# BROWSER INSPECTORS

Stop trying to debug by looking at your code

# INTRODUCTION

As applications grow in complexity, you will need to rely on tools to help you plan, debug, and even experiment quickly. While just looking at your source code works for very simple projects and sites it does not when your project grows beyond just the simplest site.

To aid in web development, most browsers have an inspection tool built right in. This is an extremely powerful tool. It has lots of features that range from convenient to major time savers.

In these slides we are going to cover most of the features that will get us started in our frontend development and as we progress through the course we will keep adding more tools from the inspector to our toolbelt.

# GETTING STARTED

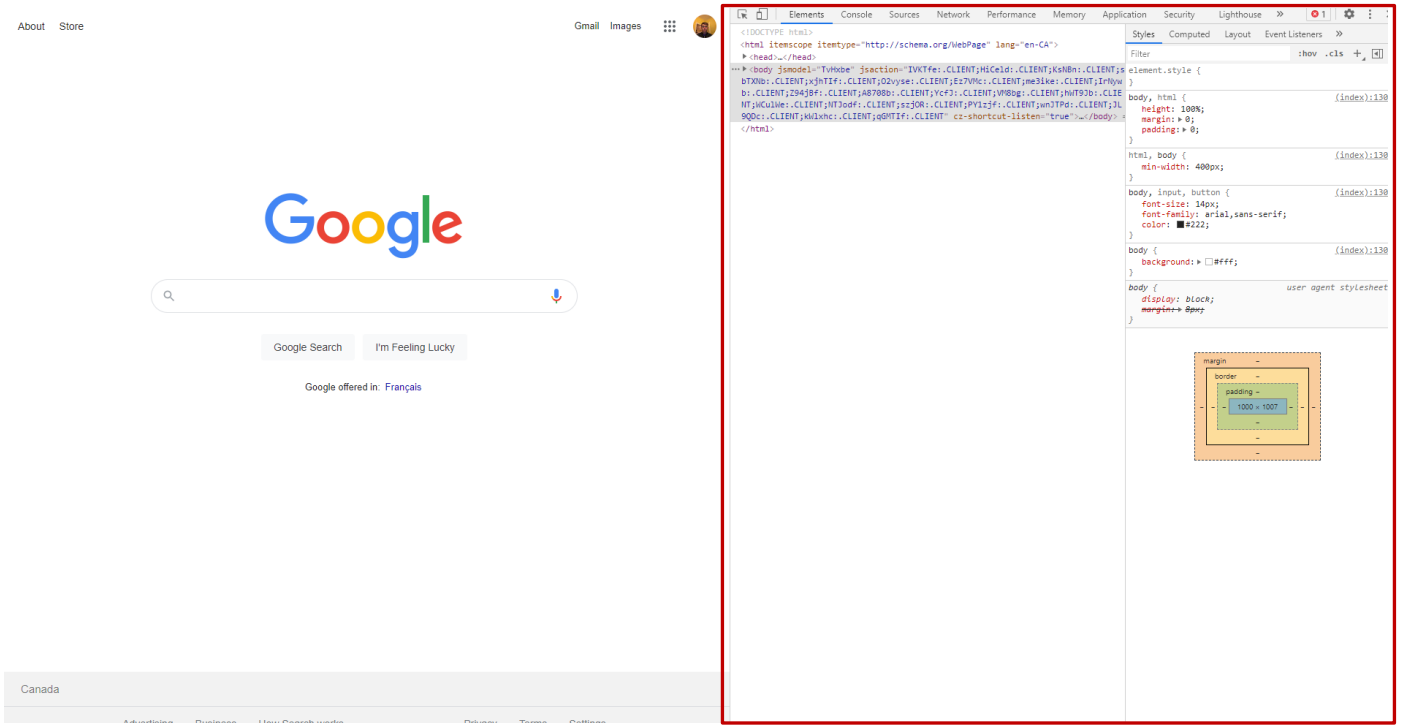
The first thing we need to do is open up the inspector. These slides assume you are working with Google Chrome, but all other modern browsers work very much the same way.

To open the inspector for any browser:

- Right click the browser viewport and choose the **inspect** option
- Use the **F12** key

By default you should see the inspector open up on the right side of your screen, but it could end up on the left, bottom, right or even as a new window.

