

# HTML AND CSS

Intro to CSS

# LEARNING OBJECTIVES

- To understand what CSS is and what it's used for
  - To understand CSS syntax and be able to write your own
- 
- A large, solid orange shape occupies the bottom half of the slide. It has a jagged, mountain-like silhouette with several peaks and valleys, creating a modern, abstract background element.



**Cascading Style Sheets** is the language used to style websites.

It defines the visual representation of the content. For example colour, margins, borders, backgrounds and position in the page.

How do we add CSS?



# Three ways to insert CSS

- Inline style
- Internal style sheet
- External style sheet

**\*we will use external style sheet so it's tidier.  
This means all the CSS is in a separate file**

# Adding an External Style Sheet

- Create a new file and name it `main.css`
- Add the path/link of your CSS file inside the html file, inside the head tag

# Note!

- Do not use `<style>` in your HTML (you may come across this on your research).
- But we should use our CSS styling in a separate file (external style sheet)

# Inside the index.html file

```
<!DOCTYPE html>  
<html lang="en">  
<head>
```

Make sure the path to the css file is correct

```
  <meta charset="UTF-8">
```

```
  <link rel="stylesheet" type="text/css" href="main.css">
```

```
  <title>Website title</title>
```

```
</head>
```

```
<body>
```

Content here...

```
</body>
```

```
</html>
```



# File Structure

- **index.html**
- **main.css**
- **image.png**

# Comments

```
/* this is css comments*/
```

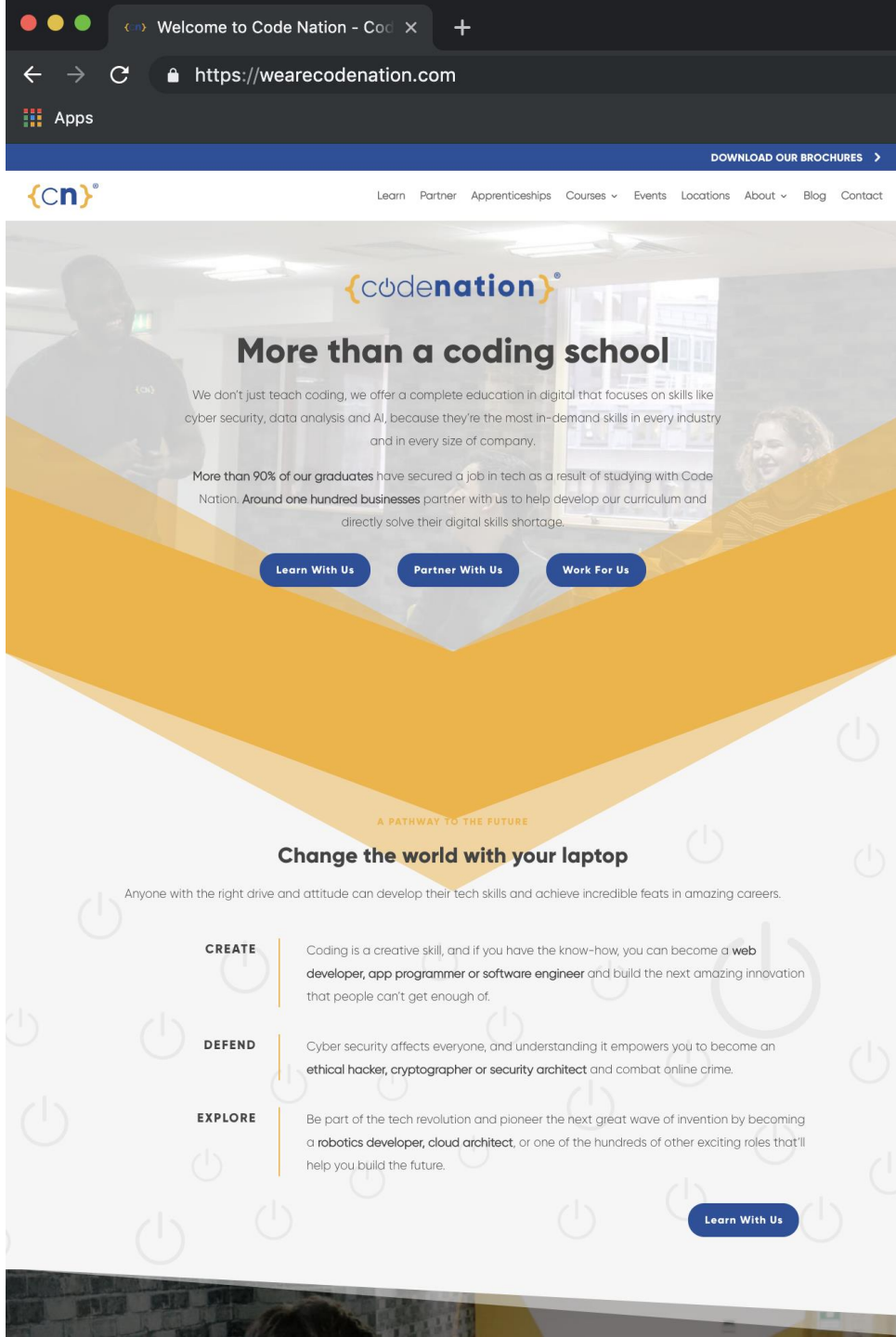
```
/*this also works
```

```
on multi-line
```

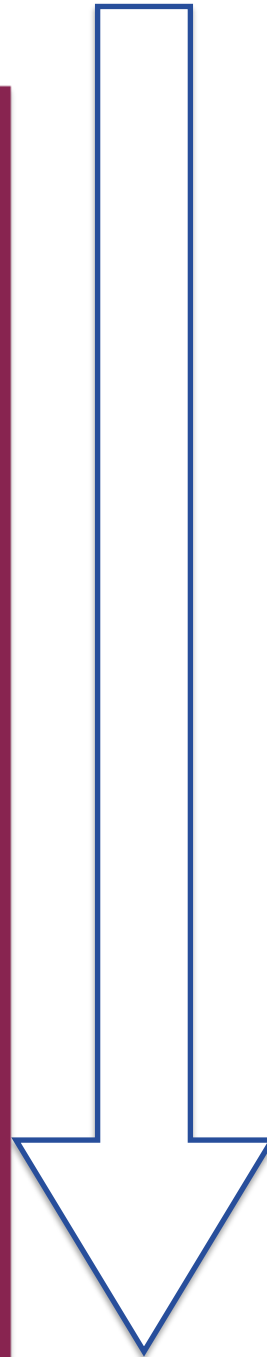
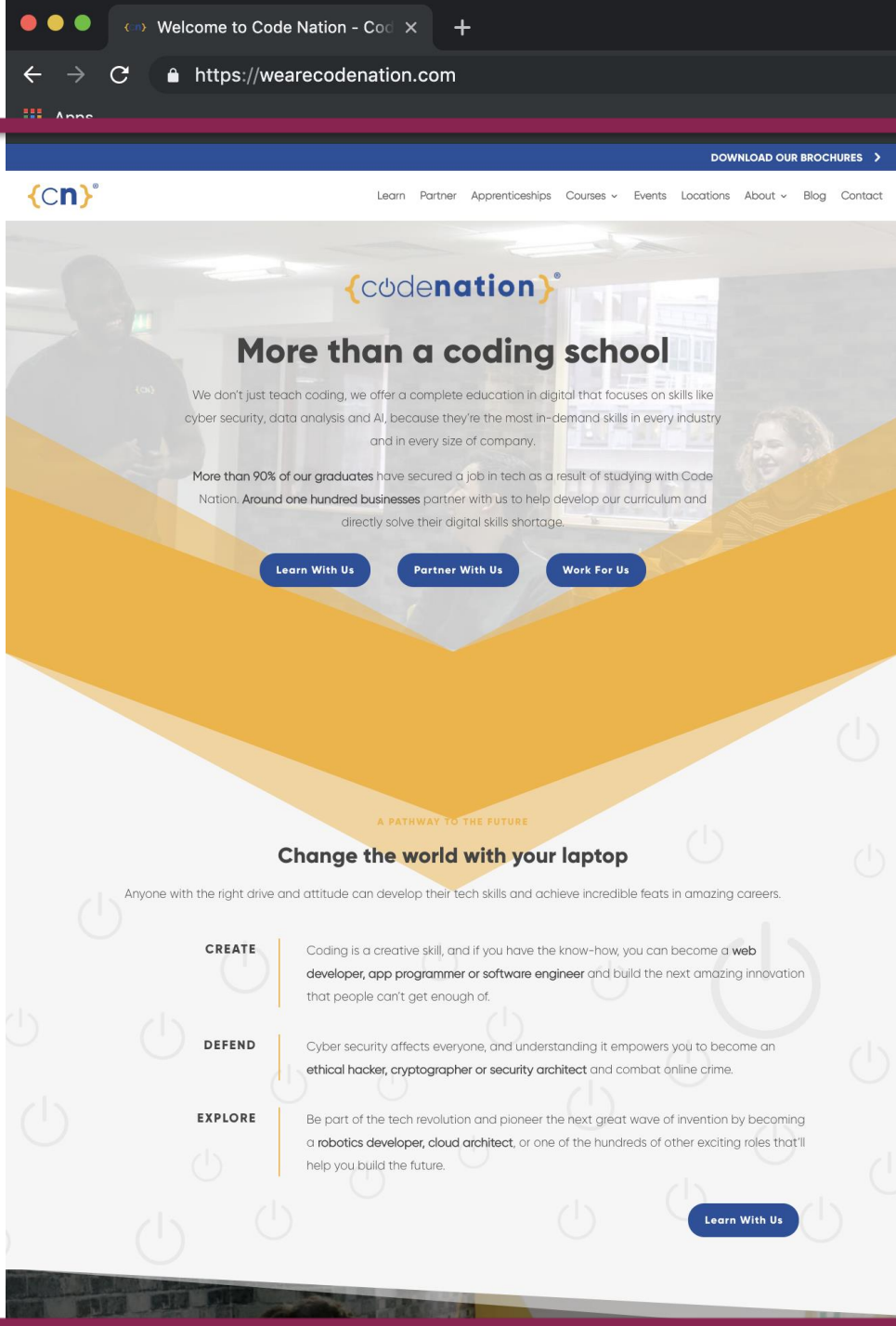
```
Comment*/
```

