# Secrets of the Web Inspector

What's the web inspector?

The web inspector is a panel available in every current browser (yes, even IE!) that allows you to navigate through the components that go into rendering the web page you see.

It also has a bunch of nifty features to help achieve better performance, find bugs, check mobile views, and more!

**A Brief History** 

- "View Source" / "Save as web page"
- Firebug 2006 (RIP)
- Browsers start adding native developer tools (2007-2008ish)

How to open the web inspector

- Mac Chrome: Cmd + Opt + I
- Safari: Cmd + Opt + I
- Firefox: Cmd + Opt + C
- Internet Explorer/Edge: F12

Alternately, you can almost always open it via rightclicking and selecting "Inspect Element" from the context menu.

If you can't find a panel

# If I'm talking about something and you can't find it, ask a neighbor and/or click on this thing:



# Let's browse some code

Let's go to http://cliqueinspect.glitch.me/ and then open the web inspector like we just talked about!

Here's about what you'll be looking at when you open it up:

Develop Network ements Console Audits Layer tml> "en-US" class="chrome"> 1ead> s="home page-template page-template-temp" mplate-home-php page page-id-2 logged-in upport"> == \$0 "newsbar">...</div> class="header">...</header> :"defs">...</div> ass="main" id="main">...</main> class="footer">...</footer> :l="stylesheet" id="gforms\_reset\_css-css" .dev/wp-content/plugins/gravityforms/css/ st.min.css?ver=2.2.3" type="text/css" medi :l="stylesheet" id="gforms\_formsmain\_css-c t.dev/wp-content/plugins/gravityforms/css in.min.css?ver=2.2.3" type="text/css" medi :l="stylesheet" id="gforms\_ready\_class\_css /coranet.dev/wp-content/plugins/gravityfor iss.min.css?ver=2.2.3" type="text/css" med :l="stylesheet" id="gforms\_browsers\_css-cs t.dev/wp-content/plugins/gravityforms/css/ s.min.css?ver=2.2.3" type="text/css" media type="text/javascript" src="http://corane s/js/admin-bar.min.js?ver=4.8"></script> type="text/javascript" src="http://corane (themes/coranet/dist/scripts/main.js">>/sc type="text/javascript" src="http://corane s/js/wp-embed.min.js?ver=4.8"></script> type="text/javascript" src="http://corane /plugins/gravityforms/js/jguery.json.min.j type="text/javascript" src="http://corane /plugins/gravityforms/js/gravityforms.min. type="text/javascript" src="http://corane /plugins/gravityforms/js/placeholders.jgue .3"></script> lte IE 8]> <script type="text/javascript"> document.body.className = t.body.className.replace( /(^|\s)(no-)?cus

