

LEARNING GARDEN MAKER WORKSHOP: INTRODUCTION TO HTML/CSS/Javascript AND GITHUB

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Today's agenda.

- 1. How does web publishing work?**
- 2. Produce a web page with code editor such as **Visual Studio Code**.**
- 3. Free hosting of static website on **Github**.**
- 4. Mark up your web page structure in **HTML**.**
- 5. Style your web page in **CSS**.**
- 6. Provide interactive effects through **JS**.**

How does web publishing work?

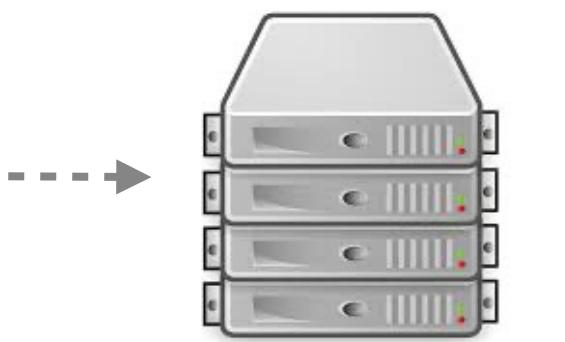
Browser

Screen Display



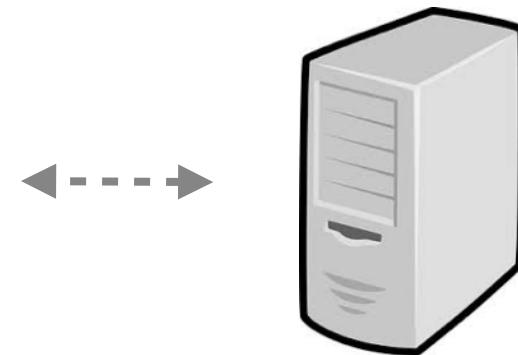
Web Server

HTML/CSS/JS



Database Server

Data



```
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="utf-8">
<title> A Tiny HTML Document </title>
<link href = "styles.css" rel="stylesheet">
<script src="scripts.js"></script>
</head>

<body>
<p>Let's rock the browser, HTML5 style.</p>
</body>
</html>
```

ID	PHONE	POPULARNAME	PREFERREDNAME	LATITUDE	LONGITUDE
1194520	00994614	popular_name_00994614	preferred_name_00994614	23.789875	88.897985
1194521	00994616	popular_name_00994616	preferred_name_00994616	23.789875	88.897985
1194522	00994618	popular_name_00994618	preferred_name_00994618	23.789875	88.897985
1194523	00994617	popular_name_00994617	preferred_name_00994617	23.789875	88.897985
1194524	00994619	popular_name_00994619	preferred_name_00994619	23.789875	88.897985
1194525	00994619	popular_name_00994619	preferred_name_00994619	23.789875	88.897985
1194526	00994620	popular_name_00994620	preferred_name_00994620	23.789875	88.897985
1194527	00994621	popular_name_00994621	preferred_name_00994621	23.789875	88.897985
1194528	00994622	popular_name_00994622	preferred_name_00994622	23.789875	88.897985
1194529	00994623	popular_name_00994623	preferred_name_00994623	23.789875	88.897985
1194530	00994624	popular_name_00994624	preferred_name_00994624	23.789875	88.897985
1194531	00994625	popular_name_00994625	preferred_name_00994625	23.789875	88.897985

Static Website vs. Dynamic Website

Browser

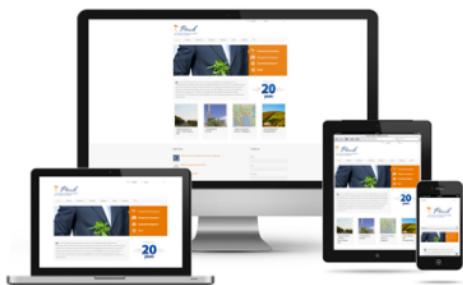
Screen Display



Web Server

HTML/CSS/JS

Static Website



```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <meta charset="utf-8">
5  <title> A Tiny HTML Document </title>
6  <link href = "styles.css" rel="stylesheet">
7  <script src="scripts.js"></script>
8  </head>
9
10 <body>
11 <p>Let's rock the browser, HTML5 style.</p>
12 </body>
13 </html>
```

Browser

Screen Display



Web Server

HTML/CSS/JS

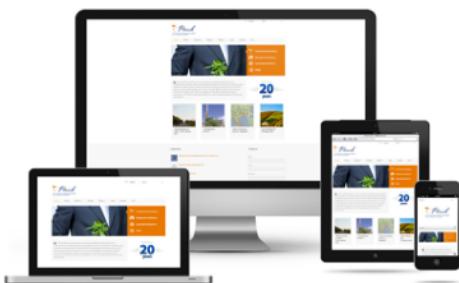


Database Server

Data



Dynamic Website



```
1 <!DOCTYPE html>
2 <html lang="en">
3   <head>
4     <meta charset="utf-8">
5     <title> A Tiny HTML Document </title>
6     <link href = "styles.css" rel="stylesheet">
7     <script src="scripts.js"></script>
8   </head>
9
10  <body>
11    <p>Let's rock the browser, HTML5 style.</p>
12  </body>
13  </html>
```

ID	PHONE	POPULARNAME	PREFERREDNAME	LATITUDE	LONGITUDE
1194520	00994614	popular_name_00994614	preferred_name_00994614	23.789875	88.897985
1194521	00994616	popular_name_00994616	preferred_name_00994616	23.789875	88.897985
1194522	00994618	popular_name_00994618	preferred_name_00994618	23.789875	88.897985
1194523	00994617	popular_name_00994617	preferred_name_00994617	23.789875	88.897985
1194524	00994619	popular_name_00994619	preferred_name_00994619	23.789875	88.897985
1194525	00994619	popular_name_00994619	preferred_name_00994619	23.789875	88.897985
1194526	00994620	popular_name_00994620	preferred_name_00994620	23.789875	88.897985
1194527	00994621	popular_name_00994621	preferred_name_00994621	23.789875	88.897985
1194528	00994622	popular_name_00994622	preferred_name_00994622	23.789875	88.897985
1194529	00994623	popular_name_00994623	preferred_name_00994623	23.789875	88.897985
1194530	00994624	popular_name_00994624	preferred_name_00994624	23.789875	88.897985
1194531	00994625	popular_name_00994625	preferred_name_00994625	23.789875	88.897985

Demo

**Browser (e.g. Chrome) translates HTML/
CSS/JS into web pages ordinary human
can understand.**

**We need a `code editor` to create
HTML/CSS/JS files.**

Version 1.47 is now available! Read about the new features and fixes from June.

Code editing. Redefined.

