh

Create JavaScript Debug Terminal  
Select Default Shell

2:59:44 PM

App running at:  
- Local: <http://localhost:8080/>  
- Network: <http://192.168.86.64:8080/>

Note that the development build is not optimized.  
To create a production build, run `npm run build`.

neo@darrios-mbp vuejs-firebase-shopping-cart %

RUN

Open a file which can be debugged or run.

Run and Debug

To customize Run and Debug [create a launch.json file](#).

Show all automatic debug configurations.

187

Welcome — CH4

Select Environment

- .NET Core
- Blazor WebAssembly Debug
- C++ (GDB/LLDB)
- Chrome (preview)
- Dart & Flutter
- Docker: Debug in Container
- Docker: Launch .NET Core (Deprecated)
- Edge: Launch
- Node.js
- Node.js (preview)
- More...

w3schools.tests.js — Code

VARIABLES

- Local
  - box: undefined
  - btn: undefined
  - option: undefined
  - > this: Context
- Closure
- Global

WATCH

```
//a(text~"${productName}")/. . .: Uncaught ReferenceError...
```

CALL STACK

PAUSED ON BREAKPOINT

- Test: npm [33770] RUNNING
- mocha [33774] PAUSED ON BREAKPOINT
- <anonymous> test/w3schools.tests.js 34:19
- callFn node\_modules/mocha/lib/runnable.js 358:21
- Runnable.run node\_modules/mocha/lib/runnable.js 346:9
- Runner.runTest node\_modules/mocha/lib/runner.js 621:10
- <anonymous> node\_modules/mocha/lib/runner.js 745:12
- next node\_modules/mocha/lib/runner.js 538:14
- <anonymous> node\_modules/mocha/lib/runner.js 548:7
- next node\_modules/mocha/lib/runner.js 430:14
- rlHandlerRun node\_modules/mocha/lib/runner.js 404:9

BREAKPOINTS

- Caught Exceptions
- Uncaught Exceptions
- HomePageModel.js test/pom 29
- login.tests.js test 47
- w3schools.tests.js test 34

LOADED SCRIPTS

TERMINAL PROBLEMS OUTPUT DEBUG CONSOLE

/usr/local/bin/npm run test

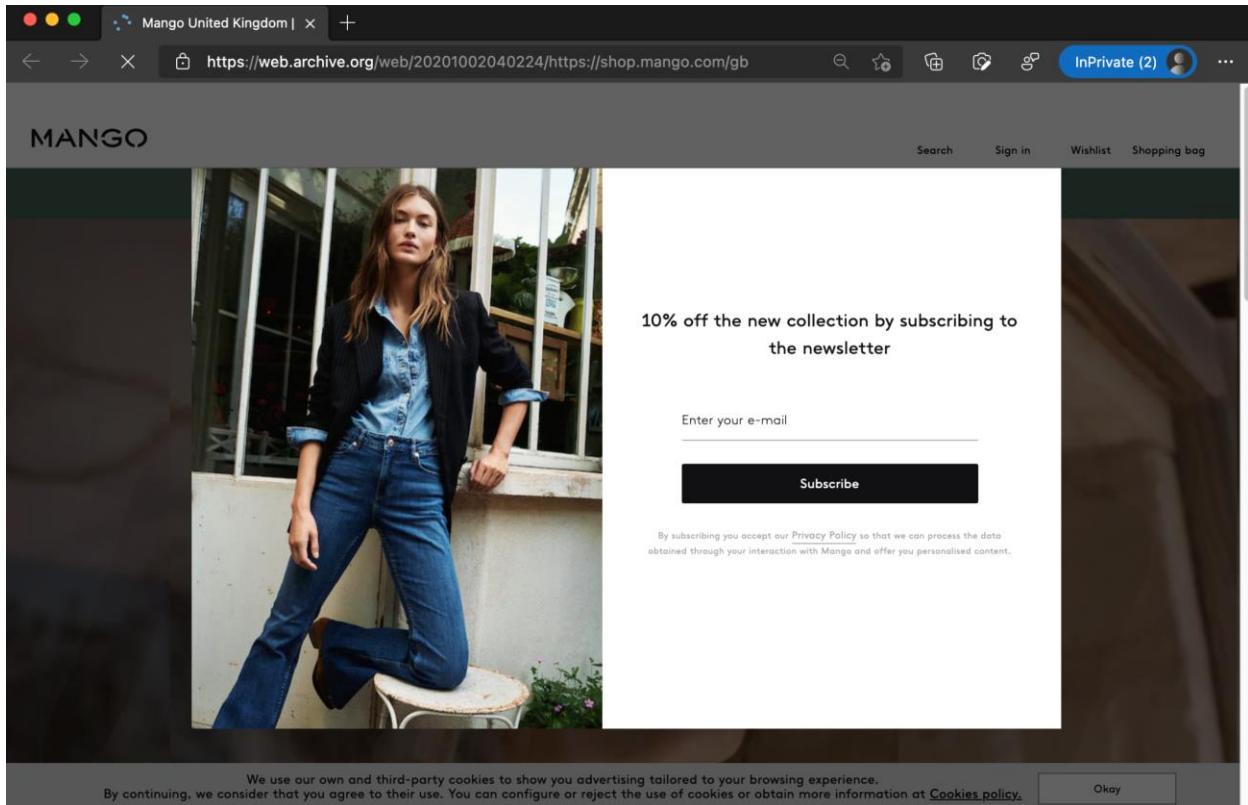
```
/usr/local/lib/node_modules/npm/node_modules/npm-lif-  
> CH001: 0.0 test /Users/neo/Library/Mobile Documents/com-apple-CloudDocs/Docs/Books/Up and  
running with Puppeteer/CH04/Code  
> mocha --timeout 30000 --reporter list
```

1) Home Page "before each" hook for "Should load an image"

node\_modules/mocha/lib/reporters/list.js:67

Ln 37, Col 29 Spaces: 4 UTF-8 LF JavaScript Prettier

# Chapter 05: Waiting for elements and network calls



Search Sign in Wish list Shopping bag

## every(wear)

Carry it like it's new. Everything.  
From home to everywhere else.

THE STORES ARE BACK Locate the reopened stores

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Okay

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The Free Encyclopedia

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<b>日本語</b> 1 231 000+ 記事	<b>Français</b> 2 254 000+ articles	<b>中文</b> 1 150 000+ 維基
<b>Русский</b> 1 665 000+ статей		
<b>Italiano</b> 1 639 000+ voci		
<b>Português</b> 1 044 000+ artigos	<b>العربية</b> ١٠٦٨ ٠٠٠+	

EN

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---

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Free textbooks

Wikinews  
Free news source

Wiktionary  
Free dictionary

Wikiversity  
Free course materials

Wikiquote  
Free quote compendium

Wikidata  
Free knowledge base

MediaWiki  
Free & open wiki application

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# every(wear)

Cornify is the new Everything.  
From home to everywhere else.

THE STORES ARE BACK Locate the [reopened stores](#)

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Mango United Kingdom | +

https://web.archive.org/web/20201002040224/https://shop.mango.com/gb

Search Sign in Wishlist Shopping bag InPrivate (2) ...

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0 answers I need to be able to search for, or upload X amount of pictures, and enter information for each. Then for each picture, I need to enter Y rows worth of data. In the past, I've done this with a ... 2 views c# winforms asked 38 secs ago Brian Gunter 65 6 Opt-in alpha test for a new Stacks editor Visual design changes to the review queues

0 votes Chat21 - Unread Messages Count How can I get count of unread messages in a group by a person? Like I need the number of unread messages in a group by a user at a particular time. 0 answers chat21 asked 41 secs ago Bhavik Solani 1

0 votes Create store listener in extjs I am somewhat new to extjs and am trying to create a listener as part of a panel, which is to retrieve the total of count of records in the store, is there any easy way of doing this? 0 answers extjs asked 42 secs ago Tabasa 1

0 votes How to obtain the query string from the current URL with Flutter Web? I have URL like this: <https://what.abc.com/#/wertcs-345snnd-dfgdnmr-fgnmm> What I need to do is to get the details after the #/ sign (query string) - that is wertcs-345snnd-dfgdnrr-fgnmm. How can I ... 0 answers dart flutter-web asked 47 secs ago arriff 3 2

0 Power BI Dax Calculate subtraction of selected rows

The screenshot shows a weather forecast for Hurtingham, Buenos Aires, Argentina. It includes sections for Today, Hourly, 10 Day, Weekend, Monthly, Radar, Video, and More Forecasts. A video player shows a meteorologist discussing a tropical depression. Below the video is a map of North America with a purple circle over the United States. A sidebar on the right says "Track Coronavirus in Your County".

Below the main content, a developer tools Network tab is open, showing a list of requests. The "Headers" tab is selected, displaying the following details for a request:

Name	Headers	Preview	Response	Initiator	Timing	Cookies
e6bbb7f0?a=397355082&v=1184.ab39b52&to=Z1RQNhBXC...rc%22....	HTML, like Gecko) Chrome/88.0.4287.0 Safari/537.36 Edg/88.0.673.0					
twc_144x144.png						
redux-dal						
339.339.0e671acea4b872e9dff2.js						

Request Payload (view parsed):

```
{ "name": "getSunV3LocationPointUrlConfig", "params": { "geocode": "-34.59,-58.67", "language": "en-US" } }
```

Network tab filters: Hide data URLs, All, XHR, JS, CSS, Img, Media, Font, Doc, WS, Manifest, Other. Time range: 20000 ms to 260000 ms.

The screenshot shows the Gmail Settings page for adding a new email address. The URL is https://mail.google.com/mail/u/0/#settings/accounts. The left sidebar shows standard Gmail navigation options: Compose, Inbox, Starred, Snoozed, Sent, All Mail, Spam, Trash, Categories, and Social.

The main content area has a yellow header bar that says "Add another email address you own". Below it, there's a form with the following fields:

- Name: Dario Kondratuk
- Email address: (input field)
- Treat as an alias. [Learn more](#)
- [Specify a different "reply-to" address \(optional\)](#)

At the bottom of the form are "Cancel" and "Next Step »" buttons.