Styles       Computed       Event Listeners       DOM Breakp         Filter       element.style {       }         element.style {       }       :last-child {         margin-bottom: 0;       }       body {         body {       background: ▶ □ #fff;         overflow-x: hidden;       color: ■#192536;		
Styles       Computed       Event Listeners       DOM Breakp         late-home       page- admin-bar       element.style { }       ilast-child { margin-bottom: 0; }         href="http:// ia="all">       body { body { body { body : ia="all">       #fff; overflow-x: hidden; color:	Tools - http://c	oranet.dev/
<pre>Iate-home page- admin-bar  Filter  element.style {     }  ilast-child {     margin-bottom: 0;     }  body {     body {         background:▶□#fff;         overflow-x: hidden;         color: ■#192536; </pre>	aXe Sour	rces Memory Application Performance Sec
<pre>late-home page- admin-bar element.style { } element.style { } ilast-child { margin-bottom: 0; } body { body { body { background:▶□#fff; overflow-x: hidden; color: ■#192536;</pre>		Styles Computed Event Listeners DOM Breakpoin
<pre>admin-bar element.style { }  :last-child {     margin-bottom: 0; }  body {     background:▶□#fff;     overflow-x: hidden;     color: ■#192536;</pre>		Filter :
<pre>margin-bottom: 0; } body {     background:▶□#fff;     overflow-x: hidden;     color: ■#192536;</pre>		P
<pre>href="http:// ia="all"&gt; background: ▶ □ #fff; overflow-x: hidden; color: ■#192536;</pre>		margin-bottom: 0;
<pre>s/ ia="all"&gt; s-css" href= rms/css/ dia="all"&gt; ss" href="<u>http:/</u> /</pre> font-size: 16px; line-height: 26px; font-family: Roboto,sans-serif; left: 0; position: relative; transition:▶.5s; //	="all"> 5" href=" <u>http:</u> ="all"> 5:ss" href= 5 <u>/css/</u> 5="all"> 1 href=" <u>http:/</u>	<pre>background:▶ □ #fff; overflow-x: hidden; color: ■#192536; -webkit-font-smoothing: antialiased; font-size: 16px; line-height: 26px; font-family: Roboto,sans-serif; left: 0; position: relative; transition:▶ .5s;</pre>
a="all"> body, html { margin: ▶ 0; padding: ▶ 0; cript> }	<u>dev/wp-</u> dev/wp-	margin:▶0; padding:▶0;
<pre>et.dev/wp-  *, :after, :before {     box-sizing: border-box;  } </pre>	dev/wp-	<pre>box-sizing: border-box;</pre>
et.dev/wp- .js?ver=2.2.3"> body { user a display: block; margin:▶ 8px; }	<pre>s?ver=2.2.3"&gt;</pre>	display: block; margin:▶ 8px;
ery.min.js? Inherited from html.chrome		
<pre>html {     -webkit-text-size-adjust: 100%;     -ms-text-size-adjust: 100%; }</pre>	omize-	-webkit-text-size-adjust: 100%; -ms-text-size-adjust: 100%;
Pseudo ::before element		Pseudo ::before element

**Editing the code** 

- Right click on elements on the page and select "inspect element" to get to that element directly in the "Elements" panel
- Double click on text or an an attribute to edit its contents
- Right click on a section and select "Edit as HTML"

In the right-hand sidebar, you can see the list of style rules that apply to the selected element

- Click on properties to edit them
- The "+" at the top allows you to create new style rules
- ":hov" allows you to force hover/active/focus states
- ".cls" allows you to add new style classes easily on the fly to keep track of a set of related properties

## The Source Panel

Why is this different from the elements panel?

- Can also view non-HTML files, such as javascript, raw CSS code, images included in page
- Can set "breakpoints" in script files that tell it to pause at a certain point
- Lists all files requested as part of loading the page

Can you find the hidden cat photo in the sources list?

## The Console

The console is a powerful debugging tool

- Displays errors
- Can also print messages from scripts being run to output debug info
- You can also type javascript directly into the console

Try the command the console message suggests to you and see what happens!

# eing run to to the console Iggests to you

# Responsive Testing

### **Open the responsive tools:**



## Ap

### ...and you'll see something like this



**Responsive testing capabilities** 

- Change viewport size to known common resolutions
- Imitate device type (e.g. if some content is only show to iOS users)
- Use "touch" event rather than "click"

## on resolutions nt is only show

A brief aside about the Safari web inspector and its unique tools

Safari is an Apple product, which means that it gets some special tools for working with iOS! When an iPhone/iPod Touch/iPad is connected via Bluetooth or USB to your computer, you can use the web inspector to look at the content of the browser on your phone.

Apple also makes a simulator application that comes packaged with their coding suite called Xcode, which can imitate all Apple devices, from watch to iPad.

iPhone 7 – iOS 10.3 (14E8301)
-------------------------------

Coranet

Carrier 穼

2:17 PM

- - -

coranet.dev

### At The Core of Your Network

We design, install, and manage your mission-critical infrastructure. Our proven expertise and dedication to using the most innovative technology are unparalleled in the industry.

