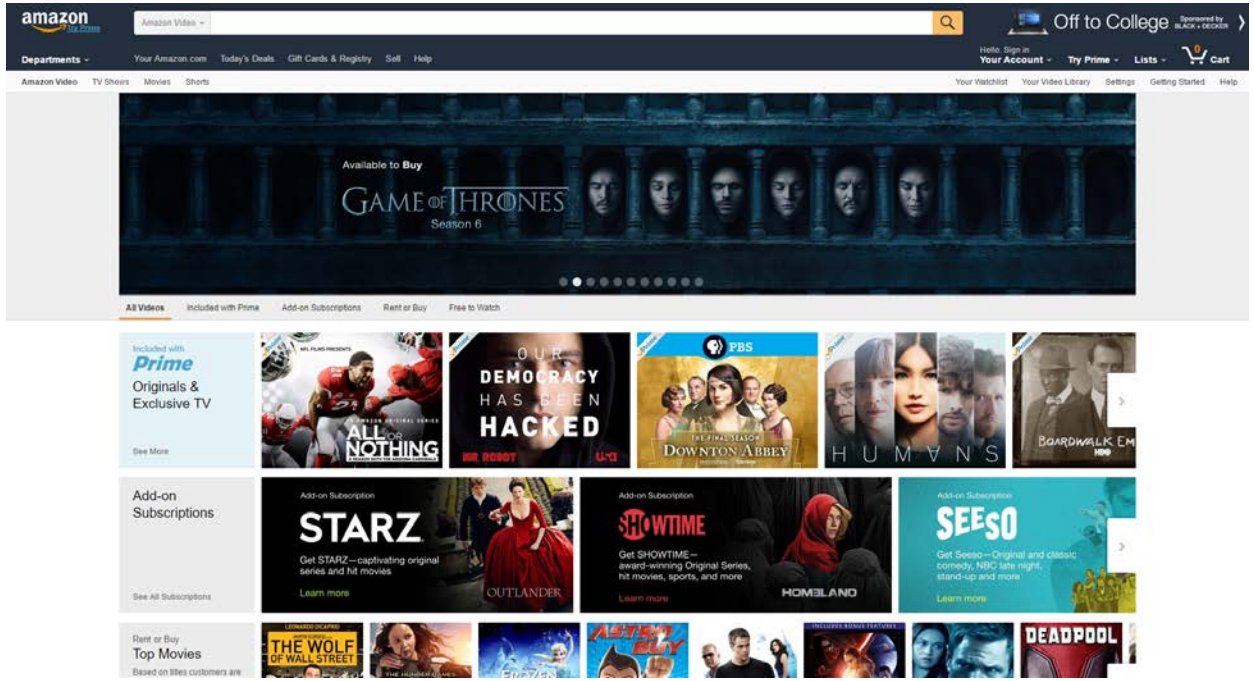
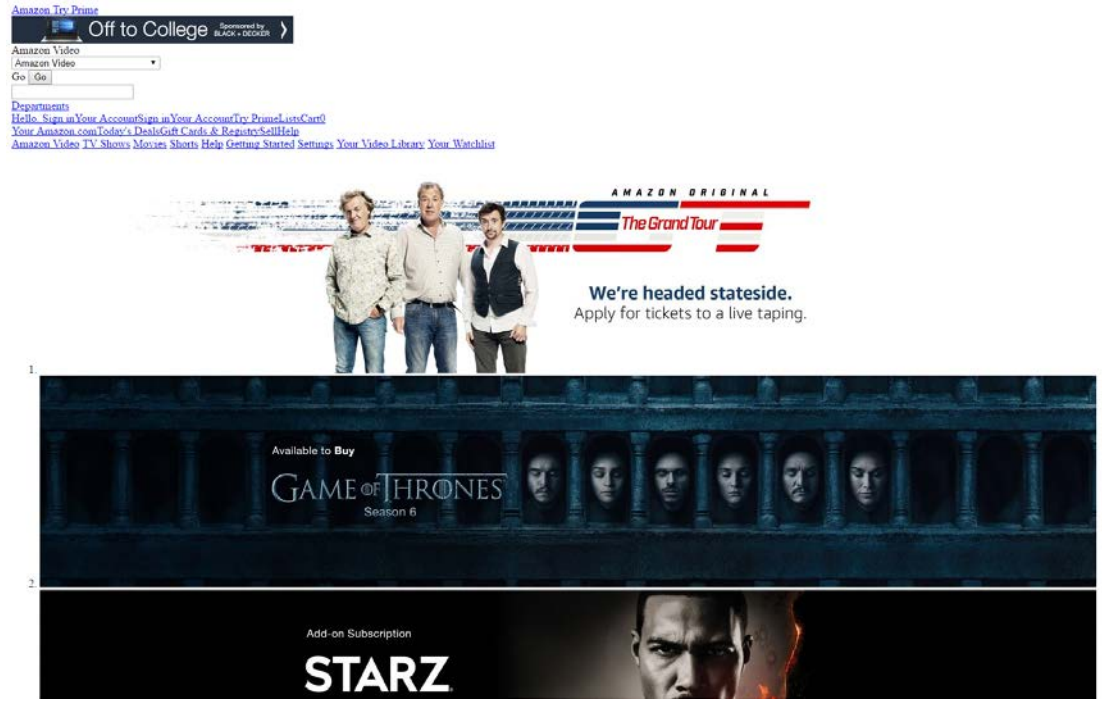
Cascading Style Sheets (CSS)

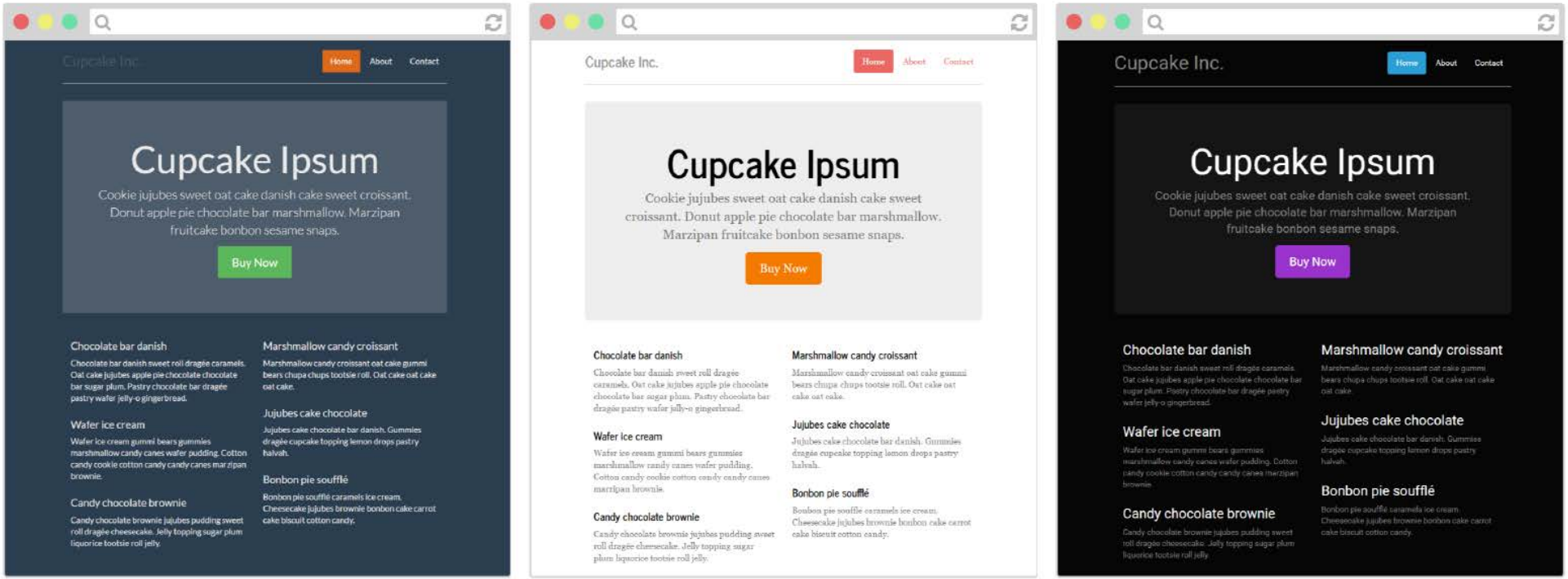
JS
HTML
CSS


amazon
Amazon Video
Departments
Your Amazon.com
Today's Deals
Gift Cards & Registry
Sell
Help
Off to College
Sponsored by BLACK + DECKER
Hello. Sign in
Your Account
Try Prime
Lists
Cart
Amazon Video
TV Shows
Movies
Shorts
Your Watchlist
Your Video Library
Settings
Getting Started
Help
Available to Buy
GAME OF THRONES
Season 6
All Videos
Included with Prime
Add-on Subscriptions
Rent or Buy
Free to Watch
Included with Prime
Originals & Exclusive TV
See More
ALL OR NOTHING
OUR DEMOCRACY HAS BEEN HACKED
PBS
DOWNTON ABBEY
HUMANS
BOARDWALK EMPIRE
Add-on Subscriptions
See All Subscriptions
Add-on Subscription
STARZ
Get STARZ—captivating original series and hit movies
Learn more
OUTLANDER
Add-on Subscription
SHOWTIME
Get SHOWTIME—award-winning Original Series, hit movies, sports, and more
Learn more
HOMELAND
Add-on Subscription
SEESO
Get Seeso—Original and classic comedy, NBC late night, stand-up and more
Learn more
Rent or Buy
Top Movies
Based on titles customers are
THE WOLF OF WALL STREET
DEADPOOL


