

The slide features a light gray background with several decorative squares in blue and red. A large blue square is in the top right corner. Smaller blue squares are scattered along the top and right edges. On the left side, there are several red squares of varying sizes, including a large one at the bottom left and a vertical column of smaller ones. The text is centered on the slide.

Introduction to Data Science

HTML & CSS

TA: 李姵徵

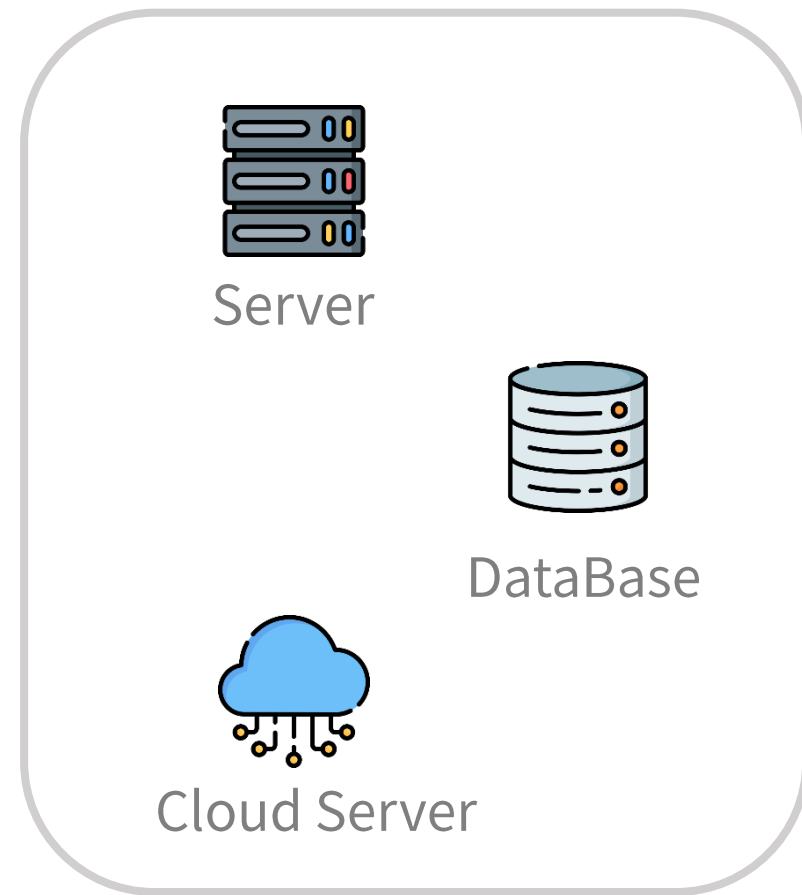
前端 & 後端



使用者



前端



後端

Content





HTML

Introduction

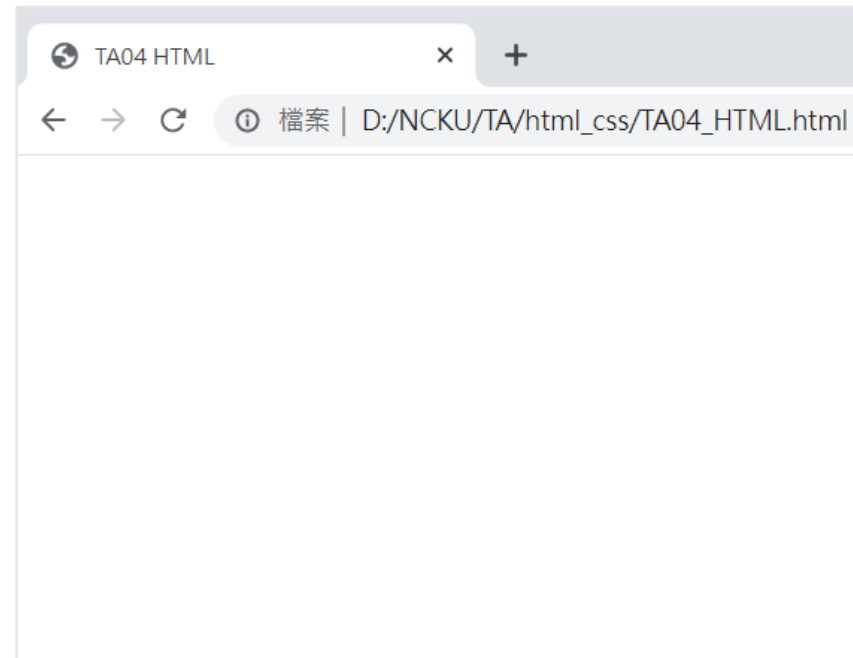
- Hyper Text Markup Language
- 用於創建網頁的標準標記語言
- 描述網頁的結構
- 由一系列的 element 組成
 - 告訴瀏覽器如何顯示內容
 - 標記內容片段
 - 例：`<h1>...</h1>`, `<p>...</p>`



Basic

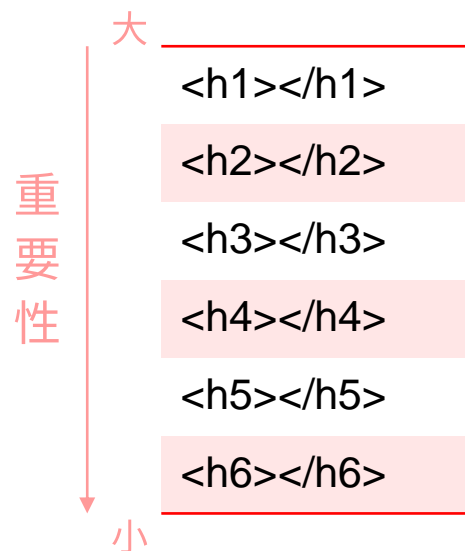
<code><!DOCTYPE html></code>	文檔類型聲明
<code><html></html></code>	HTML文檔的開始與結束
<code><head></head></code>	容納文檔的metadata
<code><body></body></code>	文檔可被看見的部分

```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <title>TA04 HTML</title>
5      </head>
6      <body>
7      </body>
8  </html>
9
```

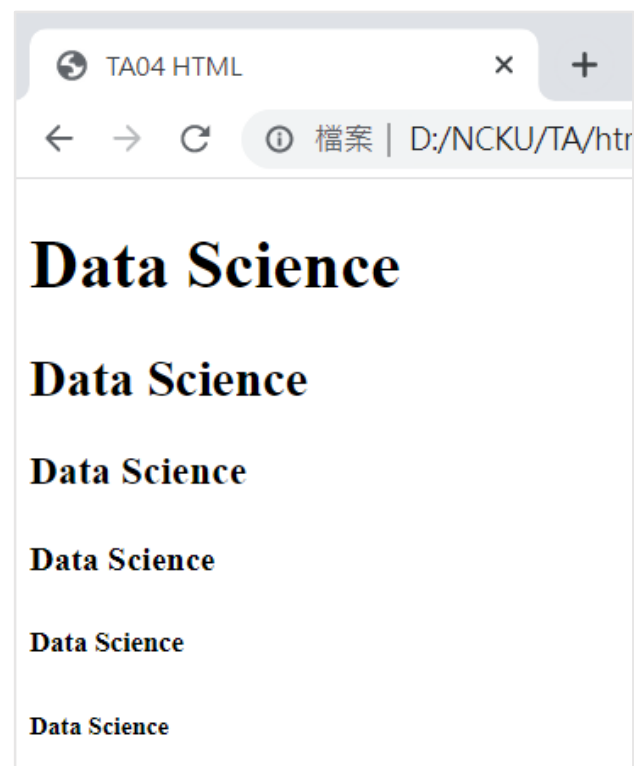


Headings

- 搜尋引擎會使用headings來索引網頁的結構及內容
- 善用headings來顯示文檔結構



```
1  <!DOCTYPE html>
2  <html>
3      <head>
4          <title>TA04 HTML</title>
5      </head>
6      <body>
7          <h1>Data Science</h1>
8          <h2>Data Science</h2>
9          <h3>Data Science</h3>
10         <h4>Data Science</h4>
11         <h5>Data Science</h5>
12         <h6>Data Science</h6>
13     </body>
14 </html>
15
```



Paragraphs

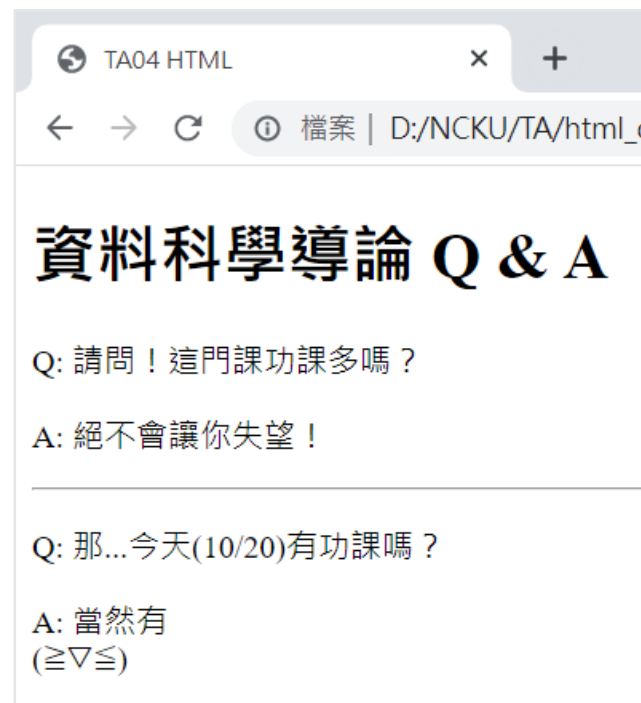
- 瀏覽器顯示時，會自動刪除多餘的空格及空行
- HTML橫向規則

`<p></p>` 定義一個新的段落

`<hr>` 分隔HTML頁面中的內容

`
` 換行符號

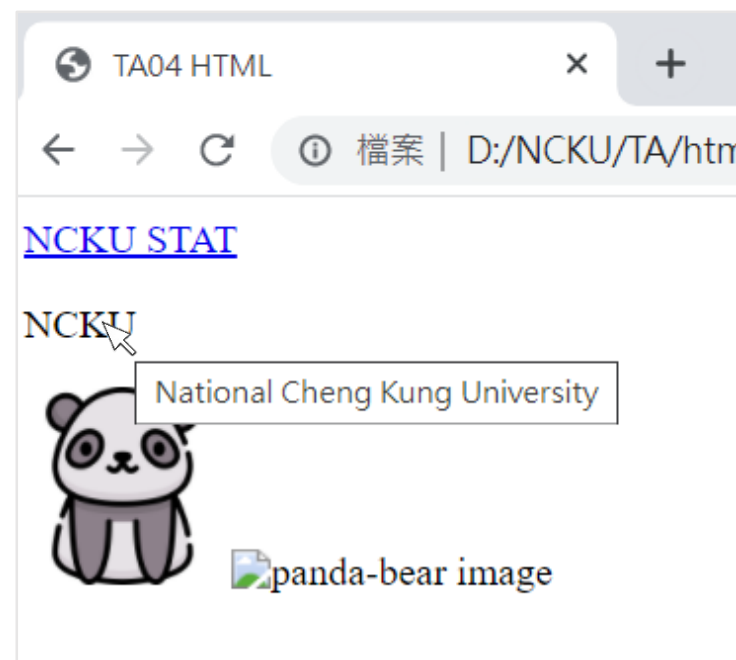
```
1  <!DOCTYPE html>
2  <html>
3  <head>
4    <title>TA04 HTML</title>
5  </head>
6  <body>
7    <h1>資料科學導論 Q & A</h1>
8    <p>Q: 請問！這門課功課多嗎？</p>
9    <p>A: 絕不會讓你失望！</p>
10   <hr>
11   <p>Q: 那...今天(10/20)有功課嗎？</p>
12   <p>A: 當然有<br>(≥▽≤)</p>
13 </body>
14 </html>
15
```



Attributes

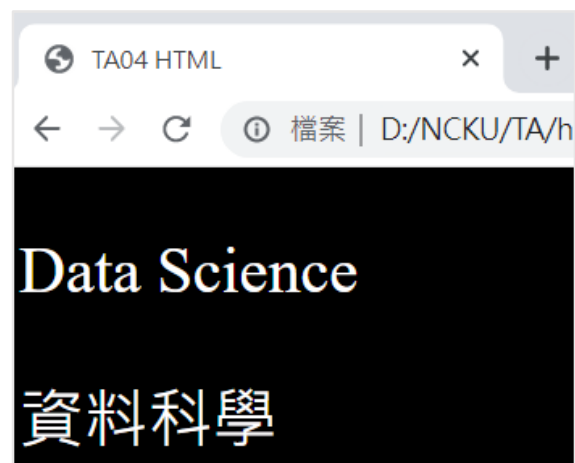
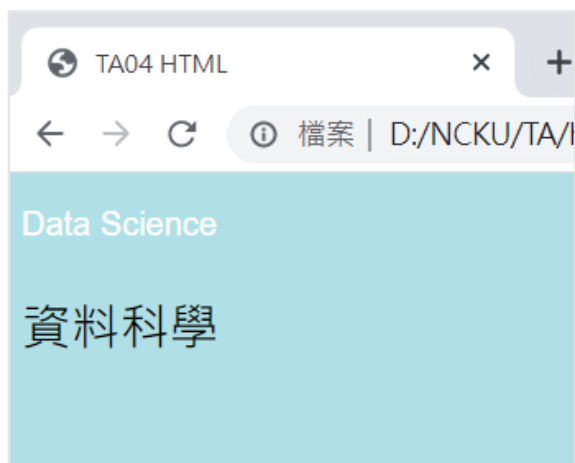
<code></code>	超連結；網址
<code><html lang="..."></html></code>	聲明網頁的語言
<code><p title="..."></p></code>	關於element的額外信息
<code></code>	圖像嵌入；路徑；替代；寬度；高度

```
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4    <title>TA04 HTML</title>
5  </head>
6  <body>
7    <a href="http://www.stat.ncku.edu.tw/">NCKU STAT</a>
8    <p title="National Cheng Kung University">NCKU</p>
9    
10   
11 </body>
12 </html>
13
```



Attributes -- style

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5   </head>
6   <body style="background-color: powderblue;">
7     <p style="color: white; font-family: Arial;">Data Science</p>
8     <p style="font-size: 150%;">資料科學</p>
9   </body>
10 </html>
11
```



```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <style>
6       p {
7         color: white;
8         font-size: 200%;
9       }
10    </style>
11  </head>
12  <body style="background-color: black;">
13    <p>Data Science</p>
14    <p>資料科學</p>
15  </body>
16 </html>
17
```

Formatting

<code></code>	粗體
<code></code>	強調
<code><i></i></code>	斜體
<code><small></small></code>	縮小
<code></code>	重要
<code><sub></sub></code>	下標
<code><sup></sup></code>	上標
<code><ins></ins></code>	底線
<code></code>	刪除
<code><mark></mark></code>	標記