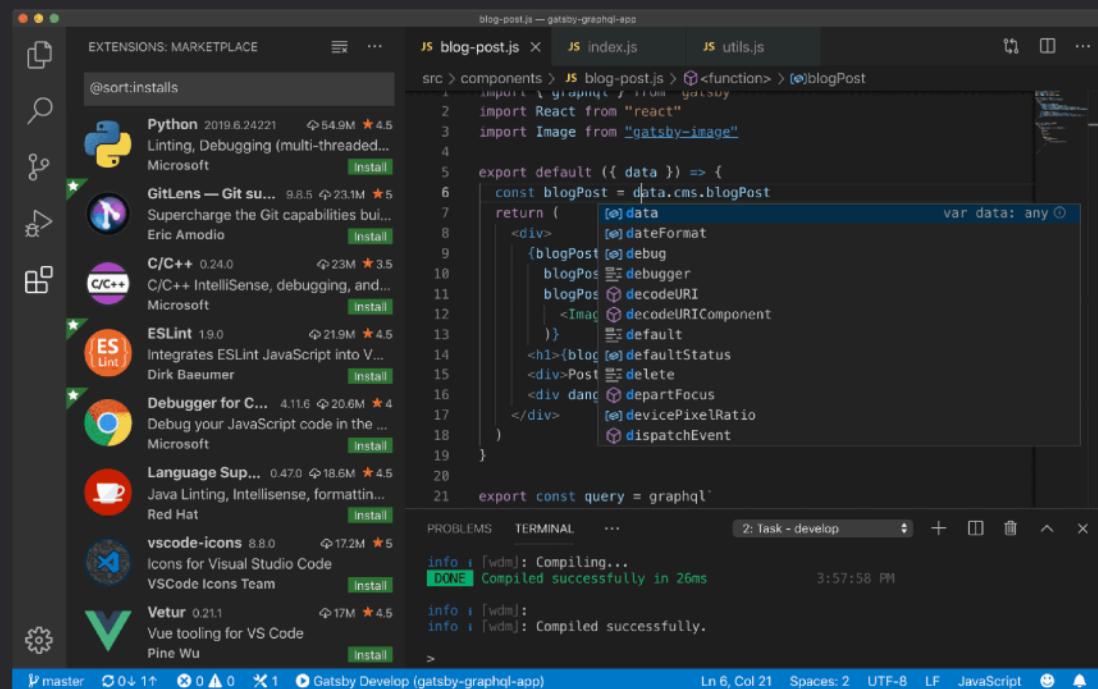
Free. Built on open source. Runs everywhere.

Download for Mac

Stable Build

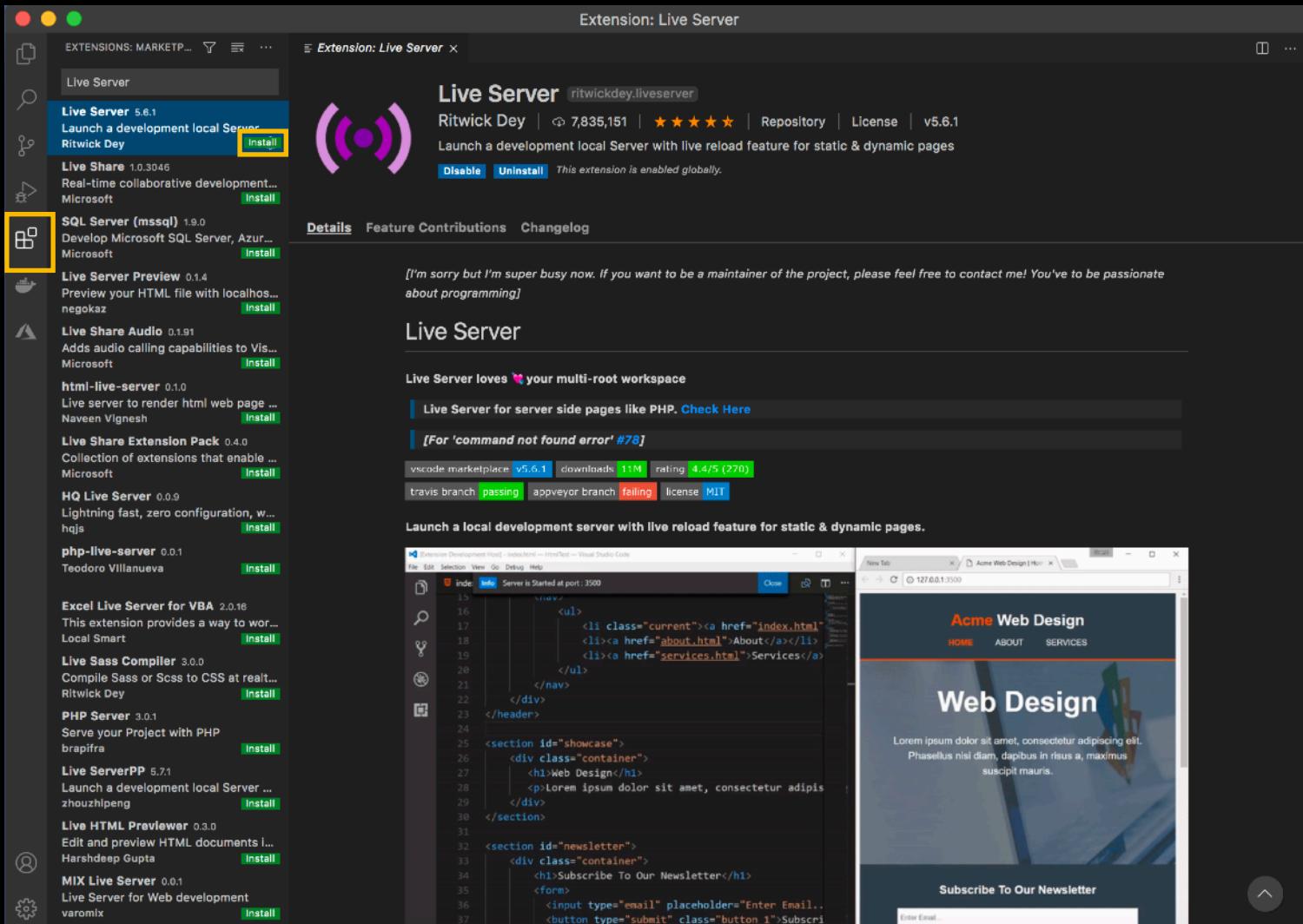
Other platforms and Insiders Edition

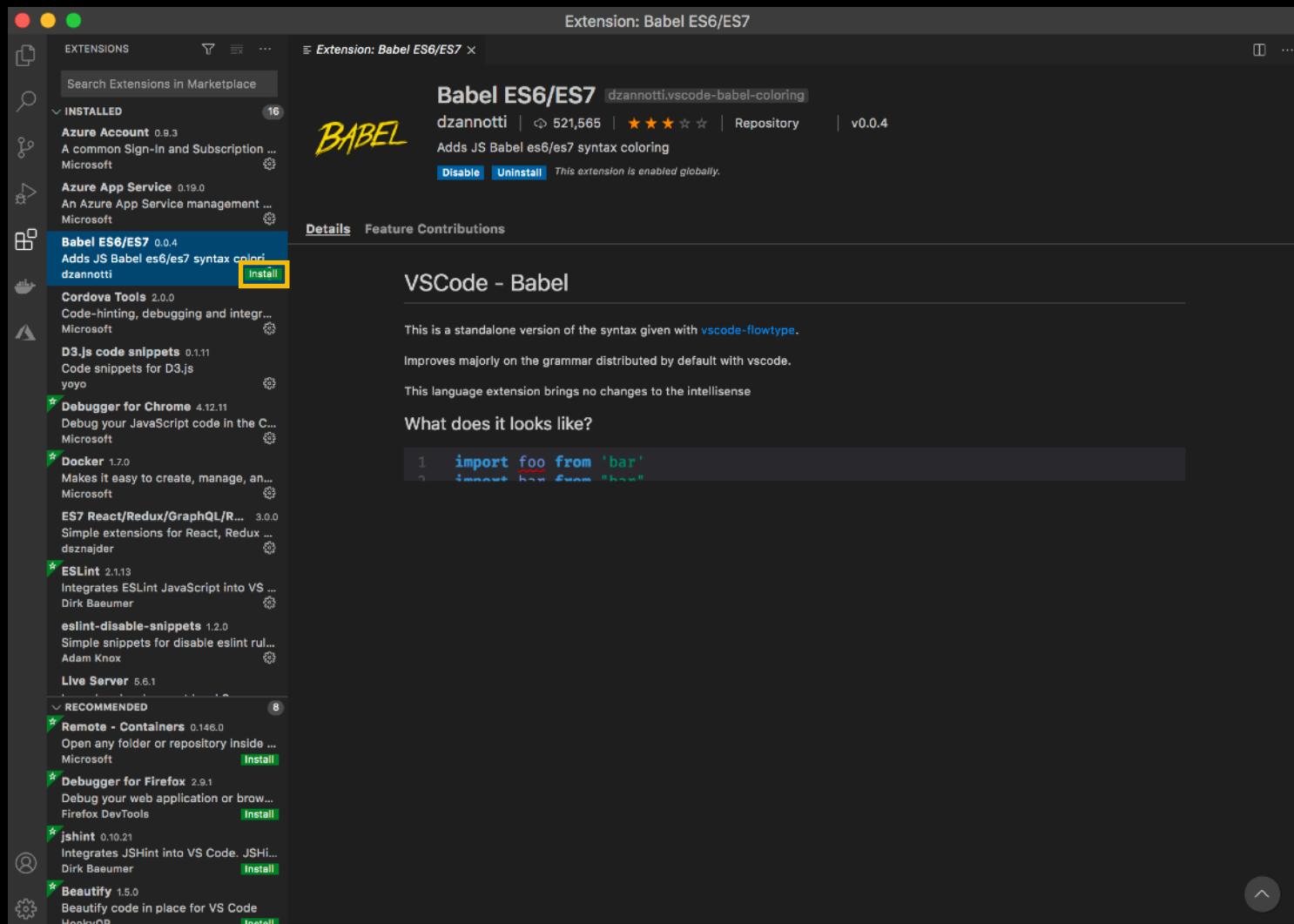
By using VS Code, you agree to its
[license](#) and [privacy statement](#).



