HTML AND CSS

Intro to HTML

LEARNING OBJECTIVES

- To understand what HTML is and what it's used for
- To understand what HTML elements are and be able to write your own
- To be able to create and structure the content of a webpage

WHATIS HTML?



Hyper Text Markup Language is used for coding the actual content of webpages.

It has been around since the early 90's and continues to be a hugely important part of web development.

HTML describes the structure of a webpage. It's the most basic building blocks of the web.

What about CSS?



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.

So you have the stuff - that's HTML
You have the way it looks - that's CSS
And you have the magic - that's Javascript

"Triad of cornerstone technologies for the web"



Let's get started with HTML

HTML is constructed with lots of elements.

These elements are simply the building blocks of HTML pages.

HTML Elements

Headings
Paragraphs
Links
Lists
and many more!

HTML elements

```
<tagname>Some content/tagname>
Opening tag
Content
Closing tag
```

Element

Tags

When a HTML document is read, it is the element tags which determine the type of content displayed.

There are many different types of tags.

Example

```
Today is cloudy!
Opening tag
Content Closing tag
```

Element

Note

Some HTML elements do not need a closing tag as they are used to place standalone elements on the webpage.

For example:



https://www.w3schools.com/tags/

Commenting

You can add notes that html will ignore.

<!-- this is where comments go -->

A few basics...



Headings

- <h1>Heading 1</h1>
- <h2>Heading 2</h2>
- <h3>Heading 3</h3>
- <h4>Heading 4</h4>
- <h5>Heading 5</h5>
- <h6>Heading 6</h6>

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

^{*}You should have only one Heading 1 <h1> on any one page

Paragraphs



Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum.



Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet. Lorem ipsum dolor sit amet, consetetur sadipscing elitr, sed diam nonumy eirmod tempor invidunt ut labore et dolore magna aliquyam erat, sed diam voluptua. At vero eos et accusam et justo duo dolores et ea rebum. Stet clita kasd gubergren, no sea takimata sanctus est Lorem ipsum dolor sit amet.

Line break

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aliquyam erat, sed diam voluptua.

Let's go deeper... adding link and image

```
 <a href="https://wearecodenation.com/">Code Nation</a> is a coding school.
```

```
<a href="https://wearecodenation.com/" > Code Nation</a> is a coding school.
```

```
<a href="https://wearecodenation.com/" target="_blank": Code
Nation</a> is a coding school.

When clicking on the link,
    it will open in a new tab
```

```
<img src="cn.png" alt="logo">
               {codenation}
```

```
<img src="cn.png" alt="logo">

The logo is stored in the same folder as your html
```

{codenation}®

Description of image

The logo is stored in the same folder as your html

{codenation}

Description of image

The logo can be stored in a folder called "images".

{codenation}®

Adding link to an image

```
<a href="https://wearecodenation.com/">
     <img src="cn.png" alt="logo">
     </a>
```

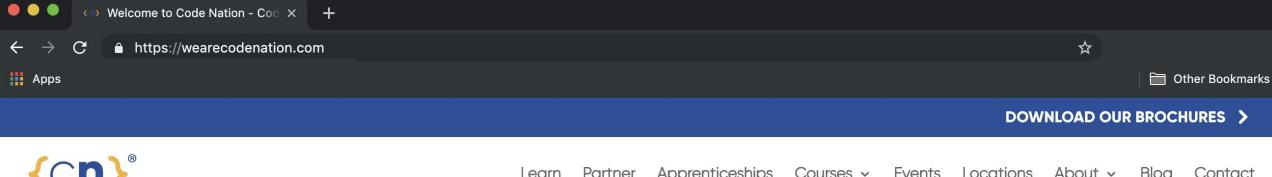


Plus many, many more....
Research more tags and elements online!

But be careful...

Some are outdated and no longer supported.

HTML in action





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{codenation}

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 Al, 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.