**A little tip!**





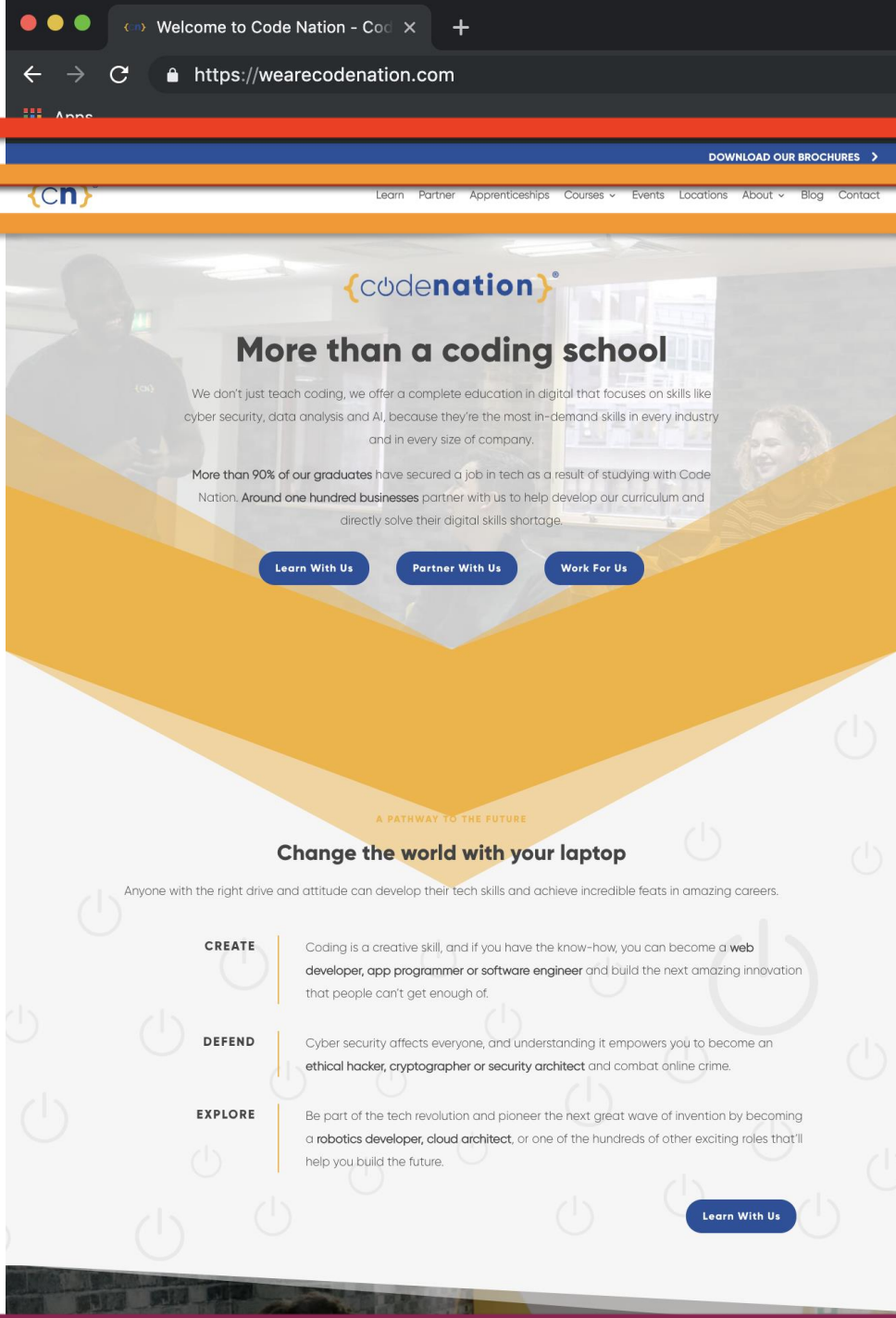
Always start from  
**top to bottom** when  
doing any styling



Think about...

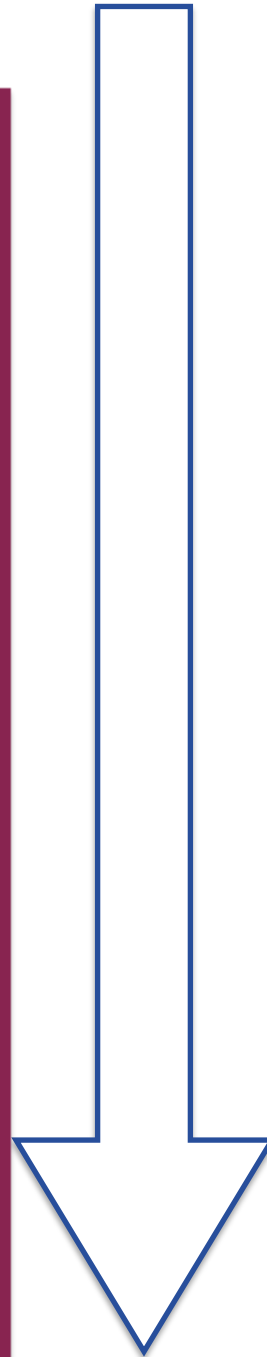
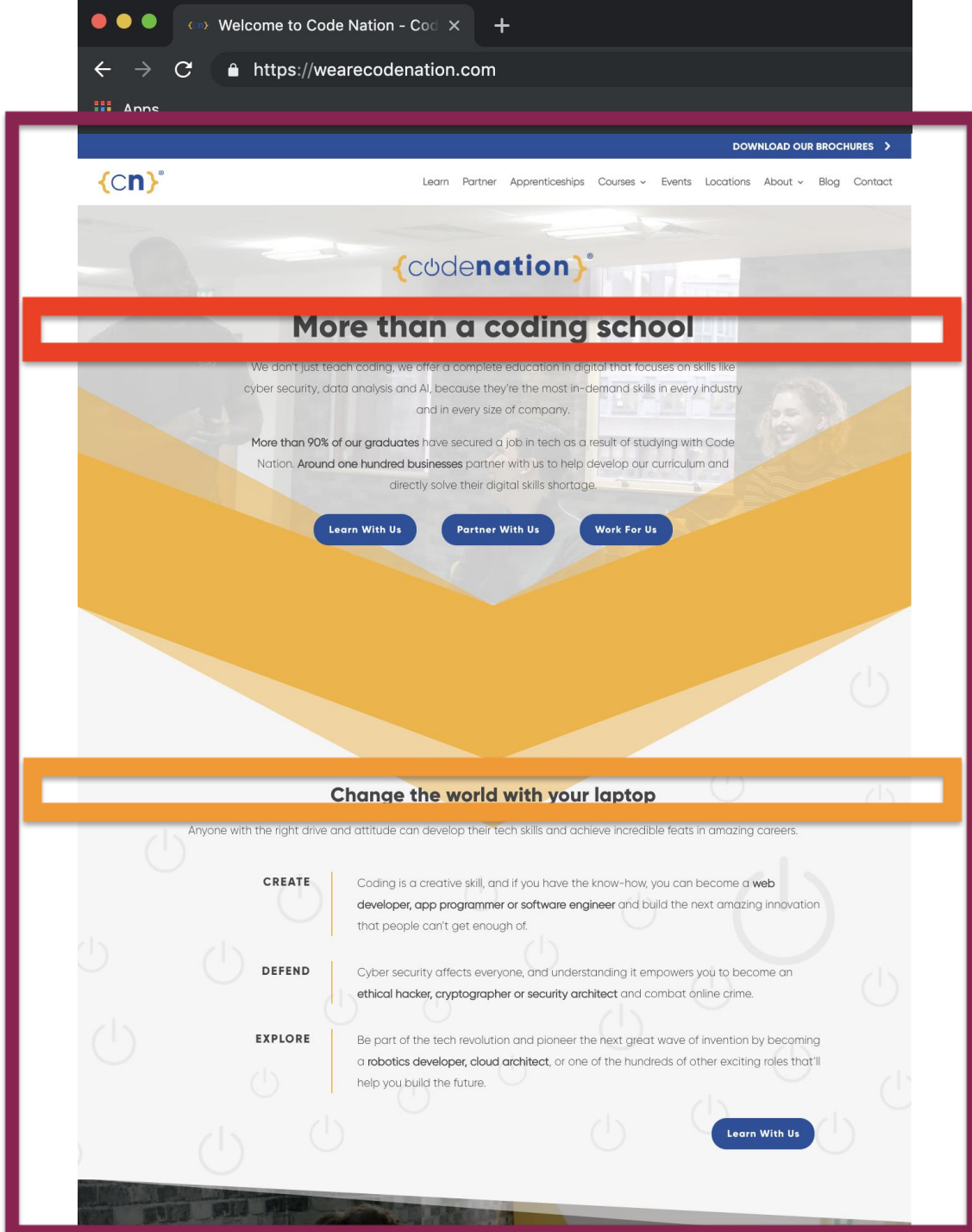
The whole body:

Font  
Color



Think about...

The menus



Think about...

Headings...

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## More than a coding school

We don't just teach coding, we offer a complete education in digital that focuses on skills like cyber security, data analysis and AI, because they're the most in-demand skills in every industry and in every size of company.

More than 90% of our graduates have secured a job in tech as a result of studying with Code Nation. Around one hundred businesses partner with us to help develop our curriculum and directly solve their digital skills shortage.

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Work For Us

A PATHWAY TO THE FUTURE

## Change the world with your laptop

Anyone with the right drive and attitude can develop their tech skills and achieve incredible feats in amazing careers.

### CREATE

Coding is a creative skill, and if you have the know-how, you can become a **web developer, app programmer or software engineer** and build the next amazing innovation that people can't get enough of.

### DEFEND

Cyber security affects everyone, and understanding it empowers you to become an **ethical hacker, cryptographer or security architect** and combat online crime.