Amazon Try Prime
Off to College
Sponsored by BLACK + DECKER
Amazon Video
Amazon Video
Go
Go
Departments
Hello. Sign in
Your Account
Sign in
Your Account
Try Prime
Lists
Cart
0
Your Amazon.com
Today's Deals
Gift Cards & Registry
Sell
Help
Amazon Video
TV Shows
Movies
Shorts
Help
Getting Started
Settings
Your Video Library
Your Watchlist
AMAZON ORIGINAL
The Grand Tour
We're headed stateside.
Apply for tickets to a live taping.
1.
Available to Buy
GAME OF THRONES
Season 6
2.
Add-on Subscription
STARZ

Separation of Content & Style

- Check out: csszengarden.com



CSS Resources

- Codecademy HTML & CSS course – free, interactive
- Shay Howe's Learn to Code HTML & CSS - written
- w3schools CSS Tutorial – semi-interactive
- Learn CSS Layout – focused on layout

SugarCube Bleached CSS

- “Bleached” - alternate default CSS for SugarCube
- Go to motoslave.net/sugarcube/2/
- Download “Bleached [ZIP archive]”
- Copy the CSS to Story Stylesheet

Back to HTML in VS Code

```
<!DOCTYPE html>

<html>

    <head>
        <meta charset="UTF-8">
        <title>Web Art</title>
    </head>

    <body>
        <h1>Web Art</h1>
    </body>

</html>
```

```
<head>
    <meta charset="UTF-8">
    <title>First Style</title>

    <!-- New HTML Element: style -->
    <style></style>
</head>

<body>
    <h1>Glorious Color</h1>
</body>
```

CSS Rule

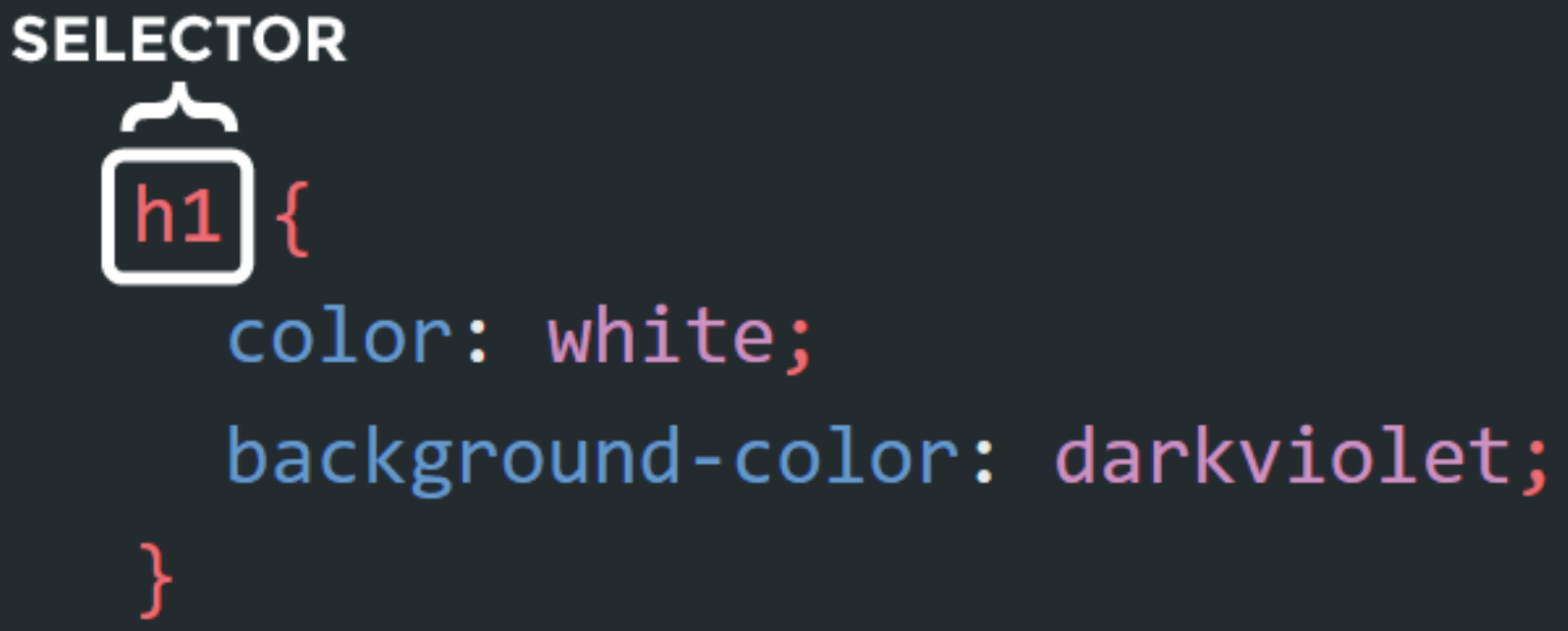
```
<head>
    <meta charset="UTF-8">
    <title>First Style</title>

    <!-- New HTML Element: style -->
    <style>
        h1 {
            color: white;
            background-color: darkviolet;
        }
    </style>
</head>

<body>
    <h1>Glorious Color</h1>
</body>
```

CSS Rule

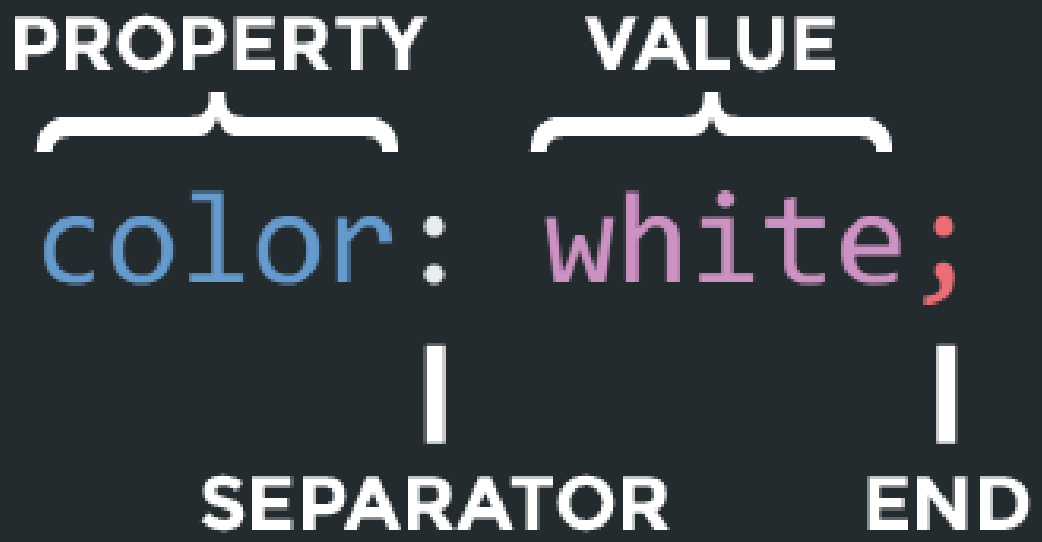
```css
h1 {
  color: white;
  background-color: darkviolet;
}
```


SELECTOR
h1 {
color: white;
background-color: darkviolet;
}

h1 {
color: white;
background-color: darkviolet;
}
BLOCK

h1 {
color: white;
background-color: darkviolet;
}
DECLARATION

Anatomy of a Declaration



Colors

```
color: red;                         /* Keyword */
color: #FF0000;                     /* RGB Hexadecimal */
color: #FF0000FF;                   /* RGBA Hexadecimal */
color: rgb(255, 0, 0);              /* RGB */
color: rgba(255, 0, 0, 1);          /* RGBA */
color: hsl(0, 100%, 50%);           /* HSL */
color: hsla(0, 100%, 50%, 1);       /* HSLA */
```

Keywords

black	dimgray	gray	darkgray	silver	lightgray	gainsboro	whitesmoke	white	rosybrown
indianred	brown	firebrick	lightcoral	maroon	darkred	red	snow	mistyrose	salmon
tomato	darksalmon	coral	orangered	lightsalmon	sienna	seashell	chocolate	saddlebrown	sandybrown
peachpuff	peru	linen	bisque	darkorange	burlywood	tan	antiquewhite	navajowhite	blanchedalmond
papayawhip	moccasin	orange	wheat	oldlace	floralwhite	darkgoldenrod	goldenrod	cornsilk	gold
khaki	lemonchiffon	palegoldenrod	darkkhaki	beige	lightgoldenrodyellow	olive	yellow	lightyellow	ivory
olivedrab	yellowgreen	darkolivegreen	greenyellow	chartreuse	lawngreen	darkseagreen	forestgreen	limegreen	lightgreen
palegreen	darkgreen	green	lime	honeydew	seagreen	mediumseagreen	springgreen	mintcream	mediumspringgreen
mediumaquamarine	aquamarine	turquoise	lightseagreen	mediumturquoise	darkslategray	paleturquoise	teal	darkcyan	aqua
cyan	lightcyan	azure	darkturquoise	cadetblue	powderblue	lightblue	deepskyblue	skyblue	lightskyblue
steelblue	aliceblue	dodgerblue	slategray	lightslategray	lightsteelblue	cornflowerblue	royalblue	midnightblue	lavender
navy	darkblue	mediumblue	blue	ghostwhite	slateblue	darkslateblue	mediumslateblue	mediumpurple	blueviolet
indigo	darkorchid	darkviolet	mediumorchid	thistle	plum	violet	purple	darkmagenta	magenta
fuchsia	orchid	mediumvioletred	deeppink	hotpink	lavenderblush	palevioletred	crimson	pink	lightpink

