HTML5
多媒體素材的運用

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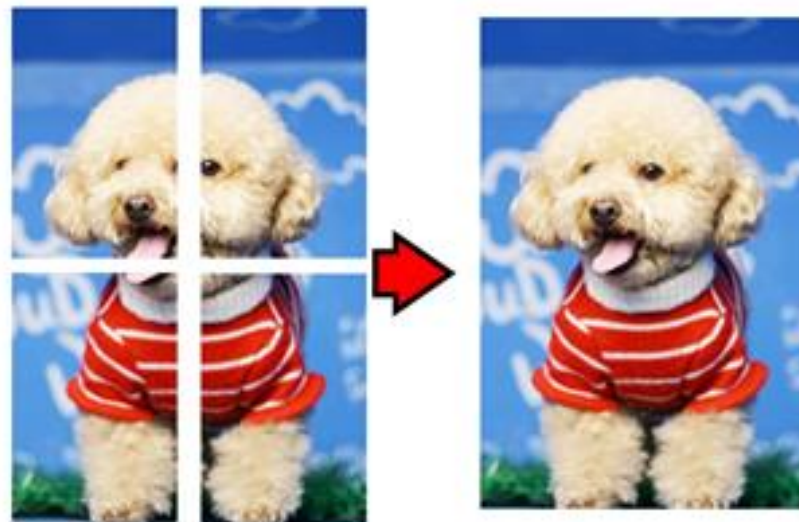賴錦慧 老師
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大綱

☐ 圖片的使用

☐ 聲音與影像

HTML5-多媒體素材的運用

圖片的使用

網頁圖片使用須知

□ 建議的圖片格式：JPEG、GIF、PNG

□ 建議的圖片解析度
- 解析度是指在單位長度內的像素點數，單位為dpi(dot per inch)，是以每英吋包含幾個像素來計算
- 網頁上理想解析度72dpi

□ 建議的圖片大小
- 最好不要超過30KB
- 大圖建議先將圖片切割成數張小圖再「拼」到網頁上

圖片的來源

- 利用繪圖軟體自行製作圖片
- 從掃描器或數位相機
- 網路上免費的網頁素材
  - Maggy的網頁素材

圖片的使用

☐ 嵌入圖片

■

屬性	設定值	說明
src	圖片位置	指定圖片的路徑及檔名
alt	替代文字	圖片失效時,以替代文字顯示
height	圖片高度	以像素(pixels)為單位
width	圖片寬度	以像素(pixels)為單位

Example

<h2>Spectacular Mountains</h2>
<img src="pic_mountain.jpg"
alt="Mountain View"
style="width:304px;height:228px">

<img src="html5.gif" alt="HTML5 Icon" width="128"
height="128" >

Attribute	Value	Description
align	top bottom middle left right	Not supported in HTML5. Specifies the alignment of an image according to surrounding elements
alt	text	Specifies an alternate text for an image
border	pixels	Not supported in HTML5. Specifies the width of the border around an image
crossorigin	anonymous use-credentials	Allow images from third-party sites that allow cross-origin access to be used with canvas
height	pixels	Specifies the height of an image
hspace	pixels	Not supported in HTML5. Specifies the whitespace on left and right side of an image
ismap	ismap	Specifies an image as a server-side image-map
longdesc	URL	Specifies a URL to a detailed description of an image
src	URL	Specifies the URL of an image
usemap	#mapname	Specifies an image as a client-side image-map
vspace	pixels	Not supported in HTML5. Specifies the whitespace on top and bottom of an image
width	pixels	Specifies the width of an image

http://www.w3schools.com/tags/tag_img.asp

影像地圖- <map>、<area>

□ 選擇一套影像處理軟體繪製要做為影像地圖的圖片，然後定義熱點

ⓐ 矩形熱點　　ⓑ 圓形熱點　　ⓒ 多邊形熱點

影像地圖- <map>、<area>

☐ **在HTML 文件中建立影像地圖**

```
<body>
  <map name="taipei_zoo">
    <area shape="circle" coords="173,152,34" href="africa.html" alt=" 非洲動物區 ">
    <area shape="rect" coords="42,159,110,227" href="bird.html" alt=" 鳥園 ">
    <area shape="poly" coords="338,106,396,125,400,200,300,185" href="night.html"
      alt=" 夜行動物館 ">
    <area shape="default" nohref>
  </map>
</body>
```