```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3  <head>
4      <title>TA04 HTML</title>
5  </head>
6  <body>
7      <p>我是<b>粗體</b></p>
8      <p>我是<em>強調</em></p>
9      <p>我是<i>斜體</i></p>
10     <p>我是<small>縮小</small></p>
11     <p>我是<strong>強調</strong></p>
12     <p>我是<sub>下標</sub></p>
13     <p>我是<sup>上標</sup></p>
14     <p>我是<ins>底線</ins></p>
15     <p>我是<del>刪除</del></p>
16     <p>我是<mark>標記</mark></p>
17 </body>
18 </html>
19
```

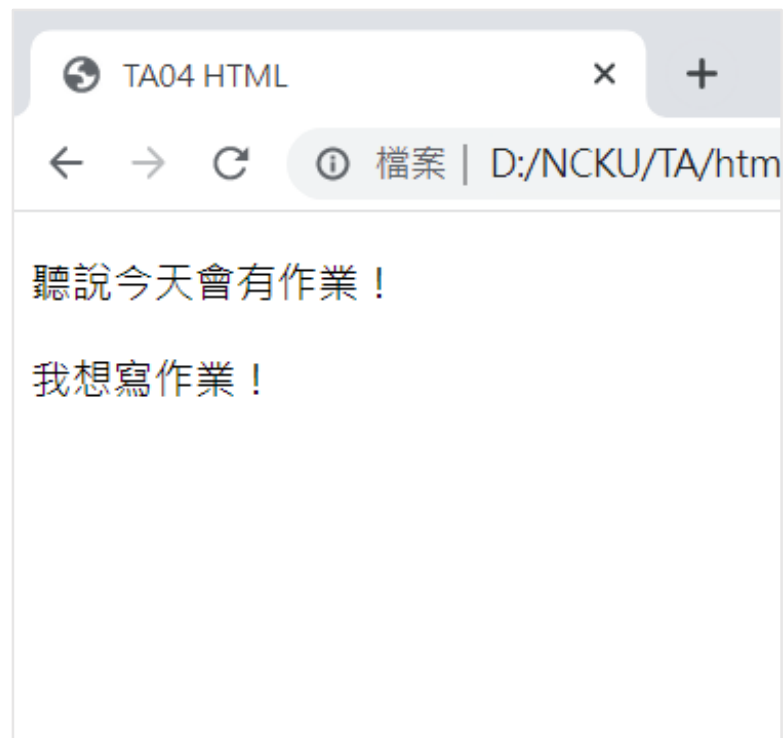


Comments

<!--...-->

註解

```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5      </head>
6      <body>
7          <!--我是註解-->
8          <p>聽說今天會有作業！</p>
9          <p>我<!--不-->想寫作業！</p>
10     </body>
11 </html>
12
```



Tables

`<table></table>` 表格

`<th></th>` 表頭

`<tr></tr>` 列

`<td></td>` 格

`<caption></caption>` 標題



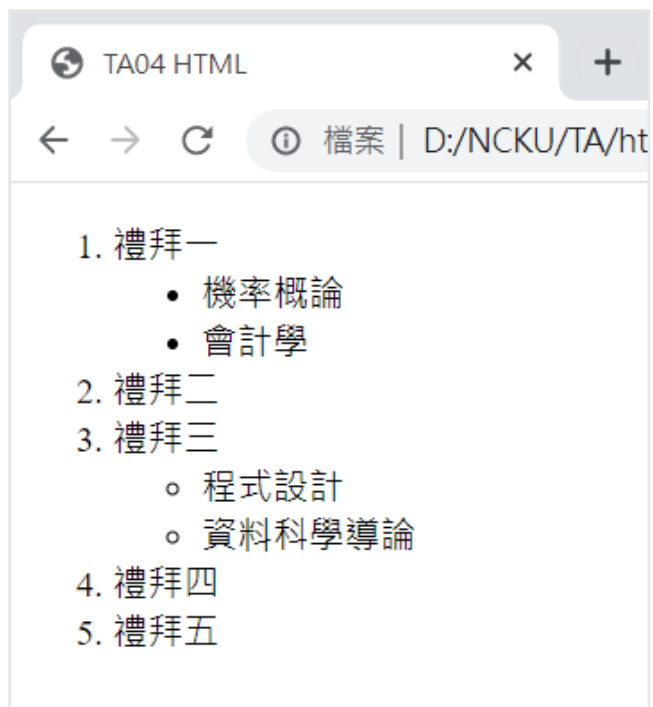
A screenshot of a web browser window. The title bar shows 'TA04 HTML'. The address bar shows the file path 'D:/NCKU/TA/html_css/TA04_HTML.html'. The main content area displays a table with an orange border. The table has a caption '作業難度' and four columns: 'HW0', 'HW1', 'HW2', and 'HW3'. The rows contain the text '別說了', '不好說', '還沒寫', and '嘿嘿嘿' respectively.

HW0	HW1	HW2	HW3
別說了	不好說	還沒寫	嘿嘿嘿

```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5          <style>
6              table, caption, th, td {
7                  border: 1px solid orange;
8              }
9          </style>
10     </head>
11     <body>
12         <table style="width: 50%;">
13             <caption>作業難度</caption>
14             <tr>
15                 <th>HW0</th>
16                 <th>HW1</th>
17                 <th>HW2</th>
18                 <th>HW3</th>
19             </tr>
20             <tr>
21                 <td>別說了</td>
22                 <td>不好說</td>
23                 <td>還沒寫</td>
24                 <td>嘿嘿嘿</td>
25             </tr>
26         </table>
27     </body>
28 </html>
29
```

Lists

<code></code>	未排序清單
<code></code>	排序清單
<code></code>	清單物件



```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5      </head>
6      <body>
7          <ol type="1">
8              <li>禮拜一
9                  <ul style="list-style-type: disc;">
10                      <li>機率概論</li>
11                      <li>會計學</li>
12                  </ul>
13              </li>
14              <li>禮拜二</li>
15              <li>禮拜三
16                  <ul style="list-style-type: circle;">
17                      <li>程式設計</li>
18                      <li>資料科學導論</li>
19                  </ul>
20              <li>禮拜四</li>
21              <li>禮拜五</li>
22          </ol>
23      </body>
24  </html>
25
```

Block & Inline

- Block element
 - 會從新的一列開始
 - 佔據整個可用的寬度
 - 有上下邊距

<address>	<article>	<aside>	<canvas>	<div>	<figure>
<form>	<h1>	<header>		<main>	<nav>
<p>	<pre>	<section>	<table>		<video>

- Inline element
 - 不會從新的一列開始
 - 只佔用必要的寬度

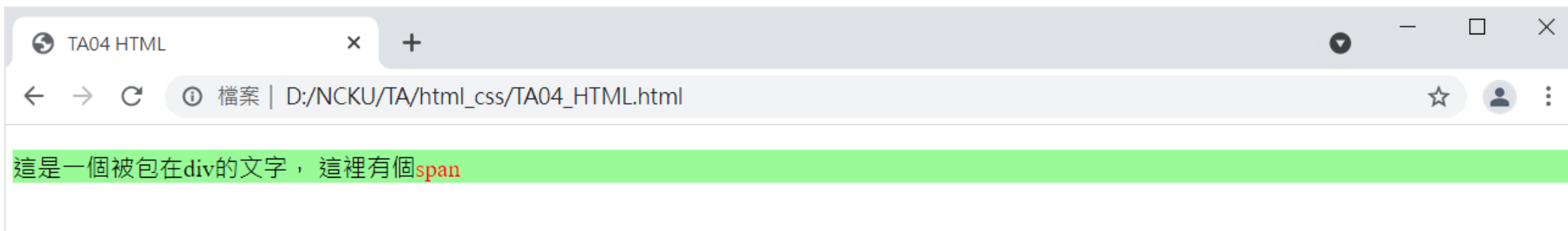
<a>	<abbr>		 	<button>	<code>
	<input>	<label>	<map>	<object>	<script>
<select>		<sub>	<sup>	<time>	<var>

Block & Inline

`<div></div>` 容器 (block)

`` 容器 (inline)

```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5      </head>
6      <body>
7          <div style="background-color: ■ palegreen;">
8              <p>
9                  這是一個被包在div的文字，
10                 這裡有個<span style="color: ■ red;">span</span>
11              </p>
12          </div>
13      </body>
14 </html>
15
```



Forms

- id
 - 整份文檔中唯一的
 - 在css中可被 # 字符引用
- name
 - 可同時對應多個控制元件
 - 在css中無法被引用

TA04 HTML

← → ↻ ⓘ 檔案 | D:\NCKU\TA\html_css\TA04_HTML.html

基本資料表

姓名
ex. 王小明

性別

☐ 男
☐ 女

程式語言 (可複選)

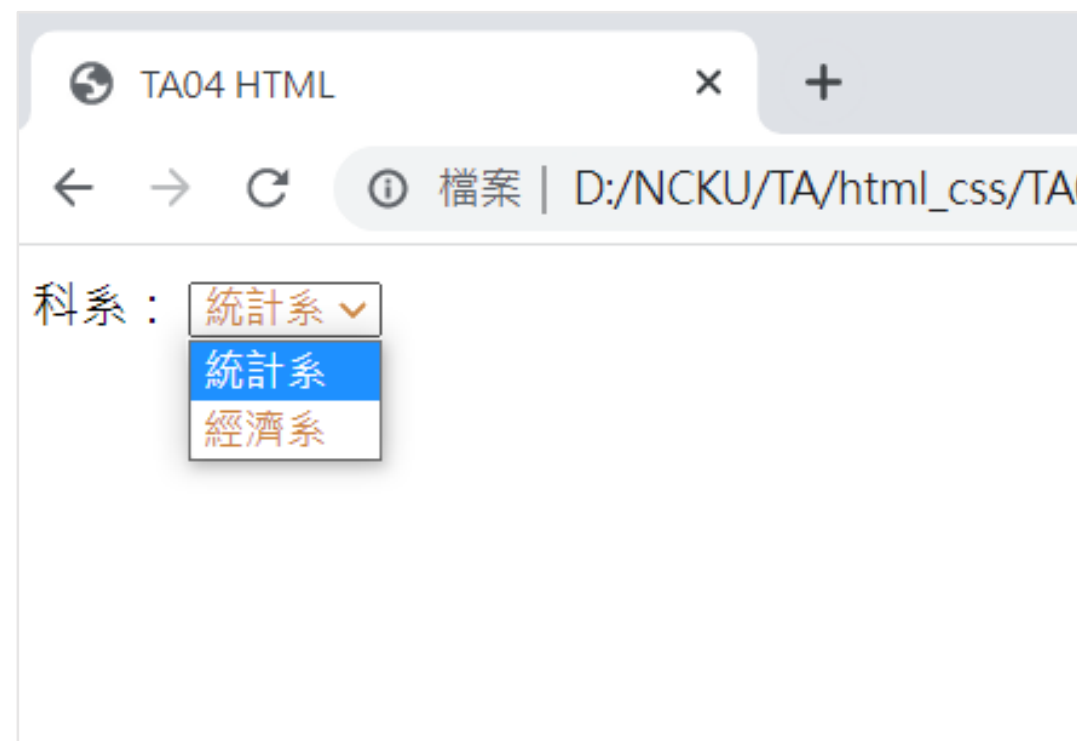
☐ Python
☐ C
☐ Java

提交

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3 <head>
4   <title>TA04 HTML</title>
5 </head>
6 <body>
7   <h1>基本資料表</h1>
8   <form>
9     <!-- 姓名 -->
10    <label for="name">姓名</label><br>
11    <input type="text" id="name" name="name" placeholder="ex. 王小明"><br>
12
13    <!-- 性別 -->
14    <p>性別</p>
15    <input type="radio" id="male" name="gender" value="male">
16    <label for="male">男</label><br>
17    <input type="radio" id="female" name="gender" value="female">
18    <label for="female">女</label>
19
20    <!-- 程式語言 -->
21    <p>程式語言 (可複選)</p>
22    <input type="checkbox" id="Python" name="coding" value="Python">
23    <label for="Python">Python</label><br>
24    <input type="checkbox" id="C" name="coding" value="C">
25    <label for="C">C</label><br>
26    <input type="checkbox" id="Java" name="coding" value="Java">
27    <label for="Java">Java</label><br>
28
29    <!-- 提交 -->
30    <input type="submit" value="提交">
31  </form>
32 </body>
33 </html>
34
```

Forms

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <style>
6       #majors {
7         color: peru;
8       }
9     </style>
10  </head>
11  <body>
12    <div>
13      <form>
14        <label for="majors">科系 :</label>
15        <select id="majors" name="majors">
16          <option value="statistics">統計系</option>
17          <option value="economics">經濟系</option>
18        </select>
19      </form>
20    </div>
21  </body>
22 </html>
23
24
```



Classes

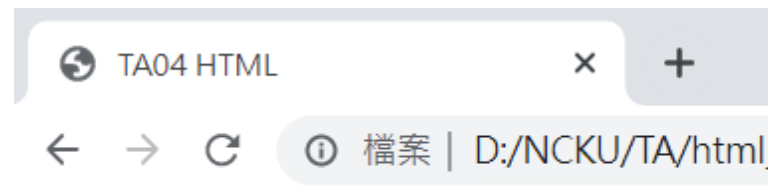
```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <style>
6       .course {
7         background: royalblue;
8         color: white;
9         padding: 10px;
10      }
11    </style>
12  </head>
13  <body>
14    <h2>資料導助教課</h2>
15    <p>帮大家複習一下，這幾次助教課的內容</p>
16    <h2 class="course">Jupyter notebook & Matplotlib</h2>
17    <p>Jupyter Notebook是一個基於Web的互動式計算環境，用於創建Jupyter Notebook檔案。</p>
18    <p>Matplotlib是Python語言及其數值計算庫NumPy的繪圖庫。</p>
19    <h2 class="course">Pandas</h2>
20    <p>Pandas是Python程式語言的用於數據操縱和分析的軟體庫。</p>
21    <h2 class="course">Numpy</h2>
22    <p>NumPy是Python語言的一個擴充程式庫。支援高階大量的維度陣列與矩陣運算，此外也針對陣列運算提供大量的數學函式庫。</p>
23  </body>
24 </html>
25
```



Emojis

- HTML的default為UTF-8，所以不設定也沒關係
- 更多emoji: https://www.w3schools.com/charsets/ref_emoji.asp

```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5          <meta charset="UTF-8">
6      </head>
7      <body>
8          <p>這是 A B C</p>
9          <p>這是 &#65; &#66; &#67;</p>
10         <p>&#128512; 這是 128512</p>
11         <p>&#128516; 這是 128516</p>
12         <p>&#128525; 這是 128525</p>
13         <p>&#128151; 這是 128151</p>
14     </body>
15 </html>
16
```



這是 A B C

這是 A B C

😊 這是 128512

😄 這是 128516

😍 這是 128525

❤️ 這是 128151



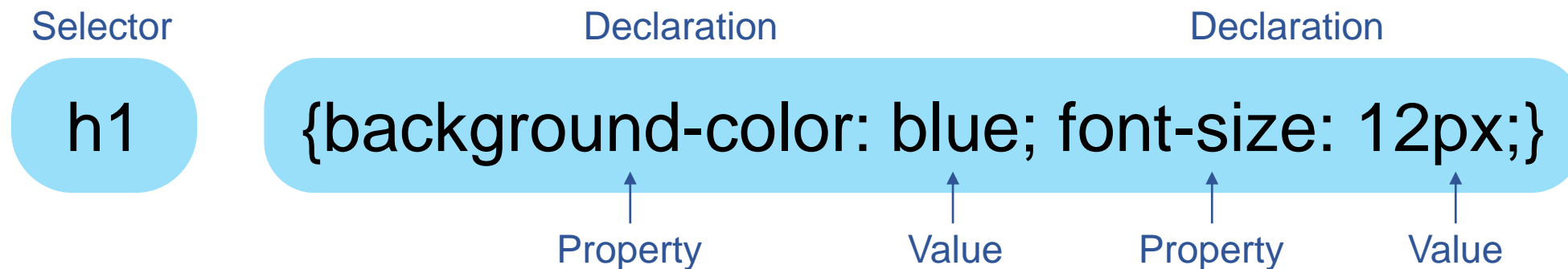
CSS

Introduction

- Cascading Style Sheets
- 用來設計HTML文檔樣式的語言
- 描述HTML的element該如何顯示
- 可一次控制多個網頁的設計



Syntax



- Selector: 想設計的HTML element
- Declaration: 可以有一個或多個，用分號分隔！
- 每個Declaration都需要包含一個Property及Value，用冒號分隔！
- Declaration要包在大括號內

Selectors

id	#
class	class
universal	*
grouping	HTML element



