

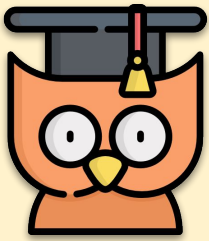
[the academy_of_code]

St. Colmcille's TY

HTML & CSS

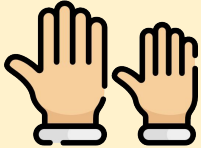
www.theacademyofcode.com/handouts

Lesson 1 - HTML/CSS - Birthday Card



Learning Outcomes

- How to create CSS within HTML Pages
- Creating a comic Strip with HTML and CSS



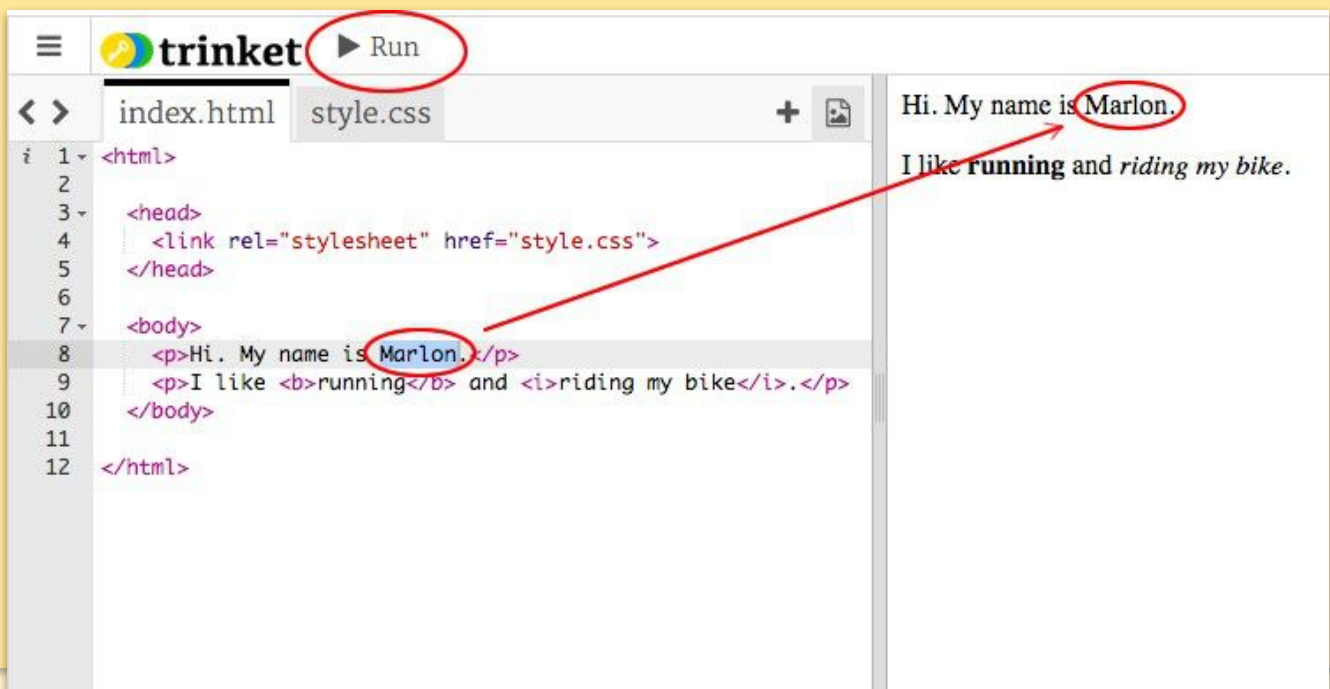
REMEMBER: Put up your hand. We love to help!

HTML and CSS - Where to?

```
1 <html>
2
3 <head>
4   ← Webpage CSS styling goes here
5 </head>
6
7 <body>
8   ← Webpage HTML content goes here
9 </body>
10
11 </html>
```

Hold **CTRL** and **click** on the following link to bring up the code below in a new tab: www.bit.ly/aocwebdevintro

Customise the text below so that it says your details. If you're finished early, try further customising it by adding in some extra information, perhaps some more **<p>** (paragraph) tags.





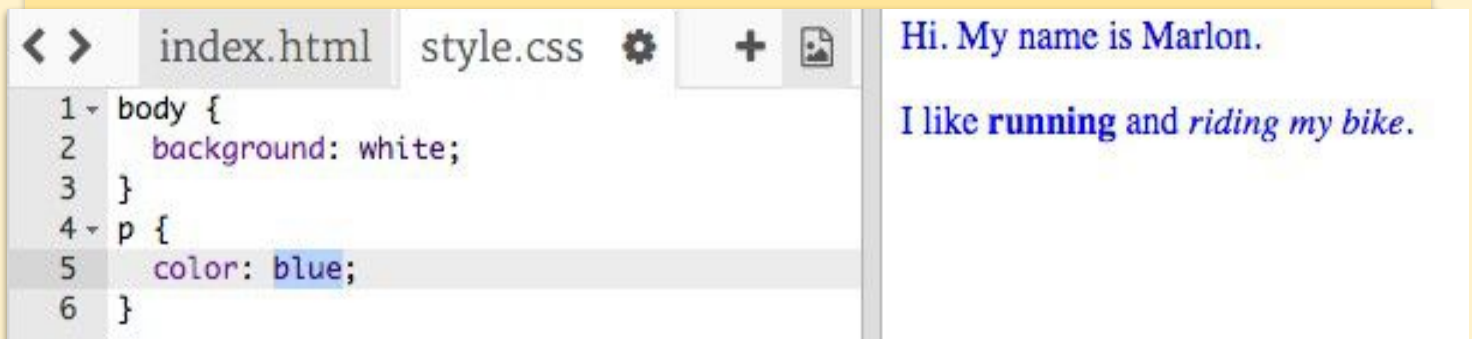
Designing with a Style Sheet

The CSS Style Sheet is exactly that, a sheet where your styles can be put, background colours, text colours, fonts etc. Your style sheet must be linked in the HTML file and named appropriately. Here, we've named it **style.css**

```
<html>

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

This CSS code has one property for paragraphs, which is that the text colour should be black. Change the word 'black' in the CSS to 'blue'. You should see the text colour of all paragraphs change to blue.



If you've finished writing this code, check out the cheat sheet at www.htmlcheatsheet.com/css or colours.neilorangepeel.com to find custom colours and style features. Remember holding **CTRL** when you click opens these links in new tabs.

Introduction

In this project, you'll learn how to create your own webpage to tell a story, joke or poem.

Editing your story

Let's start by editing the HTML content and CSS style of the story webpage. Press **CTRL** and click here to open this link: www.bit.ly/trinketcomic.

Knock Knock





Let's Get Coding

Go to line 7 of the code, and you will see the webpage content, which is inside `<body>` and `</body>` tags. Can you tell which tags are used to create the different parts of the webpage?