# GETTING STARTED



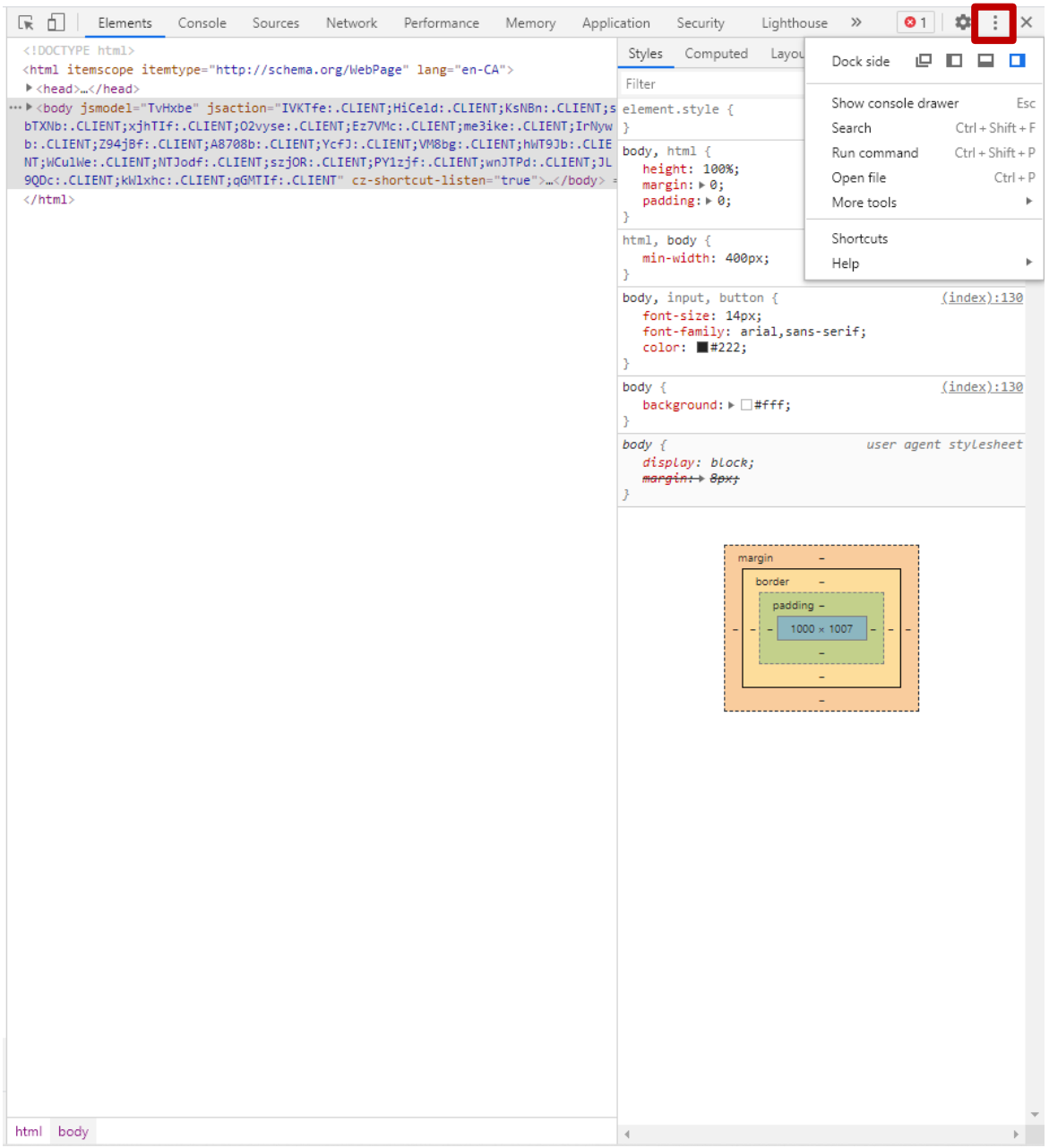
# MOVING THE INSPECTOR

While this tool can be somewhat intimidating we want to focus on the stuff that will get us rolling with the inspector. First let's try moving the location the inspector is docked to.

Close to the top right hand side of the inspector, click on the three vertically stacked dots. You will see the a dropdown menu appear with one specific option **Dock side**. Here you can pick from new window, left, bottom and right.

Pick whichever one you like best, most people just stick it on the right hand side.