Learn With Us

Partner With Us

Work For Us

```
<!DOCTYPE html>
<html lang="en">
<head>
   <meta charset="UTF-8">
   <title>Welcome to Code Nation - Coding & Cyber Security Training</title>
</head>
<body>
   <div>
       <img src = "cn-s.png" alt = "Code Nation">
       <!--menu here-->
   </div>
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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 aet enough of.

DEFEND

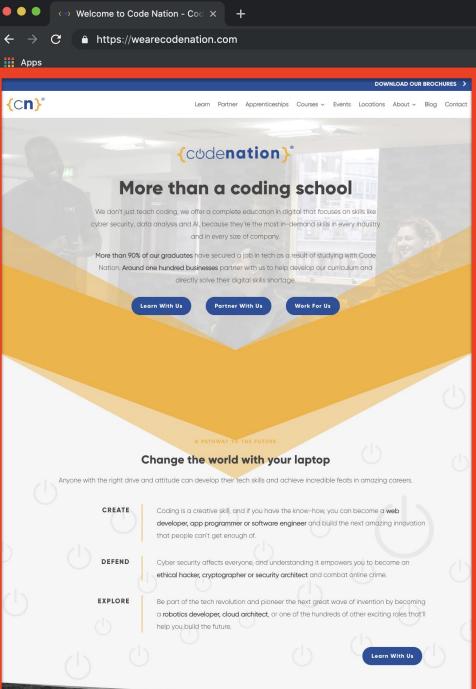
Cyber security affects everyone, and understanding it empowers you to become an ethical hacker, cryptographer or security architect and combat online crime.

EXPLORE

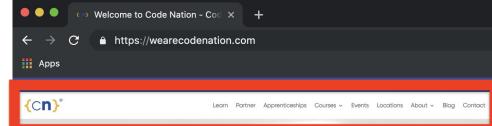