### EXPLORE

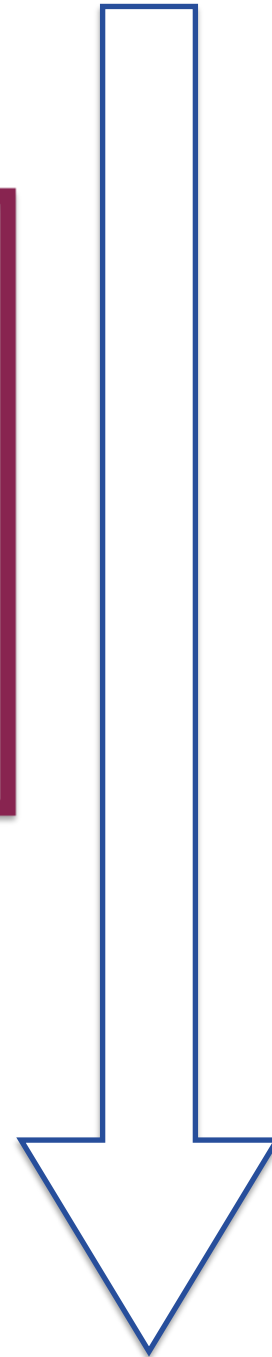
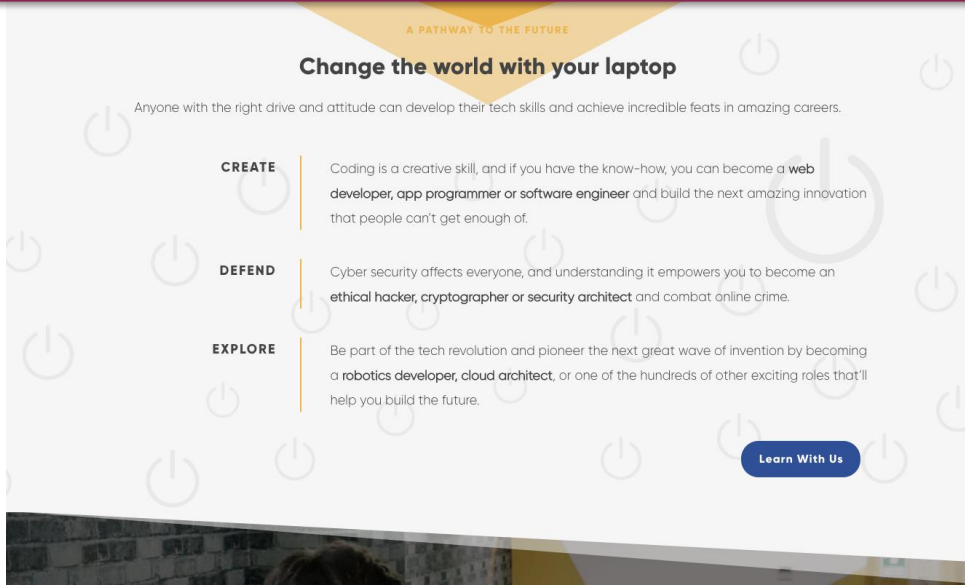
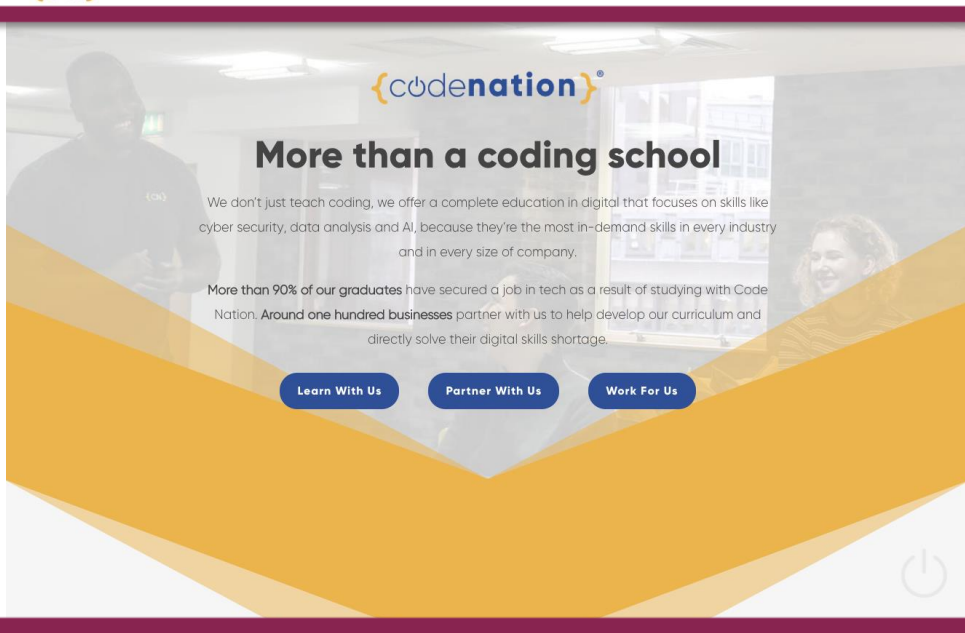
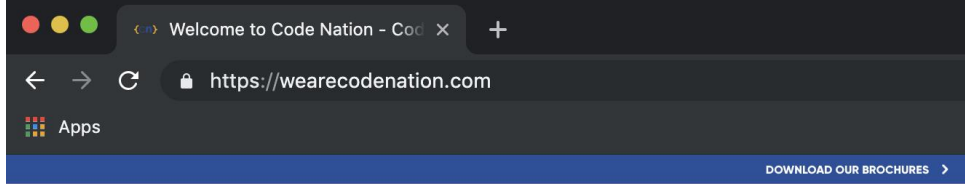
Be part of the tech revolution and pioneer the next great wave of invention by becoming a **robotics developer, cloud architect**, or one of the hundreds of other exciting roles that'll help you build the future.

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# Think about...

# All paragraphs...

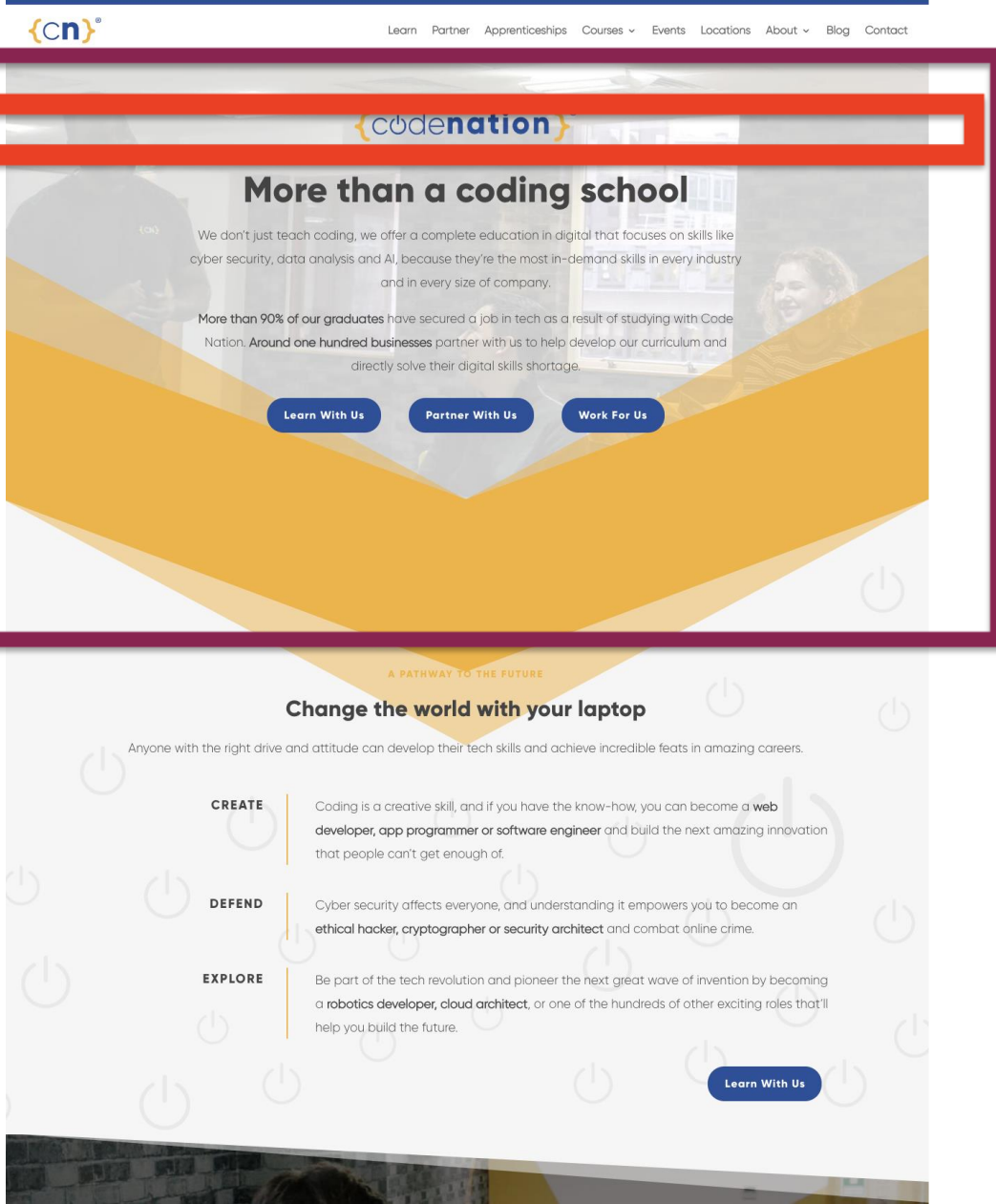
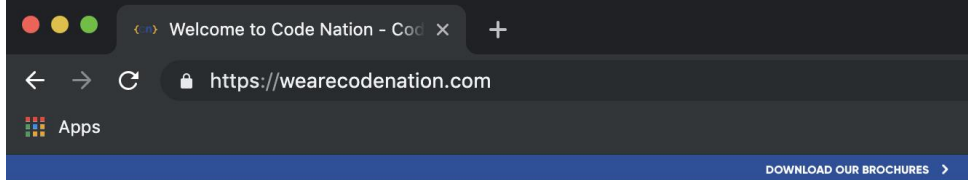




Think about...

