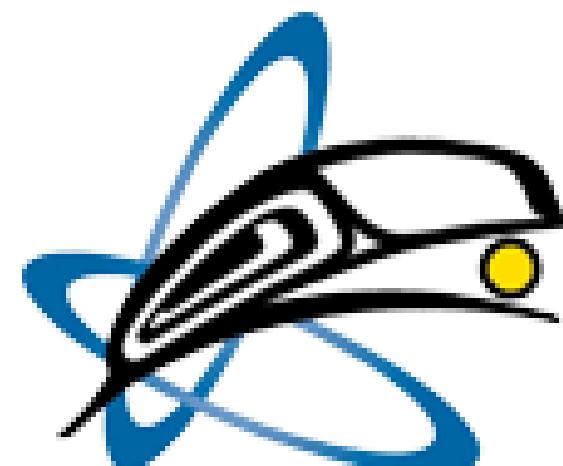


FOUNDATIONS IN INNOVATION AND TECHNOLOGY CERTIFICATE

Web Development & Coding

FITC 130

Week 1 - Lesson 5

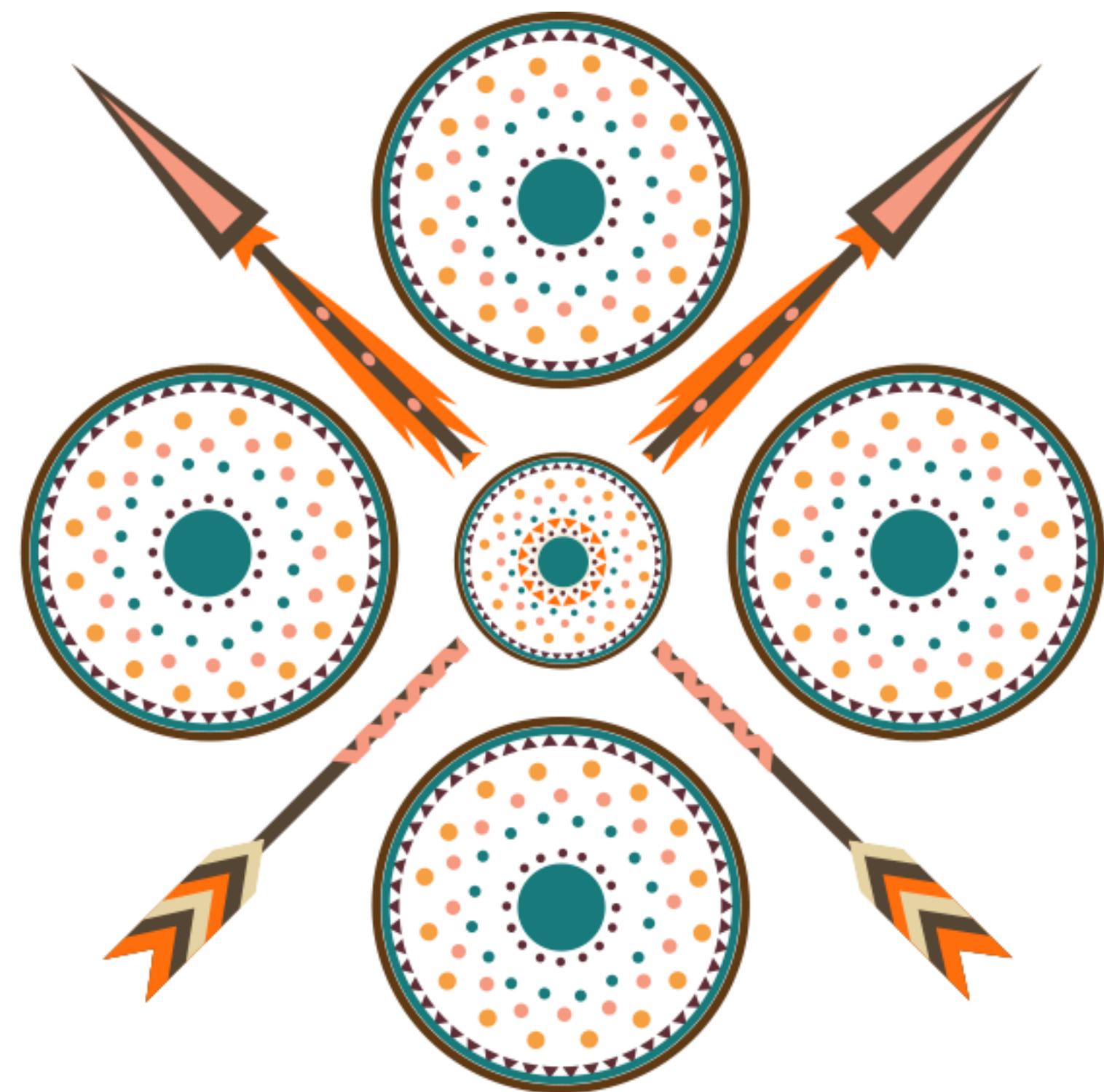


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Lesson Topics

1. Review
2. Web design
3. CSS syntax and rules
4. Background and text colours
5. Typography and fonts



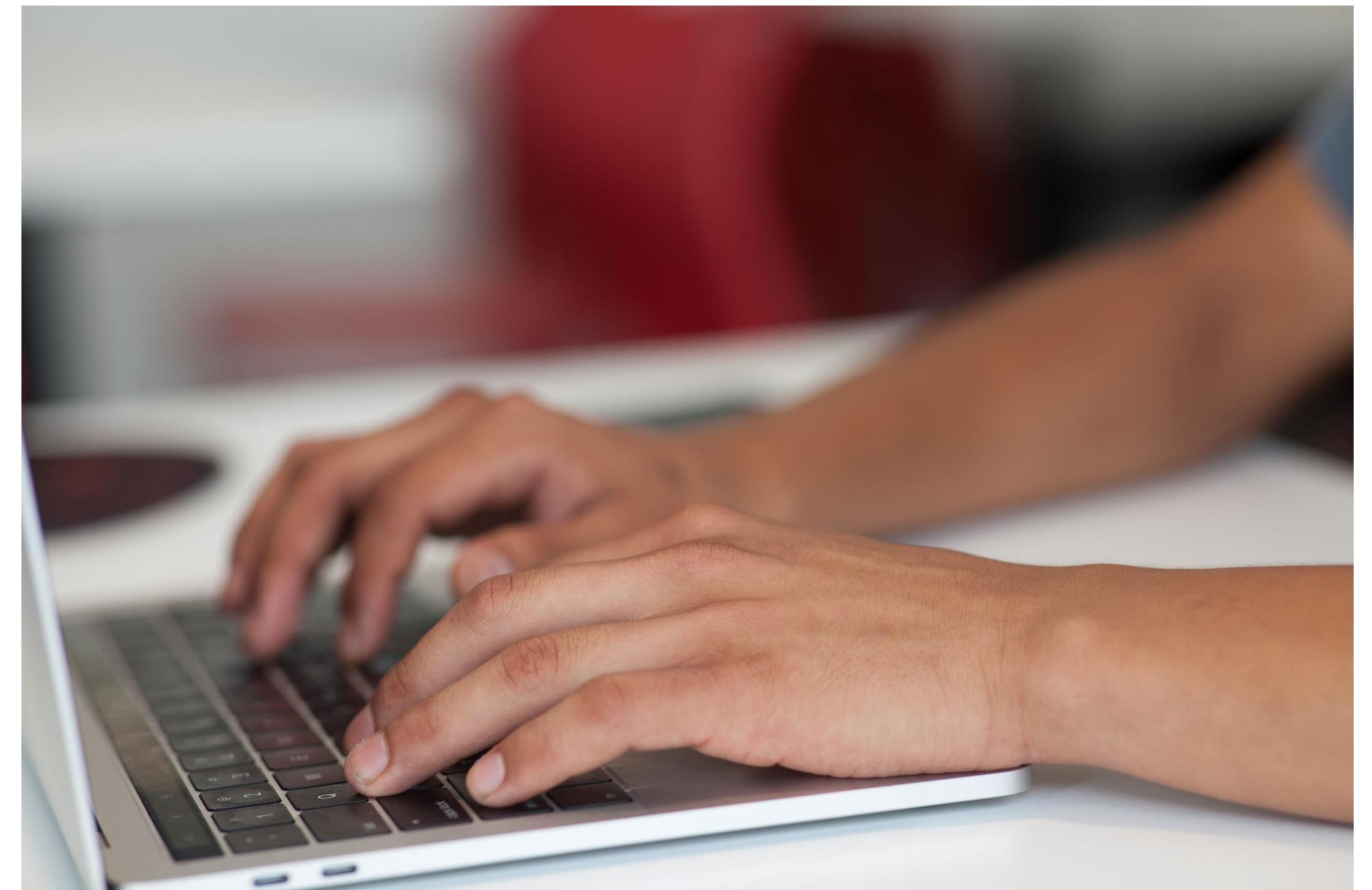
Skills Review

- Sourcing good images online
- Using ImageResizer
- Adding images and links
- Resizing image tags



HTML Review

- h1-h6
- p
- header
- section
- footer
- ol
- ul
- li
- img
- a



Jo's journey

Jo has successfully added links on the new website and inserted some great photos.

Next she will be adding some CSS to bring the website to life.