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{codenation}

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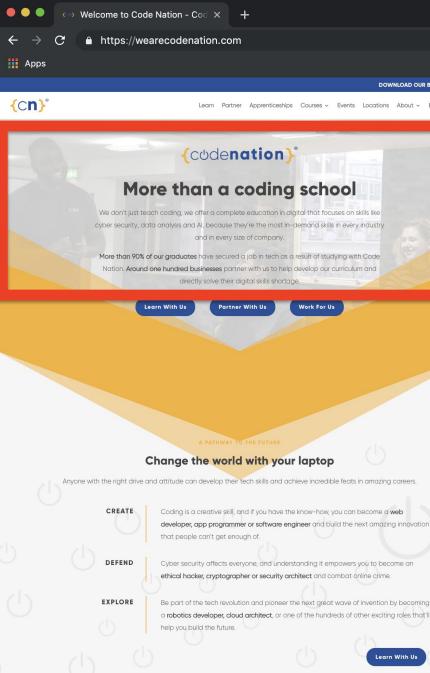
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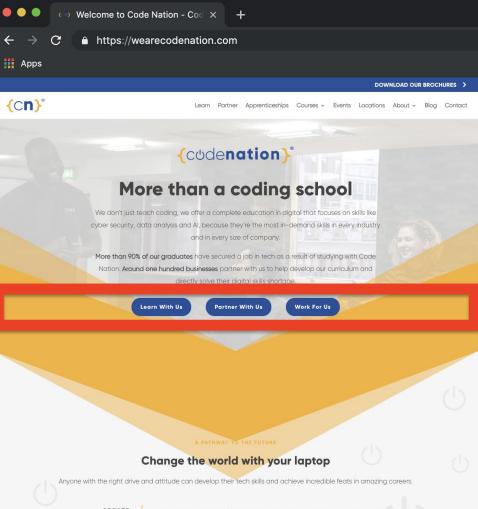
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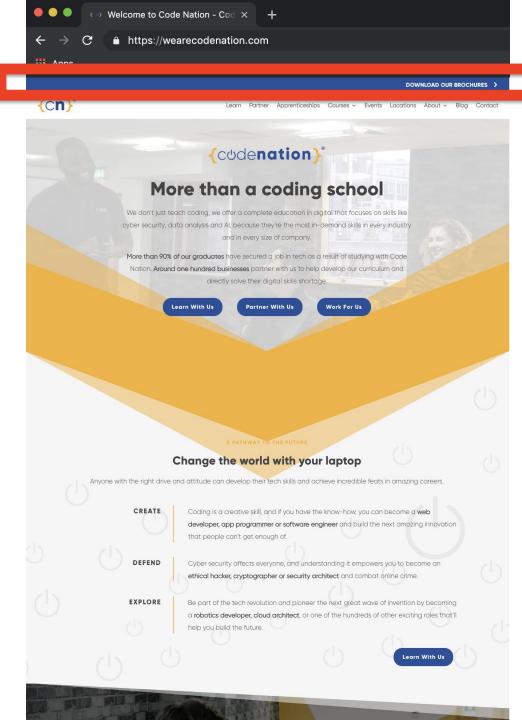
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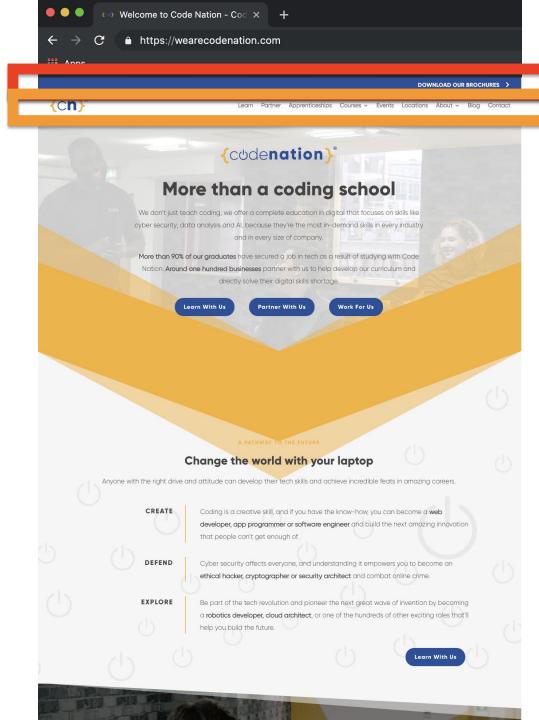
EXPLORE

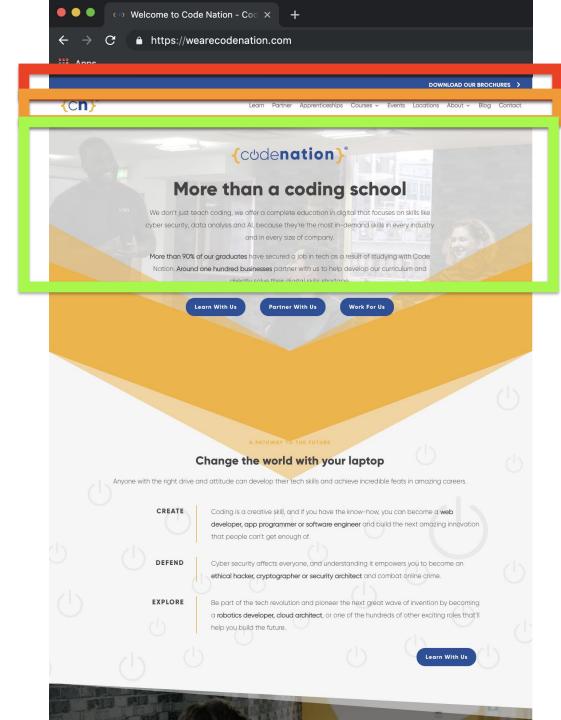
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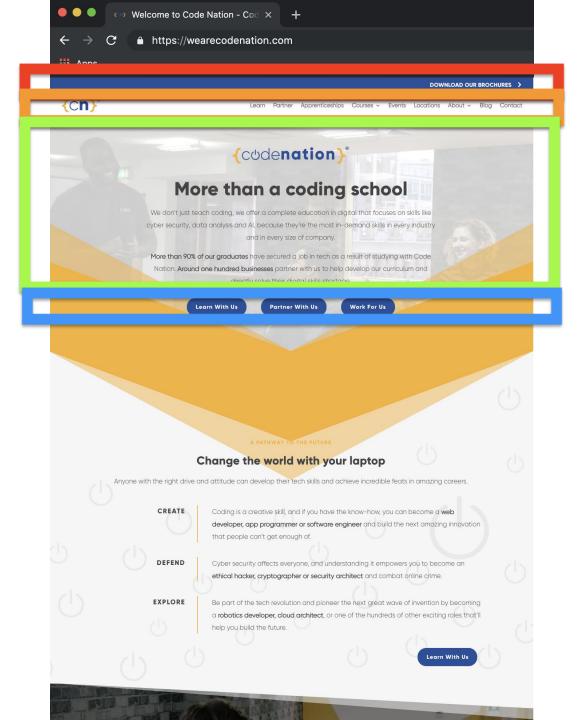
Learn With Us

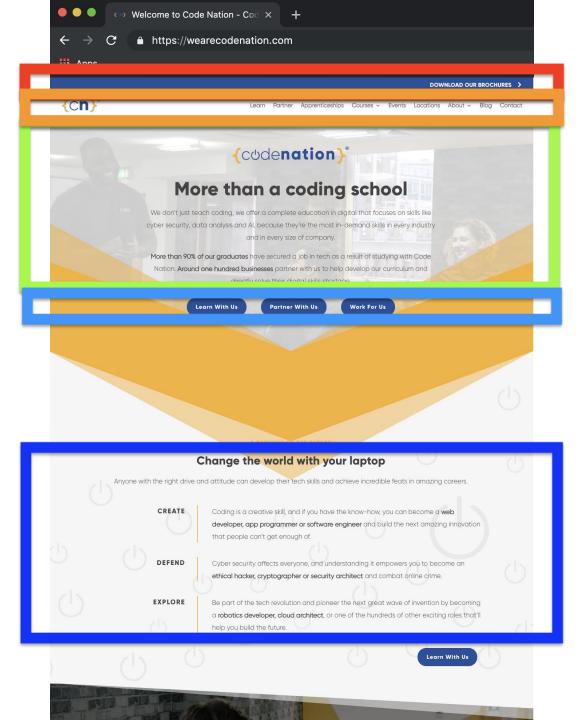
Notice how <div> were used to divide the page?

