



CSS + (Cascading Style Sheet)

Ratchapong Tantipantarak

Web Browser



ดาวน์โหลดได้ที่

<https://www.google.com/chrome/>

Source Code Editor (IDE)



ดาวน์โหลดได้ที่

<https://code.visualstudio.com/download>

ทบทวน HTML

HyperText

เอกสาร(ไฟล์)ที่สามารถสร้าง link เพื่อเปิดเอกสารอื่นที่เกี่ยวข้องได้

Markup Language

- รูปแบบเพื่อกำหนดการแสดงเนื้อหาแต่ละส่วนของเอกสารล้วนหน้าจอ (หรือเครื่องพิมพ์)
ตัวอย่างของภาษาที่เป็น Markup language

“HTML ใช้ “Tags” และ “Attributes”

โครงสร้างของ HTML



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```
<html>
<head>
    <title>ข้อความบน title/tab bar</title>
</head>
<body>
    <...>
    <...>
</body>
</html>
```

ตัวพิมพ์ใหญ่-เล็กมีค่าเท่ากัน

เช่น

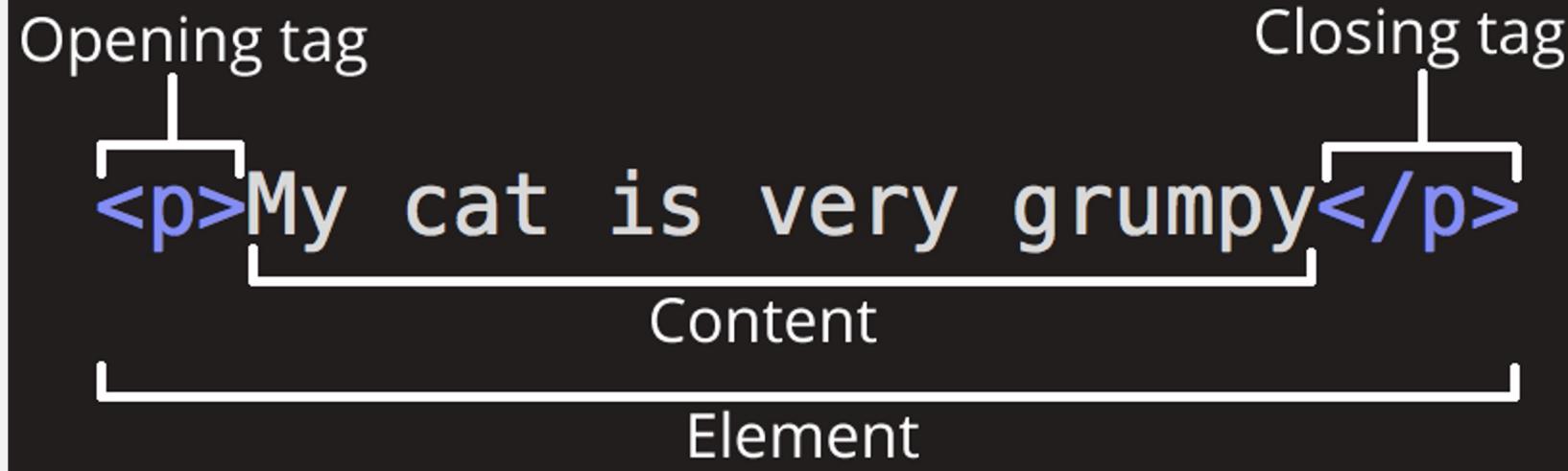
```
<html>
<HTML>
<HtMI>
```

ทั้ง 3 tag ให้ผลเหมือนกัน

โครงสร้างของ HTML Element / Tag



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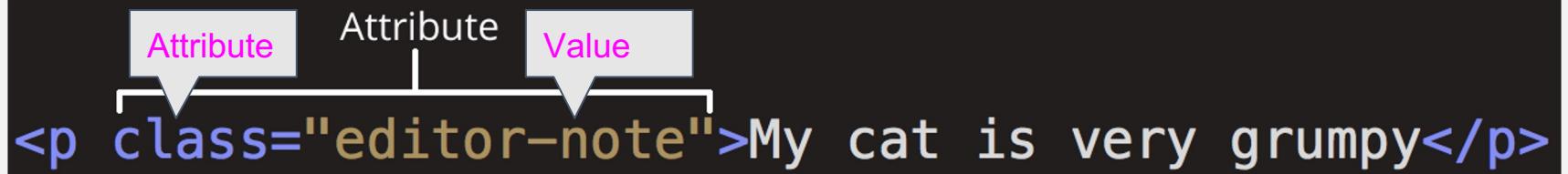


Credit & References :

https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Getting_started



HTML Element - Tag & Attribute



ใช้ได้ทั้ง single quote และ double quote

```
<p class="editor-note">
```

หรือ

```
<p class='editor-note'>
```

Credit & References :

https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Getting_started

Element (Nest, Inline, Empty)

Nesting (ชั้นแบบ parent-child)

```
1 | <p>My cat is <strong>very</strong> grumpy.</p>
```

Inline และ block element

```
1 | <em>first</em><em>second</em><em>third</em>
2 |
3 | <p>fourth</p><p>fifth</p><p>sixth</p>
```

first second third

fourth

fifth

sixth

Empty element (ไม่มี tag ปิด)

- <area>
- <base>
-

- <col>
- <embed>
- <hr>
-
- <input>
- <keygen>
- <link>
- <meta>
- <param>
- <source>
- <track>
- <wbr>

Credit & References :

https://developer.mozilla.org/en-US/docs/Learn/HTML/Introduction_to_HTML/Getting_started

https://developer.mozilla.org/en-US/docs/Glossary/Empty_element



Comment Tag