Are you wondering - what's CCS?

Jo says, "It's all about style."



Web Design

Bringing our websites to life

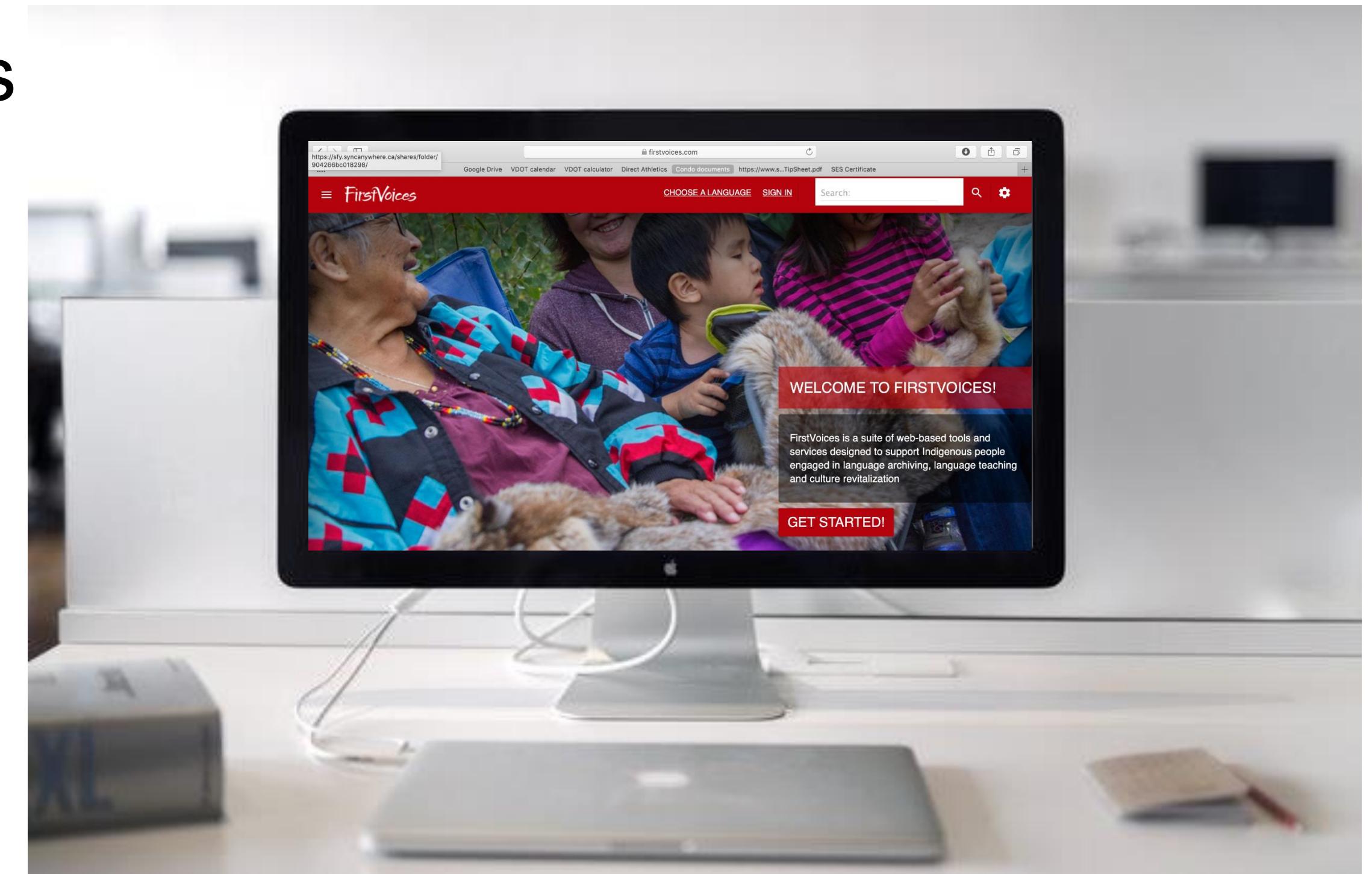


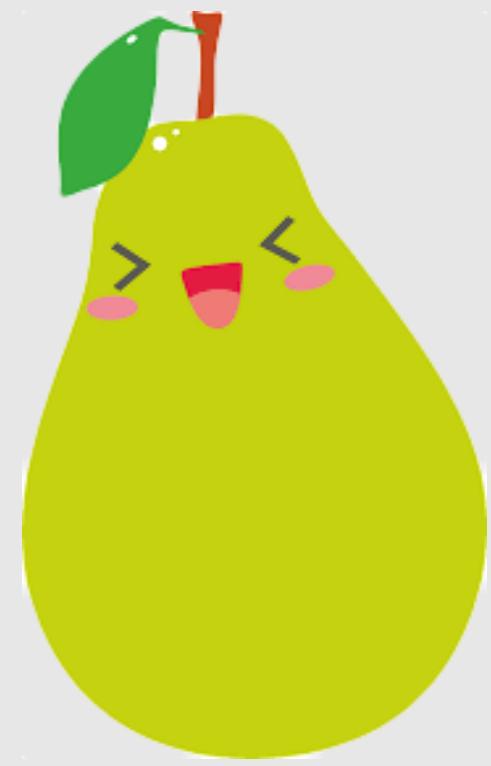
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Web Design

Let's start with design. Jo explains, "It's the combination of many disciplines related to the visual experience of a website."

That means things like colours, fonts, and spacing are used to convey a message that fits the content.





“Pear” and Share

Web design

1. Jo knows what makes a well designed website. In pairs discuss what you think makes a website **well** designed.
2. What do you think makes a website **poorly** designed?

Check out Jo’s examples...