# MOVING THE INSPECTOR



# INSPECTOR LAYOUT

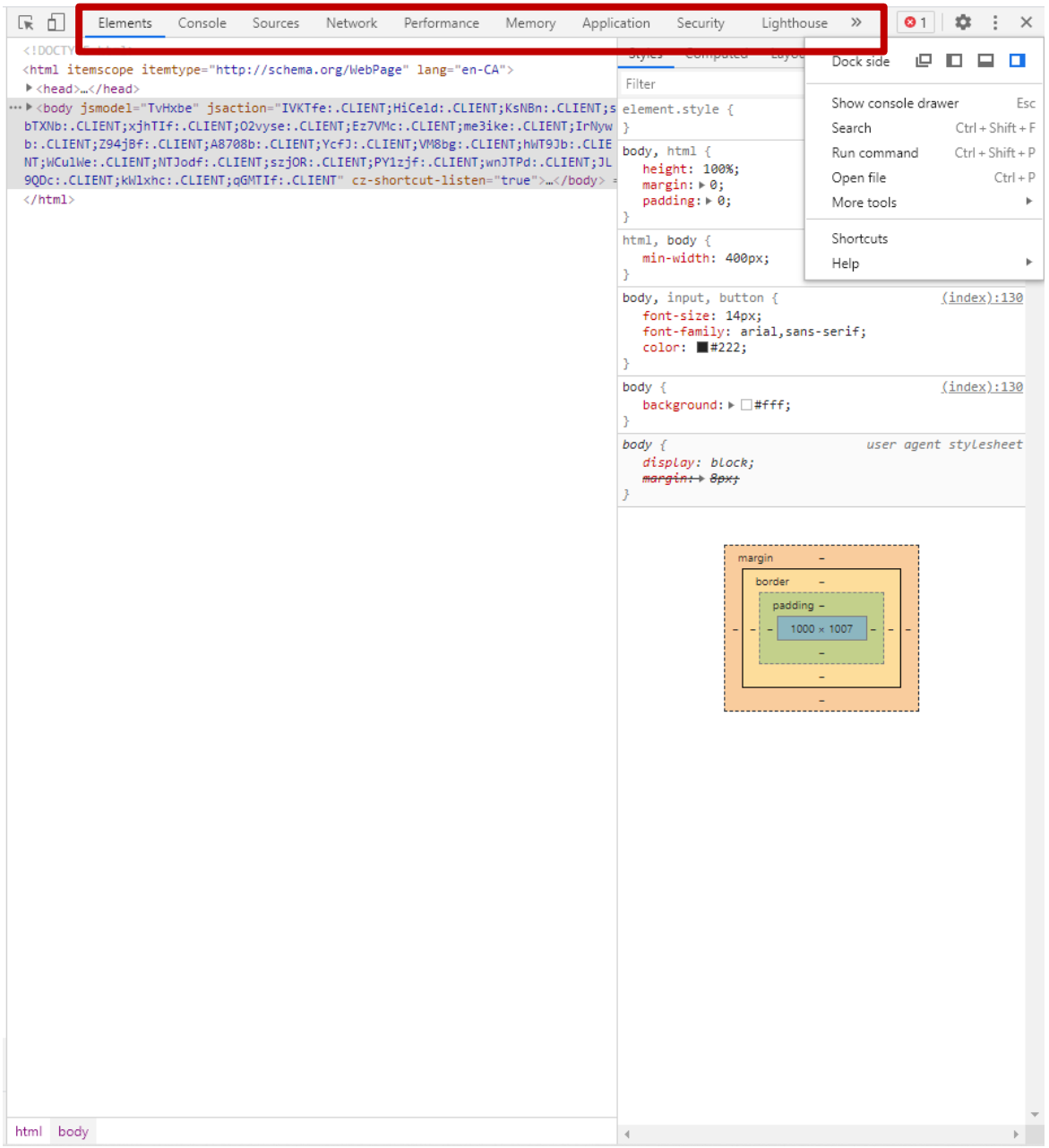
Before getting to use the inspector, we need to understand its layout so we can efficiently navigate all the tools available to us. Let's start by looking at the bar right at the top of the inspector where we can see options like:

**Elements Console Sources Network** etc.

This is the main navigation of our inspector. Each option is a different tool we can use to inspect our site in different ways. For example, the Elements tab is used to inspect our HTML and CSS, the Console can be used for JavaScript interactions, the Network tab is used to track all network requests your page is making, and so on.

Please note that if your inspector is too small, you might see a >> option towards the end. This is just a dropdown menu of the rest of the tab options.

