



前端網絡開發人員證書

6. HTML: Embedding multimedia II

Presented by Krystal Educational Platform



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6.1 Revise

6.1 Revise



- Which attribute of links to the file path or hyperlink?
- Can you name any shapes of <area>?
 - What should we type in their coords attribute?
- What are the attributes of <video> and <audio>?



6.2 More multimedia



6.2 More multimedia



- <embed> / <object> / <iframe>
 - Defines a container for an external resource
 - E.g. a web page, a media player
- Scalable Vector Graphics : <svg>
 - Used to define vector-based graphics for the Web
 - Does not lose quality when zoomed or resized
 - Reduces load time

6.2.1 Embed: Comparison



- <embed>
- Pros:
 - Supports script
- Cons:
 - NOT support HTML4 & XHTML
- <object>
- Pros:
 - All devices friendly as the screen re-size automatically
- Cons:
 - NOT support script
 - Most attributes become invalid in HTML5
- Inline frame: <iframe>
- Pros:
 - More attributes than <embed>
- Cons:
 - NOT support HTML4 & XHTML
 - Security concern

6.2.2 <Embed>



- Embed a file or URL in <main>

```
<!-- Embed -->  
<embed type="text/html" src="http://info.cern.ch/" width="500" height="200">
```

http://info.cern.ch - home of the first website

From here you can:

- [Browse the first website](#)
- [Browse the first website using the line-mode browser simulator](#)
- [Learn about the birth of the web](#)
- [Learn about CERN, the physics laboratory where the web was invented](#)

6.2.3 <Object>



- Embed a file or URL in under <embed>

```
<!-- Object -->
<object data="http://info.cern.ch/" width="500" height="200"></object>
```

[http://info.cern.ch - home of the first website](http://info.cern.ch)

From here you can:

- [Browse the first website](#)
- [Browse the first website using the line-mode browser simulator](#)
- [Learn about the birth of the web](#)
- [Learn about CERNET, the physics laboratory where the web was](#)



6.3 iFrame



6.3 iFrame: <iframe>



- Attribute
 - src: URL / file
 - title: Defines a title for better screen reading

```
<!-- iFrame -->
<h3>iFrame</h3>
<iframe src="http://info.cern.ch/" title="iframe-testing">
| Your browser doesn't support iframe.
</iframe>
```

iFrame

**http://info.cern.ch -
home of the first
website**

From here you can...

6.3 iFrame: <iframe>



- It is noted that most of the websites (<https://www.google.com>) are NOT allowed to be inline framed due to security concern



6.3 iFrame: <iframe>

- Add `width="200" height="200"` in `<iframe>` to change its size



iFrame

`http://info.ce`
- home of
the first
website

6.3 iFrame: <iframe>



- % is also allowed

```
width="50%" height="20%"
```

http://info.cern.ch - home of the first website

From here you can:

- Browse the first website

6.3 iFrame: <iframe>



- Add `frameborder="0"` in <iframe> to remove the border

iFrame

[http://info.cern.ch - home of the first website](http://info.cern.ch)

From here you can:

- [Browse the first website](#)

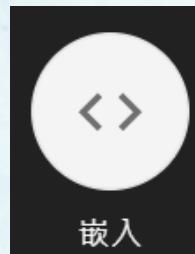
6.3.1 iFrame: Youtube



- Embedding Youtube video
 1. Visit any video in Youtube
 2. Click the share button