```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <style>
6       #left {
7         color: green;
8       }
9
10      .center {
11        color: royalblue;
12      }
13
14      span{
15        color: orange;
16      }
17
18      * {
19        color: plum;
20      }
21    </style>
22  </head>
23  <body>
24    <h1 id="left">你好</h1>
25    <h2 class="center">Hi</h2>
26    <p class="center">hello</p>
27    <h3>阿拉伯數字</h3>
28    <span>0123456789</span>
29  </body>
30 </html>
31
```


Add CSS

External	<file>.css
Internal	<pre><head> <style> ... </style> </head></pre>
Inline	<(element) style="...">



- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <h1>資料科學導論</h1>
9     <p>Introduction to Data Science</p>
10  </body>
11 </html>
12
```

- TA04_CSS.css

```
1 body {
2   background-color: lightskyblue;
3 }
4
5 h1 {
6   color: white;
7 }
8
9 p {
10  color: navy;
11 }
12
```

Comments

/*...*/

註解



- TA04_HTML.html

```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5          <link rel="stylesheet" href="TA04_CSS.css">
6      </head>
7      <body>
8          <h1>資料科學導論</h1>
9          <p>Introduction to Data Science</p>
10     </body>
11 </html>
12
```

- TA04_CSS.css

```
1  body {
2      background-color: lightskyblue;
3  }
4
5  /* h1 {
6      color: white;
7  } */
8
9  p {
10     color: navy;
11 }
12
```

Colors

color name Black

RGB rgb(0, 0, 0)

HEX #000000

HSL hsl(0, 0%, 0%)

RGBA rgba(0, 0, 0, 1)

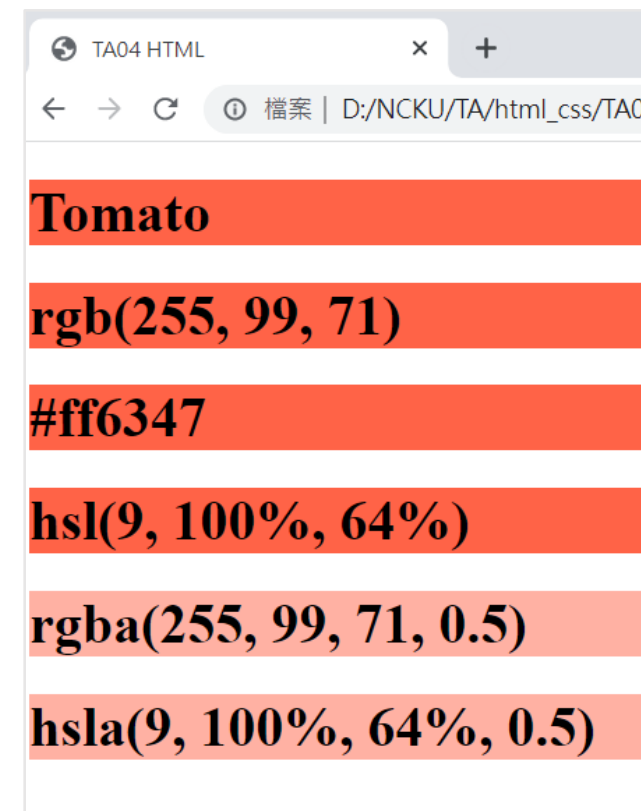
HSLA hsla(0, 0%, 0%, 1)

- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <h1 id="name">Tomato</h1>
9     <h1 id="rgb">rgb(255, 99, 71)</h1>
10    <h1 id="hex">#ff6347</h1>
11    <h1 id="hsl">hsl(9, 100%, 64%)</h1>
12    <h1 id="rgba">rgba(255, 99, 71, 0.5)</h1>
13    <h1 id="hsla">hsla(9, 100%, 64%, 0.5)</h1>
14  </body>
15 </html>
16
```

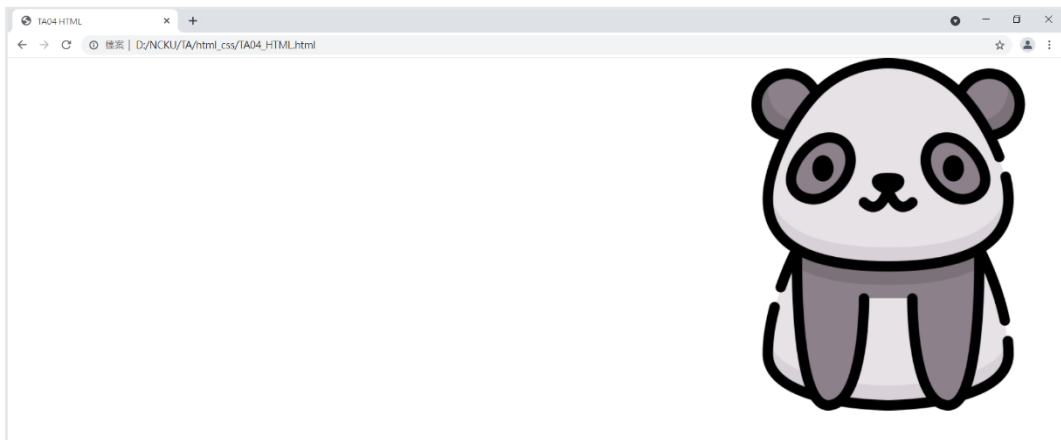
- TA04_CSS.css

```
1 #name {
2   background-color: tomato;
3 }
4
5 #rgb {
6   background-color: rgb(255, 99, 71);
7 }
8
9 #hex {
10  background-color: #ff6347;
11 }
12
13 #hsl {
14  background-color: hsl(9, 100%, 64%);
15 }
16
17 #rgba {
18  background-color: rgba(255, 99, 71, 0.5);
19 }
20
21 #hsla {
22  background-color: hsla(9, 100%, 64%, 0.5);
23 }
```



Backgrounds

background-color	背景顏色
background-image	背景圖片
background-repeat	背景圖片如何重複
background-attachment	背景圖片固定還是可隨著頁面滾動
background-position	背景圖片開始位置
background	設置所有背景屬性



- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8   </body>
9 </html>
10
```

- TA04_CSS.css (法一)

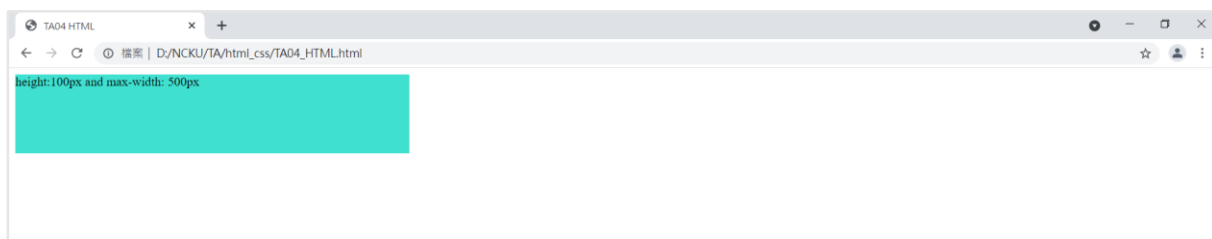
```
1 body {
2   background-image: url("images/panda-bear.png");
3   background-repeat: no-repeat;
4   background-position: right top;
5 }
6
```

- TA04_CSS.css (法二)

```
1 body {
2   background: url("images/panda-bear.png") no-repeat right top;
3 }
```

Height & Width

height	設置element的高度
max-height	設置element的最大高度
max-width	設置element的最大寬度
min-height	設置element的最小高度
min-width	設置element的最小寬度
width	設置element的寬度



- TA04_HTML.html

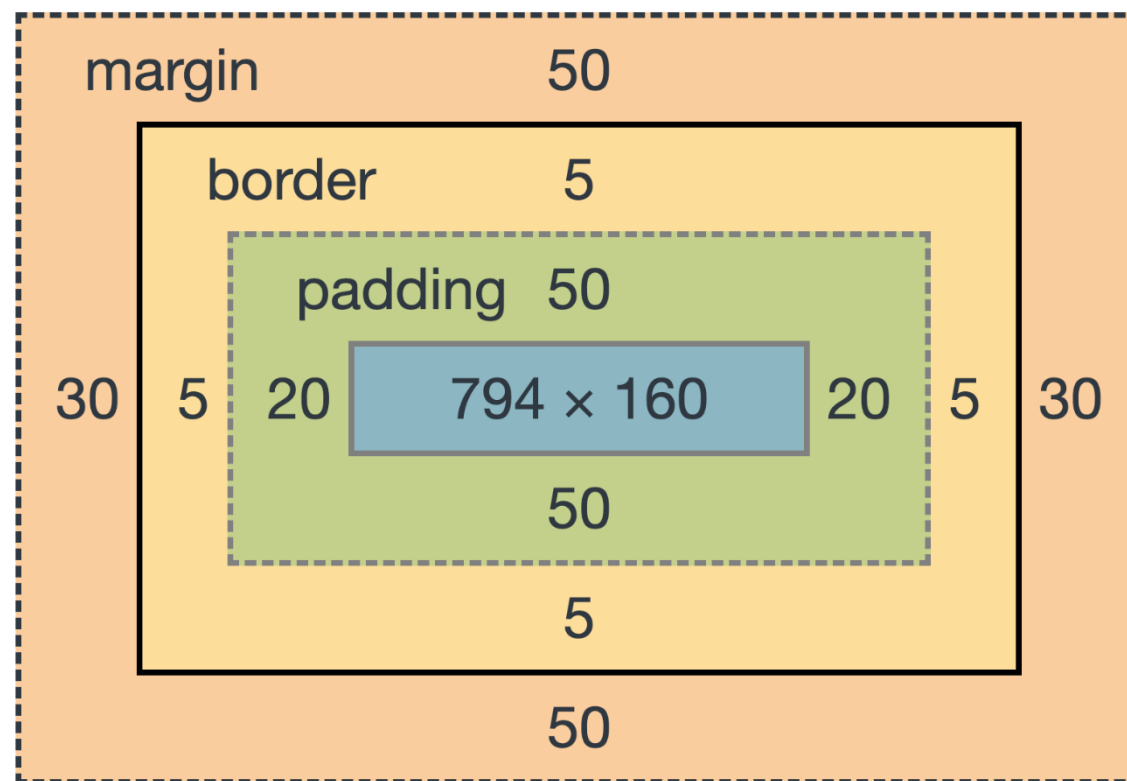
```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <div>height:100px and max-width: 500px</div>
9   </body>
10 </html>
11
```

- TA04_CSS.css

```
1 div {
2   background-color: ■turquoise;
3   height: 100px;
4   max-width: 500px;
5 }
6
```

Box Model

- content: 文本和圖像出現的地方
- padding: 內容周圍的區域，透明的
- border: 圍繞內邊距和內容的邊框
- margin: 邊界外的區域，透明的



Padding

padding 設置所有填充屬性
(top right bottom left)
(top right/left bottom)

padding-bottom 設置底部填充

padding-left 設置左側填充

padding-right 設置右側填充

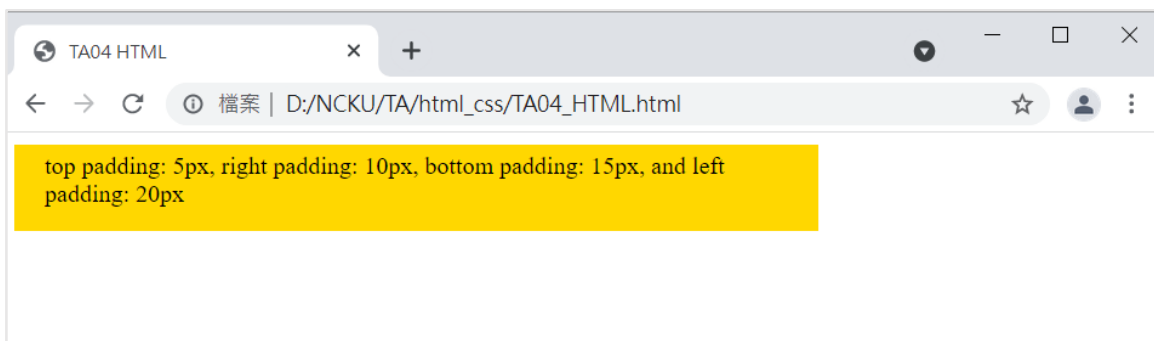
padding-top 設置頂部填充

- TA04_HTML.html

```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5          <link rel="stylesheet" href="TA04_CSS.css">
6      </head>
7      <body>
8          <div>
9              top padding: 5px,
10             right padding: 10px,
11             bottom padding: 15px,
12             and left padding: 20px
13          </div>
14      </body>
15 </html>
16
```

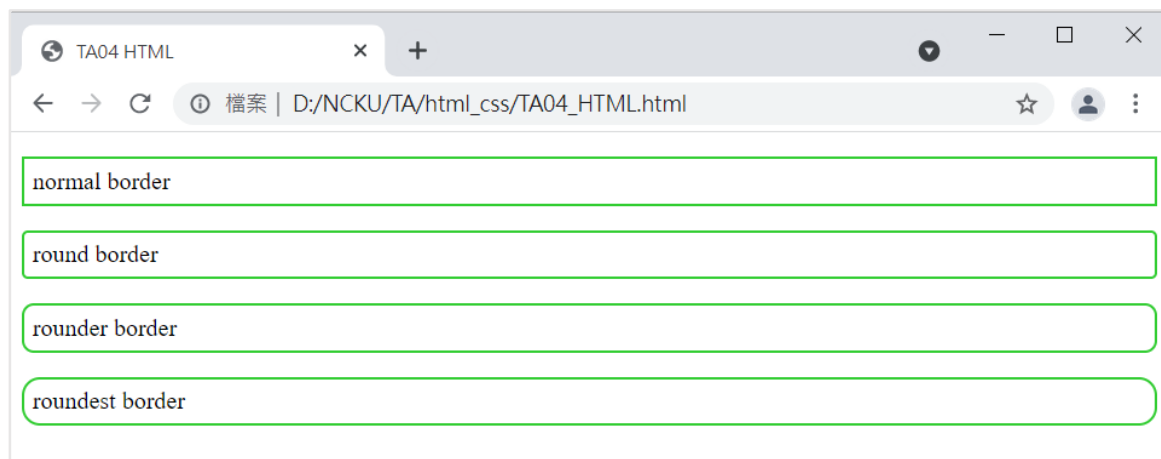
- TA04_CSS.css

```
1  div {
2      background-color: gold;
3      max-width: 500px;
4      padding: 5px 10px 15px 20px;
5  }
6
```



Borders

border-radius	設置邊界圓角屬性
border-color	設置邊界顏色
border-width	設置邊界寬度
border-style	設置邊界樣式
border	設置所有邊界屬性



- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <p>normal border</p>
9     <p class="round">round border</p>
10    <p class="rounder">rounder border</p>
11    <p class="rounderdest">rounderdest border</p>
12  </body>
13 </html>
14
15
```

- TA04_CSS.css