A Good Example

The screenshot shows the Canada Learning Code website at <https://www.canadalearningcode.ca/experiences/>. The page title is "Learning Experiences". The header includes the Canada Learning Code logo, navigation links for LEARN, TEACH, VOLUNTEER, ABOUT, DONATE, and a French link (FR). Below the title are three filter dropdowns: LOCATION, PROGRAM, and EXPERIENCE TYPE. A message states "We found 33 learning experiences related to your search criterion". There are three cards displayed:

- MEETUP**: JAN 10, 2019 7:00PM • JAN 10, 2019 9:00PM. Meetup at THE INC, 3553 31 ST NW (#1000), CALGARY (AB).
- WORKSHOP**: JAN 12, 2019 10:00AM • JAN 12, 2019 9:00PM. Data Insights with Python for Beginners for 13-17 year olds.
- WORKSHOP**: JAN 12, 2019 10:00AM • JAN 12, 2019 4:00PM. Responsive Design for Beginners: Build Mobile Friendly Websites with HTML5 & CSS3 for 13-17 year olds.

GRID VIEW and **MAP VIEW** buttons are also visible.

A Poor Example

SCHOOL OF ART EVENTS CALENDAR
See a listing of all School of Art Events and affiliated events of interest at the University.

[**Click here!**](#)

Last edited by: Sarah Stevens-Morling
Edit access: Sysop

ACADEMIC CALENDAR

FALL 2018

- Aug. 27, M. — Orientation for all new students
- Aug. 28, T. — Registration for all students
- Aug. 29, W. — *Fall-term classes begin, 8:25 a.m.*
- Sep. 3, M. — Labor Day; classes do not meet; offices closed
- Sep. 17, M. — Last day to add a course with permission of registrar
- Oct. 17, W. — October recess begins for Yale College, 8:25 a.m.
- Oct. 22, M. — Yale College Classes resume
- Oct. 26, F. — Last day to drop a course with permission of registrar
Midterm grades due, 12 noon.
- Nov. 15, TH. — *Annual All-School Open House*
- Nov. 16, F. — November recess begins, 5:30 p.m.
- Nov. 26, M. — Classes resume, 8:25 a.m.
- Dec. 7, F. — Last day to withdraw from a course with permission of instructor and registrar
Fall-term classes end, 5:30 p.m.
Reading period begins
- Dec. 13, TH. — Critiques and examinations begin, 9 a.m.
- Dec. 19, W. — Critiques and examinations end, 5:30 p.m.
Winter recess begins

SPRING 2019

- Jan. 3, TH. — Closing date for submission of online applications for admission in September 2019
- Jan. 14, M. — Registration for all students
Spring-term Academic classes begin

Home
AboutThisSite
Admissions
Alums
Calendars
Courses
CurrentStudents
Facilities
FacultyAndStaff
FinancialAid
Gallery
RecentChanges
StudyAreas
SummerPrograms
Undergraduate
Visiting
EverythingElse
Support
Contact

Visitor: Log in
Edit this page
Page history

Page last changed by:
Taryn Wolf
Background changed by:
Sam Shoemaker
Page editable by:
Everyone

Good Design

- **Clear** — content is easy to read, and graphics and colours support the idea
- **Concise** — content is presented in a succinct manner without anything unnecessary
- **Captivating** — style is easy on the eyes and captures the readers interest



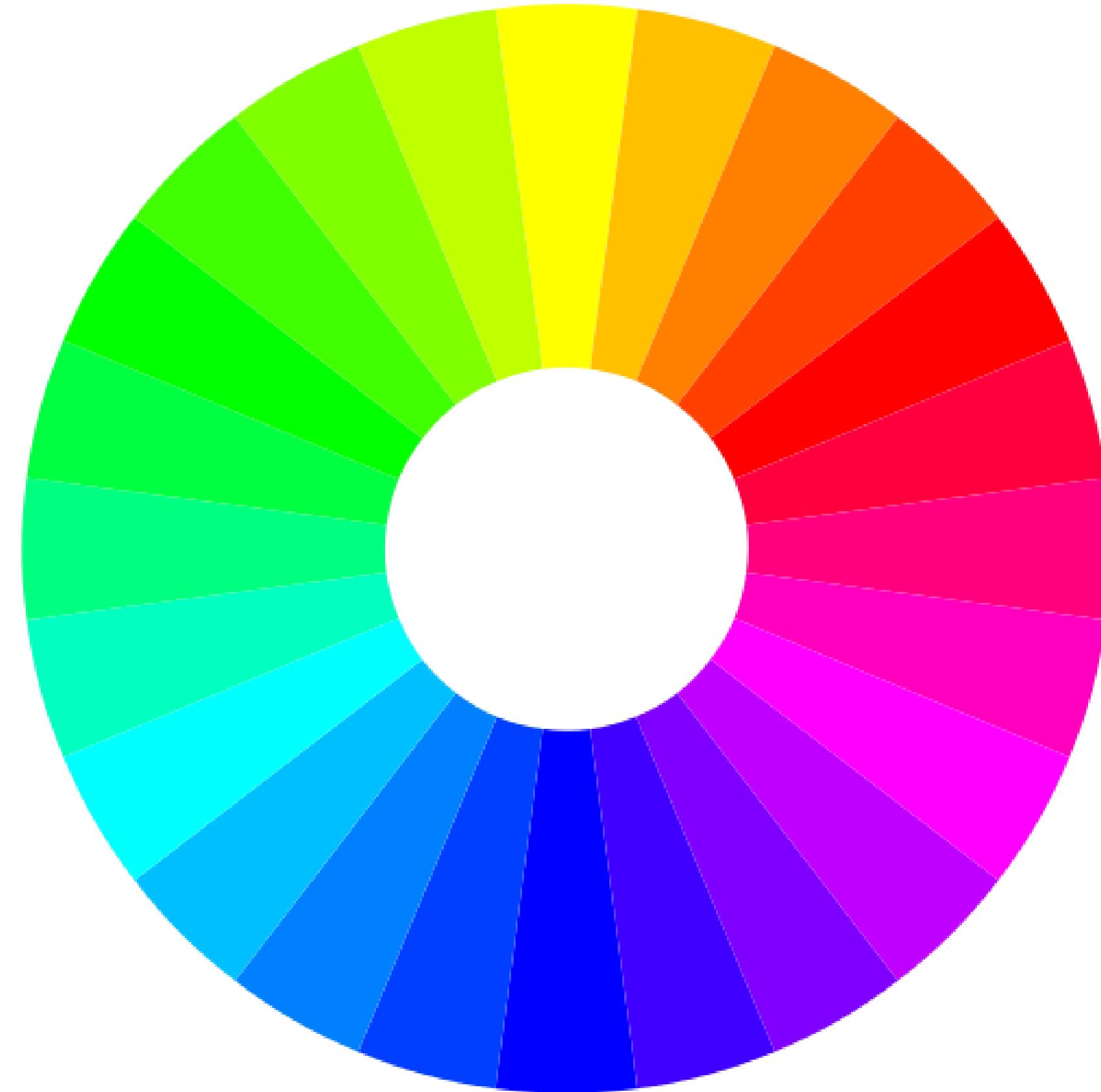
Organizing Content



- Think about how your eyes navigate a web page
- Vary the size of your content areas to guide the viewer's eyes
- Put **space** around your content to make it more readable and add balance to your design

Colour

- Colours evoke different emotions, and we can use it to make our audience feel a certain way.
- Blocks of colour help distinguish sections of our website.
- Colour can enhance readability by emphasizing certain features on the page.