<https://code.visualstudio.com/>

Adding plugins.





Free hosting of static website on Github.

1. Sign-up for a **Github** account (the free account)
2. Install **Github Desktop** and create a new repository
(You can treat the repository as a folder) by
creating a new folder associated with it.



Built for developers

GitHub is a development platform inspired by the way you work. From **open source to business**, you can host and review code, manage projects, and build software alongside 50 million developers.

<https://github.com>

Username

my_account_name

Email

bernard@cuhk.edu.hk

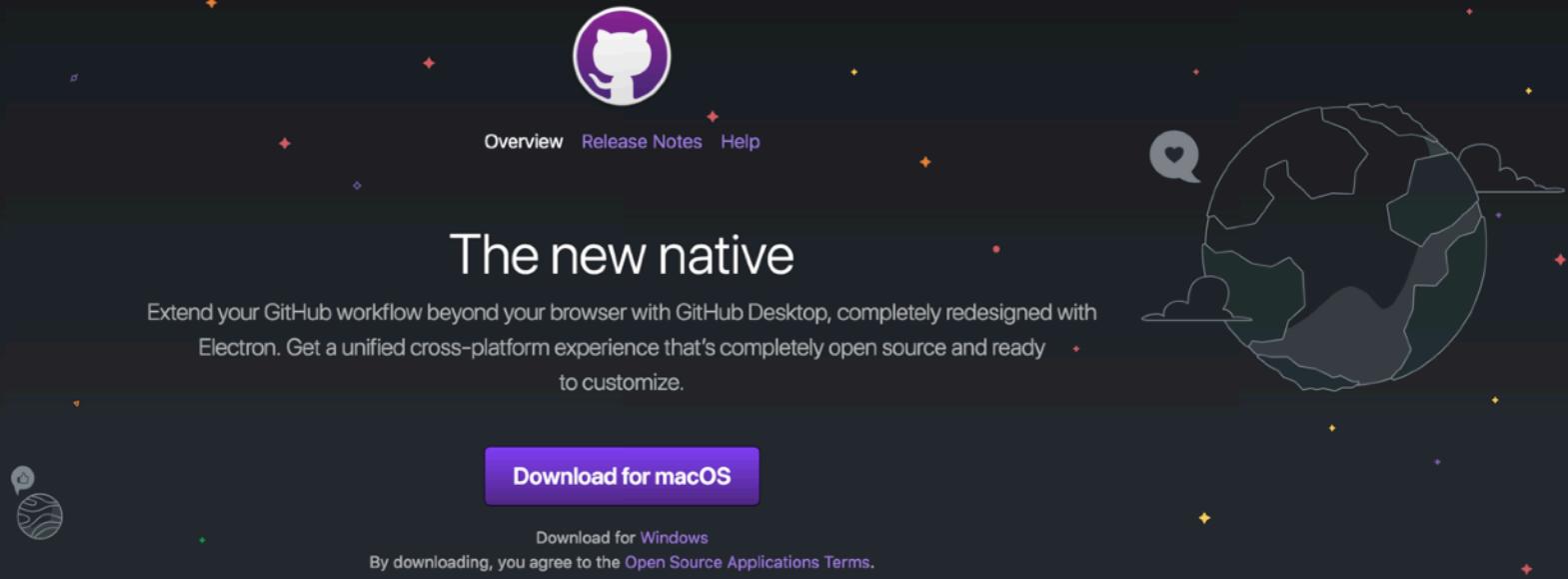
Password

Make sure it's at least 15 characters OR at least 8 characters including a number and a lowercase letter. [Learn more](#).

Sign up for GitHub

By clicking "Sign up for GitHub", you agree to our [Terms of Service](#) and [Privacy Statement](#). We'll occasionally send you account related emails.





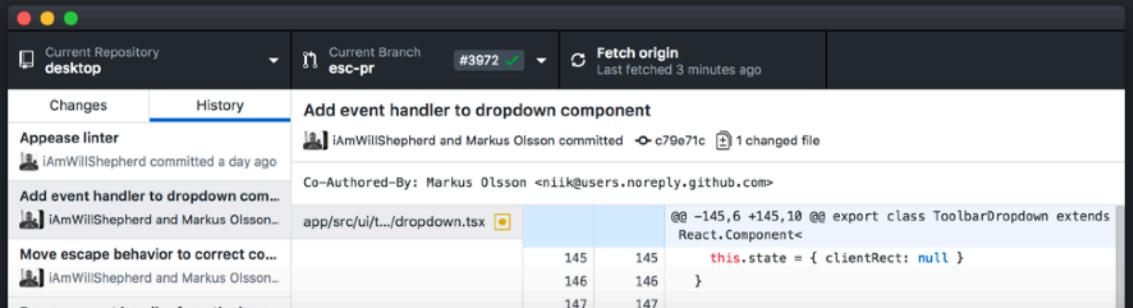
The new native

Extend your GitHub workflow beyond your browser with GitHub Desktop, completely redesigned with Electron. Get a unified cross-platform experience that's completely open source and ready to customize.

Download for macOS

Download for Windows

By downloading, you agree to the [Open Source Applications Terms](#).



A screenshot of the GitHub Desktop application window. The window title is "desktop". The top bar shows "Current Repository" set to "desktop", "Current Branch" set to "esc-pr", and "Fetch origin" status. The main pane displays a pull request titled "Add event handler to dropdown component". The commit message is from "iAmWillShepherd and Markus Olsson committed" on "c79e71c" with "1 changed file". The code changes are shown in a diff view:

```
@@ -145,6 +145,10 @@ export class ToolbarDropdown extends React.Component<
    this.state = { clientRect: null }
}
```

<https://desktop.github.com/>



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suentze2020

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Joined 18 days ago

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Language ▾

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New

[pre-class-workshop](#)

HTML Updated 10 days ago

Star

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What does HTML stand for?

(H)yper (T)ext (M)arkup (L)anguage

(M)arkup is a collection of “tags”.