```

6
7 <body>
8
9     <h1>Add your title here!</h1>
10
11 <div>
12     
13     <p>Add your own text here!</p>
14 </div>
15
16 </body>
17

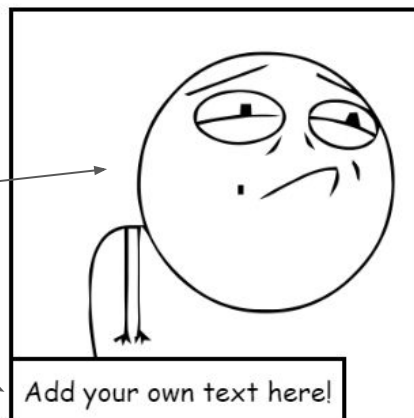
```

```

1 <html>
2
3 <head>
4     <link rel="stylesheet" href="style.css">
5 </head>
6
7 <body>
8
9     <h1>Add your Title here</h1>
10
11 <div>
12     
13     <p>Add your own text here!</p>
14 </div>
15
16 </body>
17
18 </html>
19
20
21
22

```

Add your Title here



- `<h1>` is a heading. You can use the numbers 1 to 6 to create headings of different sizes. It needs a `</h1>` closing tag.
- `<div>` is short for division, and is a way of grouping stuff together. In this webpage, you'll use it to group together all the stuff for each part of your story. It needs a closing `</div>` tag.
- `` is an image. It does **not** need a closing tag.
- `<p>` is a paragraph of text. It needs a closing `</p>` tag.

Changing the Images

Can you find the HTML for the image (Hint: it's on line 12)? Click on the **image library** icon to find a different image title. Change the name from "meme (483).jpg" to another one and you'll see the image change! You can use any of the images in the library. We've loaded these in already.



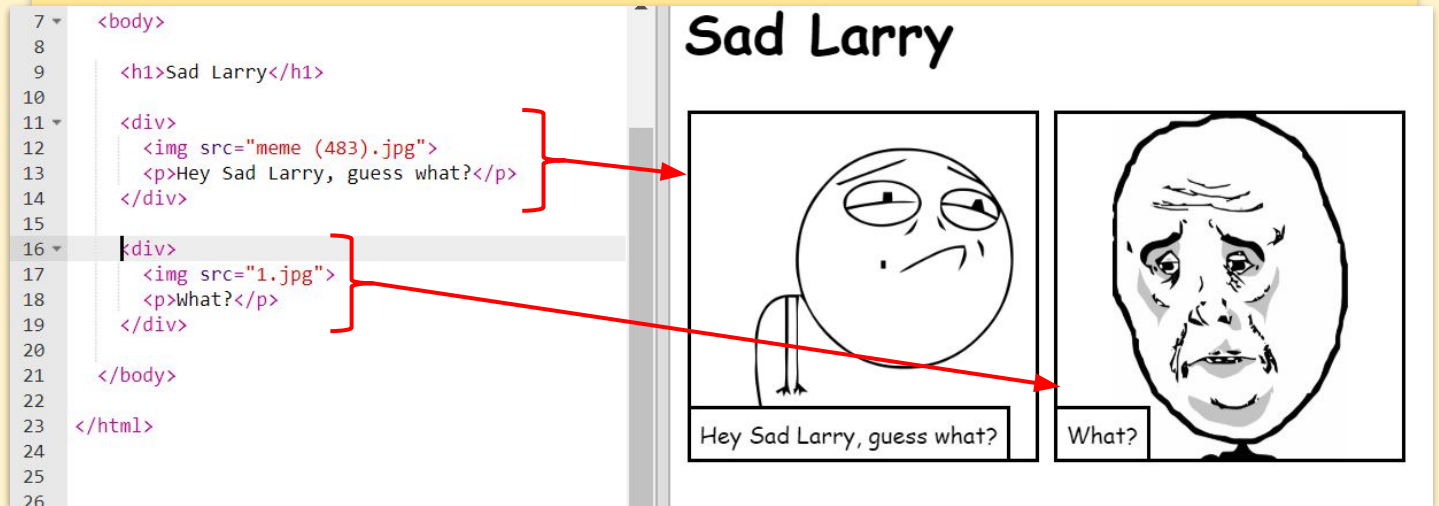


Adding Another Frame

1

Use **CTRL + C** to copy these lines, the first frame and it's text. Paste (**CTRL + V**) a copy including the `<div>` and `</div>` tags to create a second picture.