3. Click the Embed button



6.3.1 iFrame: Youtube



4. Copy the <iframe> code

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```
<iframe width="560" height="315"
src="https://www.youtube.com/embed/
BW1aX0IbZOE" title="YouTube video
player" frameborder="0"
allow="accelerometer; autoplay;
clipboard-write; encrypted-media;
gyroscope; picture-in-picture"
allowfullscreen></iframe>
```

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6.3.1 iFrame: Youtube



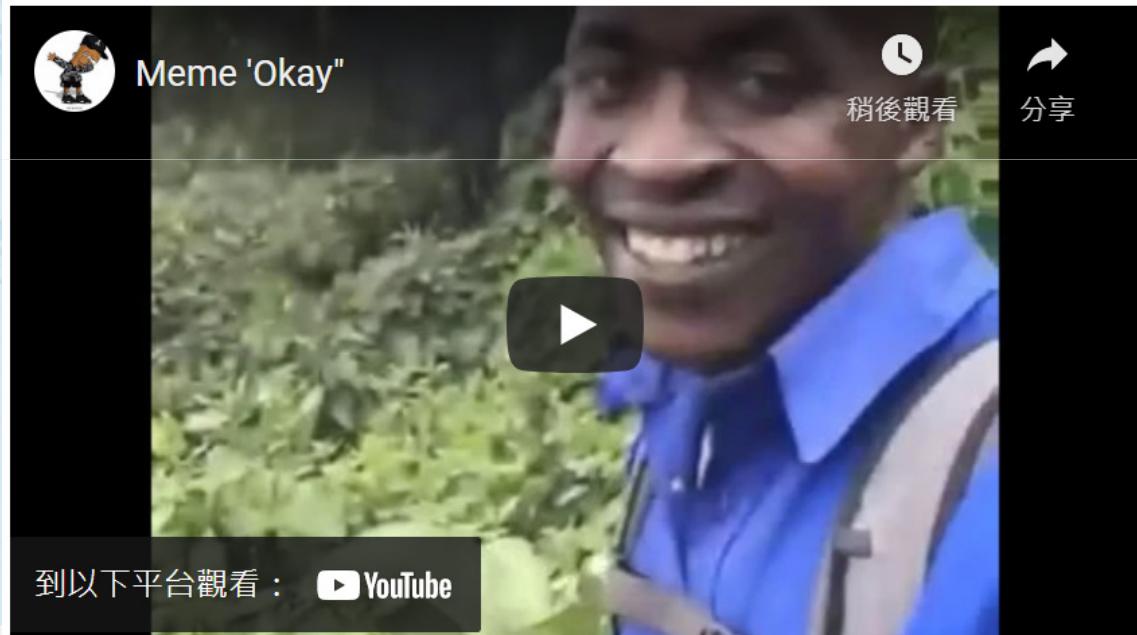
5. Paste it to your HTML

```
<h4>Youtube</h4>
<iframe width="560" height="315"
```

6.3.1 iFrame: Youtube



- Check your result



6.3.1 iFrame: Youtube



- Allowfullscreen: Allows the iframe to full screen using Fullscreen API
 - If deleted this code, the iframe cannot full screen



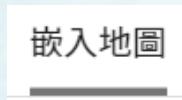
6.3.2 iFrame: Google Map



- Embedding Google Map
 1. Search for any location in Google Map
 2. Click the share button



3. Click embed map



6.3.2 iFrame: Google Map



4. Choose the map size



6.3.2 iFrame: Google Map



5. Copy the <iframe> code

```
<iframe src="https://www.google.com/maps" 複製 HTML
```

6. Paste it to your HTML

```
<h4>Google Map</h4>
<iframe src="https://w"
```

6.3.2 iFrame: Google Map



- Check your result





6.4 SVG



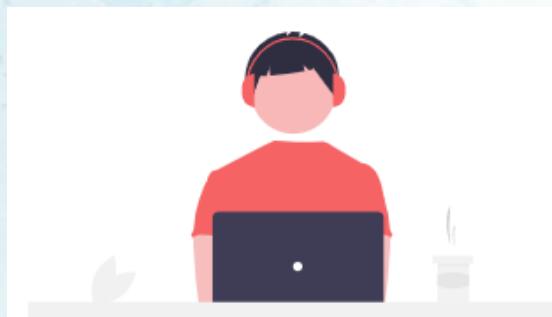
6.4.1 SVG:



- The simplest way to add SVG images