Hexadecimal

- Format: #RRGGBB
- Hex: 0 – 9 then A – F

Source: Smashing Magazine

RGB & RGBA

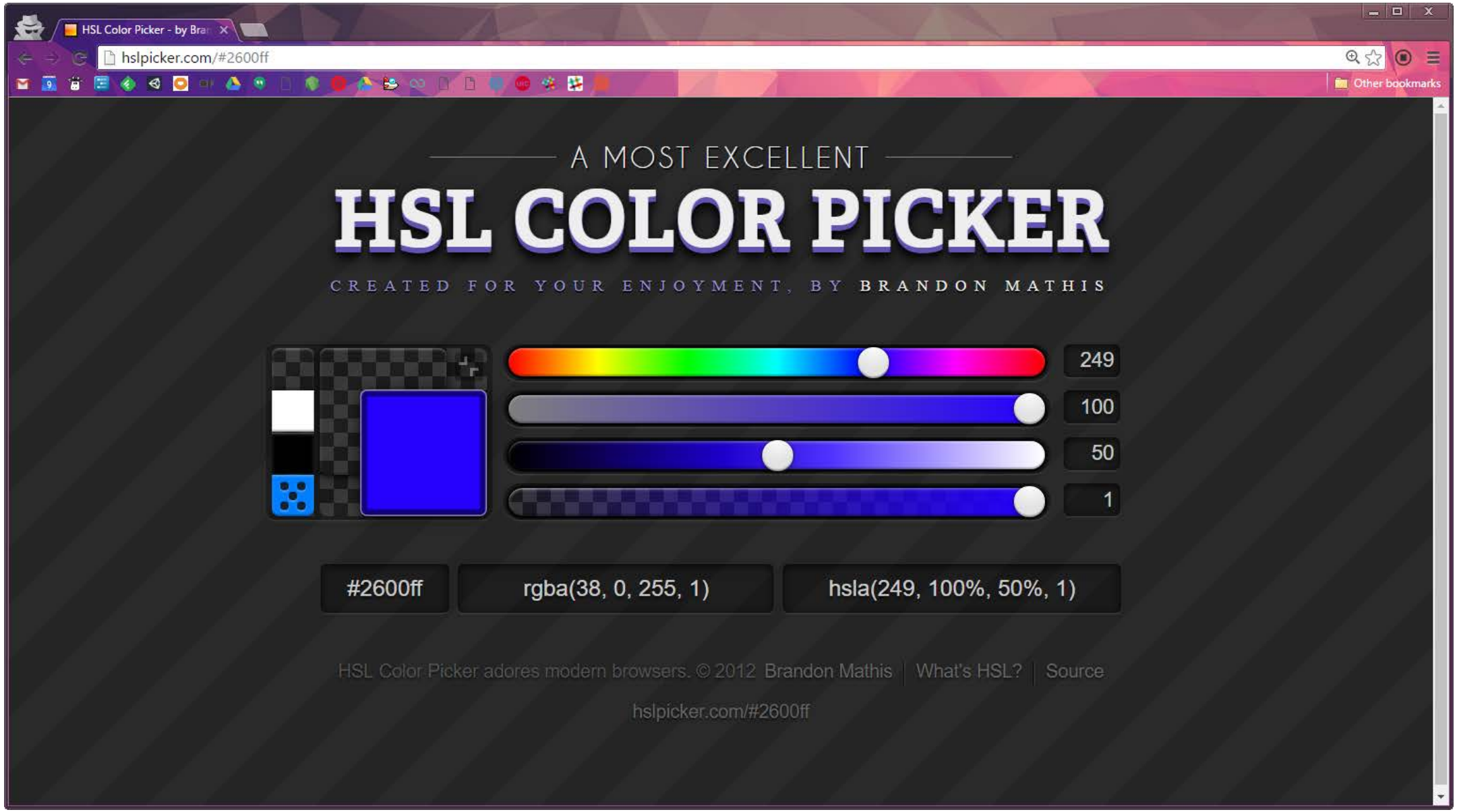
- Red, Green, Blue
  - Each channel goes from 0 to 255
  - Must be whole numbers
- Alpha from 0 to 1
  - 0 is transparent
  - 1 is opaque

```
color: rgb(255, 101, 239);
color: rgba(255, 101, 239, 0.5);
```

HSL & HSLA

- Hue, Saturation, Lightness
  - Hue: 0 - 360
  - Saturation: 0 – 100 %
  - Lightness: 0 – 100 %
- Alpha from 0 to 1

```
color: hsl(187, 100%, 61%);
color: hsla(187, 100%, 61%, 0.75);
```



http://hslpicker.com/

Inline Style

Inline Style

```
<h1 style="background-color: crimson; color: white;">Inline styling. Gross.</h1>
```

Inline Style in Twine

Type	Syntax	Example	Rendered As
Highlight, Inline	@@Text@@	@@Text@@	Text
Custom Style, Inline	@@*style-list*[1];Text@@	@@#foo;.bar;Text@@	Text
		@@color:red;Text@@	Text
Highlight, Block	@@ Text @@	@@ Text @@	Text
Custom Style, Block	@@*style-list*[1]; Text @@	@@#foo;.bar; Text @@	Text
		@@color:red; Text @@	Text

