

Before we start...

Make sure to download the starter kit on [the event website](#)!

Unzip the files from the starter kit, and move it into a new folder.

- Windows: Right Click > Extract all...
- Mac: Double click on zip file
- [HowTo Guide](#)

Optional: You can also install a different text editor such as [Notepad++](#) or [Sublime Text](#), which might make reading code easier by colour coding parts of the code for you.

The starter kit should contain some .html files.

Double clicking will open the page in your web browser. This will allow you to see how the html document looks on a website. It's useful for previewing how your changes to the html file affects how the web page looks!

To edit, go to Notepad (Win) or TextEdit (Mac), or a text editor you've installed.

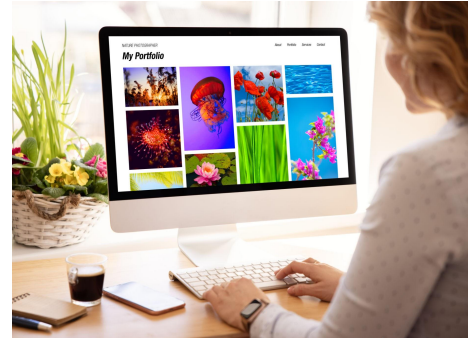
Go to File > Open and select the html file you want. This opens the HTML "code" that we'll be writing in and editing today!

HTML & CSS is the language, or code, behind websites.

Hypertext Markup
Language (HTML)

&

Cascading Style
Sheets (CSS)



HTML Documents: What's behind it?

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <meta name="viewport"
      content="width=device-width,
      initial-scale=1.0"/>

    <title>Page Title</title>

  </head>
  <body>
    <h1>This is a header.</h1>

    <p>This is a paragraph.</p>

    <p>Lorem ipsum dolor sit amet, consectetur
    adipiscing elit, sed do eiusmod tempor
    incididunt ut labore et dolore magna
    aliqua. Ut enim ad minim veniam, quis
    nostrud exercitation ullamco laboris nisi
    ut aliquip ex ea commodo consequat. Duis
    aute irure dolor in reprehenderit in
    voluptate velit esse cillum dolore eu
    fugiat nulla pariatur. Excepteur sint
    occaecat cupidatat non proident, sunt in
    culpa qui officia deserunt mollit anim id
    est laborum.</p>
  </body>
</html>
```



base.html



This is a header.

This is a paragraph.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

HTML Documents: What's behind it?



```
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      content="width=device-width,
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  </head>
  <body>
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    <p>This is a paragraph.</p>

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    incididunt ut labore et dolore magna
    aliqua. Ut enim ad minim veniam, quis
    nostrud exercitation ullamco laboris nisi
    ut aliquip ex ea commodo consequat. Duis
    aute irure dolor in reprehenderit in
    voluptate velit esse cillum dolore eu
    fugiat nulla pariatur. Excepteur sint
    occaecat cupidatat non proident, sunt in
    culpa qui officia deserunt mollit anim id
    est laborum.</p>
  </body>
</html>
```

Containers!

- Tells the browser what goes where

`<!DOCTYPE html>` tells the browser to expect a HTML document.

html: tells the browser that everything inside is a HTML *element*

- Declare the language, `lang=en` to help browsers and search engines

head: “brain” → contains information behind the scenes...

body: the contents that show up on your web browser!

HTML Documents: What's behind it?

```
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    <meta name="viewport"
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  </head>
  <body>
    <h1>This is a header.</h1>

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    incididunt ut labore et dolore magna
    aliqua. Ut enim ad minim veniam, quis
    nostrud exercitation ullamco laboris nisi
    ut aliquip ex ea commodo consequat. Duis
    aute irure dolor in reprehenderit in
    voluptate velit esse cillum dolore eu
    fugiat nulla pariatur. Excepteur sint
    occaecat cupidatat non proident, sunt in
    culpa qui officia deserunt mollit anim id
    est laborum.</p>
  </body>
</html>
```

Every container has an open and close tag.

- Helps the browser (and you!) identify what elements go into which container!
- Like the lid & base of a container...

Open Tag	Close Tag
<head>	</head>
<body>	</body>
<h1>	</h1>
<p>	</p>
<title>	</title>

Tags use
the angled
brackets!

HTML Documents: What's behind it?