**www.google.com says**

This is an alert

**OK**

**www.google.com says**

Are you sure you want to save the changes?

**Cancel**

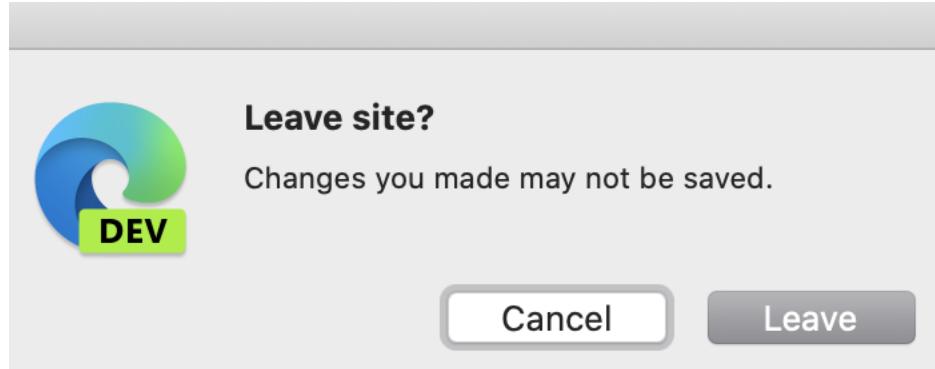
**OK**

**www.google.com says**

How old are you?

**Cancel**

**OK**



chrome web store

Home > Extensions > Headless Recorder

**Headless Recorder**

Offered by: [checklyhq.com](#)

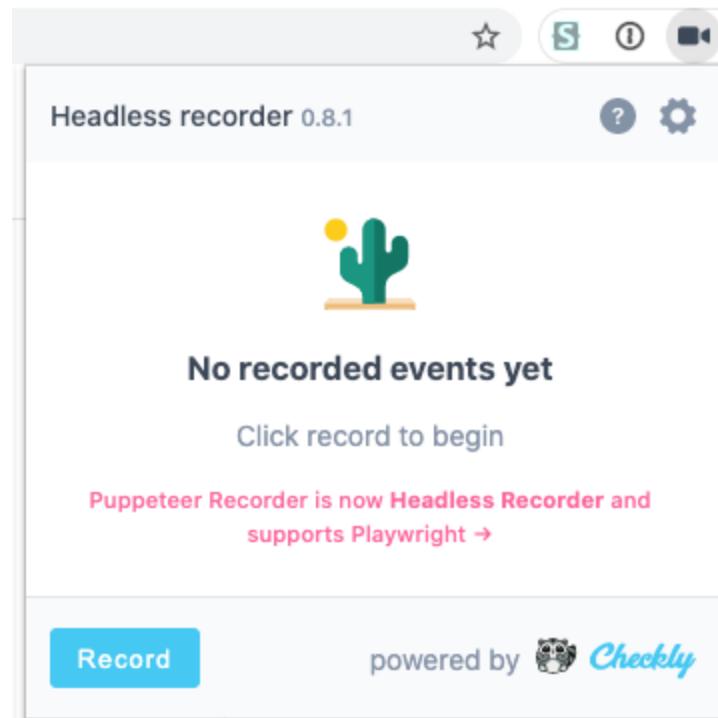
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Record Puppeteer &  
Playwright scripts with  
Headless Recorder



Headless recorder 0.8.1



Puppeteer Playwright

```
const puppeteer = require('puppeteer');
(async () => {
  const browser = await puppeteer.launch()
  const page = await browser.newPage()

  await page.goto('http://localhost:8080/')

  await page.setViewport({ width: 1760, heig
    await page.waitForSelector('.mb-3:nth-child(1) > .th
    await page.click('.mb-3:nth-child(1) > .th

    await page.waitForSelector('.flex-fill > .
    await page.click('.flex-fill > .message-ba

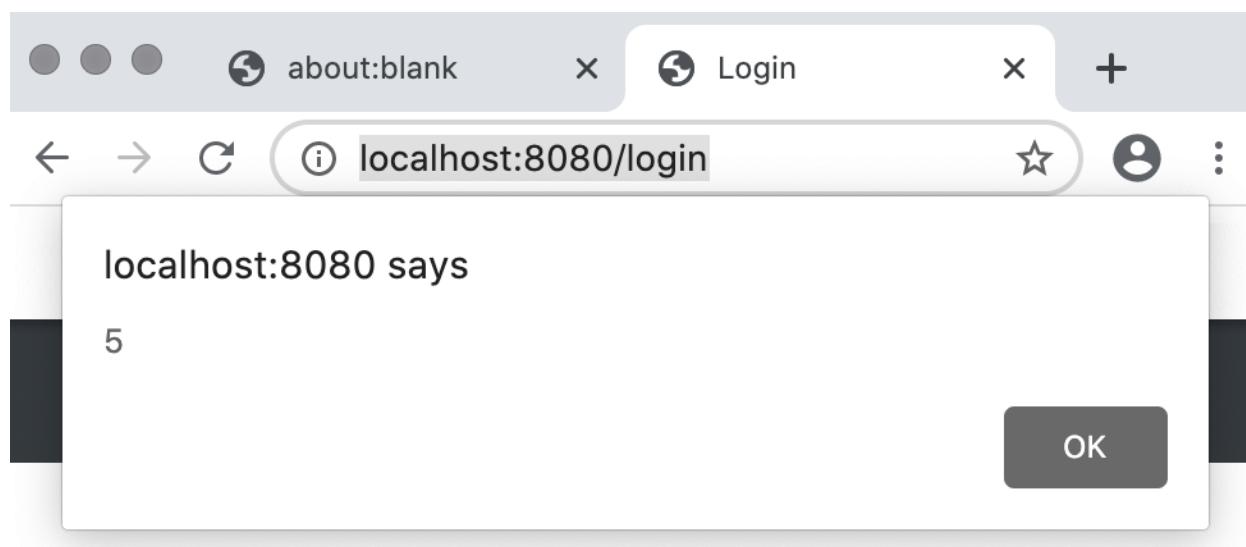
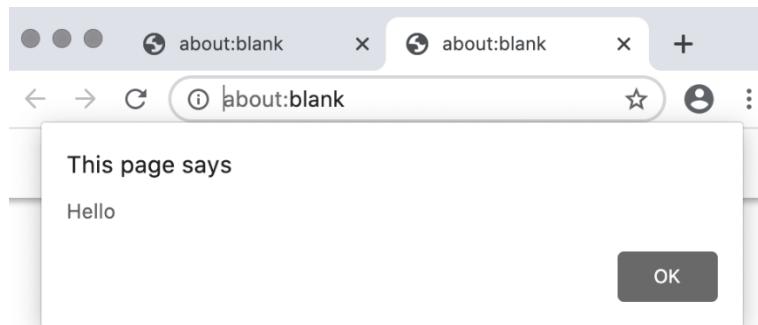
    await page.waitForSelector('.mb-3:nth-child(2) > .th
    await page.click('.mb-3:nth-child(2) > .th

    await browser.close()
})()
```

Restart

copy to clipboard

# Chapter 06: Executing and Injecting JavaScript



Email Address

Password

Amazon.com : puppeteer

[https://www.amazon.com/s?k=puppeteer&ref=nb\\_sb\\_noss\\_2](https://www.amazon.com/s?k=puppeteer&ref=nb_sb_noss_2)

amazon Deliver to Argentina All node

Today's Deals Customer Service Gift Cards Sell Registry Amazon's response to COVID-19

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Elements Console Sources Network Performance 334 Default levels View issues

```
> document.querySelector('[value=puppeteer]')
< input type="text" id="twotabsearchtextbox" value="puppeteer" name="field-keywords"
  autocomplete="off" placeholder class="nav-input" dir="auto" tabindex="0" aria-label="Search">
> document.querySelector('[value=node]')
< null
> |
```

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JavaScript development book

Elements Console Sources Network Performance Memory Application Security Lighthouse Adblock Plus Augury

Preserve log Disable cache Online

Name	Method	Status	Type	Initiator	Size	T	Waterfall
?id=445429252334850&ev=SubscribedButtonClick&dl=ht...160509093...	GET	200	gif	fbevents.js:23	86 B	1.	
add/	POST	200	xhr	jquery.js:10260	767 B	1.	
h?a=34805961&u=7352454686454241&v=7041890137392876...16050...	GET	200	gif	heap-34805961.js:2	212 B	1.	
?sections=messages&force_new_section_timestamp=true&_=1605090...	GET	200	xhr	jquery.js:10260	462 B	4.	
?sections=cart&force_new_section_timestamp=true&_=1605090935938	GET	200	xhr	jquery.js:10260	1.0 kB	1.	
subtotal.html	GET	200	xhr	text.js:137	372 B	2.	