NOUN

HTML

<html>, <head>, <title>, <meta>, <style>, <script>, <body>, <header>, <footer>, <nav>, <main>, <section>, <aside>, <p>,
, <a>, , , , <table>, <div>, <form>

Elements
has
attributes

(e.g. color, background-color, position, font-family, font-size, font-style, display, width, margin, border, padding)

```
<html>
```

```
  <head>
```

```
    <title>Page title </title>
```

```
  </head>
```

```
<body>
```

```
  <h1>This is a heading </h1>
```

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

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

```
</body>
```

```
</html>
```

First hands-on exercise:

<https://www.wikihow.com/Create-a-Simple-Web-Page-with-HTML> (Part 1 to Part 5)

**Part
1**

Adding a Head to Your HTML

```
<!DOCTYPE html>
<html>
<head>
<title>wikihow</title>
</head>
```

Part
2

Adding a Body and Text to Your HTML

```
<!DOCTYPE html>
<html>
<head>
<title>wikihow</title>
</head>
<body>
<h1>How to create a webpage</h1>
<p> It's easy and fun</p>
```

Part
3

Adding Additional Elements to Your HTML

```
<!DOCTYPE html>
<html>
<head>
<title>wikihow</title>
</head>
<body>
<h1>How to create a webpage</h1>
<p> It's easy and fun</p>

```

Part
3

Adding Additional Elements to Your HTML

```
<!DOCTYPE html>
<html>
<head>
<title>wikihow</title>
</head>
<body>
<h1>How to create a webpage</h1>
<p> It's easy and fun</p>

<a href="https://www.facebook.com">Facebook</a>
<br>
```

Part
4

Customizing Colors

```
<!DOCTYPE html>
<html>
<head>
<title>wikihow</title>
</head>
<body style="background-color:lavender;">
<h1>How to create a webpage</h1>
<p> It's easy and fun</p>

<a href="https://www.facebook.com">Facebook</a>
<br>
```

Part
5

Closing Your HTML Document

```
<!DOCTYPE html>
<html>
<head>
<title>wikihow</title>
</head>
<body style="background-color:lavender;">
<h1>How to create a webpage</h1>
<p> It's easy and fun</p>

<a href="https://www.facebook.com">Facebook</a>
<br>
</body>
</html>
```

Congratulation. You created your first html page.
(example1.html). Now it's time to upload it to your
remote Github account space.

Headings and HTML Formatting Elements



Browser View

How to create a webpate

This is a h2 tag

It's easy and fun.

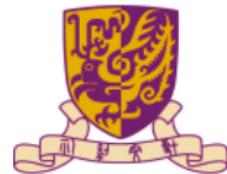
Bold text

Italic text

Underlined text

Subscript text

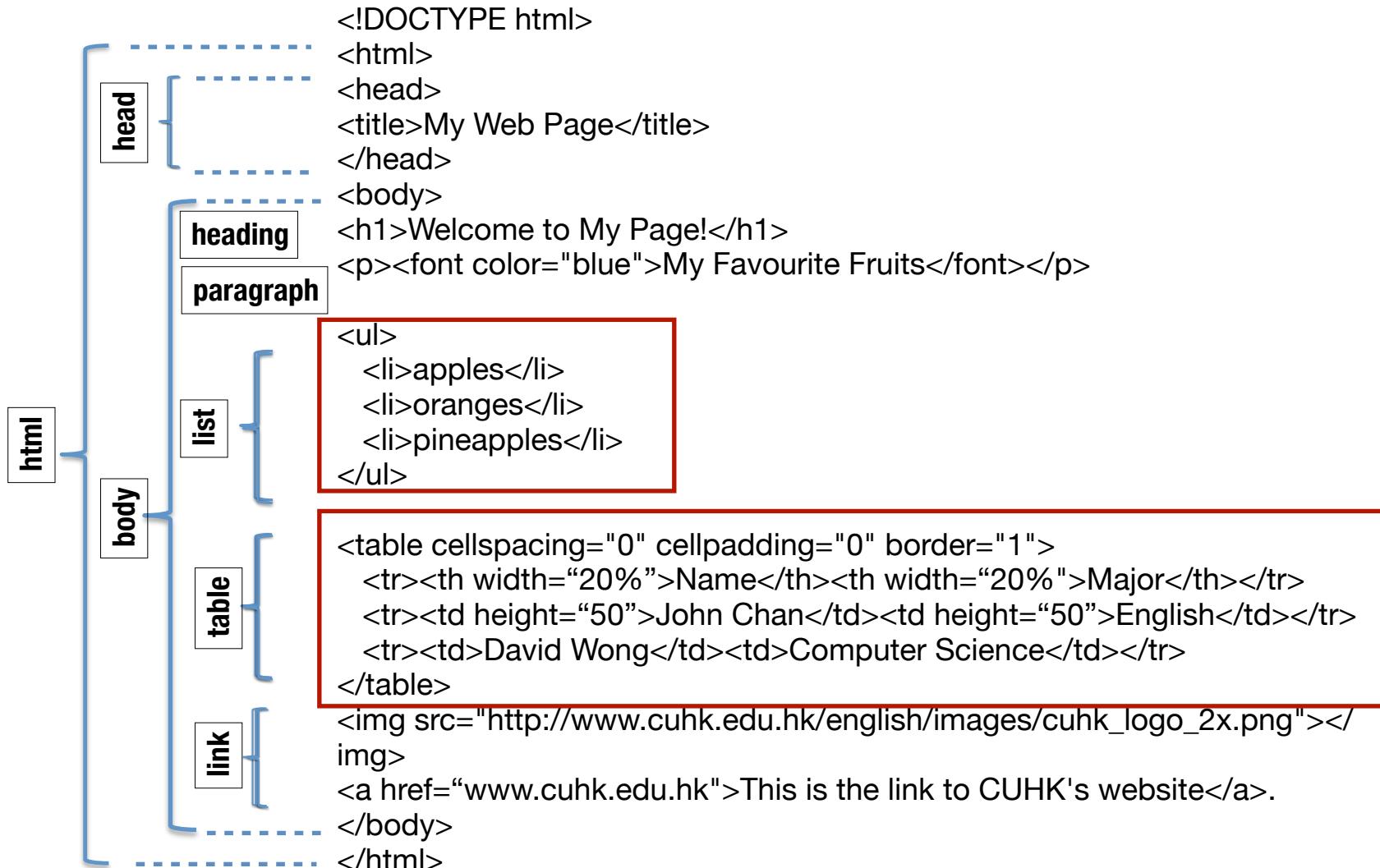
Superscript text



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[Facebook](#)

Lists and Tables



Browser View

Welcome to My Page!

My Favourite Fruits

- apples
- oranges
- pineapples

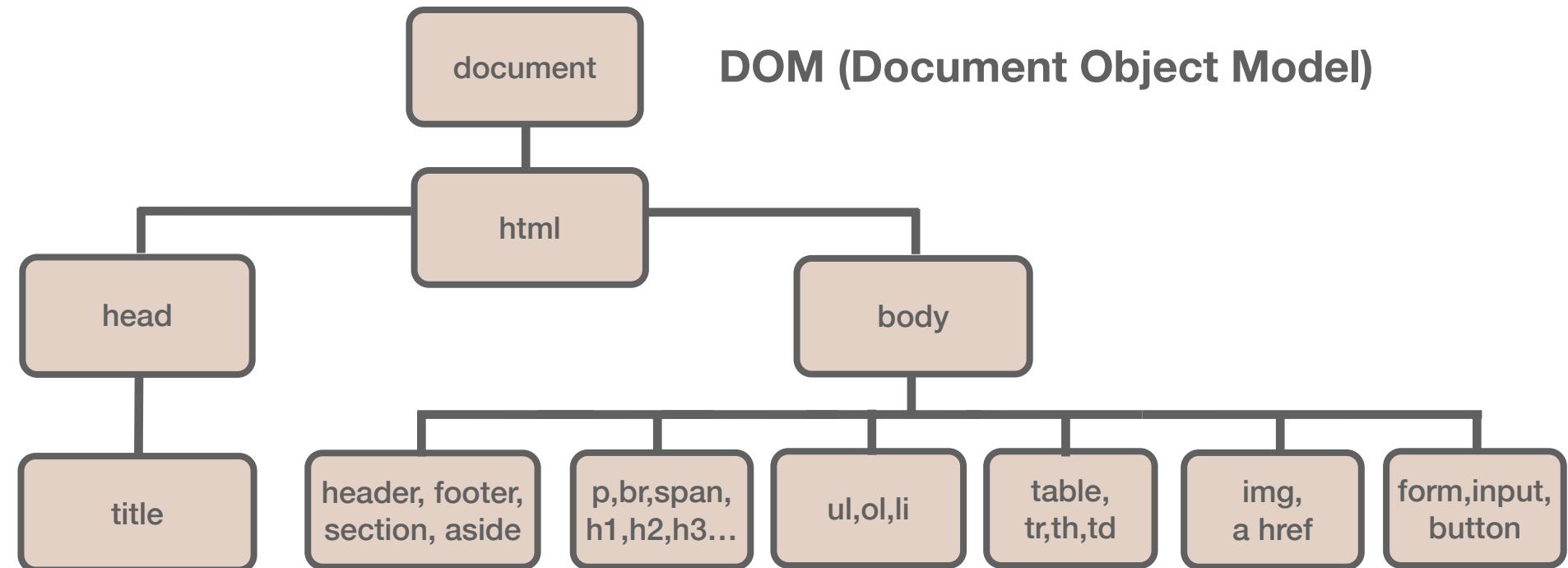
Name	Major
John Chan	English
David Wong	Computer Science



