網頁程式設計 Web Programming

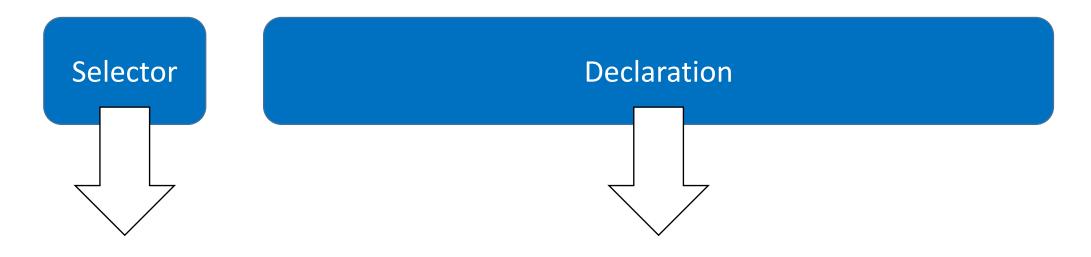
Ch3: CSS

Outline

- CSS Syntax
- Simple selector
- Combinator selector
- Pseudo-class selector
- Pseudo-elements selector
- Attribute selector
- More CSS effects

CSS Syntax

- A CSS description includes two basic blocks:
 - Selector
 - Declaration

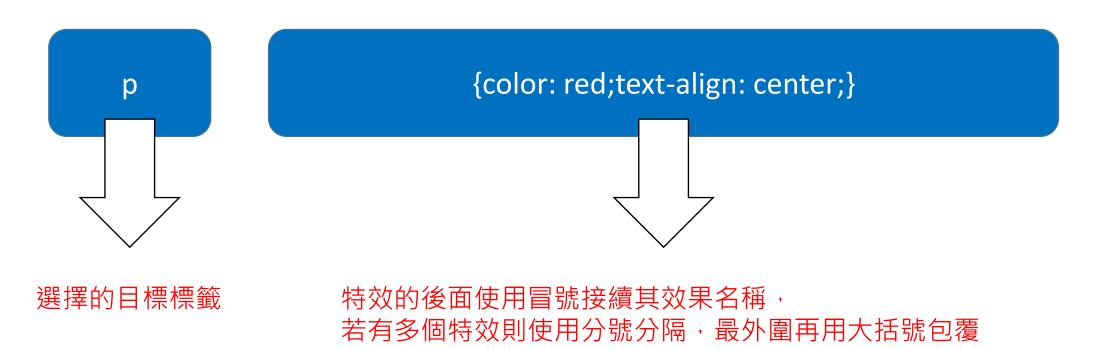


The HTML element you want to style

Specify CSS property name(s) and corresponding value(s)

CSS Syntax (cont.)

- The selector should be the target tag for effecting the style
- Declaration specification should be separated by colon, different declarations are separated with semicolons, and its outside block should be surrounded by curly braces



CSS Selector

 As described in previous slide, a CSS selector is used to find target HTML element that requires to make it with style

- There are five types:
 - Simple selector
 - Combinator selector
 - Pseudo-class selector
 - Pseudo-elements selector
 - Attribute selector

根據名稱和ID來選擇要套用效果的標籤

根據標籤之間的的關係來選擇要套用效果的標籤

根據狀態來選擇要套用效果的標籤

根據設定的條件讓部分標籤套用效果

根據標籤的參數來選擇要套用效果的標籤

Using simple selector

```
<!DOCTYPE html>
    -<html>
         <head>
            <title>This is the title</title>
             <link rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             <div>
                No AREA: Hello world!
10
                AREA1: Hello world!
            </div>
12
         </body>
13
     </html>
```

mystyle.css (by element)

```
background-color: black;
color: white;
}
```

• Simple selector

```
<!DOCTYPE html>
    -<html>
         <head>
            <title>This is the title</title>
            <link rel="stylesheet" href="mystyle.css">
         </head>
         <body>
            <div>
                No AREA: Hello world!
10
                AREA1: Hello world!
            </div>
12
         </body>
13
     </html>
```

mystyle.css (by id)

```
background-color: black;

background-color: black;

color: white;

#area1 {
    text-align: center;
    background-color: blue;
    color: yellow;
}
```

Combinator selector

```
<!DOCTYPE html>
    -<html>
         <head>
             <title>This is the title</title>
             <link rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             Hello world!
             <div>
10
                 Hello world!
                 <section>Hello world!</section>
12
             </div>
13
         </body>
14
     </html>
```

• mystyle.css

← descendant selector (space)

Combinator selector

```
<!DOCTYPE html>
    -<html>
         <head>
             <title>This is the title</title>
             k rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             Hello world!
             <div>
10
                 Hello world!
11
                <section>Hello world!</section>
12
             </div>
13
         </body>
14
     </html>
```

• mystyle.css

← child selector (>)

Combinator selector

```
<!DOCTYPE html>
    -<html>
 3
         <head>
            <title>This is the title</title>
            k rel="stylesheet" href="mystyle.css">
         </head>
         <body>
            Hello world!
            <div>
10
                Hello world!
11
                <section>Hello world!</section>
12
            </div>
            Hello world!
            Hello world!
14
15
         </body>
16
     </html>
```

```
This is the title × + • - - ×

This is the title × + • - - ×

Hello world!

Hello world!

Hello world!

Hello world!

Hello world!
```

• mystyle.css

← adjacent sibling selector (+)

Combinator selector

```
<!DOCTYPE html>
    -<html>
 3
         <head>
            <title>This is the title</title>
            k rel="stylesheet" href="mystyle.css">
         </head>
         <body>
            Hello world!
            <div>
10
                Hello world!
11
                <section>Hello world!</section>
12
            </div>
            Hello world!
            Hello world!
14
15
         </body>
16
     </html>
```

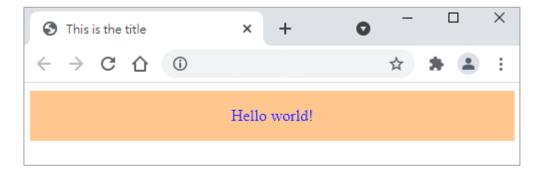
• mystyle.css

← general sibling selector (~)

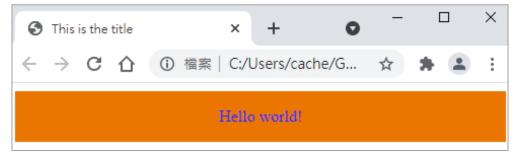
Pseudo-class selector

• mystyle.css



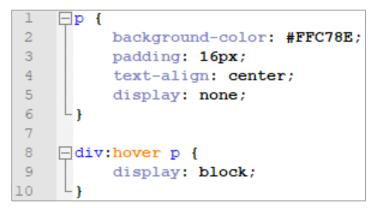


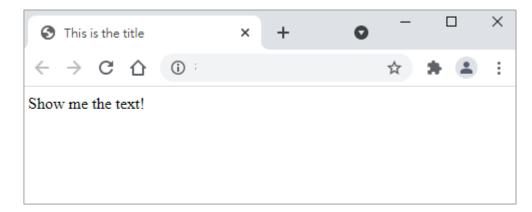
將滑鼠指標移動上去後會改變顏色



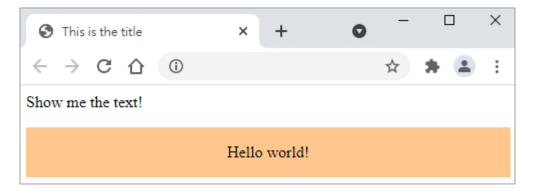
Pseudo-class selector

mystyle.css





將滑鼠指標移動上去後會出現

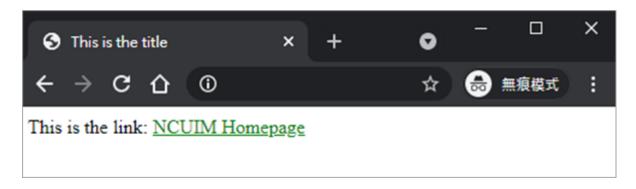


Pseudo-class selector

• mystyle.css

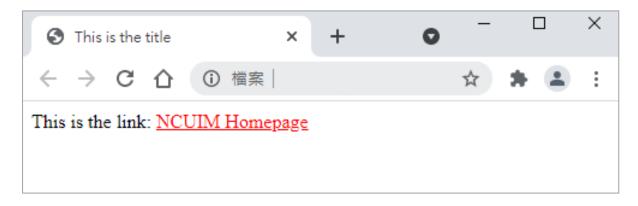
設定四種不同的顏色配置 讓超鏈結未點選過時有預設顏色(綠色)、點選過會改變顏色(紅色)、 滑鼠移動到超鏈結文字上面時變色(黃色)、 滑鼠按下超鏈結文字時變色(藍色)

Pseudo-class selector: link (un-visited hyperlink)



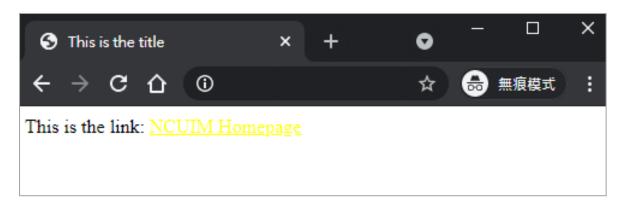
← 有時須搭配無痕模式 才能正確顯示出效果

Pseudo-class selector: visited (visited hyperlink)



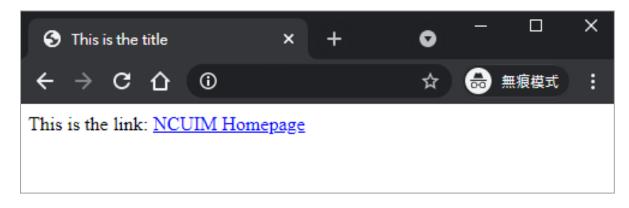
←一般模式下即可看出效果

Pseudo-class selector: hover (moving on the hyperlink)



← 滑鼠指標移動到超鏈結上面

Pseudo-class selector: active (when pressing the hyperlink)