# INSPECTOR LAYOUT



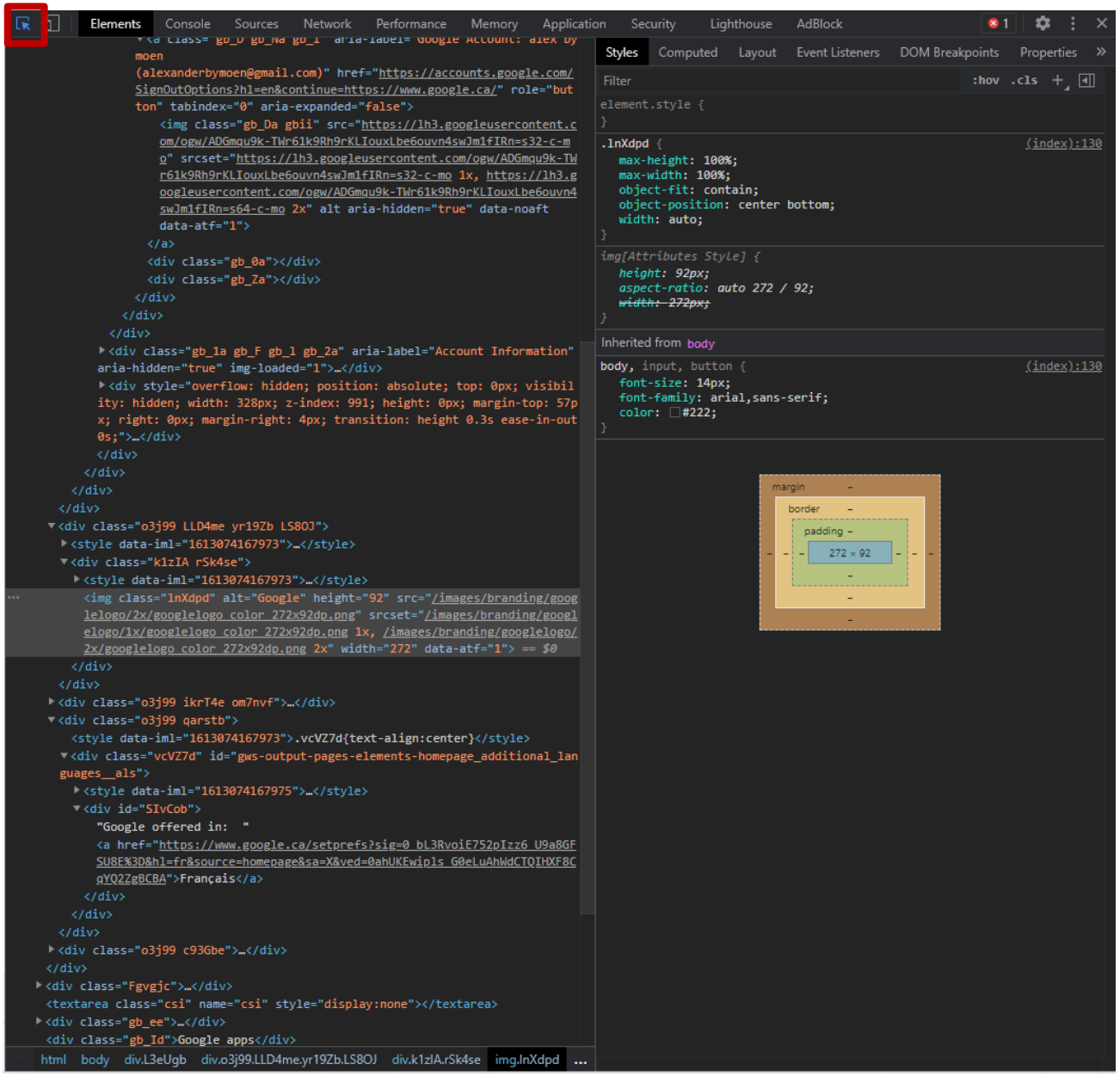
# VIEWPORT TOOLS

You will also notice to the left of our options, we have a couple of icons. The first is a mouse icon with a square. This tool is the is the element selector. If you toggle it on your mouse will turn into an interactive selector on the page.

This is very useful if you want to see the specific code that is causing something visual on the page. It is very handy for finding which tag might be breaking the width of the page.

When you use this selector, you will notice the elements on the side will move to the code that is producing the element you are hovering over. Very useful.