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[This is the link to CUHK's website.](#)

DOM (Document Object Model)



<https://www.runoob.com/htmldom/htmldom-tutorial.html>

The **Grammar** of HTML Elements

- Start with `<>` tag (e.g. `<p>`).
- End with `</>` tag (e.g. `</p>`).
- Element content is everything between the start and end tags.
- Some elements have empty content and no end tag (e.g. `
`).
- Most elements have attributes.

What does CSS stand for?

(C)ascading (S)tyle (S)heet

CSS Demonstration:

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

CSS Demo - One HTML Page - Multiple Styles!

Here we will show one HTML page displayed with four different stylesheets. Click on the "Stylesheet 1", "Stylesheet 2", "Stylesheet 3", "Stylesheet 4" links below to see the different styles:

The screenshot shows a web page with the following structure:

- Header:** A green header bar containing the text "Welcome to My Homepage" in white, bold, sans-serif font, and "Use the menu to select different Stylesheets" in a smaller white font.
- Sidebar:** A vertical sidebar on the left side with a light gray background. It contains a list of links:
 - Stylesheet 1** (highlighted in green)
 - Stylesheet 2
 - Stylesheet 3
 - Stylesheet 4
 - No Stylesheet
- Main Content:** The main content area has a white background. It features large, bold, black text that reads "Same Page Different Stylesheets". Below this, there is explanatory text in a smaller black font: "This is a demonstration of how different stylesheets can change the layout of your HTML page. You can change the layout of this page by selecting different stylesheets in the menu, or by selecting one of the following links: [Stylesheet1](#), [Stylesheet2](#), [Stylesheet3](#)".

MOST IMPORTANT LESSON TO REMEMBER IN CSS:

To **style** a HTML element, you need to have a way to access it. In CSS, this is done through the **SELECTOR**.

There are two types of selector: **BASE** and **CUSTOM**.
The **CUSTOM** selectors are further divided into **CLASS** and **ID**.

Once an element is selected, it can be styled by changing the **values** of its **properties**.

Base

Selector

body

ADJECTIVE

CSS

Declaration

Declaration

{ color:purple; font-size:12px; }

Property

Value

Property

Value

body

ADJECTIVE

CSS

Declaration

Declaration

{ color:purple; font-size:12px; }

Property

Value

Property

Value

Custom (e.g. class or id)
Selector

ADJECTIVE

CSS

Declaration

Declaration

.box

#nav

{ color:blue; font-size:12px; }

class

id

Property

Value

Property

Value

**Inspecting CSS codes through the Chrome
inspector.**

Browser View Using Chrome Inspect

Welcome to My Page!

My name is Bob.

I hope you like it here.

This is my paragraph.

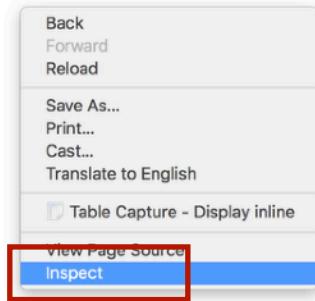
Whales are majestic creatures.



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[This is the link to CUHK's website.](#)

[Bold text](#) [Italic text](#) [Underlined text](#) [Subscript text](#) [Superscript text](#)



Use right mouse click to trigger pop-up window

Browser View Using Chrome Inspect

Welcome to My Page!

My name is Bob.

I hope you like it here.

This is my paragraph.

Whales are majestic creatures.

A screenshot of the Chrome Developer Tools Elements tab. The tab is highlighted with a red box. The main area shows the DOM tree with the root element "`<html>`". The "Styles" panel on the right displays the CSS rules for the "html" element, including the "display: block;" property. A specific element in the DOM tree has a yellow dashed border around it, indicating it is selected. The "Computed" tab in the styles panel is also visible. The bottom of the screen shows the browser's address bar with the URL "http://localhost:8080".

Browser View Using Chrome Inspect

Welcome to My Page!

My name is Bob.

I hope you like it here.

This is my paragraph.

[Whales are majestic creatures.](#)



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[Bold text](#) [Italic text](#) [Underlined text](#) [Subscript text](#) [Superscript text](#)

The screenshot shows the Chrome DevTools Elements tab with the DOM tree open. A red box highlights the CSS rule for the second heading element:

```
<h2 style="border-style: solid; border-width: 1px;">My name is Bob.</h2> == $0
```

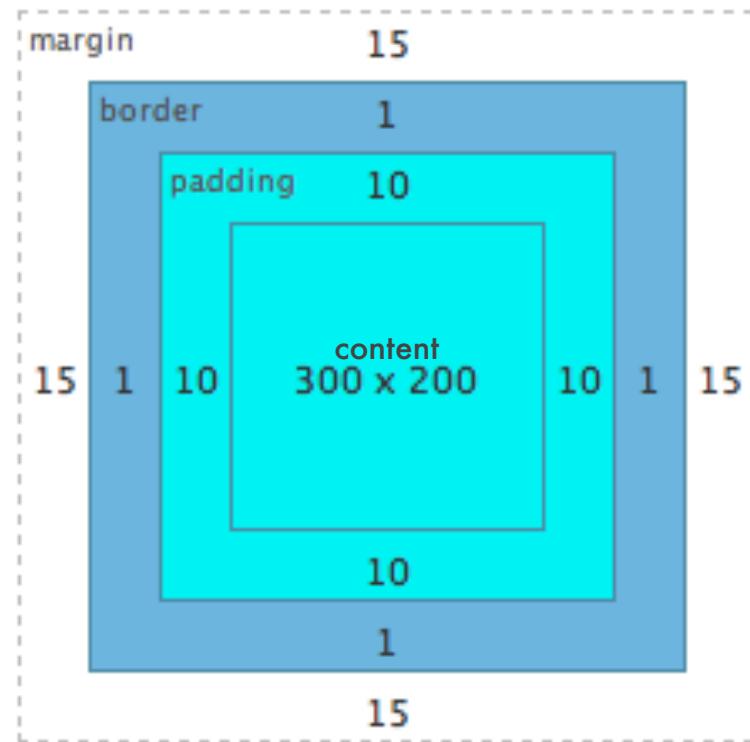
The right panel shows the Styles tab with the following CSS rule highlighted by a red box:

```
element.style {  
    border-style: solid;  
    border-width: 1px;  
}
```

The computed styles for the h2 element are also listed:

```
nz t user agent stylesheet  
display: block;  
font-size: 1.5em;  
-webkit-margin-before: 0.83em;  
-webkit-margin-after: 0.83em;  
-webkit-margin-start: 0px;  
-webkit-margin-end: 0px;  
font-weight: bold;
```

The Box Model



Third hands-on exercise:

<https://www.w3.org/Style/Examples/011/firstcss.en.html>

Base

Selector

body

ADJECTIVE

CSS

Declaration

Declaration

{ color:purple; font-size:12px; }

Property

Value

Property

Value

Third hands-on exercise:

<https://www.w3.org/Style/Examples/011/firstcss.en.html>

STEP I: WRITING THE HTML

For this tutorial, I suggest you use only the very simplest of tools. E.g., Notepad (under Windows),TextEdit (on the Mac) or KEdit (under KDE) will do fine. Once you understand the principles, you may want to switch to more advanced tools, or even to commercial programs, such as Style Master, Dreamweaver or GoLive. But for your very first CSS style sheet, it is good not to be distracted by too many advanced features.