```
<html>
<head>
    <title>Any Title</title>
</head>
<body>
    <....>
    <....>
<!--
    ส่วนนี้คือ comment
    ซึ่ง Web Browser จะไม่สนใจ
-->
    <....>
    <....>
</body>
</html>
```

Tag ที่ควรรู้จัก



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Text

https://www.w3schools.com/html/html_headings.asp
https://www.w3schools.com/html/html_paragraphs.asp
https://www.w3schools.com/html/html_formatting.asp
ตัวอักษรพิเศษ
https://www.w3schools.com/html/html_entities.asp

Link

https://www.w3schools.com/html/html_links.asp

List

https://www.w3schools.com/html/html_lists.asp

Image

https://www.w3schools.com/html/html_images.asp

** แนะนำ Site รูปภาพ

https://picsum.photos/200/300

https://commons.wikimedia.org

Table

https://www.w3schools.com/html/html_tables.asp

Form

https://www.w3schools.com/html/html_forms.asp
** test html form **
<http://jkorpela.fi/forms/testing.html>

Block & inline (<div> /)

https://www.w3schools.com/html/html_blocks.asp

Style (CSS internal)

https://www.w3schools.com/html/html_styles.asp
https://www.w3schools.com/html/html_colors.asp



CSS

(Cascading Style Sheet)



CSS knowledge resource

แหล่งอ้างอิงหลัก

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

https://developer.mozilla.org/en-US/docs/Learn/CSS/First_steps

แหล่งอ้างอิงเพิ่มเติม

html-css-js.com

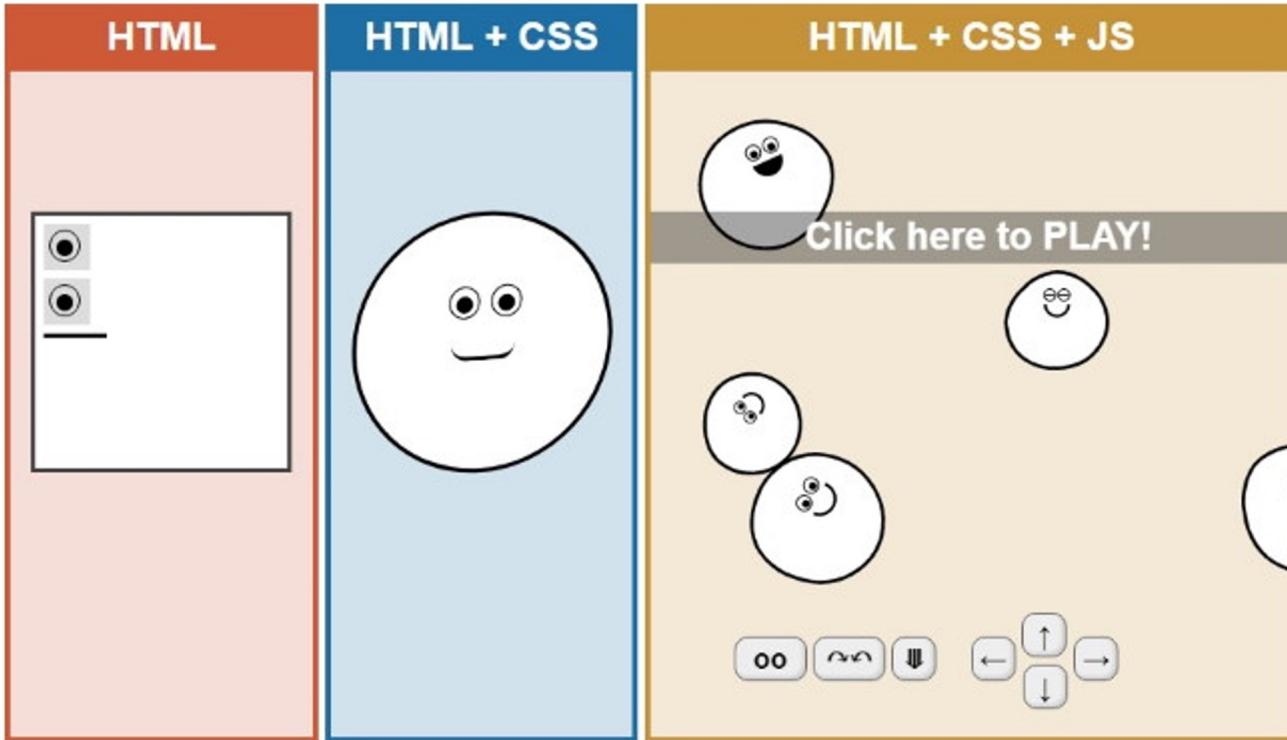
<https://cssauthor.com/css-tutorial-websites/>

<https://marksheet.io>

HTML - CSS - JS



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CSS Topics



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CSS Intro.

https://www.w3schools.com/css/css_intro.asp

CSS Syntax

https://www.w3schools.com/css/css_syntax.asp



<https://www.w3.org/Style/CSS/all-properties.en.html>



CSS Topics

CSS Comment

https://www.w3schools.com/css/css_comments.asp

```
<!DOCTYPE html>
<html>
<head>
<style>
p {
  color: red; /* Set text color to red */
}
</style>
</head>
<body>

<h2>My Heading</h2>

<!-- These paragraphs will be red -->
<p>Hello World!</p>
```

← CSS comment

← HTML comment

CSS Topics



How to Insert CSS

https://www.w3schools.com/css/css_howto.asp

```
<head>
<link rel="stylesheet" type="text/css" href="mystyle.css">
<style>
h1 {
  color: orange;
}
</style>
</head>
```

External CSS

```
1 /* mystyle.css */
2
3 h1 {
4   font-family: Impact, sans-serif;
5   color: #CE5937;
6 }
7 p {
8   color: blue;
9 }
```

```
<!DOCTYPE html>
<html>
<head>
<style>
body {
  background-color: linen;
}

h1 {
  color: maroon;
  margin-left: 40px;
}
</style>
</head>
<body>
```

```
<h1>This is a heading</h1>
<p>This is a paragraph.</p>

</body>
</html>
```

Internal CSS

```
<!DOCTYPE html>
<html>
<body>

<h1 style="color:blue;text-align:center;">This is a heading</h1>
<p style="color:red;">This is a paragraph.</p>

</body>
</html>
```

Inline CSS



CSS (Element concept)

Chrome Developer Tools

The screenshot shows the Chrome Developer Tools interface with the 'Elements' tab selected. The left pane displays the DOM tree for an `<h1>` element with the text 'Example Domain'. The right pane shows the element's style properties in the 'Styles' panel:

```
element.style {  
}  
  
div {  
    width: 600px;  
    margin: 5em auto;  
    padding: 2em;  
    background-color: #fdfdff;  
    border-radius: 0.5em;  
    box-shadow: 2px 3px 7px 2px rgba(0,0,0,0.02);  
}
```

`border-radius`

`margin collapse`

`Box-shadow`

Block-level

Inline & Block

This is a paragraph.

This is another paragraph.

Paragraphs are block-level elements, so they stack vertically.

Inline

Links are inline elements, so they fit side-by-side.

Width-Height

Box Model



`Outline`

`Box-sizing`

`margin: auto`

Margin Collaspe

```
1 <!DOCTYPE html>
2 <html>
3   <head>
4     <title>HTML CSS JS</title>
5   </head>
6   <body>
7     <div class='box-1'>
8       <h1>Box1</h1>
9       <p>Welcome to HTML-CSS-JS.com</p>
10    </div>
11    <div class='box-2'>
12      <h1>Box2</h1>
13      <p>Welcome to HTML-CSS-JS.com</p>
14    </div>
15  </body>
16 </html>
```

HTML