# VIEWPORT TOOLS



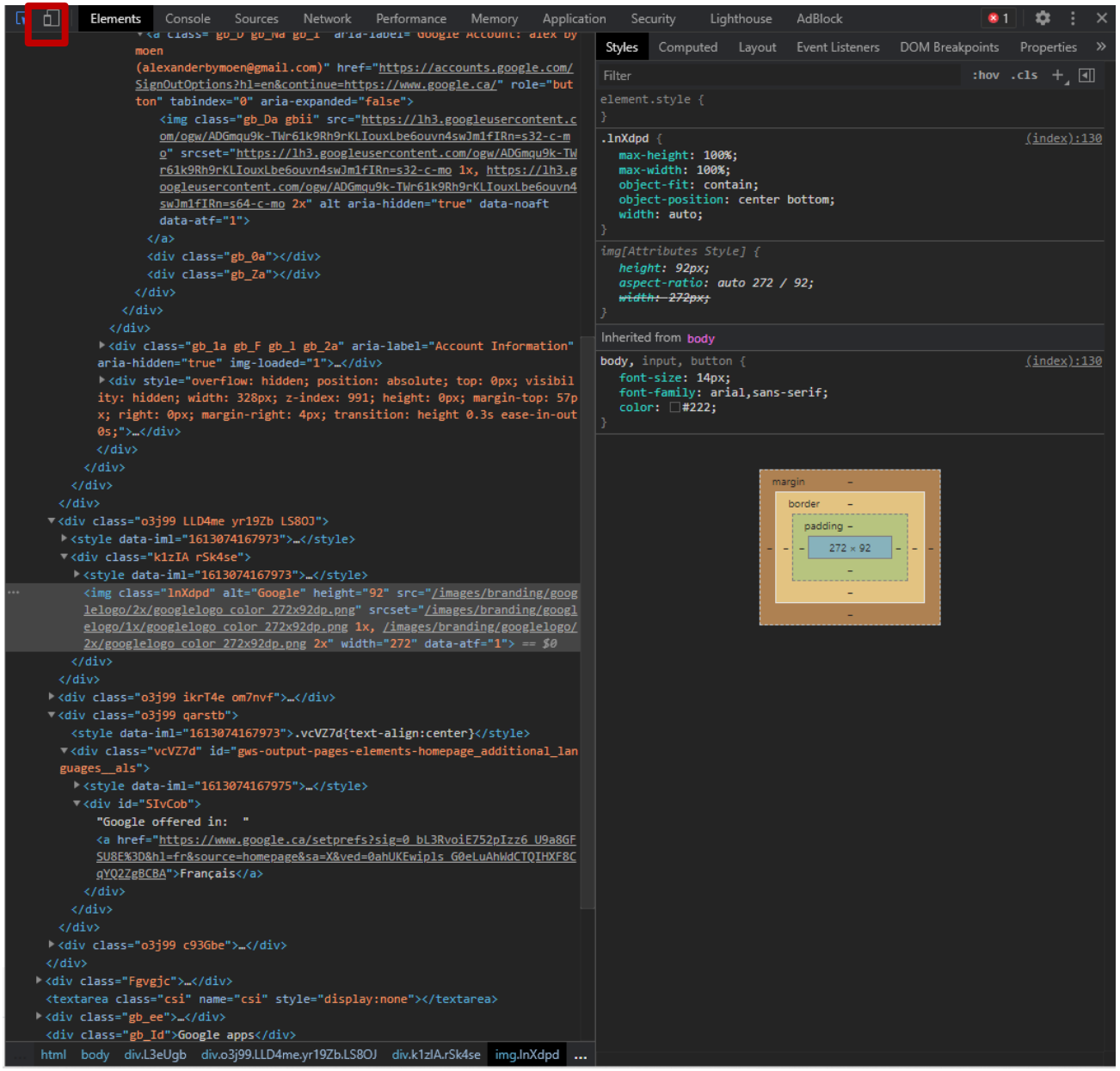
# VIEWPORT TOOLS CONT.

The next icon turns on device mode. This will allow you to simulate different devices in your browser. This is great for seeing what your design will look like on different screen sizes or devices.

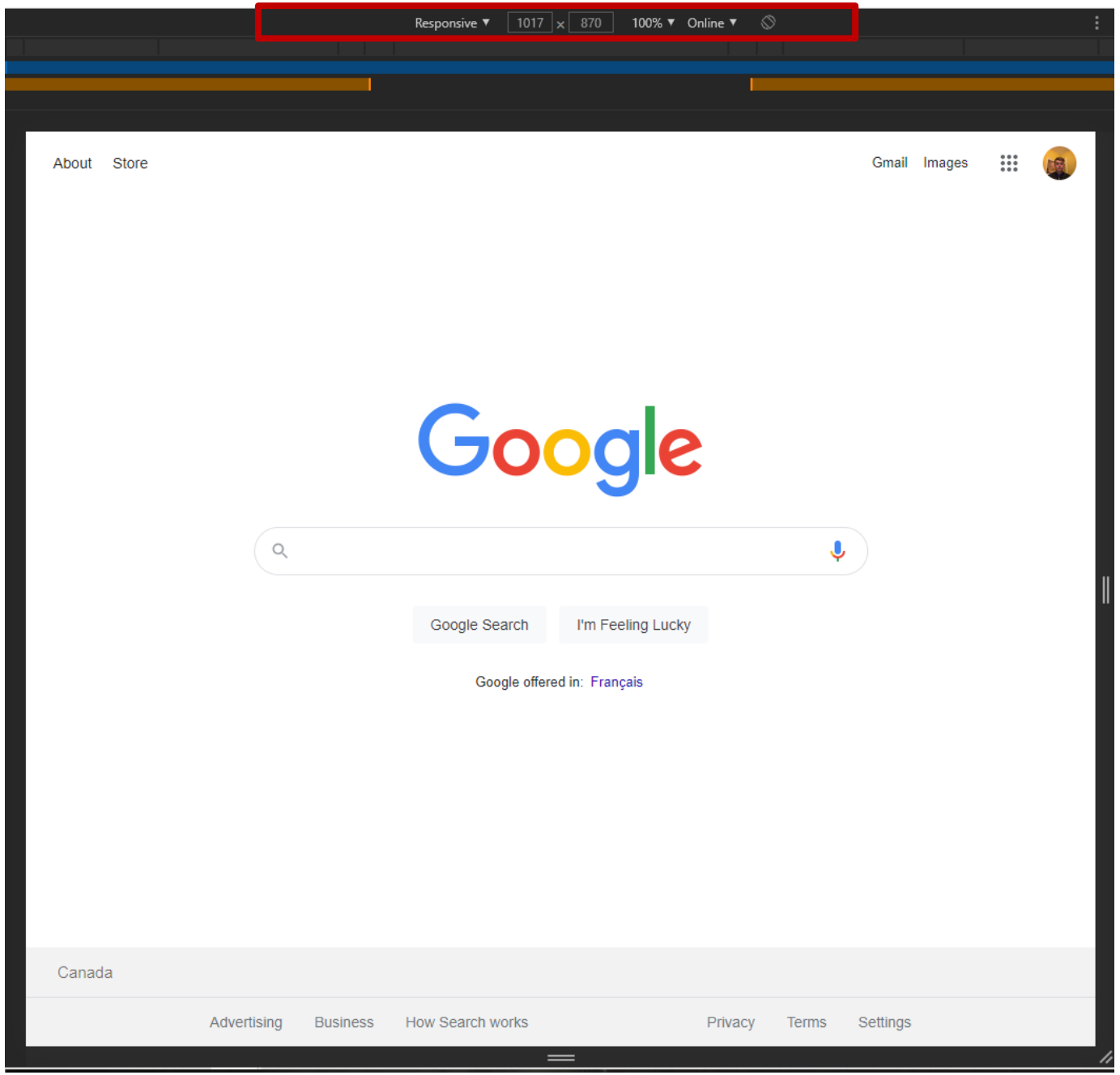
To turn this mode on, simply click on the little icon that looks like a phone and tablet. Once you do, you will notice a new set of options will have appeared over the viewport for your site.