Don't use a wordprocessor, such as Microsoft Word or OpenOffice. They typically make files that a Web browser cannot read. For HTML and CSS, we want simple, plain text files.

Step I is to open your text editor (Notepad,TextEdit, KEdit, or whatever is your favorite), start with an empty window and type the following:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
  <title>My first styled page</title>
</head>
```

Local links

[1.The HTML](#)

[2.Adding color](#)

[3.Adding fonts](#)

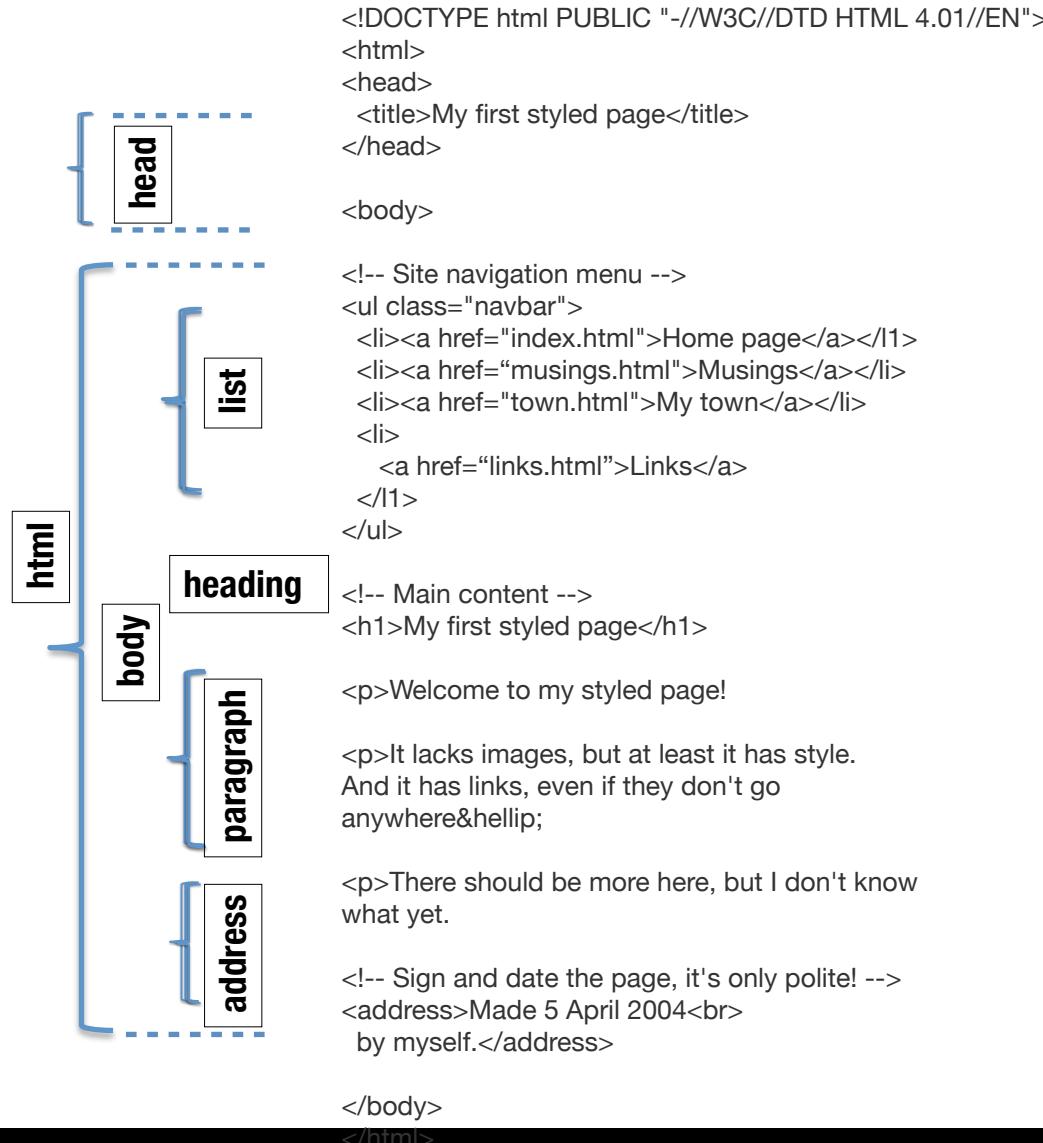
[4.A navigation bar](#)

[5. Styling links](#)

[6. Horizontal line](#)

[7. External CSS](#)

[Further reading](#)



```
<body>
<!-- Site navigation menu -->
<ul class="navbar">
    <li><a href="index.html">Home page</a>
    <li><a href="musings.html">Musings</a>
    <li><a href="town.html">My town</a>
    <li><a href="links.html">Links</a>
</ul>
<!-- Main content -->
<h1 style="
    border-style: solid;
    border-width: 7px;
    padding: 20px;
    text-align: center;
    color: black;
    width: 50%;">
    >My first styled page</h1>
<p>Welcome to my styled page!
<p>It lacks images, but at least it has style.
And it has links, even if they don't go
anywhere&hellip;
<p>There should be more here, but I don't know
what yet.
<!-- Sign and date the page, it's only polite! -->
<address>Made 5 April 2004<br>
    by myself.</address>
</body>
</html>
```

In-line style definition

- [Home page](#)
- [Musings](#)
- [My town](#)
- [Links](#)

My first styled page

Welcome to my styled page!

It lacks images, but at least it has style. And it has links, even if they don't go anywhere...

There should be more here, but I don't know what yet.

*Made 5 April 2004
by myself.*

```
<head><title>Example 3</title>
<style type="text/css">
border-style: solid;
border-width: 7px;
padding: 20px;
text-align: center;
color: black;
width: 50%;</style>
</head>
<body>
<!-- Site navigation menu --&gt;
&lt;ul class="navbar"&gt;
&lt;li&gt;&lt;a href="index.html"&gt;Home page&lt;/a&gt;
&lt;li&gt;&lt;a href="musings.html"&gt;Musings&lt;/a&gt;
&lt;li&gt;&lt;a href="town.html"&gt;My town&lt;/a&gt;
&lt;li&gt;&lt;a href="links.html"&gt;Links&lt;/a&gt;
&lt;/ul&gt;
<!-- Main content --&gt;
&lt;h1&gt;My first styled page&lt;/h1&gt;
&lt;p&gt;Welcome to my styled page!
&lt;p&gt;It lacks images, but at least it has style.
And it has links, even if they don't go anywhere&amp;hellip;
&lt;p&gt;There should be more here, but I don't know what yet.
<!-- Sign and date the page, it's only polite! --&gt;
&lt;address&gt;Made 5 April 2004&lt;br&gt;by myself.&lt;/address&gt;
&lt;/body&gt;
&lt;/html&gt;</pre>
```

Internal style-sheet definition

**Put the Internal Style Definition
into an External File**

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
<title>My first styled page</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
<body>
<!-- Site navigation menu --&gt;
&lt;ul class="navbar"&gt;
&lt;li&gt;&lt;a href="index.html"&gt;Home page&lt;/a&gt;
&lt;li&gt;&lt;a href="musings.html"&gt;Musings&lt;/a&gt;
&lt;li&gt;&lt;a href="town.html"&gt;My town&lt;/a&gt;
&lt;li&gt;&lt;a href="links.html"&gt;Links&lt;/a&gt;
&lt;/ul&gt;
<!-- Main content --&gt;
&lt;h1&gt;My first styled page&lt;/h1&gt;
&lt;p&gt;Welcome to my styled page!
&lt;p&gt;It lacks images, but at least it has style.
And it has links, even if they don't go
anywhere&amp;hellip;;
&lt;p&gt;There should be more here, but I don't know what yet.
&lt!-- Sign and date the page, it's only polite! --&gt;
&lt;address&gt;Made 5 April 2004&lt;br&gt; by myself.&lt;/address&gt;
&lt;/body&gt;
&lt;/html&gt;</pre>
```

