

# Life is Possible - 生命教育 手機程式工作坊

Lecture 03 - Introduce to CSS and Bootstrap

# Menu

- What is CSS and Why
- Concepts of CSS
- Concepts of classes, id in HTML
- Basics CSS structure
- Reading CSS `style` and `Docs`
- Basic use of Bootstrap

# What is CSS and Why

Does the website looks beautiful at your previous Lab 02 HTML task?

# How does these website looks?

Demo:

<https://81-web.com/>

<https://1guu.jp/>

# CSS (Cascading Style Sheets)

AKA: CSS can be used for very basic document text styling

# HTML



# HTML+CSS



# What the different of HTML and CSS?

## HTML

All you contents and text

e.g Humans body bones and muscles 🦴

## CSS

All you style and hows the UI look

e.g Humans Skin and hair 🧑

# Quick demo of how (Internal method)

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>
  <style>
    #apple{
      color: red;
      text-align: center;
    }
  </style>
</head>
<body>
  <h1 id="apple">I am an apple.</h1>
</body>
</html>
```



# Quick demo of how (External method)

index.html

```
<!DOCTYPE html>
<html lang="en">
<head>
  <!-- Skipped -->
  <link rel="stylesheet" href="index.css">
</head>
<body>
  <h1 class="apple">I am an apple.</h1>
</body>
</html>
```

index.css

```
.apple{
  color: red;
  text-align: center;
}
```

# Quick demo of how (Inline method)

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>

</head>
<body>
  <h1 style="color: red; text-align: center;">
    I am an apple.
  </h1>
</body>
</html>
```

# Which CSS method we preferred?

## Internal CSS

Semi-recommended 👍

## External CSS

Most recommended 👍👍

## Inline CSS

Lessly-recommended 🚫

# Class exercise (6 mins)

Try to create a `index.html` and `index.css` inside a folder.  
then copy these stuff inside each folder.

`index.html`

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta
    name="viewport"
    content="width=device-width, initial-scale=1.0"
  >
  <link rel="stylesheet" href="index.css">
</head>
<body>
  <h1 class="school">Hello schools.</h1>
</body>
</html>
```

`index.css`

```
.school{
  color: #FF00FF;
  text-align: right;
}
```

# Short Break

# Introduce to `id` and `class`

As the top examples, you may see the following code

```
<h1 class="school">Hello schools.</h1>  
<h1 id="apple">I am an apple.</h1>
```

So, what is the `id` and `class`?

# id and class

In general introductions, it said:

The `id` attribute specifies a unique id for an HTML element. The value of the `id` attribute must be unique within the HTML document.

The `class` attribute is often used to point to a `class` name in a style sheet. It can also be used by a JavaScript to access and manipulate elements with the specific `class` name.

## `id` and `class`

AKA: We use `id` and `class` to POINT to the elements that we want to apply something in that elements.

(e.g. Apply some style, events, control the regarding elements ...)



# Different of `id` and `class`

1. `id` is a unique tags, it can only references to ONE element only.  
`class` can be apply to a lot of elements at the same time.

Correct ○

```
<h1 id="apple">I am an apple.</h1>  
<h3 class="school">Hello schools 3.</h3>  
<h2 class="school">Hello schools 2.</h2>
```

Wrong ✗ (same id can not be reuse again)

```
<h1 id="apple">I am an apple.</h1>  
<h1 id="apple">Hello schools 1.</h1>  
<h3 class="school">Hello schools 3.</h3>  
<h2 class="school">Hello schools 2.</h2>
```

## More correct samples

Correct ○

```
<h1 id="apple">I am an apple.</h1>  
<h3 id="orange">Hello schools 3.</h3>  
<h2 class="school">Hello schools 2.</h2>
```

Correct ○

```
<h1 id="apple" class="school">I am an apple.</h1>  
<h3 id="orange">Hello schools 3.</h3>  
<h2 class="school boxes">Hello schools 2.</h2>
```

2. `class` can multi apply to various elements, `id` can not.

Correct ○

```
<h2 class="school">Hello schools 2.</h2>  
<h2 class="boxes">Hello schools 2.</h2>  
<h2 class="school boxes">Hello tom</h2>
```

In this top example, the `Hello tom` elements can use the css of both class `school` and `boxes`

Wrong ✗ (id can not be apply two times)

```
<h1 id="apple orange">I am an apple.</h1>
```

# Short Break

How to apply `id` and `class`?

# id

To link a `id`, we use `#` in css to represent the following tag is a `id` references.

index.css

```
#apple {  
    color: red;  
    text-align: center;  
}  
  
#orange {  
    color: yellow;  
}
```

index.html

```
<h1 id="apple">I am an apple.</h1>  
<h1 id="orange">I am an orange?</h1>
```

# class

To link a **class**, we use **.** in css to represent the following tag is a **class** references.

index.css

```
.apple-class {  
    color: red;  
    text-align: center;  
}  
  
.box {  
    font-size: 30px  
}
```

index.html

```
<div class="box">  
    I am an apple.  
</div>  
  
<h1 class="apple-class box">  
    I am an apple also  
</h1>
```

# Normal complex CSS case