Here we have some great options for devices, zoom level and even simulating slower network speeds!

# VIEWPORT TOOLS CONT.



# VIEWPORT TOOLS CONT.



# DEVICE SETTINGS

You will notice while in this mode we have some new options to play with to change our viewport.

You can change the device type by clicking on the left side dropdown menu. You will notice many common devices listed there like phones and tables.

You will also notice the responsive mode which is a viewport you can freely change the size of by dragging the borders to the exact shape you want.

You can also change the zoom level with a percent, the network speed with the **online** dropdown and device orientation with the rotating phone icon.

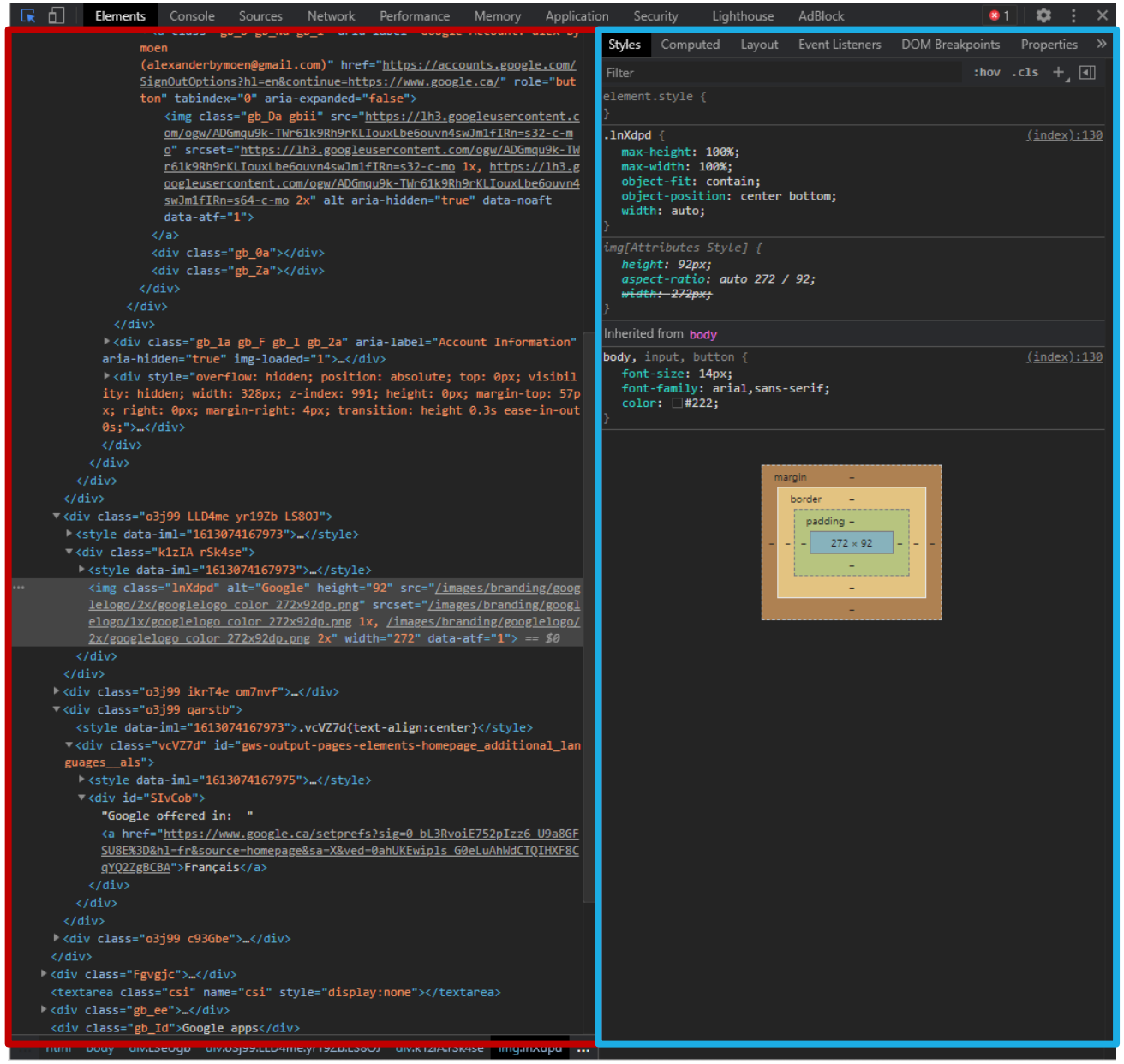
# ELEMENTS

Since we have only gone over HTML & CSS, we are just going to talk about the elements tab for now. The elements tab is our go-to when it comes to trying to debug our HTML and CSS code.