☐ **指定圖片與影像地圖的關聯**

```
<img src="zoo.jpg" border="0" alt=" 木柵動物園遊園地圖 " usemap="#taipei_zoo">
```

Example:
http://www.w3schools.com/tags/tryit.asp?filename=tryhtml_areamap

影像地圖-<area> coords屬性

☐ <area shape ="rect /circle/poly" coords= "value" >

(Shape屬性只能三選一)

Attribute Values

Value	Description
x1,y1,x2,y2	Specifies the coordinates of the left, top, right, bottom corner of the rectangle (for shape="rect")
x,y,radius	Specifies the coordinates of the circle center and the radius (for shape="circle")
x1,y1,x2,y2,..,xn,yn	Specifies the coordinates of the edges of the polygon. If the first and last coordinate pairs are not the same, the browser will add the last coordinate pair to close the polygon (for shape="poly")

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

<figure>、<figcaption>（HTML5）

```
<body>
   <figure>
      <img src="jp1.jpg">
      <figcaption> 日本九州紀行－豪斯登堡 </figcaption>
   </figure>
</body>
```


http://www.w3schools.com/tags/tryit.asp?filename=tryhtml5_figure_default_css

練習1 (1/2)

- 請使用影像處理軟體，在zoo.jpg定義三個熱點:
  - 圓形熱點：圓心座標為(298, 297)，半徑為30
  - 矩形熱點：左上角座標為(218, 156), 右下角座標為(297,185)
  - 多邊形熱點: 四個角的坐標依順時鐘方向為(402,232), (371, 253), (388, 287), (460, 270)

ⓐ 圓形熱點 ⓑ 矩形熱點 ⓒ 多邊形熱點

練習1 (2/2)

- 新增3個空白html網頁: cute.html, desert.html, country.html
- 圓形、矩形及多邊形熱點分別連結至cute.html, desert.html, country.html, 替代顯示文字為「可愛動物區」、「沙漠動物區」、「台灣鄉土動物區」, 再另存新檔為zoo2.html

HTML5-多媒體素材的運用

聲音與影像

影音特效

- HTML5撥放影片或聲音：<video>標記與<audio>標記。
    - 不同點在於video可以顯示影像；audio只會有聲音，不會顯示影像。

- 網頁中加入音樂
    - 音訊標記：<audio> … </audio>
    - < audio src="music.mp3" type="audio/mpeg" controls></ audio>

```
<audio controls>
    <source src="horse.ogg" type="audio/ogg" >
    <source src="horse.mp3" type="audio/mpeg" >
    Your browser does not support the audio element.
</audio>
```

http://www.w3schools.com/tags/tryit.asp?filename=tryhtml5_source_src

影音特效

□ 常用屬性：

- src：設定音樂檔案名稱及路徑，<audio>標記支援mp3、wav及ogg
- autoplay：是否自動播放音樂
- controls ：是否顯示播放面板
- loop ：是否循環播放
- preload：是否預先載入(auto/ metadata/none)。有設定autoplay時,preload屬性會被忽略
- width / height：播放面板的寬度和高度，單位pixels
- type="audio/mpeg"：指定播放類型
  - **HTML Audio - Media Types**

File Format	Media Type
MP3	audio/mpeg
Ogg	audio/ogg
Wav	audio/wav

Audio

= New in HTML5.