← 滑鼠指標持續按住超鏈結

Pseudo-class selector (first-child)

```
<!DOCTYPE html>
       -<html>
             <head>
                 <title>This is the title</title>
                 <link rel="stylesheet" href="mystyle.css">
             </head>
             <body>
                 <div>
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
    9
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
   10
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
  11
  12
                 </div>
  13
             </body>
                                                                                                                ×
  14
         </html>
                                                       This is the title
                                                                                ×
mystyle.css
                                                     Hello world! Hello world! Hello world! Hello world!
      p b:first-child {
            color: blue;
                                                     Hello world! Hello world! Hello world! Hello world!
                                                     Hello world! Hello world! Hello world! Hello world!
```

Pseudo-class selector (first-child)

```
<!DOCTYPE html>
       -<html>
             <head>
                <title>This is the title</title>
                <link rel="stylesheet" href="mystyle.css">
             </head>
             <body>
                 <div>
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
  10
  11
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
  12
                 </div>
  13
             </body>
                                                                                                                ×
         </html>
                                                       This is the title
                                                                                ×
mystyle.css
                                                     Hello world! Hello world! Hello world! Hello world!
      mp:first-child b {
            color: blue:
                                                     Hello world! Hello world! Hello world! Hello world!
                                                     Hello world! Hello world! Hello world! Hello world!
```

Pseudo-class selector (first-child)

```
<!DOCTYPE html>
       -<html>
             <head>
                 <title>This is the title</title>
                 <link rel="stylesheet" href="mystyle.css">
             </head>
             <body>
                 <div>
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!</b>
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
   10
                     Hello world!<b>Hello world!</b> Hello world!<b>Hello world!<b>
                 </div>
   13
             </body>
                                                                                                                X
   14
         </html>
                                                       This is the title
mystyle.css
                                                     Hello world! Hello world! Hello world! Hello world!
       p:first-child {
            color: blue;
                                                     Hello world! Hello world! Hello world! Hello world!
                                                     Hello world! Hello world! Hello world! Hello world!
```

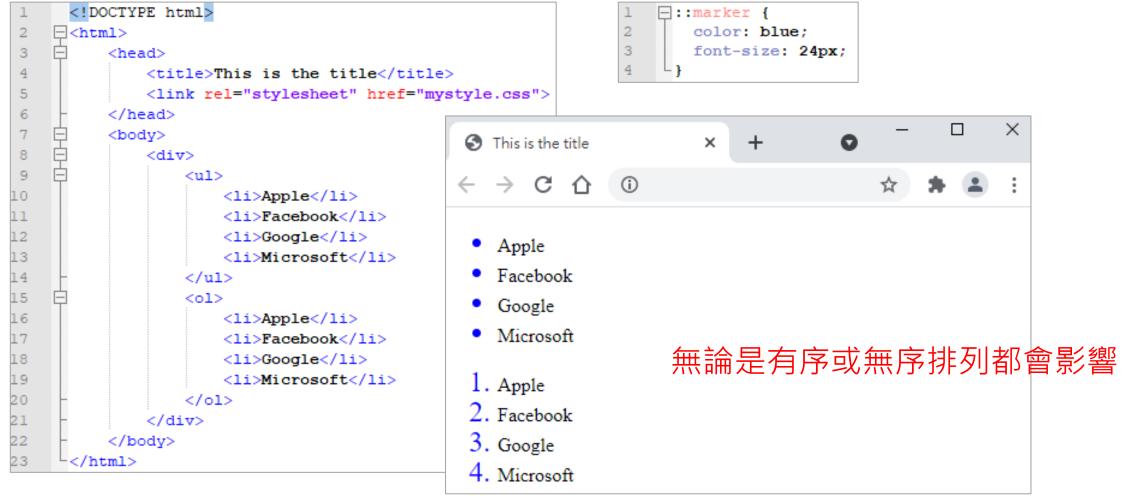
Pseudo-elements selector (first-line & first-letter)

font-size: 200%;

```
<!DOCTYPE html>
      -<html>
            <head>
                <title>This is the title</title>
               <link rel="stylesheet" href="mystyle.css">
            </head>
            <body>
                <div>
                    This is the line with ::first-letter and ::first-line pseudo-elements for changing style
                </div>
  10
            </body>
                                                                                                                     ×
                                                             This is the title
        </html>
                                                                             ① 檔案 | C:/Users/cache/G...
mystyle.css
                         Ep::first-line {
                              color: red:
                                                            his is the line with ::first-letter and ::first-line
                              font-size: x-large;
                        First-letter {
                                                           pseudo-elements for changing style
                              color: blue:
```

Pseudo-elements selector (marker)

mystyle.css



Pseudo-elements selector (selection)

```
<!DOCTYPE html>
      -<html>
            <head>
               <title>This is the title</title>
               k rel="stylesheet" href="mystyle.css">
           </head>
           <body>
               <div>
                                                                            將內容文字反白的時候
                   Line1: The quick brown fox jumps over the lazy dog
  10
                   Line1: The quick brown fox jumps over the lazy dog
                                                                            會產生指定效果
  11
                   Line1: The quick brown fox jumps over the lazy dog
               </div>
  13
            </body>
                                                    This is the title
                                                                            ×
        </html>
mystyle.css
                                                   Line1: The quick brown fox jumps over the lazy dog
     -::selection {
                                                   Line1: The quick brown fox jumps over the lazy dog
         color: white;
         background: green;
                                                   Line1: The quick brown fox jumps over the lazy dog
```

Attribute selector (exact match)

```
    Facebook

     <!DOCTYPE html>
                                                    Google
   -<html>

    Microsoft

         <head>
            <title>This is the title</title>
            k rel="stylesheet" href="mystyle.css">
                                                     只對設定 target="_blank" 的超鏈結
        </head>
        <body>
                                                     才套用特效
            <div>
                This is the list:
10
                <u1>
                   <a href="https://www.apple.com">Apple</a>
                   <a href="https://www.facebook.com" target=" blank">Facebook
12
                   <a href="https://www.google.com" target=" top">Google
13
14
                   <a href="https://www.microsoft.com">Microsoft
15
                16
            </div>
17
         </body>
     </html>
```

This is the title

This is the list:

Apple

mystyle.css

Attribute selector (wildcard match)

```
<!DOCTYPE html>
   -<html>
         <head>
            <title>This is the title</title>
            <link rel="stylesheet" href="mystyle.css">
        </head>
         <body>
            <div>
                <hl class="class">"Hello World!"</hl>
10
                <h2 class="class-set-2">"Hello World!"</h2>
                <h3 class="3-class">"Hello World!"</h3>
12
                <h4 class="class-mate-is-4">"Hello World!"</h4>
13
                Hello World!
                Hello World!
15
            </div>
16
         </body>
     </html>
```

```
This is the title × + • - - ×

This is the title × + • - - ×

This is the title × + • - - ×

This is the title × + • - - ×

This is the title × + • - - - ×

This is the title × + • - - - ×

This is the title × + • - - - ×

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This is the title × + • • - - - - ×

This is the title × + • • - - - - ×

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This is the title × + • • - - - - ×

This is the title × + • • • · · · · · · ·

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This is the title × + · · ·

This is the title × + · · ·

This is the title × + · · ·

This is the title × + · · ·

This is the title × + · · ·

Th
```

mystyle.css

開頭字串為 class 時會套用特效

Attribute selector (wildcard match)

```
<!DOCTYPE html>
   -<html>
         <head>
            <title>This is the title</title>
            <link rel="stylesheet" href="mystyle.css">
        </head>
         <body>
            <div>
                <hl class="class">"Hello World!"</hl>
10
                <h2 class="class-set-2">"Hello World!"</h2>
                <h3 class="3-class">"Hello World!"</h3>
12
                <h4 class="class-mate-is-4">"Hello World!"</h4>
13
                Hello World!
                Hello World!
15
            </div>
16
         </body>
     </html>
```

```
This is the title
← → C ↑ ①
"Hello World!"
"Hello World!"
"Hello World!"
"Hello World!"
Hello World!
Hello World!
```

mystyle.css

開頭字串中包含 class 時會套用特效

Attribute selector (wildcard match)

```
<!DOCTYPE html>
   -<html>
         <head>
            <title>This is the title</title>
            <link rel="stylesheet" href="mystyle.css">
        </head>
         <body>
            <div>
                <hl class="class">"Hello World!"</hl>
10
                <h2 class="class-set-2">"Hello World!"</h2>
                <h3 class="3-class">"Hello World!"</h3>
12
                <h4 class="class-mate-is-4">"Hello World!"</h4>
13
                Hello World!
                Hello World!
15
            </div>
16
         </body>
     </html>
```

mystyle.css

結尾字串中包含 class 時會套用特效

Attribute selector

```
<!DOCTYPE html>
    -<html>
         <head>
             <title>This is the title</title>
             <link rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             <div>
                 <hl class="re-build">"Hello World!"</hl>
10
                 <h2 class="reproduction">"Hello World!"</h2>
11
                 <h3 class="rar">"Hello World!"</h3>
12
                 <h4 class="we-are-good">"Hello World!"</h4>
13
                 Hello World!
14
                 Hello World!
15
             </div>
16
         </body>
      </html>
```

```
This is the title × + • - • ×

This is the title × + • - • ×

The llo World!"

"Hello World!"

"Hello World!"

"Hello World!"

Hello World!

Hello World!
```

mystyle.css

字串中有 re 時會套用特效

Attribute selector (styling form)

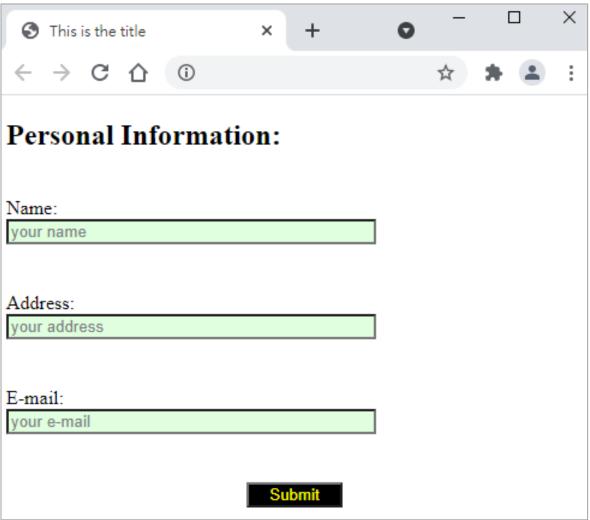
```
<!DOCTYPE html>
    -<html>
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <h2>Personal Information:</h2>
              <br>
10
              <form name="input" action="" method="get">
                  Name: <input type="text" name="Name" value="your name" size="24">
                  Address:<input type="text" name="Address" value="your address" size="24">
12
13
                  E-mail:<input type="text" name="Address" value="your e-mail" size="24">
                  <input type="button" value="Submit">
14
15
              </form>
16
          </body>
17
     L</html>
```