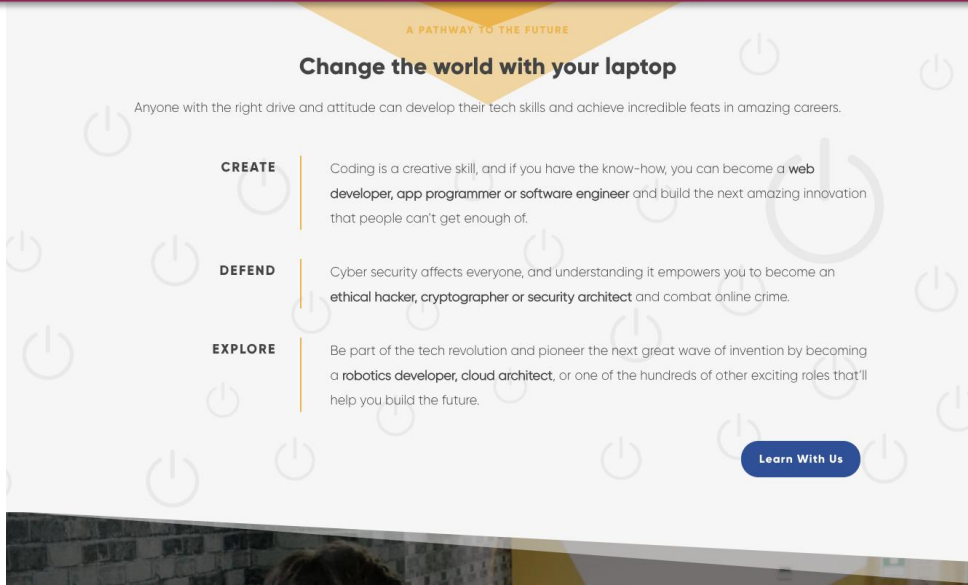
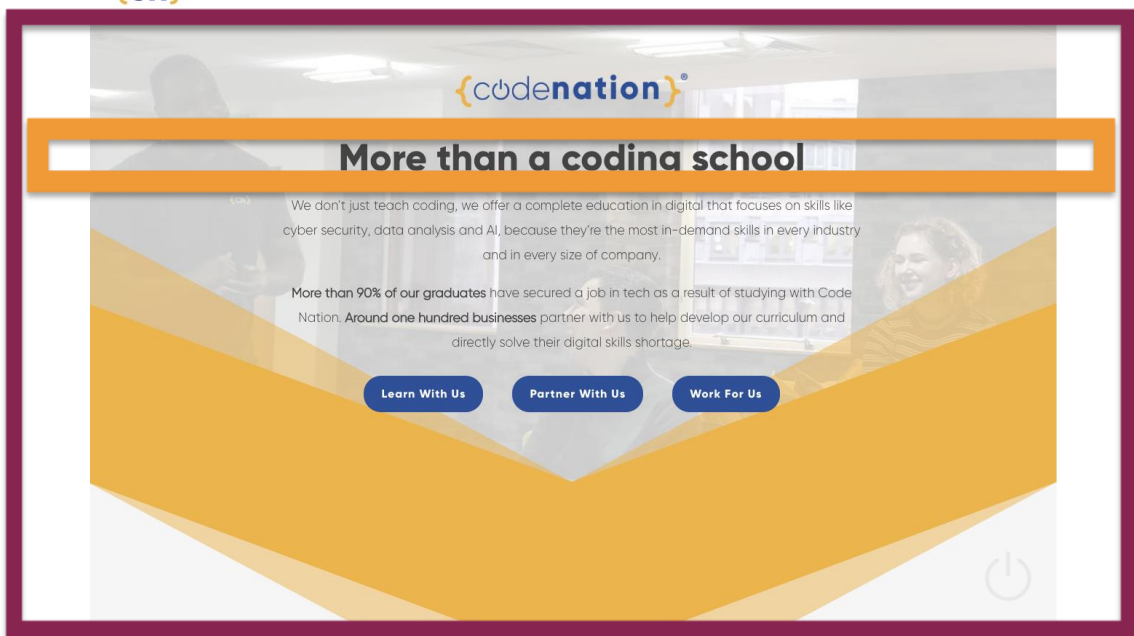
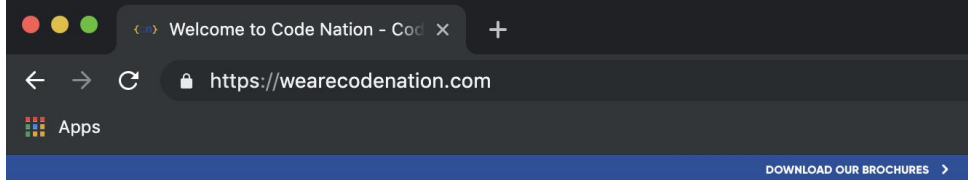
The first section





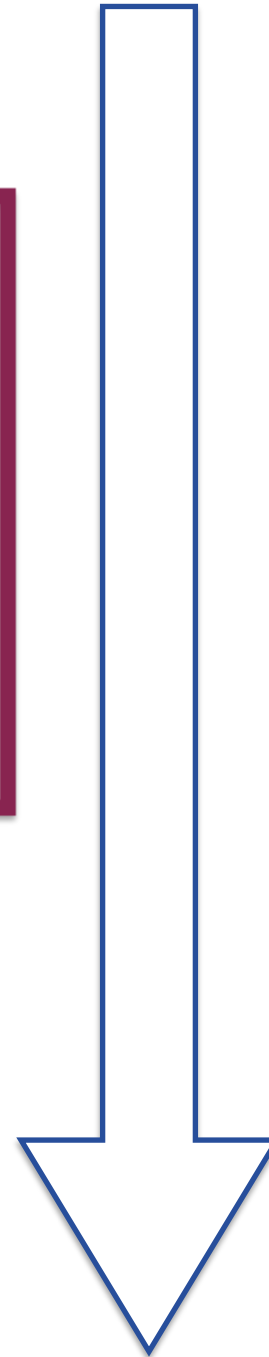
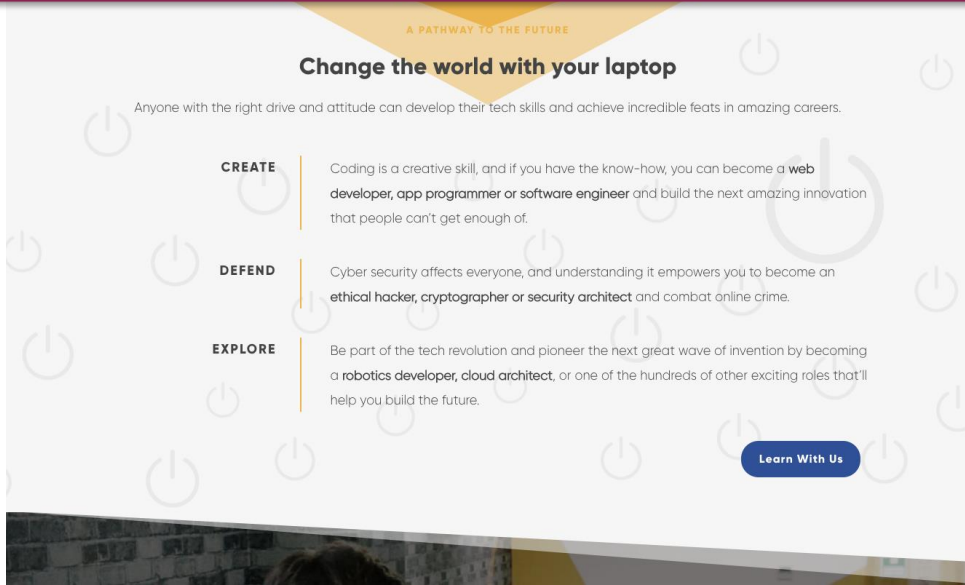
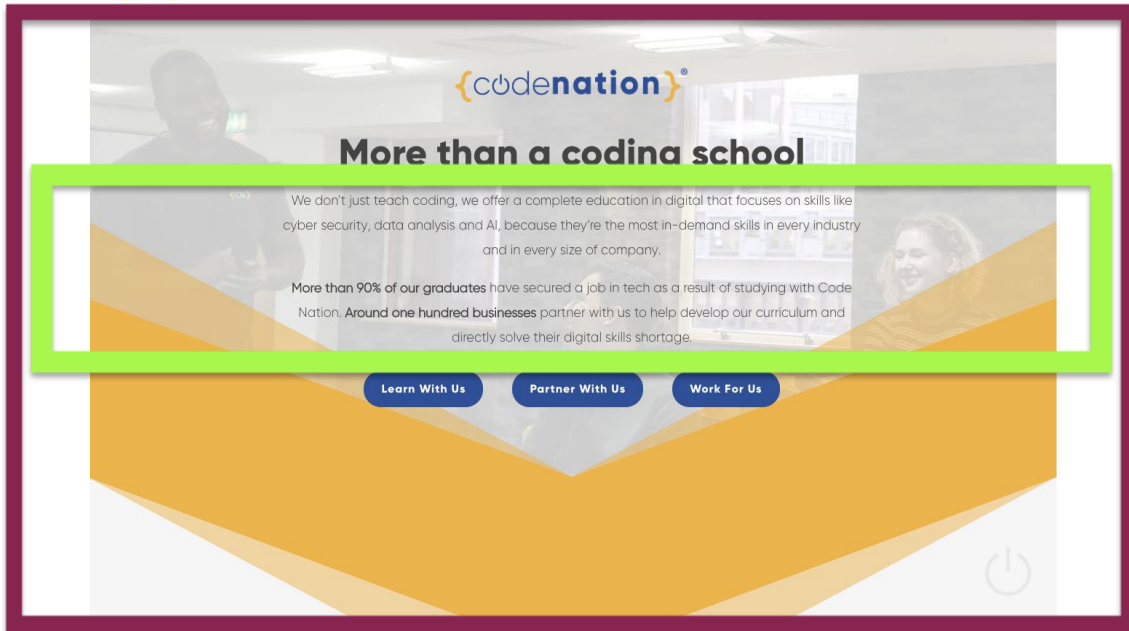
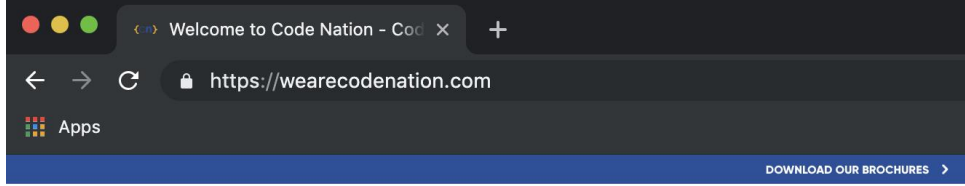
Think about...