Fonts and Typography

- Like colours, fonts affect the meaning and tone of your words
- Some are formal while others are playful and fun
- Varying the size, style and colours of your text can emphasize certain sections and enhance readability

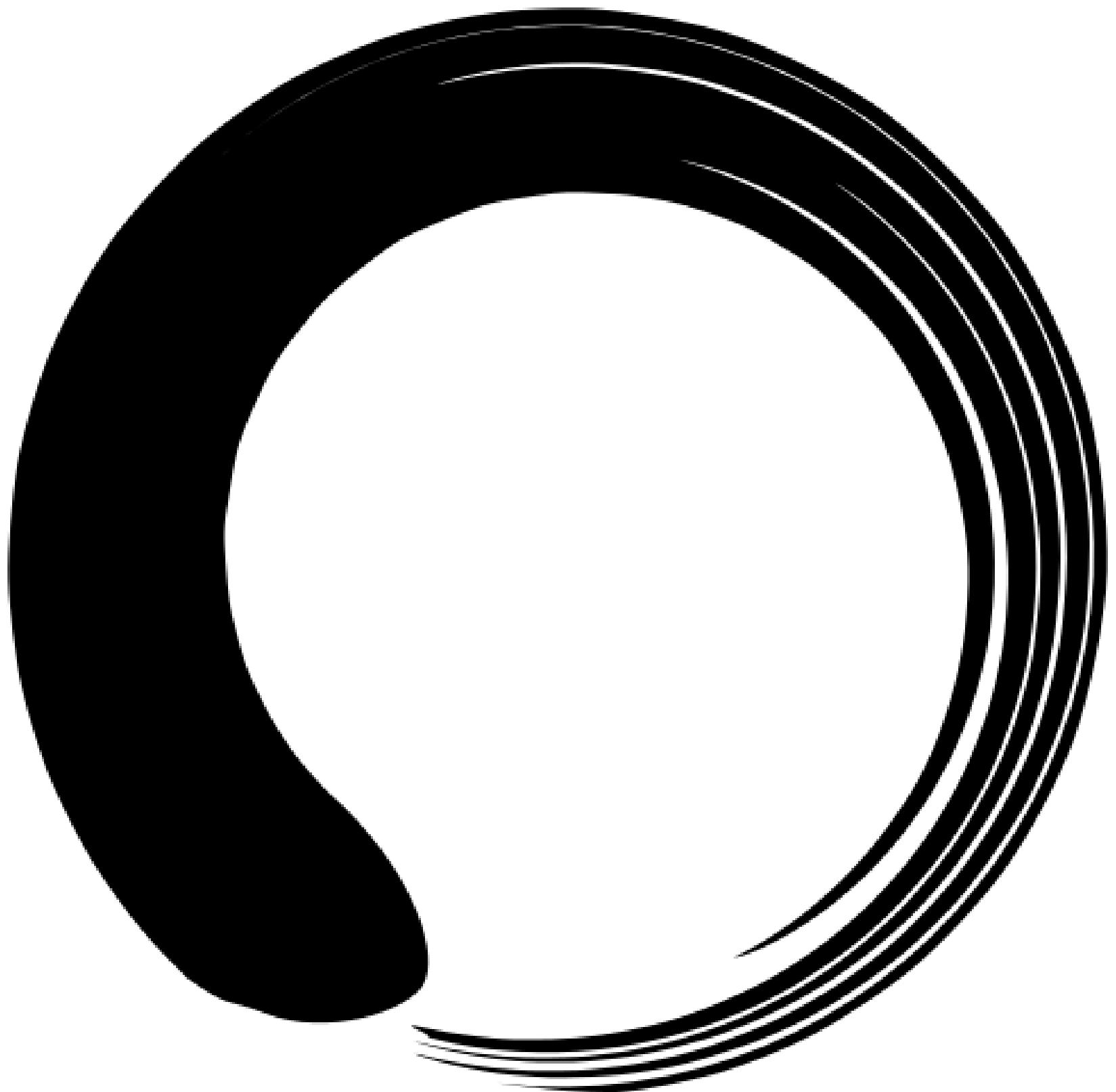
Light
Regular
Bold

Regular
Italics
Underlined

Helvetica
Georgia
Monaco

Red
Blue
Green

Composition and Layout



- Composition is how we place or arrange things on our canvas (the web page).
- Create balance by using **symmetry** and **empty space**.
- Arrange your images using grids to line up the edges.

General Guidelines



- Remember to **Keep It Super Simple (KISS)**
- Stay consistent by using a colour palette and one or two fonts
- Look at websites you like for inspiration



Activity 1

Design inspiration

1. Visit the [Awwwards](#) website nominee list for some design inspiration
2. What kind of ideas would work well on your website?
3. Post a link to your favourite on Slack

What is CSS?

Introducing Cascading Style Sheets

Introducing CSS

HTML

Structure



CSS

Style



JavaScript

Behaviour



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CSS

Remember Jo said CSS is all about style?
Here are some other CSS facts:

- CSS is short for **Cascading Style Sheets**
- It has a language with its own syntax and separates **content** from **presentation**
- HTML used to be used for presentation, but those tags and attributes are now obsolete

CSS



CSS stylesheet

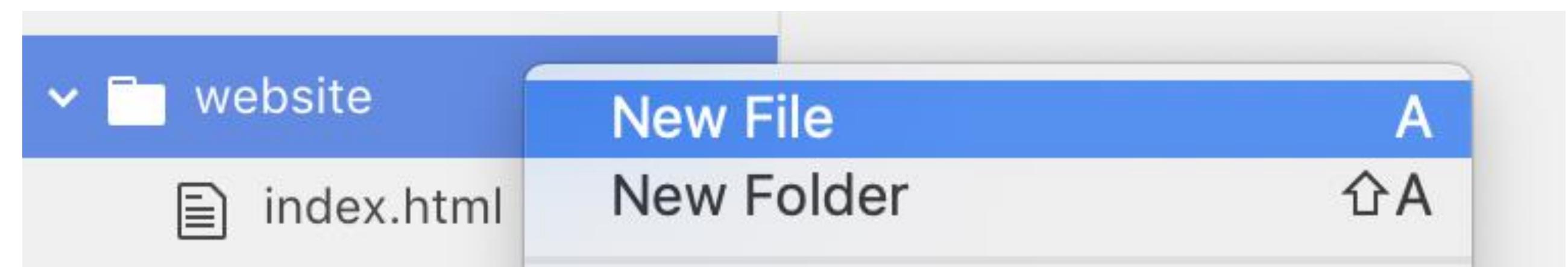
- A stylesheet is essentially a list of **rules** or **directives** that define elements of your entire website
- CSS reduces redundancy and saves time, and it makes designing websites far easier
- It also makes it possible to build more complex designs

Next, let's try to make our own stylesheet.