Inspector & DevTools

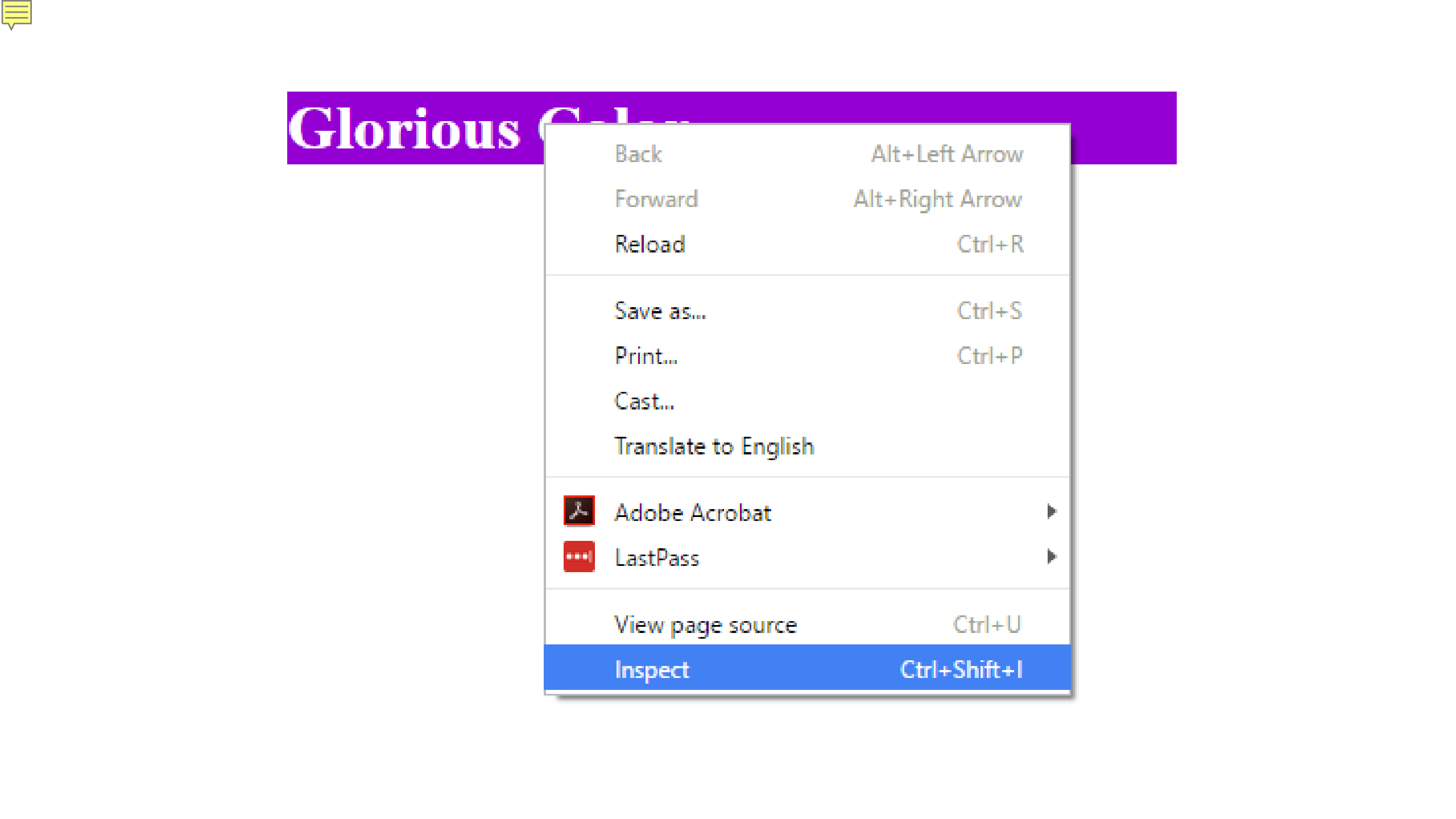
Accessing DevTools

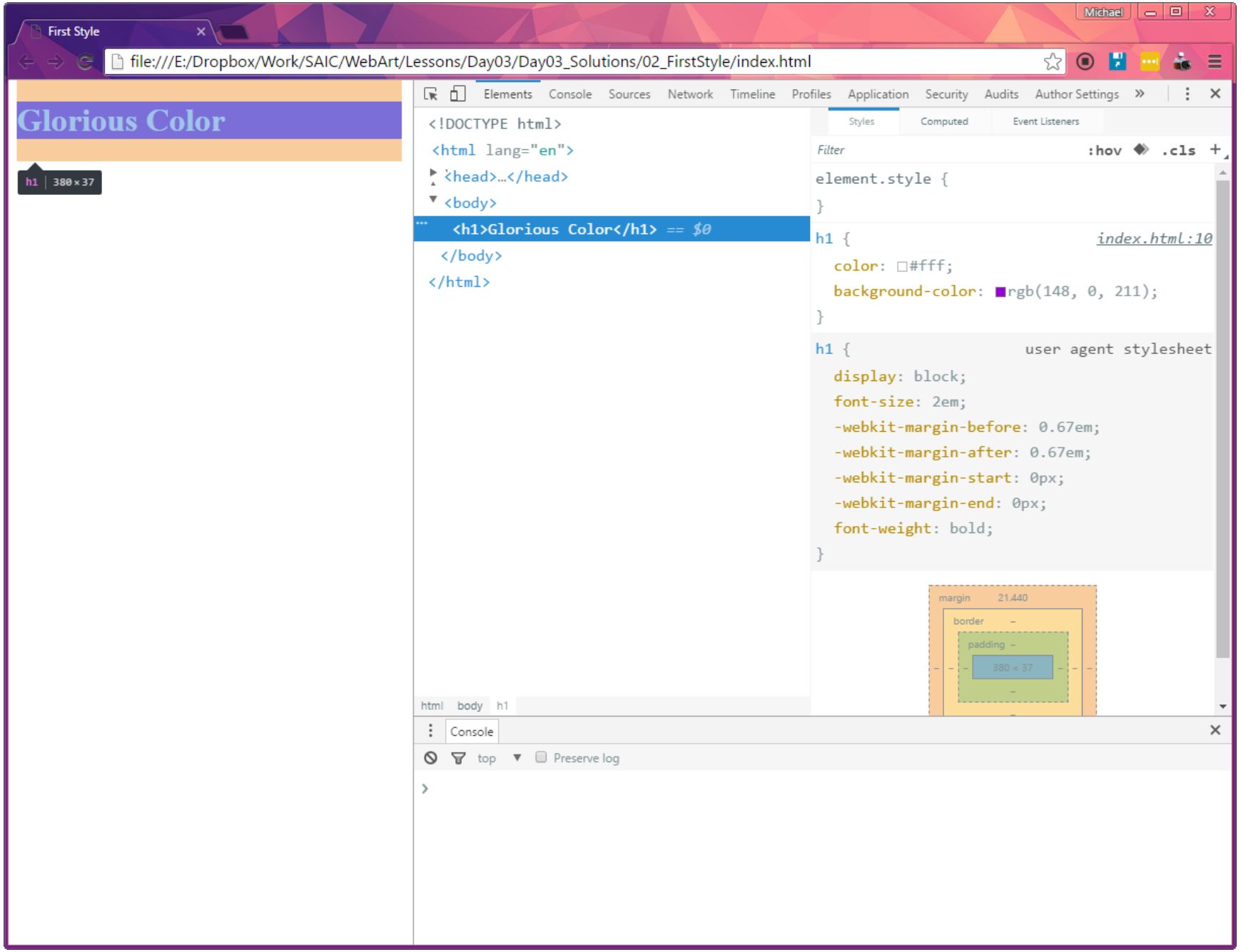
To access the DevTools, on any web page or app in Google Chrome:

- Open the **Chrome menu** ☰ at the top-right of your browser window, then select **Tools > Developer Tools**.
- Right-click on any page element and select **Inspect Element**.

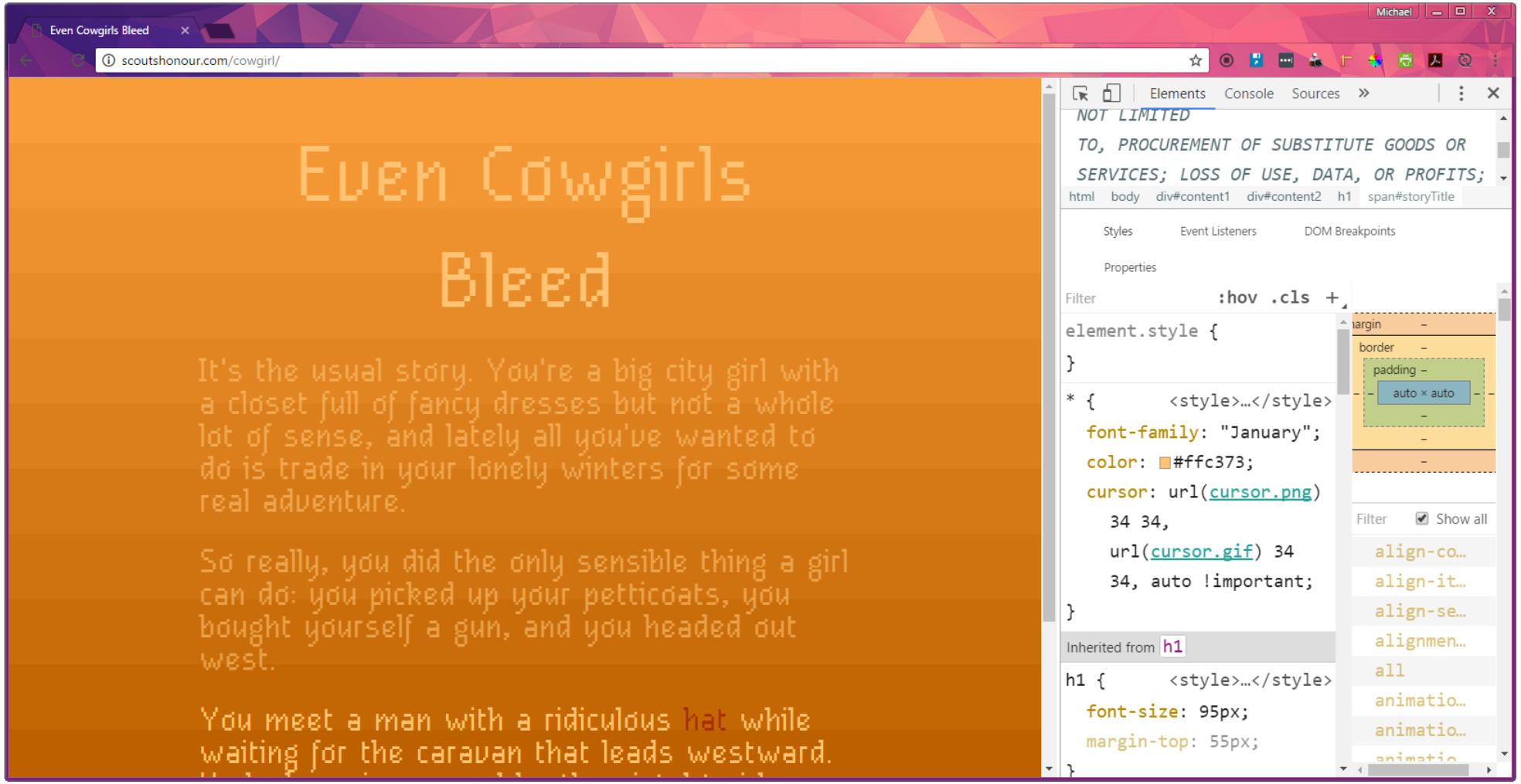
On the keyboard:

Access DevTools	On Windows	On Mac
Open Developer Tools	`F12`, `Ctrl` + `Shift` + `I`	`Cmd` + `Opt` + `I`


Glorious
Back Alt+Left Arrow
Forward Alt+Right Arrow
Reload Ctrl+R
Save as... Ctrl+S
Print... Ctrl+P
Cast...
Translate to English
Adobe Acrobat
LastPass
View page source Ctrl+U
Inspect Ctrl+Shift+I


First Style
Michael
file:///E:/Dropbox/Work/SAIC/WebArt/Lessons/Day03/Day03_Solutions/02_FirstStyle/index.html
Glorious Color
h1 | 380 × 37
Elements Console Sources Network Timeline Profiles Application Security Audits Author Settings
<!DOCTYPE html>
<html lang="en">
<head>…</head>
<body>
<h1>Glorious Color</h1> == $0
</body>
</html>
Styles Computed Event Listeners
Filter :hov .cls +
element.style {
}
h1 { index.html:10
color: #fff;
background-color: rgb(148, 0, 211);
}
h1 { user agent stylesheet
display: block;
font-size: 2em;
-webkit-margin-before: 0.67em;
-webkit-margin-after: 0.67em;
-webkit-margin-start: 0px;
-webkit-margin-end: 0px;
font-weight: bold;
}
margin 21.440
border –
padding –
380 × 37
html body h1
Console
top Preserve log

Inspecting a Twine



Typography

Font Size

- Most common units: pixels (px), percent (%), em and rem
- We'll be focusing on pixels to start

```
font-size: 35px;
```

Fonts

SERIF
Serif fonts have extra details on the end of the main strokes of the letters.
EXAMPLES:
Georgia
Times
Times New Roman
SANS-SERIF
Sans-serif fonts have straight ends to letters and therefore have a much cleaner design.
EXAMPLES:
Arial
Verdana
Helvetica

Fonts

MONOSPACE

Every letter in a monospace typeface is the same width. (Non-monospace fonts have different widths.)