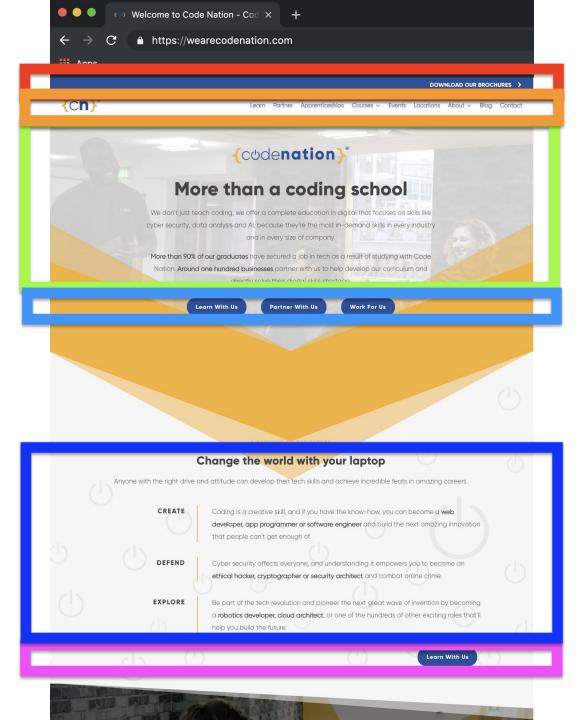


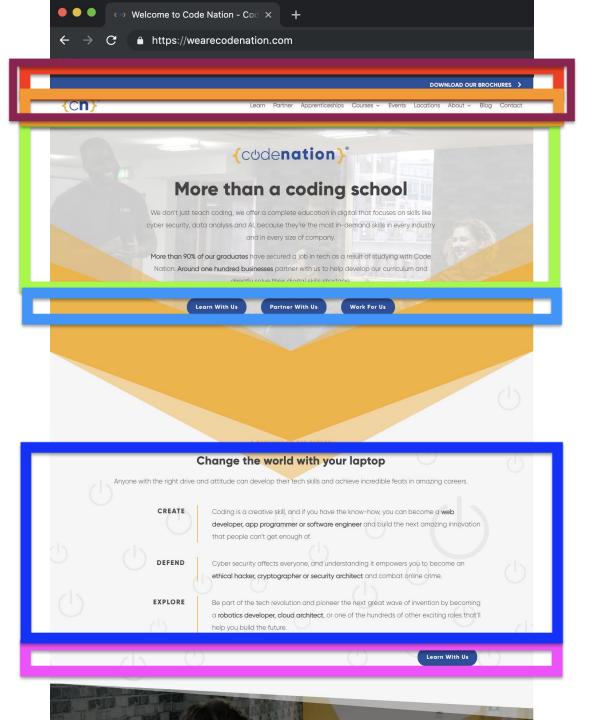




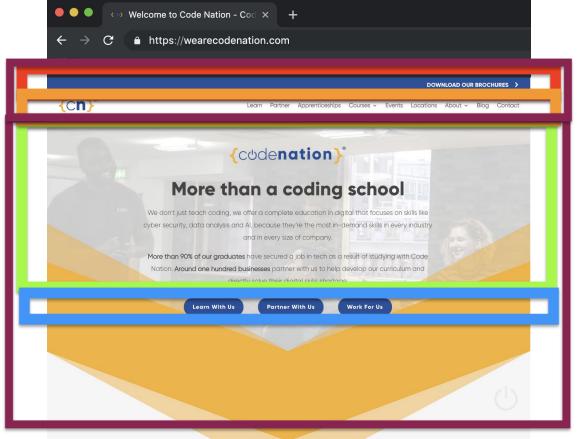


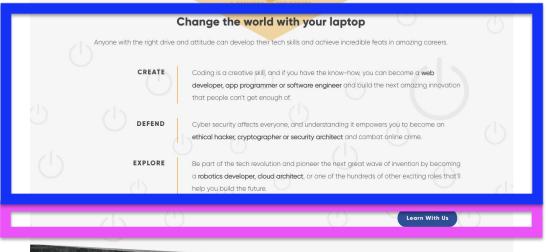




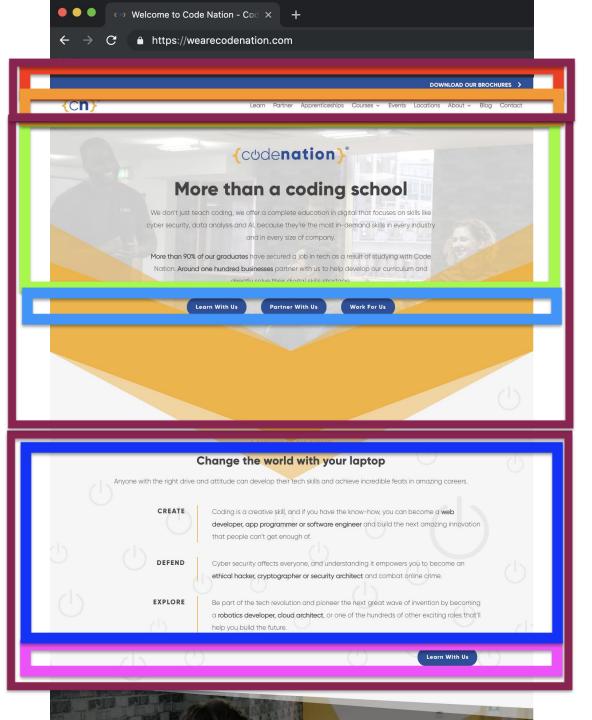


You can also have <div> inside another <div> so you can organise the page in the structure you'd like, and later use for styling.





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You can also have <div> inside another <div> so you can organise the page in the structure you'd like, and later use for styling.

<div> sections will
help us out when
styling with CSS

Even if it doesn't seem like they're doing much... Use them!

Creating a new html page

Before you create a new html page...

- -Create a new folder where you want to store your project
- -Give a name to this folder (small letters, no spaces, descriptive)
- -Drag and drop the folder to VSCode or use 'Open Folder'
- -Create a new file, name it "index.html"

In VS Code

Type html and select html:5





In VS Code

Type html and select html:5

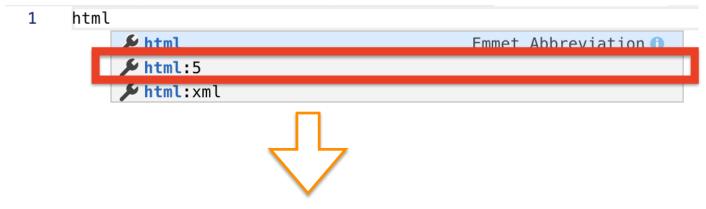


VS Code will give you a template

In VS Code

</html>

Type html and select html:5



VS Code will give you a template

You only need to define UTF-8 So delete line 5 and 6 for now

Webpage Structure

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
    ...Webpage contents...
</body>
</html>
```