CSS



1. Right click on the **website** folder on the side bar inside **Atom** and click **New File**



Activity 2

Adding a style sheet

+ Enter the path for the new file.

style.css

The **link** Element

- Used for “linking” to **external** files
- They are used primarily for linking **style sheets**
- The **rel** attribute defines the link type
- The **href** attribute specifies the path to the file

```
<link rel="stylesheet"  
      href="style.css">
```



1. Go back to your `index.html` file
2. Insert a `<link>` tag inside your `<head>` element, just below the `<meta>` tag
3. Set the `rel` value to `stylesheet` and the `href` to `style.css`

Activity 3

Linking to the style sheet

```
<head>
  <title>My website</title>
  <meta charset="utf-8">
  <link rel="stylesheet" href="style.css">
</head>
```

Activity 4

Testing the CSS link

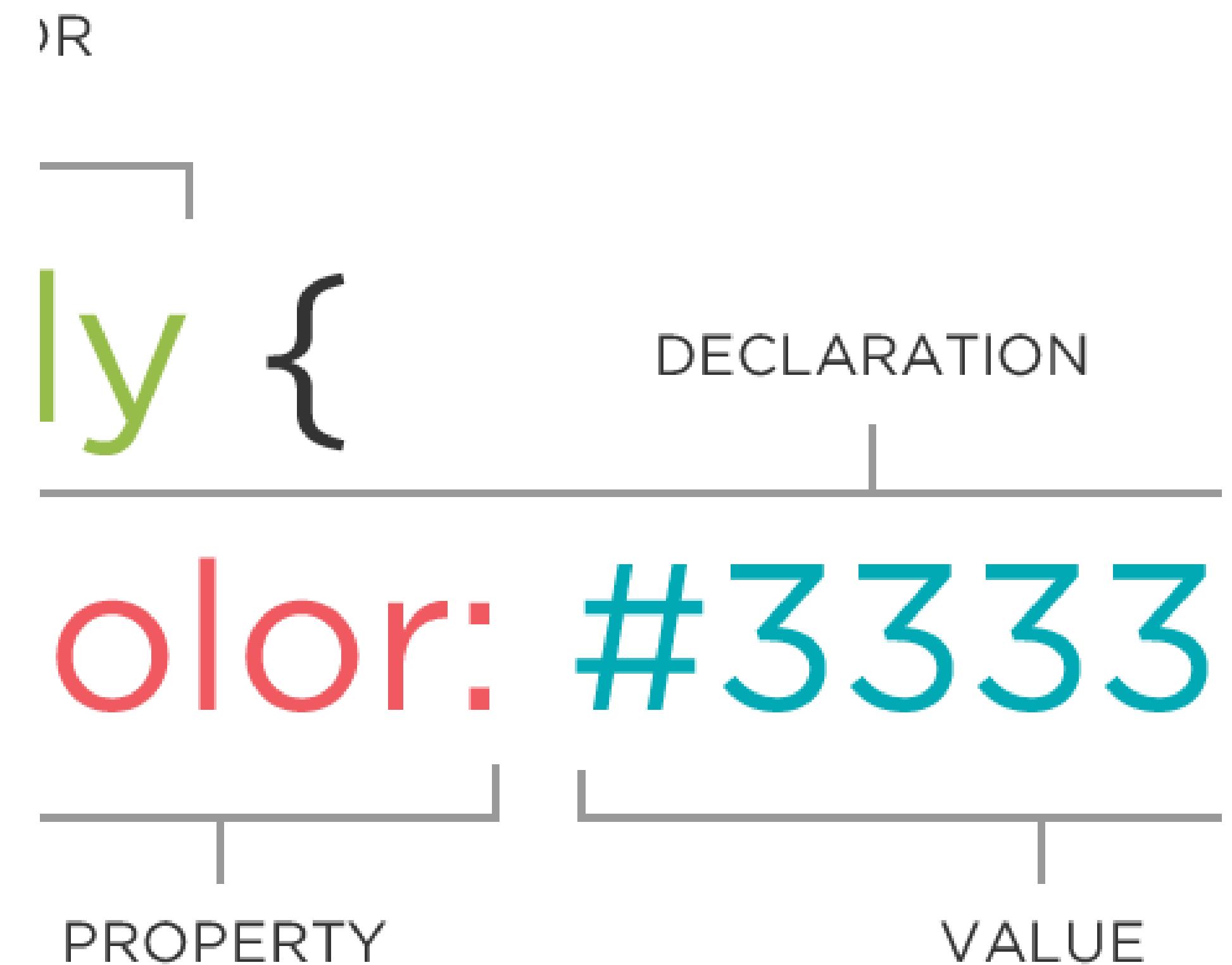
1. Switch to the **style.css** file inside **Atom** (it should be empty)

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

2. Add the following to verify our webpage is linked to the CSS file
3. Check that the background of your website is now **red**

CSS Terminology

- **selector** — specifies which HTML element(s) to apply the styles to
 - **declaration** — a style “rule” written with **property-value** pairs
 - **property** — the **style** attribute to specify
 - **value** — the specified quality or quantity for the property



Syntax

- Each **declaration** must end with a semi-colon ; to indicate that the instruction is complete
- All declarations must be inside a **declaration block** designated by curly braces {}
- Each declaration should be on its own line and indented **once**

```
h1 {  
    font-size: 24px;  
    color: grey;  
}
```

Good!

```
h1 {  
    font-size: 24px;  
    color: grey;  
}  
  
p {  
    font-size: 16px;  
}
```

Not so good :(

```
h1 {  
    font-size: 24px; color: gi  
}  
  
h2 {  
    color: green  
}  
  
p{font-size:16px}
```

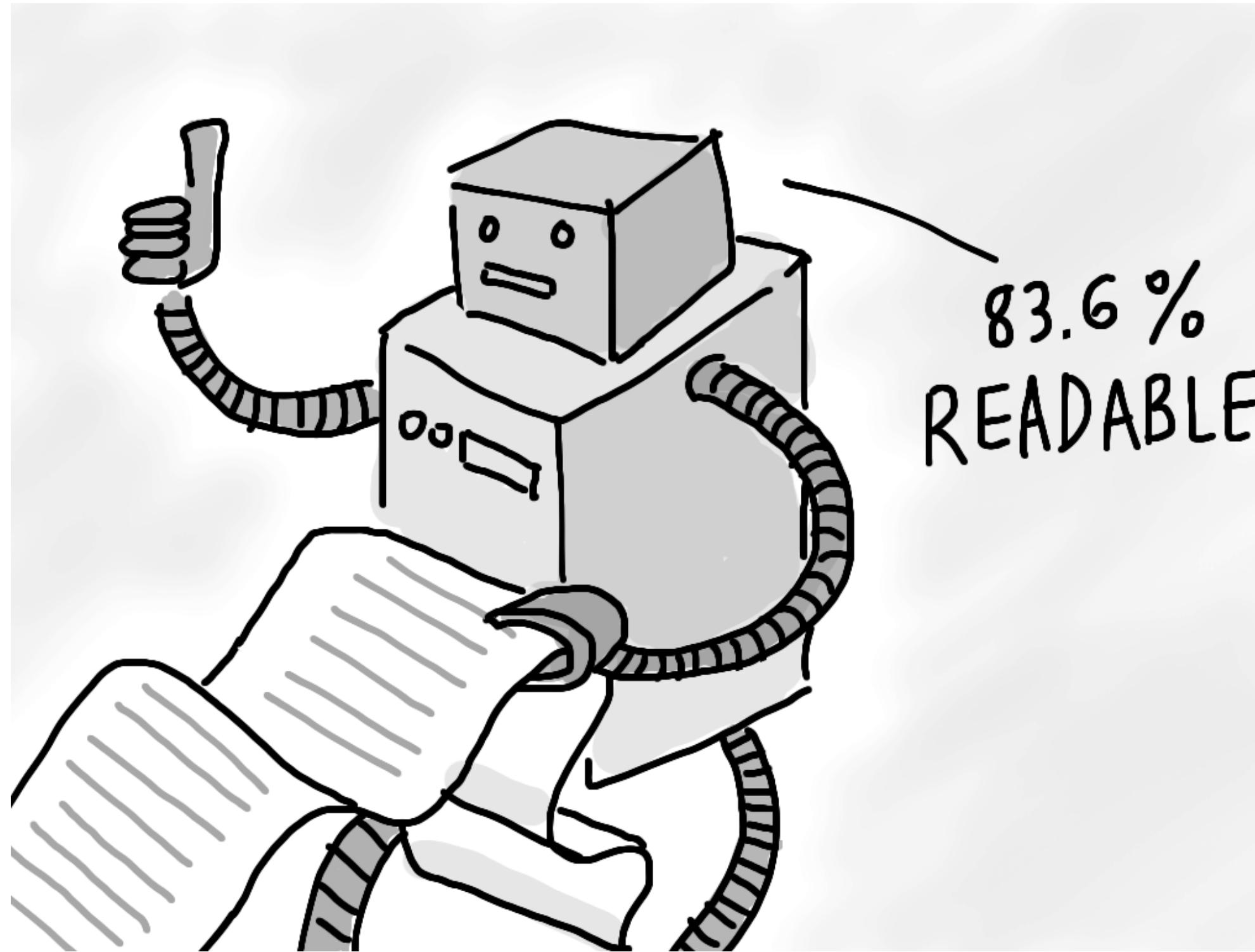
Two declarations on one line

indent

Missing semi-colon

Missing spaces

Style Counts



Source: [UX Mastery](#)