12 requests 30.8 kB transferred 33.1 kB resources

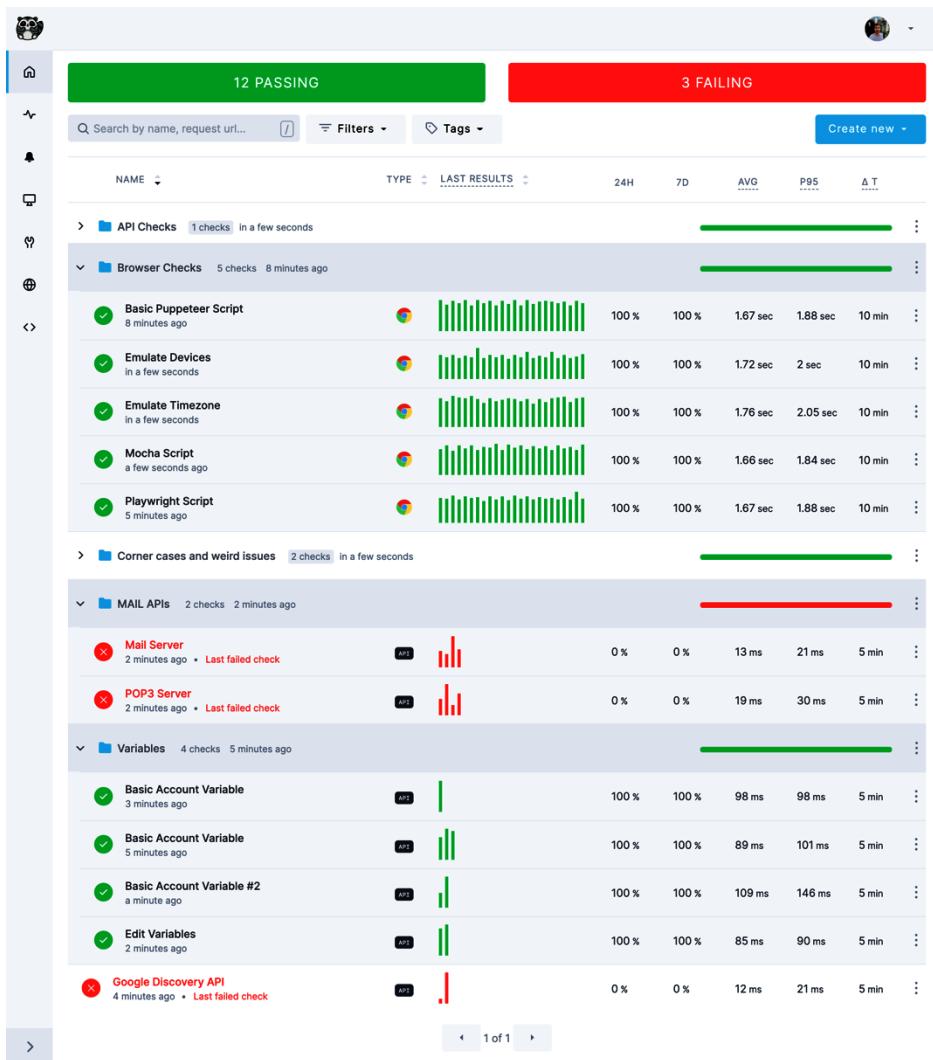
The screenshot shows a web browser window with the URL <https://www.packtpub.com/tech/javascript>. The page displays a list of books under the 'Released' category, with a filter for 'Available (198)'. The books listed are:

- By Dani Akash S, 298 pages, Aug 2017
- By Loiane Groner, 426 pages, Apr 2018
- By Ved Antani, 550 pages, Jan 2017

Below the page content, the browser's developer tools are open, specifically the 'Console' tab. The console output shows the following JavaScript code being run:

```
Some messages have been moved to the Issues panel.
> let observer = new MutationObserver(list => console.log(list[0].target.nodeValue));
< undefined
> observer.observe(document.querySelector('.counter.qty .counter-number'), {characterData: true, attributes: false, childList: false, subtree: true});
< undefined
1
2
> |
```

Annotations in the console output include 'View issues' next to the first message and VM2251:1 next to the numbers 1 and 2.



Dashboard

https://app.checklyhq.com

Your dashboard has been created! 🎉

This dashboard is real, but any checks marked with **SAMPLE** are samples which you can delete if you want.

[Dismiss](#)

ALL 2 PASSING

NAME	TYPE	LAST RESULTS	24H	7D	Avg	P95	Δ T
API check sample <small>SAMPLE</small> a few seconds ago	API		98%	98%	164 ms	235 ms	10 min
Browser check sample <small>SAMPLE</small> a few seconds ago	Chrome		98%	98%	3.82 sec	5.03 sec	30 min

1 of 1

Getting started

Monitor your API Monitor click flows Get your team involved Tweak your alerting





**...hmm, seems empty here.**

Add your first check, this will be your dashboard.



### API check

Check the speed and validity of API endpoints.



### Browser check

Check your crucial browser click flows.

The screenshot shows a web browser window with two tabs: "New browser checks" and "Delightful Active Monitoring". The main content is a form titled "Create a Browser Check".

**CHECK NAME \***  
Cart number check

**CHECK TAGS**  
Type a tag, hit enter

**Code a Browser Check**

With Puppeteer, Playwright, and our Headless Recorder browser extension, you can validate almost any browser transaction or click flow using an actual Chrome browser. Read the [Quick Start](#) and check out the examples in the examples browser below.

**NEW** We now support **Playwright** with the Chrome browser!

**EXAMPLES**

**TEST SCRIPT** (selected)    TEST RESULTS    SCREENSHOTS

**Run script**    Cancel

```
1 const assert = require("chai").assert;
2 const puppeteer = require("puppeteer");
3
4 const browser = await puppeteer.launch({defaultViewport: null});
5 const page = await browser.newPage();
6 await page.goto('https://www.packtpub.com/tech/javascript/');
7 const cookieLink = await page.waitForSelector('.accept_all', { timeout : 1000}).catch(e => e);
8
9 if (cookieLink) {
10   await cookieLink.click();
11 }
12
13 await Promise.all([
14   page.waitForSelector('.counter.qty.empty'),
15   page.waitForSelector('.add-to-cart')
16 ]);
17
18 const reachedToTwo = new Promise((resolve) => {
19   page.exposeFunction('notifyCartChange', i => {
20     if(i ==='2')
21       resolve();
22   })
23 })
```

# Chapter 07: Generating Content with Puppeteer

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Filter 10000 ms 20000 ms

Screenshot Capture area screenshot  
Screenshot Capture full size screenshot  
Screenshot Capture node screenshot  
Screenshot Capture screenshot

Name	Method	Status	Type	Initiator	Size	T	Waterfall
cs?ns=nxtck&uid3=6b68c9dc-4a16-40f8-b542-9e263e19d064	GET	200	gif	VM14 act.php:20	290 B	4	
demconf.jpg?et:ibs%7cdata:dpid=903&dpuuid=a586c3f9...d...	GET	200	gif	ibs:dpid=903&dpuuid=...	590 B	4	
NRJS-0f4d86b78cc0c8047b9?a=475968873&v=1184.ab39b...	POST	200	xhr	nr-1184.min.js:1	492 B	3	
h?a=34805961&u=7352454686454241&v=852129595468061...	GET	200	gif	heap-34805961.js:2	212 B	1	
h?a=34805961&u=7352454686454241&v=852129595468061...	GET	200	gif	heap-34805961.js:2	212 B	1	
h?a=34805961&u=7352454686454241&v=852129595468061...	GET	200	gif	heap-34805961.js:2	212 B	1	
NRJS-0f4d86b78cc0c8047b9?a=475968873&v=1184.ab39b...	POST	200	xhr	nr-1184.min.js:1	492 B	2	
NRJS-0f4d86b78cc0c8047b9?a=475968873&v=1184.ab39b...	POST	200	xhr	nr-1184.min.js:1	492 B	3	

365 requests 5.2 MB transferred 10.5 MB resources

a Amazon.com: Online Shopping X +

https://www.amazon.com

Print Total: 4 pages

Printer Save as PDF

Layout Portrait

Pages All e.g. 1-5, 8, 11-13

More settings Print using system dialog (⌘P)