Attribute selector (styling form)

```
input[type=text] {
          width: 300px;
          display: block;
          margin-bottom: 40px;
          background-color: #DFFFDF;
 6
          color: gray;
    input[type=button] {
          width: 80px;
10
          margin-left: 200px;
          display: block;
          background-color: black;
13
          color: yellow;
14
```

mystyle.css





Backgrounds

• background-color 設定背景顏色

• background-image 設定背景圖片

• background-repeat 設定背景圖片(重複使用填滿畫面)

• background-attachment 貼附背景圖片

• background-position 設定貼附的背景圖片位置

• opacity: VALUE 設定透明度

background: rgba (VALUE1, VALUE2, VALUE3, VALUE4)

使用 RGBA 語法設定背景顏色和透明度

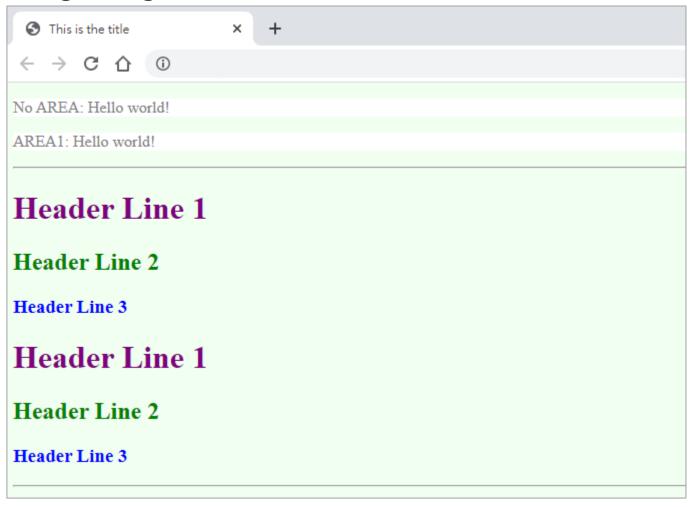
Using background-color

```
<!DOCTYPE html>
    □<html>
 3
          <head>
              <title>This is the title</title>
              <link rel="stylesheet" href="mystyle.css">
 6
          </head>
          <body>
              <div>
 9
                  No AREA: Hello world!
10
                 AREA1: Hello world!
11
              </div>
12
              <hr id="line1">
13
              <div>
14
                  <hl>Header Line 1</hl>
15
                  <h2>Header Line 2</h2>
16
                  <h3>Header Line 3</h3>
17
                  <hl id="header">Header Line 1</hl>
18
                  <h2 id="header">Header Line 2</h2>
19
                  <h3 id="header">Header Line 3</h3>
20
              </div>
21
              <hr id="line2">
          </body>
23
      </html>
```

mystyle.css

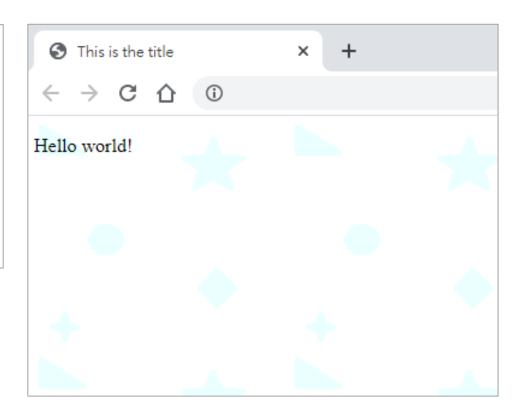
```
⊟body {
          background-color: #FOFFFO;
     □hl {
          color: purple;
     □h2 {
           color: green;
     □h3 {
           color: blue;
13
     □h4 {
           color: red;
16
     ∃hr {
           color: #FFE681;
19
20
          background-color: white;
           color: gray;
22
```

Using background-color



Using background-image

mystyle.css



請確認檔名及資料夾路徑正確

自動填補背景圖片至全畫面

Using background-repeat

```
<!DOCTYPE html>
    3
         <head>
             <title>This is the title</title>
             <link rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             <div>
                 Hello world!
10
             </div>
11
         </body>
12
      </html>
```

• mystyle.css 請確認檔名及資料夾路徑正確

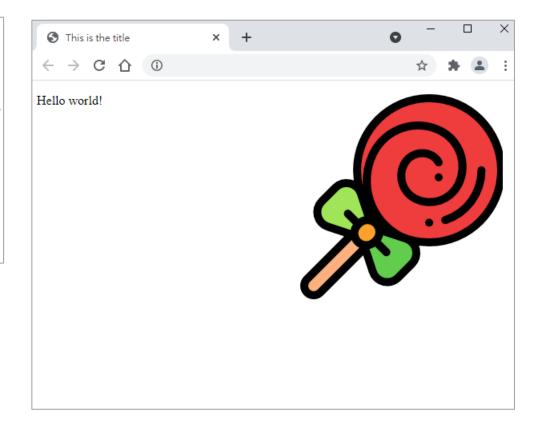
```
body {
background-image: url("bak2.png");
background-repeat: repeat-x;
}
```

This is the title → C ① Hello world!

背景圖檔水平 自動延伸

測試成功後再試著把第3行拿掉看會發生什麼事情

Using background-repeat and position



• mystyle.css 請確認檔名及資料夾路徑正確

```
body {
background-image: url("pic.png");
background-repeat: no-repeat;
background-position: right top;
}
```

測試成功後再試著把第 4 行的 right 改成 left 看看

Using background-attachment

```
<!DOCTYPE html>

□<html>

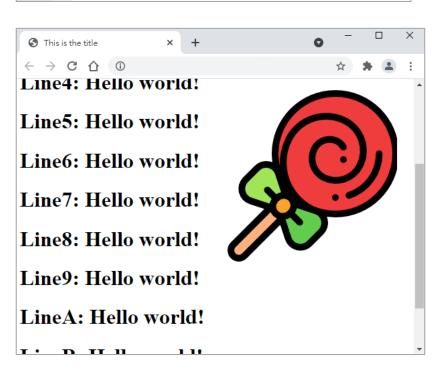
          <head>
              <title>This is the title</title>
              <link rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                   <h1>Line1: Hello world!</h1>
10
                   <hl>Line2: Hello world!</hl>
11
                   <hl>Line3: Hello world!</hl>
12
                  <hl>Line4: Hello world!</hl>
13
                  <hl>Line5: Hello world!</hl>
                  <hl>Line6: Hello world!</hl>
15
                  <h1>Line7: Hello world!</h1>
16
                  <hl>Line8: Hello world!</hl>
17
                  <h1>Line9: Hello world!</h1>
18
                  <hl>LineA: Hello world!</hl>
19
                   <hl>LineB: Hello world!</hl>
20
                  <hl>LineC: Hello world!</hl>
              </div>
          </body>
23
       </html>
```

請先將瀏覽器視窗縮小後再測試拉動右側的 bar

mystyle.css

```
body {
background-image: url("pic.png");
background-repeat: no-repeat;
background-position: right top;
background-attachment: fixed;
}
```

圖片會定格



Using background-attachment

```
<!DOCTYPE html>

□<html>

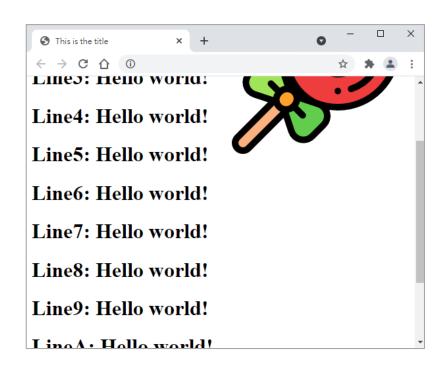
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <h1>Line1: Hello world!</h1>
10
                  <hl>Line2: Hello world!</hl>
11
                  <hl>Line3: Hello world!</hl>
12
                  <hl>Line4: Hello world!</hl>
13
                  <hl>Line5: Hello world!</hl>
                  <hl>Line6: Hello world!</hl>
15
                  <h1>Line7: Hello world!</h1>
16
                  <hl>Line8: Hello world!</hl>
17
                  <h1>Line9: Hello world!</h1>
18
                  <hl>LineA: Hello world!</hl>
19
                  <hl>LineB: Hello world!</hl>
20
                  <hl>LineC: Hello world!</hl>
              </div>
          </body>
23
       </html>
```

請先將瀏覽器視窗縮小後再測試拉動右側的 bar

mystyle.css

```
body {
background-image: url("pic.png");
background-repeat: no-repeat;
background-position: right top;
background-attachment: scroll;
}
```

圖片 不會定格



Using opacity

```
<!DOCTYPE html>
    -<html>
          <head>
 3
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <hl class="line1">Line1: Hello world!</hl>
 9
10
                  <hl class="line2">Line2: Hello world!</hl>
11
                  <hl class="line3">Line3: Hello world!</hl>
12
                  <hl class="line4">Line4: Hello world!</hl>
              </div>
14
          </body>
15
      </html>
```

```
□.linel {
 2
          background: rgb(0, 0, 255);
 3
          color: orange;
 4
          opacity: 0.25;
 5
    □.line2 {
          background: rgb(0, 0, 255);
 8
          color: orange;
 9
          opacity: 0.5;
10
11
    -.line3 {
12
          background: rgb(0, 0, 255);
13
          color: orange;
14
          opacity: 0.75;
15
16
    -.line4 {
17
          background: rgb(0, 0, 255);
18
          color: orange;
19
          opacity: 1;
20
```

Using opacity



← 前景字體和背景顏色一起淡化

Using RGBA expression

```
<!DOCTYPE html>
    -<html>
 3
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <hl class="line1">Line1: Hello world!</hl>
10
                  <hl class="line2">Line2: Hello world!</hl>
                  <hl class="line3">Line3: Hello world!</hl>
11
12
                  <hl class="line4">Line4: Hello world!</hl>
              </div>
14
          </body>
15
      </html>
```

mystyle.css

```
□.linel {
          background: rgba(0, 0, 255, 0.25);
 3
          color: orange;
 4
    -.line2 {
 6
          background: rgba(0, 0, 255, 0.5);
          color: orange;
 8
    -.line3 {
10
          background: rgba(0, 0, 255, 0.75);
11
          color: orange;
12
13
    - line4 {
14
          background: rgba(0, 0, 255, 1);
15
          color: orange;
16
```

改成使用 RGBA 語法表示

• Using RGBA expression



← 只有背景顏色淡化

Using linear-gradient

← → C ① ①
★ ★ ② :
Hello world!