```
<!-- SVG -->
<h3>SVG</h3>

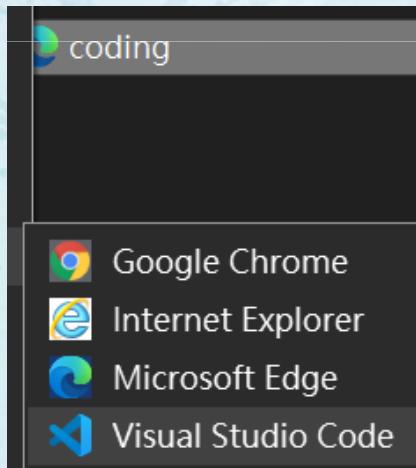
```



6.4.2 SVG: Inline



- To write the SVG image directly into the HTML
- 1. Right click the image, Open as code editor software



6.4.2 SVG: Inline



2. Copy all the codes and paste back to our HTML

```
<svg id="a57f6051-90d9-4b0f-831b-7c7398482616" data-name="Layer 1" xmlns="http://www.w3.org/2000/svg">
```

3. Add width & height attributes to control the size

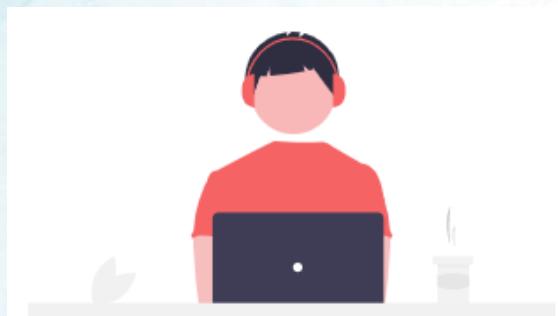
```
width="200" height="200"
```

6.4.3 SVG: <object>



- The most recommended inline embedding method of SVG over <iframe> and <embed>

```
<object data="SVG/coding.svg" width="200" height="200"></object>
```

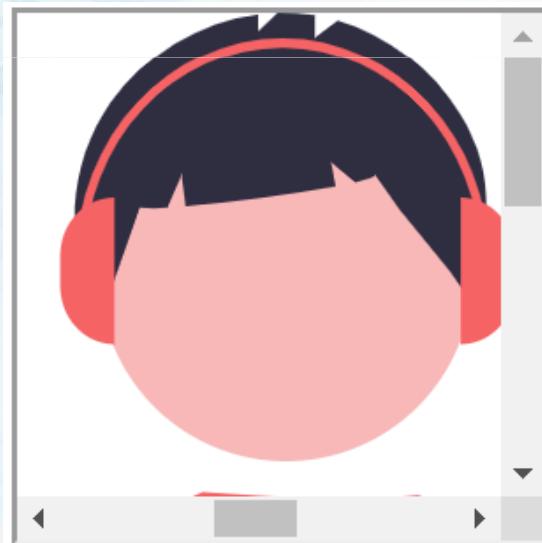


6.4.4 SVG: <iframe>



- Not recommended

```
<iframe src="SVG/coding.svg" width="200" height="200"></iframe>
```

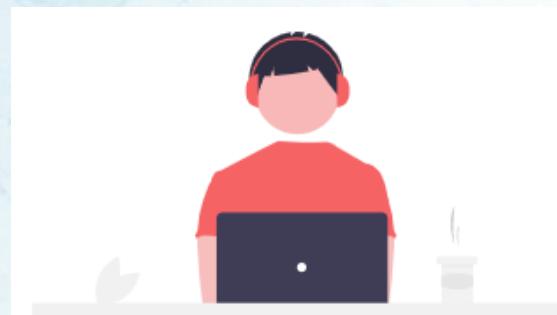


6.4.5 SVG: <embed>



- Not recommended
 - More browsers support <iframe> over <embed>

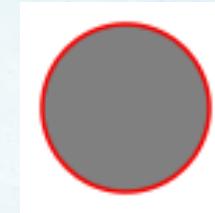
```
<embed src="SVG/coding.svg" width="200" height="200">
```



6.4.6 SVG: Circle



- <circle>
- Attributes
 - cx: Center x-axis
 - cy: Center y-axis
 - r: Radius
 - stroke: Border color
 - stroke-width: Border width
 - fill: Fill-in color



Noted: SVG is a part of the web, it can't be copied or saved or selected