Hi, Customization

Recommendation Your Orders Computers & Accessories Home & Kitchen

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- Estimated import fees

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## Print



Total: 2 pages

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### Paper size

A4



### Scale (%)

100

### Pages per sheet

1



### Margins

Default



### Options

Headers and footers

Background graphics

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2/15/2021

Wikipedia

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2 534 000+ Artikel

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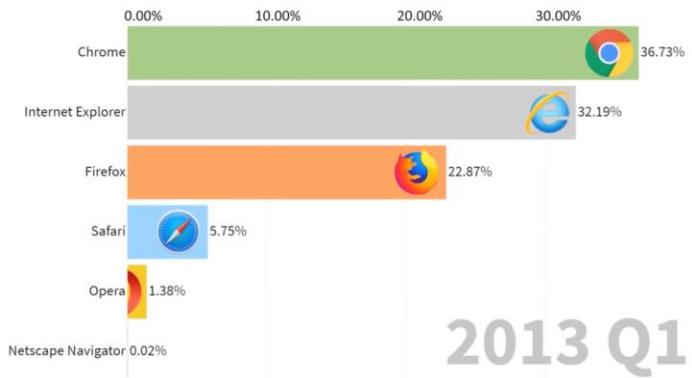
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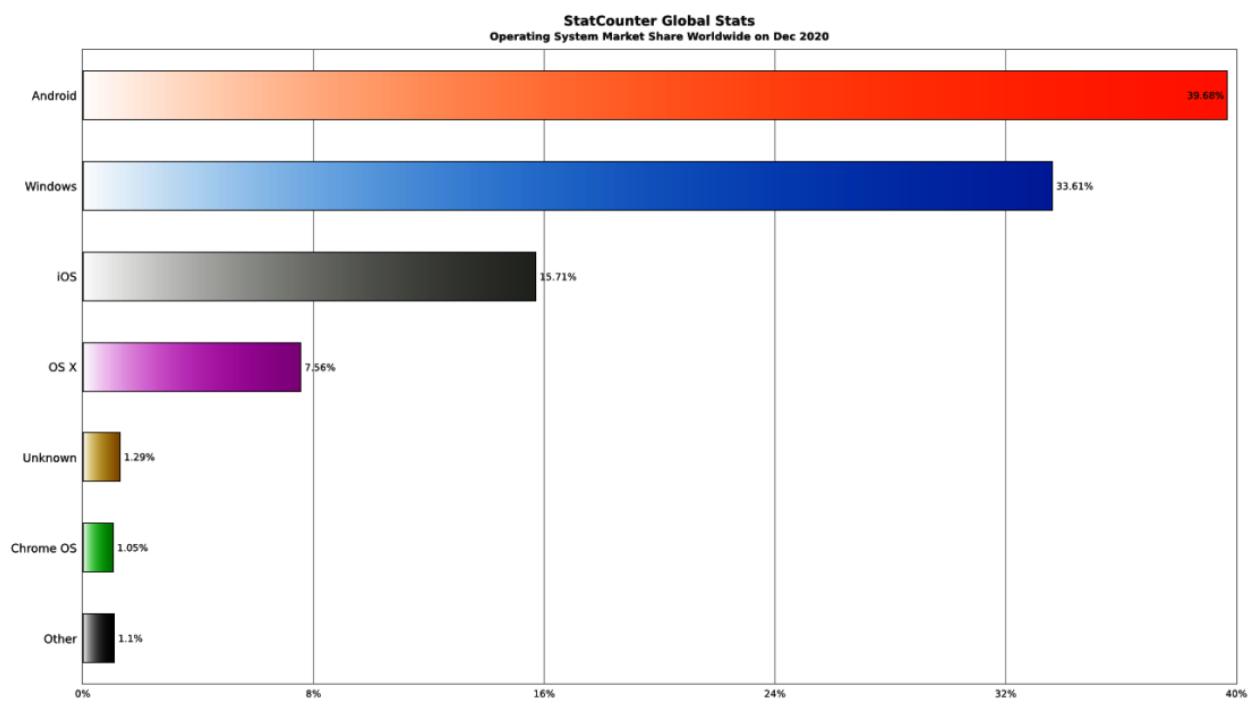
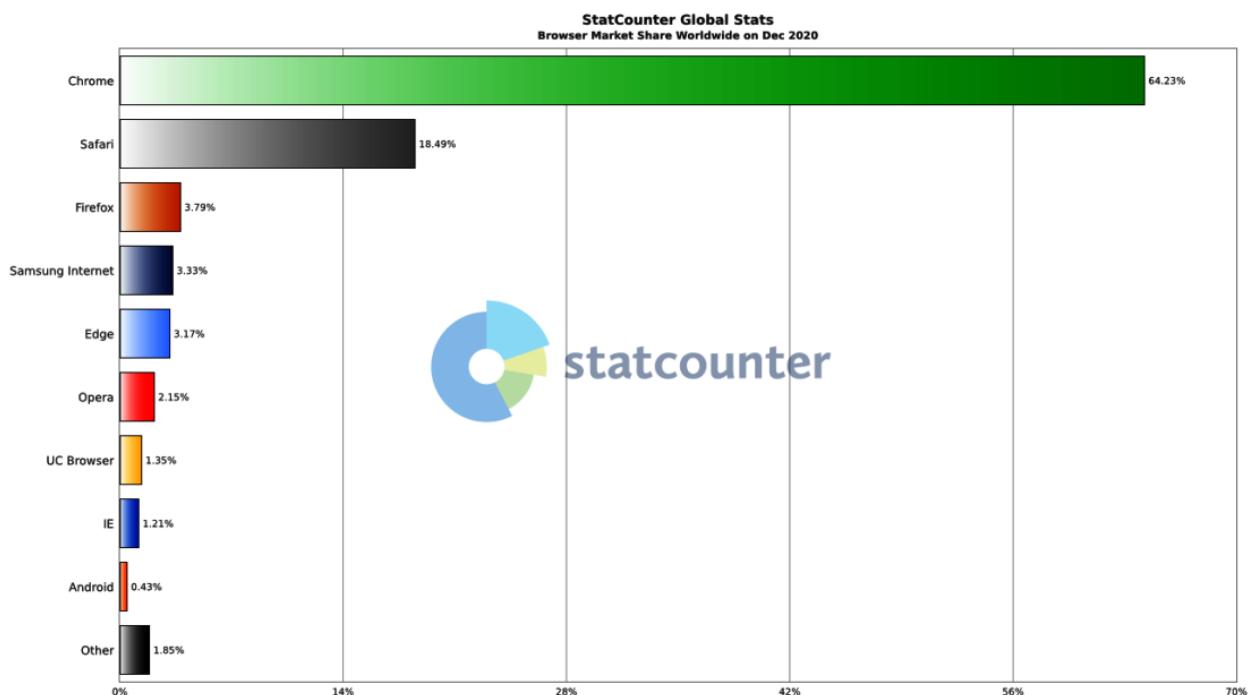
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Pages 1 of 2

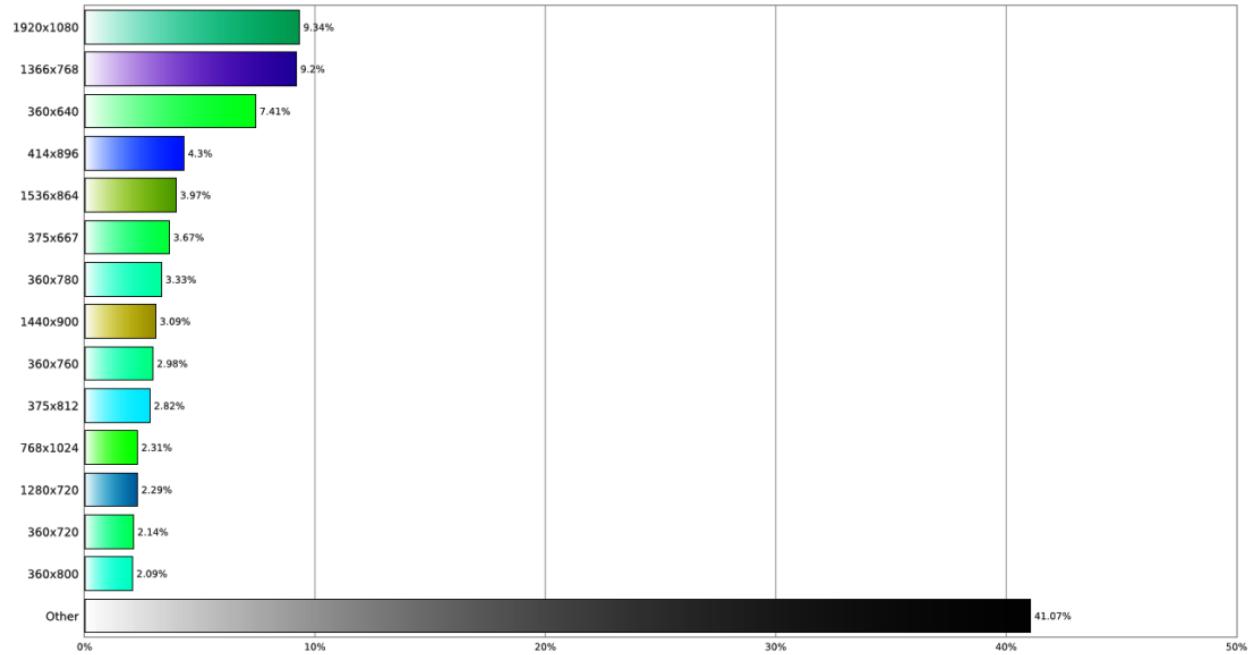
# Chapter 08: Environments emulation

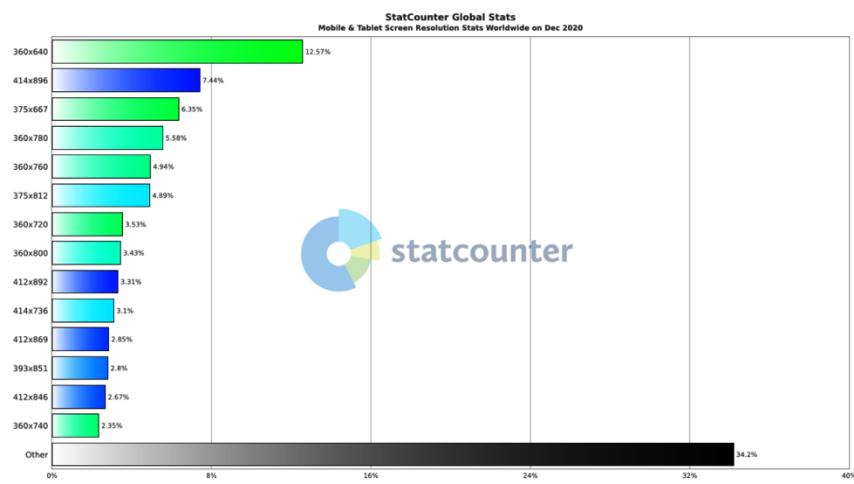
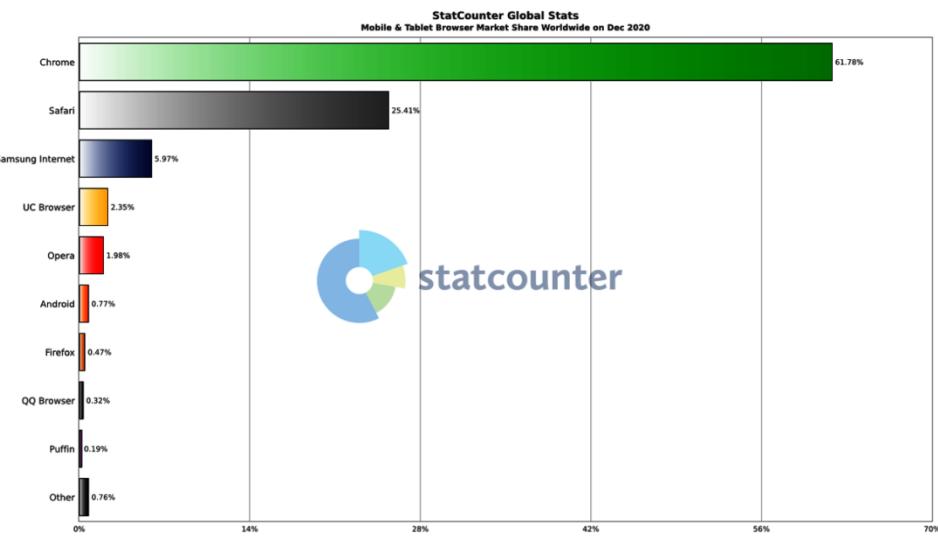
Browser	Peak Market Share	Peak Year
Netscape Navigator	90%	1995
Internet Explorer	95%	2004
Opera	3%	2009
Mozilla Firefox	32%	2010
Safari	7%	2012