See Our Work

3.24

1

Get In Touch

гîп

m

				.0 0
뮲 Elements	D Network	Resources	<ul> <li>Timelines</li> </ul>	Đ c
E html.safari > E body.	home.page-template.pag	e-template-template-home	page-template	
<pre>page-id-2"&gt; = \$0</pre>	<pre>page-template page "header"&gt; &gt; ain" id="main"&gt;"footer"&gt; lesheet" id="gforms_ ss/formreset.min.css lesheet" id="gforms_ lesheet" id="gforms_ lesheet" id="gforms_ lesheet" id="gforms_ lesheet" id="gforms_</pre>	<pre>-template-template-hom in&gt; reset_css-css" href="h ?ver=2.2.3" type="text formsmain_css-css" hre ?ver=2.2.3" type="text ready_class_css-css" h s.min.css?ver=2.2.3" t browsers_css-css" href ver=2.2.3" type="text/</pre>	ttp://coranet.dev/ /css" media="all"> f="http://coranet. /css" media="all"> ref="http://corane ype="text/css" med ="http://coranet.d	wp-content/ dev/wp-cont t.dev/wp-cc ia="all">
<pre><script main.js"="" type=""></scr: script type="" ver=4.8"></scr: script type="" jquery.json.min <script type="" gravityforms.min <script type="" </pre></td><td><pre>text/javascript" srd ipt> text/javascript" srd ipt> text/javascript" srd n.js?ver=2.2.3"></sd text/javascript" srd in.js?ver=2.2.3"></sd></td><td><pre>="http://coranet.dev/w ="http://coranet.dev/w ="http://coranet.dev/w ript> ="http://coranet.dev/w cript> ="http://coranet.dev/w</pre></td><td>p-content/themes/c p-includes/js/wp-e p-content/plugins/ p-content/plugins/</td><td>mbed.min.j: gravityforr gravityforr</td></tr><tr><td>//</td><td></td><td></td><td></td><td></td></tr><tr><td>Console</td><td></td><td></td><td>All Errors</td><td>Warnings</td></tr><tr><td>> Console</td><td>C</td><td>console opened at 2:17:02</td><td></td><td>Warnings</td></tr><tr><td></td><td></td><td>console opened at 2:17:02</td><td></td><td>Warnings</td></tr></tbody></table></script></pre>				

the hisperior children caratter contain co

Do Ao	<b>\$</b>	Q~ Search			
Debugger	Storage	)고 Console	+ 🕄		
•   «»   ==   🖊   🛄	Node	Styles 🗧 Layers			
nome-php page	template-home	e-template.page-tem .page-template-temp .page-id-2 — Style At Click to Edit	olate-		
	Media: all — coranet	.dev:1			
ent/plugins/ content/plugins/	<pre>(i) :last-child</pre>				
p-content/ "> pntent/plugins/	<u>icons.scss:4</u> Media: all — <u>coranet</u>		—		
dist/scripts/ n.js?	<pre>body — _base.sc font-size: 14 line-height: 2</pre>	ox;			
forms/js/	Media: all — coranet	dev:1			
forms/js/ forms/js/		#fff; idden; 536; smoothing: antialia	ased;		
Logs   ∰   ☆	font-size: 16 line-height: 7 font-family: M left: 0; position: rela transition: .	2 <del>6px;</del> Roboto, sans-serif; ative;	:		
	<pre>   body, html — <u>reset.scss:17</u>   margin: 0;   padding: 0</pre>				
Main Frame 🗘	+ 🖲 Filter Styles		Classes		

Internet Explorer/Edge has slightly different tools for responsive device testing, which are under the "Emulation" tab. Internet Explorer/Edge can imitate other previous versions of IE, as well as emulate Windows phones.

# The Application Panel

The main use for this panel is to deal with cookies. Cookies are the way that sites temporarily store data about you and your choices in the browser.

If you're in Safari or Firefox, you'll find this under the "Storage" tab.

### View the cookies:

Elements Cons	ole Network Audits Lay	ers aXe Sources Memory	Applicati		erformand		curity	
Application Manifest	Name	Value	Do	Path	Expi	Size	HTTP	Sec
Service Workers	PHPSESSID	1anmu2mnsssroer5a3ak6vm0a4	loca	1	Ses	35		
Clear storage	SOFTCookies6869_sid	7jsc6ENHoKLSMBSkpfDmsmYMKL	loca	1	Ses	51		
	atuvc	0%7C36%2C0%7C37%2C0%7C38	loca	1	201	51		
Storage	_character-system_ses	ZDBVTnpSU0pDQ0tjZmhlZHp5b2Zy	loca	1	Ses	423	1	
Local Storage	_ga	GA1.1.1146460908.1464040158	loca	/	201	30		
Session Storage	io	Qe0Nw9Z-PILxzic7AAGF	loca	/	Ses	22	1	
IndexedDB	news_bar_hidden	1	loca	/	Ses	16		
Web SQL								
Cookies								
http://localhost:3000								
Cache								
Cache Storage								
Application Cache								
Frames								
▶								



**Examples of cookie usage:** 

## - User login

- Online store shopping cart
- Remember that user has closed a one-time notice

You might want to clear cookies to reset a feature for testing, for example.