```
<svg width="100" height="100">
  <circle cx="30" cy="30" r="20" stroke="red" stroke-width="1" fill="grey">
    Your browser doesn't support SVG.
</svg>
```

6.4.7 SVG: Rectangle



- <rect>

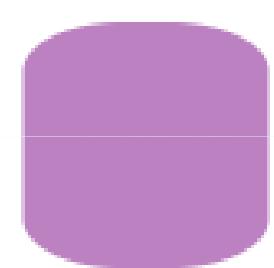


```
<svg width="100" height="100">
|   <rect width="100" height="50" stroke="black" stroke-width="5" fill="green">
</svg>
```

6.4.8 SVG: Rounded rectangle



- <rect>
- Attributes
 - x: x- axis of the graphic
 - y: y-axis of the graphic
 - rx: Round the top & bottom side
 - ry: Round the left & right side
 - opacity: Makes the graphic transparent

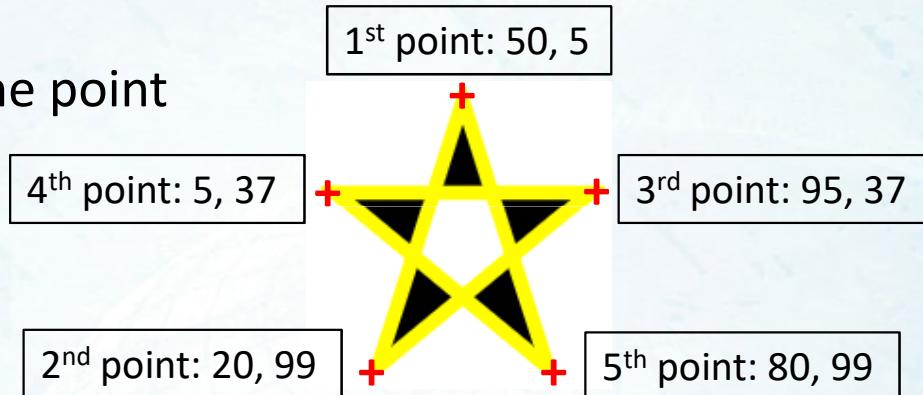


```
<svg width="100" height="100">
|   <rect x="25" y="10" rx="20" ry="10" width="50" height="50" fill="purple" opacity="0.5">
</svg>
```

6.4.9 SVG: Polygon



- <polygon>
 - points: x-axis, y-axis of the point



```
<svg width="100" height="100">
  <polygon points="50,5 20,99 95,37 5,37 80,99" stroke="yellow" stroke-width="5" fill-rule="evenodd">
</svg>
```

6.4.10 SVG: Line



- <line>
- Attributes
 - x1, y1: Starting coordinate
 - X2, y2: Ending coordinate

```
<svg width="100" height="100">
|   <line x1="0" y1="0" x2="200" y2="200" stroke="black">
</svg>
```



6.4.11 SVG: Polyline

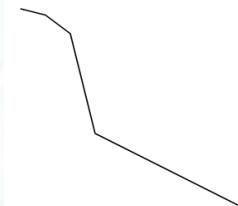


- Straight line with multiple turning points