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x

800

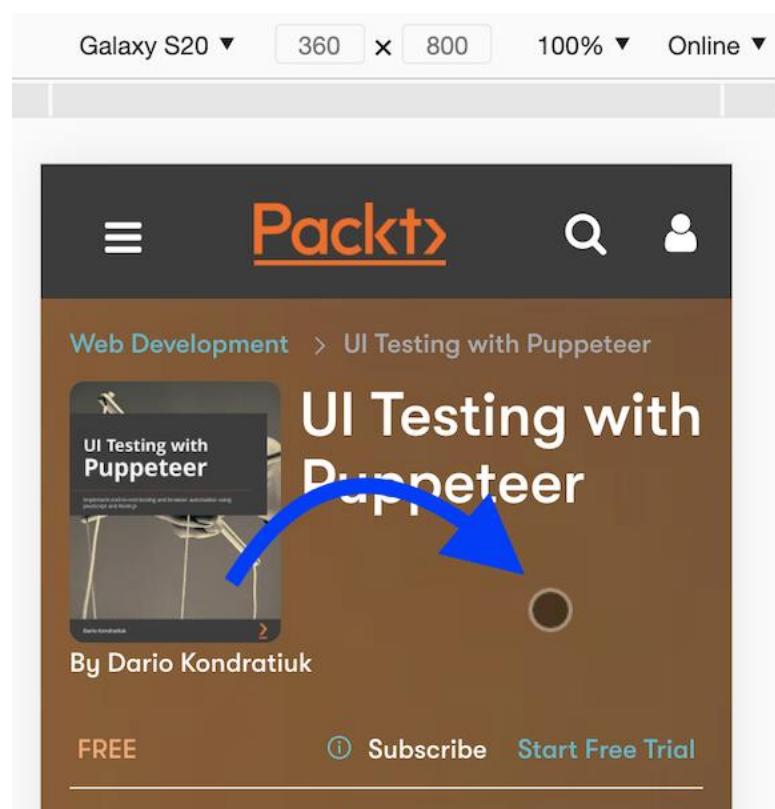
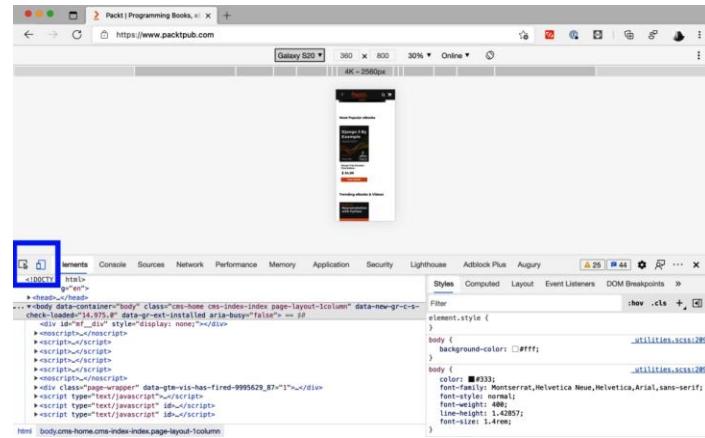
65% ▾

Online ▾

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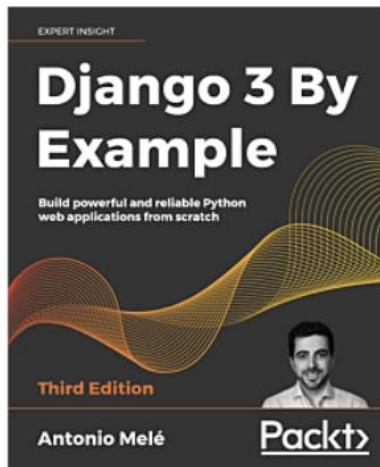
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Name	Method	Status	Type	Initiator	Size	T	Waterfall
filter-by.js	GET	200	script	require.js:1895	835 B	2.	
page-by.js	GET	200	script	require.js:1895	460 B	2.	
sort-by.js	GET	200	script	require.js:1895	535 B	2.	
cart.js	GET	200	script	require.js:1895	297 B	3.	
responsive.js	GET	200	script	require.js:1895	726 B	2.	
theme.js	GET	200	script	require.js:1895	688 B	2.	
popper.min.js	GET	200	script	require.js:1895	7.2 kB	9.	
compat.js	GET	200	script	require.js:1895	638 B	3.	
cookies.js	GET	200	script	require.js:1895	1.3 kB	3.	
algoliaBundle.min.js	GET	200	script	require.js:1895	170 kB	1.	
customer-data.js	GET	200	script	require.js:1895	2.7 kB	4.	
price-utils.js	GET	200	script	require.js:1895	1.6 kB	4.	

358 requests 4.9 MB transferred 10.8 MB resources Finish: 4.5 min DOMContentLoaded: 18.21 s Load: 1.7 min

 Argentina	 India	 România
 Australia	 Indonesia	ID EN
 België	FR NL	 Ireland
 Bolivia		 Israel
 Brasil		 Italia
 Canada	EN FR	 日本
 Chile		 Malaysia
 中国		 México
 Colombia		 Nederland
 Costa Rica		 New Zealand
 Danmark		 Nicaragua
 Deutschland	DE EN	 Norge
 Ecuador		 Panamá
 El Salvador		 Paraguay
 España	ES CA	 Perú
 France		 Philippines
 Ελλάδα		 Polska
 Guatemala		 Portugal
 Honduras		 Puerto Rico
 香港	EN 繁	 República Dominicana
		 India
		ID EN
		 Ireland
		FR DE
		 Israel
		EN 简
		 Italia
		South Africa
		 日本
		대한민국
		 Malaysia
		EN BM
		 Suomi
		 Sverige
		 台灣
		 Türkiye
		United Arab Emirates
		 United Kingdom
		 United States
		EN ES
		 Uruguay
		 Việt Nam
		EN VI
		 Österreich
		 Česká republika
		 Україна
		 Saudi Arabia
		 ประเทศไทย
		TH EN

www.google.com wants to

Know your location

Block Allow

Cerca de 1,450,000,000 resultados (0.54 segundos)

A map of Buenos Aires showing the neighborhood of Villa Crespo. Other areas visible include Villa Ortúzar, Parque Chas, Paternal, Recoleta, Retiro, and the city center. Several restaurants are marked with red pins, including 'Restaurante i Latina Buenos Aires', 'Don Julio', 'El Ateneo Grand Splendid', and 'Museo Nacional de Bellas Artes'. Street names like Av. Alvarez Thomas, Av. Jorge Newbery, Av. Dorrego, Av. Córdoba, Av. Medina, Av. Corrientes, and Av. Sarmiento are labeled. A green shaded area covers parts of Villa Crespo and Paternal.

Calificación ▾ Horario de atención ▾

about:blank Google where to eat - Recherche Google

google.com/search?source=hp&ei=czbVX-WJCeKU5OUpOWsmAQ&q=where+to+eat&oq=where+to+eat&gs\_lcp=CgZwc3ktYWIQAzICCAyAg

Chrome is being controlled by automated test software.

where to eat

Tous Maps Images Shopping Actualités Plus Paramètres Outils

Environ 1 550 000 000 résultats (0,59 secondes)

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En savoir plus OK

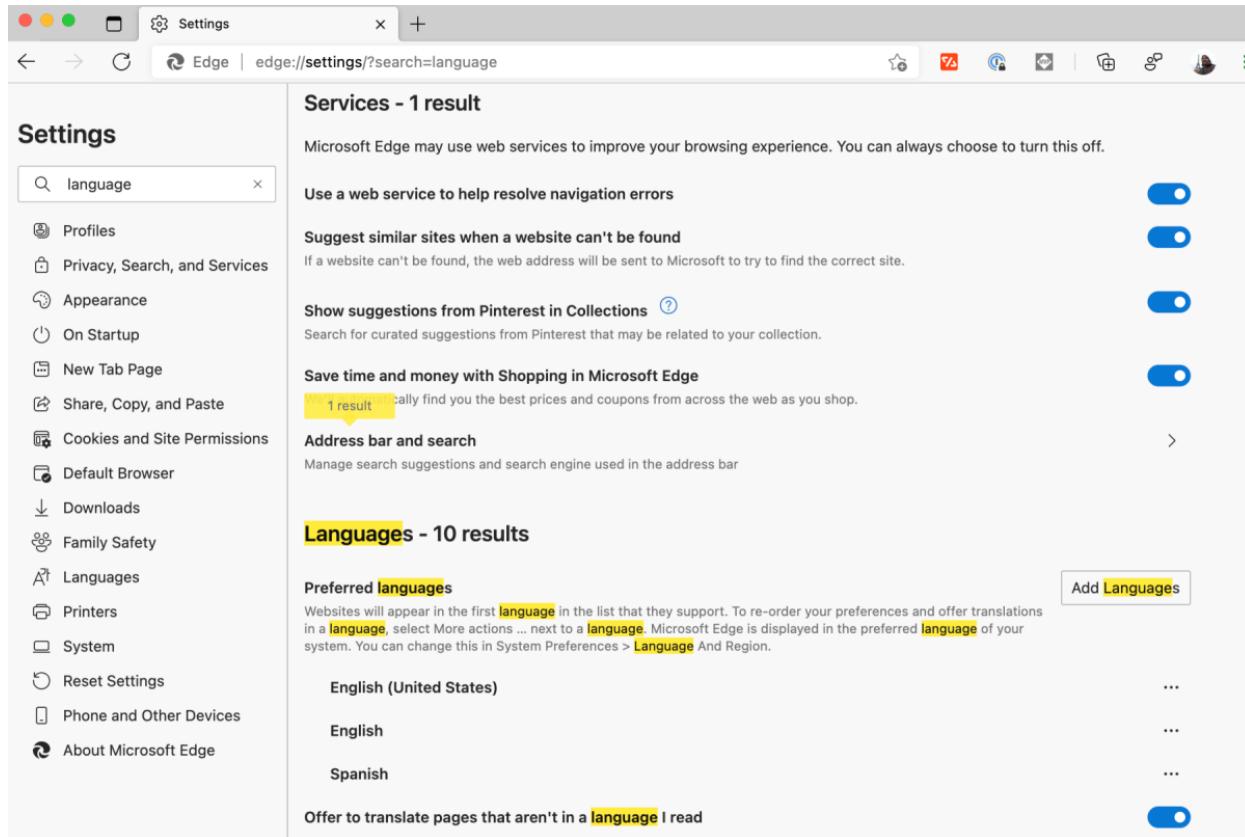
Looking for results in English?  
Change to English  
Continuer en Français  
Paramètres de langue

Rechercher des résultats sur

TripAdvisor THE 10 BEST Cheap Eats in... Timeout 50 Absolute Best Restaurants ...