Click the **Elements** option at the top to navigate to this tab (it is probably the tab open by default).

If your inspector is large enough, you will see two sections next to each other. First is our HTML section (this is the actual HTML code our browser has received or constructed) and next is the styles section. The right section is actually more complicated than just CSS code, but we will ignore this for now.

# ELEMENTS


Elements
Console
Sources
Network
Performance
Memory
Application
Security
Lighthouse
AdBlock
Styles
Computed
Layout
Event Listeners
DOM Breakpoints
Properties
Filter
:hov .cls
element.style {
}
.lnXdpd {
max-height: 100%;
max-width: 100%;
object-fit: contain;
object-position: center bottom;
width: auto;
}
(index):130
img[Attributes Style] {
height: 92px;
aspect-ratio: auto 272 / 92;
width: 272px;
}
Inherited from body
body, input, button {
font-size: 14px;
font-family: arial,sans-serif;
color: #222;
}
(index):130
margin
border
padding
272 × 92

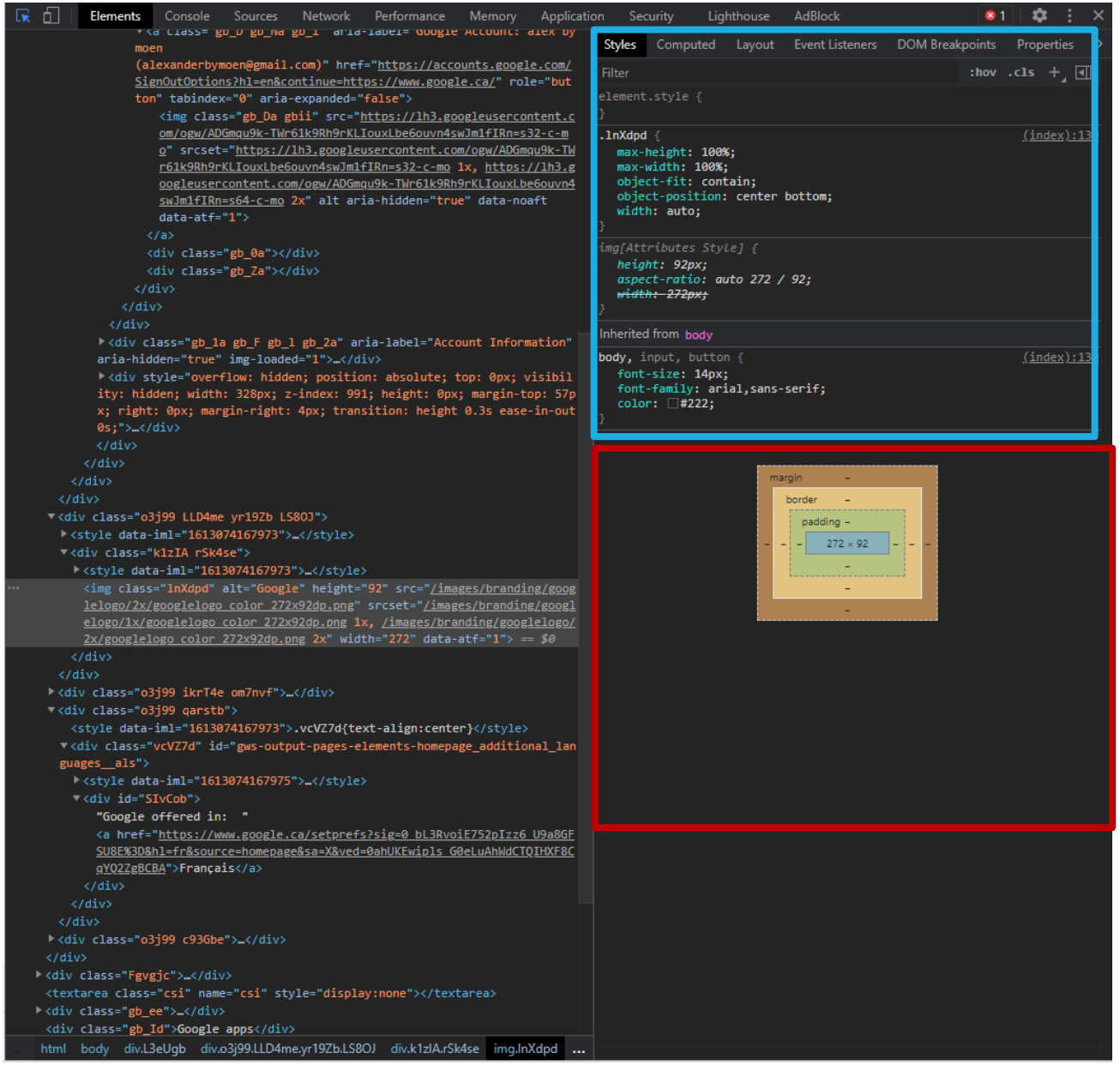
# ELEMENTS CONT.