```
1 p {
2   padding: 5px;
3   border: 2px solid limegreen;
4 }
5
6 .round {
7   border-radius: 4px;
8 }
9
10 .rounder {
11   border-radius: 8px;
12 }
13
14 .rounderdest {
15   border-radius: 12px;
16 }
17
```

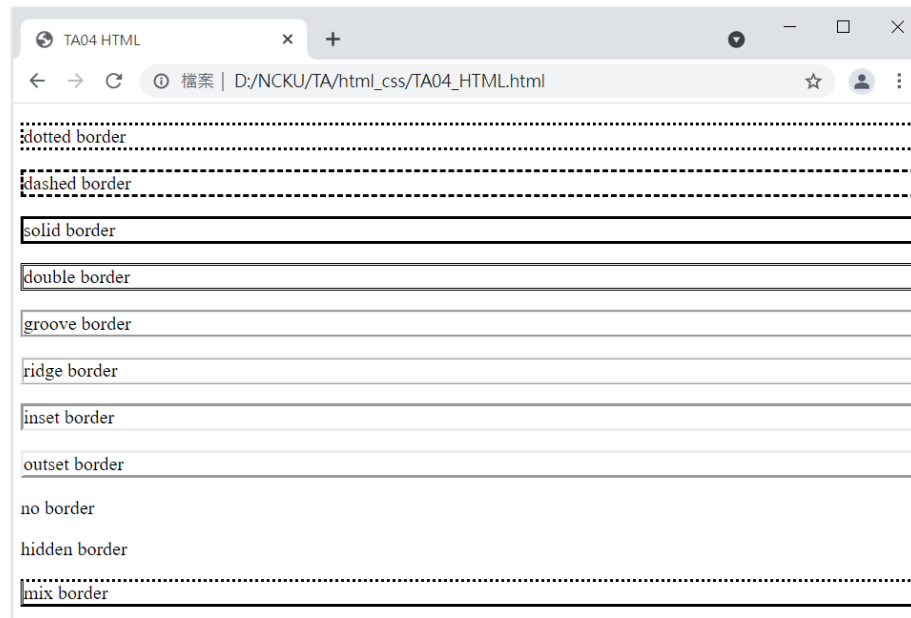

Borders

- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3 <head>
4   <title>TA04 HTML</title>
5   <link rel="stylesheet" href="TA04_CSS.css">
6 </head>
7 <body>
8   <p class="dotted">dotted border</p>
9   <p class="dashed">dashed border</p>
10  <p class="solid">solid border</p>
11  <p class="double">double border</p>
12  <p class="groove">groove border</p>
13  <p class="ridge">ridge border</p>
14  <p class="inset">inset border</p>
15  <p class="outset">outset border</p>
16  <p class="no">no border</p>
17  <p class="hidden">hidden border</p>
18  <p class="mix">mix border</p>
19 </body>
20 </html>
21
```

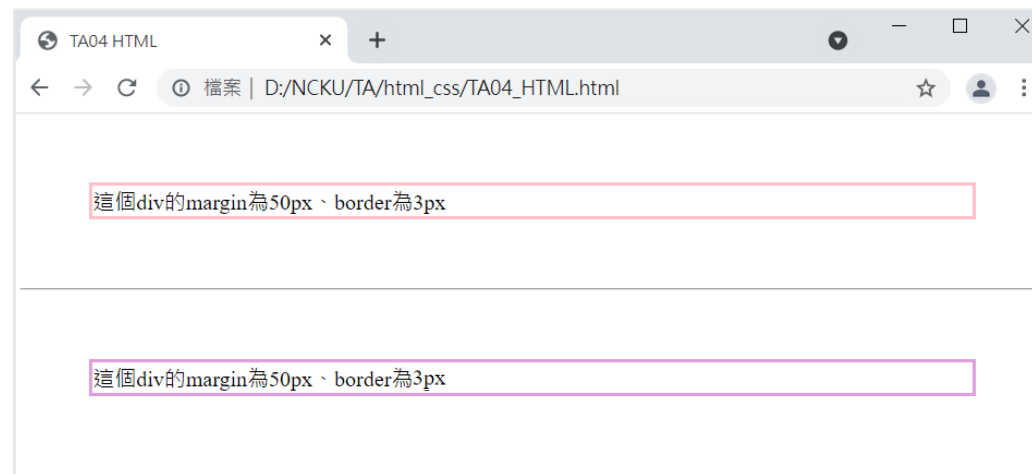
- TA04_CSS.css

```
1 p.dotted {border-style: dotted;}
2 p.dashed {border-style: dashed;}
3 p.solid {border-style: solid;}
4 p.double {border-style: double;}
5 p.groove {border-style: groove;}
6 p.ridge {border-style: ridge;}
7 p.inset {border-style: inset;}
8 p.outset {border-style: outset;}
9 p.none {border-style: none;}
10 p.hidden {border-style: hidden;}
11 p.mix {border-style: dotted dashed solid double;}
12
```



Margins

margin-bottom	設置底部邊的屬性
margin-left	設置左側邊的屬性
margin-right	設置右側邊的屬性
margin-top	設置頂部邊的屬性
margin	設置所有邊的屬性 (top right bottom left)



- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <div style="border-color: pink;">這個div的margin為50px、border為3px</div>
9     <hr>
10    <div style="border-color: plum;">這個div的margin為50px、border為3px</div>
11  </body>
12 </html>
```

- TA04_CSS.css

```
1 div{
2   margin: 50px;
3   border: 3px solid;
4 }
5
```

Outline

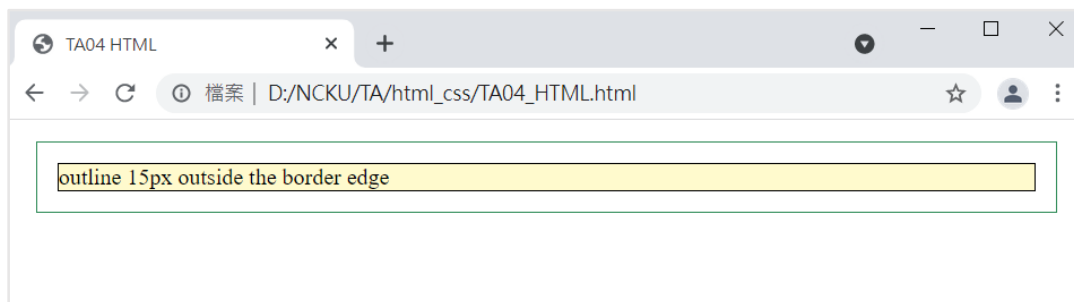
outline	設置所有輪廓的屬性
outline-color	輪廓的顏色
outline-offset	輪廓與邊界之間的空間
outline-style	輪廓的樣式
outline-width	輪廓的寬度

- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <p>outline 15px outside the border edge</p>
9   </body>
10 </html>
11
```

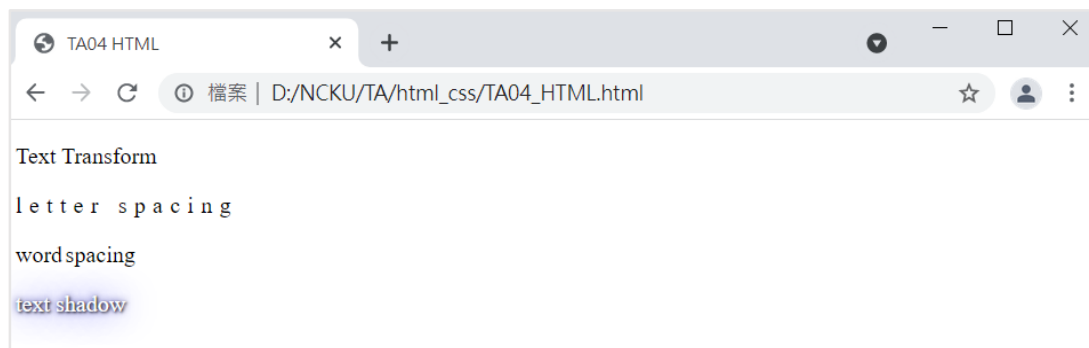
- TA04_CSS.css

```
1 p {
2   margin: 30px;
3   background: ■ lemonchiffon;
4   border: 1px solid □ black;
5   outline: 1px solid ■ seagreen;
6   outline-offset: 15px;
7 }
8
```



Text

color	文字顏色
text-align	文字的水平對齊方式
text-decoration	添加文字裝飾
text-transform	控制文字大小寫
letter-spacing	增加/減少字元間的空間
word-spacing	增加/減少文字間的空間
text-shadow	添加文字陰影效果



- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <p class="transform">text transform</p>
9     <p class="letter">letter spacing</p>
10    <p class="word">word spacing</p>
11    <p class="shadow">text shadow</p>
12  </body>
13 </html>
14
```

- TA04_CSS.css

```
1 .transform {text-transform: capitalize;}
2
3 .letter {letter-spacing: 5px;}
4
5 .word {word-spacing: -2px;}
6
7 .shadow {
8   color: white;
9   text-shadow: 1px 1px 2px black, 0 0 25px blue, 0 0 5px navy;
10 }
11
```

Fonts

font 設置所有字體屬性

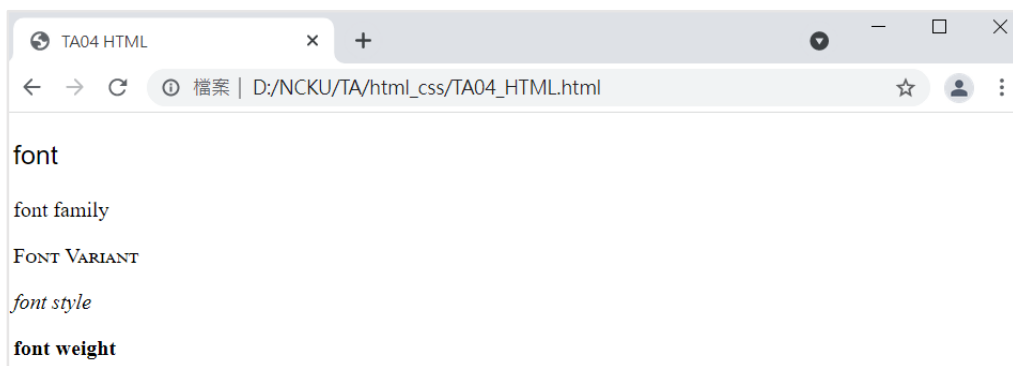
font-family 字體

font-size 字體大小

font-style 字體樣式

font-variant 小型大寫字體

font-weight 字體粗細



- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <p class="all">font</p>
9     <p class="family">font family</p>
10    <p class="variant">Font Variant</p>
11    <p class="style">font style</p>
12    <p class="weight">font weight</p>
13  </body>
14 </html>
15
```

- TA04_CSS.css

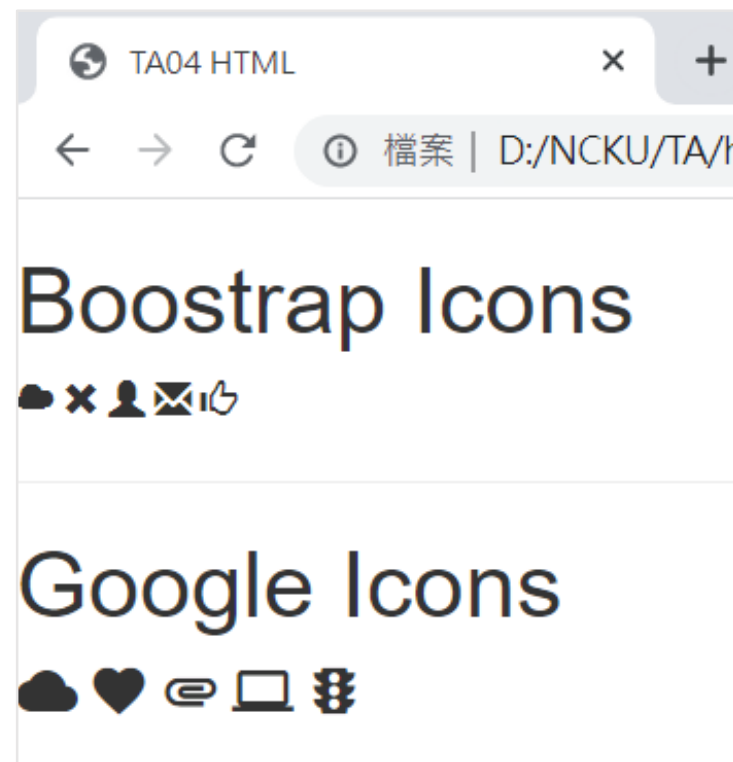
```
1 .all {font: 20px Arial, sans-serif;}
2 .family {font-family: "Times New Roman", Times, serif;}
3 .variant {font-variant: small-caps;}
4 .style {font-style: italic;}
5 .weight {font-weight: bold;}
6
```

Icons

Bootstrap <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">

Google <link rel="stylesheet" href="https://fonts.googleapis.com/icon?family=Material+Icons">

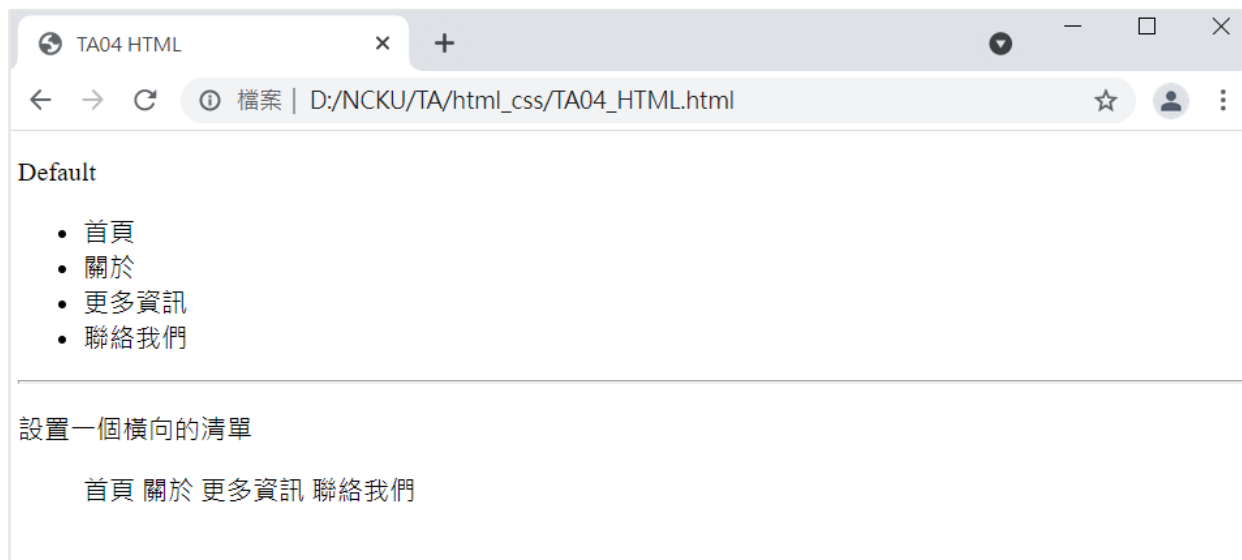
```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <!-- Add Icons -->
6     <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3.3.7/css/bootstrap.min.css">
7     <link rel="stylesheet" href="https://fonts.googleapis.com/icon?family=Material+Icons">
8   </head>
9   <body>
10    <!-- Bootstrap Icons -->
11    <h1>Bootstrap Icons</h1>
12    <i class="glyphicon glyphicon-cloud"></i>
13    <i class="glyphicon glyphicon-remove"></i>
14    <i class="glyphicon glyphicon-user"></i>
15    <i class="glyphicon glyphicon-envelope"></i>
16    <i class="glyphicon glyphicon-thumbs-up"></i>
17    <hr>
18    <!-- Google Icons -->
19    <h1>Google Icons</h1>
20    <i class="material-icons">cloud</i>
21    <i class="material-icons">favorite</i>
22    <i class="material-icons">attachment</i>
23    <i class="material-icons">computer</i>
24    <i class="material-icons">traffic</i>
25  </body>
26 </html>
27
```