- Good style and consistency helps us avoid creating bugs
- It improves readability for other people (including you!) that read your code later
- Like any language, grammar, spelling and punctuation help communicate more effectively

Style Counts

- Coding isn't just about telling a computer what to do
- Style is a way of expressing yourself through your code
- Code can be poetic as well as functional



Colour Definitions

Different letter and number combinations create different colour shades, like mixing together different paint colours.

1. **Keywords** — A predefined “named” colour
 - e.g. `blue`, `firebrick`, `whiteSmoke`, `papayaWhip`
2. **RGB** — Three numerical values between **0** and **255** corresponding to Red/Green/Blue
 - e.g. `rgb(178, 34, 34)`
3. **Hex Code** — A colour code using the hash symbol (#) and six hexadecimal characters (0-9, A-F)
 - e.g. `#B22222`, `#000000` (black), `#FFFFFF` (white)

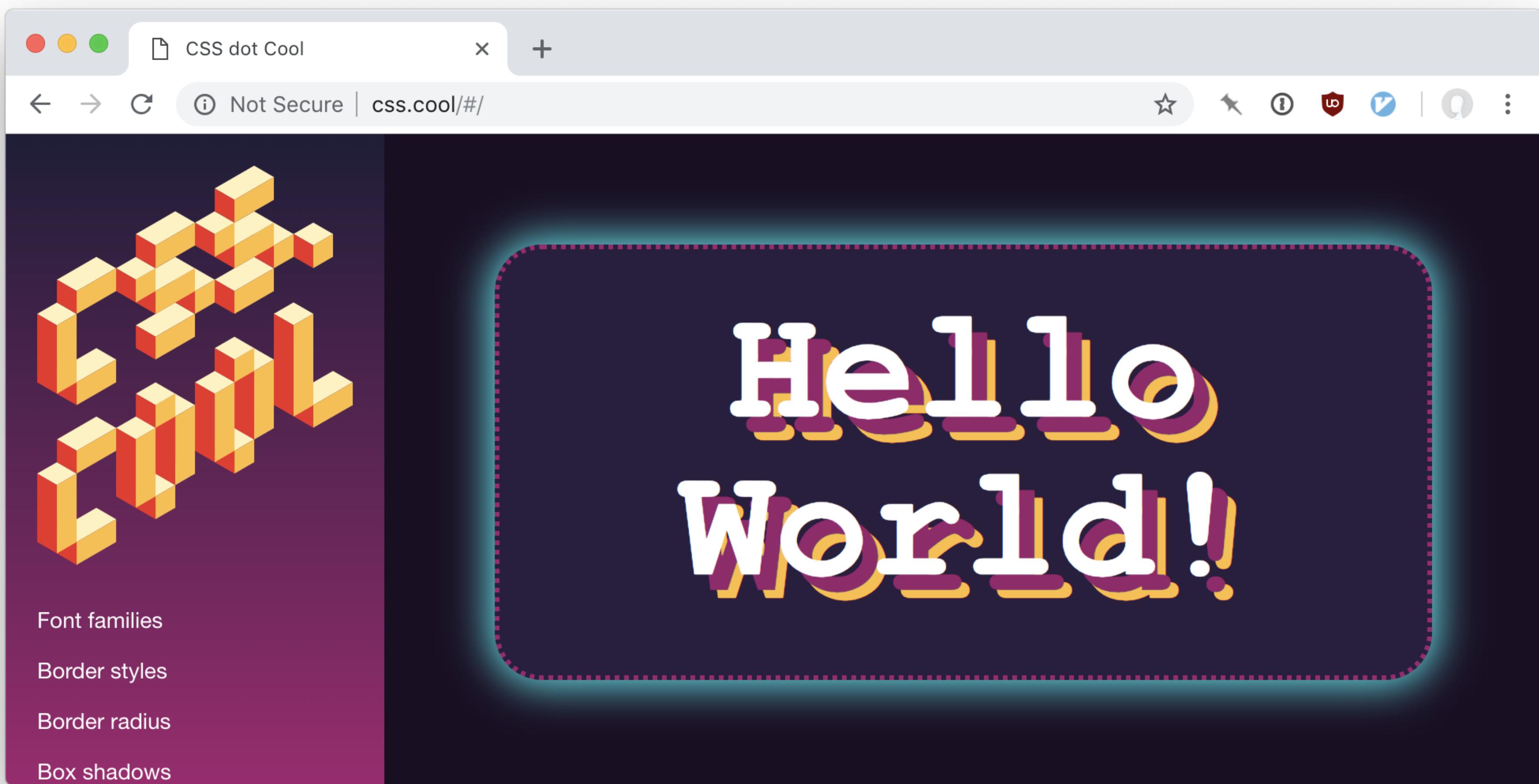
The `background-color` property

- The `background-color` property defines the **background** colour of a given element
- Note the **American** spelling of **color** (no “u”)

```
body {  
    background-color: Blue;  
}
```

Style Inspiration

We will be using css.cool for ideas for colours, fonts and other styles



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Activity 5

Setting the body
background colour

1. Visit css.cool and click on **Colors** in the left side bar
2. Find a colour you like and go back to your **style.css** file
3. Update the **value** of your **background-color** rule to the new colour

```
body {  
    background-color: AliceBlue;  
}
```

The `color` property

- The `color` property defines the colour of the `text` for a given element
- Note the **American** spelling (again)
- The colours work exactly the same as with the `background-color` property

```
body {  
    color: Indigo;  
}
```