```
<div>
  
  <p>Hey Sad Larry, guess what?</p>
</div>
```



2

Add a new line of text inside your new `<div>` tag.

3

Add an image to your new box, by adding this code inside your `<div>` tag, ``. For HTML images, you need to add the source of the image, inside the speech marks.

4

With *Trinket.io*, you can upload images from the web if you have an account but if you don't, don't worry. You can insert images links/URLs directly in your `` tag.

Open image in new tab
Save image as...
Copy image
Copy image address
Search Google for image

Inspect

Ctrl+Shift+I

Right click on an image online, copy the image address and Paste the URL between the speech marks in your `` tag. You should see your image appear.

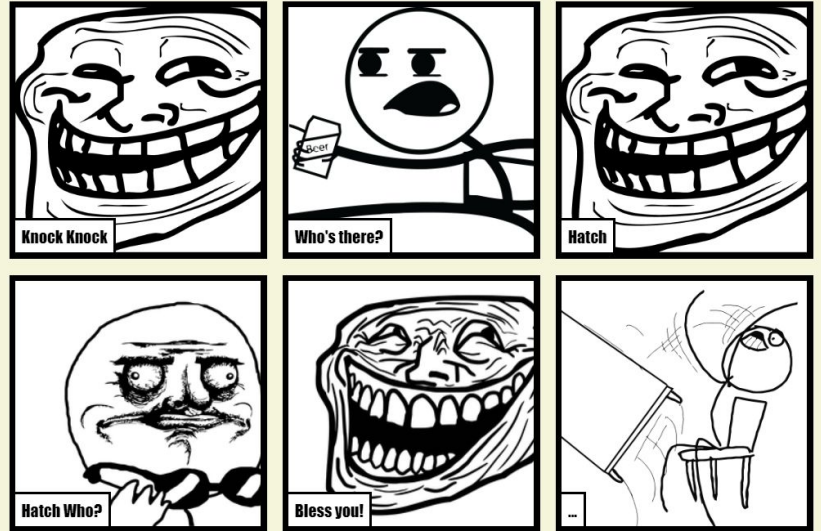
```
16 <div>
17   <img src="https://s3-eu-west-1.amazonaws.com/codeclub-t
18   <p>More text here!</p>
19 </div>
```




Finish your story

Use what you have learned to create a finished project telling your story.

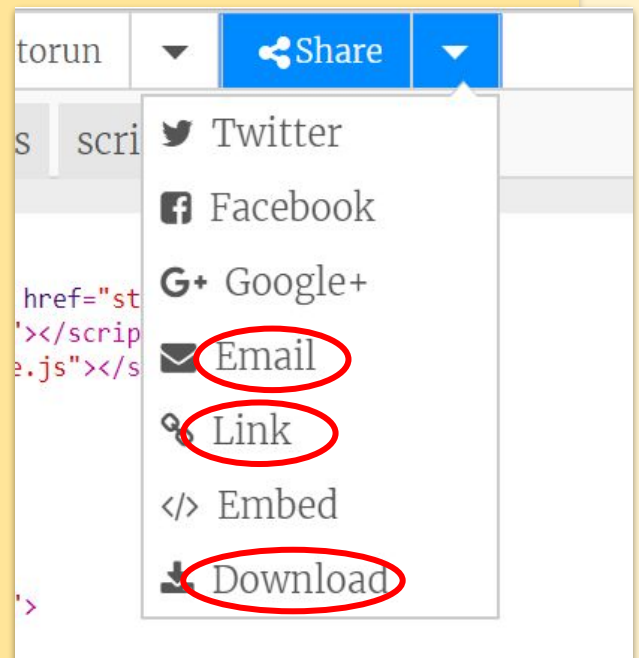
Knock Knock



Saving your work

You have a few saving options accessible via the **Share** menu at the top of the screen. If it is actually your friends birthday, save the **link** or you can send the link in an **email**.

Alternatively you can hit **download** to save all of your files (including pictures) in one zipped file. This can then be saved on your USB or in a specific folder on your computer.



Using Bit.ly

Your link may be a bit long. www.bit.ly is a URL shortening tool so that you can easily and quickly share your long link with your tutor, friends or family.

Help us out - Clear your History

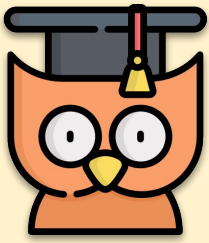
Once you've saved your work, you'll need to delete the history so that the next student can start fresh. Press **Ctrl+H**, Click **Clear browsing data** and clear your history from the last 24 hours.

Chrome history

Tabs from other devices

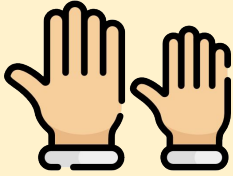
Clear browsing data

Lesson 2 - HTML/CSS - Making a Story

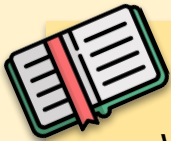


Learning Outcomes

- How to create CSS within HTML Pages
- How to create CSS to be called in multiple HTML Pages



REMEMBER: Put up your hand. We love to help!



HTML - Using CSS Libraries

We are going to use the programming languages '**HTML**' and '**CSS**' to design a birthday card, and something called '**Javascript**' to add animation and other functionality. Many sites you see online use **CSS and Javascript Libraries** - this is CSS and Javascript code which we can use without too much additional work to make our code more visually interesting.

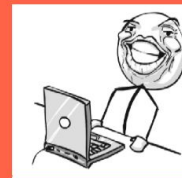
Open this Trinket link www.bit.ly/mybirthdaycard. Don't worry if you don't understand all of the code. This birthday card looks a bit boring, so you're going to edit the given code to make some changes to this **HTML** and **CSS**. Click the button on the front of the card, and you should see it open to reveal the inside.

Happy Birthday!



Click to open

Have a great birthday Jane!



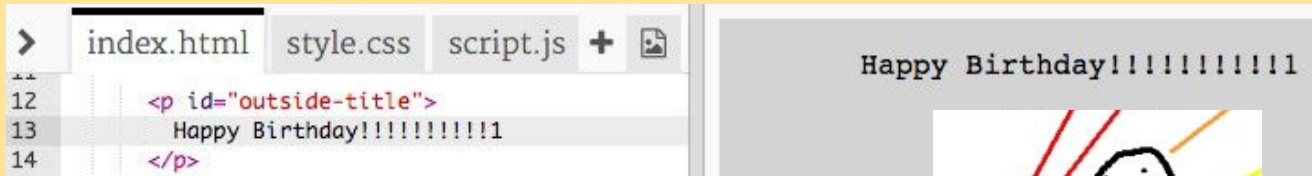
I can't wait for your party on Saturday!
Love, Viktoria!

Click to close

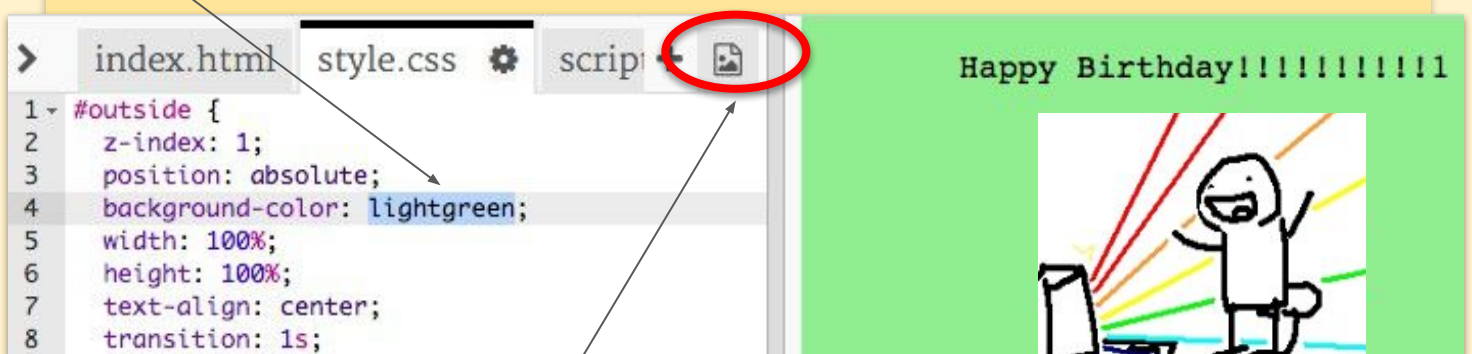


Let's Get Coding

- 1 Go to **line 13** or so of the code. Just like in last week's, you can edit any of the text in the HTML to customise the card.

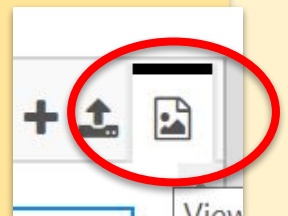


- 2 Edit the CSS of the birthday card. Click on the tab for "style.css". It begins with all of the CSS for the outside of the card. Change the **background-color** to **lightgreen**. For more colours click <http://colours.neilorangepeel.com>

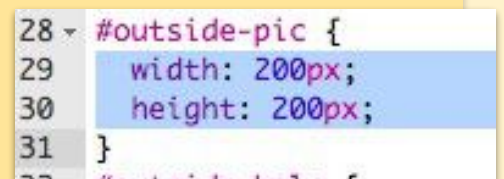


- 3 Find the HTML for the image (Hint: it's called "**meme (608).jpg**")? Find a different image in the **image library** and change the image name.

Example go from "meme (608).jpg" to "meme (1).jpg" and you'll see the image change to that. We've loaded in lots of memes already.



- 4 You can also change the size of an image. Go to line 29 of the CSS, and change the width and height of the outside image to 200px (px stands for pixels).



- 5 The font can be changed too. Go to line 24 and change the font-family to **Comic Sans MS** and the font-size to 16pt. Check this site for a list of some other fonts you could consider using:

www.w3.org/Style/Examples/007/fonts.en.html





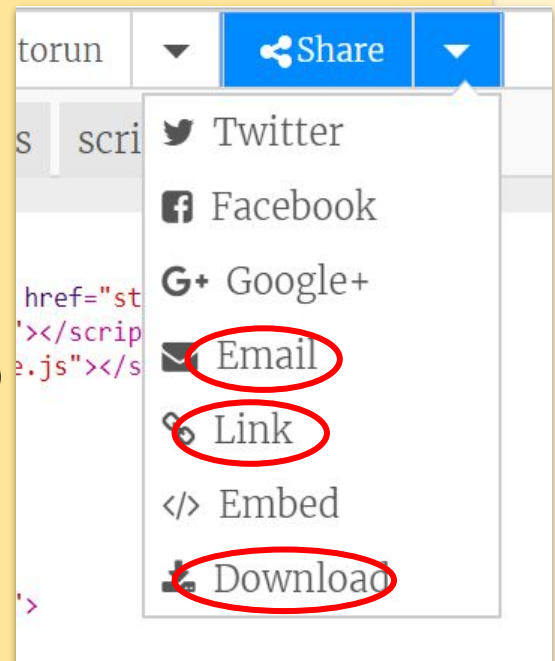
Challenge: Create a New Personalised card

Use everything you've learnt about HTML and CSS to finish making a personalised card. It doesn't even have to be a birthday card, it could be for any occasion or person. Here's an example:



Saving your work

You have a few saving options accessible via the **Share** menu at the top of the screen. If it is actually your friends birthday, save the **link** or you can send the link in an **email**. Alternatively you can hit **download** to save all of your files (including pictures) in one zipped file. This can then be saved on a USB or in a specific folder on your computer.

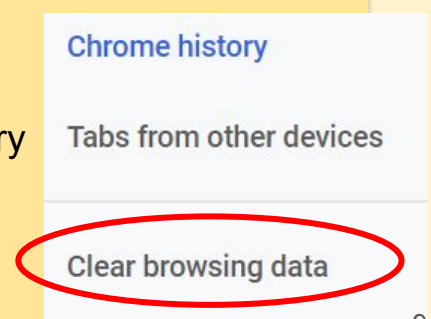


Using Bit.ly

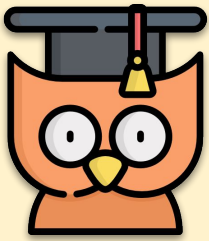
Your link may be a bit long. www.bit.ly is a URL shortening tool so that you can easily and quickly share your long link with your tutor, friends or family.

Help us out - Clear your History

Once you've saved your work, you'll need to delete the history so that the next student can start fresh. Press **Ctrl+H**, Click **Clear browsing data** and clear your history from the last 24 hours.

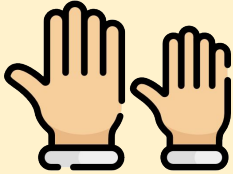


Lesson 3 - HTML/CSS - Wanted Poster

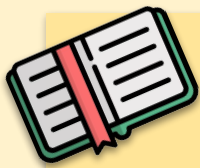


Learning Outcomes

- How to use CSS within HTML Pages
- How to edit HTML and CSS to create our own Wanted Poster



REMEMBER: Put up your hand. We love to help!



Making a Wanted Poster

Today we're going to make a Wanted Poster with HTML and CSS.

Access the beginning code at the following link. Remember to **hold CTRL** when clicking as you'll need to keep the notes open. www.bit.ly/wantedcoder

Click on the “**style.css**” tab. You'll notice that there are already CSS properties for anything called `<div>`

What do you think these do?

WANTED!

Have you seen this coder?



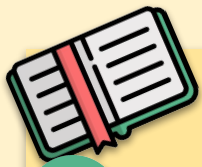
Description: Height: 2-4m

Appearance: Well Dressed, almost always

Arms: Between 2 and 4

If you have any information, please contact
6207 332 2310