```
1 * {margin: 0;}
2 h1 {
3   font-family: Impact, sans-serif;
4   color: #CE5937;
5 }
6 .box-1 {
7   background: salmon;
8   width: 300px;
9   margin-bottom: 100px;
10}
11 .box-2 {
12   background: lightblue;
13   width: 300px;
14   margin-top: 50px;
15}
```

CSS



CSS Selector : Simple

CSS Selector : Simple

https://www.w3schools.com/css/css_selectors.asp

Selector	Example	Example description
<u>.class</u>	.intro	Selects all elements with class="intro"
<u>#id</u>	#firstname	Selects the element with id="firstname"
*	*	Selects all elements
<u>element</u>	p	Selects all <p> elements
<u>element,element,...</u>	div, p	Selects all <div> elements and all <p> elements



CSS Selector : Combinators

CSS Selector : Combinators

https://www.w3schools.com/css/css_combinators.asp

Selector	Example	Example description
<u>element element</u>	div p	Selects all <p> elements inside <div> elements
<u>element>element</u>	div > p	Selects all <p> elements where the parent is a <div> element
<u>element+element</u>	div + p	Selects all <p> elements that are placed immediately after <div> elements
<u>element1~element2</u>	p ~ ul	Selects every element that are preceded by a <p> element

<https://www.w3schools.com/cssref/trysel.asp>



CSS Selector : Pseudo classes

Selector	Example	Example description
<code>:active</code>	<code>a:active</code>	Selects the active link
<code>:checked</code>	<code>input:checked</code>	Selects every checked <code><input></code> element
<code>:disabled</code>	<code>input:disabled</code>	Selects every disabled <code><input></code> element
<code>:empty</code>	<code>p:empty</code>	Selects every <code><p></code> element that has no children
<code>:enabled</code>	<code>input:enabled</code>	Selects every enabled <code><input></code> element
<code>:first-child</code>	<code>p:first-child</code>	Selects every <code><p></code> elements that is the first child of its parent
<code>:first-of-type</code>	<code>p:first-of-type</code>	Selects every <code><p></code> element that is the first <code><p></code> element of its parent
<code>:focus</code>	<code>input:focus</code>	Selects the <code><input></code> element that has focus
<code>:hover</code>	<code>a:hover</code>	Selects links on mouse over
<code>:in-range</code>	<code>input:in-range</code>	Selects <code><input></code> elements with a value within a specified range
<code>:invalid</code>	<code>input:invalid</code>	Selects all <code><input></code> elements with an invalid value
<code>:lang(<i>language</i>)</code>	<code>p:lang(it)</code>	Selects every <code><p></code> element with a lang attribute value starting with "it"
<code>:last-child</code>	<code>p:last-child</code>	Selects every <code><p></code> elements that is the last child of its parent
<code>:last-of-type</code>	<code>p:last-of-type</code>	Selects every <code><p></code> element that is the last <code><p></code> element of its parent
<code>:link</code>	<code>a:link</code>	Selects all unvisited links
<code>:not(selector)</code>	<code>:not(p)</code>	Selects every element that is not a <code><p></code> element
<code>:nth-child(n)</code>	<code>p:nth-child(2)</code>	Selects every <code><p></code> element that is the second child of its parent
<code>:nth-last-child(n)</code>	<code>p:nth-last-child(2)</code>	Selects every <code><p></code> element that is the second child of its parent, counting from the last child
<code>:nth-last-of-type(n)</code>	<code>p:nth-last-of-type(2)</code>	Selects every <code><p></code> element that is the second <code><p></code> element of its parent, counting from the last child
<code>:nth-of-type(n)</code>	<code>p:nth-of-type(2)</code>	Selects every <code><p></code> element that is the second <code><p></code> element of its parent

<code>:only-of-type</code>	<code>p:only-of-type</code>	Selects every <code><p></code> element that is the only <code><p></code> element of its parent
<code>:only-child</code>	<code>p:only-child</code>	Selects every <code><p></code> element that is the only child of its parent
<code>:optional</code>	<code>input:optional</code>	Selects <code><input></code> elements with no "required" attribute
<code>:out-of-range</code>	<code>input:out-of-range</code>	Selects <code><input></code> elements with a value outside a specified range
<code>:read-only</code>	<code>input:read-only</code>	Selects <code><input></code> elements with a "readonly" attribute specified
<code>:read-write</code>	<code>input:read-write</code>	Selects <code><input></code> elements with no "readonly" attribute
<code>:required</code>	<code>input:required</code>	Selects <code><input></code> elements with a "required" attribute specified
<code>:root</code>	<code>root</code>	Selects the document's root element
<code>:target</code>	<code>#news:target</code>	Selects the current active <code>#news</code> element (clicked on a URL containing that anchor name)
<code>:valid</code>	<code>input:valid</code>	Selects all <code><input></code> elements with a valid value
<code>:visited</code>	<code>a:visited</code>	Selects all visited links

CSS Selector : Pseudo classes

https://www.w3schools.com/css/css_pseudo_classes.asp



CSS Selector : Pseudo elements

CSS Selector : Pseudo elements

https://www.w3schools.com/css/css_pseudo_elements.asp

Selector	Example	Example description
<u>::after</u>	p::after	Insert content after every <p> element
<u>::before</u>	p::before	Insert content before every <p> element
<u>::first-letter</u>	p::first-letter	Selects the first letter of every <p> element
<u>::first-line</u>	p::first-line	Selects the first line of every <p> element
<u>::selection</u>	p::selection	Selects the portion of an element that is selected by a user

CSS Selector : Attribute

CSS Selector : Attribute Selectors

https://www.w3schools.com/css/css_attribute_selectors.asp

Selector	Example	Example description
[attribute]	[target]	Selects all elements with a target attribute
[attribute=value]	[target=_blank]	Selects all elements with target="_blank"
[attribute~=value]	[title~=flower]	Selects all elements with a title attribute containing the word "flower"
[attribute =value]	[lang =en]	Selects all elements with a lang attribute value starting with "en"
[attribute^=value]	a[href^="https"]	Selects every <a> element whose href attribute value begins with "https"
[attribute\$=value]	a[href\$=".pdf"]	Selects every <a> element whose href attribute value ends with ".pdf"
[attribute*=value]	a[href*="w3schools"]	Selects every <a> element whose href attribute value contains the substring "w3schools"



CSS Selector : Reference & practice

CSS Selector : Reference

https://www.w3schools.com/cssref/css_selectors.asp

CSS Selector : Practice

<https://www.w3schools.com/cssref/trysel.asp>

Click a selector:

```
.intro  
#Lastname  
.intro, #Lastname  
h1  
h1, p  
div p  
div > p  
ul + p  
ul ~ table  
*  
  
p.myquote  
[id]  
[id$=ess]  
[id$=my]  
[id^=L]  
[title*=beautiful]  
[id^=s]  
:checked  
:disabled  
:enabled  
:empty  
:focus  
p:first-child  
p:first-letter  
p:first-line  
p:first-of-type  
h1:hover  
input:in-range  
input:out-of-range  
input:invalid  
input:valid  
p:lang(it)  
p:last-child  
p:last-of-type  
tr:nth-child(even)  
tr:nth-child(odd)  
li:nth-child(1)  
li:nth-last-child(1)  
li:nth-of-type(2)  
li:nth-last-of-type(2)
```

Selector:
div p

All <p> elements that are inside a <div> element.

Result:

```
<h1>Welcome to My Homepage</h1>  
<div class="intro">  
    <p>My name is Donald <span id="Lastname">Duck.</span></p>  
    <p id="my-Address">I live in Duckburg</p>  
    <p>I have many friends:</p>  
</div>  
  
<ul id="Listfriends">  
    <li>Goofy</li>  
    <li>Mickey</li>  
    <li>Daisy</li>  
    <li>Pluto</li>  
</ul>  
  
<p class="myquote">All my friends are great!<br>But I really like Daisy!!</p>  
  
<p lang="it" title="Hello beautiful">Ciao bella</p>  
  
<h3>We are all animals!</h3>  
  
<p><b>My latest discoveries have led me to believe that we are all animals:</b></p>  
  
<table>  
    <thead>  
        <tr> Name | Type of Animal |    <tbody>  
        <tr> Mickey | Mouse |        <tr> Goofey | Dog |        <tr> Daisy | Duck |        <tr> Pluto | Dog |    </tbody>  
</table>
```

CSS : some fallback..

Inline-block with vertical-align