This is the title

• mystyle.css

```
body {
    background: -webkit-linear-gradient(-8deg, rgb(255, 255, 255), rgb(0, 59, 119))
}
```

REF: http://www.colinkeany.com/blend/

Fonts

• Using font-family property is able to specify the font in webpage

Generic Font Family	Examples of Font Names
Serif	Times New Roman Georgia Garamond
Sans-serif	Arial Verdana Helvetica
Monospace	Courier New Lucida Console Monaco
Cursive	Brush Seript M7 Lucida Handwriting
Fantasy	Copperplate Papyrus

REF: https://www.w3schools.com/css/css_font.asp

Generic font families

```
<!DOCTYPE html>
    -<html>
 3
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <hl class="line1">Line1: Hello world!</hl>
10
                  <hl class="line2">Line2: Hello world!</hl>
11
                  <hl class="line3">Line3: Hello world!</hl>
12
                  <hl class="line4">Line4: Hello world!</hl>
                  <hl class="line5">Line5: Hello world!</hl>
14
                  <hl class="line6">Line6: Hello world!</hl>
15
              </div>
16
          </body>
      </html>
```

```
.linel {
          font-family: "Times New Roman", serif;
    -.line2 {
          font-family: "Arial", sans-serif;
    -.line3 {
          font-family: "Lucida Console", monospace;
10
    □.line4 {
          font-family: "Courier New", monospace;
12
    □.line5 {
14
          font-family: "Brush Script MT", cursive;
15
     L
16
    -.line6 {
          font-family: "Copperplate", fantasy;
18
```

Generic font families



← 若瀏覽器不支援會顯示預設值

- Selecting "Web Safe Fonts" has a better chance that browser may support it
- Following list shows the suggested "Web Safe Fonts"

Arial (sans-serif)

Verdana (sans-serif)

Helvetica (sans-serif)

Tahoma (sans-serif)

Trebuchet MS (sans-serif)

Times New Roman (serif)

Georgia (serif)

Garamond (serif)

Courier New (monospace)

Brush Script MT (cursive)

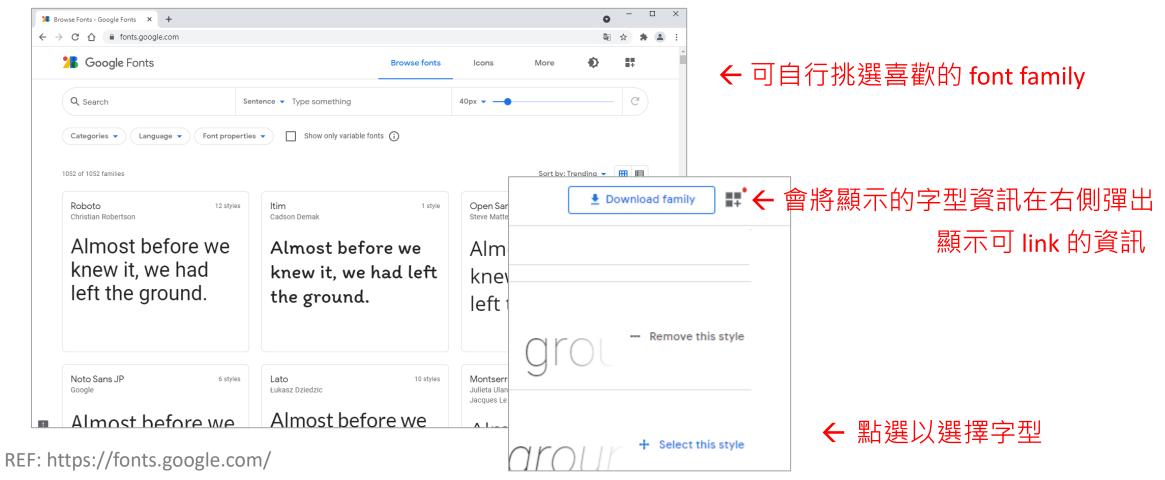
這些是大部分瀏覽器會支援的字型

Link external fonts (ex. Google's fonts)

```
<!DOCTYPE html>
    -<html>
          <head>
             <title>This is the title</title>
             <link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Audiowide">
             <style>
                 body {
                     font-family: "Audiowide", sans-serif;
             </style>
10
                                                                    This is the title
          </head>
          <body>
13
              <div>
14
                 <hl>Hello World!</hl>
15
                 0910-234567
                                                                   Hello World!
16
             </div>
17
          </body>
18
      </html>
                                                                   0910-234567
```

使 link 語法鏈結外部資源 (此範例使用 Google Fonts)

• Link external fonts (ex. Google's fonts)



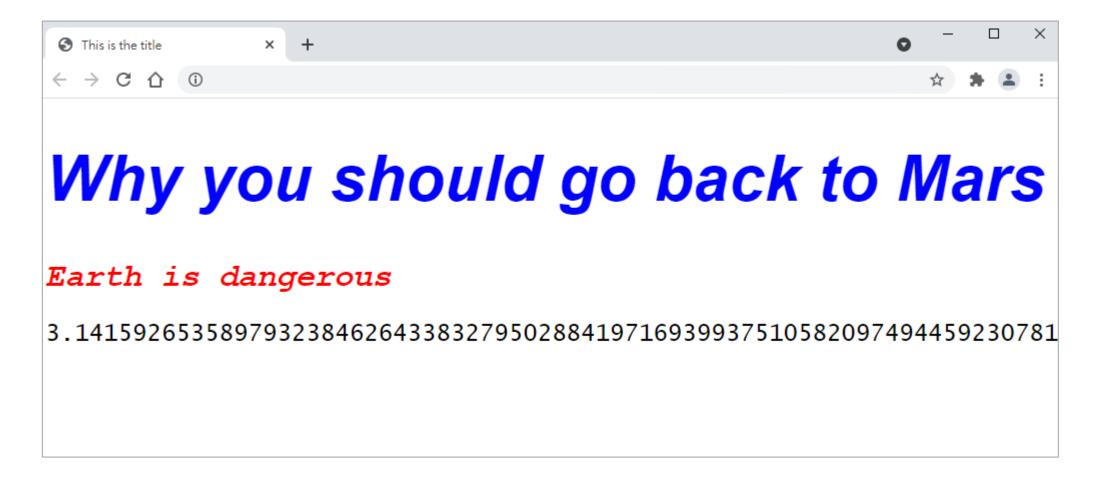
Integrated property

```
<!DOCTYPE html>
    -<html>
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <hl>Why you should go back to Mars</hl>
10
                  <h2>Earth is dangerous</h1>
11
                  3.1415926535897932384626433832795028
12
              </div>
13
          </body>
14
      </html>
```

隨便打一行很長的字就可以了

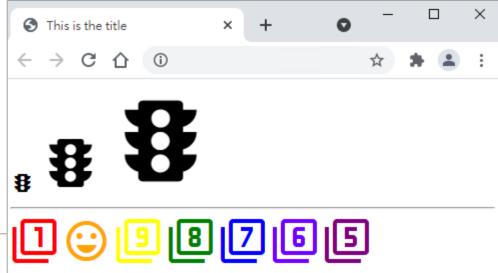
```
□body {
          background-color: while;
 3
          font-family: "Lucida Console", monospace;
          font-size: 24px;
          color: black;
 6
    -hl {
 8
          font-family: "Arial", sans-serif;
 9
          font-size: 64px;
10
          font-style: oblique;
11
          color: blue;
12
13
    □h2 {
14
          font-family: "Courier New", monospace;
15
          font-size: 32px;
16
          font-style: italic;
17
          color: red;
18
```

Integrated property - Result



Icons

 Icons can be added by the name of the specified icon class in webpage



```
<!DOCTYPE html>
    □<html>
          <head>
              <title>This is the title</title>
              <link href="https://fonts.googleapis.com/icon?family=Material+Icons" rel="stylesheet">
          </head>
          <body>
              <i class="material-icons">traffic</i>
              <i class="material-icons" style="font-size:64px;">traffic</i>
              <i class="material-icons" style="font-size:108px;">traffic</i>
10
              <hr>>
              <i class="material-icons" style="font-size:48px;color:red">filter 1</i>
              <i class="material-icons" style="font-size:48px;color:orange">sentiment very satisfied</i>
              <i class="material-icons" style="font-size:48px;color:yellow">filter 9</i>
              <i class="material-icons" style="font-size:48px;color:green">filter 8</i>
              <i class="material-icons" style="font-size:48px;color:blue">filter 7</i>
16
              <i class="material-icons" style="font-size:48px;color:#6F00FF">filter_6</i>
18
              <i class="material-icons" style="font-size:48px;color:purple">filter 5</i>
19
          </body>
      </html>
```

REF: https://fonts.googleapis.com/

Table

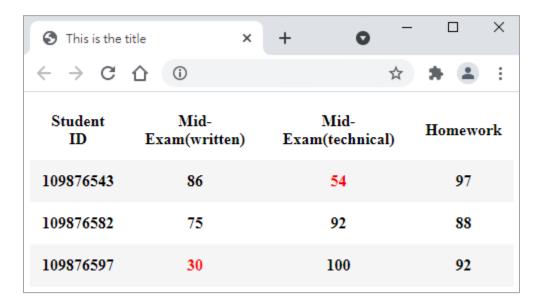
```
□div {
          overflow-x: auto;
 3
     =table {
          border-collapse: collapse;
 6
          width: 100%;

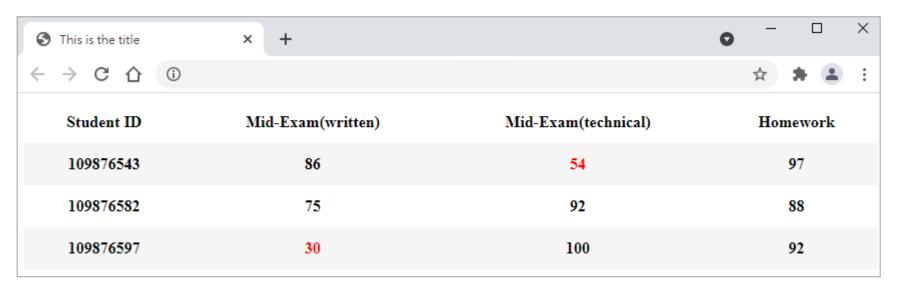
─ th, td {
 9
          text-align: center;
10
          padding: 12px;
11
12
     = tr:nth-child(even) {
13
          background-color: #F5F5F5;
14
```

```
<!DOCTYPE html>
   □<html>
       <head>
          <title>This is the title</title>
         <link rel="stylesheet" href="mystyle.css">
       </head>
       <body>
          <div>
            11
                  Student ID
12
                  Mid-Exam (written) 
13
                  Mid-Exam(technical)
                  Homework
15
               16
               17
                  109876543
18
                  86
19
                  <span style="color:red;">54</span>
20
                  97
               22
               23
                  109876582
24
                  75
25
                  92
26
                  88
27
               28
               29
                  109876597
30
                  <span style="color:red;">30</span>
31
                  100
32
                  92
33
               34
            35
         </div>
       </body>
36
37
    </html>
```

Table (cont.)