```
.apple-class {  
    color: red;  
    text-align: center;  
}  
  
.box {  
    font-size: 30px  
}  
  
#apple {  
    color: red;  
    text-align: center;  
}  
  
#orange {  
    color: yellow;  
}
```



# What we can do in css?

- Color style
- Layout style
- Text style
- Animations
- Size and height
- Display method

# What we can NOT do in css?

- Logics control
- Handling event
- Control display when something happens

These are the functions of `javascript` to do, we will learn `javascript` in the next lesson.

# CSS utilis

All references in:

<https://www.w3schools.com/css/default.asp>

<https://developer.mozilla.org/en-US/docs/Web/CSS/accent-color>

# CSS utilis Notices

1. Some tags are not very common / deprecated / relatively new, hence we can't introduce all tags in a short time.
2. Depends on the needed, you should google it / search the docs as your requirement. Even a senior programmer can't memorized all syntax and codes. Don't try to memorized all syntax, but a concepts that we can do this stuff in css.

# CSS utilis

## Common Text related

```
.some-class {  
  color: blue;  
  text-align: center;  
  font-size: 100px;  
  font-weight: 600;  
  font-family: 'Courier New', Courier, monospace;  
}
```

More:

<https://developer.mozilla.org/en-US/docs/Web/CSS/font>

<https://developer.mozilla.org/en-US/docs/Web/CSS/text-align>

# CSS utilis

## Common bg color and others

```
.some-class {  
  background-color: #123F02;  
  text-shadow: 2px 2px;  
  box-shadow: 10px 10px;  
}
```

# CSS utilis

## Common layout utilis

- `margin` : [https://www.w3schools.com/css/css\\_margin.asp](https://www.w3schools.com/css/css_margin.asp)
- `padding` : [https://www.w3schools.com/css/css\\_padding.asp](https://www.w3schools.com/css/css_padding.asp)
- `Height, Width` : [https://www.w3schools.com/css/css\\_dimension.asp](https://www.w3schools.com/css/css_dimension.asp)
- `border` : [https://www.w3schools.com/css/css\\_border.asp](https://www.w3schools.com/css/css_border.asp)
- `float` : [https://www.w3schools.com/css/css\\_float.asp](https://www.w3schools.com/css/css_float.asp)

# CSS utilis

## Common layout utilis (Advance)

- `position` : [https://www.w3schools.com/css/css\\_positioning.asp](https://www.w3schools.com/css/css_positioning.asp)
- `display` : [https://www.w3schools.com/css/css\\_display\\_visibility.asp](https://www.w3schools.com/css/css_display_visibility.asp)
- `z-index` : [https://www.w3schools.com/css/css\\_z-index.asp](https://www.w3schools.com/css/css_z-index.asp)



# CSS utilis

## Common layout utilis (Important)

```
display: flex
```

```
justify-content: flex-start | flex-end | center | space-between | space-around;
```

```
align-items: flex-start | flex-end | center | baseline | stretch;
```

<https://www.casper.tw/css/2017/07/21/css-flex/>

**display flex** demo

<https://grid.malven.co/>

**display flex** practices game

<https://flexboxfroggy.com/>

# Break

# Introduce to Bootstrap v5

Get started with Bootstrap, the world's most popular framework for building responsive, mobile-first sites, with jsDelivr and a template starter page.

<https://getbootstrap.com/>

# Why Bootstrap v5

- Built decent components to use
- Decent UI
- Easy responsive website setting
- Write less CSS

# Install in HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>

  <!-- Add this link line -->
  <link
    href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/css/bootstrap.min.css"
    rel="stylesheet"
    integrity="sha384-GLhlTQ8iRABdZLl603oVMWSktQOp6b7In1Zl3/Jr59b6EGGoI1aFkw7cmDA6j6gD"
    crossorigin="anonymous"
  >
</head>
<body>

  <!-- Add this script line also -->
  <script
    src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-w76AqPfDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN"
    crossorigin="anonymous">
  </script>
</body>
</html>
```

# Basic usage

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta http-equiv="X-UA-Compatible" content="IE=edge">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Document</title>

  <link
    href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/css/bootstrap.min.css"
    rel="stylesheet"
    integrity="sha384-GLhlTQ8iRABdZL1603oVMWSktQOp6b7In1Zl3/Jr59b6EGGoI1aFkw7cmDA6j6gD"
    crossorigin="anonymous"
  >
</head>
<body>

  <button type="button" class="btn btn-primary">
    Hello all
  </button>

  <script
    src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/js/bootstrap.bundle.min.js"
    integrity="sha384-w76AqPfDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN"
    crossorigin="anonymous">
  </script>
</body>
</html>
```



# Common layouts in Bootstrap

- `container`: <https://getbootstrap.com/docs/5.3/layout/containers/>
- `row` and `col`: <https://getbootstrap.com/docs/5.3/layout/grid/>
- `utilities`: <https://getbootstrap.com/docs/5.3/layout/utilities/>

# Common Components in Bootstrap

- **Cards** : <https://getbootstrap.com/docs/5.3/components/card/>
- **Navbar** : <https://getbootstrap.com/docs/5.3/components/navbar/>
- **Button** : <https://getbootstrap.com/docs/5.3/components/buttons/>

And more...

# Lab 01

Remember the previous `Introduce yourself` page from `lecture 02`?

Let's create more CSS and Bootstrap to decorate it!

# Lab 01

Something that you **Should** add to your pages

- Text Color and background color
- Font size, text align
- Border
- At least two elements that from Bootstrap

Something that you **Can** add to your pages

- More Bootstrap components and layout stuff
- Try display with justify-content and / or align-items
- More you can think of ...

# End