```
<svg width="200" height="200">
|   <polyline points="20,20 40,25 60,40 80,120 120,140 200,180">
</svg>
```



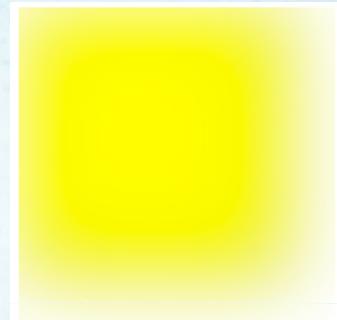
- With `fill="none" stroke="black"`



6.4.12 SVG: Blurry effect



- <feGaussianBlur>: Defines the blurry effect
 - stdDeviation: Defines how blurry will the effect be



```
<svg>
  <defs>
    <filter id="f1" x="0" y="0">
      <feGaussianBlur in="SourceGraphic" stdDeviation="15">
    </filter>
  </defs>
  <rect width="100" height="100" stroke="green" stroke-width="3" fill="yellow" filter="url(#f1)">
</svg>
```



6.5 Inkscape



6.5 Inkscape



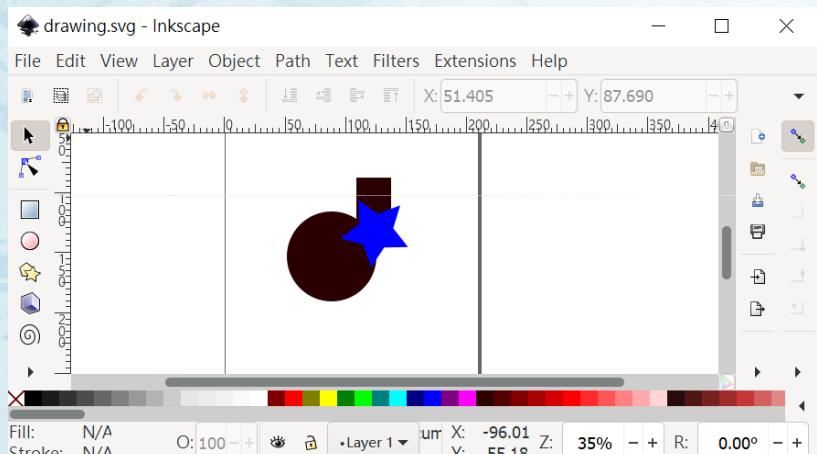
- A Free and open source vector graphics editor
- Download from <https://inkscape.org/release/inkscape-1.0.2/>
- Choose your OS

<p>GNU/Linux</p>  <p>Linux based Free Desktop Systems</p>	<p>Windows</p>  <p>Microsoft's Windows Desktop</p>	<p>macOS (10.11-10.15)</p>  <p>disk image (dmg)</p>
--	---	--

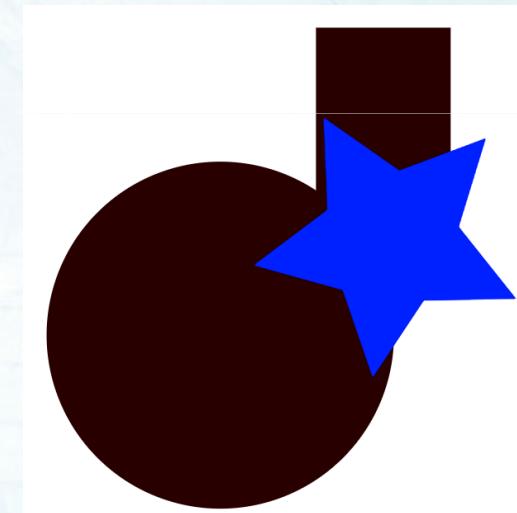
6.5 Inkscape: Try on your own



1. Draw anything you like!



2. Save the SVG file and check the result on browser



3. Use the previous methods to embed the SVG to your HTML

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MC Quiz



- 10 minutes

<https://www.online-stopwatch.com/countdown/>



Reference



- CERN (n.d.). *http://info.cern.ch - home of the first website* [online] available from <<http://info.cern.ch/>> [20 May 2021]
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Reference



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- Youtube (2017). *Meme ‘Okay’* [online] available from <<https://www.youtube.com/watch?v=BW1aX0lbZOE>> [20 May 2021]