```
1 <!DOCTYPE html>                                HTML
2 <html>
3   <head>
4     <title>HTML CSS JS</title>
5   </head>
6   <body>
7     <div class="box">
8       <h3>Header</h3>
9       <p>Lorem ipsum dolor sit amet, con-
10      sequat, ultricies integer quis, eu mi
11      volutpat ac, donec massa sapien faucibus
12      vestibulum, eros. Nam pretium, tortor
13      at cursus commodo, nunc urna molestie
14      quam ut, blandit vel, enim lorem ipsum
15      dolor sit amet, con-
16      sequat, ultricies integer quis, eu mi
17      volutpat ac, donec massa sapien faucibus
18      vestibulum, eros. Nam pretium, tortor
19      at cursus commodo, nunc urna molestie
20      quam ut, blandit vel, enim lorem ipsum
21      dolor sit amet, con-
```

1 .box {
2 display : inline-block;
3 background : lightblue;
4 width : 250px;
5 padding : 5px;
6 margin : 5px;
7 }
CSS

The screenshot shows a web page with two blue rectangular boxes. Each box contains a header section with the text "Header" and a paragraph of placeholder text. The boxes are positioned side-by-side.

Header
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Architecto deserunt consequuntur maiores vel consequatur omnis maxime quae ipsum ullam id adipisci esse praesentium unde ex at laudantium soluta voluptate deleniti repudiandae quo quibusdam nulla nam officia querat error ad impedit totam necessitatibus magnam quod voluptate distinctio temporibus optio. Odio ipsum repudiandae sunt autem eos quisquam corporis quod obcaecati voluptatum dolore explicabo nisi veritatis sit id doloribus nam at saepe. Facere qui cum fuga cumque voluptate! Itaque sed amet dolorum quo perspicatis magnam et. Necessestibus officis nisi accusantium cupiditate modi harum ullam accusamus expedita iste porro ipsa vero! Mollitia magni rem.

The screenshot shows a web page with two blue rectangular boxes. Each box contains a header section with the text "Header" and a paragraph of placeholder text. The boxes are positioned side-by-side.

Header
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Tenetur ducimus assumenda quam sapiente praesentium eius sit suscipit modi doloremque aspernatur fuga perferendis. Voluptate necessitatibus assumenda quam sequi repellat quia obcaecati. Lorem ipsum dolor sit amet, con-

```
1 <!DOCTYPE html>                                HTML
2 <html>
3   <head>
4     <title>HTML CSS JS</title>
5   </head>
6   <body>
7     <div class="box">
8       <h3>Header</h3>
9       <p>Lorem ipsum dolor sit amet, con-
10      sequat, ultricies integer quis, eu mi
11      volutpat ac, donec massa sapien faucibus
12      vestibulum, eros. Nam pretium, tortor
13      at cursus commodo, nunc urna molestie
14      quam ut, blandit vel, enim lorem ipsum
15      dolor sit amet, con-
16      sequat, ultricies integer quis, eu mi
17      volutpat ac, donec massa sapien faucibus
18      vestibulum, eros. Nam pretium, tortor
19      at cursus commodo, nunc urna molestie
20      quam ut, blandit vel, enim lorem ipsum
21      dolor sit amet, con-
```

```
1 .box {
2   display : inline-block;
3   background : lightblue;
4   width : 250px;
5   padding : 5px;
6   margin : 5px;
7   vertical-align: top;
8 }
```

vertical-align:top

The screenshot shows a web page with two blue rectangular boxes. Each box contains a header section with the text "Header" and a paragraph of placeholder text. The boxes are positioned side-by-side.

Header
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Harum iusto vero perferendis consequatur quam eligendi rerum voluptatibus at architecto autem a est maxime minus necessitatibus minima nulla esse numquam tenetur non veniam. Enim possimus tenetur recusandae quaerat nisi aspernatur deleniti tempora esse inventore quam praesentium quia voluptatibus ad adipisci laboriosam!

The screenshot shows a web page with two blue rectangular boxes. Each box contains a header section with the text "Header" and a paragraph of placeholder text. The boxes are positioned side-by-side.

Header
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Architecto deserunt consequuntur maiores vel consequatur omnis maxime quae ipsum ullam id adipisci esse praesentium unde ex at laudantium soluta voluptate deleniti repudiandae quo quibusdam nulla nam officia querat error ad impedit totam necessitatibus magnam quod tenet distinctio temporibus optio. Odio ipsum repudiandae sunt autem eos quisquam corporis quod obcaecati voluptatum dolore explicabo nisi veritatis sit id doloribus nam at saepe. Facere qui cum fuga cumque voluptate! Itaque sed amet dolorum quo perspicatis magnam et. Necessestibus officis nisi accusantium cupiditate modi harum ullam accusamus expedita iste porro ipsa vero! Mollitia magni rem.

The screenshot shows a web page with two blue rectangular boxes. Each box contains a header section with the text "Header" and a paragraph of placeholder text. The boxes are positioned side-by-side.

Header
Lorem ipsum dolor sit amet, consectetur adipisicing elit. Tenetur ducimus assumenda quam sapiente praesentium eius sit suscipit modi doloremque aspernatur fuga perferendis. Voluptate necessitatibus assumenda quam sequi repellat quia obcaecati. Lorem ipsum dolor sit amet, consectetur adipisicing elit. Harum iusto vero perferendis consequatur quam eligendi rerum voluptatibus at architecto autem a est maxime minus necessitatibus minima nulla esse numquam tenetur non veniam. Enim possimus tenetur recusandae quaerat nisi aspernatur deleniti tempora esse inventore quam praesentium quia voluptatibus ad adipisci laboriosam!

CSS : some fallback..

 is an “inline-block” (not “inline”)

<https://stackoverflow.com/questions/2402761/is-img-element-block-level-or-inline-level>

The screenshot shows a browser window with developer tools open. The left panel displays the DOM structure:

```
<html>
  <head></head>
  <body>
    <a href="#" style="width:100px; margin-top:100px;">A-Tag</a>
    <hr>
    ...  == $0
    <hr>
  </body>
</html>
```

The right panel shows the "Computed" styles for the image element. The image has a width of 300px and a height of 340px. It is positioned at top: 100px from the top of its parent container. The image's styling includes a 1px dashed blue outline and 20px padding all around. The overall layout is shown with nested boxes representing margin, border, padding, and content dimensions.

...normally, “*inline*” cannot set

- margin-top/bottom
- padding-top/bottom
- width
- height

CSS (Div Container)



Image Gallery Card

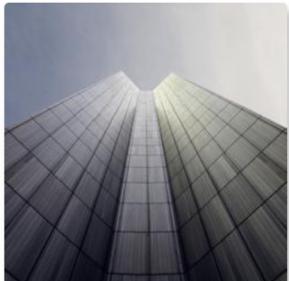
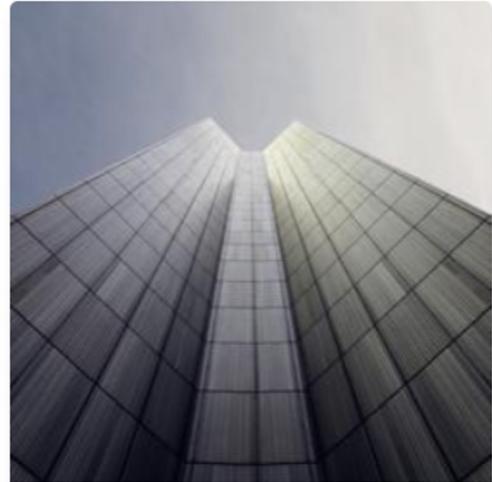
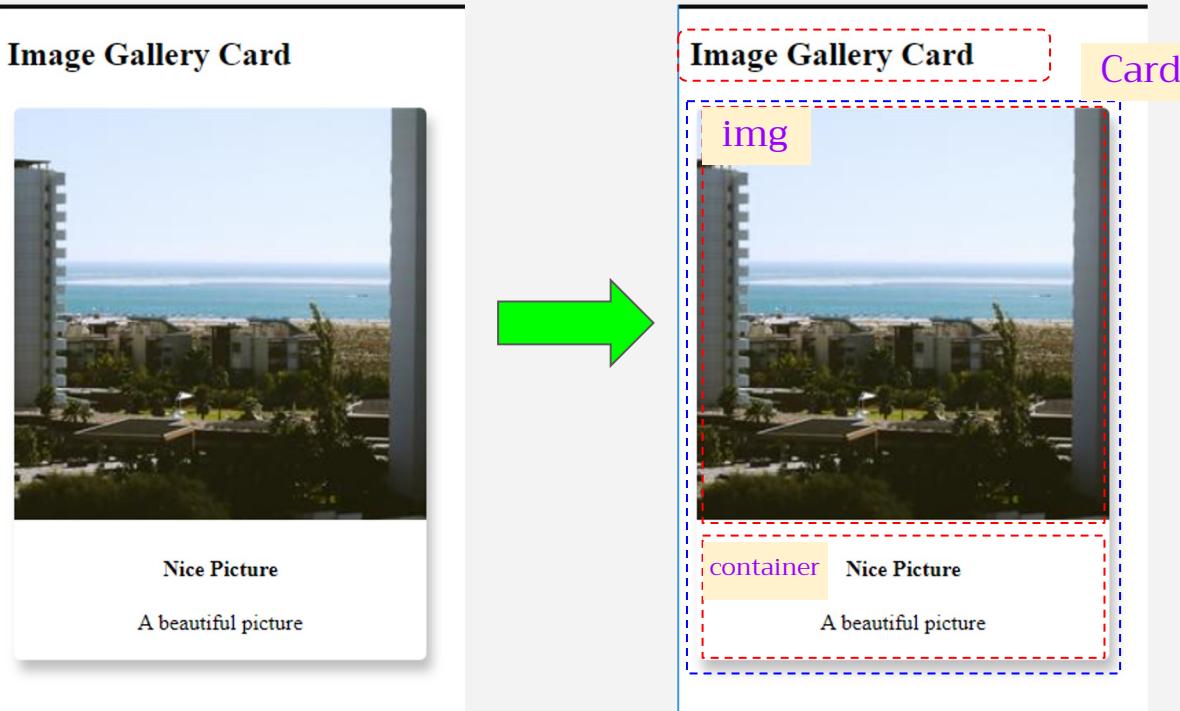


Image Gallery Card



CSS (Div Container)



CSS (Div Container)



Image Gallery Card

Nice Picture

A beautiful picture

```
25 <h2>Image Gallery Card</h2>
26
27 <div class="card">
28   
29   <div class="container">
30     <h4><b>Nice Picture</b></h4>
31     <p>A beautiful picture</p>
32   </div>
33 </div>
```

CSS (Div Container)



```
25  <h2>Image Gallery Card</h2>
26
27  <div class="card">
28    
29    <div class="container">
30      <h4><b>Nice Picture</b></h4>
31      <p>A beautiful picture</p>
32    </div>
33  </div>
```

```
5   <style>
6     .card {
7       display: inline-block;
8       box-shadow: 4px 8px 8px #silver;
9       width: 300px;
10      border-radius: 5px;
11      margin: 5px;
12    }
13    img {
14      border-radius: 5px 5px 0 0;
15      width: 100%;
16    }
17    .container {
18      padding: 2px 16px;
19      text-align: center;
20    }
21  </style>
```

Homework #1



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Image gallery Card



Nice Picture

A beautiful picture



Nice Picture

A beautiful picture

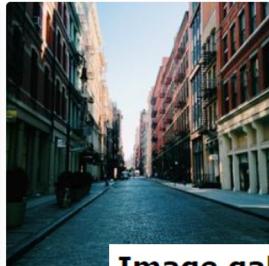


Image gallery Card



โจทย์

- ให้เปลี่ยนสีพื้นหลังส่วน container
- มีเงา + ขอบมนเหมือนเดิม
- รูปต้องต่อสนิทกับ container



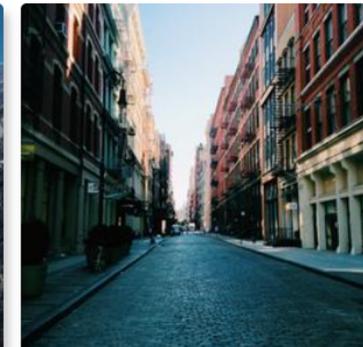
Nice Picture

A beautiful picture



Nice Picture

A beautiful picture



Nice Picture

A beautiful picture





CSS

Part 2

CSS Color



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https://www.w3schools.com/css/css_colors.asp
<https://marksheet.io/css-color-units.html>

color : tomato

rgb(255, 99, 71)

#ff6347

hsl(9, 100%, 64%)

50% transparent:

rgba(255, 99, 71, 0.5)

hsla(9, 100%, 64%, 0.5)

<https://rgbcodr.com/>

4DA6FF



Cornflower blue

#4DA6FF

rgb(77,166,255)

rgb(0.30,0.65,1.00)

CMYK(0.698, 0.349, 0, 0)

Hue: 210, Saturation: 70, Value: 100

Save
Open

Color Converter »

CSS Units



Absolute Units

Unit	Description
cm	centimeters
mm	millimeters
in	inches ($1\text{in} = 96\text{px} = 2.54\text{cm}$)
px *	pixels ($1\text{px} = 1/96\text{th of 1in}$)
pt	points ($1\text{pt} = 1/72 \text{ of 1in}$)
pc	picas ($1\text{pc} = 12 \text{ pt}$)

https://www.w3schools.com/css/css_units.asp

Relative Units

Unit	Description
em	Relative to the font-size of the element (2em means 2 times the size of the current font)
ex	Relative to the x-height of the current font (rarely used)
ch	Relative to width of the "0" (zero)
rem	Relative to font-size of the root element
vw	Relative to 1% of the width of the viewport*
vh	Relative to 1% of the height of the viewport*
vmin	Relative to 1% of viewport's* smaller dimension
vmax	Relative to 1% of viewport's* larger dimension
%	Relative to the parent element

CSS Text



https://www.w3schools.com/css/css_text.asp

- Text color
- Text alignment
- Text Decoration
- Text Transformation
- Text Spacing
- Text Shadow

This Heading is Black with White Text

This is heading 1

~~This is heading 2~~

This is heading 3

TEXT FORMATTING

This text is styled with some of the text formatting properties. The heading uses the text-align, text-transform, and color properties. The paragraph is indented, aligned, and the space between characters is specified. The underline is removed from this colored "Try it Yourself" link.

Heading 1 (center)

Heading 2 (left)

Heading 3 (right)

The three headings above are aligned center, left and right.

Text-shadow effect!

CSS Fonts



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

- Font Family
- Font Fallback
- Font Style
- Font Weight
- Font Size
- Google Font



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	<i>Brush Script MT</i> <i>Lucida Handwriting</i>
Fantasy	Copperplate <i>Papyrus</i>