```
<!DOCTYPE html>
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    <meta charset="UTF-8">
    <meta name="viewport"
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    aliqua. Ut enim ad minim veniam, quis
    nostrud exercitation ullamco laboris nisi
    ut aliquip ex ea commodo consequat. Duis
    aute irure dolor in reprehenderit in
    voluptate velit esse cillum dolore eu
    fugiat nulla pariatur. Excepteur sint
    occaecat cupidatat non proident, sunt in
    culpa qui officia deserunt mollit anim id
    est laborum.</p>
  </body>
</html>
```



Containers can be nested.

- Containers can be situated within other containers.
- Open and close tags of a child (“smaller”) container is within the open and close tags of its parent (“bigger”) container.
- Parent containers can contain many children containers.
- Some containers only go into head, and some only go into body!

HTML Documents: Try it! (5 mins)

Try editing **base.html**, saving, and then refreshing the page on your browser.

Things you can try:

- Change the text within the containers `<title>`, `<p>`, `<h1>` etc.
- Add more things to the **body**.
- Modify the containers in the **body**.
- Indenting (⌨ Tab) vs not indenting your code

- ```
<p>
 Text VS Text
</p> </p>
```

- Line breaks (⌨ Enter) vs inline

- ```
<p>
  text  VS  <p>text</p>
</p>
```

HTML Tags

Body containers you can try (remember to add close tags!):

- `` - text within turns **bold**
- `<i>` - text within turns *italic*
- `<u>` - text within turns underlined
- `<s>` - text within has ~~striketrough~~
- `<h1>` to `<h6>` - header (try changing the numbers to 1, 2, etc until 6)
- `<div>` - div containers; they become powerful to segment content later
- `<p>` - paragraph container
- ``your link name``
- `<details><summary>`Hi, a summary`</summary>` Hi, more explanations!`</details>`

Body tags you can try:

- `` - insert image (no need close)
- `
` - line break (no need close)
- `<hr>` - horizontal line (no need close)
- Try to insert a Youtube video! Share > HTML on the youtube video that you like...

For more: check https://www.w3schools.com/tags/tag_comment.asp for HTML tags

We have substance... but now we want **STYLE!**

To add style, we use CSS!

To do that, we need to first define a **style** container that we can write CSS in within our file...

```
<head>
  <meta charset="UTF-8">
  <meta name="viewport"
    content="width=device-width,
    initial-scale=1.0"/>

  <title>Page Title</title>

  <style>

</style>
</head>
```

We have substance... but now we want **STYLE!**

```
<head>
  <meta charset="UTF-8">
  <meta name="viewport"
    content="width=device-width,
    initial-scale=1.0"/>

  <title>Page Title</title>

  <style>
    body { background-color: pink;
    font-family: arial; }

    h1 { color: red; }

    p { border: 1px solid #eee; padding: 10px;
    }
  </style>
</head>
```



base-styled.html

To add style, we use **CSS!**

To do that, we need to first define a **style** container that we can write CSS in within our file...

Then we need to write in CSS to tell the browser what we want to style...

We have substance... but now we want **STYLE!**

```
<head>
  <meta charset="UTF-8">
  <meta name="viewport"
    content="width=device-width,
    initial-scale=1.0"/>

  <title>Page Title</title>

  <style>
    body { background-color: pink;
      font-family: arial; }

    h1 { color: red; }

    p { border: 1px solid #eee; padding: 10px;
      }
  </style>
</head>
```



base-styled.html

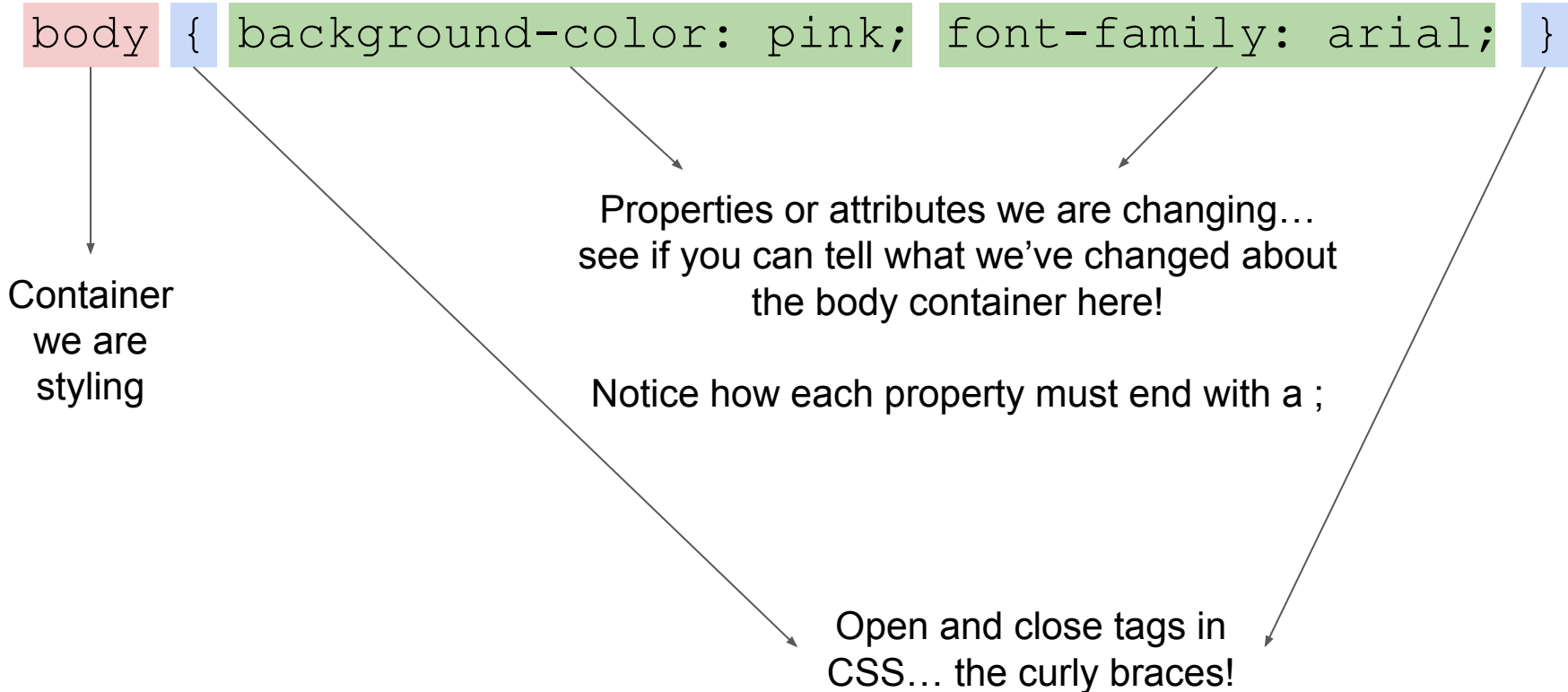
This is a header.

This is a paragraph.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Let's try to understand what's happening!

CSS: What's behind it?



CSS: What's behind it?