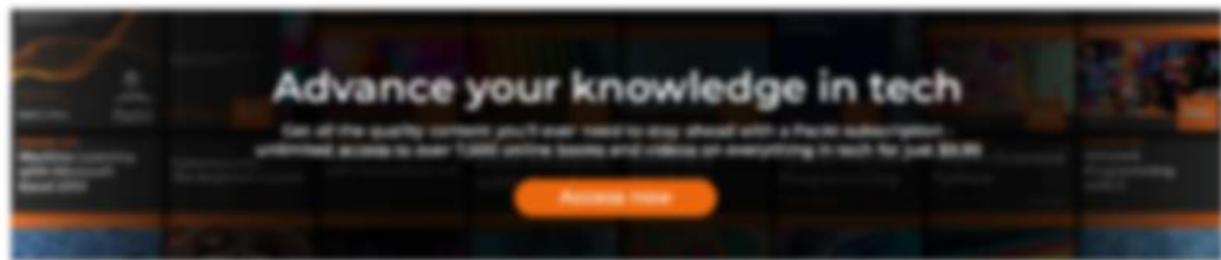
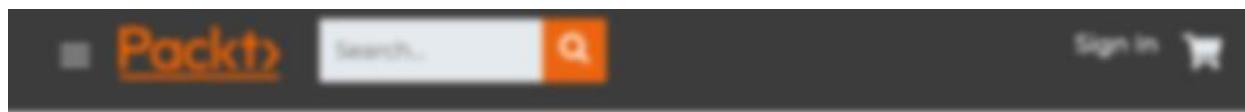
Note ▾ Cuisine ▾ Horaires ▾ Trier par ▾

**Bistrot Victoires**  
4,4 ★★★★★ (2 168) · €€ · Bistro  
1,4 km · 6 Rue de la Vrillière  
Ferme bientôt · 23:00

A screenshot of the Microsoft Edge Settings window. The left sidebar shows a search bar with "language" and a list of settings categories: Profiles, Privacy, Search, and Services, Appearance, On Startup, New Tab Page, Share, Copy, and Paste, Cookies and Site Permissions, Default Browser, Downloads, Family Safety, Languages, Printers, System, Reset Settings, Phone and Other Devices, and About Microsoft Edge. The main content area has two sections: "Services - 1 result" and "Languages - 10 results".  
**Services - 1 result**  
Microsoft Edge may use web services to improve your browsing experience. You can always choose to turn this off.  
**Use a web service to help resolve navigation errors** (switched on)  
**Suggest similar sites when a website can't be found** (switched on)  
**Show suggestions from Pinterest in Collections** (switched on)  
**Save time and money with Shopping in Microsoft Edge** (switched on)  
**Address bar and search** (with a "Manage" link)  
**Languages - 10 results**  
**Preferred languages**  
Websites will appear in the first language in the list that they support. To re-order your preferences and offer translations in a language, select More actions ... next to a language. Microsoft Edge is displayed in the preferred language of your system. You can change this in System Preferences > Language And Region.  
**Add Languages**  

Language	Action
English (United States)	...
English	...
Spanish	...

**Offer to translate pages that aren't in a language I read** (switched on)



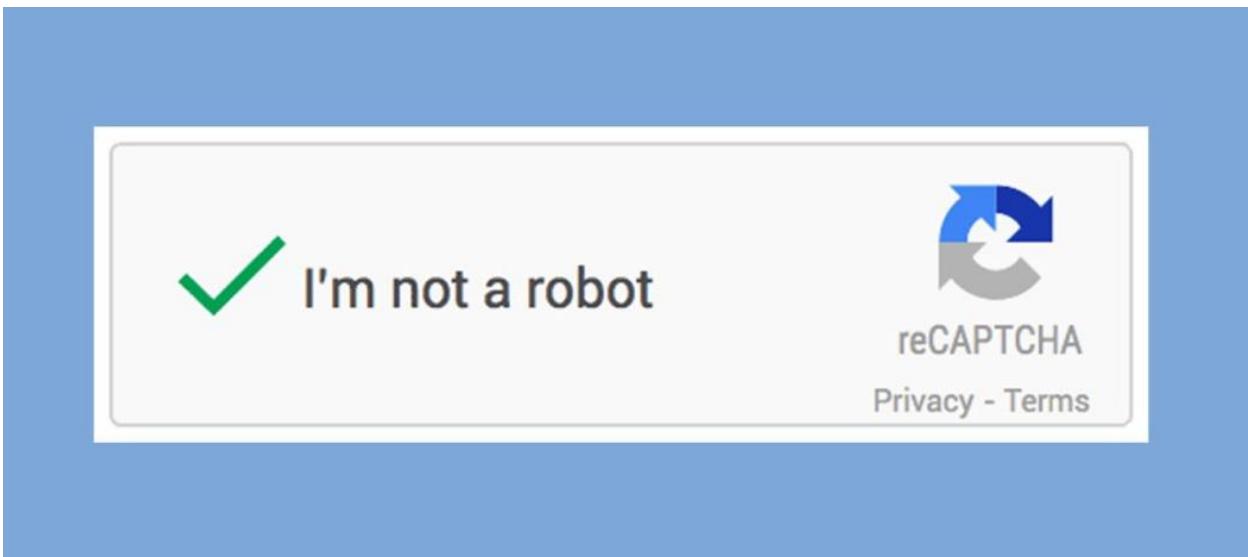
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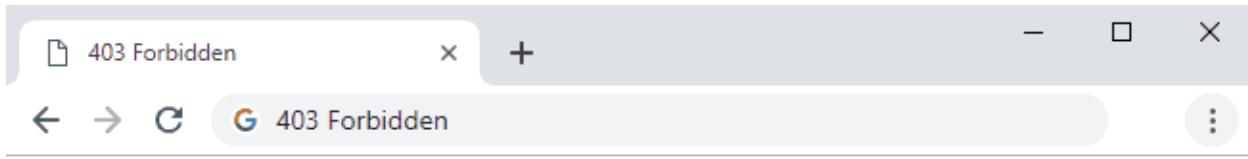
# Chapter 09: Scraping tools



Select all squares with  
**traffic lights**  
If there are none, click skip



SKIP



# Forbidden

You don't have permission to access /wp-content/uploads/2018/06/ on this server.

---

*Apache/2.4.10 (Debian) Server at blogsdna.com Port 80*



## MediaWiki API result

This is the HTML representation of the JSON format. HTML is good for debugging, but is unsuitable for application use.  
Specify the `format` parameter to change the output format. To see the non-HTML representation of the JSON format, set `format=json`.  
See the [complete documentation](#), or the [API help](#) for more information.

```
{  
    "batchcomplete": "",  
    "warnings": {  
        "main": {  
            "*": "Subscribe to the mediawiki-api-announce mailing list at <https://lists.wikimedia.org/mailman/listinfo/mediawiki-api-announce> for notice of API deprecations and breaking changes. Use [[Special:ApiFeatureUsage]] to see usage of deprecated features by your application."  
        },  
        "revisions": {  
            "*": "Because \"rvslots\" was not specified, a legacy format has been used for the output. This format is deprecated, and in the future the new format will always be used."  
        }  
    },  
    "query": {  
        "normalized": [  
            {  
                "from": "puppeteer",  
                "to": "Puppeteer"  
            }  
        ],  
        "pages": {  
            "156592": {  
                "pageid": 156592,  
                "ns": 0,  
                "title": "Puppeteer",  
                "revisions": [  
                    {  
                        "contentformat": "text/x-wiki",  
                        "content": "\n<div style=\r\n",  
                        "id": 156592  
                    }  
                ]  
            }  
        }  
    }  
}
```



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By Dario Kondratuk

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Antoine Vastel   [Statistics browser fingerprinting](#)   [See your fingerprint](#)

Are you chrome headless?

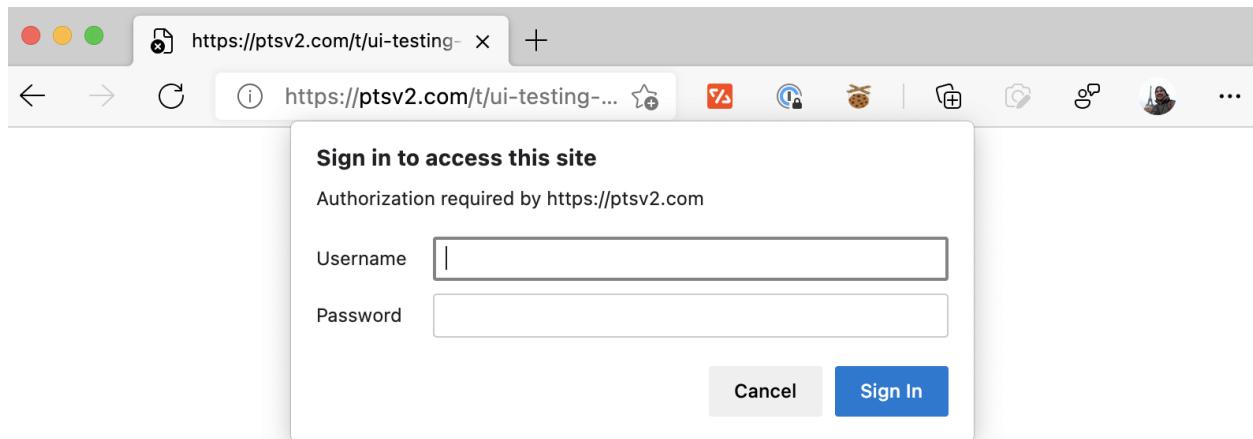
You are Chrome  
headless

This page runs a simple test to determine whether or not you are Chrome headless. For research purpose, I also collect a more complex browser fingerprint. It does not use detection any of techniques presented in these blog posts ([post 1](#),[post 2](#)) or in the [Fp-Scanner library](#). Known spoofing/escape techniques such as the ones presented in [this repository](#) are totally useless. Since I use a simple test and don't try to correlate its value with other known tests, false positives/negatives may occur on less popular browsers. Under the hood, I only verify if browsers pretending to be Chromium-based are who they pretend to be. Thus, if your Chrome headless pretends to be Safari, I won't catch it with my technique, but because of the differences, it could be easily caught using many other techniques.