```
div {  
  text-align: center;  
  overflow: hidden;  
  border: 2px solid black;  
  width: 300px;  
}
```



Editing the CSS

- 1 Let's start by changing the `text-align` property:

```
text-align: center;
```

What happens when you change the word `center` to `left` or `right`?

- 2 How about the `border` property?

```
border: 2px solid black;
```

`2px` in the code above means 2 pixels. What happens when you change `2px solid black` to `4px dotted red`?

- 3 Change the `width` of the poster to `400px`. What happens to the poster?

- 4 Let's add some CSS to set the background colour of the poster. Go to the end of line 5 of your code and press return, so that you have a new blank line.

```
1 div {  
2   text-align: center;  
3   overflow: hidden;  
4   border: 4px dotted red;  
5   width: 400px;  
6   background: yellow;  
7 }
```

- 5 Add the following CSS property to your div style.

```
border-radius: 40px;
```

What does this property do? What happens if you change the number in the code above?



Styling images

Let's improve the style of the image in the poster. At the moment, there aren't any CSS properties for your `` tag, so let's add some!

- 1 Firstly, add the following code underneath the **CSS** for your **div** to set the width of the image. You'll see that the size of the image changes, so that its width is 100 pixels.

```
> index.html style.css ⚙
1 div {
2   text-align: center;
3   overflow: hidden;
4   border: 4px dotted red;
5   width: 400px;
6   background: yellow;
7 }
8
9 img {
10  width: 100px;
11 }
```

- 2 You can also add a border around the image with this code

```
border: 1px solid black;
```

- 3 There's not much space between the image and the border. You can fix this by adding some **padding** around the image.

```
padding: 10px;
```

What do you think would happen if you changed the padding to 50px?

Can you give your image a background colour? Or a rounded border?

You can find more CSS colour names at

www.trinket.io/docs/colors





Styling headings

1

Add the following code underneath your image's CSS:

```
h1 {  
  
}
```

This is where you'll add CSS properties for your main `<h1>` heading.

2

To change the font of your `<h1>` headings, add the following code between the curly brackets:

```
font-family: Impact;
```

3

You can also change the size of the heading:

```
font-size: 50pt;
```

Have you noticed that there's a big space between the `<h1>` heading and the stuff around it? This is because there's a margin around the heading. A margin is the space between the element (in this case a heading) and the other stuff around it.

4

Make the margin smaller with this code:

```
margin: 10px;
```

5

Underline your heading:

```
text-decoration: underline;
```




Challenge: Finish your Poster

Use what you have learned to create a finished project of your Poster.

Experiment with the different CSS properties below to see what they do

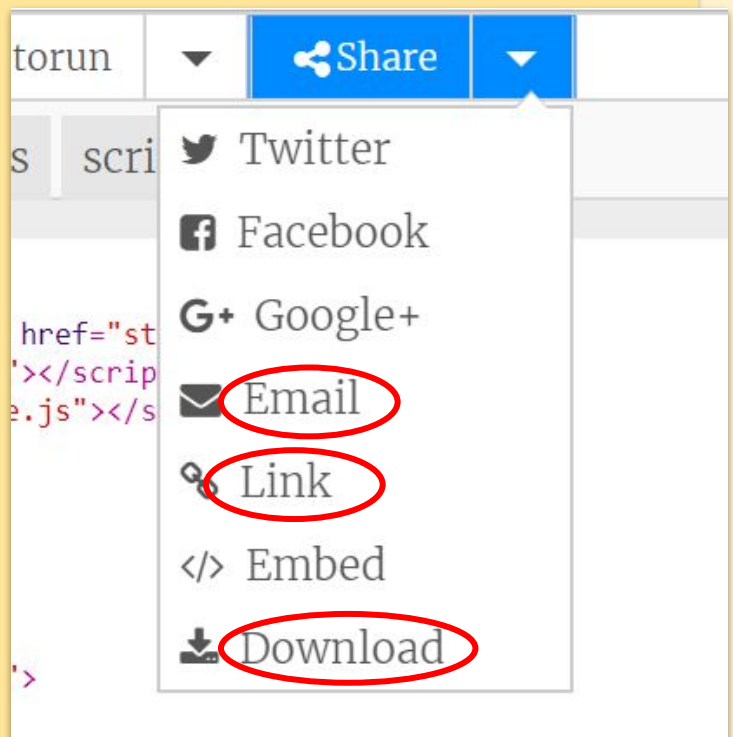
```
color: black;
background: white;
font-family: Arial / Comic Sans MS / Courier / Impact / Tahoma;
font-size: 12pt;
font-weight: bold;
text-decoration: underline overline line-through;
margin: 10px;
padding: 10px;
width: 100px;
height: 100px;
```



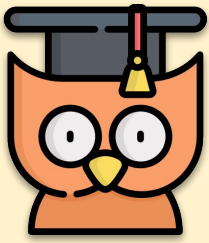
Saving your work

You have a few saving options accessible via the **Share** menu at the top of the screen. If it is actually your friends birthday, save the **link** or you can send the link in an **email**.

Alternatively you can hit **download** to save all of your files (including pictures) in one zipped file. This can then be saved on your USB or in a specific folder on your computer.

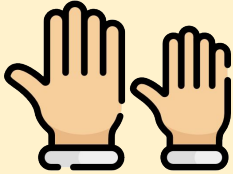


Lesson 4 - HTML/CSS - Recipe

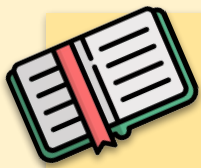


Learning Outcomes

- How to use CSS within HTML Pages
- How to edit HTML and CSS to create our own Recipe



REMEMBER: Put up your hand. We love to help!



Making a Recipe Web Page

Think about a recipe you want to share with your friends.

It could be:

- A recipe you found online;
- Your favourite meal;
- Something you made up!

The example recipe you'll see in this project is for a banana milkshake. You can copy this recipe if you can't find one of your own.

Banana Milkshake



Ingredients:

- 1 banana
- 250ml milk
- 3 ice cubes

Ingredients

Let's list the ingredients that are needed for your recipe. So we don't forget, take note of these in **WordPad** or **Notepad**



Let's Get Coding

1

Go to www.bit.ly/trinkettemplate

The project should look like this:

```
<html>
<head>
  <link rel="stylesheet" href="style.css">
</head>
<body>
</body>
</html>
```

2

For your list of ingredients, you're going to use an **unordered list**, using the `` tag. This means that it will make a list with bullet points, as opposed to an ordered list which has numbers.

Go to line 8 (or between the **body**) of the template and add this HTML, replacing the text in the `<h1>` title with the name of your own recipe.

```
<h1>Banana Milkshake</h1>

<h3>Ingredients:</h3>

<ul>

</ul>
```

3

View your page, you should see your two headings. You won't see your list yet though, because you haven't added any list items to it!

Banana Milkshake

Ingredients:

4

The next step is to add list items into your list, by using the `` tag. Add the following code inside your `` tag:

```
<li>1 banana</li>
```

5

List more items. Each will need an `` tag,

```
<ul>
  <li>1 banana</li>
</ul>
```



Adding an Ordered List

You're going to use another list to write your method, but this time you'll be using an **ordered list**, by using the `` tag. An **ordered list** is a numbered list, which you should use when the order of the steps is important.

Add this code underneath your ingredients list, making sure that it's still inside your `<body>` tag:

```
<h3>Method:</h3>
```

```
<ol>
```

```
</ol>
```

Now you just need to add list items into your new ordered list. Like with the unordered list, each item will need it's own `` tag. Notice that the list items are automatically numbered!

```
<li>Peel the banana and add to a blender</li>
```

Banana Milkshake

Ingredients:

- 1 banana
- 250ml milk
- 3 ice cubes

Method:

1. Peel the banana and add to a blender
2. Add the milk and ice cubes to the blender
3. Turn on the blender for 30 seconds
4. Drink!

Colours

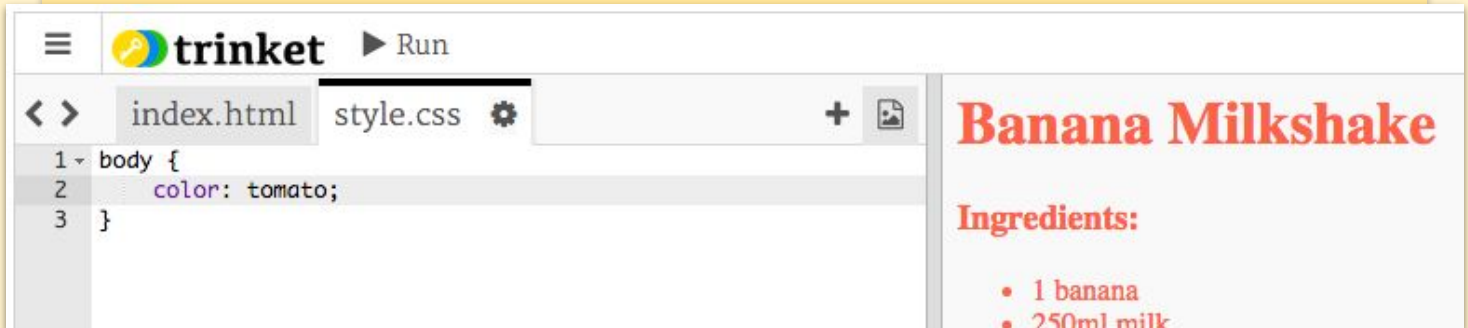
You've already learnt how to add coloured text to a webpage. We add this code **inside your `style.css` file**, to make all of the text in the website body blue for example:

```
body {  
    color: blue;  
}
```

Your browser knows colours like `blue`, `yellow` and even `lightgreen`, but did you know that your browser actually knows the **names** of over 140 different colours? Check out some of their names at www.trinket.io/docs/colors which includes colour names like `tomato`, `firebrick` and `peachpuff`. Change the text colour from `blue` to `tomato`, or pick your own unique colour.



Colours

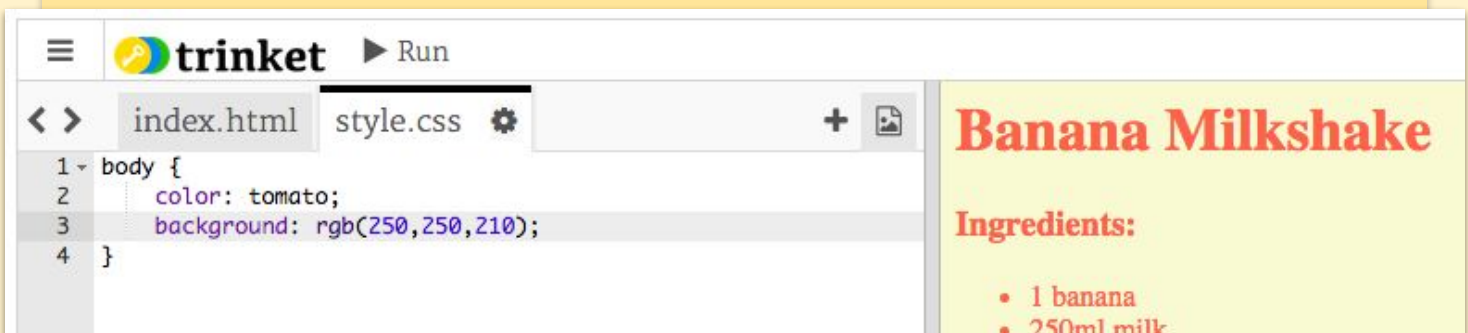


As said, our browsers knows the names of 140 colours, but actually knows the **colour values** of more than 16 million colour combinations!

To tell the browser which colour to display, you just need to let it know how much **red, green and blue** to use. The amounts of red, green and blue are written as a number between 0 and 255.

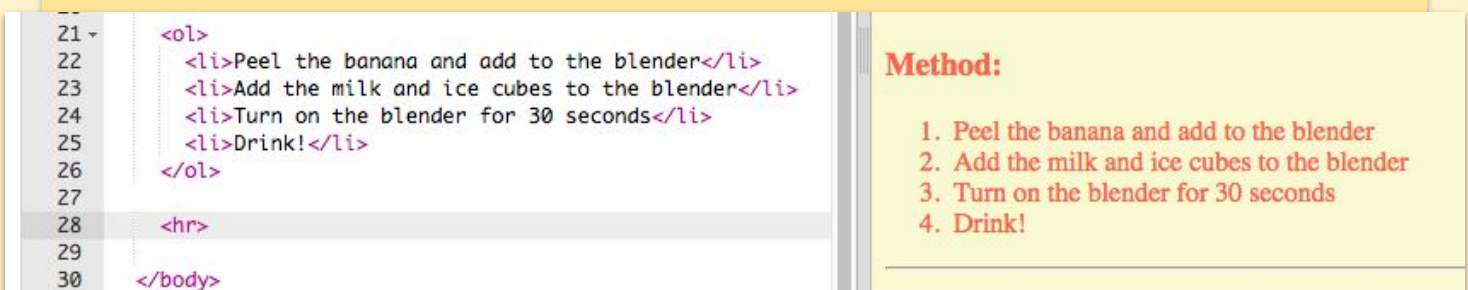
Red Green Blue
↓ ↓ ↓
background: rgb(250,250,210);

Add this code to the CSS for the of the webpage, to display a yellow background:



Finishing Touches

You can add a horizontal line at the end of your recipe, by using the `<hr>` tag. Notice that this tag doesn't have an end tag, just like the `` tag.





More Finishing Touches

The line you've just added doesn't match the style of the rest of your webpage. Let's fix that by adding some CSS code.

```
hr {  
  height: 2px;  
  border: none;  
  background-color: tomato;  
}
```

You can even change how your bullet points look by adding this.

```
ul {  
  list-style-type: square;  
}
```

See if you can remember how to add an image previous lessons. You need to have an account to upload your own images, but you can link any image from the web by **finding an image**, copying the images URL



Save Image As...
Copy Image URL
Copy Image
Open Image in New Tab
Search Google for this Image
Print...
Inspect Element

and putting in a line of code like the one at the bottom (where your link goes between the two quotation marks (")). Here are some lines of codes to help you:

```

```

Banana Milkshake

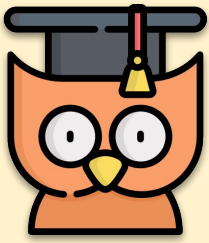


Ingredients:

- 1 banana
- 250ml milk
- 3 ice cubes

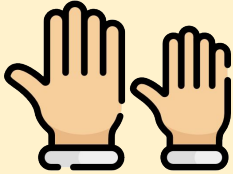
```
15  
16 <div>  
17     
18   <p>More text here!</p>  
19 </div>  
20
```

Lesson 5 - HTML/CSS - Ransom Note



Learning Outcomes

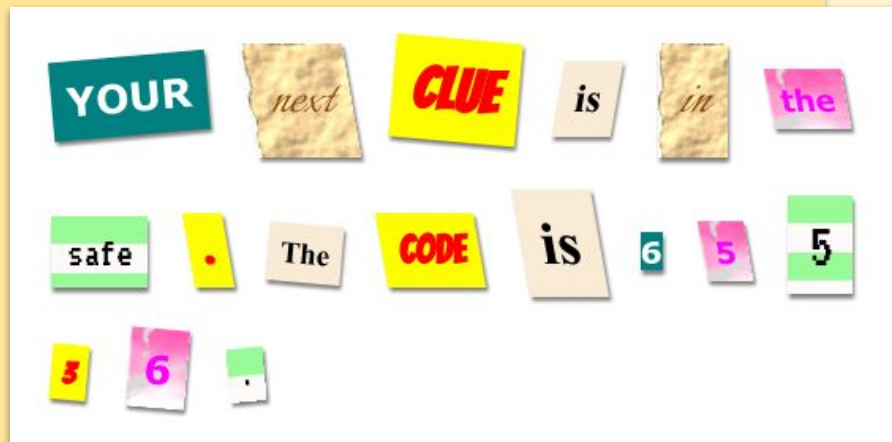
- How to create CSS within HTML Pages
- Creating a ransom note with HTML and CSS



REMEMBER: Put up your hand. We love to help!

Introduction

In this project, you'll create a mystery letter that looks like each word has been cut from a different newspaper, magazine, comic or other source.



Choose Your Message

Ransom notes are used in films and books to send secret messages.

Think of a mystery message; 12 words is about the right length. If you can't think of a message you can use the example: 'Your next clue is in the safe. The code is 65536.' (12 'words' including the full stop!)

Either make a note of your message in **WordPad** or **NotePad** or remember it.



Let's Get Coding!

Go to www.bit.ly/trinketrandom

index.html	style.css	prefix	+	Result	Instructions
<pre> <html> <head> <title>Mystery Letter</title> <link rel="stylesheet" href="style.css"> <script src="prefixfree.js"></script> </head> <body> <p> Replace these words </pre>				<p>Replace these words with your own mystery message . Make it about 12 words long .</p>	

The `` tag is used to group smaller pieces of text inside a paragraph so that we can style them. Change the words to your message by putting one word in each ``. You will need to add or remove `` tags if your message is a different length.