External style definition

3 Ways of Style Definition + Cascading Rule

- **Inline style definition (Highest priority)**
- **Internal style definition (Middle priority)**
- **External style definition (Lowest priority)**
- **Style defined last has priority over style defined earlier**

STEP I: WRITING THE HTML

For this tutorial, I suggest you use only the very simplest of tools. E.g., Notepad (under Windows),TextEdit (on the Mac) or KEdit (under KDE) will do fine. Once you understand the principles, you may want to switch to more advanced tools, or even to commercial programs, such as Style Master, Dreamweaver or GoLive. But for your very first CSS style sheet, it is good not to be distracted by too many advanced features.

Don't use a wordprocessor, such as Microsoft Word or OpenOffice. They typically make files that a Web browser cannot read. For HTML and CSS, we want simple, plain text files.

Step I is to open your text editor (Notepad,TextEdit, KEdit, or whatever is your favorite), start with an empty window and type the following:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
  <title>My first styled page</title>
</head>
```

Local links

[1.The HTML](#)

[2.Adding color](#)

[3.Adding fonts](#)

[4.A navigation bar](#)

[5. Styling links](#)

[6. Horizontal line](#)

[7. External CSS](#)

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Local links

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Further reading

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
  <title>My first styled page</title>
</head>

<body>

  <!-- Site navigation menu -->
  <ul class="navbar">
    <li><a href="index.html">Home page</a>
    <li><a href="musings.html">Musings</a>
    <li><a href="town.html">My town</a>
    <li><a href="links.html">Links</a>
  </ul>

  <!-- Main content -->
  <h1>My first styled page</h1>

  <p>Welcome to my styled page!

  <p>It lacks images, but at least it has style.
  And it has links, even if they don't go
  anywhere&hellip;

  <p>There should be more here, but I don't know
  what yet.

  <!-- Sign and date the page, it's only polite! -->
  <address>Made 5 April 2004<br>
    by myself.</address>

</body>
</html>
```

STEP 2: ADDING SOME COLORS

You probably see some black text on a white background, but it depends on how the browser is configured. So one easy thing we can do to make the page more stylish is to add some colors. (Leave the browser open, we will use it again later.)

We will start with a style sheet embedded inside the HTML file. Later, we will put the HTML and the CSS in separate files. Separate files is good, since it makes it easier to use the same style sheet for multiple HTML files: you only have to write the style sheet once. But for this step, we just keep everything in one file.

We need to add a `<style>` element to the HTML file. The style sheet will be inside that element. So go back to the editor window and add the following five lines in the head part of the HTML file. The lines to add are shown in red.

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
  <title>My first styled page</title>
  <style type="text/css">
    body {
      color: purple;
      background-color: #d8da3d }
  </style>
</head>

<body>
[etc.]
```

Local links

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[6.Horizontal line](#)

[7.External CSS](#)

[Further reading](#)

- [Home page](#)
- [Musings](#)
- [My town](#)
- [Links](#)

My first styled page

Welcome to my styled page!

It lacks images, but at least it has style. And it has links, even if they don't go anywhere...

There should be more here, but I don't know what yet.

*Made 5 April 2004
by myself.*

STEP 3: ADDING FONTS

Another thing that is easy to do is to make some distinction in the fonts for the various elements of the page. So let's set the text in the "Georgia" font, except for the h1 heading, which we'll give "Helvetica."

On the Web, you can never be sure what fonts your readers have on their computers, so we add some alternatives as well: if Georgia is not available, Times New Roman or Times are also fine, and if all else fails, the browser may use any other font with [serifs](#). If Helvetica is absent, Geneva, Arial and SunSans-Regular are quite similar in shape, and if none of these work, the browser can choose any other font that is serif-less.

In the text editor add the following lines:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
  <title>My first styled page</title>
  <style type="text/css">
    body {
      font-family: Georgia, "Times New Roman",
                  Times, serif;
      color: purple;
      background-color: #d8da3d }
    h1 {
      font-family: Helvetica, Geneva, Arial,
                  SunSans-Regular, sans-serif }
  </style>
</head>

<body>
[etc.]
```

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My first styled page

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Further reading

STEP 4: ADDING A NAVIGATION BAR

The list at the top of the HTML page is meant to become a navigation menu. Many Web sites have some sort of menu along the top or on the side of the page and this page should have one as well. We will put it on the left side, because that is a little more interesting than at the top...

The menu is already in the HTML page. It is the `` list at the top. The links in it don't work, since our "Web site" so far consists of only one page, but that doesn't matter now. On a real Web site, there should not be any broken links, of course.

So we need to move the list to the left and move the rest of the text a little to the right, to make room for it. The CSS properties we use for that are 'padding-left' (to move the body text) and 'position', 'left' and 'top' (to move the menu).

There are other ways to do it. If you look for "column" or "layout" on the [Learning CSS](#) page, you will find several ready-to-run templates. But this one is OK for our purposes.

In the editor window, add the following lines to the HTML file:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
<title>My first styled page</title>
<style type="text/css">
body {
    padding-left: 11em;
    font-family: Georgia, "Times New Roman",
        Times, serif;
    color: purple;
    background-color: #d8da3d }
ul.navbar {
    position: absolute;
    top: 2em;
    left: 1em;
    width: 9em }
```

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
<title>My first styled page</title>
<style type="text/css">
body {
    color: purple;
    background-color: #d8da3d }
ul.navbar {
    position: absolute;
    top: 2em;
    left: 1em;
    width: 9em }
h1 {
    font-family: Helvetica, Geneva, Arial,
    SunSans-Regular, sans-serif }
</style>
</head>
<body>
<!-- Site navigation menu --&gt;
&lt;ul class="navbar"&gt;
&lt;li&gt;&lt;a href="index.html"&gt;Home page&lt;/a&gt;
&lt;li&gt;&lt;a href="musings.html"&gt;Musings&lt;/a&gt;
&lt;li&gt;&lt;a href="town.html"&gt;My town&lt;/a&gt;
&lt;li&gt;&lt;a href="links.html"&gt;Links&lt;/a&gt;
&lt;/ul&gt;
<!-- Main content --&gt;
:
:</pre>
```

Code View - Step 4 (Add navbar)

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- [Musings](#)
- [My town](#)
- [Links](#)

My first styled page

Welcome to my styled page!

It lacks images, but at least it has style. And it has links, even if they don't go anywhere...

There should be more here, but I don't know what yet.