EXAMPLES:

Courier

Courier New

CURSIVE

Cursive fonts either have joining strokes or other cursive characteristics, such as handwriting styles.

EXAMPLES:

Comic Sans MS

Monotype Corsiva

FANTASY

Fantasy fonts are usually decorative fonts and are often used for titles. They're not designed for long bodies of text.

EXAMPLES:

Impact

Haettenschweiler

Font Family

- Specifies which font to use
  - Every computer has different fonts installed
- Can use a generic family
  - serif, sans-serif, monospace, cursive, fantasy
- Can use a font that is stored on visitor's computer
  - See fonts on your machine: workmark.it

```
font-family: "Georgia";
font-family: sans-serif;
```

Font Stacks

- Different operating systems have different fonts
- Safe stacks: cssfontstack.com

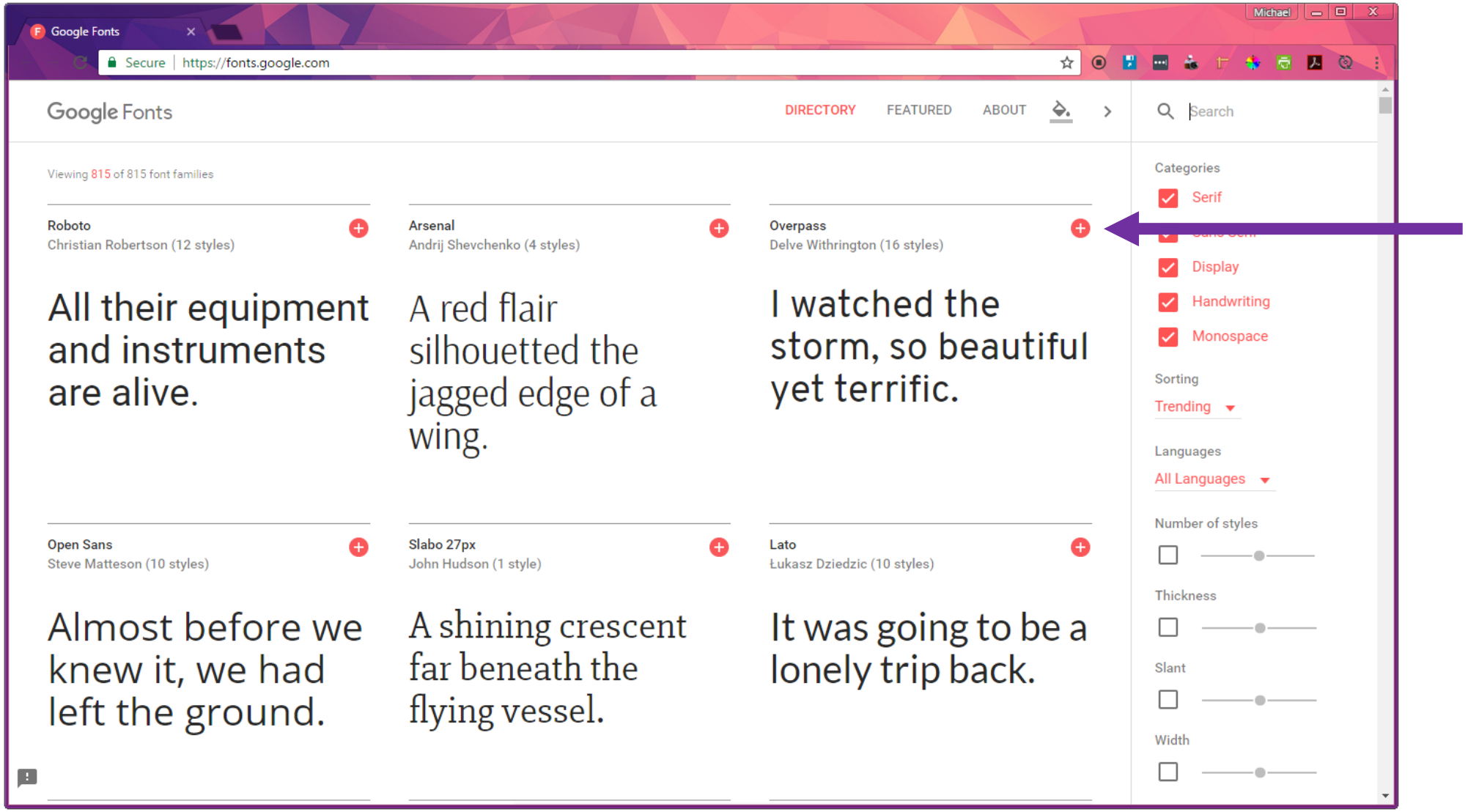
```
font-family: "Helvetica Neue", "Helvetica", "Arial", sans-serif;
```

Embedding Fonts the Google Way

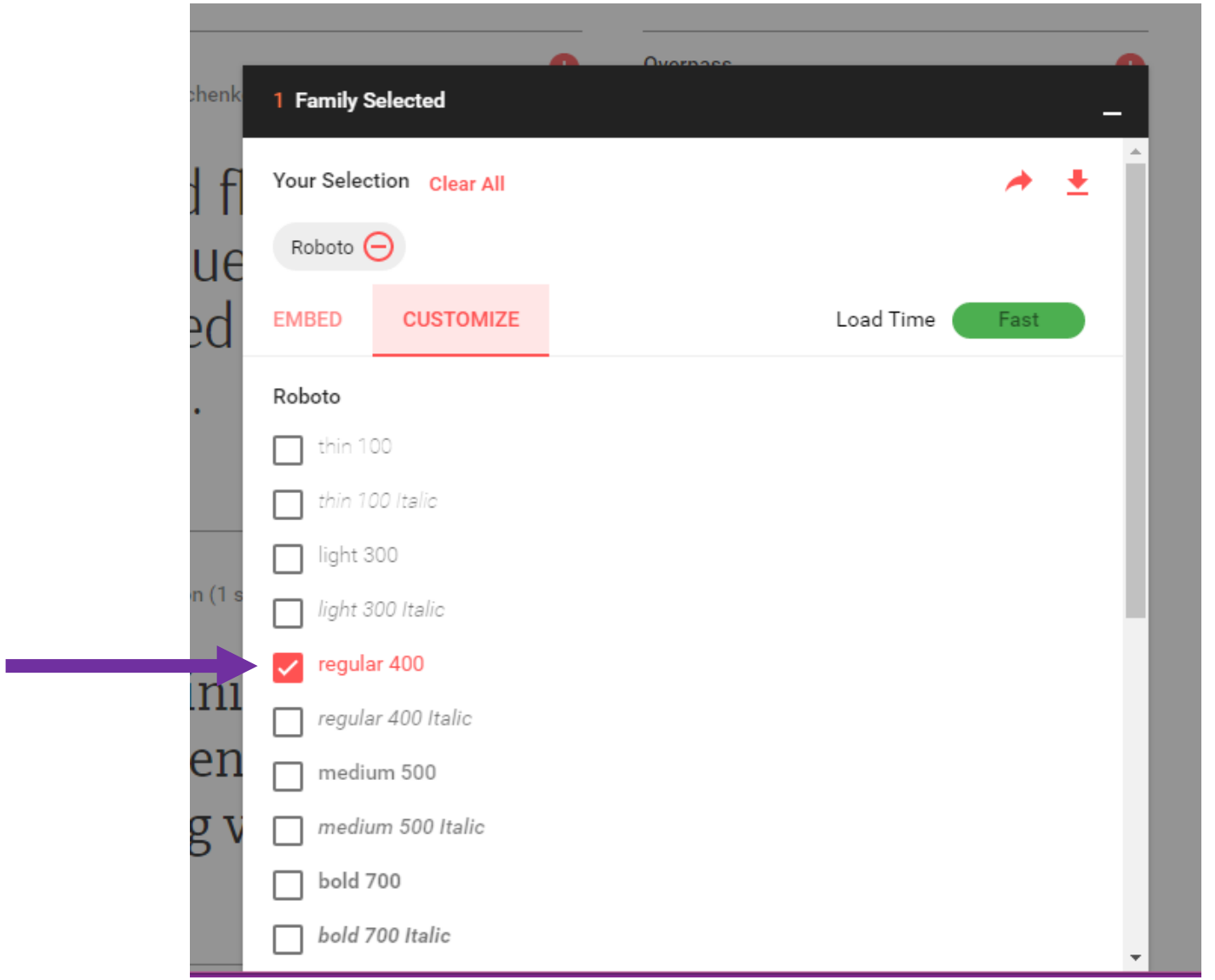
Embedding Fonts

- Font files loaded over the internet
- Uses @font-face (font file support)
- Web font services: fonts.google.com, Adobe Typekit