隨著調整瀏覽器視窗大小,表格都還是會維持佔據100%寬度的配置





Float

• Float property is able to setup the position and format of text/image content



Float (cont.)

Float property is able to setup the position and format of text/image content



Float (cont.)

Float property is able to setup the position and format of text/image content

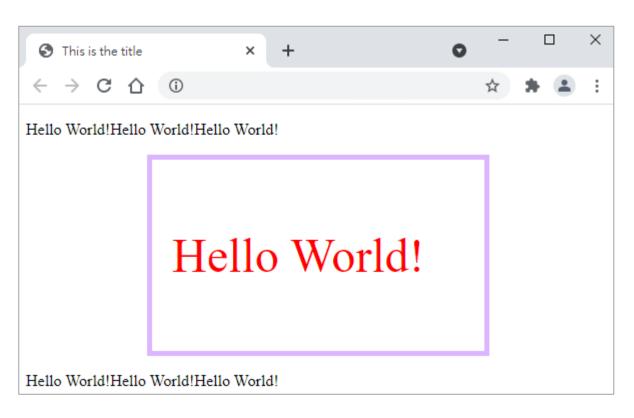


Align

• Just as its name, this tag aligns the text content

```
<!DOCTYPE html>
    -<html>
          <head>
             <title>This is the title</title>
             <link rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             <div>
9
                 Hello World!Hello World!Hello World!
10
             </div>
             <div class="target">
12
                 Hello World!
13
             </div>
14
             <div>
15
                 Hello World!Hello World!Hello World!
16
             </div>
          </body>
      </html>
```

mystyle.css



← 設定作用於 class 標示為 target 的標籤

Rounded Corner

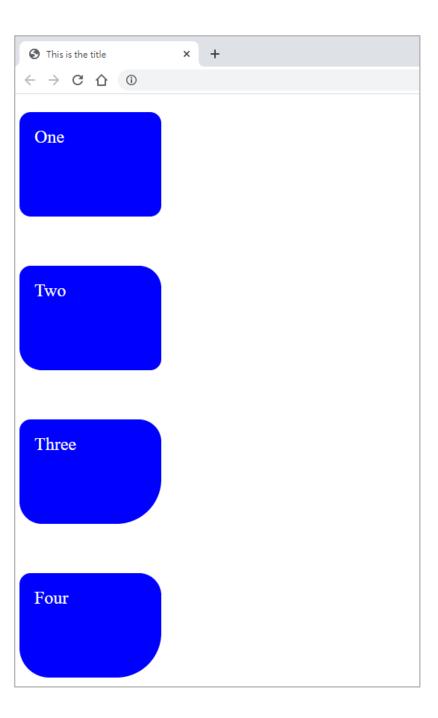
Use rounded corner

```
<!DOCTYPE html>
   -<html>
3
        <head>
4
           <title>This is the title</title>
           <link rel="stylesheet" href="mystyle.css">
5
        </head>
        <body>
8
           <div>
               One
10
               <br>
               Two
12
               <br>
13
               Three
14
               <br>
              Four
15
16
           </div>
17
        </body>
18
    L</html>
```

```
□p {
          color: white;
 3
          font-size: 24px;
    #c1 {
          border-radius: 15px;
          background: blue;
 8
          padding: 20px;
 9
          width: 150px;
          height: 100px;
10
11
12
    -#c2 {
13
          border-radius: 15px 30px;
          background: blue;
14
15
          padding: 20px;
16
          width: 150px;
17
          height: 100px;
18
19
    -#c3 {
20
          border-radius: 15px 30px 60px;
21
          background: blue;
22
          padding: 20px;
23
          width: 150px;
24
          height: 100px;
25
26
    -#c4 {
27
          border-radius: 15px 30px 60px 40px;
          background: blue;
28
29
          padding: 20px;
30
          width: 150px;
31
          height: 100px;
32
```

Rounded Corner (cont.)

Result



Rounded Image

Use rounded image

```
<!DOCTYPE html>
    -<html>
 3
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <img class="style1" src="./view.jpg">
10
                  <br>
11
                  <img class="style2" src="./view.jpg">
12
                  <br>
13
                  <img class="style3" src="./view.jpg">
14
              </div>
15
          </body>
16
      </html>
```

```
.stylel {
          max-width: 100%;
          height: auto;
 4
    .style2 {
          border-radius: 50px;
          max-width: 100%;
 8
          height: auto;
 9
10
    .style3 {
          border-radius: 50%;
12
          max-width: 100%;
          height: auto;
```

請確認檔名及資料夾路徑正確

Rounded Image (cont.)

Result



Image Opacity

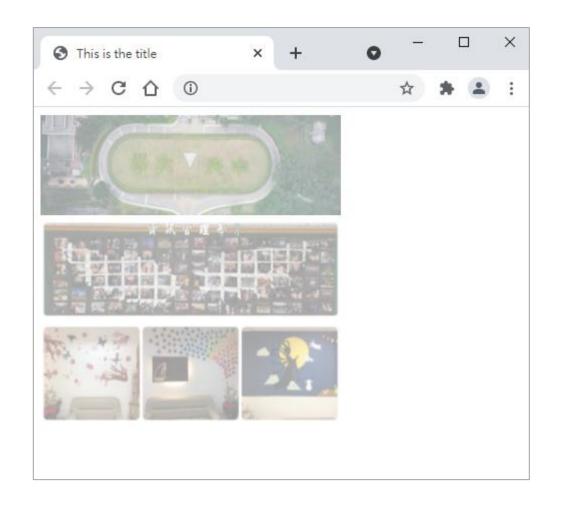
Integrated example

```
<!DOCTYPE html>
    | <html> | <he
          <head>
               <title>This is the title</title>
               <link rel="stylesheet" href="mystyle.css">
          </head>
          <body>
               <div>
                   <img src="https://im.mqt.ncu.edu.tw/imq/welcome/hero-slide-1.jpq">
 9
10
                   <br>>
11
                   <img src="https://im.mqt.ncu.edu.tw/img/welcome/FotoJet.png">
12
                   <br>
13
                   <img src="https://im.mqt.ncu.edu.tw/img/welcome/1080911.png">
14
               </div>
15
          </body>
16
      </html>
```

Image Opacity (cont.)

Result

搭配 hover 動作觸發,當滑鼠指標移動到圖片上時會有變化



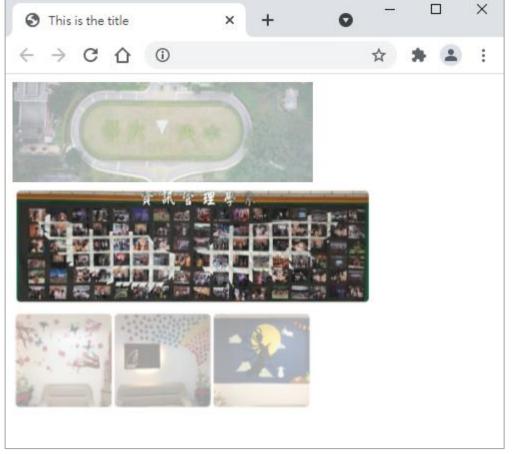


Image Gallery

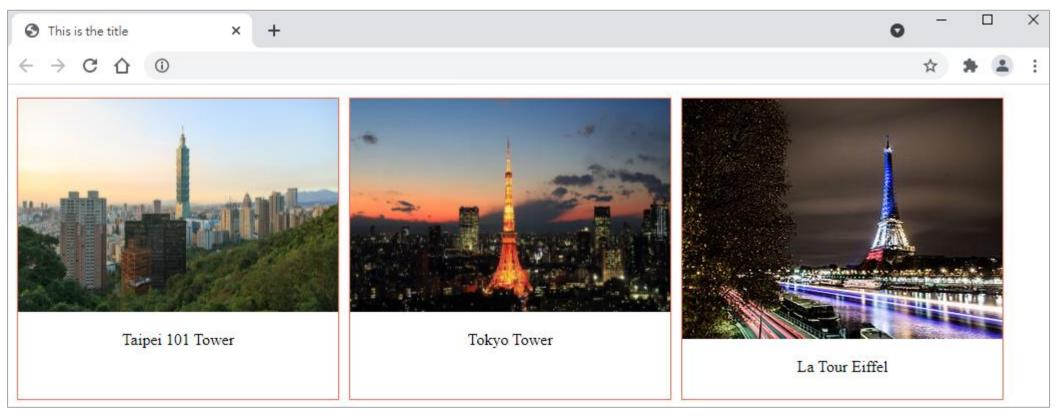
```
<!DOCTYPE html>
    -<html>
         <head>
             <title>This is the title</title>
             <link rel="stylesheet" href="mystyle.css">
         </head>
         <body>
 8
             <div class="gallery">
                 <a href="https://commons.wikimedia.org/wiki/File:Taipei_Taiwan_Taipei-101-Tower-01.jpg" target="_blank">
 9
                                      ← 請確認檔名及資料夾路徑正確
                    <img src="1.jpg">
                 </a>
12
                 <div class="remarks">
13
                    Taipei 101 Tower
14
                 </div>
15
             </div>
16
             <div class="gallery">
17
                 <a href="https://commons.wikimedia.org/wiki/File:Tokyo Tower Afterglow 2.JPG" target=" blank">
18
                    <img src="2.jpg">
19
                 </a>
                 <div class="remarks">
                    Tokvo Tower
                 </div>
             </div>
             <div class="gallery">
                 <a href="https://zh.wikipedia.org/wiki/File:The Eiffel Tower lit in blue white red - Fluctuat nec mergitur.jpg" target=" blank">
                    <img src="3.jpg">
                                                                      可以自行換成其他的 hyperlink
                 </a>
                 <div class="remarks">
                                                                      這邊只是參考範例
29
                    La Tour Eiffel
                 </div>
31
             </div>
         </body>
      </html>
```