The logo



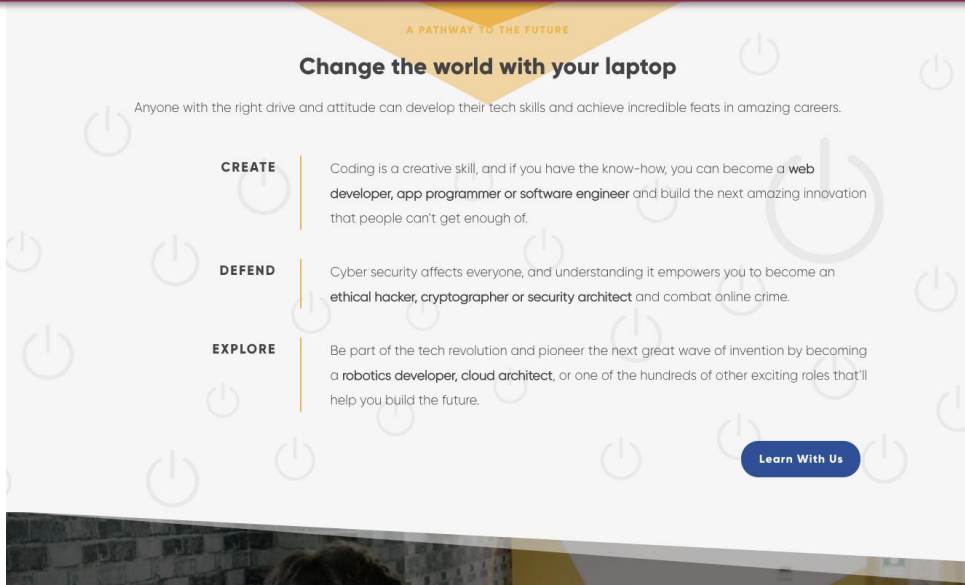
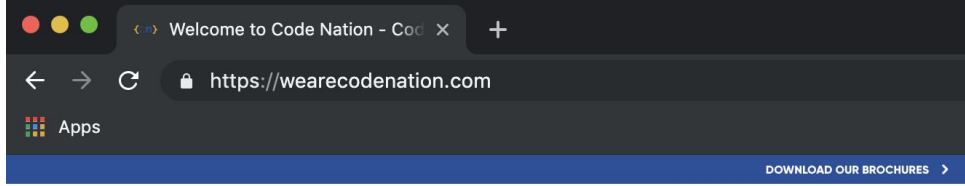
Think about...

The heading



Think about...

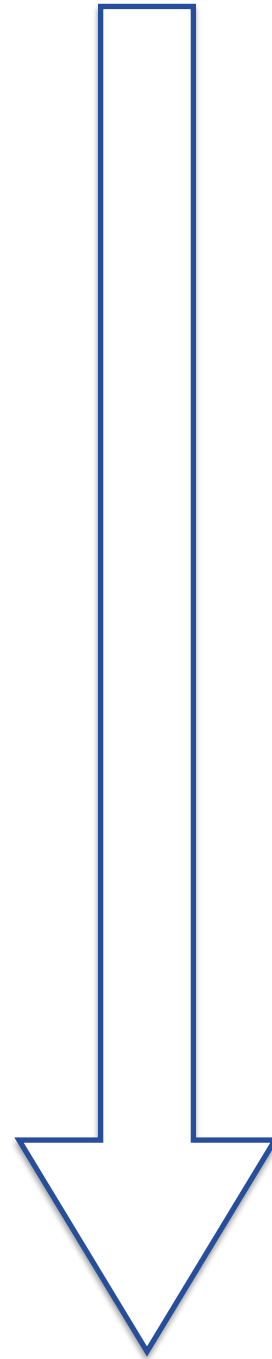
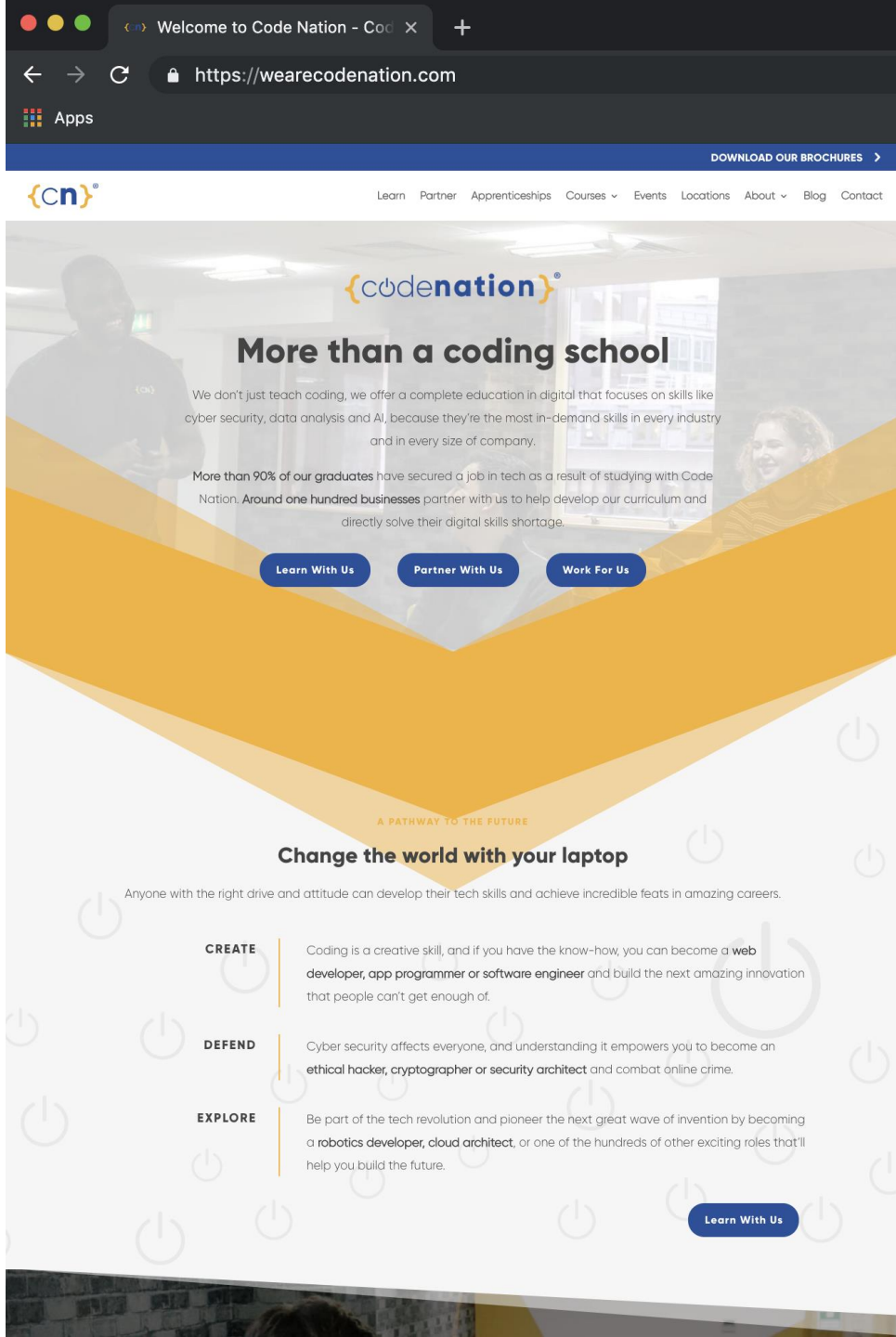
The paragraph



Think about...

The buttons





and so on...