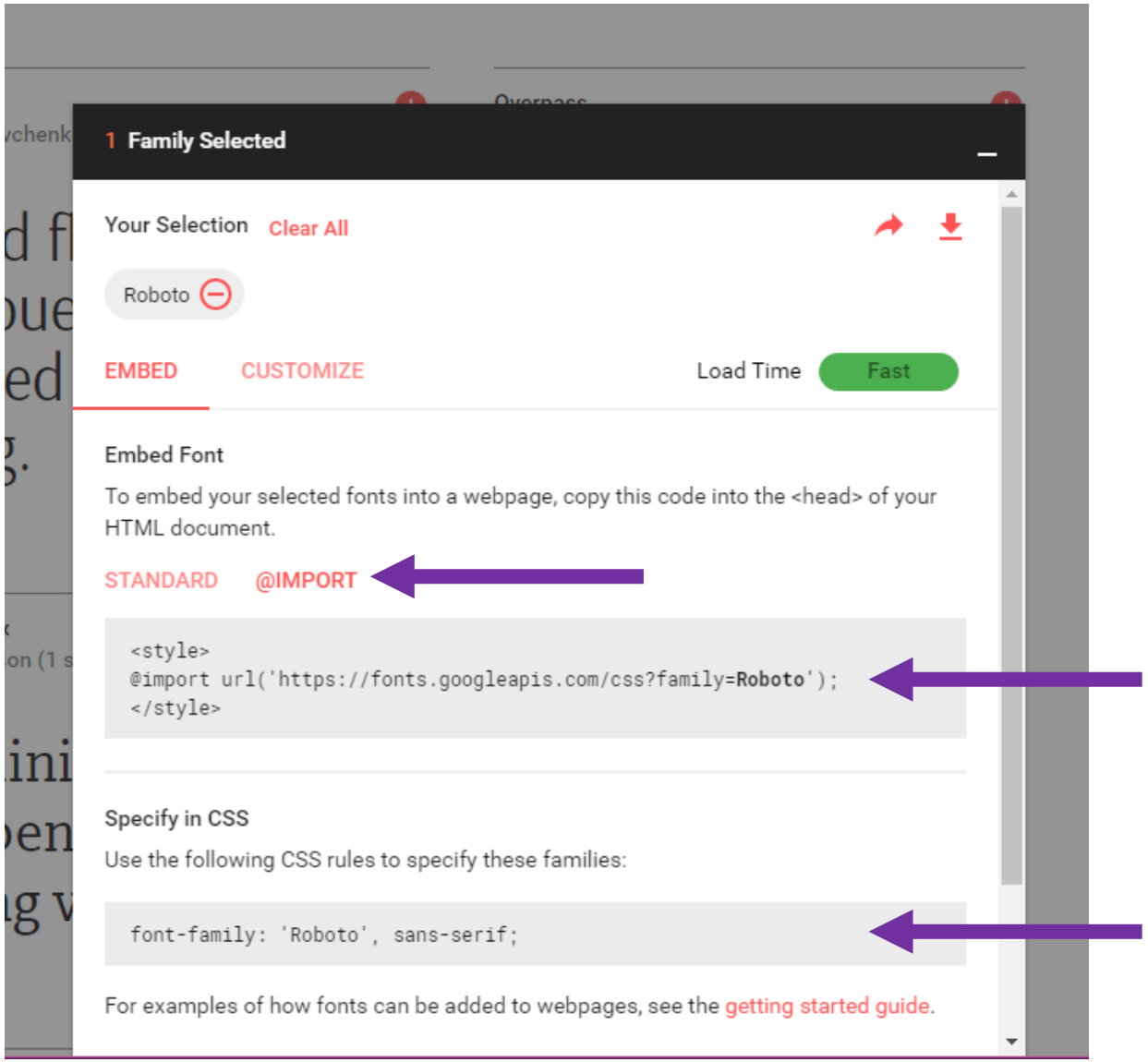
Pick a Font


Google Fonts
Secure | https://fonts.google.com
Michael
Google Fonts
DIRECTORY
FEATURED
ABOUT
Search
Viewing 815 of 815 font families
Roboto
Christian Robertson (12 styles)
All their equipment and instruments are alive.
Arsenal
Andrij Shevchenko (4 styles)
A red flair silhouetted the jagged edge of a wing.
Overpass
Delve Withrington (16 styles)
I watched the storm, so beautiful yet terrific.
Open Sans
Steve Matteson (10 styles)
Almost before we knew it, we had left the ground.
Slabo 27px
John Hudson (1 style)
A shining crescent far beneath the flying vessel.
Lato
Łukasz Dziedzic (10 styles)
It was going to be a lonely trip back.
Categories
Serif
Display
Handwriting
Monospace
Sorting
Trending
Languages
All Languages
Number of styles
Thickness
Slant
Width

Pick Your Typefaces



Get the Code


1 Family Selected
Your Selection
Clear All
Roboto
EMBED
CUSTOMIZE
Load Time
Fast
Embed Font
To embed your selected fonts into a webpage, copy this code into the <head> of your HTML document.
STANDARD
@IMPORT
<style>
@import url('https://fonts.googleapis.com/css?family=Roboto');
</style>
Specify in CSS
Use the following CSS rules to specify these families:
font-family: 'Roboto', sans-serif;
For examples of how fonts can be added to webpages, see the getting started guide.

```
@import url('https://fonts.googleapis.com/css?family=Roboto');
```

- @import lets you import an external CSS file from a URL
- Google Fonts has CSS files that embed a font
- Not the optimal way to use Google Fonts, but it's the best way to use it with Twine

Typography (Continued)

Font Weight

- Can be a number (100, 200, 300, ..., 900)
- Can be a keyword: normal (400), bold (700)
- Not all fonts are available in all weights

Raleway, 100 Raleway, 200 Raleway, 300 Raleway, 400

Raleway, 500 **Raleway, 600** **Raleway, 700** **Raleway, 800** **Raleway, 900**

```
font-weight: 100;
```

Text Alignment

Left

Jelly beans tootsie roll carrot cake bonbon donut cotton candy lollipop powder sesame snaps. Candy canes gingerbread sugar plum cheesecake chupa chups jelly beans sesame snaps chocolate cheesecake. Croissant halvah powder tart donut.

Right

Croissant cotton candy candy canes pastry. Cookie candy jujubes chocolate cake chocolate. Macaroon danish lollipop. Chocolate cake powder sugar plum pastry macaroon.

Center

Liquorice gingerbread sweet toffee marshmallow croissant sweet roll lollipop. Dragée candy pudding. Topping cheesecake cake sugar plum powder tootsie roll. Sesame snaps liquorice cookie.

Justify

Soufflé dessert lemon drops lollipop powder. Lollipop dessert ice cream bear claw danish chupa chups pie gummi bears jelly-o. Halvah lemon drops dessert. Topping powder gummies toffee powder apple pie chocolate bar candy tart.

```
/*
    Possible values:
    justify, left, right, center
*/
text-align: center;
```

Font Style

- Can be a keyword: normal, italic, oblique
  - Italic – more like cursive
  - Oblique – normal font, but slanted
- If font doesn’t have italic, browser will try to make it

```
font-style: italic;
```

Line Height

- Leading
- Space between lines
- Best practice: unit-less number, based on font size

```
line-height: 1.4;
```

Text References

- Other properties
  - text-transform
  - text-decoration
  - letter-spacing
  - word-spacing
- MDN's Text Styling Fundamentals
- w3schools text and font pages

Typographic Tools

- gridlover
- typescale

Getting Selective

Element Selector

```
h1 {
    font-size: 50px;
}
h2 {
    font-size: 35px;
}
p {
    font-size: 25px;
}
```

Combining Selectors

```
h1, h2, h3, h4, h5, h6 {
    font-family: "Raleway", sans-serif;
}
```

ID Selector

- Targets 1x *unique* element
- Valid IDs:
  - Must have at least 1 character
  - No spaces
  - Best to stick to letters and dashes

```
<style>
    #title {
        font-size: 40px;
        font-style: italic;
    }
</style>
```

```
<body>
    <h1 id="title">Artist Statement</h1>
</body>
```

Class Selector

- Targets *multiple* elements
- Same rules for valid id names apply to class names

```
<style>
    .completed {
        text-decoration: line-through;
    }
</style>
```

```
<body>
    <h1>To Do</h1>
    <ol>
        <li class="completed">Wake up</li>
        <li class="completed">Eat</li>
        <li>Run</li>
        <li>Sleep</li>
    </ol>
</body>
```

SELECTOR	MEANING	EXAMPLE
UNIVERSAL SELECTOR	Applies to all elements in the document	`* {}` Targets all elements on the page
TYPE SELECTOR	Matches element names	`h1, h2, h3 {}` Targets the <h1>, <h2> and <h3> elements