Display

display 如何顯示

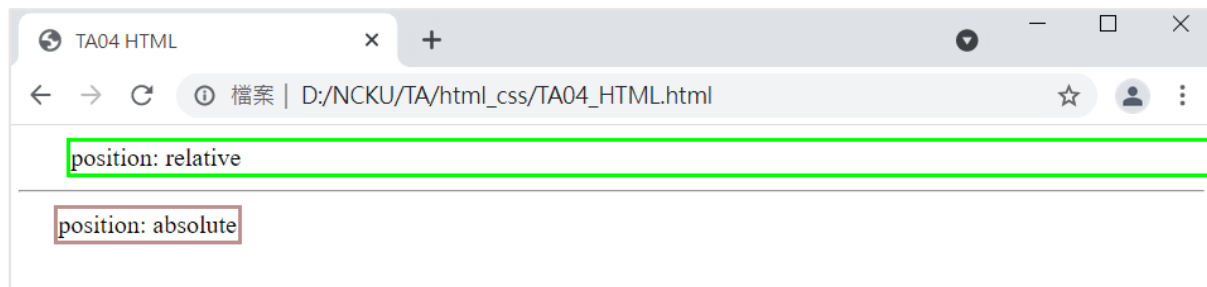
visibility 是否可見



```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5          <style>
6              .row {
7                  display: inline;
8              }
9          </style>
10     </head>
11     <body>
12         <p>Default</p>
13         <ul>
14             <li>首頁</li>
15             <li>關於</li>
16             <li>更多資訊</li>
17             <li>聯絡我們</li>
18         </ul>
19         <hr>
20         <!-- Display -->
21         <p>設置一個橫向的清單</p>
22         <ul>
23             <li class="row">首頁</li>
24             <li class="row">關於</li>
25             <li class="row">更多資訊</li>
26             <li class="row">聯絡我們</li>
27         </ul>
28     </body>
29 </html>
30
```

Position

static	(default)無特殊定位方式
relative	相對於其正常位置進行定位
fixed	始終保持在同一位置，不隨頁面滾動而移動
absolute	固定位置，但隨著頁面滾動而移動
sticky	基於滾動位置的相對定位

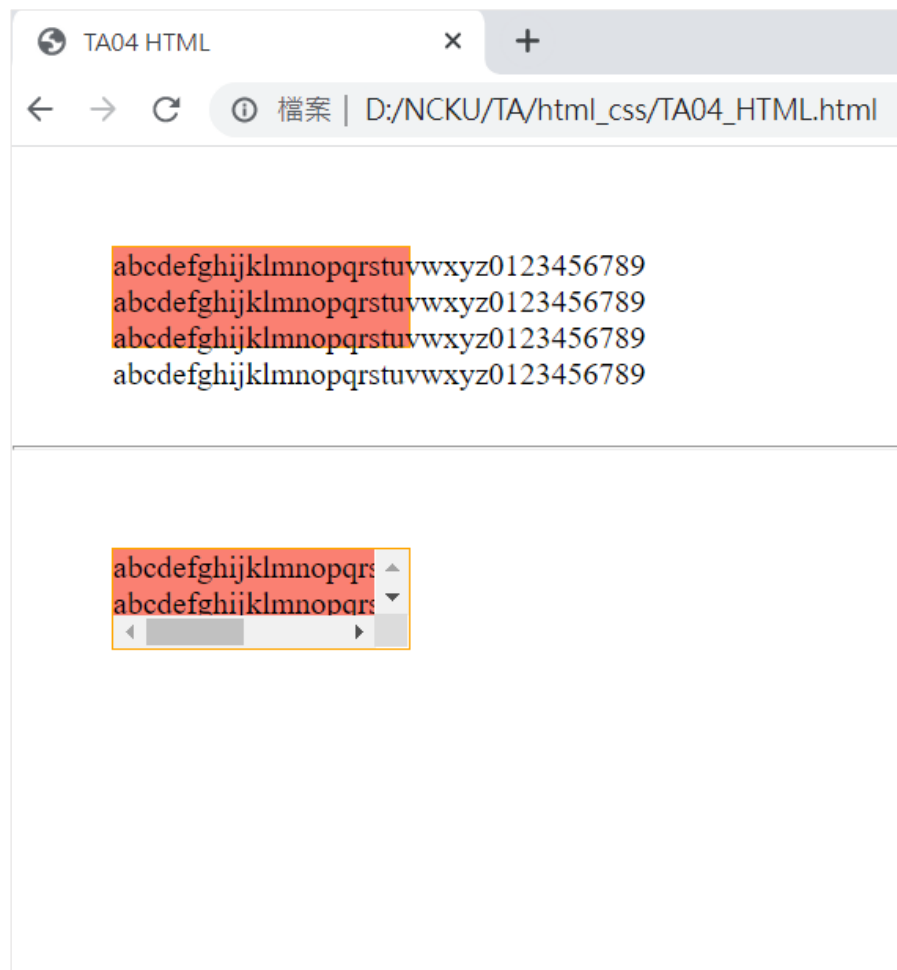


```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5          <style>
6              div.relative {
7                  position: relative;
8                  left: 30px;
9                  border: 3px solid lime;
10             }
11
12             div.absolute {
13                 position: absolute;
14                 left: 30px;
15                 border: 3px solid rosybrown;
16             }
17         </style>
18     </head>
19     <body>
20         <div class="relative">position: relative</div>
21         <hr>
22         <div class="absolute">position: absolute</div>
23     </body>
24 </html>
25
```


Overflow

overflow 元素的內容太大而無法放入指定區域時，是否剪切內容或添加滾動條

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <style>
6       div {
7         background-color: salmon;
8         width: 150px;
9         height: 50px;
10        border: 1px solid orange;
11        margin: 50px;
12      }
13    </style>
14  </head>
15  <body>
16    <div style="overflow: visible;">
17      abcdefghijklmnopqrstuvwxyz0123456789
18      abcdefghijklmnopqrstuvwxyz0123456789
19      abcdefghijklmnopqrstuvwxyz0123456789
20      abcdefghijklmnopqrstuvwxyz0123456789
21    </div>
22    <hr>
23    <div style="overflow: scroll;">
24      abcdefghijklmnopqrstuvwxyz0123456789
25      abcdefghijklmnopqrstuvwxyz0123456789
26      abcdefghijklmnopqrstuvwxyz0123456789
27      abcdefghijklmnopqrstuvwxyz0123456789
28    </div>
29  </body>
30 </html>
31
```

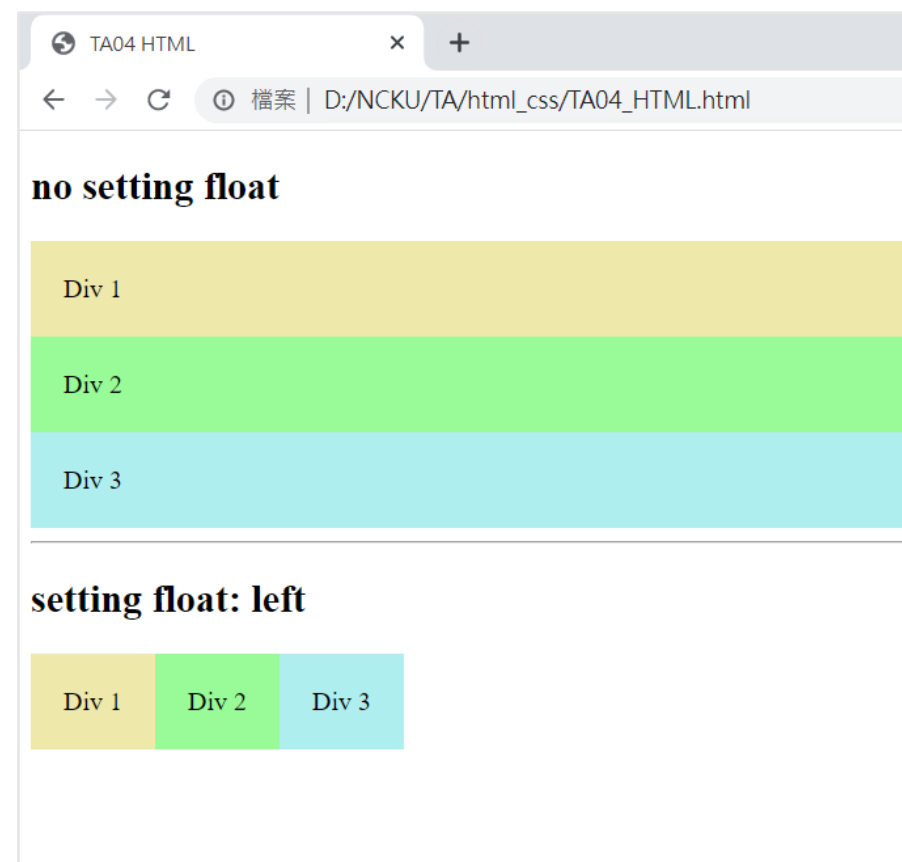


Float & Clear

float 元素應該如何浮動

clear 元素可以漂浮在已清除元素的旁邊

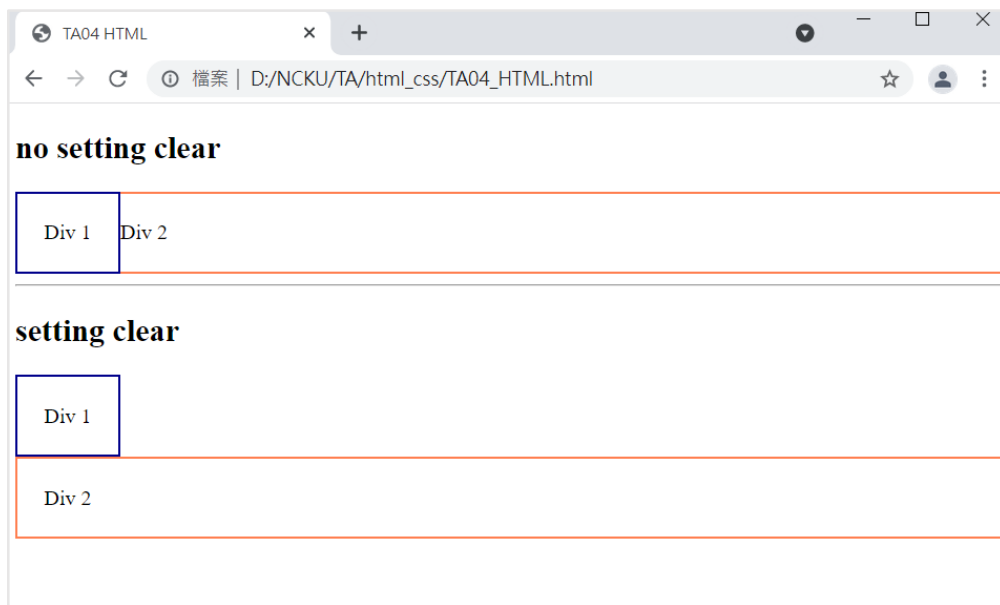
```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3    <head>
4      <title>TA04 HTML</title>
5      <style>
6        div {
7          padding: 20px;
8        }
9      </style>
10   </head>
11   <body>
12     <h2>no setting float</h2>
13     <div style="background-color: palegoldenrod;">Div 1</div>
14     <div style="background-color: palegreen;">Div 2</div>
15     <div style="background-color: paleturquoise;">Div 3</div>
16     <hr>
17     <h2>setting float: left</h2>
18     <div style="background-color: palegoldenrod; float: left;">Div 1</div>
19     <div style="background-color: palegreen; float: left;">Div 2</div>
20     <div style="background-color: paleturquoise; float: left;">Div 3</div>
21   </body>
22 </html>
23
```



Float & Clear

float 元素應該如何浮動

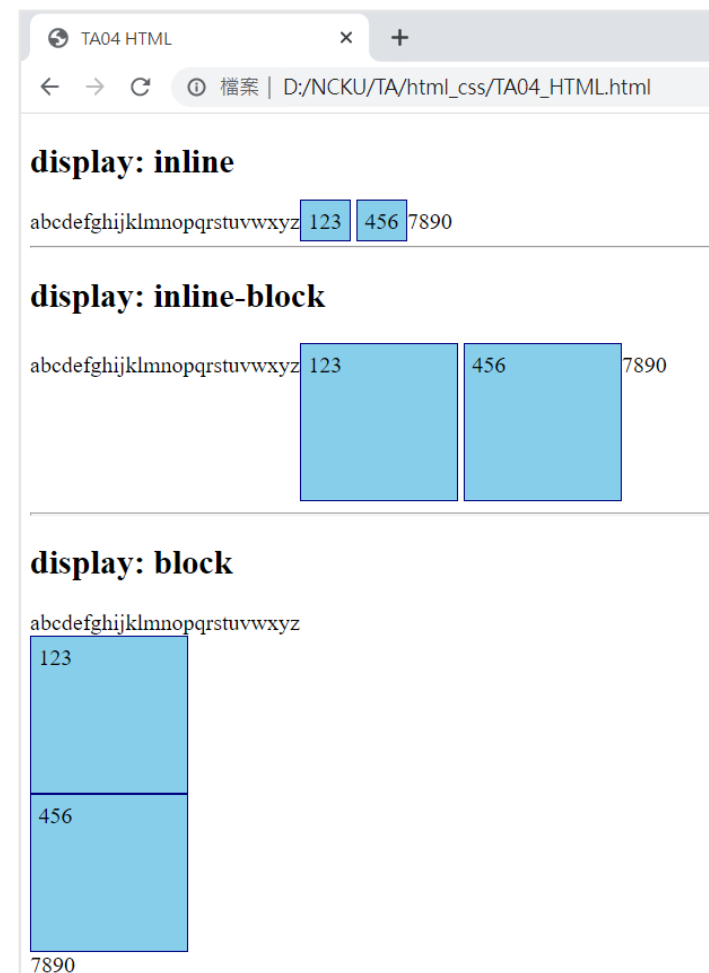
clear 元素可以漂浮在已清除元素的旁邊