```
<head>
<link rel="stylesheet" href="https://fonts.googleapis.com/css?family=Audiowide|Sofia|Trirong">
<style>
h1.a {font-family: "Audiowide", sans-serif;}
h1.b {font-family: "Sofia", sans-serif;}
h1.c {font-family: "Trirong", serif;}
</style>
</head>
```

Result:

Audiowide Font
Sofia Font
Trirong Font

- 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)

Web Safe Fonts

CSS Icons



Font Awesome

Bootstrap

Material-icons (Google)

```
<div class="box">
  <span>Skill : </span>
  <i class="fab fa-html5" style="color:orange"></i>
  <i class="fab fa-css3-alt" style="color:blue"></i>
  <i class="fab fa-js-square" style="color:#efd81d"></i>
</div>
<div class="box">
  <span>Contact : </span>
  <i class="fab fa-line" style="color:lime"></i>
  <i class="fab fa-twitter" style="color:lightblue"></i>
  <i class="fab fa-instagram" style="color:darkblue"></i>
</div>
<div class="box">
  <i class="fas fa-phone-alt" style="color:darkgreen"></i>
  <span>(555)555-5555 </span>
</div>
```

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

```
<head>
  <link href="https://use.fontawesome.com/releases/v5.15.1/css/all.css" rel="stylesheet" />
  <title>CSS Font Awesome Lab</title>
</head>
```

```
<link href="https://use.fontawesome.com/releases/v5.15.1/css/all.css" rel="stylesheet" />
```

Explore all icons..

Skill :   

Contact :   

 (555)555-5555

CSS Background



- **Background Image**
 - Repeat
 - Attachment
 - Position
 - Size
 - Origin
- **Background Gradient**

https://www.w3schools.com/css/css_background.asp

https://www.w3schools.com/css/css3_backgrounds.asp

https://www.w3schools.com/css/css3_gradients.asp

<https://marksheet.io/css-background.html>



[https://unsplash.com/ \(รูปภาพ hi-res FREE\)](https://unsplash.com/)

ใช้กับรูปที่เป็น content เช่น logo, รูปสินค้า, รูป profile...

(style) background-image : url(...)

เน้นใช้กับการตกแต่ง เช่น ภาพพื้นหลัง, wallpaper

Background-size : contain



Background-size : cover

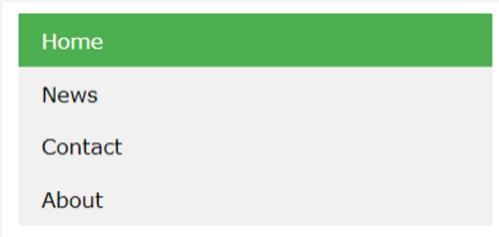


CSS Links - Lists - Navigation



- **Links**
 - state (pseudo classes)
 - text-decoration, cursor
- **Lists**
 - list-style
- **Navigation Bar**
 - vertical / horizontal

https://www.w3schools.com/css/css_link.asp
https://www.w3schools.com/css/css_list.asp
https://www.w3schools.com/css/css_navbar.asp



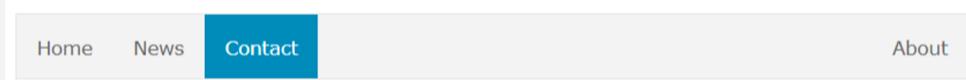
[Text Link](#) [Text Link](#) [Link Button](#) [Link Button](#)



`a:link` - a normal, unvisited link
`a:visited` - a link the user has visited
`a:hover` - a link when the user mouses over it
`a:active` - a link the moment it is clicked

```
ul {  
    list-style-type: none;  
    margin: 0;  
    padding: 0;  
}
```

```
<ul>  
    <li><a href="default.asp">Home</a></li>  
    <li><a href="news.asp">News</a></li>  
    <li><a href="contact.asp">Contact</a></li>  
    <li><a href="about.asp">About</a></li>  
</ul>
```



CSS Position



- Static
- Relative
- Absolute
- Fixed
- Sticky

= normal flow(**default**)
= based-on normal flow
= actual x,y of parent
= actual x,y on viewport (scroll)
= 'relative' first + 'fixed' after scroll

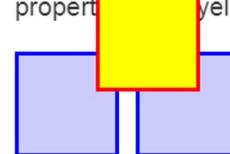
- Top
- Bottom
- Left
- Right

- z-index

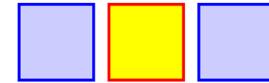
```
position: absolute;  
top: 40px; left: 40px;
```

```
position: fixed;  
top: 40px; left: 40px;
```

In this demo you can control
property of yellow box.

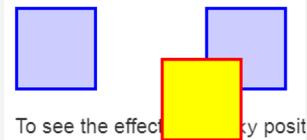


```
position: static;
```



To see the effect of sticky position

```
position: relative;  
top: 40px; left: 40px;
```



To see the effect of sticky position

```
position: sticky;  
background: #555a;  
top: 20px;
```



To see the effect of sticky position
the position: sticky option an

https://www.w3schools.com/css/css_positioning.asp

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

https://www.w3schools.com/cssref/pr_pos_z-index.asp

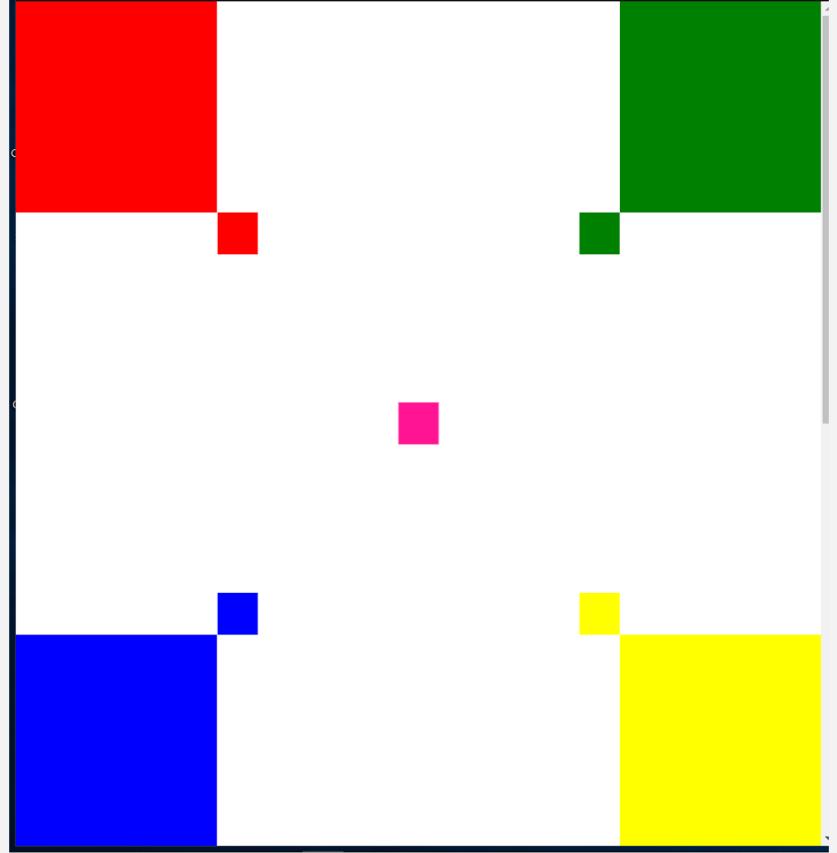
Homework #2



1. ให้สร้าง web page ดังภาพจาก style ด้านล่าง

- ห้ามแก้ไข style ที่ให้ + ห้ามใส่ style ใน tag
- ตรึง 5 กล่องเล็กตรงกลาง ไม่เลื่อนตาม scroll bar