Activity 6

Setting the body text colour

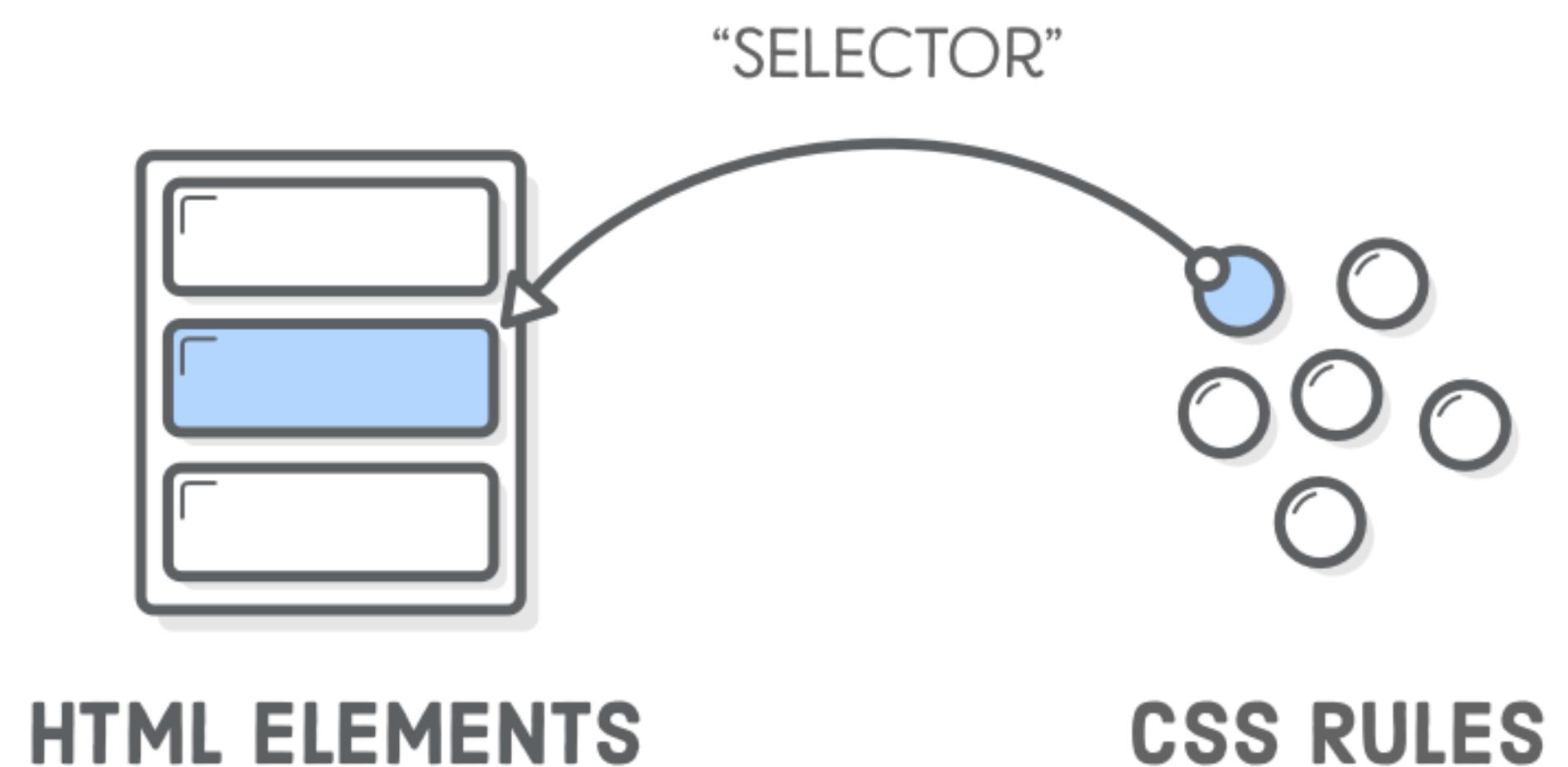
1. Go back to css.cool and look for a colour to change the **body text** to
2. Add a new line **below** your **background-color** rule **inside** the **body** declaration
3. Add a **color** rule with the colour for the body text

```
body {  
    background-color: AliceBlue;  
    color: DarkSlateBlue;  
}
```

Understanding Selectors

There are **three** ways you can select
HTML elements to apply style to

- 1. Element type**
- 2. Class**
- 3. Identifier (ID)**



Type Selectors

- Type selectors target HTML elements by their specific tag **type**
- Adding a rule for a specific tag type will apply that style to **all** of those elements

HTML

```
<p>Hello there!</p>
<p>How are you?</p>
```

CSS

```
p {
  font-size: 16px;
}
```

Activity 7

Styling headings

1. Add a **new** line and a **blank** line below the **body** declaration in your CSS file

2. Add a **color** rule to for your **h1** tags

```
body {  
    background-color: AliceBlue;  
    color: DarkSlateBlue;  
}
```

```
h1 {  
    color: red;  
}
```

Activity 8

Styling other elements

1. Experiment with adding **color** and **background-color** styles to different elements on your page
 - e.g. **h1, h2, h3, p, header, section, footer**
2. Make sure to keep your CSS clean and add **blank lines** between your declarations

Typography

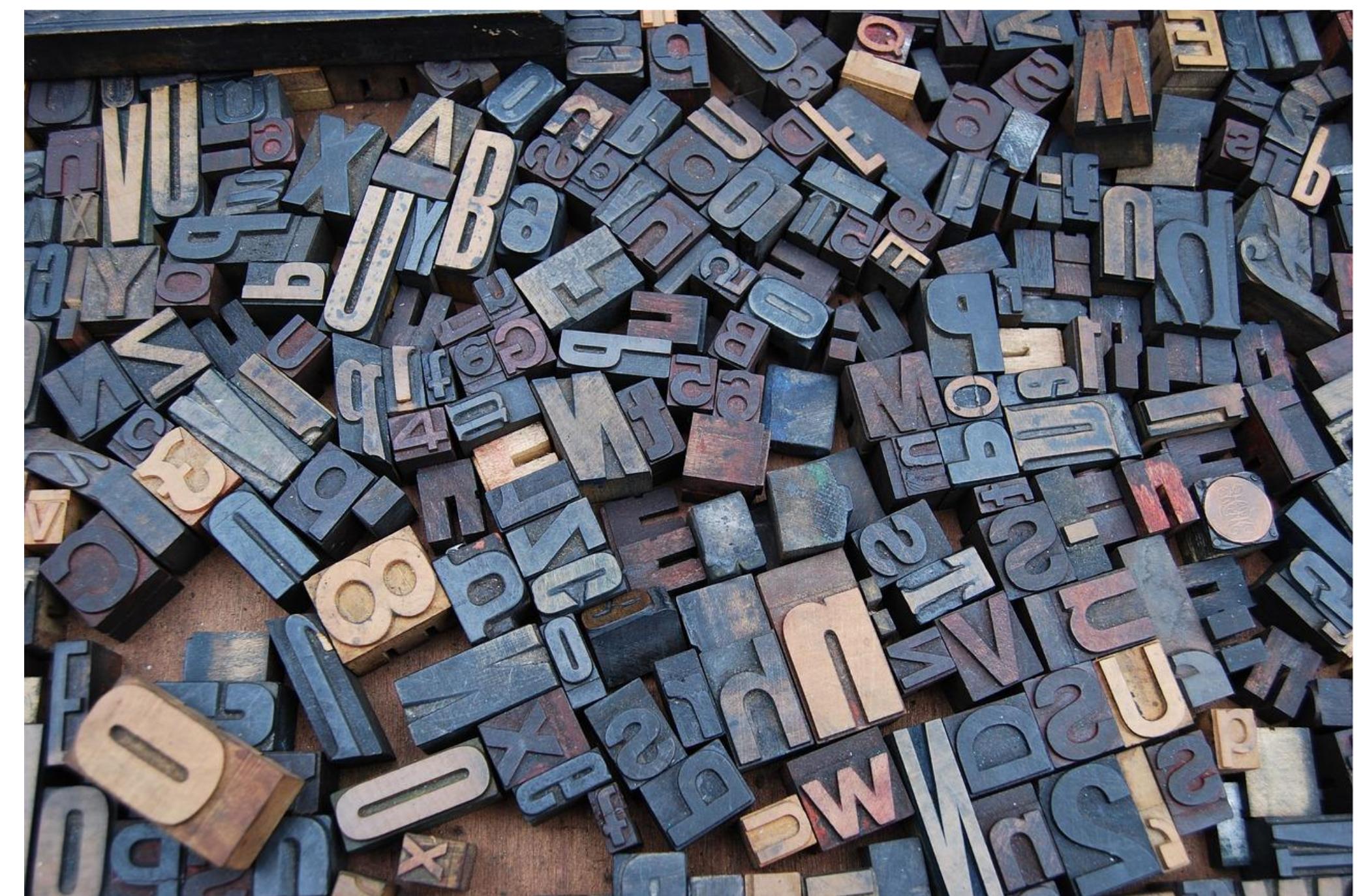
Giving our text some character



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Typography

- A **typeface** is a collection of glyphs or symbols used in writing
- A **font** is more or less the same as a typeface but includes the size and styling of the text (e.g **bold** or *italic*)
- Typography is an essential part of web design



Font Properties

- There are a handful of CSS font properties for styling text
 - `font-family`
 - `font-weight`
 - `font-size`
 - `font-style`
 - `font-variant`

The screenshot shows a web browser window displaying the text "The quick brown fox jumps over the lazy dog" in various colors corresponding to different platforms. The platforms listed are:

- system-ui (red)
- Safari on iOS & macOS (orange)
- Chrome on macOS (yellow)
- Windows (green)
- Android (blue)
- Linux (purple)
- All Platforms (black)

Below the text samples, a note says: "View this page's source to see the `font-family` for each sample."