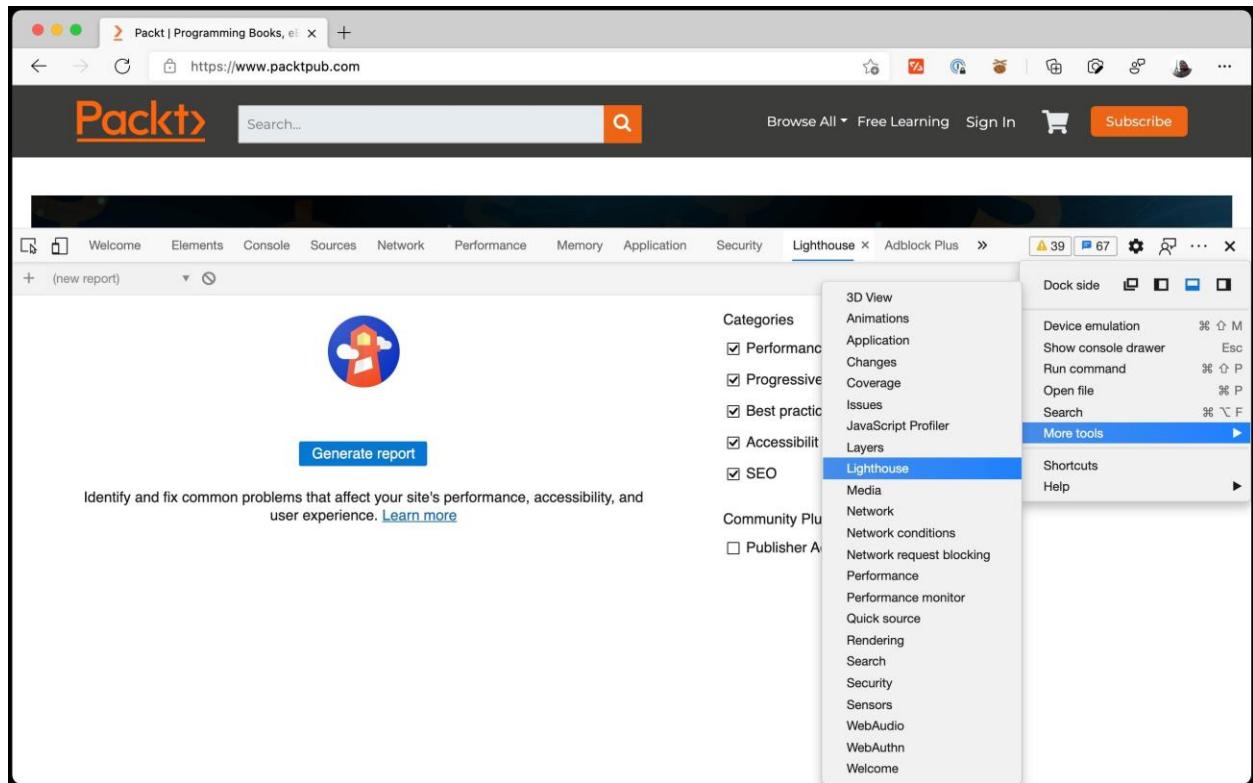
Are you chrome headless?

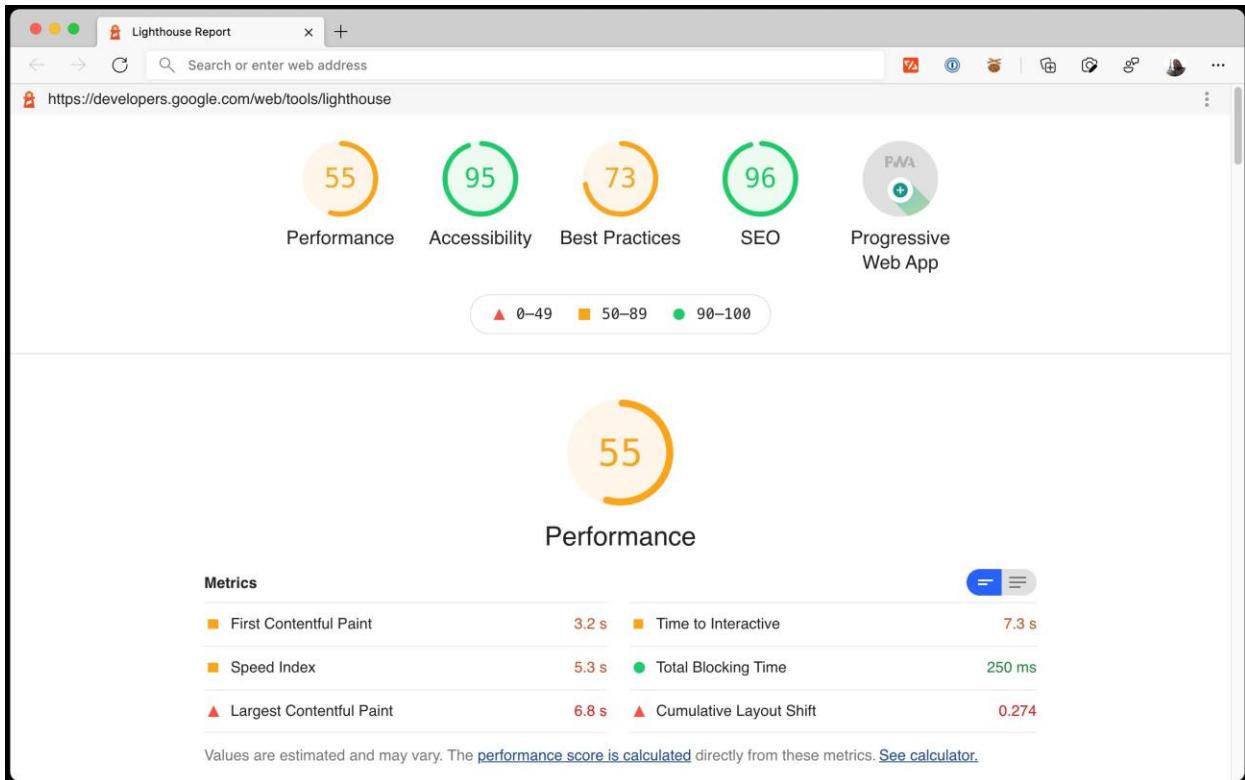
# You are not Chrome headless

This page runs a simple test to determine whether or not you are Chrome headless. For research purpose, I also collect a more complex browser fingerprint. It does not use detection any of techniques presented in these blog posts ([post 1](#),[post 2](#)) or in the Fp-Scanner library. Known spoofing/escape techniques such as the ones presented in this repository are totally useless. Since I use a simple test and don't try to correlate its value with other known tests, false positives/negatives may occur on less popular browsers. Under the hood, I only verify if browsers pretending to be Chromium-based are who they pretend to be. Thus, if your Chrome headless pretends to be Safari, I won't catch it with my technique, but because of the differences, it could be easily caught using many other techniques.



# Chapter 10: Measuring a website performance





**Opportunities** — These suggestions can help your page load faster. They don't directly affect the Performance score.

Opportunity	Estimated Savings
▲ Properly size images	28.2 s ▾
▲ Serve images in next-gen formats	27.31 s ▾
▲ Eliminate render-blocking resources	1.7 s ▾
▲ Remove unused JavaScript	1.65 s ▾
■ Remove unused CSS	0.75 s ▾

Opportunity	Estimated Savings	
▲ Properly size images	28.2 s ^	
URL	Resource Size	Potential Savings
 ...images/extension.png (developers.google.com)	1,945.8 KiB	1,696.9 KiB
 ...images/audits.png (developers.google.com)	1,824.1 KiB	1,590.8 KiB
 ...images/cdt-report.png (developers.google.com)	1,823.1 KiB	1,589.9 KiB
 ...images/report.png (developers.google.com)	701.8 KiB	612.0 KiB
 ...images/lighthouse-ps1.png (developers.google.com)	168.0 KiB	133.5 KiB
 ...images/viewer.png (developers.google.com)	123.4 KiB	24.1 KiB

**Diagnostics** — More information about the performance of your application. These numbers don't directly affect the Performance score.

▲ Ensure text remains visible during webfont load ▼

**Warnings:** Lighthouse was unable to automatically check the `font-display` value for the origin <https://fonts.gstatic.com>.

▲ Reduce the impact of third-party code — **Third-party code blocked the main thread for 270 ms** ▼

▲ Some third-party resources can be lazy loaded with a facade — **1 facade alternative available** ▼