Webpage Structure

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
    ...Webpage contents...
</body>
</html>
```

The doctype is the first thing to define in an HTML page.

It tells the browser which version of HTML the page is using.

<!DOCTYPE html>

```
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
    ...Webpage contents...
</body>
```

Followed by html tag which contains everything you need in a web page.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
    ...Webpage contents...
</body>
  html>
```

Notice the opening and closing tag of the html element and everything inside it.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
    ...Webpage contents...
</body>
</html>
```

A HTML page is split into two parts. The head and body.

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <title>Title</title>
</head>
<body>
    ...Webpage contents...
</body>
</html>
```

The head contains important webpage information like the page title (the text in the browser tab), stylesheets and meta information.

```
<!DOCTYPE html>
<html lang="en">
<head>
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    <title>Title</title>
</head>
<body>
    ...Webpage contents...
 body>
</html>
```

The body contains webpage content that is visible to the user.

The magic of css



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Learn With Us Partner With Us Work For Us

No styling required yet, so with any page we build we should start with plain html.





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And then do the magic with CSS

No styling required yet, so with any page we build we should start with plain html.



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It won't be pretty...



But don't worry. It's meant to look bad. Remember the magic of CSS...
We'll make it look nice later.

LEARNING OBJECTIVES

- To understand what HTML is and what it's used for
- To understand what HTML elements are and be able to write your own
- To be able to create and structure the content of a webpage

Your website

- Completely up to you what kind of website you're going to build - is it going to be a professional portfolio, a page for a fake agency/brand you've made up, a fan site, something based around your favourite things or hobbies? Be creative!
- In the very least, you must include three pages (more is fine) To start with, I suggest:
 - Home page
 - About me page
 - Contact me

Research more tags to see what HTML can do!

- Here are some suggestions:
- Further reading at the end of the presentation
- Video tag
- Mailto link
- Special characters and HTML entities
- SuperScript & SubScript elements (for dates, maths, equations etc)

Activity(1) - front page

Start thinking about what the home page of your website will be. When the user enters your website address, where will they land?

This page MUST be named index.html (all lower case).

Activity(1) - front page

What is going to be on the front page of your website? Start structuring it with different elements and adding some details. As a starting point, think about having:

- A page title/heading
- At least an image (of anything relevant)
- Subheadings for different sections (i.e. about me, my background, your interests in technology and coding, what made you interested in joining Code Nation)

Activity(2) - more pages!

As you continue to build your website, think about:

- -How many pages your website will have each page is a separate HTML file
- -e.g. index.html home page aboutme.html - about me page contact.html - contact me page
- -You should at least have three pages but more if needed

Activity(2) - more pages!

- -To connect all your pages together, first make sure all your HTML files are in the same root folder.
- -You can use the link tag we've learnt, but instead of a https address, use the file name.
- -E.g. Click here

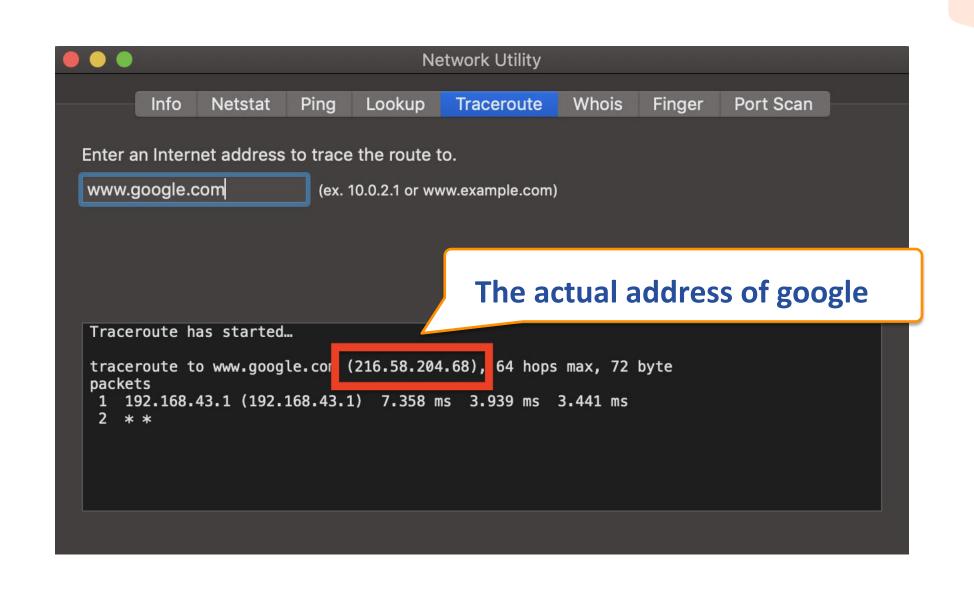
Extra reading



How does the web work?