Image Gallery (cont.)

```
⊟div.gallery {
2
        margin: 5px;
                              ← 直接使用顏色名稱
        border: 1px solid tomato;
3
4
        float: left;
        width: 320px;
                    ← 注意這邊的長寬設定指的是 gallery 外框的長寬
6
   ⊟div.gallery:hover {
                               ← 使用色碼
9
        border: 3px solid #000000;
10
   ⊟div.gallery img {
12
        width: 100%;
13
        height: auto;
14
15
   div.remarks {
16
        padding: 15px;
                          ← 說明文字的相關設定
17
        text-align: center;
18
```

Image Gallery (cont.)

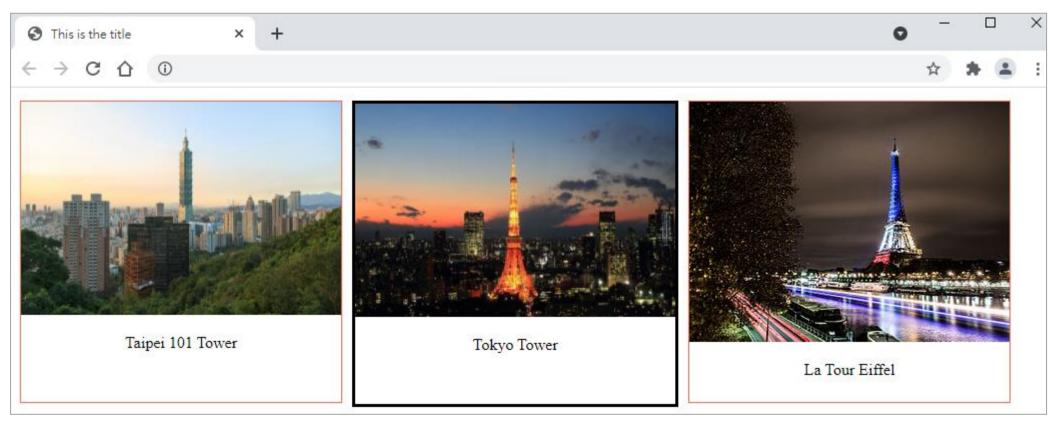
• Result



慟~ 這就是沒有對圖片大小預先處理的情況

Image Gallery (cont.)

• Result - hover



滑鼠指標移動時會觸發特效

Transition

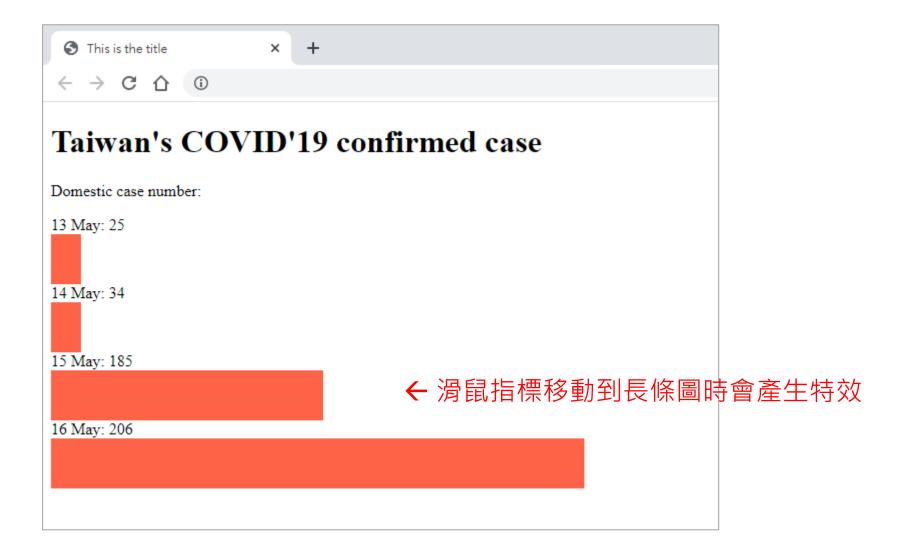
Use transition (bar graph)

```
<!DOCTYPE html>
    -<html>
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <!-- not support IE9 and its earlier versions -->
              <hl>Taiwan's COVID'19 confirmed case</hl>
10
              >Domestic case number:
11
              13 May: 25<div class="day13"></div>
12
              14 May: 34<div class="day14"></div>
              15 May: 185<div class="day15"></div>
14
              16 May: 206<div class="day16"></div>
15
          </body>
16
      </html>
```

```
■div {
          width: 30px;
          height: 50px;
 3
          background: tomato;
          transition: width 2s;
    - day13:hover
          width: 100px;
 9
10
    -.day14:hover {
11
          width: 136px;
12
13
    - day15:hover {
14
          width: 740px;
15
16
    -.dayl6:hover {
17
          width: 824px;
18
```

Transition (cont.)

• Result



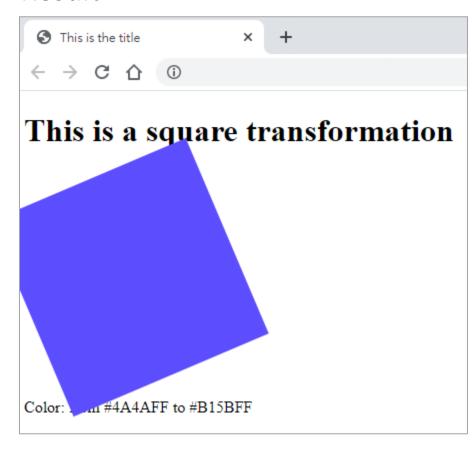
Transition (cont.)

• Use transition (square transformation)

```
<!DOCTYPE html>
    -<html>
          <head>
              <title>This is the title</title>
              <link rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <!-- not support IE9 and its earlier versions -->
              <h1>This is a square transformation</h1>
10
              <div></div>
11
              Color: from #4A4AFF to #B15BFF
12
          </body>
      </html>
```

• mystyle.css

Result



Animation

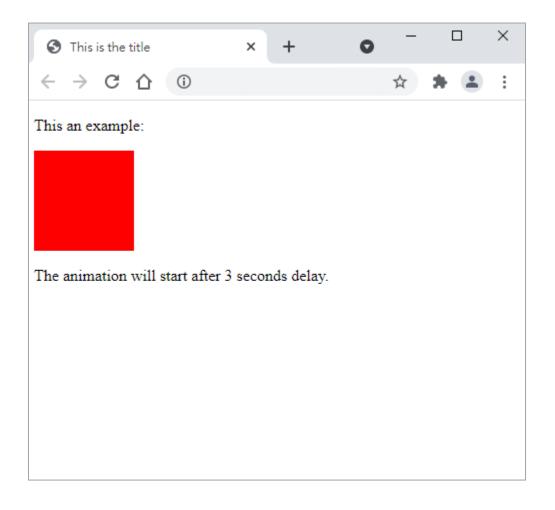
• Use animation (bar graph)

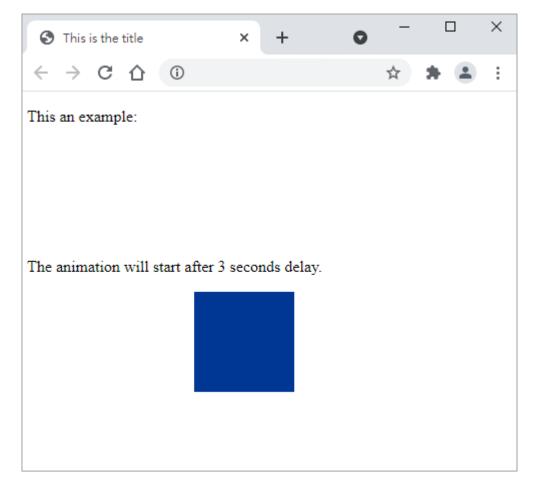
```
<!DOCTYPE html>
    -<html>
 3
          <head>
 4
              <title>This is the title</title>
 5
              <link rel="stylesheet" href="mystyle.css">
 6
          </head>
          <bodv>
 8
              <!-- not support IE9 and its earlier versions -->
              This an example:
 9
10
              <div></div>
12
13
              The animation will start after 3 seconds delay.
14
          </body>
15
      </html>
```

```
⊟div {
          width: 100px;
 3
          height: 100px;
          background-color: red;
 4
          position: relative;
 6
          animation-name: example;
          animation-duration: 8s;
          animation-delay: 3s;
 8
 9
          animation-iteration-count: 10;
10
          animation-direction: alternate;
11
12
13
    □@keyframes example {
               {background-color:red; left:0px; top:0px;}
14
15
          25% {background-color:yellow; left:400px; top:0px;}
16
          50% {background-color:green; left:400px; top:150px;}
17
          75% {background-color:blue; left:0px; top:150px;}
          100% {background-color:red; left:0px; top:0px;}
18
19
```

Animation (cont.)