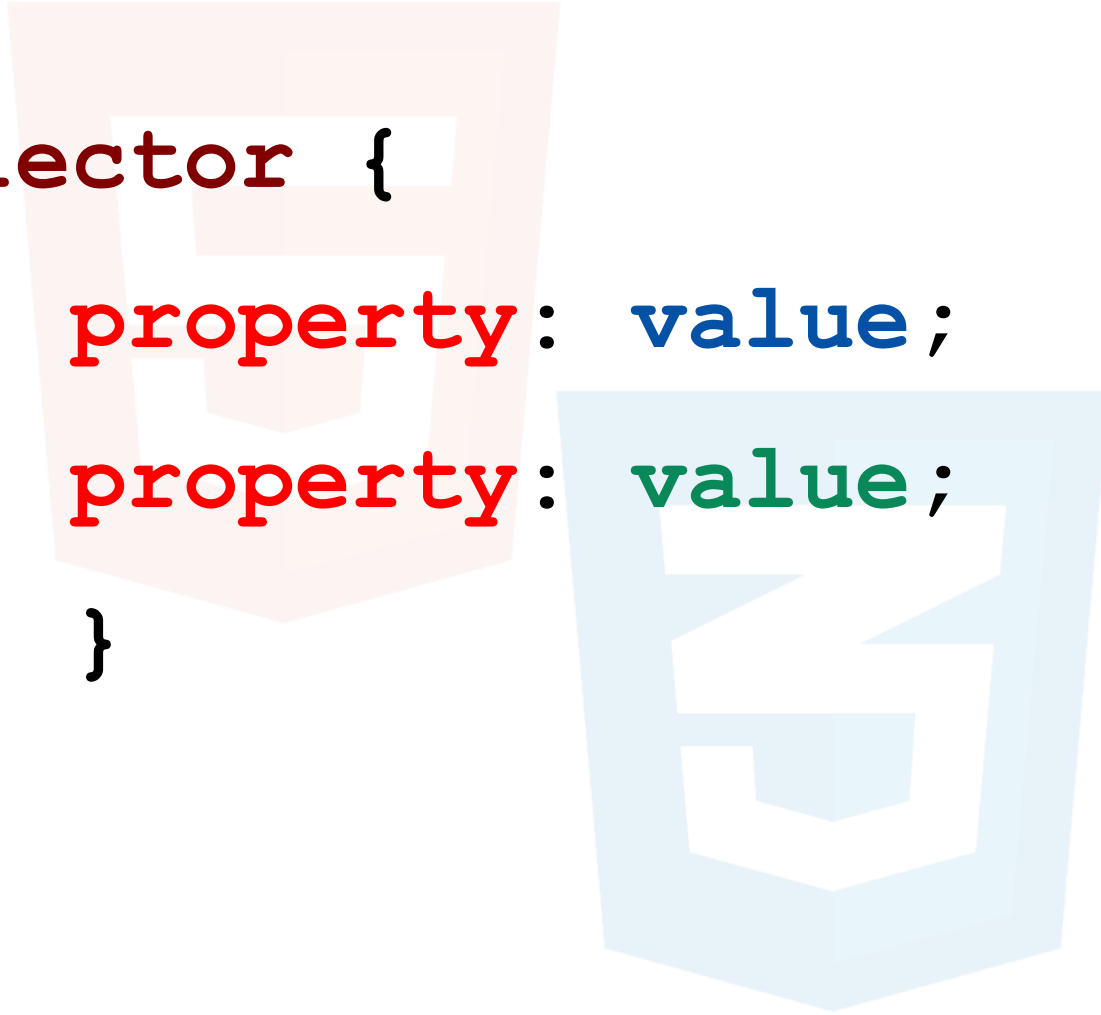
# CSS ***syntax***



# CSS Syntax

```
h1 {  
    color: red;  
    font-size: 12px;  
}
```

```
selector {  
    property: value;  
    property: value;  
}
```





# CSS Selectors



# CSS Selectors

They are used to find the html elements based on their **tag name, id, class** etc.

Styling can also be applied to the whole html.

# Element Selector

```
h1 {  
    color: red;  
    font-size: 12px;  
}
```

```
elementtag {  
    property: value;  
    property: value;  
}
```



## HTML



1 ▾ <h1>Section 1</h1>

2 ▾ <h2>Section 2</h2>

3 ▾ <p>Section3</p>



## CSS



1 ▾ h1 {

2     color: red;

3 }

4

5 ▾ h2 {

6     color: red;

7 }

# Section 1

## Section 2

Section3

# Group Selectors

You can set the same styling to different groups

```
h1, h2, p{  
    color: violet;  
}
```



# The whole HTML!

```
* {  
    background-color: aliceblue;  
    font-size: 12px;  
}
```

```
* {  
    property: value;  
    property: value;  
}
```



⚙ HTML

1

<h1> This looks awful but I'm just using it  
to illustrate a point</h1>

2

<h2>This is my second heading.</h2>

3

<div>

4

<p>

5

This is the main body of my truly awful  
blog.

6

</p>

7

</div>

⚙ CSS

1

\* {

2

background-color: blue;

3

font-size: 24px;

4

}

5

**This looks awful but I'm just using it to illustrate a point**

**This is my second heading.**

**This is the main body of my truly awful blog.**

**What if we want to select  
things a bit differently?**





# Class Selector

```
.aboutme {  
    background-color: firebrick;  
}
```

```
.classname {  
    property: value;  
}
```

\* same class name can be applied in different parts of the page

# Defining in HTML - classes

-In CSS:

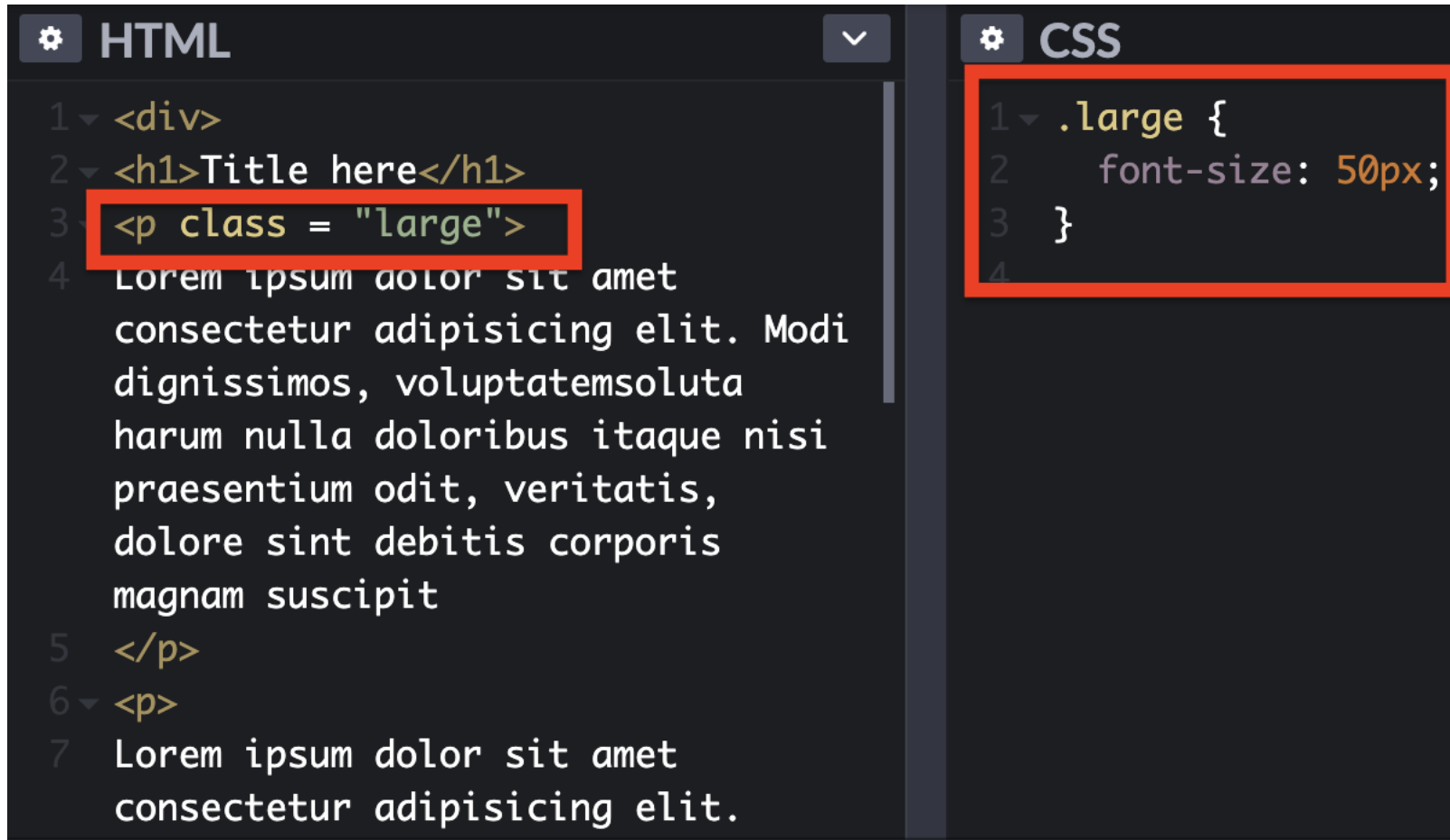
```
.large {  
    font-size: 50px;  
}
```

-In HTML:

```
<p class="large">Hello World</p>
```



# Defining in HTML - classes



```
HTML
1 <div>
2 <h1>Title here</h1>
3 <p class = "large">
4 Lorem ipsum dolor sit amet
  consectetur adipisicing elit. Modi
  dignissimos, voluptatemsoluta
  harum nulla doloribus itaque nisi
  praesentium odit, veritatis,
  dolore sint debitis corporis
  magnam suscipit
5 </p>
6 <p>
7 Lorem ipsum dolor sit amet
  consectetur adipisicing elit.
```

```
CSS
1 .large {
2   font-size: 50px;
3 }
```



# Defining in HTML - classes

**Title here**

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi dignissimos, voluptatem soluta harum nulla doloribus itaque nisi praesentium odit, veritatis, dolore sint debitis corporis magnam suscipit

Lorem ipsum dolor sit amet consectetur adipisicing elit. Itaque quibusdam iusto consequatur veritatis dolore aspernatur, ut doloribus! Impedit, velit consectetur, dolores cum laudantium ipsum quibusdam veniam tempora facilis vero commodi!

# Defining in HTML - classes

**Title here**

Lorem ipsum dolor sit amet consectetur adipisicing elit. Modi dignissimos, voluptatem soluta harum nulla doloribus itaque nisi praesentium odit, veritatis, dolore sint debitis corporis magnam suscipit

Lorem ipsum dolor sit amet consectetur adipisicing elit. Itaque quibusdam iusto consequatur veritatis dolore aspernatur, ut doloribus! Impedit, velit consectetur, dolores cum laudantium ipsum quibusdam veniam tempora facilis vero commodi!