https://www.google.com/





216.58.204.68



Alternatively, you can use command line

Traceroute www.google.com

```
[Leonas-MBP:~ leona$ Traceroute www.google.com
Traceroute to www.google.com (216.58.208.164), 64 hops max, 52 byte packets
 1 my.meraki.net (192.168.1.1) 5.581 ms 3.565 ms 5.196 ms
 2 51.219.209.137 (51.219.209.137) 4.120 ms 5.338 ms 5.286 ms
 3 51.219.107.240 (51.219.107.240) 6.792 ms 4.198 ms 5.651 ms
   164.39.242.0 (164.39.242.0) 19.389 ms 11.635 ms 12.950 ms
   216.239.63.138 (216.239.63.138) 13.755 ms
   172.253.66.88 (172.253.66.88) 12.445 ms
   172.253.68.210 (172.253.68.210) 17.721 ms
 9 216.239.46.29 (216.239.46.29) 12.380 ms
   216.239.46.39 (216.239.46.39) 15.011 ms
    74.125.242.115 (74.125.242.115) 13.145 ms
10 lhr25s09-in-f164.1e100.net (216.58.208.164) 12.785 ms
    216.239.59.77 (216.239.59.77) 13.904 ms 13.946 ms
```

A few keywords

DNS:-

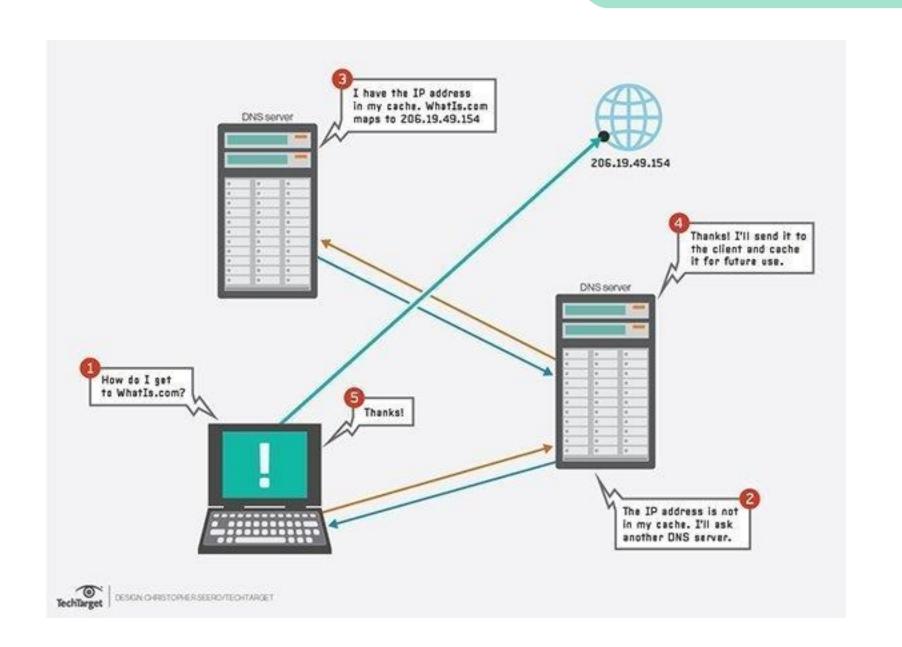
Domain Name System

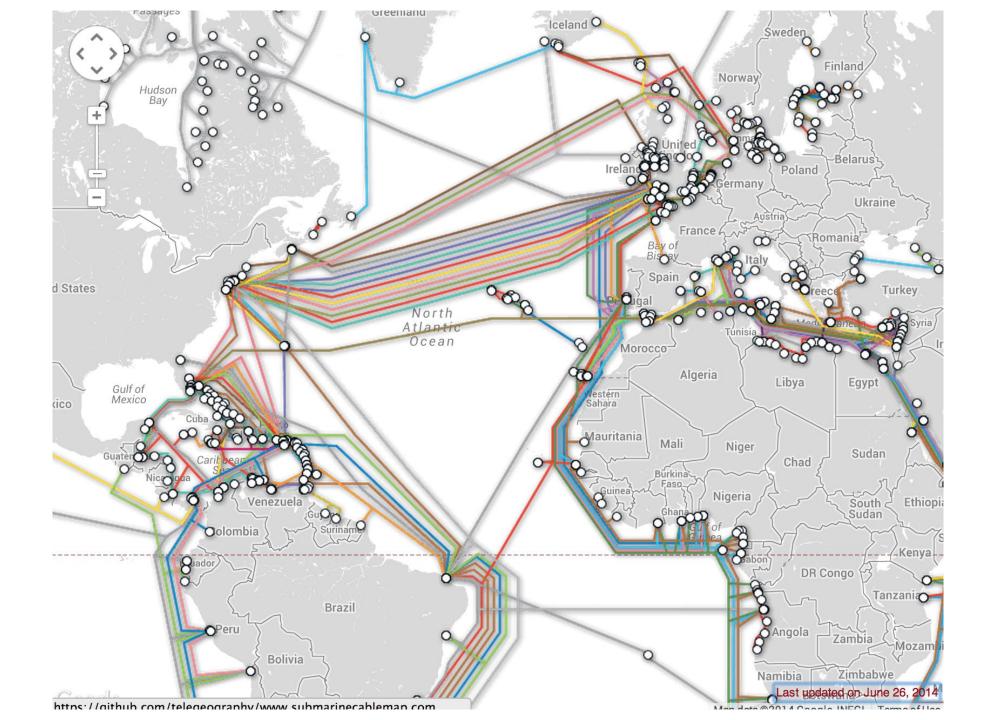
HTTP:-

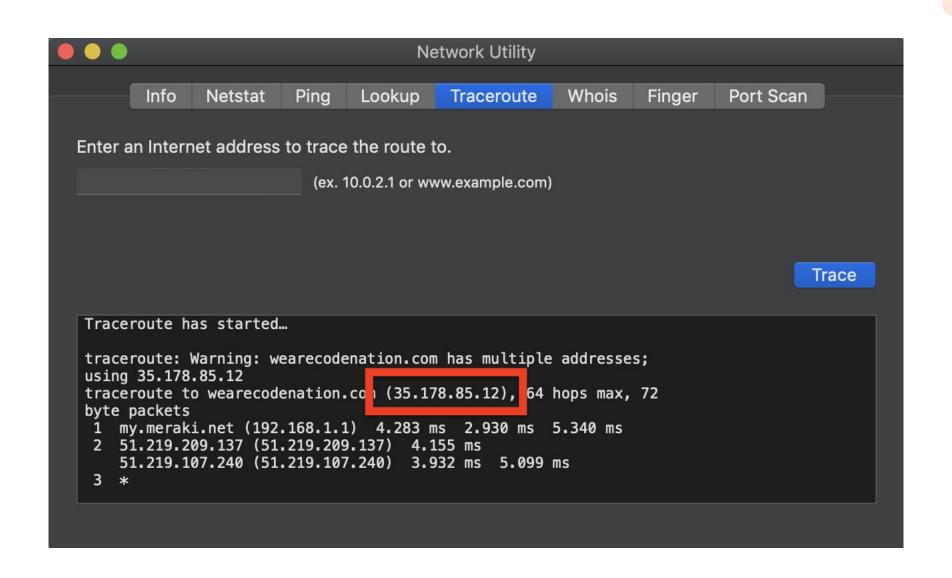
HyperText Transfer Protocol

WWW:-

World Wide Web