```
<style>
body { padding: 0; margin: 0; height: 200vh; }
.big { width: 50%; height: 50%; }
.small { width: 25%; height: 25%; }
.inside { width: 10%; height: 10%; }
.absolute { position: absolute; }
.relative { position: relative; }
.fixed { position: fixed; }
.top { top: 0; }
.left { left: 0; }
.right { right: 0; }
.bottom { bottom: 0; }
.center { left: 50%; top: 50%; transform: translate(-50%, -50%); }
.red { background-color: red; }
.green { background-color: green; }
.blue { background-color: blue; }
.yellow { background-color: yellow; }
.pink { background-color: deeppink; }
.white { background-color: white; }
</style>
```



CSS Flexbox

https://www.w3schools.com/css/css3_flexbox.asp

<https://css-tricks.com/snippets/css/a-guide-to-flexbox/>



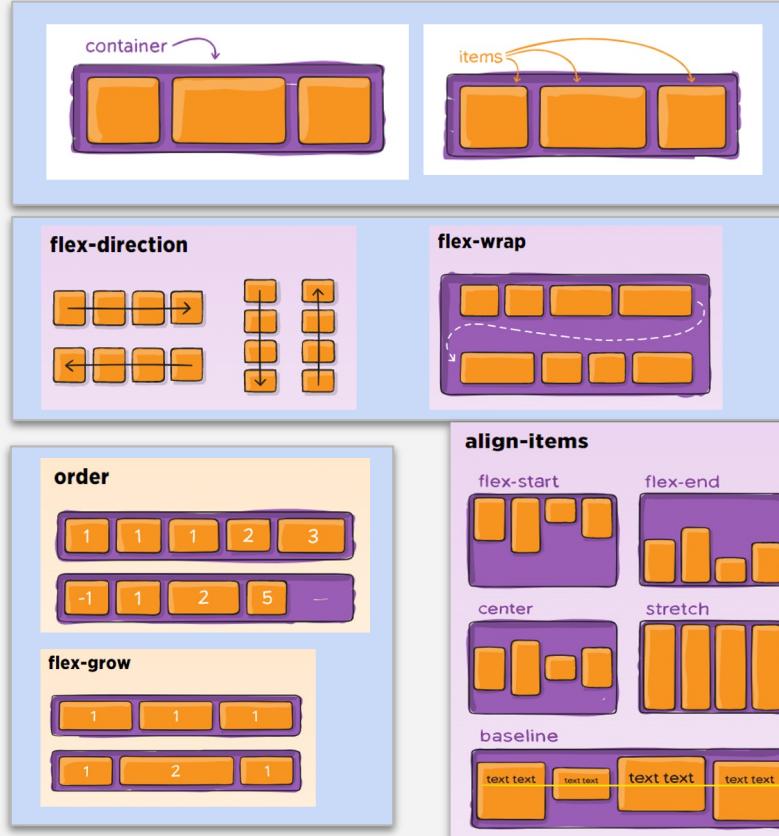
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Container

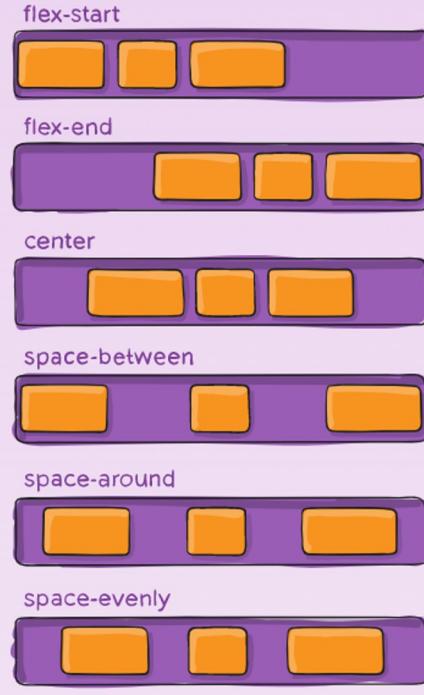
- **flex-flow**
 - flex-direction
 - flex-wrap
- justify-content
- align-items
- align-content

Items

- order
- **flex**
 - flex-grow
 - flex-shrink
 - flex-basis
- align-self



justify-content



CSS Flexbox - pattern



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Flexbox design pattern (by. kevin powell)

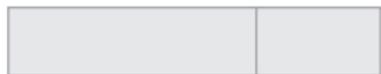
- Even Columns
- Grid-ish
- Content & Sidebar

```
.content-sidebar {  
  display: flex;  
  flex-wrap: wrap;  
}  
  
.content-sidebar > *:nth-child(1) {  
  flex: 1 1 70%;  
  min-width: 25ch;  
}  
  
.content-sidebar > *:nth-child(2) {  
  flex: 1 1 30%;  
  min-width: 15ch;  
}
```

CONTENT & SIDEBAR

Create a standard main content area with a sidebar, with the added bonus of not requiring media queries!

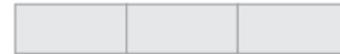
The classes can be placed on the children.



```
.even-columns {  
  display: flex;  
}  
  
.even-columns > * {  
  flex-basis: 100%;  
}
```

EVEN COLUMNS

Ensures that all direct children of the parent are equal width, no matter how many you have or what the content is inside of them.