<h1>

<p class="large">

<p>



## HTML



```
1 <h1 class="makeMeRed">Section 1</h1>
2 <h2 class="makeMeRed">Section 2</h2>
3 <p>Section3</p>
```



## CSS



```
1 .makeMeRed {
2   color: red;
3 }
```

Section 1

Section 2

Section3

# Defining in HTML - classes

- Can have more than one style so add as many as required
- In HTML:

```
<p class="center large">Hello World</p>
```

# Defining in HTML - classes

-In CSS:

```
.center {  
    text-align: center;  
}  
  
.large {  
    font-size: 50px;  
}
```





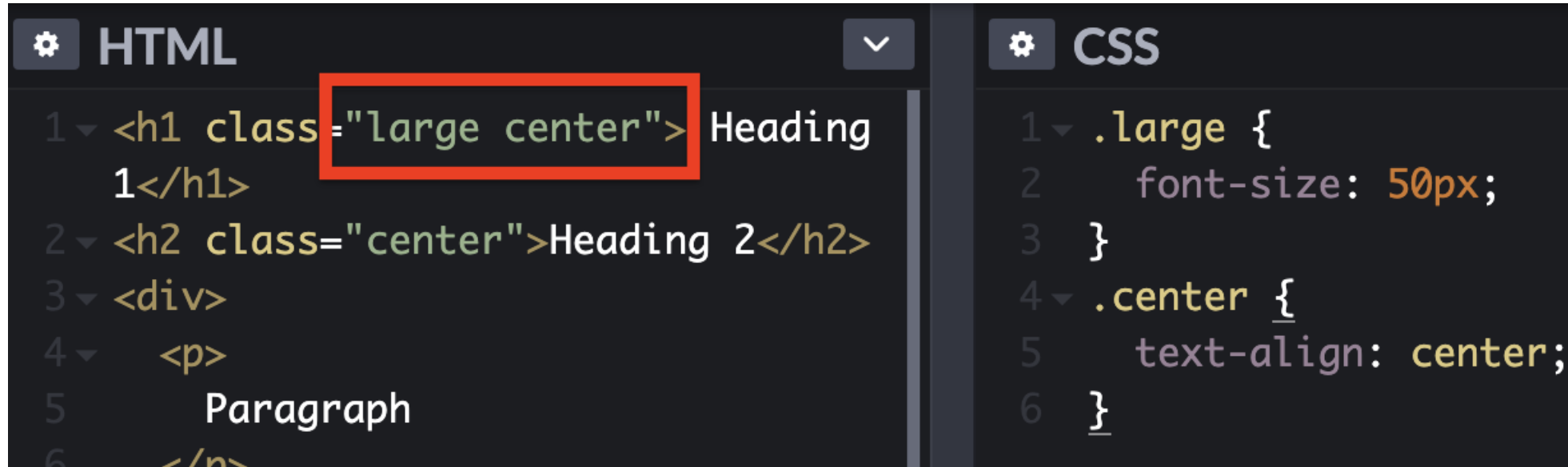
# Defining in HTML - classes

- Can have more than one style so add as many as required
- In HTML:

```
<p class="center large">Hello World</p>
```

\* space between each class

# Defining in HTML - classes



```
HTML
1 <h1 class="large center">Heading 1</h1>
2 <h2 class="center">Heading 2</h2>
3 <div>
4 <p>
5   Paragraph
6 </p>

CSS
1 .large {
2   font-size: 50px;
3 }
4 .center {
5   text-align: center;
6 }
```

**Heading 1**

**Heading 2**

where `<div>` comes into play

A decorative graphic in the bottom right corner consisting of several overlapping, rounded, light purple shapes of various sizes, creating a layered, abstract effect.

# Class vs ID



# ID Selector

```
#specialBlue {  
    color: blue;  
    font-size: 20px;  
}
```

```
#idname {  
    property: value;  
    property: value;  
}
```

\* each id name should only appear once

# Defining in HTML - id

- This is unique - only one id
- Cannot start with a number
- In HTML:

```
<p id="para1">Paragraph 1</p>
```

- In CSS:

```
#para1 {  
    color: blue;  
}
```

# A little extra - Box sizing



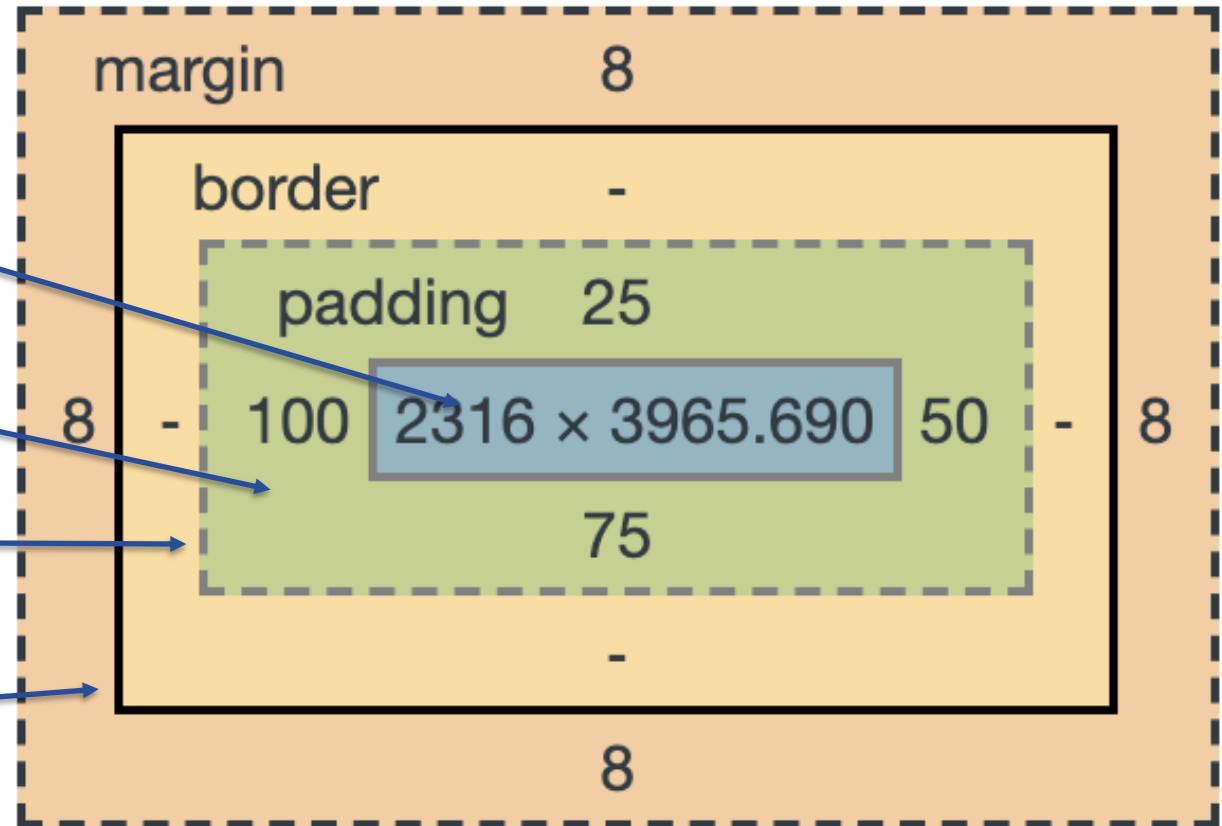
# Box Model - design and layout

Content

Padding

Border

Margin





# Box Model - design and layout

## Content

- The content of the box, where text and images appear

## Padding

- Clears an area around the content. The padding is transparent

## Border

- A border that goes around the padding and content

## Margin

- Clears an area outside the border. The margin is transparent

# Box Sizing

Defines how the width and height of an element are calculated, should they include padding and border or not.

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

\* reset the border to the whole HTML as most browsers have their own settings

# Example - Padding

- Generate space around an element's content, inside any defined borders

```
* {  
    box-sizing: border-box;  
    padding: 25px;  
}
```

- One value: all for paddings

# Example - Padding

- Generate space around an element's content, inside any defined borders

```
* {  
    box-sizing: border-box;  
    padding: 25px 50px 75px 100px;  
}
```

- Padding applied: top 25, right 50, bottom 75, left 100
- Three values: top, right and left, bottom
- Two values: top and bottom

**A little extra** - element sizing

A decorative graphic in the bottom right corner consisting of several overlapping rounded rectangles in various shades of purple and blue, creating a layered, abstract effect.

# Height and width of an element

You can set the sizes of any element to how you like it, these are the main ones:

- Value:

- **auto**: the browser calculates the width
- **length**: Defines the height/width in px for example
- **%**: Defines the width in percentage of the containing block

# Height and width of an element

You can set the sizes of any element to how you like it, these are the main ones:

- Value:

- **auto**: the browser calculates the width
- **length**: Defines the height/width in px for example
- **%**: Defines the width in percentage of the containing block

```
img {  
  width: 100%;  
}
```

Set the image to 100% of the original size

**A little extra –**  
**colours and backgrounds**





# Three main colour values

- String (tomato)

- Hex (#ff6347)

- RGB values (255, 99, 71)



# Three main colour values

Some colours are defined already in CSS:

- String (tomato)

Or you can create the perfect colour:

- Hex (#ff6347)
- RGB values (255, 99, 71)
- and many more (RGBA, HSL, HSLA)



# Three main colour values

How to implement:

- String (tomato)

`color: tomato;`

- Hex (#ff6347)

`color: #ff6347;`

- RGB values (255, 99, 71)

`color: rgb (255, 99, 71);`



# A tip

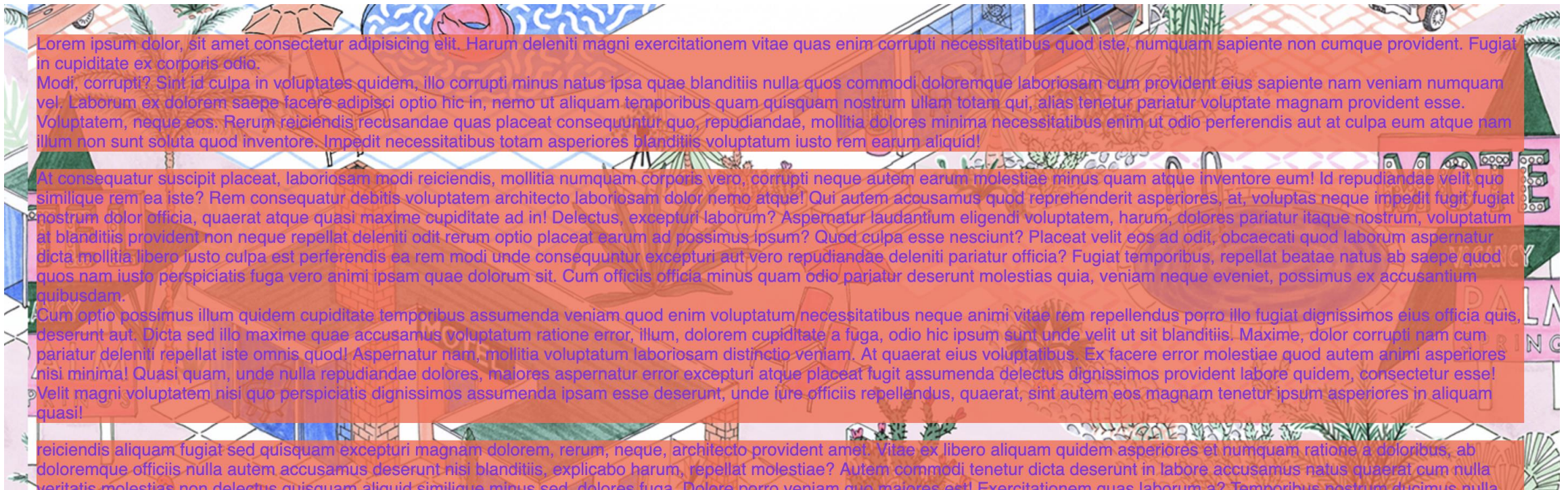
If you want to play with transparency (i.e slightly transparent background for your content), use RGBA.