Attribute	Value	Description
autoplay	autoplay	Specifies that the audio will start playing as soon as it is ready
controls	controls	Specifies that audio controls should be displayed (such as a play/pause button etc)
loop	loop	Specifies that the audio will start over again, every time it is finished
muted	muted	Specifies that the audio output should be muted
preload	auto metadata none	Specifies if and how the author thinks the audio should be loaded when the page loads
src	URL	Specifies the URL of the audio file

□ **HTML Audio - Browser Support**

Browser	MP3	Wav	Ogg
Internet Explorer	YES	NO	NO
Chrome	YES	YES	YES
Firefox	YES	YES	YES
Safari	YES	YES	NO
Opera	YES	YES	YES

影音動畫

- ☐ 影音標記\<video>
  - ■ \<video src="multimedia/butterfly.mp4" controls="controls">\</video>

```
<video width="320" height="240" controls>
   <source src="movie.mp4" type="video/mp4">
   <source src="movie.ogg" type="video/ogg">
   Your browser does not support the video tag.
</video>
```


http://www.w3schools.com/html/tryit.asp?filen
ame=tryhtml5_video_all

```
<video src="http://v2v.cc/~j/theora_testsuite/320x240.ogg" controls>
  Your browser does not support the <code>video</code> element.
</video>
```

Video- Attribute

= New in HTML5.

Attribute		Value	Description
autoplay		autoplay	Specifies that the video will start playing as soon as it is ready
controls		controls	Specifies that video controls should be displayed (such as a play/pause button etc).
height		*pixels*	Sets the height of the video player
loop		loop	Specifies that the video will start over again, every time it is finished
muted		muted	Specifies that the audio output of the video should be muted
poster		*URL*	Specifies an image to be shown while the video is downloading, or until the user hits the play button
preload		auto metadata none	Specifies if and how the author thinks the video should be loaded when the page loads
src		*URL*	Specifies the URL of the video file
width		*pixels*	Sets the width of the video player

Video- Attribute

☐ Media type

■ <video>標記支援三格影音格式，ogg (Theora編碼)、mp4及 WebM(VP8編碼)。

File Format	Media Type
MP4	video/mp4
WebM	video/webm
Ogg	video/ogg

☐ Browser support

Browser	MP4	WebM	Ogg
Internet Explorer	YES	NO	NO
Chrome	YES	YES	YES
Firefox	YES	YES	YES
Safari	YES	NO	NO
Opera	YES (from Opera 25)	YES	YES

Audio & video 進階控制

□ HTML5 DOM 為 <audio> 和 <video> 元素提供了方法、屬性和事件。

□ 必須使用 JavaScript 來操作 <audio> 和 <video> 元素。

□ http://www.w3school.com.cn/tags/html_ref_audio_video_dom.asp

```html
<div style="text-align:center">
  <button onclick="playPause()">Play/Pause</button>
  <button onclick="makeBig()">Big</button>
  <button onclick="makeSmall()">Small</button>
  <button onclick="makeNormal()">Normal</button>
  <br>

  <video id="video1" width="420">
    <source src="mov_bbb.mp4" type="video/mp4">
    <source src="mov_bbb.ogg" type="video/ogg">
    Your browser does not support HTML5 video.
  </video>
</div>

<script>
var myVideo = document.getElementById("video1");

function playPause() {
    if (myVideo.paused)
        myVideo.play();
    else
        myVideo.pause();
}

function makeBig() {
    myVideo.width = 560;
}

function makeSmall() {
    myVideo.width = 320;
}

function makeNormal() {
    myVideo.width = 420;
}
</script>
```


http://www.w3schools.com/html/tryit.asp?filename=tryhtml5_video_js_prop

加入**Flash**動畫

- Flash動畫是向量格式、檔案小又不失真、不僅可以加入音效，還可以製作互動效果。
- 語法：
  - <embed src="movie.swf" width="100" height="100" >