## time notice a feature for

**Editing cookies** 

In the list of cookies for the test webpage, look for one called username. Try double-clicking the value to edit it, change it to your own name, and refresh the page to see what happens!

## The Audits Panel

Developer Tools - http://localhost:3000/news-resources/	
Elements Console Network Audits Layers aXe Sources Memory >>	
- <u>+</u> ⊘	





Audits contains several automated tests that you can run on a website to check if it meets certain lists of criteria. For example, you can check Google's performance scores and whether the site meets accessibility best practices from the inspector window, even if it's a local site.

## For example, here's a performance audit before setting up caching; obviously not a great score because we haven't optimized the site yet.



Here you can see the accessibility data for the same website—it's not doing too bad, but there's some items we could tidy up.

Has limitations (you still need a human audit!) but good to point out obvious problems

### Some example accessibility audit results

### Accessibility

These checks highlight opportunities to improve the accessibility of your app.

### Elements Use Attributes Correctly

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous conte

Image elements do not have [alt] attributes.

Some elements have a [tabindex] value greater than 0.

### Elements Have Discernable Names

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous conte

- Buttons do not have an accessible name.
- Links do not have a discernable name.

### Elements Describe Contents Well

Screen readers and other assistive technologies require annotations to understand otherwise ambiguous content

	83
ent.	
	×
	×
ent.	
	×
	××

## More hidden tools

### Where to find more tools

Layers aXe Sou	rces Memory Application	Performance Security
ghri9nFbP-mACQ/	Styles Computed Event Lis	Dock side 🛄 🔲 🔲
/docs.google.com/ UHoxuoSnuighri9nFbP-	Filter	
<pre>leplus"&gt; ps://ssl.gstatic.com/</pre>	element.style { }	Hide console drawer
l.gstatic.com/docs/	.freebirdFormviewerViewFo	Open file
/ssl.gstatic.com/docs/	<sup>m</sup> Animations	More tools
entWrapper"> ==	Coverage	Shor cuts Settin <mark>,</mark> s
<pre>tic.com/ /freebird/ / base/rt=j/d=1/ cript&gt;</pre>	Legacy Audits	Help
<pre>nt: 20px; width: auto; er; font-style: bold; font-stretch: ; font-family:</pre>	<ul> <li>Network conditions</li> <li>Quick source</li> <li>Remote devices</li> </ul>	-column;
olor: rgb(255, 255, vcmcvMjAwMC9zdmciIGhla	-	user agent styles
rapper < Network conditions I	Ir Search Re Sensors	LiahtBackaround
	What's New	

Listening for animations...



### sheet

×

### **Animation Tracking**



Before this, you'd need a proxy server to test how your site would look with different geolocation data, but you can spoof it with the tools in Chrome.

Interesting note: Safari and Firefox don't have this feature, but IE does (under the bottom tab, "Emulation")

### **Example of the Geolocation panel**

Console	What's New	Search $\times$	Animations	Network conditions	Remote devices	Sensors ×
Geolocation	No override		•			$\sim$
	0	Latitude	8			
	0	Longitu	de			
Orientation	Off		•			
	0	α (alpha	3)		also some	
	0	β (beta)			device orie	entation
_	0	v (gamr	na)	-		



The Layers panel will show you where all the components on the page are, regardless of whether they're currently visible or not

Ex. go to the example page, and you can see that it shows where the hover effect on the button is, even when it's not visible—this is great for debugging

### **Example of the Layers panel**



## If a client has concerns about mobile performance, Chrome can "throttle" your network, which is to say pretend it's operating under worse conditions to test performance.



×

...and even more?

- New features added all the time in Chrome
- Firefox just rolled Firebug into its native suite of tools, pointing to more ahead
- Try the Safari Technology Preview for cutting-edge Safari tools