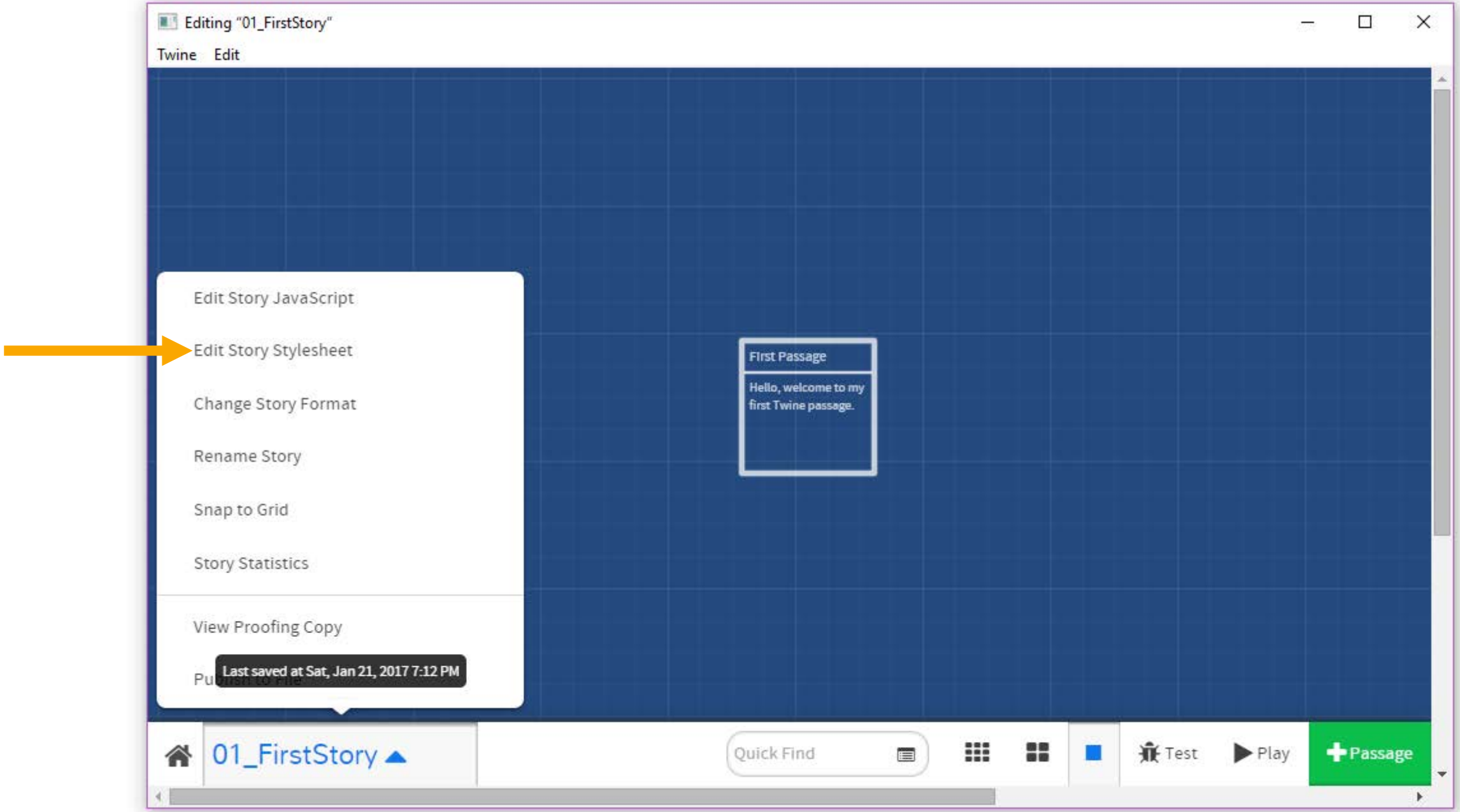
CLASS SELECTOR	Matches an element whose `class` attribute has a value that matches the one specified after the period (or full stop) symbol	`.note {}`
		Targets any element whose `class` attribute has a value of `note`
		`p.note {}`
		Targets only <p> elements whose `class` attribute has a value of `note`

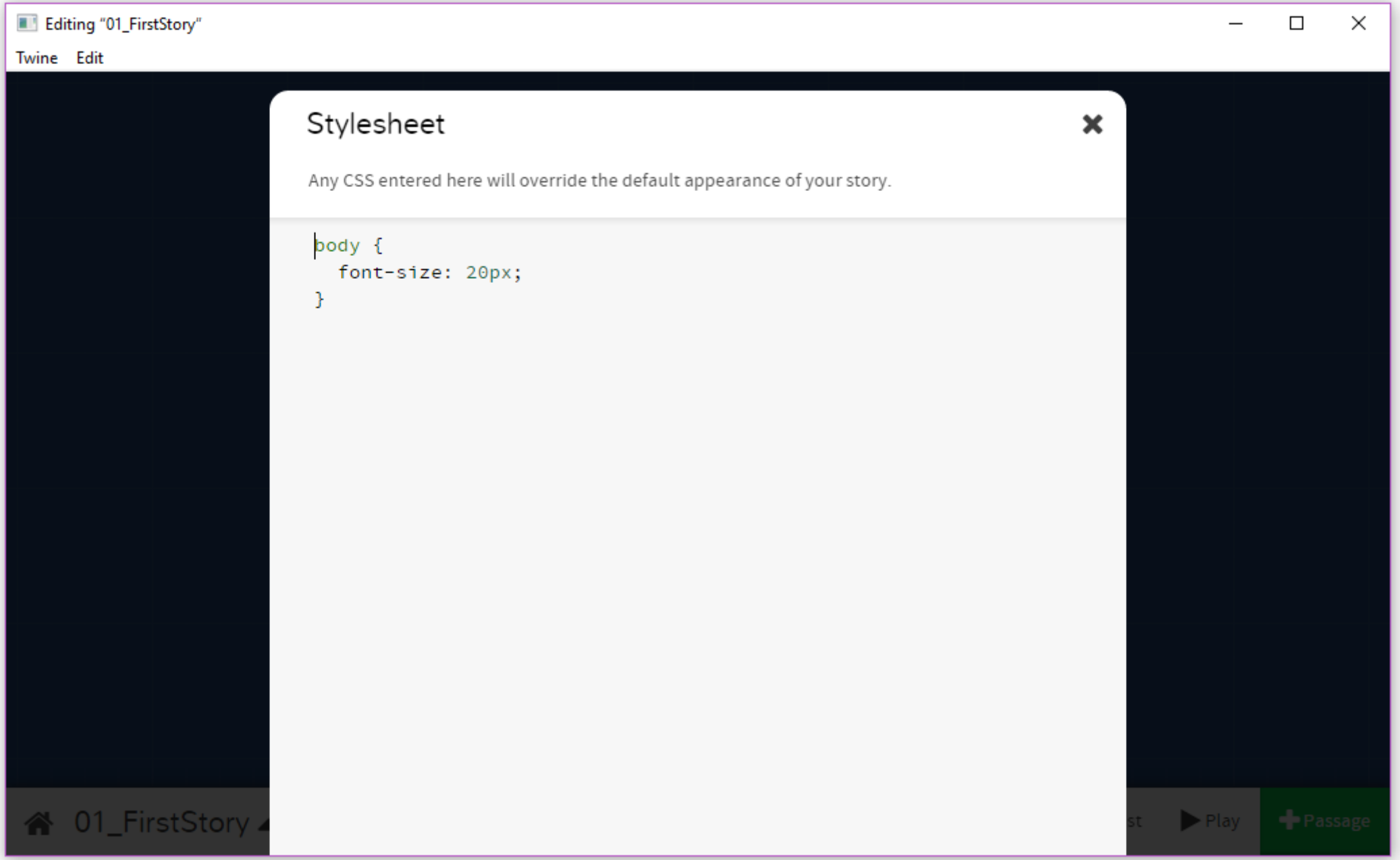
ID SELECTOR	Matches an element whose `id` attribute has a value that matches the one specified after the pound or hash symbol	`#introduction {}` Targets the element whose `id` attribute has a value of `introduction`
CHILD SELECTOR	Matches an element that is a direct child of another	`li>a {}` Targets any <a> elements that are children of an <li> element (but not other <a> elements in the page)
DESCENDANT SELECTOR	Matches an element that is a descendent of another specified element (not just a direct child of that element)	`p a {}` Targets any <a> elements that sit inside a <p> element, even if there are other elements nested between them
ADJACENT SIBLING SELECTOR	Matches an element that is the next sibling of another	`h1+p {}` Targets the first <p> element after any <h1> element (but not other <p> elements)
GENERAL SIBLING SELECTOR	Matches an element that is a sibling of another, although it does not have to be the directly preceding element	`h1~p {}` If you had two <p> elements that are siblings of an <h1> element, this rule would apply to both

Selectors Reference

- w3schools selectors page

CSS in Twine


Editing "01_FirstStory"
Twine
Edit
Edit Story JavaScript
Edit Story Stylesheet
Change Story Format
Rename Story
Snap to Grid
Story Statistics
View Proofing Copy
Last saved at Sat, Jan 21, 2017 7:12 PM
First Passage
Hello, welcome to my first Twine passage.
01_FirstStory
Quick Find
Test
Play
Passage


Editing "01_FirstStory"
Twine
Edit
Stylesheet
Any CSS entered here will override the default appearance of your story.
body {
font-size: 20px;
}
01_FirstStory
Play
Passage

SugarCube HTML Structure

```
<body class="…">

    <!-- Loading screen -->
    <div id="init-screen"></div>

    <!-- Screen overlay (used with modal box in order to dim screen) -->
    <div id="ui-overlay" class="ui-close"></div>

    <!-- Container for model box (e.g. pop up save and restart menus) -->
    <div id="ui-dialog"></div>

    <!-- Container for the sidebar -->
    <div id="ui-bar"></div>

    <!-- Container for the story -->
    <div id="story" role="main">
        <div id="passages">
            <div class="passage …" id="…" data-passage="…">
                <!-- The active passage content -->
            </div>
        </div>
    </div>

</body>
```

Passage IDs and Classes

- Each passage gets an ID from its name
- Each passage gets a class for each of its tags
- Body gets a class for each tag on the active passage

General Notes

All internally created IDs and class names are normalized (which entails: removing characters which are not alphanumerics, underscores, hyphens, en-/em-dashes, or whitespace, then replacing any remaining non-alphanumeric characters with hyphens, one per group, and finally converting the result to lowercase; e.g. the passage `Gone fishin'` becomes `passage-gone-fishin`).

When displaying a passage, its tags are added to the active passage's container element and the page's `<body>` element as CSS classes. The special tags (noted below) are excluded from this mapping.