傳統影音播放器

□ 可讓不支援<video>標記的瀏覽器可以使用Flash player來播放

```
<video controls="controls">
   <source src="multimedia/butterfly.mp4" />
   <source src="multimedia/butterfly.ogg" />
    <object classid="clsid:d27cdb6e-ae6d-11cf-96b8-444553540000"
codebase="http://download.macromedia.com/pub/shockwave/cabs/flash/swf
lash.cab#version=6,0,40,0">
        <param name="movie" value=" butterfly.swf" />
        <param name="allowFullScreen" value="true" />
        <param name="allowscriptaccess" value="always" />
        <embed movie="butterfly.swf" type="application/x-shockwave-
flash" allowscriptaccess="always" allowfullscreen="true"></embed>
    </object>
</video>
```
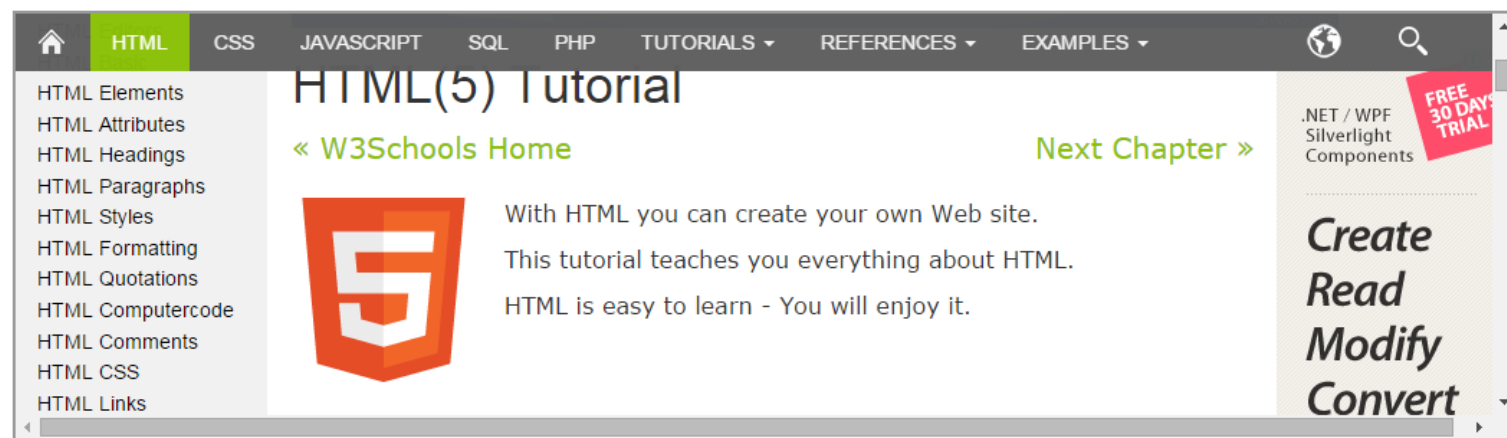
iframe

- <iframe>標記是屬於框架語法，能夠將要連結的網頁與元件直接內嵌在目前的網頁中。

http://www.w3schools.com/html/html_iframe.asp

iframe

☐ 語法：

> `<iframe name="f1" src="new_page.htm" width="300" height="400">`
>   您的瀏覽器不支援iframe框架。
> `</iframe>`

只有在瀏覽器不支援 `<iframe>` 標記時才會顯示

- ■ name: 框架窗格名稱
- ■ src="new_page.htm" : 顯示在窗格的文件路徑及檔名
- ■ width/ height:窗格的寬度和高度

🖻 = New in HTML5.