*Made 5 April 2004
by myself.*

STEP 5: STYLING THE LINKS

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
<title>My first styled page</title>
<style type="text/css">
body {
  padding-left: 1em;
  font-family: Georgia, "Times New Roman",
    Times, serif;
  color: purple;
  background-color: #d8da3d }
ul.navbar {
  list-style-type: none;
  padding: 0;
  margin: 0;
  position: absolute;
  top: 2em;
  left: 1em;
  width: 9em }
h1 {
  font-family: Helvetica, Geneva, Arial,
    SunSans-Regular, sans-serif }
ul.navbar li {
  background: white;
  margin: 0.5em 0;
  padding: 0.3em;
  border-right: 1em solid black }
ul.navbar a {
  text-decoration: none }
a:link {
  color: blue }
a:visited {
  color: purple }
</style>
```

1.The HTML

2.Adding color

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Further reading

Home page

My first styled page

Musings

Welcome to my styled page!

My town

It lacks images, but at least it has style. And it has links, even if they don't go anywhere...

Links

There should be more here, but I don't know what yet.

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Local links

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Further reading

STEP 6: ADDING A HORIZONTAL LINE

The final addition to the style sheet is a horizontal rule to separate the text from the signature at the bottom. We will use 'border-top' to add a dotted line above the <address> element:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
  h1 {
    font-family: Helvetica, Geneva, Arial,
    SunSans-Regular, sans-serif }
  ul.navbar li {
    background: white;
    margin: 0.5em 0;
    padding: 0.3em;
    border-right: 1em solid black }
  ul.navbar a {
    text-decoration: none }
  a:link {
    color: blue }
  a:visited {
    color: purple }
  address {
    margin-top: 1em;
    padding-top: 1em;
    border-top: thin dotted }
</style>
</head>

<body>
[etc.]
```

Home page

Musings

My town

Links

My first styled page

Welcome to my styled page!

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There should be more here, but I don't know what yet.

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STEP 7: PUTTING THE STYLE SHEET IN A SEPARATE FILE

We now have an HTML file with an embedded style sheet. But if our site grows we probably want many pages to share the same style. There is a better method than copying the style sheet into every page: if we put the style sheet in a separate file, all pages can point to it.

To make a style sheet file, we need to create another empty text file. You can choose "New" from the File menu in the editor, to create an empty window. (If you are usingTextEdit, don't forget to make it plain text again, using the Format menu.)

Then cut and paste everything that is inside the `<style>` element from the HTML file into the new window. Don't copy the `<style>` and `</style>` themselves. They belong to HTML, not to CSS. In the new editor window, you should now have the complete style sheet:

```
<!DOCTYPE html PUBLIC "-//W3C//DTD HTML 4.01//EN">
<html>
<head>
  <title>My first styled page</title>
  <link rel="stylesheet" href="mystyle.css">
</head>

<body>
[etc.]
```

Local links

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Base

Selector

body

ADJECTIVE

CSS

Declaration

Declaration

{ color:purple; font-size:12px; }

Property

Value

Property

Value

Diagram illustrating the components of a CSS rule:

The diagram shows the structure of a CSS rule with the following components:

Base Selector: body

ADJECTIVE: CSS

Declarations: { color:purple; font-size:12px; }

Property: color

Value: purple

Property: font-size

Value: 12px

Custom (e.g. class or id)
Selector

ADJECTIVE

CSS

Declaration

Declaration

.box

#nav

{ color:blue; font-size:12px; }

class

id

Property

Value

Property

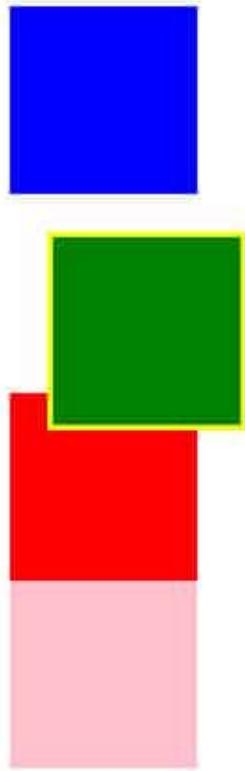
Value

Combination of Selectors

- 1. Multiple selectors for single tag.**
- 2. Style inheritance.**
- 3. Same styles for different tags.**

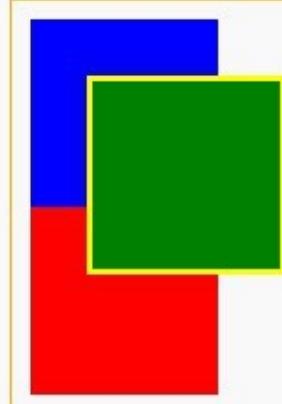
4 Ways of Positioning Display Box

- **Static** - default position of a box following the normal document flow (not affected by top, left, right, bottom pos.)
- **Fixed** - it always stay on the same location as defined by the positions (top and left or bottom or right) even the page is scrolled. Unlike absolute, its parent is the viewport.
- **Relative** - relative when used with top and left position pair or bottom and right position pair will allow the object box to be moved to a new location relative to its current position (not container).
- **Absolute** - take the positioning out of the document flow and place it at a location (top and left position) as defined in relationship to its containing (or parent) element (context). The container/parent should be set to relative.



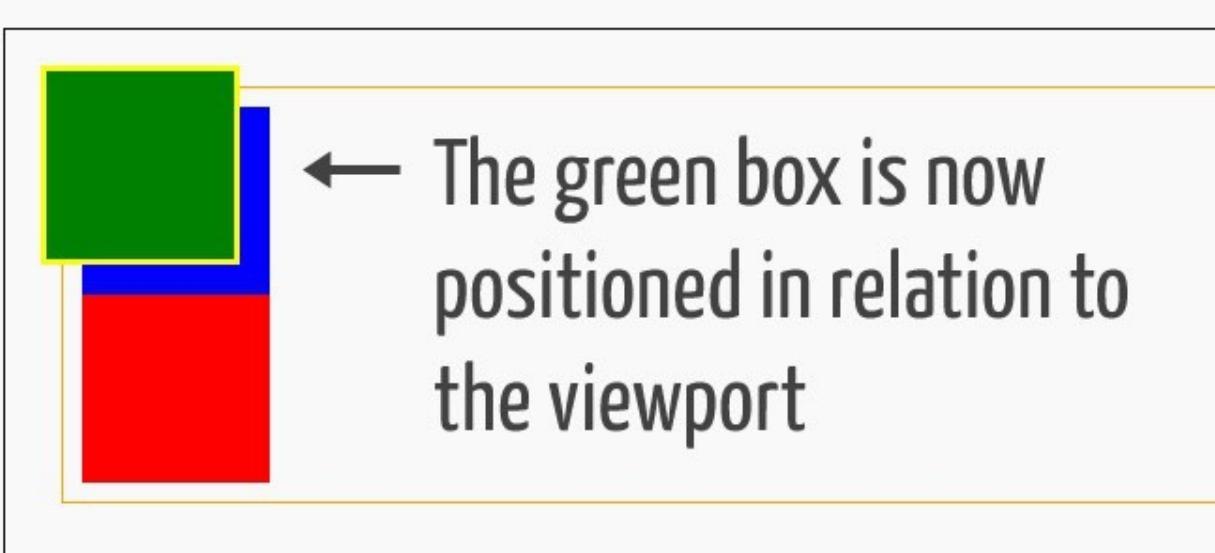
The second box is set to “position: relative” and is offset using top and left values.

Source: CSS Positioning: A Comprehensive Look
(<http://blog.teamtreehouse.com/css-positioning>)



The second box is set to “position: absolute” and is offset in relation to the “.container” element

Source: CSS Positioning: A Comprehensive Look
(<http://blog.teamtreehouse.com/css-positioning>)



Source: CSS Positioning: A Comprehensive Look
(<http://blog.teamtreehouse.com/css-positioning>)

Box 1

Box 2

Box 3

The Grammar of CSS

- Styles define how to display HTML elements
- Each style description is made up of a Selector and Declaration
- Selector defines which HTML element should be used for display and the declaration defines how
- Each declaration contains properties and values
- There are base and custom selectors (ID and CLASS are custom selectors)
- Style definition can be placed inline, in the head section or in an external file (e.g. `style.css`)

Thank you for your time!