Typeface Styles

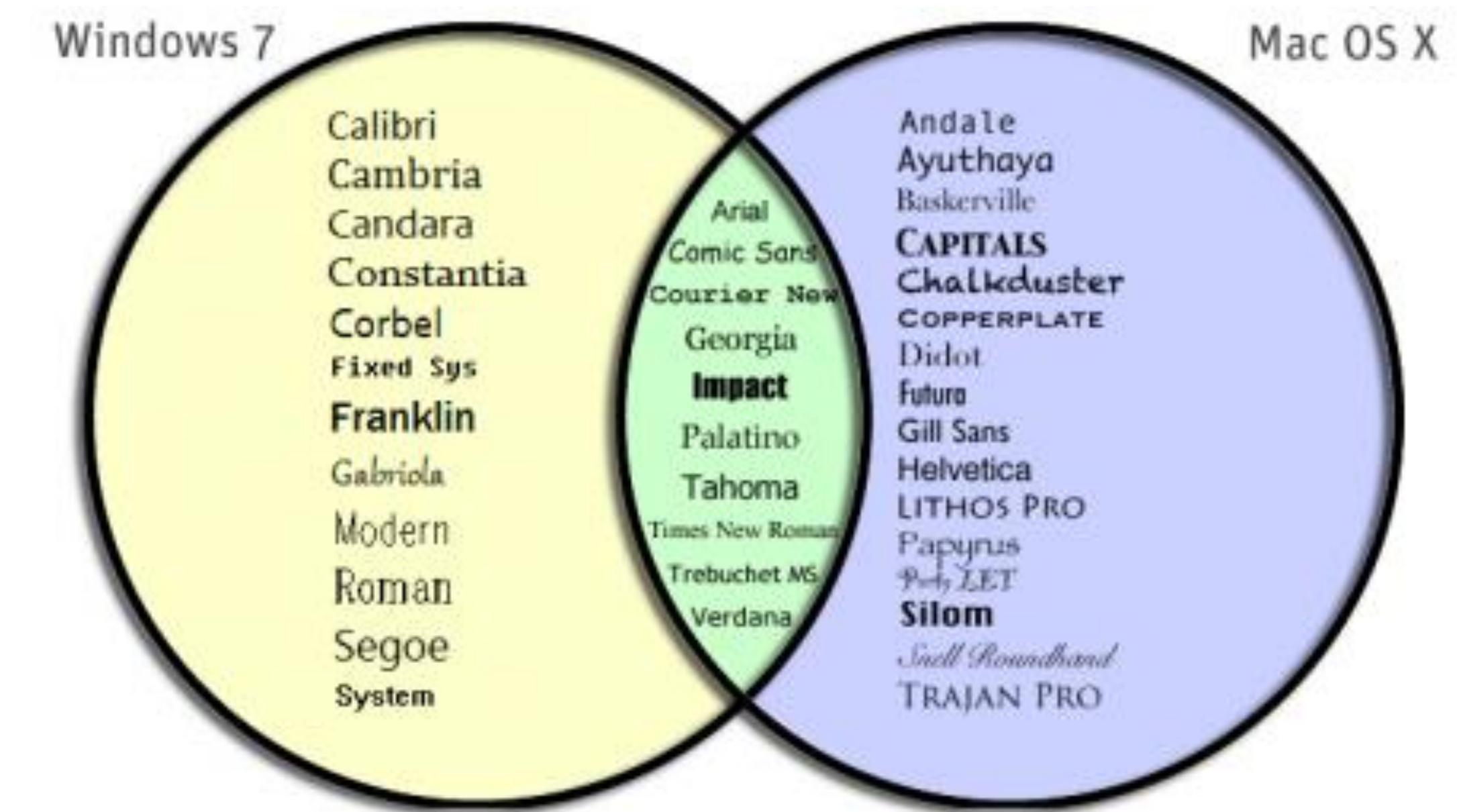
- There are many ways to describe the subtle different typefaces
- Two key categories for our concerns:
 1. Proportion
 2. Serif
- Font choices affect the way the reader interprets your message

Proportional
Monospace

Sans-serif
Serif

Web Safe Fonts

- MacOS, Windows and Linux come with different default fonts
- Fonts are considered “**web safe**” if they work on most devices
- **Examples:** Arial, Times New Roman, Tahoma, Verdana, Trebuchet, Courier New



The font-family Property

- We assign our typefaces (also known as font families) using the **font-family** property
- This property accepts **one or more** typeface names
- If the first type is unavailable, it will try the next one and so on

```
h1 {  
  font-family: Helvetica, Arial;  
}
```



Activity 9

Setting the font-family
for the body

1. Visit cssfontstack.com and browse all the different fonts we can choose from
2. Choose a font you like
3. Add a new rule to your **body** tag to define **font-family** for the page

```
body {  
    background-color: AliceBlue;  
    color: DarkSlateBlue;  
    font-family: Arial;  
}
```

Other Font Options

- There are thousands of fonts available to use — you aren't limited to just web safe fonts
- It is always a good idea to use web safe fonts as **fallbacks**
- **Google Fonts** has a lot of great options available for free

Google Fonts

Activity 10

Adding custom fonts

1. Visit fonts.google.com and find a font you like



- 2.
3. Click on the black box that pops up at the bottom of the page

4. Copy all the text in the grey box in the pop up window

Embed Font

To embed your selected fonts into a webpage, copy this code into the <head> of your HTML document.

STANDARD @IMPORT

```
<link href="https://fonts.googleapis.com/css?family=Noto+Serif+TC" rel="stylesheet">
```

Activity 10

Adding custom fonts

```
<head>
  <meta charset="utf-8">
  <link rel="stylesheet" href="style.css">
  <link href="https://fonts.googleapis.com/
  css?family=Noto+Serif+TC" rel="stylesheet">
</head>
```

Activity 10

Adding custom fonts

6. Update the **font-family** inside the body declaration

7. Make sure you use quotes around your google font and include a web safe font as a fallback

```
body {  
  font-family: 'Noto Serif TC', Georgia, serif;  
}
```

Gathering Time



Gathering Time is a time for check-in.

This is where we leave our desks behind, grab a stone and provide everyone with an opportunity to speak and to listen. Whoever is talking will hold the stone, and everyone else will listen.

Class Wrap-up

How was your day?

How's your website coming along?

Are you excited to add some colour?



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- Colors <http://precisionintermedia.com/color>
- Fonts <https://furbo.org/2018/03/28/system-fonts-in-css/>