```
<head>
  <meta charset="UTF-8">
  <meta name="viewport"
    content="width=device-width,
    initial-scale=1.0"/>

  <title>Page Title</title>

  <style>
    body { background-color: pink;
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    h1 { color: red; }

    p { border: 1px solid #eee; padding: 10px;
    }
  </style>
</head>
```



base-styled.html

This is a header.

h1

This is a paragraph.

p

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

CSS: What's behind it?

```
<style>
  body {
    background-color: pink;
    font-family: arial;
    font-size: 2em;
    padding: 20px;
  }

  h1 {
    color: red;
  }

  p {
    border: 1px solid #eee;
    padding: 10px;
  }

</style>
```

Sometimes if we have too many properties we want to add, writing everything in 1 line is very hard to read.

We can use line breaks (↵ Enter) and indentation (⇥ Tab) to help keep things readable — just like HTML tags!

Some “Containers” You Can Try Styling With CSS

- `body` – for entire document
- `h1, h2, ... h6`
- `b, i, s, u` – for bold, italic, strikethrough and underline respectively, see the starter kit for examples
- `blockquote` – for quotes, see starter kit for examples
- `p` – for paragraphs
- `a` – for links, check [this guide](#)

How can we make more complex pages?

```
<body>
  <h1>This is a header.</h1>
  <div>
    <div>
      <p>This is a paragraph.</p>
    </div>

    <p>Lorem ipsum dolor sit amet, consectetur
    adipiscing elit, sed do eiusmod tempor
    incididunt ut labore et dolore magna aliqua.
    Ut enim ad minim veniam, quis nostrud
    exercitation ullamco laboris nisi ut aliquip
    ex ea commodo consequat. Duis aute irure
    dolor in reprehenderit in voluptate velit
    esse cillum dolore eu fugiat nulla pariatur.
    Excepteur sint occaecat cupidatat non
    proident, sunt in culpa qui officia deserunt
    mollit anim id est laborum.</p>
  </div>
  <div>
    <p>Lorem ipsum dolor sit amet, consectetur
    adipiscing elit, sed do eiusmod tempor
    incididunt ut labore et dolore magna aliqua.
    Ut enim ad minim veniam, quis nostrud
    exercitation ullamco laboris nisi ut aliquip
    ex ea commodo consequat. Duis aute irure
    dolor in reprehenderit in voluptate velit
    esse cillum dolore eu fugiat nulla pariatur.
    Excepteur sint occaecat cupidatat non
    proident, sunt in culpa qui officia deserunt
    mollit anim id est laborum.</p>
  </div>
</body>
```

<div> and...

- You can separate contents into different div containers
- div containers can be nested within more div containers (if needed)
- div containers can be styled with...

How can we make more complex pages?