On the left hand side in our HTML, we can inspect any element our code produced. You can also open/close tags by clicking the little grey triangle next to the tag name.

Clicking on a tag will change what you see on the right hand side in the **Styles** section. At the bottom you will see the box model visually for the tag you clicked on and above you will see the CSS rules being applied to this particular tag.

For the CSS, selectors lower in the section are of lower importance and can be overwritten by the selectors higher in this section. In the

# ELEMENTS


Elements
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:hov .cls
element.style {
}
.lnXdpd {
max-height: 100%;
max-width: 100%;
object-fit: contain;
object-position: center bottom;
width: auto;
}
img[Attributes Style] {
height: 92px;
aspect-ratio: auto 272 / 92;
width: 272px;
}
Inherited from body
body, input, button {
font-size: 14px;
font-family: arial,sans-serif;
color: #222;
}
margin
border
padding
272 × 92
<img class="lnXdpd" alt="Google" height="92" src="/images/branding/googlelogo/2x/googlelogo_color_272x92dp.png" srcset="/images/branding/googlelogo/1x/googlelogo_color_272x92dp.png 1x, /images/branding/googlelogo/2x/googlelogo_color_272x92dp.png 2x" width="272" data-atf="1"> == $0
"Google offered in: "
Français
Google apps
html
body
div.L3eUgb
div.o3j99.LLD4me.yr19Zb.LS8OJ
div.k1zIA.rSk4se
img.lnXdpd

# EDITING ELEMENTS

One of the cool things about the inspector is that you can actually edit any page in real time. Simply right click on any tag in your HTML section and click **Edit as HTML** and you can just edit the HTML of the page right there and see the changes in real time!

You can also change the CSS on the fly in the right section. You can toggle existing rules on and off by clicking the checkbox next to the rules you hover your mouse over. You can also click on any rule and edit it in place.

If you click to the right of the opening { for the CSS rule you can also just inject new CSS. **Be warned** any changes you make here are **temporary**. Don't go and make a ton of changes here and expect any changes to save. You need to remember the changes you are making and transfer them to your actual code!

# KNOWLEDGE CHECK

The inspector is one of the most important tools at our disposal as a web developer. Learning how to use it properly utilize it will drastically improve your understanding of how your browser really works, so use it all the time.

1. Follow the Git/GitHub workflow to create a folder called InspectorInspecting in your Scratch folder.
2. Create a basic index.html and style.css site with:
    1. At least 2 content tags
    2. At least 2 style rules
3. Open the site in the browser and open the inspector.
4. View your site on a mobile phone screen size.
5. Use the interactive inspector to select one of your content tags.
6. Use the inspector to edit the HTML of one of your tags.
7. Use the inspector to edit the CSS of one of your tags.

# BROWSER INSPECTORS

So when doing any kind of development work, having solid tools that assist with debugging and experimentation is a must! This is not just a web development thing.

When working with most languages for building applications there are debuggers that allow you to do similar things like editing values on the fly and such.