▲ Image elements do not have explicit `width` and `height` ▼

▲ Avoid enormous network payloads — **Total size was 8,044 KiB** ▼

▲ Minimize main-thread work — **4.1 s** ▼

■ Serve static assets with an efficient cache policy — **9 resources found** ▼

● Avoid chaining critical requests — 8 chains found ▼

● Keep request counts low and transfer sizes small — 91 requests • 8,044 KiB ▼

● Largest Contentful Paint element — 1 element found ▼

● Avoid large layout shifts — 5 elements found ▼

● Avoid long main-thread tasks — 12 long tasks found ▼

● Avoid non-composited animations — 11 animated elements found ▼

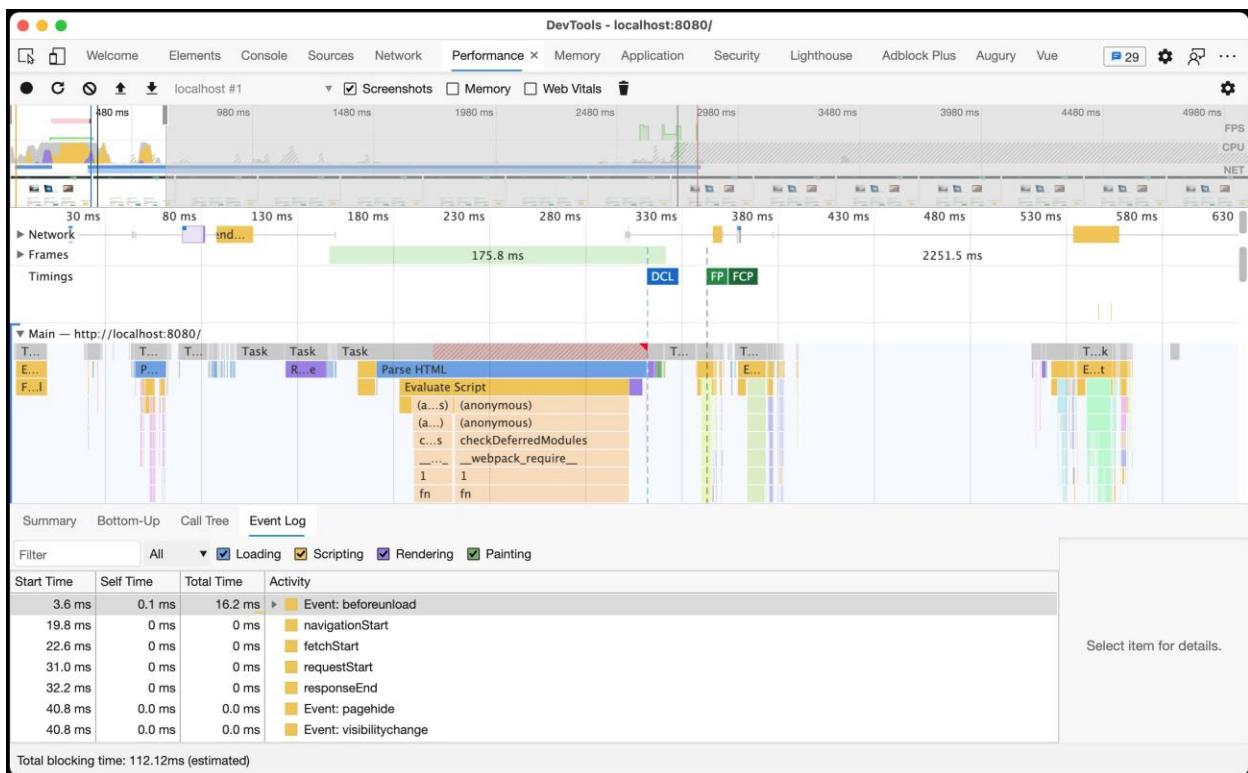
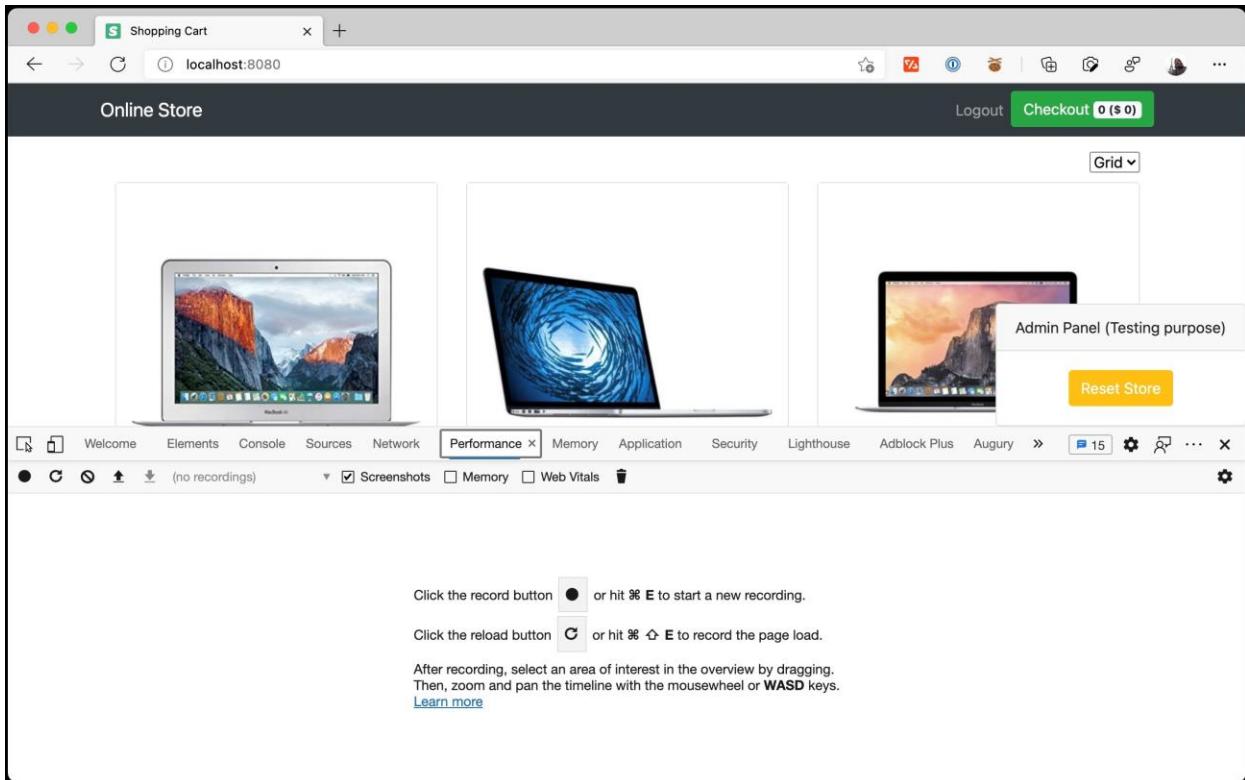
⚠ Minimize main-thread work — 4.1 s

^

Consider reducing the time spent parsing, compiling and executing JS. You may find delivering smaller JS payloads helps with this. [Learn more](#)

Category	Time Spent
Script Evaluation	1,490 ms
Style & Layout	1,253 ms
Other	969 ms
Rendering	138 ms
Script Parsing & Compilation	134 ms
Parse HTML & CSS	103 ms
Garbage Collection	5 ms

```
✓ WATCH
✓ result.lhr: {userAgent: 'Mozilla/5.0 (Macintosh; Intel Mac OS X 10_1...ike Gecko) Chrome/85.0.4182.0 Safari/53...
  ✓ audits: {first-contentful-paint: {...}, largest-contentful-paint: {...}, first-meaningful-paint: {...}, speed-ind...
    > bootup-time: {id: 'bootup-time', title: 'JavaScript execution time', description: 'Consider reducing the ...'
    > critical-request-chains: {id: 'critical-request-chains', title: 'Avoid chaining critical requests', descr...
    > cumulative-layout-shift: {id: 'cumulative-layout-shift', title: 'Cumulative Layout Shift', description: '...
    > diagnostics: {id: 'diagnostics', title: 'Diagnostics', description: 'Collection of useful page vitals.', ...
    > dom-size: {id: 'dom-size', title: 'Avoids an excessive DOM size', description: 'A large DOM will increase...
    > duplicated-javascript: {id: 'duplicated-javascript', title: 'Remove duplicate modules in JavaScript bundl...
    > efficient-animated-content: {id: 'efficient-animated-content', title: 'Use video formats for animated con...
    > estimated-input-latency: {id: 'estimated-input-latency', title: 'Estimated Input Latency', description: '...
    > final-screenshot: {id: 'final-screenshot', title: 'Final Screenshot', description: 'The last screenshot c...
  ✓ first-contentful-paint: {id: 'first-contentful-paint', title: 'First Contentful Paint', description: 'Fir...
    description: 'First Contentful Paint marks the time at which the first text or image is painted. [Learn ...
    details: undefined
    displayValue: '18.3 s'
    errorMessage: undefined
    explanation: undefined
    id: 'first-contentful-paint'
    numericUnit: 'millisecond'
    numericValue: 18341.727199999994
    score: 0
    scoreDisplayMode: 'numeric'
  > should (get): f shouldGetter() {\n      if (this instanceof String)\n        || this instanceof Number...\n  > should (set): f shouldSetter(value) {\n      // See https://github.com/chaijs/chai/issues/86: this makes...
    title: 'First Contentful Paint'
    warnings: undefined
```



S Shopping Cart × +

localhost:8080

Logout **Checkout 0 (\$ 0)**

Online Store Admin Panel (Testing purpose)

Reset Store

Welcome Elements Console Sources Network Performance Memory Application Security Lighthouse JavaScript Profiler x »

Select JavaScript VM instance  
15.7 MB ↑123 kB/s localhost:8080

Coverage

... Console Issues Coverage x

Per function URL filter All Content scripts

URL	Type	Total Bytes	Unused Bytes
chrome-extension://elgalmkoelokbchhhacckok.../ng-validate.js	JS (per function)	127 071	88 829
webpack-internal:///node_modules/sockjs-client/dist/sockjs.js	JS (per function)	480 134	82 169
webpack-internal:///node_modules/vue/dist/vue.runtime.esm.js	JS (per function)	596 402	79 277
webpack-internal:///node_modules/vue-router/dist/vue-router.esm.js	JS (per function)	198 995	28 550
http://localhost:8080/js/app.js	JS (per function)	1 101 967	23 520
http://maxcdn.bootstrapcdn.com/font-.../font-awesome.min.css	CSS	20 766	20 742
webpack-internal:///node_modules/vuex/dist/vuex.esm.js	JS (per function)	82 261	10 186
webpack-internal:///node_modules/url/url.js	JS (per function)	60 855	9 286
webpack-internal:///node_modules/core-js/mo... /es.promise.js	JS (per function)	37 039	7 761
webpack-internal:///node_modules/events/events.js	JS (per function)	34 905	7 636
webpack-internal:///node_modules/node-lbs-br.../punycode.js	JS (per function)	40 307	6 841

Filtered: 6.3 MB of 6.8 MB (93%) used so far, 473 kB unused. Total: 6.5 MB of 7.2 MB (90%) used so far, 743 kB unused.

3D View Animations Application Changes Coverage Issues JavaScript Profiler Layers Lighthouse Media Network Network conditions Network request blocking Performance Performance monitor Quick source Rendering Search Security Sensors WebAudio WebAuthn Welcome

Dock side Device emulation Hide console drawer Run command Open file Search More tools Shortcuts Help