Result



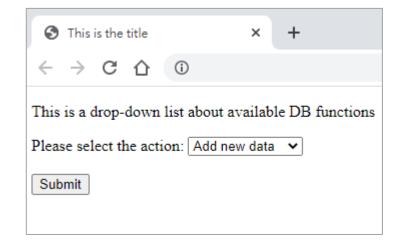


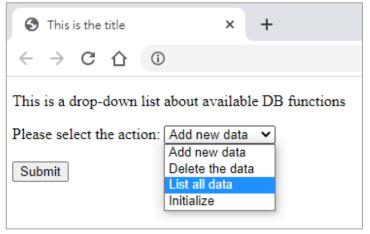
Select

Use function

```
<!DOCTYPE html>
    -<html>
 3
         <head>
             <title>This is the title</title>
 5
             <link rel="stylesheet" href="mystyle.css">
         </head>
 6
         <body>
 8
 9
             This is a drop-down list about available DB functions
10
             <form action="/action.php">
11
                 <label for="function">Please select the action:</label>
12
                 <select name="db" id="db">
13
                     <option value="add">Add new data</option>
                     <option value="del">Delete the data</option>
14
15
                     <option value="list">List all data
16
                     <option value="init">Initialize</option>
                 </select>
                 <br><br>>
18
19
                 <input type="submit" value="Submit">
20
             </form>
         </body>
     L</html>
```

Result





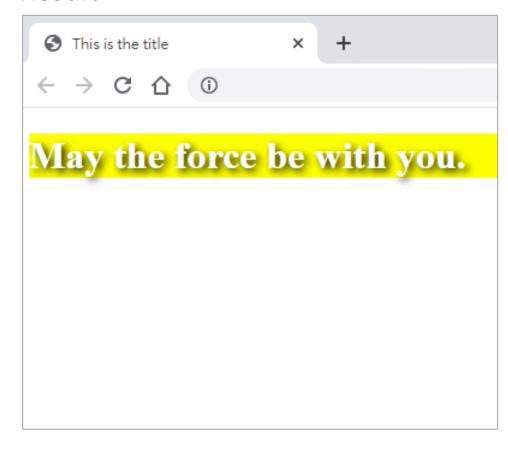
Shadow Effect

Apply shadow effect on text

```
<!DOCTYPE html>
    -<html>
 3
          <head>
              <title>This is the title</title>
              <link rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <h1>May the force be with you.</h1>
10
              </div>
11
          </body>
12
     L</html>
```

• mystyle.css

Result



Gradients

Use gradient with linear-gradient (rainbow)
 mystyle.css

```
<!DOCTYPE html>
    -<html>
 3
          <head>
              <title>This is the title</title>
              k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div id="rainbow">
              United We Stand
10
              </div>
          </body>
      </html>
```

Result

This is the title

→ C A

United We Stand

```
⊟div {
          text-align: center;
          margin: auto;
          color: black;
          font-size: 48px;
 6
          color: #D0D0D0;
    -#rainbow {
 8
          height: 64px;
10
          background-color: gray;
          background-image: linear-gradient(to right,
              red,
              orange,
14
              yellow,
15
              green,
16
              blue,
17
              indigo,
18
              purple);
  X
```

Gradients (cont.)

Use gradient with linear-gradient (rgba)

• mystyle.css

Result



← 套用 RGBA 語法

Navigation Bar

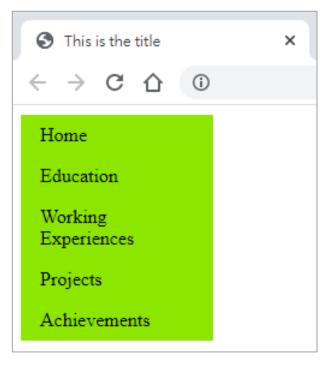
Vertical navigation bar

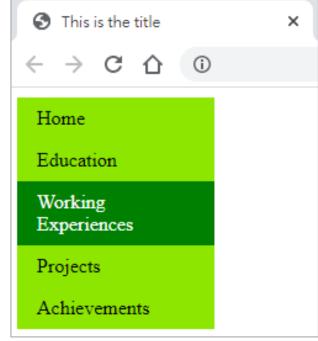
```
<!DOCTYPE html>
   3
         <head>
 4
            <title>This is the title</title>
            k rel="stylesheet" href="mystyle.css">
 6
        </head>
         <body>
            <div>
9
               <l
10
                   <a href="#home">Home</a>
11
                   <a href="#edu">Education</a>
12
                   <a href="#we">Working Experiences</a>
13
                   <a href="#proj">Projects</a>
14
                   <a href="#ach">Achievements</a>
15
               16
            </div>
17
         </body>
18
     </html>
```

mystyle.css

```
□ul {
          list-style-type: none;
          margin: 0;
          padding: 0;
          width: 160px;
          background-color: #8ce600
    □li a {
          display: block;
10
          color: #000;
11
          padding: 8px 16px;
12
          text-decoration: none:
13
14
    □li a:hover {
15
          background-color: green;
16
          color: white;
17
```

• Vertical navigation bar - Result





← 若字串長度大於選單長度 可能會造成換行 (可適度調整用字)

搭配 hover 動作觸發,當滑鼠指標移動到圖片上時會有變化

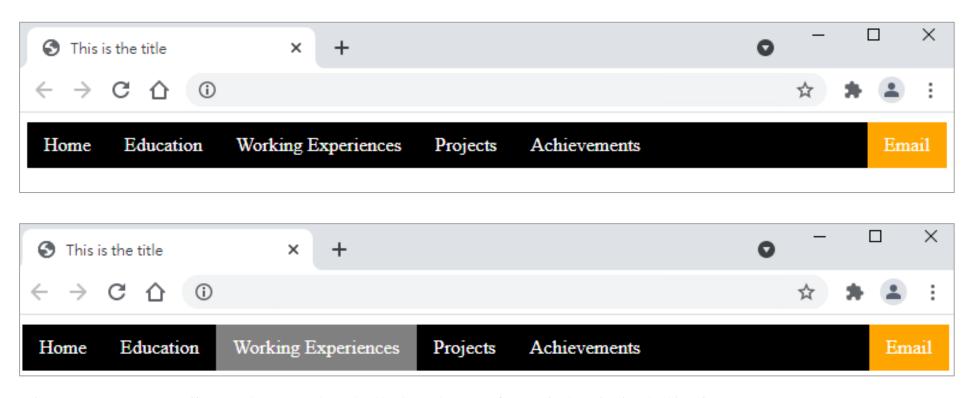
Horizontal navigation bar

mystyle.css

```
<!DOCTYPE html>
   -<html>
        <head>
            <title>This is the title</title>
            k rel="stylesheet" href="mystyle.css">
        </head>
        <body>
            <div>
               <u1>
10
                   <a href="#home">Home</a>
11
                   <a href="#edu">Education</a>
12
                   <a href="#we">Working Experiences</a>
13
                   <a href="#proj">Projects</a>
14
                   <a href="#ach">Achievements</a>
15
                   <a class="active" href="#about">Email</a>
16
               17
            </div>
18
        </body>
19
     </html>
```

```
list-style-type: none;
 3
          margin: 0;
          padding: 0;
          overflow: hidden;
          background-color: black;
    □li {
          float: left;
10
    □li.email {
12
          float: right;
13
    ⊟li a {
15
          display: block;
16
          color: white;
          text-align: center;
18
          padding: 10px 14px;
19
          text-decoration: none;
20
21
    = li a:hover:not(.active) {
22
          background-color: gray;
23
    □li a.active {
25
          background-color: orange;
26
```

Horizontal navigation bar - Result



搭配 hover 動作觸發,當滑鼠指標移動到圖片上時會有變化

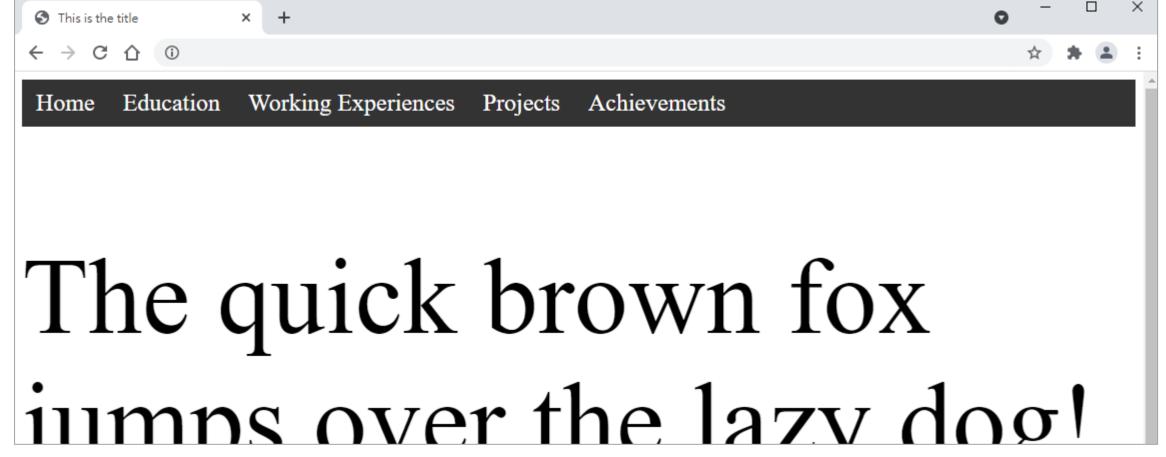
• mystyle.css

• Horizontal navigation bar (sticky effect) 提升 Safari 瀏覽器相容性

```
<!DOCTYPE html>
    -<html>
 3
         <head>
 4
             <title>This is the title</title>
            k rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             <div>
                <l
10
                    <a href="#home">Home</a>
                    <a href="#edu">Education</a>
12
                    <a href="#we">Working Experiences</a>
                    <a href="#proj">Projects</a>
13
                    <a href="#ach">Achievements</a>
14
15
                16
                    The quick brown fox jumps over the lazy dog!<br> The quick brown
17
            </div>
18
         </body>
19
     </html>
```