```
1  <!DOCTYPE html>
2  <html lang="zh-tw">
3      <head>
4          <title>TA04 HTML</title>
5          <style>
6              div {
7                  padding: 20px;
8              }
9
10             .div1 {
11                 float: left;
12                 border: 2px solid darkblue;
13             }
14
15             .div2 {
16                 border: 2px solid coral;
17             }
18         </style>
19     </head>
20     <body>
21         <h2>no setting clear</h2>
22         <div class="div1">Div 1</div>
23         <div class="div2">Div 2</div>
24         <hr>
25         <h2>setting clear</h2>
26         <div class="div1">Div 1</div>
27         <div class="div2" style="clear: left;">Div 2</div>
28     </body>
29 </html>
30
```

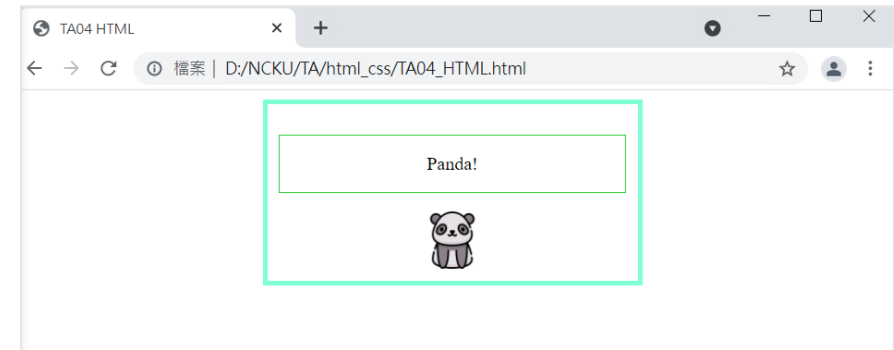
Inline-block

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <style>
6       span {
7         width: 100px;
8         height: 100px;
9         padding: 5px;
10        border: 1px solid navy;
11        background-color: skyblue;
12      }
13      span.a {display: inline; /* the default for span */}
14      span.b {display: inline-block;}
15      span.c {display: block;}
16    </style>
17  </head>
18  <body>
19    <h2>display: inline</h2>
20    <div>abcdefghijklmnopqrstuvwxyz<span class="a">123</span> <span class="a">456</span>7890 </div>
21    <hr>
22    <h2>display: inline-block</h2>
23    <div>abcdefghijklmnopqrstuvwxyz<span class="b">123</span> <span class="b">456</span>7890</div>
24    <hr>
25    <h2>display: block</h2>
26    <div>abcdefghijklmnopqrstuvwxyz<span class="c">123</span> <span class="c">456</span>7890</div>
27  </body>
28 </html>
```



Align

elements	margin: auto; width: ?%; (一定要設置width，且非100%)
text	text-align: center;
image	margin-right: auto; margin-left: auto; display: block;
vertically	padding



- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <div class="element-align-center">
9       <p class="text-align-vertically-center">Panda!</p>
10      
11    </div>
12  </body>
13 </html>
14
```

- TA04_CSS.css

```
1 .element-align-center {
2   margin: auto;
3   width: 40%;
4   border: 4px solid #00FFFF;
5   padding: 10px;
6 }
7
8 .text-align-vertically-center {
9   text-align: center;
10  border: 1px solid #00FF00;
11  padding: 15px;
12 }
13
14 .image-align-center {
15   display: block;
16   margin-left: auto;
17   margin-right: auto;
18   height: 50px;
19   width: 50px;
20 }
21
```

Pseudo-classes & Pseudo-element

:hover 鼠標移到設定的element時，改變原有的CSS

::after element後插入內容

::before element前插入內容

::selector 選擇的element部分



• TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <div>我會變色！</div>
9     <p>圈選的範圍會變色！</p>
10  </body>
11 </html>
12
```

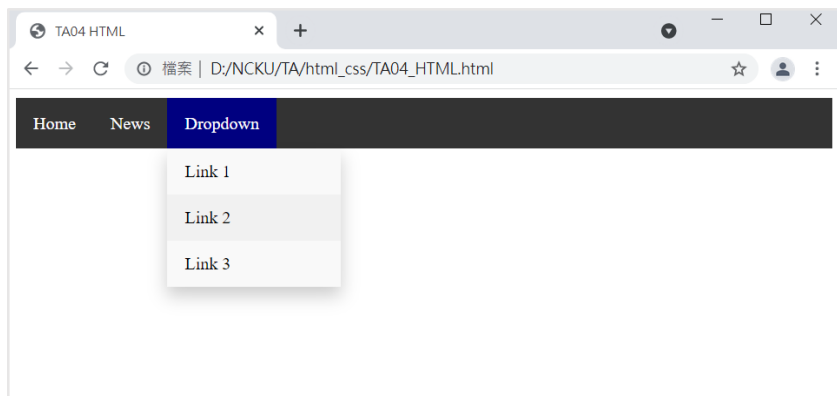
• TA04_CSS.css

```
1 div {
2   background-color: chocolate;
3   color: white;
4   padding: 10px;
5   text-align: center;
6 }
7
8 div:hover {
9   background-color: gold;
10  color: black;
11 }
12
13 p::selection {
14   background-color: peachpuff;
15   color: red;
16 }
17
```

Navigation Bar & Dropdown

- TA04_HTML.html

```
1 <!DOCTYPE html>
2 <html lang="zh-tw">
3   <head>
4     <title>TA04 HTML</title>
5     <link rel="stylesheet" href="TA04_CSS.css">
6   </head>
7   <body>
8     <ul>
9       <li><a href="#home">Home</a></li>
10      <li><a href="#news">News</a></li>
11      <li class="dropdown">
12        <a href="javascript:void(0)" class="dropbtn">Dropdown</a>
13        <div class="dropdown-content">
14          <a href="#">Link 1</a>
15          <a href="#">Link 2</a>
16          <a href="#">Link 3</a>
17        </div>
18      </li>
19    </ul>
20  </body>
21 </html>
```



- TA04_CSS.css

```
1 ul {
2   list-style-type: none;
3   margin: 0;
4   padding: 0;
5   overflow: hidden;
6   background-color: #333;
7 }
8
9 li {
10  float: left;
11 }
12
13 li a, .dropbtn {
14  display: inline-block;
15  color: white;
16  text-align: center;
17  padding: 14px 16px;
18  text-decoration: none;
19 }
20
21 li a:hover, .dropdown:hover .dropbtn {
22  background-color: navy;
23 }
24
25 li.dropdown {
26  display: inline-block;
27 }
28
```

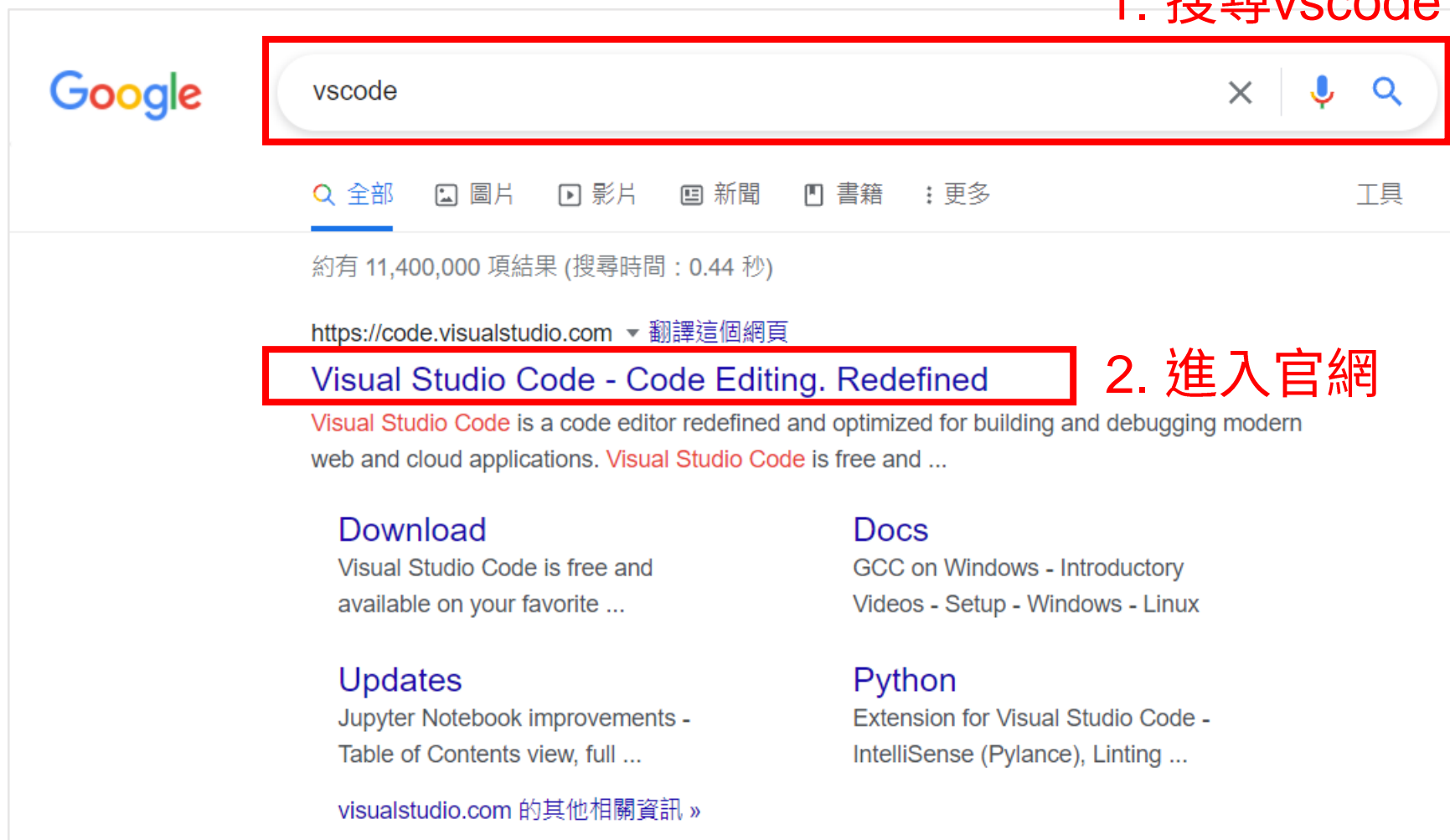
```
29 .dropdown-content {
30  display: none;
31  position: absolute;
32  background-color: #f9f9f9;
33  min-width: 160px;
34  box-shadow: 0px 8px 16px 0px rgba(0,0,0,0.2);
35  z-index: 1;
36 }
37
38 .dropdown-content a {
39  color: black;
40  padding: 12px 16px;
41  text-decoration: none;
42  display: block;
43  text-align: left;
44 }
45
46 .dropdown-content a:hover {background-color: #f1f1f1;}
47
48 .dropdown:hover .dropdown-content {
49  display: block;
50 }
```



Do It !

Editor – VS Code

1. 搜尋vscode



2. 進入官網

Editor – VS Code

The screenshot shows the Visual Studio Code website. The main heading is "Code editing. Redefined." with the subtext "Free. Built on open source. Runs everywhere." Below this, there is a "Download for Windows" button with a dropdown arrow. A red box highlights the dropdown menu, which shows options for "macOS", "Windows x64", and "Linux x64". Another red box highlights the "Stable" column in the dropdown menu. A third red box highlights the "3. 點擊向下選單" (Click the downward arrow) instruction. A fourth red box highlights the "4. 選擇自己的作業系統" (Choose your operating system) instruction, with a sub-note "ps. 選 'Stable' 的版本!" (ps. Choose the 'Stable' version!). The background of the website shows a snippet of JavaScript code and a list of extensions.

Visual Studio Code Docs Updates Blog API Extensions FAQ Learn

Version 1.61 is now available! Read about the new features and fixes from September.

Code editing. Redefined.

Free. Built on open source. Runs everywhere.

Download for Windows Stable Build

3. 點擊向下選單

4. 選擇自己的作業系統
ps. 選 "Stable" 的版本!

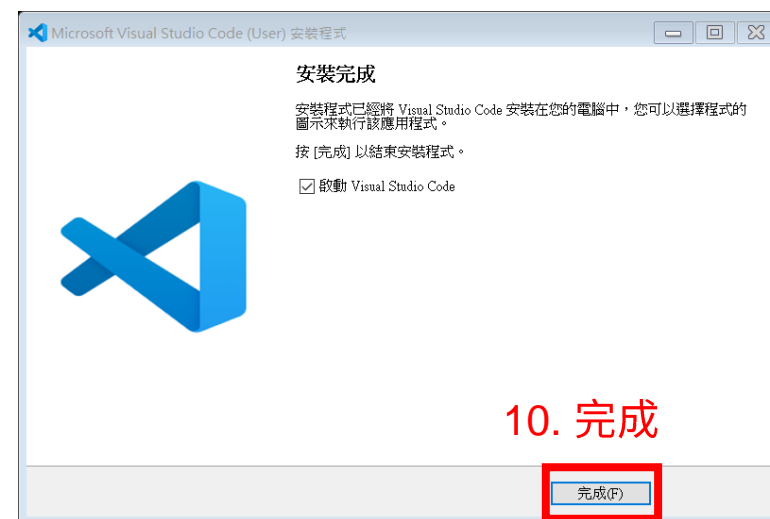
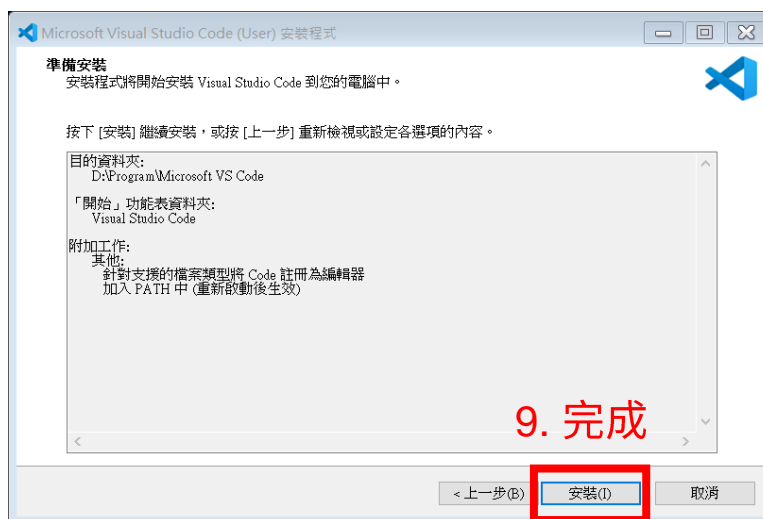
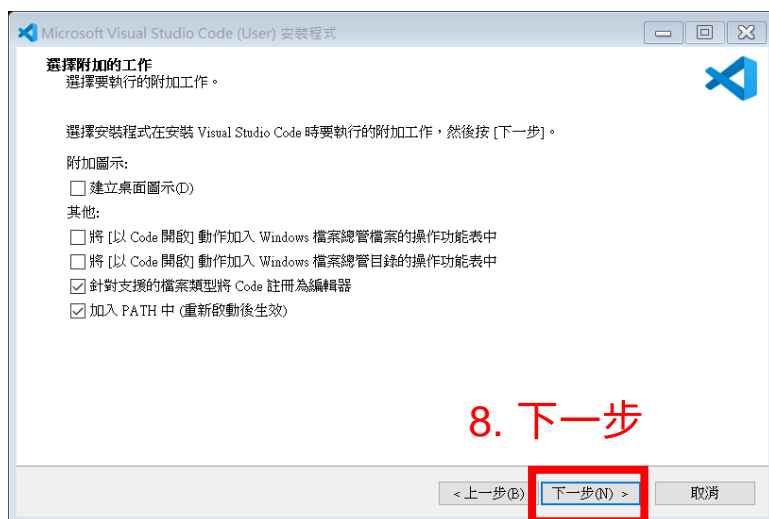
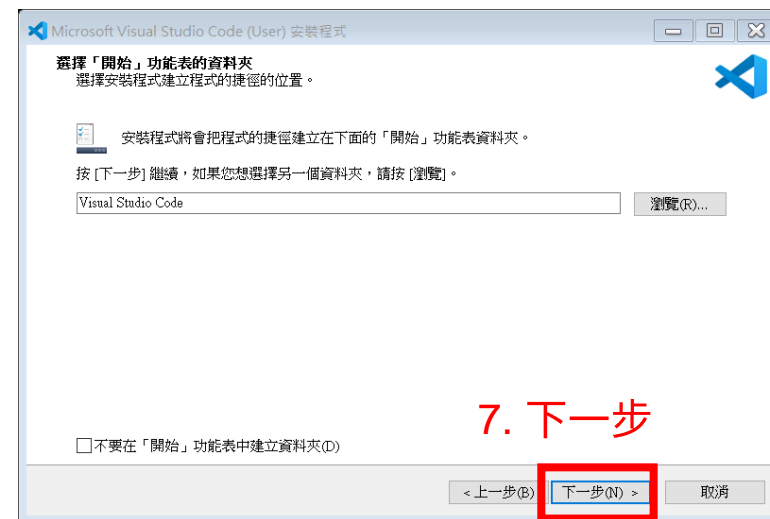
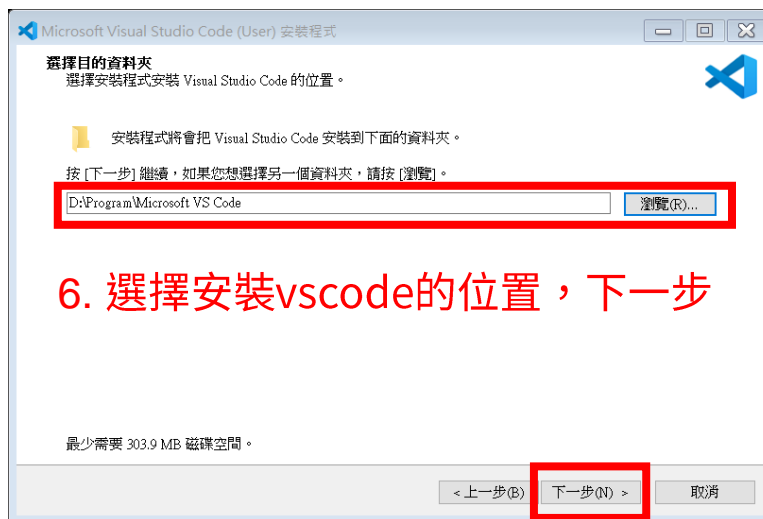
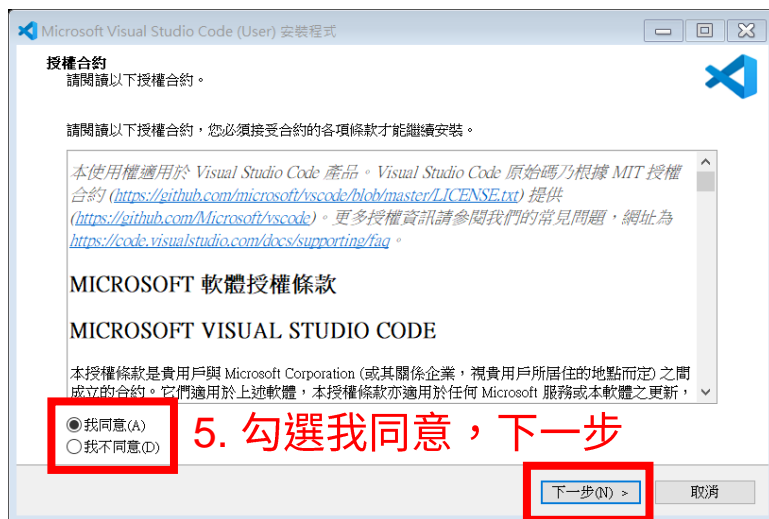
macOS Universal Stable Insiders