More HTML elements

Formatting text

```
<em>Emphasized text
<br>
<strong>Strong text</strong>
<br>
<code>A piece of computer code</code>
<br>
<samp>Sample output from a computer
program</samp>
<br>
<kbd>Keyboard input</kbd>
<br>
<var>Variable</var>
```

Emphasized text

Strong text

A piece of computer code
Sample output from a computer program
Keyboard input
Variable

Quotation

```
<q>Inline quote</q>
```

<blockquote>Blockquote

"Inline quote"

Blockquote

Abbreviation

```
You can use <abbr title="Cascading Style Sheets">CSS</abbr> to
style your <abbr title="HyperText Markup Language">HTML</abbr>.
```

You can use <u>CSS</u> to style your <u>HTML</u>.

Cascading Style Sheets

Abbreviation

```
You can use <abbr title="Cascading Style Sheets">CSS</abbr> to
style your <abbr title="HyperText Markup Language">HTML</abbr>.
```



*shows the abbreviation when you mouse hover over it

Unordered list

```
     Coffee
     Tea
     Hot Chocolate
```

- Coffee
- Tea
- Hot Chocolate

Ordered list

```
     Coffee
     Tea
     Hot Chocolate
```

- 1. Coffee
- 2. Tea
- 3. Hot Chocolate