```

<p>
  <span class="">Your</span>
  <span class="">next</span>
  <span class="">clue</span>
  <span class="">is</span>
  <span class="">in</span>

```

```

<body>

  <p>
    <span class="">Replace</span>
    <span class="">these</span>
    <span class="">words</span>
    <span class="">with</span>
    <span class="">your</span>
    <span class="">own</span>
    <span class="">mystery</span>
    <span class="">message</span>
    <span class="">.</span>
    <span class="">Make</span>
    <span class="">it</span>
    <span class="">about</span>
    <span class="">12</span>
    <span class="">words</span>
    <span class="">long</span>
    <span class="">.</span>
  </p>

</body>

```

Using Class Styles

Did you notice the `class=""` in the `` tags? You can use this to style more than one thing in the same way. Add the **magazine1 class** to a few of your `` tags and test your webpage.

```

<p>
  <span class="magazine1">Your</span>
  <span class="">next</span>
  <span class="">clue</span>
  <span class="">is</span>
  <span class="magazine1">in</span>
  <span class="">the</span>
  <span class="">safe</span>
  <span class="">.</span>
  <span class="">The</span>
  <span class="">code</span>
  <span class="">is</span>
  <span class="magazine1">6</span>

```

YOUR next clue is IN the safe . The code is 6 5 5 3 6 .



More Class Styles

You can add more than one class to an element. Just leave a space in between.

Add the `big` class to one of your `` tags. Test your page.

```
<p>
<span class="magazine1 big">Your</span>
<span class="">next</span>
<span class="">clue</span>
<span class="">is</span>
<span class="magazine1">in</span>
<span class="">the</span>
<span class="">safe</span>

```

YOUR next clue is **IN** the
safe . The code is 6 5 5 3 6 .

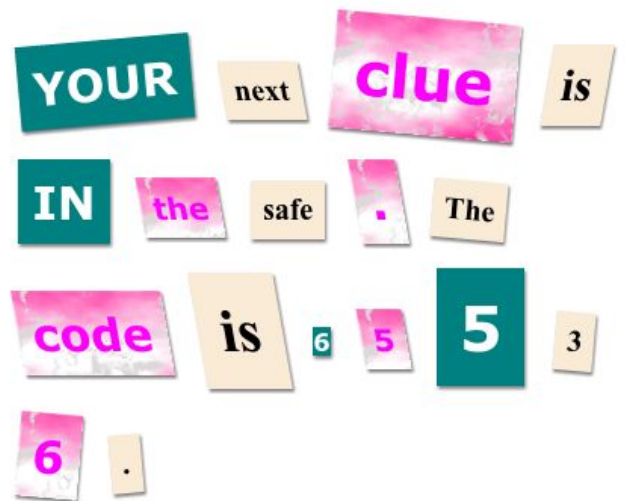
Task: Styling your Message

Use the provided styles to make your message look like a mystery letter.

Add these classes to your `` tags:

- `newspaper`, `magazine1`, `magazine2`
- `medium`, `big`, `reallybig`
- `rotateleft`, `rotateright`
- `skewleft`, `skewright`

Don't add more than one from each line to a particular ``. This message here is roughly how your letter could look.



Click on the '**style.css**' tab. Find the style for the `newspaper` CSS class that you have been using.

Notice that there's a dot (full stop) '.' before the name of the class in the CSS file but not in the `` tag in your HTML document.

Now look at the other CSS classes that you used to style your mystery letter. Can you find:

- How the `magazine1` style changes the text to all uppercase (capital) letters.
- How the `magazine2` style puts an image behind the text.

```
.newspaper {
  background-color: antiquewhite;
  font-family: "Times New Roman";
  font-weight: bold;
}
```

```
.magazine1 {
  background-color: teal;
  color: white;
  font-family: Verdana;
  font-weight: 900;
  text-transform: uppercase;
}

.magazine2 {
  background-image: url('pink-pattern.png');
  color: fuchsia;
  font-family: Verdana;
  font-weight: 900;
}
```



More Class Styles

What happens if you change the `background-image` for `magazine2` to `canvas.png`? If you prefer `pink-pattern.png` you can change it back.

You can also change the colours in the magazine styles if you like. Find the CSS used to rotate and skew (tilt) your words.

```
.rotateleft {  
  transform: rotate(-5deg);  
}  
  
.rotateright {  
  transform: rotate(5deg);  
}  
  
.skewleft {  
  transform: skewX(10deg);  
}  
  
.skewright {  
  transform: skewX(-10deg);  
}
```

Try changing the numbers to create different effects and then testing your page.

Creating a New Class

Let's create a style that looks like it has been cut from a Comic. Go to fonts.google.com which provides loads of **fonts** that are free to use.

Add a `comic` class in the **style.css** file. After `magazine2` is a good place. Don't worry if you get a warning saying that **'The Rule is empty'**; we'll fix that next.

```
.magazine2 {  
  background-image: url('pink-pattern.png');  
  color: fuchsia;  
  font-family: Verdana;  
  font-weight: 900;  
}  
  
.comic {
```



Don't forget the dot in front of the class name!

Now add some CSS to the comic CSS class. You can use different colours if you like. There's a list of loads of colours at

www.trinket.io/docs/colors