Windows x64 User Installer Stable Insiders

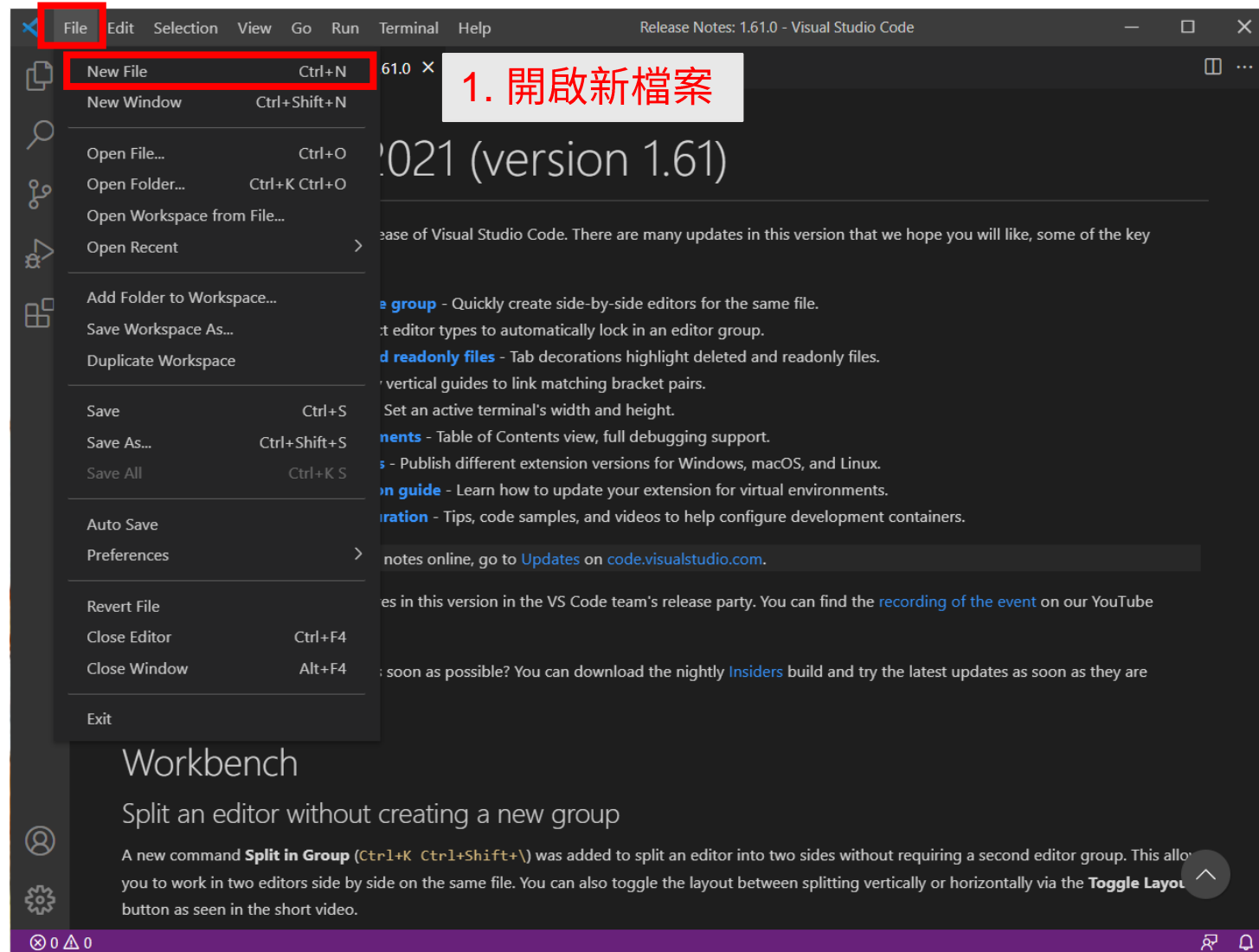
Linux x64 .deb .rpm Stable Insiders

Other downloads

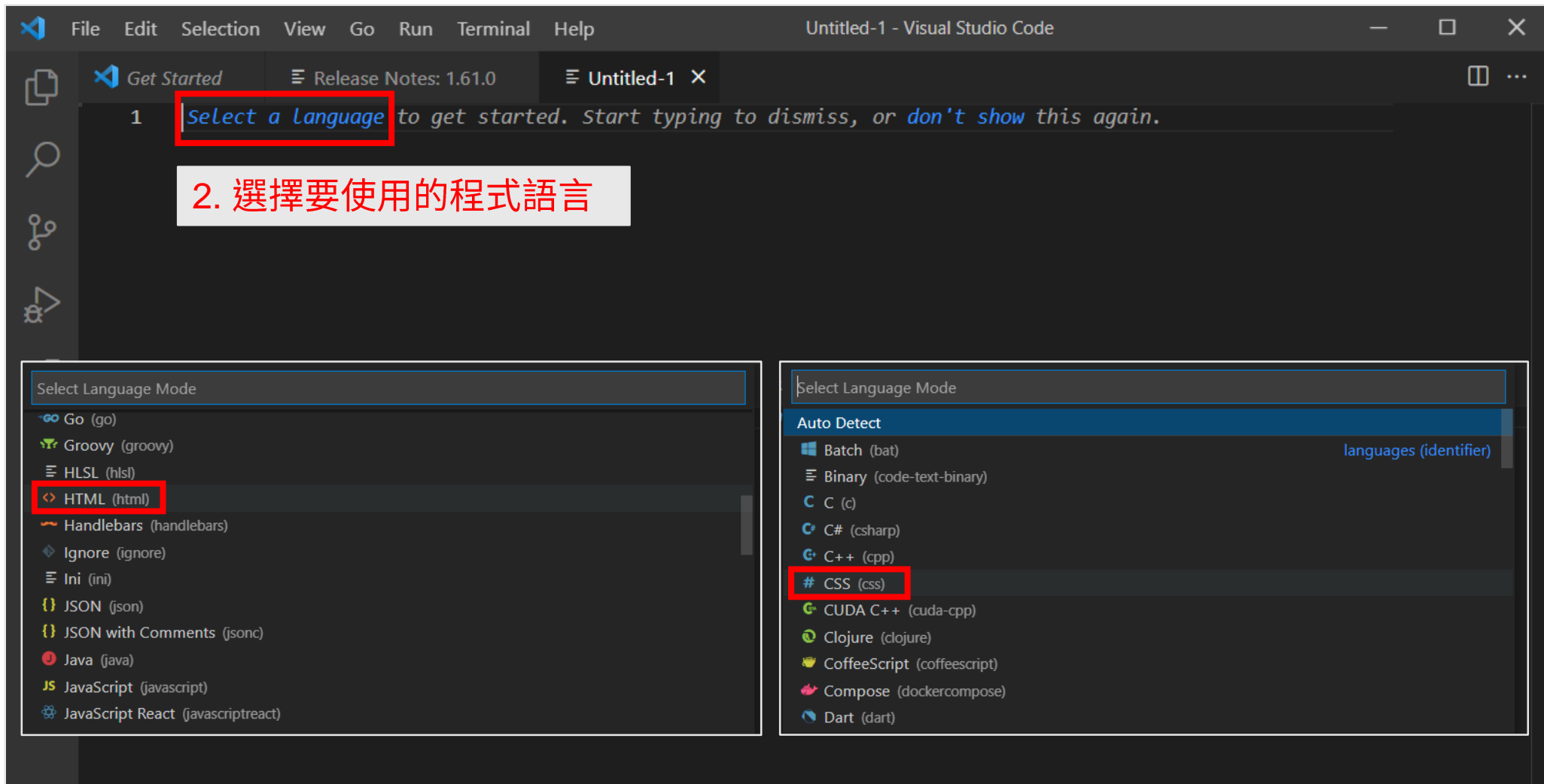
Editor – VS Code



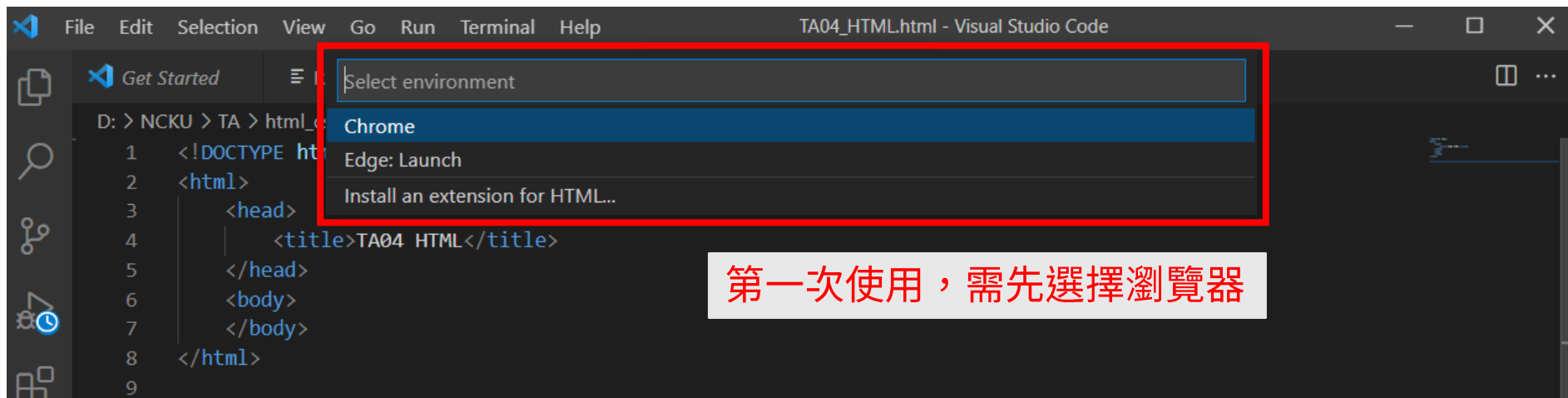
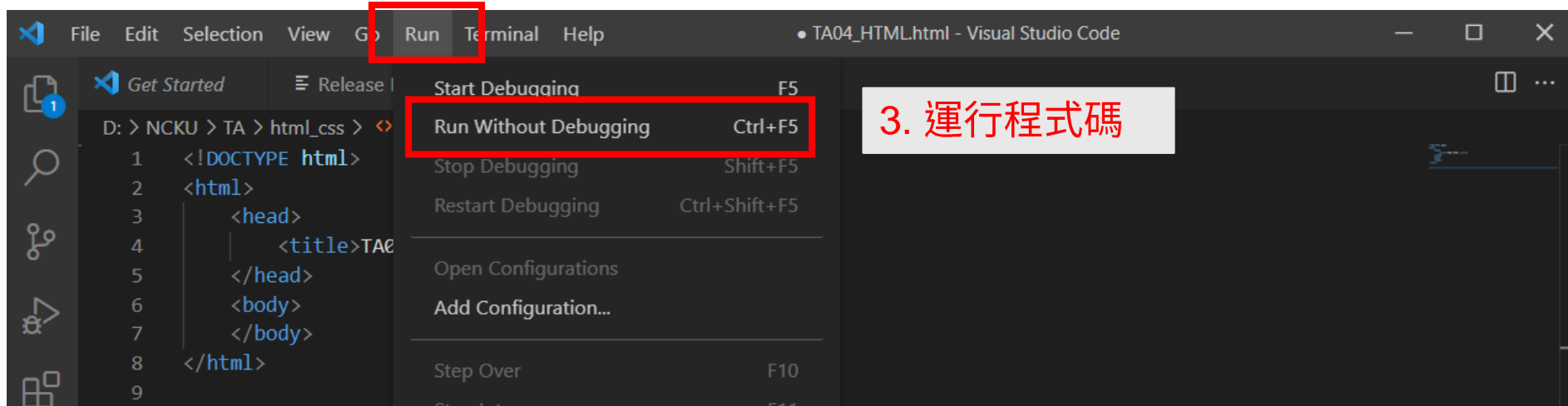
Editor – VS Code