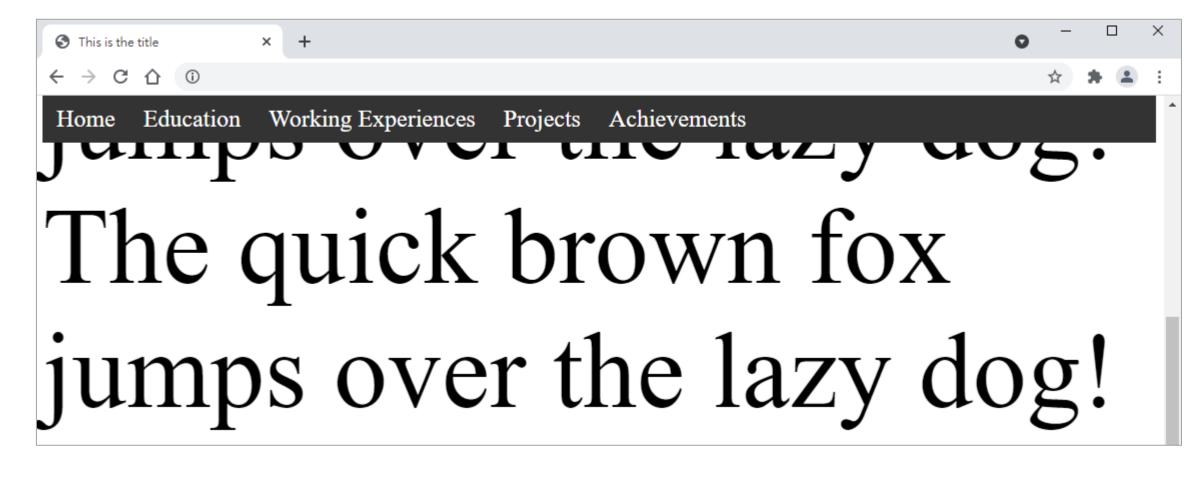
```
body {
           font-size: 108px;
     □ul {
           font-size: 24px;
          list-style-type: none;
          margin: 0;
          padding: 0;
          overflow: hidden;
10
          background-color: black;
11
          position: -webkit-sticky;
12
          position: sticky;
13
           top: 0;
14
15
     □li {
16
          float: left;
17
18
     ⊟li a {
19
          display: block;
20
          color: white;
          text-align: center;
          padding: 10px 14px;
23
           text-decoration: none;
24
     li a:hover:not(.active) {
          background-color: gray;
28
     □li a.active {
29
          background-color: orange;
30
```

Horizontal navigation bar - Result



• Horizontal navigation bar (sticky effect) - Result

捲動頁面時 bar 仍然維持在畫面上方

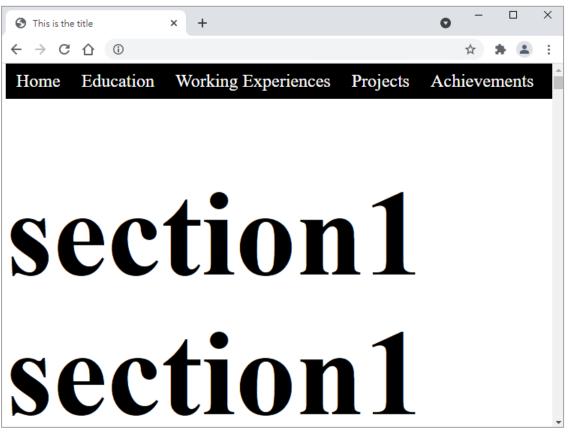


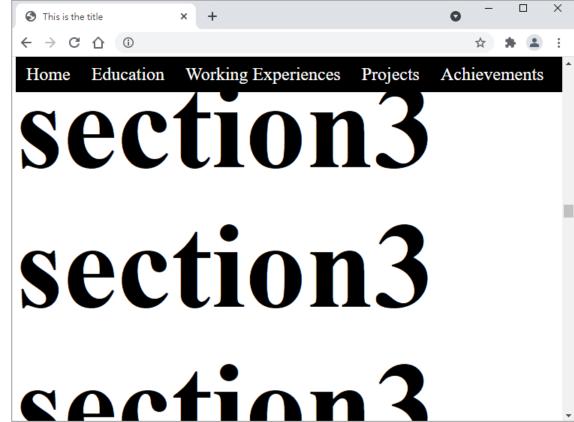
Horizontal navigation bar (session + position fixed) • mystyle.css

```
<!DOCTYPE html>
    -<html>
          <head>
              <title>This is the title</title>
              <link rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              <div>
                  <u1>
10
                      <a href="#home">Home</a>
11
                      <a href="#edu">Education</a>
12
                      <a href="#we">Working Experiences</a>
13
                      <a href="#proj">Projects</a>
14
                      <a href="#ach">Achievements</a>
15
                  16
              </div>
17
              <section id="home">
18
                  <hl>section1 section1 section1 section1 section1 section1 section1
19
              </section>
20
              <section id="edu">
                  <h1>section2 section2 section2 section2 section2 section2 section3
22
              </section>
23
              <section id="we">
24
                  <hl>section3 section3 section3 section3 section3 section3
25
              </section>
              <section id="proj">
27
                  <hl>section4 section4 section4 section4 section4 section4
28
              </section>
29
              <section id="ach">
30
                  <hl><hl>section5 section5 section5 section5 section5 section5
31
              </section>
                                                 多複製幾段增加長度方便測試
32
          </body>
     </html>
```

```
body {
 2
          font-size: 108px;
 4
    □ul {
          font-size: 24px;
          list-style-type: none;
          margin: 0;
          padding: 0;
          overflow: hidden;
          background-color: black;
          position: fixed;
          top: 0;
          width: 100%;
14
15
    - li {
          float: left:
17
    ⊟li a {
          display: block;
          color: white;
          text-align: center;
          padding: 10px 14px;
23
          text-decoration: none:
    li a:hover:not(.active) {
          background-color: gray;
    □li a.active {
          background-color: orange;
30
```

• Horizontal navigation bar (session + position fixed) - Result





選擇表單時會根據點選的項目捲動畫面到對應的 session id 位置

Horizontal navigation bar (dropdown)

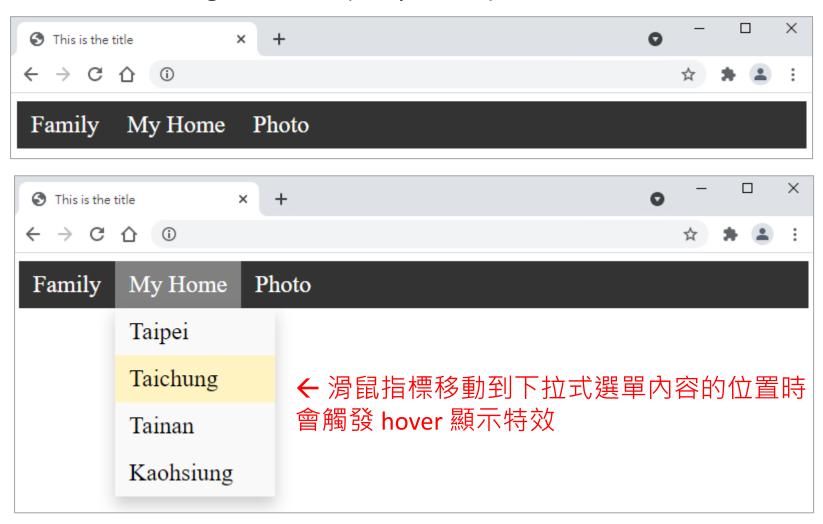
```
<!DOCTYPE html>
    -<html>
         <head>
             <title>This is the title</title>
             k rel="stylesheet" href="mystyle.css">
         </head>
         <body>
             <div>
                 <l
10
                     <a href="#Family">Family</a>
                     class="dropdown">
12
                        <a href="javascript:void(0)" class="dropbtn">My Home</a>
13
                        <div class="dropdown-content">
14
                            <a href="#TP">Taipei</a>
15
                            <a href="#TC">Taichung</a>
16
                            <a href="#TN">Tainan</a>
17
                            <a href="#KS">Kaohsiung</a>
18
                        </div>
19
                     <a href="#Photo">Photo</a>
20
21
                 </div>
23
         </body>
      </html>
```

mystyle.css

```
□ul {
          list-style-type: none;
          margin: 0;
          padding: 0;
          overflow: hidden;
 6
          background-color: black;
 8
     ⊟li {
 9
          font-size: 24px;
10
          float: left:
11
12
    □li a, .dropbtn {
13
          display: inline-block;
14
          color: white;
15
          text-align: center;
16
          padding: 10px 14px;
17
          text-decoration: none:
18
19
    li a:hover, .dropdown:hover .dropbtn {
20
          background-color: gray;
21
    □li.dropdown {
23
          display: inline-block;
24
```

```
.dropdown-content {
26
          display: none;
          position: absolute;
28
          background-color: #f9f9f9;
29
          min-width: 160px;
          box-shadow: Opx 8px 16px Opx rgba(0,0,0,0.2);
30
31
          z-index: 1:
32
    -.dropdown-content a {
34
          color: black:
35
          padding: 10px 14px;
36
          text-decoration: none;
37
          display: block;
38
          text-align: left;
39
    .dropdown-content a:hover {
40
41
          background-color: #FFF4C1;
42
43
    dropdown:hover .dropdown-content {
44
          display: block;
45
```

• Horizontal navigation bar (dropdown) - Result



Pagination

Use pagination

```
<!DOCTYPE html>
    -<html>
          <head>
              <title>This is the title</title>
             k rel="stylesheet" href="mystyle.css">
          </head>
          <body>
              Pagination:
 9
              <div class="pagination">
                  <a href="#">&laquo;</a>
11
                 <a href="#">Page 1</a>
12
                  <a href="#" class="active">Page 2</a>
13
                  <a href="#">Page 3</a>
                 <a href="#">Page 4</a>
                 <a href="#">Page 5</a>
15
                 <a href="#">&raquo;</a>
16
              </div>
                           這是 ASCII Code
         </body>
18
19
      </html>
```

```
This is the title x +

← → C 	 □

Pagination:

« Page 1 Page 2 Page 3 Page 4 Page 5 »
```

mystyle.css

```
pagination {
          display: inline-block;
 3
    .pagination a {
          color: black;
          float: left;
 8
          padding: 8px 16px;
 9
          text-decoration: none;
10
          transition: background-color .5s;
          border: 1px solid #ddd;
12
13
    .pagination a.active {
15
          background-color: #5A5AAD;
16
          color: white;
          border: 1px solid #5A5AAD;
18
19
    .pagination a:hover:not(.active) {
21
          background-color: #D0D0D0;
22
```

設定特效反應時間為 0.5 秒

← 設為 active 的會有突顯配色的特效

Q & A

Thanks for your time and attention.