```
.comic {  
  background-color: yellow;  
  color: red;  
  font-weight: bold;  
}
```



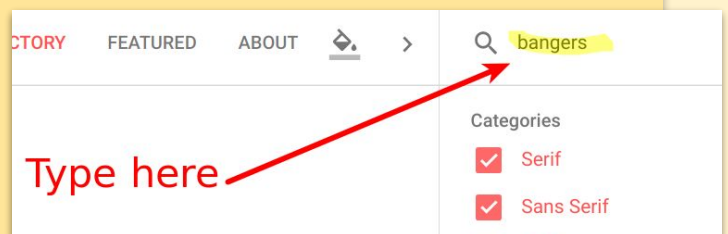

Using your New Class

Use the comic style in some of the `` tags in your HTML document and test your page:

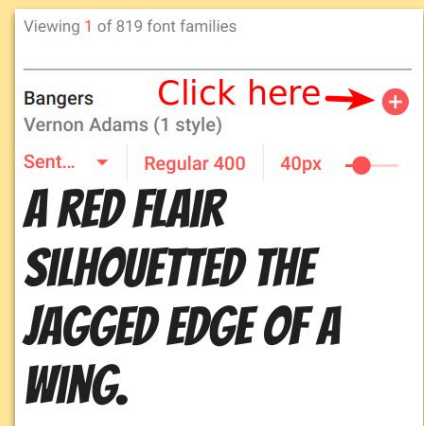
```
<p>
<span class="magazine1 big rotateleft">Your</span>
<span class="newspaper medium skewleft">next</span>
<span class="comic reallybig rotateright">clue</span>
<span class="newspaper big skewright">is</span>
<span class="magazine1 big">in</span>
<span class="magazine2 medium skewleft">the</span>
<span class="newspaper medium">safe</span>
<span class="comic big skewleft">.</span>
<span class="newspaper medium rotateright">The</span>
<span class="comic big skewleft">code</span>
<span class="newspaper reallybig skewleft">is</span>
</p>
```



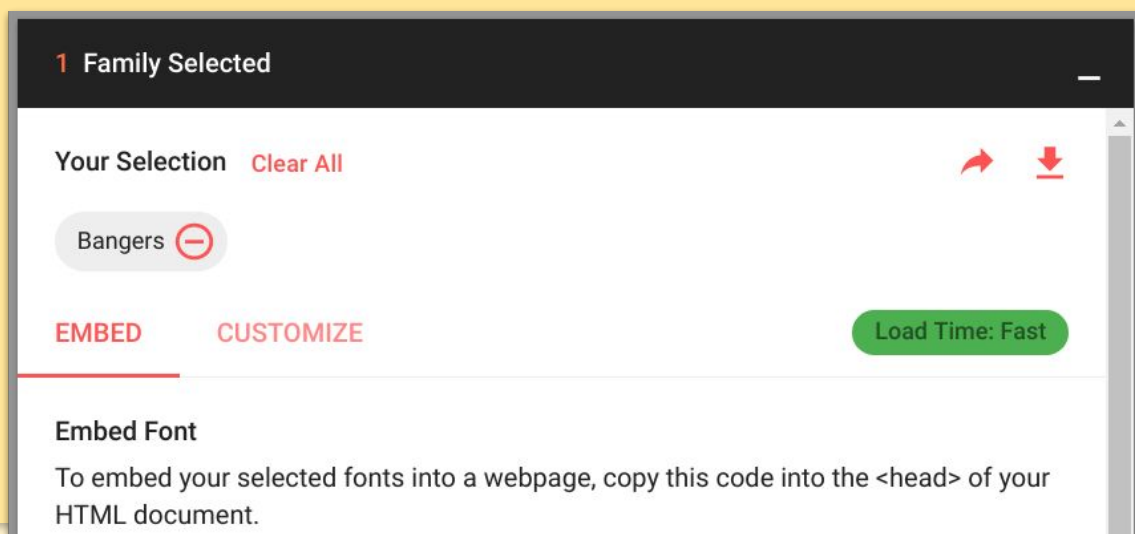
Now you can add a fun font. Open a new browser tab or window. Go to fonts.google.com, click on the search icon, and search for 'bangers'.



Click on the Bangers font Select button. A new header will appear at the bottom of the page.



Click on the box header to bring up information about how to use your fonts:





STANDARD @IMPORT

```
<link href="https://fonts.googleapis.com/css?family=Bangers" rel="stylesheet">
```

Copy the highlighted code and paste the `<link>` code that you just copied from Google fonts into the `<head>` of your webpage.

```
<head>
<title>Mystery Letter</title>
<link rel="stylesheet" href="style.css">
<link href='https://fonts.googleapis.com/css?family=Bangers' rel='stylesheet' type='text/css'>
```

This allows you to use the Bangers font in your webpage. Return to Google fonts and scroll further down the page and copy the font-family code.

Specify in CSS

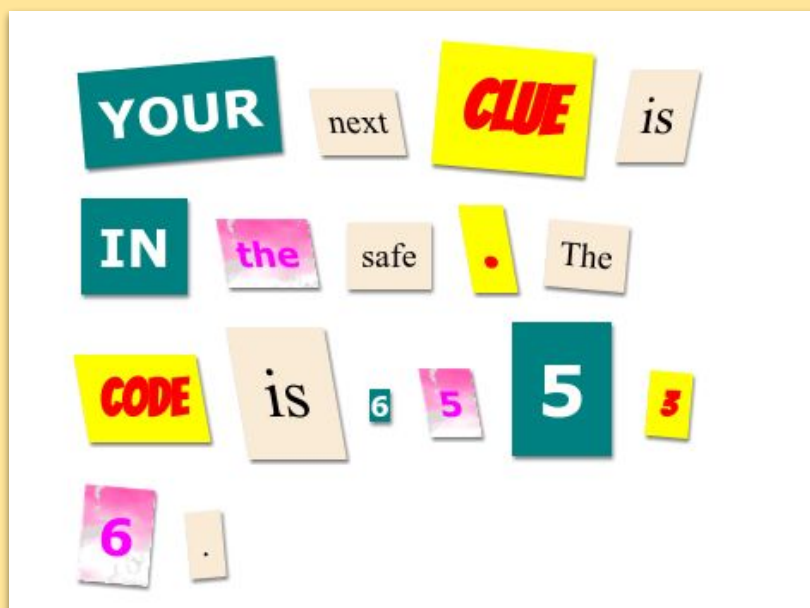
Use the following CSS rules to specify these families:

```
font-family: 'Bangers', cursive;
```

Now go back to your **'style.css'** file in trinket and paste the font-family code into the comic style:

```
.comic {
  background-color: yellow;
  color: red;
  font-weight: bold;
  font-family: 'Bangers', cursive;
}
```

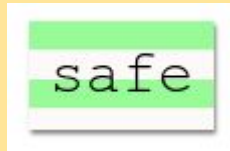
Test your webpage. The result should look something like this:





Challenge

Create an old-fashioned computer print style and apply it to some of the words.



You will need:

- The **VT323** font family from fonts.google.com. Look back at Step 5 if you need a reminder on using Google fonts.
- The **computer-printout-paper.png** background image. Look back at back to the **editing classes** section if you need a reminder on using background images.

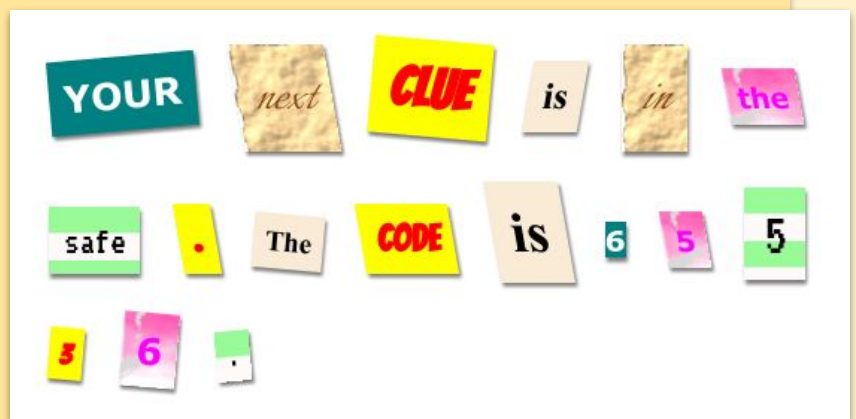


Challenge

Now create your own class styles and make your mystery letter even more interesting. Use the CSS that you have learnt in previous projects and look at the examples in **style.css** for ideas. Here's an example:

You can see the images that are available to use by clicking on the Images tab in trinket. Try setting image backgrounds using one of the included images:

- `rough-paper.png`
- `canvas.png`



If you have a trinket account, you can upload images of your own as you may have done in the **'Tell a Story'** Project.

Find fonts that you like on fonts.google.com and copy their `<link>` and CSS code into your trinket to use them.