Editor – VS Code

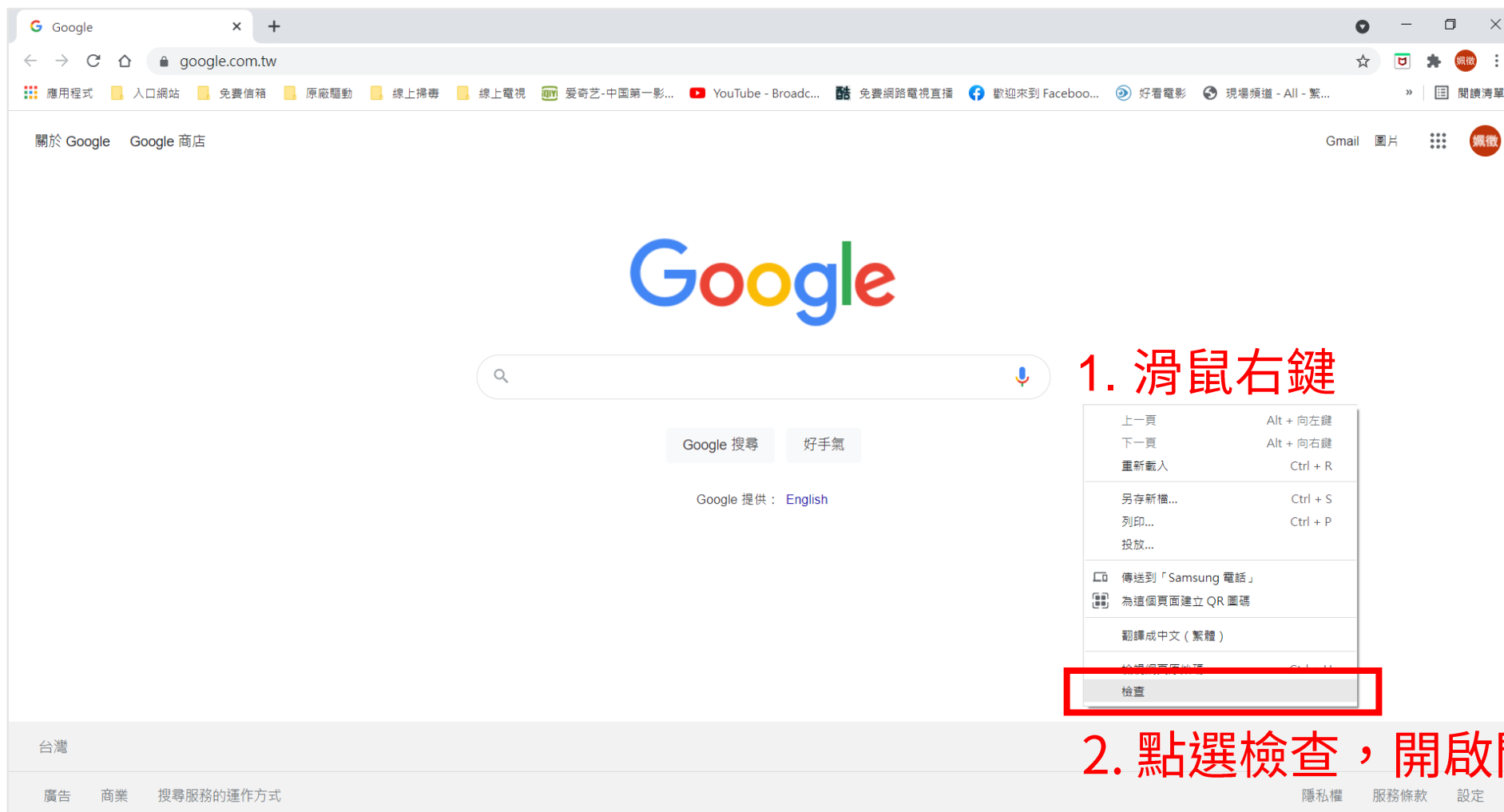


Editor – VS Code

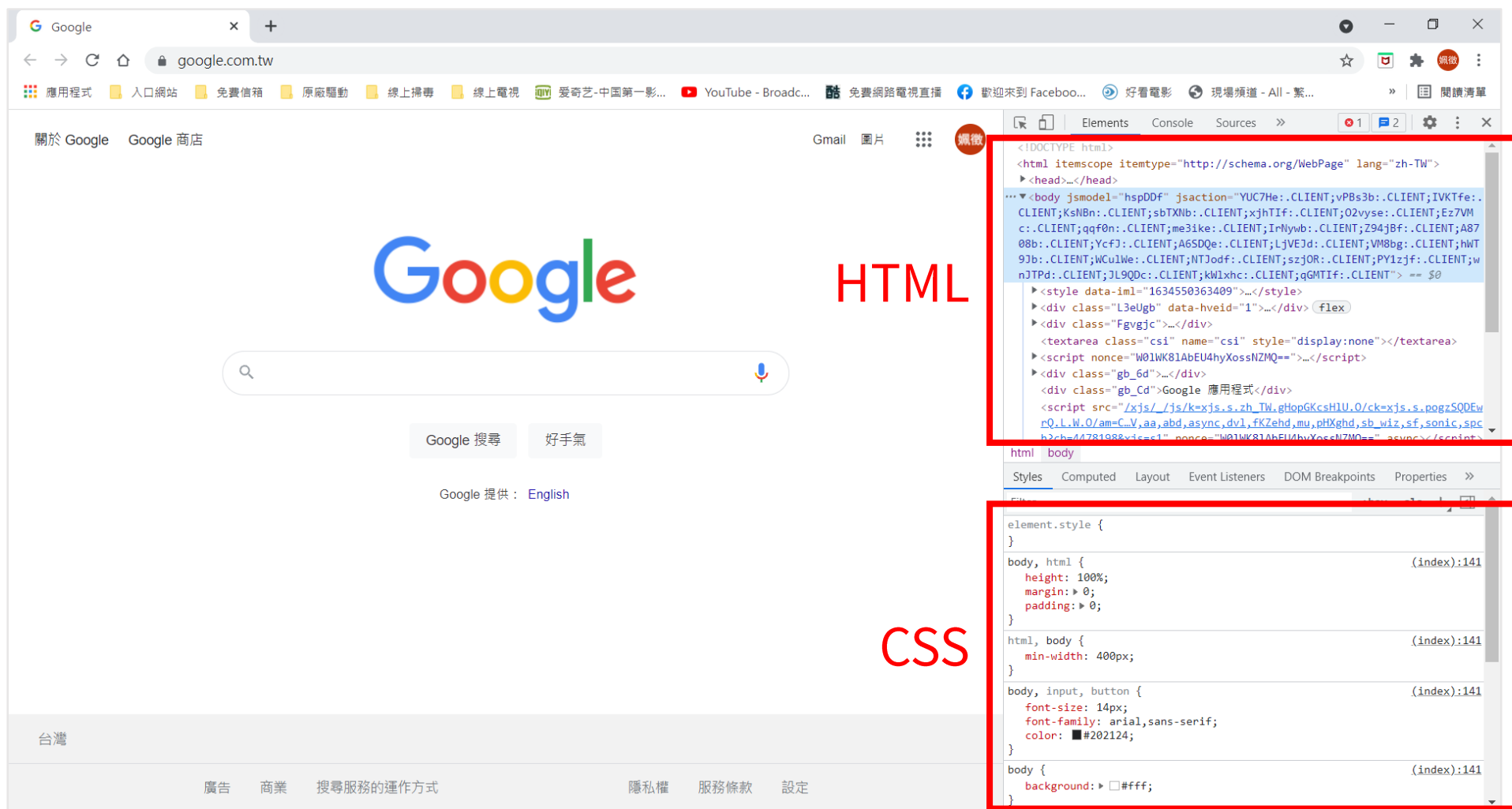


DevTools

Ps. 鍵盤上的 **F12** 也可直接開啟開發者工具

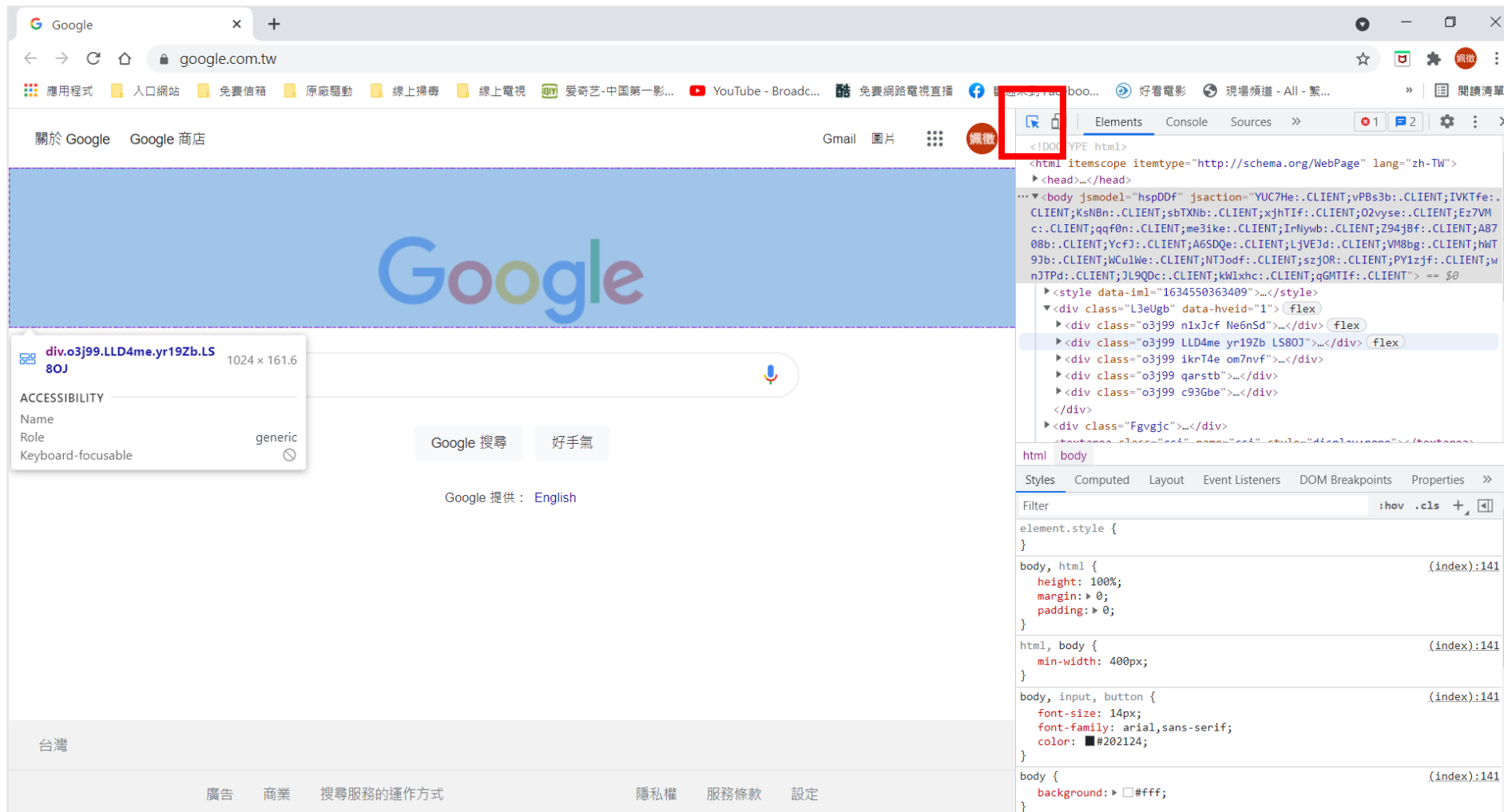


DevTools



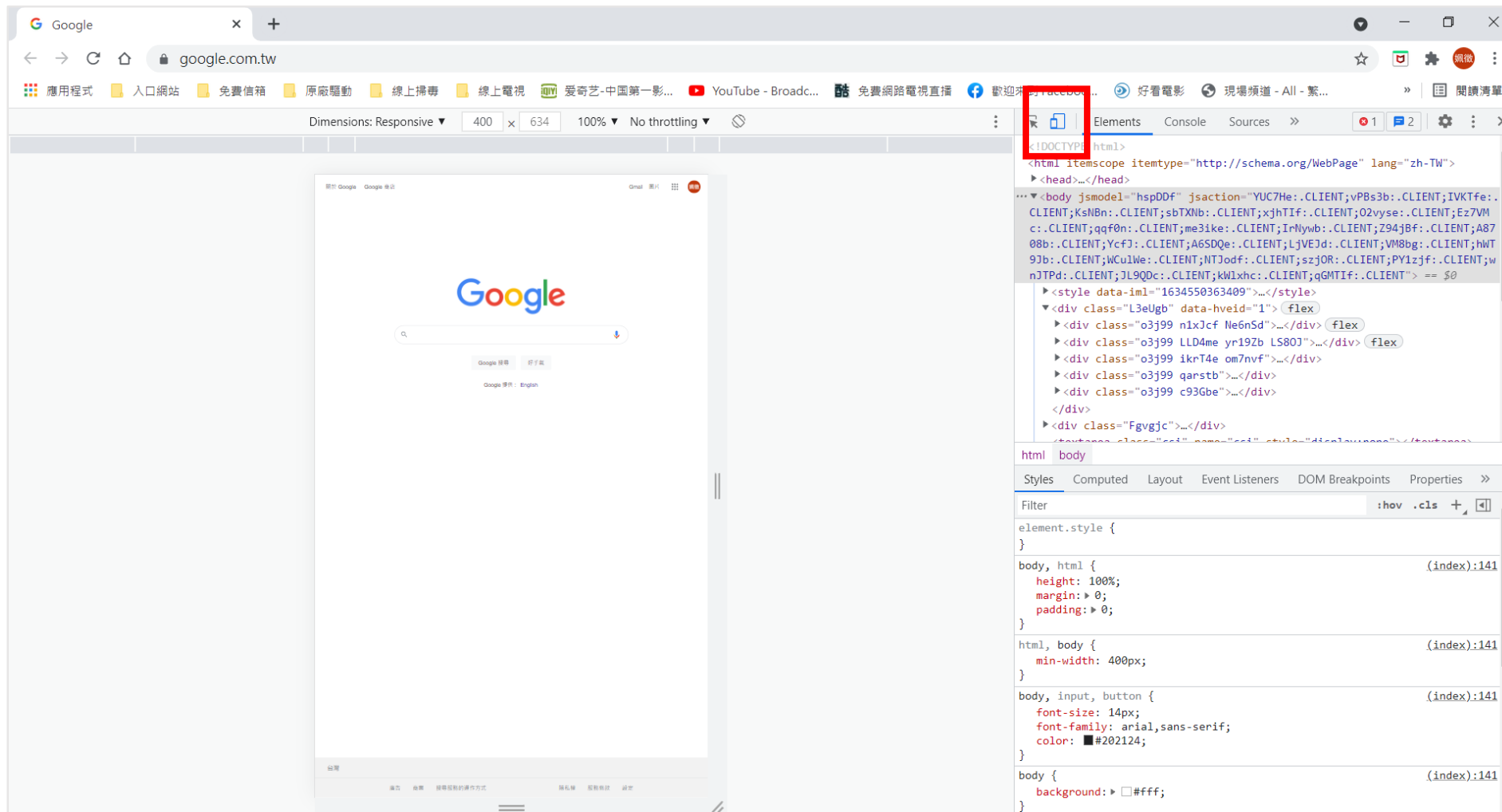
DevTools

選擇頁面中的一個element進行檢查



DevTools

切換設備工具欄



RWD

- Responsive **W**eb **D**esign (響應式網頁設計)
- 在所有設備上都能有好的呈現
- 僅使用HTML及CSS
- 非程序或JavaScript



Picture source: https://www.w3schools.com/css/css_rwd_intro.asp



End

HTML與CSS並不難，相信只要用心都可以刻出美美的網頁♡

PS. 網頁的基本架構一定要了解喔！爬蟲時將會派上用場 (◇▽◇)