```
.grid-ish {  
  display: flex;  
  flex-wrap: wrap;  
}  
  
.grid-ish > * {  
  flex: 1 1 10em;  
}
```

GRID-ISH

A grid style layout that doesn't require any media queries!

The biggest issue here is that the columns of different rows can be different widths.



<https://www.kevindowell.co/>

[Flexbox design patterns \(youtube vdo\)](#)

<https://tobiasahlin.com/blog/common-flexbox-patterns/>

CSS Responsive



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Responsive Web Design

- Device, Browser, Viewport
- Media queries
 - min-width
 - max-width



https://www.w3schools.com/css/css_rwd_intro.asp
<https://marksheet.io/css-responsiveness.html>



```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

device

browser
viewport

```
@media (min-width: 768px) {  
    /* Rules for tablets and bigger viewports */  
}  
  
@media (min-width: 992px) {  
    /* Rules for laptops, small desktop screens */  
}  
  
@media (min-width: 1200px) {  
    /* Rules for larger desktop screens only */  
}
```

Mobile first

```
@media (max-width: 1199px) {  
    /* Rules for laptops, small desktop screens, */  
}  
  
@media (max-width: 991px) {  
    /* Rules for tablets and smaller viewports */  
}  
  
@media (max-width: 767px) {  
    /* Rules for smartphones only */  
}
```

Desktop first

CSS Tables



- Table borders
- Table size
- Table-alignment
- Table style
- Table responsive

Company	Contact	Country
Alfreds Futterkiste	Maria Anders	Germany
Berglunds snabbköp	Christina Berglund	Sweden
Centro comercial Moctezuma	Francisco Chang	Mexico
Ernst Handel	Roland Mendel	Austria
Island Trading	Helen Bennett	UK
Königlich Essen	Philip Cramer	Germany
Laughing Bacchus Winecellars	Yoshi Tannamuri	Canada
Magazzini Alimentari Riuniti	Giovanni Rovelli	Italy
North/South	Simon Crowther	UK
Paris spécialités	Marie Bertrand	France

```
<table id="customers">
  <tr>
    <th>Company</th>
    <th>Contact</th>
    <th>Country</th>
  </tr>
  <tr>
    <td>Alfreds Futterkiste</td>
    <td>Maria Anders</td>
    <td>Germany</td>
  </tr>
```

https://www.w3schools.com/css/css_table.asp

```
#customers {
  font-family: Arial, Helvetica, sans-serif;
  border-collapse: collapse;
  width: 100%;
}

#customers td, #customers th {
  border: 1px solid #ddd;
  padding: 8px;
}

#customers tr:nth-child(even){background-color: #f2f2f2;}

#customers tr:hover {background-color: #ddd;}

#customers th {
  padding-top: 12px;
  padding-bottom: 12px;
  text-align: left;
  background-color: #4CAF50;
  color: white;
}
```

CSS Forms

- Label & input
- Input selector
- Styling input
- Icon with input

https://www.w3schools.com/css/css_form.asp



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p

First Name

Last Name

Country

AustraliaCanadaUSA

Submit

```
<form action="/action_page.php">
  <label for="fname">First Name</label>
  <input type="text" id="fname" name="firstname" placeholder="Your name..">

  <label for="lname">Last Name</label>
  <input type="text" id="lname" name="lastname" placeholder="Your last name..">

  <label for="country">Country</label>
  <select id="country" name="country">
    <option value="australia">Australia</option>
    <option value="canada">Canada</option>
    <option value="usa">USA</option>
  </select>
  <input type="submit" value="Submit">
</form>
```

```
input[type=text], select {
  width: 100%;
  padding: 12px 20px;
  margin: 8px 0;
  display: inline-block;
  border: 1px solid #ccc;
  border-radius: 4px;
  box-sizing: border-box;
}
```

```
input[type=submit] {
  width: 100%;
  background-color: #4CAF50;
  color: white;
  padding: 14px 20px;
  margin: 8px 0;
  border: none;
  border-radius: 4px;
  cursor: pointer;
}
```

```
input[type=submit]:hover {
  background-color: #45a049;
}
```

Homework #3



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1. ให้สร้าง web รูปแบบเดียวกับ facebook register

responsive

← - - - →

facebook

Facebook ช่วยคุณเชื่อมต่อและแบ่งรักกับผู้คนมากมายรอบตัวคุณ

เข้าสู่ระบบ

ลืมรหัสผ่านไปยังหน้าไหน

สร้างบัญชีใหม่

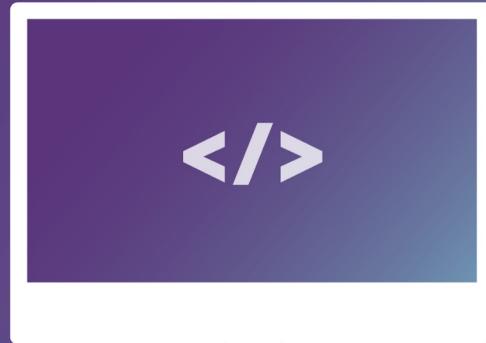
สร้างเพจ สำหรับบุคคลหรือธุรกิจ 旺角店 หรือธุรกิจ

Homework #3



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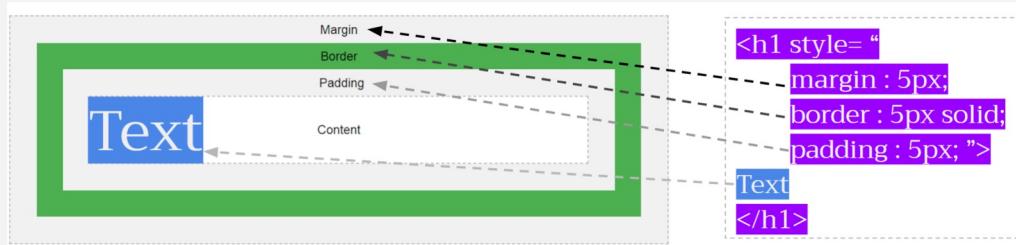
1. ให้สร้าง web รูปแบบเดียวกับ facebook register



CSS Topics

CSS Box model

https://www.w3schools.com/css/css_boxmodel.asp



CSS Border

https://www.w3schools.com/css/css_border.asp

CSS Padding

https://www.w3schools.com/css/css_padding.asp

CSS Margin

https://www.w3schools.com/css/css_margin.asp

CSS Topics



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CSS Width/Height

https://www.w3schools.com/css/css_dimension.asp

CSS Outline

https://www.w3schools.com/css/css_outline.asp

CSS Color

https://www.w3schools.com/css/css_colors.asp

CSS Text

https://www.w3schools.com/css/css_text.asp

CSS Fonts

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

CSS Links

https://www.w3schools.com/css/css_link.asp

CSS Lists

https://www.w3schools.com/css/css_list.asp

CSS Tables

https://www.w3schools.com/css/css_table.asp

CSS Forms

https://www.w3schools.com/css/css_form.asp

CSS Position

https://www.w3schools.com/css/css_positioning.asp

CSS Background (image)

https://www.w3schools.com/css/css_background.asp

CSS Topics



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CSS Display

https://www.w3schools.com/css/css_display_visibility.asp

CSS Image (styling)

https://www.w3schools.com/css/css3_images.asp

CSS Object-fit

https://www.w3schools.com/css/css3_object-fit.asp

CSS Transition

<https://marksheet.io/css-transitions.html>

CSS Animation

<https://marksheet.io/css-animations.html>

CSS Transform

https://www.w3schools.com/css/css3_2dtransforms.asp

CSS Learning Path



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HTML + DOM

- Default : Block & Inline

CSS Selector

- tag, id, class, multi-class

CSS Specificity - Cascading

- !important

CSS Box model

- margin, padding, border
- box-sizing
- overflow, display:none

CSS Units

- px, vw-vh, em, %, min-width, max-

width

CSS Layout

- display
- position
- z-index

CSS Text

CSS Color

CSS Image

CSS Pseudo Element (::after, ::before)

CSS Flexbox

CSS Responsive

CSS Variables

CSS calc() Function

CSS Pre-processors (code & compile to .css)

- SASS

BEM (Block Element Modifier)

Functional CSS

- TailwindCSS