We use RGB values but add a fourth value that defines the amount of transparency on a scale from 0-1 (0 being completely clear, 1 being solid)

```
body {  
    background-color: rgba(255, 99, 71, 0.8);  
}
```

# A tip

```
body {  
    background-color: rgba(255, 99, 71, 0.8);  
}
```



Lorem ipsum dolor, sit amet consectetur adipisicing elit. Harum deleniti magni exercitationem vitae quas enim corrupti necessitatibus quod iste, humquam sapiente non cumque provident. Fugiat in cupiditate ex corporis odio.

Modi, corrupti? Sint id culpa in voluptates quidem, illo corrupti minus natus ipsa quae blanditiis nulla quos commodi doloremque laboriosam cum provident eius sapiente nam veniam numquam vel. Laborum ex dolorem saepe facere adipisci optio hic in, nemo ut aliquam temporibus quam quisquam nostrum ullam totam qui, alias tenetur pariatur voluptate magnam provident esse. Voluptatem, neque eos. Rerum reiciendis recusandae quas placeat consequuntur quo, repudiandae, mollitia dolores minima necessitatibus enim ut odio perferendis aut at culpa eum atque nam illum non sunt soluta quod inventore. Impedit necessitatibus totam asperiores blanditiis voluptatum iusto rem earum aliquid!

At consequatur suscipit placeat, laboriosam modi reiciendis, mollitia numquam corporis vero, corrupti neque autem earum molestiae minus quam atque inventore eum! Id repudiandae velit quo similique rem ea iste? Rem consequatur debitis voluptatem architecto laboriosam dolor nemo atque! Qui autem accusamus quod reprehenderit asperiores, at, voluptas neque impedit fugit fugiat nostrum dolor officia, quaerat atque quasi maxime cupiditate ad in! Delectus, excepturi laborum? Aspernatur laudantium eligendi voluptatem, harum, dolores pariatur itaque nostrum, voluptatum at blanditiis provident non neque repellat deleniti odit rerum optio placeat earum ad possimus ipsum? Quod culpa esse nesciunt? Placeat velit eos ad odit, obcaecati quod laborum aspernatur dicta mollitia libero iusto culpa est perferendis ea rem modi unde consequuntur excepturi aut vero repudiandae deleniti pariatur officia? Fugiat temporibus, repellat beatae natus ab saepe quod quos nam iusto perspiciatis fuga vero animi ipsam quae dolorum sit. Cum officiis officia minus quam odio pariatur deserunt molestias quia, veniam neque eveniet, possimus ex accusantium quibusdam.

Cum optio possimus illum quidem cupiditate temporibus assumenda veniam quod enim voluptatum necessitatibus neque animi vitae rem repellendus porro illo fugiat dignissimos eius officia quis, deserunt aut. Dicta sed illo maxime quae accusamus voluptatum ratione error, illum, dolorem cupiditate a fuga, odio hic ipsum sunt unde velit ut sit blanditiis. Maxime, dolor corrupti nam cum pariatur deleniti repellat iste omnis quod! Aspernatur nam, mollitia voluptatum laboriosam distinctio veniam. At quaerat eius voluptatibus. Ex facere error molestiae quod autem animi asperiores nisi minima! Quasi quam, unde nulla repudiandae dolores, maiores aspernatur error excepturi atque placeat fugit assumenda delectus dignissimos provident labore quidem, consectetur esse! Velit magni voluptatem nisi quo perspiciatis dignissimos assumenda ipsam esse deserunt, unde iure officiis repellendus, quaerat, sint autem eos magnam tenetur ipsum asperiores in aliquam quasi!

reiciendis aliquam fugiat sed quisquam excepturi magnam dolorem, rerum, neque, architecto provident amet. Vitae ex libero aliquam quidem asperiores et numquam ratione a doloribus, ab doloremque officiis nulla autem accusamus deserunt nisi blanditiis, explicabo harum, repellat molestiae? Autem commodi tenetur dicta deserunt in labore accusamus natus quaerat cum nulla veritatis molestias non delectus quisquam aliquid similique minus sed, dolores fuga. Dolore porro veniam quo maiores est! Exercitationem quas laborum a? Temporibus nostrum ducimus nulla

# Adding a background image to your page

Target the 'body' element or add a class.

```
body {  
    background-image: url ("background.jpg") ;  
}
```

Not perfect? You can improve this... Check out the link or research.

[https://www.w3schools.com/cssref/pr\\_background-image.asp](https://www.w3schools.com/cssref/pr_background-image.asp)

**A little extra - fonts**



# Font Properties

- Change font (font-family)
- Different sizes (font-size)
- Different style (font-style) - normal, *italic*
- Different font size with pixels (font-weight)



# Google fonts

We can import fonts that are not commonly used. HTML has a few standard fonts to use.

[fonts.google.com](https://fonts.google.com) is one of the many resources we can use to help us



Sentence ▾

40px ▾



Categories ▾

Language ▾

Font properties ▾



Show only variable fonts ⓘ

993 of 993 families

View:



Grid



List

Sort by: Trending ▾

Roboto

12 styles

Christian Robertson

Almost before we knew  
it, we had left the  
ground.

Grenze Gotisch

Variable

Omnibus-Type

Almost before we knew it, we  
had left the ground.

Modak

1 style

Ek Type

**Almost before we  
knew it, we had left**

Open Sans

Steve Matteson

Almost before we  
knew it, we had left

Search and select the  
one you want

# Styles

Type here to preview text

Almost before we knew it, we had left the ground.

Size: 30px ▼



Thin 100

Almost before we knew it, we had left the ground.

+ Select this style

Thin 100 italic

*Almost before we knew it, we had left the ground.*

+ Select this style

Light 300

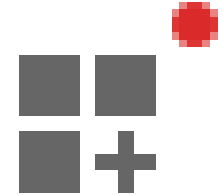
**Choose 'select this style' for the one you want**

Selected family



Review

Embed



Roboto

Thin 100



Add more styles

Remove all

**A tab should appear on the right hand side of the screen, or click on this**

Selected family



Review

Embed

Roboto

Thin 100



Add more styles

Remove all

Select **Embed** and then  
**'@import'**

To embed a font, copy the code into the  
<head> of your html

<link> @import

```
<style>
@import url('https://fonts.goog
leapis.com/css2?family=Roboto:w
ght@100&display=swap');
</style>
```

CSS rules to specify families

```
font-family: 'Roboto', sans-ser
if;
```

To embed a font, copy the code into the  
<head> of your html

<link>    @import

```
<style>  
@import url('https://fonts.goog  
leapis.com/css2?family=Roboto:w  
ght@100&display=swap');  
</style>
```

CSS rules to specify families:

```
font-family: 'Roboto',  
if;
```

**Copy and past this code to the top of  
css file (you do not need <style> and  
</style>)**

To embed a font, copy the code into the  
<head> of your html

<link>    @import

```
<style>  
@import url('https://fonts.goog  
leapis.com/css2?family=Roboto:w  
ght@100&display=swap')  
</style>
```

CSS rules to specify families

```
font-family: 'Roboto', sans-ser  
if;
```

**The exact CSS syntax you need has  
been generated here - copy and paste  
this to your styling**

To embed a font, copy the code into the <head> of your html

<link> @import

```
<style>
@import url('https://fonts.goog
leapis.com/css2?family=Roboto:w
ght@100&display=swap')
</style>
```

**'Roboto' is the name of the font we're importing**  
**Sans-serif is the backup font**

CSS rules to specify families

```
font-family: 'Roboto', sans-ser
if;
```



# Google fonts - in practice


At the very top of my CSS

```
@import  
url('https://fonts.googleapis.com/css2?family=Roboto:wght@10  
0&display=swap');
```

```
h1 {  
    font-family: 'Roboto', sans-serif;  
}
```

Applying the imported style

# LEARNING OBJECTIVES

- To understand what CSS is and what it's used for
  - To understand CSS syntax and be able to write your own
- 
- A large, solid orange shape occupies the bottom half of the slide. It has a jagged, mountain-like silhouette with several peaks and valleys, creating a modern, abstract background element.

# **ACTIVITY**

**Add CSS to all HTML pages you have created so far.**

**You must include at least a class and an id.**

**There is much, much more that you can do with CSS. These are the basics. You can research more to get your website exactly as you like it.**

# What about layout, positioning and arranging things?

We will use CSS Flexbox tomorrow. It's much easier to use for centering, alignment and position of items (we also use it to make really nice navbars). So wait!

# MORE INFO:

<https://www.w3schools.com/css/>

[https://developer.mozilla.org/en-US/docs/Learn/Getting started with the web/CSS basics](https://developer.mozilla.org/en-US/docs/Learn/Getting_started_with_the_web/CSS_basics)