```
<body>
  <h1>This is a header.</h1>
  <div class="cool-class">
    <div class="awesome">
      <p>This is a paragraph.</p>
    </div>

    <p>Lorem ipsum dolor sit amet, consectetur
    adipiscing elit, sed do eiusmod tempor
    incididunt ut labore et dolore magna aliqua.
    Ut enim ad minim veniam, quis nostrud
    exercitation ullamco laboris nisi ut aliquip
    ex ea commodo consequat. Duis aute irure
    dolor in reprehenderit in voluptate velit
    esse cillum dolore eu fugiat nulla
    pariatur.</p>
  </div>
  <div class="awesome">
    <p>Lorem ipsum dolor sit amet, consectetur
    adipiscing elit, sed do eiusmod tempor
    incididunt ut labore et dolore magna aliqua.
    Ut enim ad minim veniam, quis nostrud
    exercitation ullamco laboris nisi ut aliquip
    ex ea commodo consequat. Duis aute irure
    dolor in reprehenderit in voluptate velit
    esse cillum dolore eu fugiat nulla
    pariatur.</p>
  </div>
</body>
```



base-styledmore.html

<div> and...

- You can separate contents into different div containers
- div containers can be nested within more div containers (if needed)
- div containers can be styled with...

CSS classes!

- They're like "uniforms" you can apply to multiple containers
- Classes can apply to different HTML elements, not just divs
 - But some properties are relevant for only certain types of elements

How can we make more complex pages?

```
<style>
  .cool-class {
    border: 2px dashed;
  }

  .awesome {
    background-color: #eee;
    text-transform: uppercase;
    margin: 20px;
    border-left: 5px solid blue;
    padding-left: 10px;
  }

  h1 {
    text-shadow: 5px 10px 3px chartreuse;
  }
</style>
```

This is a header.

THIS IS A HEADER.

THIS IS A PARAGRAPH.

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

LOREM IPSUM DOLOR SIT AMET, CONSECTETUR ADIPISCING ELIT, SED DO EIUSMOD TEMPOR INCIDIDUNT UT LABORE ET DOLORE MAGNA ALIQUA. UT ENIM AD MINIM VENIAM, QUIS NOSTRUD EXERCITATION ULLAMCO LABORIS NISI UT ALIQUIP EX EA COMMODO CONSEQUAT. DUIS AUTE IRURE DOLOR IN REPREHENDERIT IN VOLUPTATE VELIT ESSE CILLUM DOLORE EU FUGIAT NULLA PARIATUR.



base-styledmore.html

CSS Classes... How do they work?

1. You give them a name... then add a period (.) before that name

```
.cool-class
```

2. You style the class in CSS...

```
<style>  
    .cool-class { border: 2px dashed; }  
</style>
```

3. You assign the divs in HTML the class(es)!

```
<div class="cool-class">  
...  
</div>
```

HTML & CSS: Try it... by making your page for this event!

The best way to learn is to break things apart & try!

- The starter kit contains a few layouts you can immediately use and try to modify and customize...
- Have an idea you're not sure how to implement? Ask us, or the internet!
- Look up CSS attributes to see what sort of values they can take — W3schools or Mozilla developers are helpful!
- Curious how something was achieved on a website? Right Click > View Source or Inspect Element on websites!

Some Common CSS Properties

Some text-related properties:

- `font-family: Arial, sans serif;`
- `font-size: 20pt;`
- `font-weight: 600;`
- `font-style: italic;`
- `line-height: 120%;`
- `color: #eeeeee;`
- `text-decoration: underline;`
- `text-decoration-style: wavy;`
- `text-align: center;`
- `text-transform: uppercase;`
- `text-shadow: 2px 2px 5px red;`

Some container-related properties:

- `margin: 10px;`
- `padding: 10px;`
- `height: 200px;`
- `width: 500px;`
- `border: 2px dashed pink;`
- `border-radius: 20px;`
- `position: absolute;`
`top: 200px;`
`left: 200px;`
- `background-color: #eeeeee;`
- `cursor: pointer;`
- `rotate: 30deg;`

For more: check https://www.w3schools.com/cssref/css4_pr_accent-color.php for CSS properties

CSS sizes, colours & fonts

You will notice some properties require you to specify sizes with *units*. Units tell the browser exactly how big you're talking about... just like how 1 cm and 1 inch are different amounts!

A quick overview of common sizes:

- px — pixels (absolute)
- em — 1 em = 16px typically
- % — percentage
- vw — viewport width, the width of the size of your browser, 1 vw = 1%
- vh — viewport height, roughly the height of your browser, 1 vh = 1%

More info here:

https://www.w3schools.com/css/css_font_size.asp

Colours can be referred to in many different ways in CSS. [Check out this page](#) for a full list of methods.

- [Supported colour names](#)
- [HTML colour picker](#)

You can use [generally web safe fonts](#), or install custom fonts on your website.

The easiest way to install custom fonts is to use Google fonts! Check out [this guide](#).

Future reading...

Once you feel more confident in coding, you can start to explore! Here are some suggestions for what you can look up and read more about:

- HTML IDs
- CSS Flexbox
- CSS Grid
- Responsive design
- Accessible design

W3schools is a great resource for these!