Special Tags for Twine 1: `debug`, `nobr`, `passage`, `script`, `stylesheet`, `widget`, and any tag starting with `twine.`
Special Tags for Twine 2: `debug`, `nobr`, `passage`, `widget`, and any tag starting with `twine.`

I'm the first

+ Tag red big

```
<!--
    This passage has an ID of "im-the-first"
    This passage has the following classes: "red", "big"
    The body element also has those classes.
-->
```

Stylesheet

Any CSS entered here will override the default appearance of your story.

```
body.red {
  background-color: red;
}
body.blue {
  background-color: blue;
}
```

Cursor Styling

Cursor Styling

- Interactive example
- Tutorial
- Using a custom image and specifying offset

Pseudo-Classes

Pseudo-Classes

- Selector for a particular “state” of an element, e.g. hover
- Preceded by a colon (e.g. “:hover”)
- List of pseudo-classes

Hyperlink Styling

- Relevant pseudo-classes:
  - :link – unvisited link
  - :visited – visited link
  - :hover – hovering with mouse
  - :active – link being pressed
- Should be defined in that order

Possible Link Styling Properties

- Text
  - font-weight
  - font-style
  - text-decoration
  - text-transform
  - letter-spacing
  - font-size
- Color
  - color
  - background-color
- Cursor
- Shadows
  - text-shadow
  - box-shadow
- Box
  - outline
  - border
  - padding, margin

Advanced Effects

- Link Effects Demo
  - Tutorial
  - Note: these use a concept called pseudo-elements
- Hover.css
- Smashing Magazine: Pseudo-elements and -classes

Backgrounds

- Individual properties:
  - background-image
  - background-position
  - background-size
  - background-repeat
  - background-attachment
  - background-origin
  - background-clip
  - background-color
- Shorthand:
  - background

Shorthand

CSS

```css
body {
  background:
    url(sweettexture.jpg)     /* image */
    top center / 200px 200px /* position / size */
    no-repeat                 /* repeat */
    fixed                     /* attachment */
    padding-box               /* origin */
    content-box               /* clip */
    red;                      /* color */
}
```

Gradient Resources

- Gradient Generator tool
- CSS Tricks on CSS3 Gradients
- MDN on Using Gradients
- Gradient Animator (animates background-position)

CSS3 Transitions

```
/* One property at a time */
transition-property: <property> | all | none;
transition-duration: 1s | 1000ms;
transition-timing-function: <same as animations>;
transition-delay: 0.2s | 200ms;

/* Or all at once */
transition: background-color 1s ease 0s;
```

Check out Shay Howe's transition tutorial

```
#image-1 {
    margin: 200px;
    width: 400px;
    transition: transform 0.5s ease 0s;
}

#image-1:hover {
    transform: scale(2) rotate(15deg);
}
```

Transition vs Animation

- Comprehensive blog post
  - Transitions don’t have keyframes
  - Transitions are more useful for user interfaces

animatable

One property, two values, endless possibilities

Fork me on GitHub

Animate on hover | Animate all

http://leaverou.github.io/animatable/

Box Model

Everything is a Box

```
* {
    border: 1px solid red !important;
}
```

MARGIN
BORDER
PADDING
CONTENT

Display

- Controls what type of box is used
- Common values:

```
display: inline;
display: block;
display: inline-block;
display: flex;
display: none;
```

- More info: MDN

Width & Height

- Width and height of box
- Depends on the display property
  - Block and inline-block work as expected
  - Inline is quirky

```
width: 200px;
height: 200px;
```

```
width: 25%; /* % of parent's width */
height: 25%; /* % of parent's height */
```

```
width: 200px;
height: auto; /* Expand to fit */
```

Margins

- Space between elements
- Again, inline is “quirky”

```
margin-top: 20px;
margin-bottom: 20px;
margin-left: 10px;
margin-right: 10px;
```

Margin Shorthand

Padding

- Space between content and border
- Again, inline is “quirky”
- Same shorthand properties as margin

```
padding-top: 20px;
padding-bottom: 20px;
padding-left: 10px;
padding-right: 10px;
```

Margin vs Padding

- Padding is part of the element, whereas margin is not. If a link has padding, the padded area is clickable.
- Margins collapse, whereas padding does not.

Border

- More on borders: w3schools

```
/* All borders at once */
border: 1px solid black;
```

```
/* Each border individually */
border-top: 1px solid black;
border-bottom: 2px dashed crimson;
border-left: 3px dotted deepskyblue;
border-right: none;
```

Margin Centering

Margin Auto

- Evenly divides up the whitespace on either side of the element
- Only applied to block elements

```
/* Individually */
margin-left: auto;
margin-right: auto;

/* Or with shorthand */
margin: 0 auto;
```

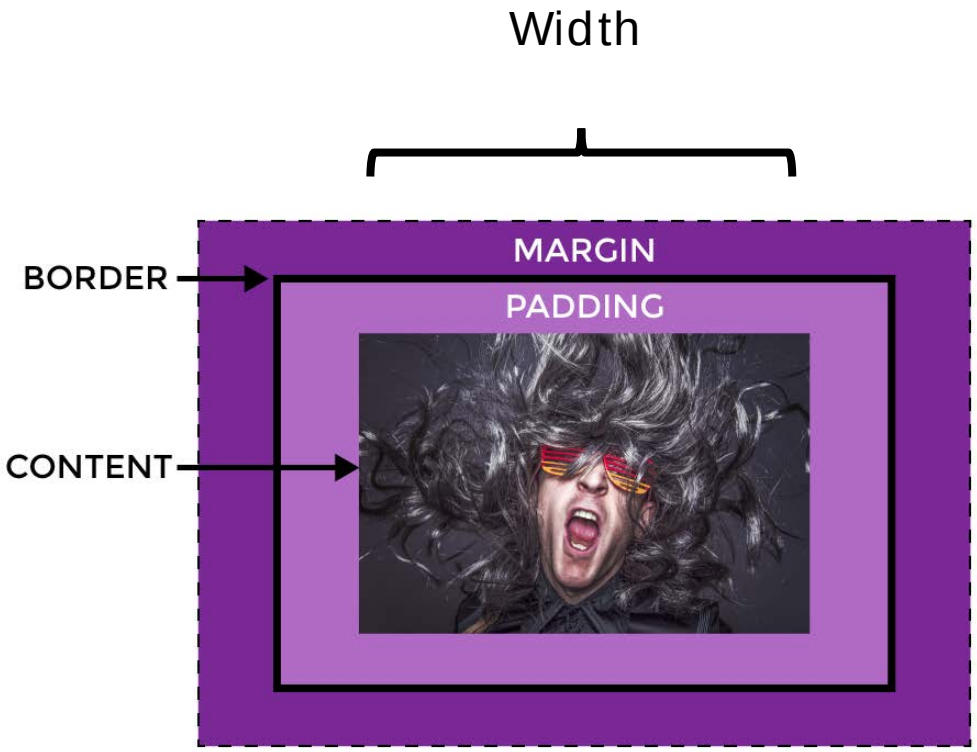
Box Sizing

- Determines how the width and height of the box are calculated

```
box-sizing: content-box; /* The default */
box-sizing: border-box;
```

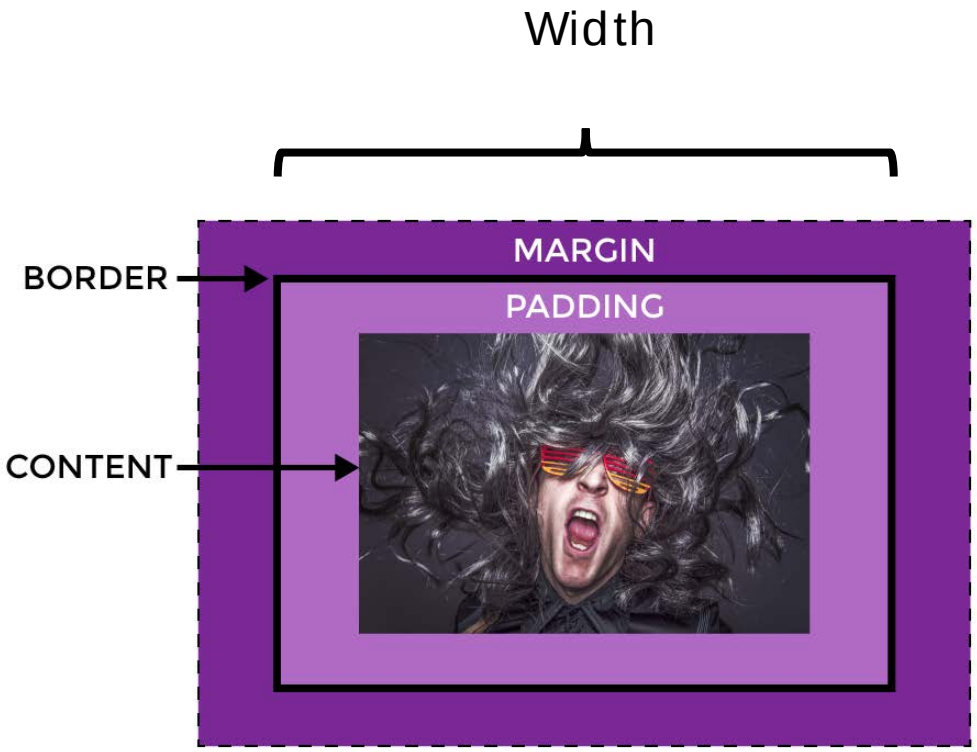
Content Box

Size is just the content



Border Box

Size includes the padding and border



Border Box Everything

```
* {
    box-sizing: border-box;
}
```