Attribute	Value	Description
align	left right top middle bottom	Not supported in HTML5. Specifies the alignment of an \<iframe\> according to surrounding elements
frameborder	1 0	Not supported in HTML5. Specifies whether or not to display a border around an \<iframe\>
height	*pixels*	Specifies the height of an \<iframe\>
longdesc	*URL*	Not supported in HTML5. Specifies a page that contains a long description of the content of an \<iframe\>
marginheight	*pixels*	Not supported in HTML5. Specifies the top and bottom margins of the content of an \<iframe\>
marginwidth	*pixels*	Not supported in HTML5. Specifies the left and right margins of the content of an \<iframe\>
name	*text*	Specifies the name of an \<iframe\>
sandbox	allow-forms allow-pointer-lock allow-popups 🖻 allow-same-origin allow-scripts allow-top-navigation	Enables an extra set of restrictions for the content in an \<iframe\>
scrolling	yes no auto	Not supported in HTML5. Specifies whether or not to display scrollbars in an \<iframe\>
seamless 🖻	seamless	Specifies that the \<iframe\> should look like it is a part of the containing document
src	*URL*	Specifies the address of the document to embed in the \<iframe\>
srcdoc 🖻	*HTML_code*	Specifies the HTML content of the page to show in the \<iframe\>
width	*pixels*	Specifies the width of an \<iframe\>

Iframe-- seamless

☐ seamless: 隱藏邊框 (目前的瀏覽器皆不支援)

<h3>加入iframe框架</h3>
<p>浪淘沙
虞美人<p />
<iframe name="main" src="ch04_04_a.htm" width="350" height="380" seamless>
        您的瀏覽器不支援iframe框架!
</iframe>

Iframe--border

<iframe src="demo_iframe.htm" style="border:none;"></iframe>

This page is displayed in an iframe

<iframe src="demo_iframe.htm" style="border:5px dotted red;"></iframe>

This page is displayed in an iframe

http://www.w3schools.com/html/tryit.asp?filename=tryhtml_iframe_border2

Use iframe as a Target for a Link

```
<iframe width="100%" height="300px" src="demo_iframe.htm"
name="iframe_a"></iframe>
<p><a href="http://www.w3schools.com" target="iframe_a">W3Schools.com</a></p>

<p>When the target of a link matches the name of an iframe, the link will open in the
iframe.</p>
```

iframe_a

This page is displayed in an iframe

W3Schools.com

When the target of a link matches the name of an iframe, the link will open in the iframe.

http://www.w3schools.com/html/tryit.asp?filename=tryhtml_iframe_target

Iframe--嵌入YouTube影音

☐ 想要用iframe嵌入影音，只要將src改成影片網址即可。

```
<iframe width="420" height="315"
src="http://www.youtube.com/embed/uq2RBrjP3KQ" frameborder="0"
allowfullscreen>
</iframe>
```

加入影片

練習2

一、節目簡介

薩克斯風（Saxophone），由比利時Adolphe Sax發明，由於樂器本身的結構特殊，同時具備了木管樂器的細膩靈活，以及銅管樂器的大音量和爆發力，是高靈活性低約束性的樂器。大多數的人對薩克斯風的印象，多停留在爵士樂或搖滾樂，鮮少與古典音樂連結，本次邀請薩克斯風音樂家-沈子傑，讓大家更進一步了解薩克斯風的美妙聲音。

二、演出曲目

1. Sonata No.6-J.S. BACH(extract)　第六號奏鳴曲-巴哈(選粹)
2. Rhapsodie-Claude Debussy　狂想曲-德布西
3. Morricone Paradiso-Toshio Mashima　新天堂樂園-真島俊夫
4. Brahms :Op.118,No.2 Intermezzo　布拉姆斯:作品１１８，第二號間奏曲

三、音樂家簡介

薩克斯風－沈子傑

沈子傑，1985年出生於台北，4歲開始學鋼琴，國三學薩克斯風，師事胡東龍老師、蔡佳修老師。畢業於國立巴黎音樂院，師事Yann LEMARIE，與生俱來的舞台自信與魅力，在音樂方面展現多才多藝，為古典音樂界注入新的表演風格，勇於突破與創新。

- 1、2 :在新的網頁中開啟音樂檔案連結,並顯示播放面板

- 3、4:設定Youtube影片連結