

Roadmap

- Formatting Elements
- Box
- Layout



CSS Layout

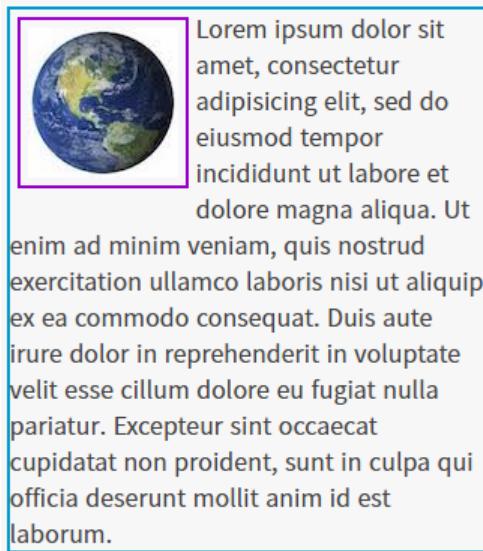
- CSS page layout techniques allow us to take elements contained in a web page and control where they're positioned relative to the following factors:
 - their default position in normal layout flow, the other elements around them, their parent container, and the main viewport/window.

● Properties

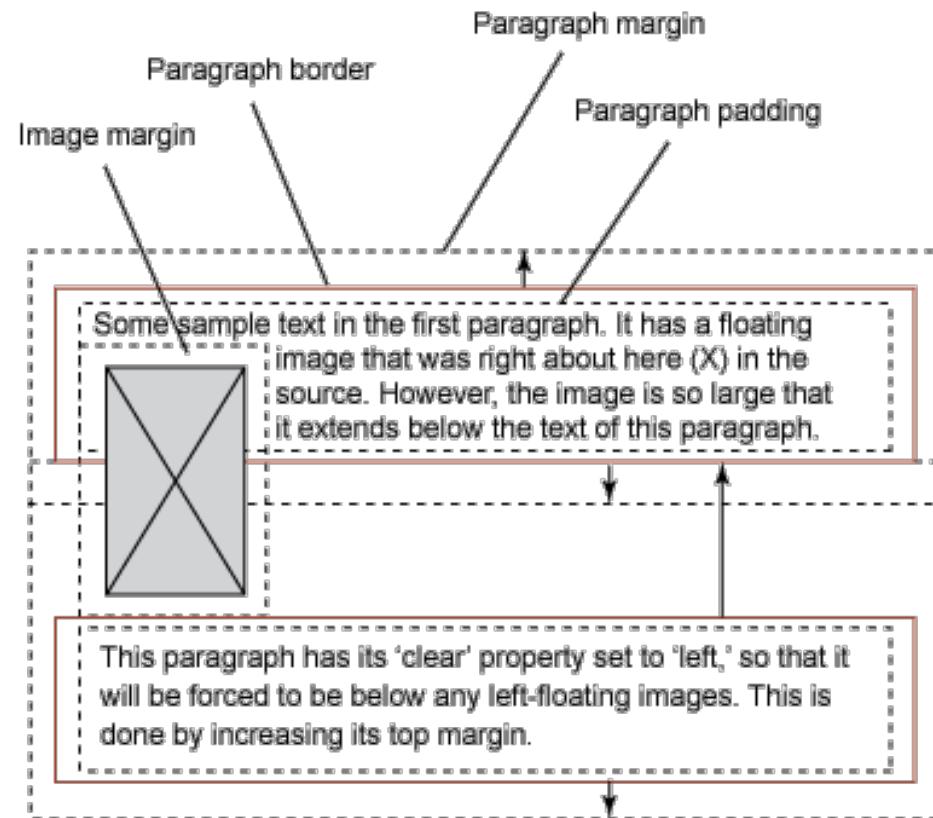
- Float
- Clear
- Display
- Position

Float Property

- An element can be pushed left or right, allowing other elements to wrap around it
- Often used for images
- Values: **none, left, right**



Property:value	Description
<code>float: left</code>	Assign the floating state of the element to the left.
<code>float: right</code>	Assign the floating state of the element to the right.



Illustration

In the paragraph below, we have added an image with style **float:right**.
The result is that the image will float to the right in the paragraph.

This is some text. This is some text. This is some text.
This is some text. This is some text. This is some text.
This is some text. This is some text. This is some text.
This is some text. This is some text. This is some text.
This is some text. This is some text. This is some text.
This is some text. This is some text. This is some text. This is some
text. This is some text. This is some text. This is some text. This is
some text. This is some text. This is some text. This is some text. This
is some text. This is some text. This is some text. This is some text.



```
1 <style type="text/css">
2   img { float: right; }
3 </style>
4
5 
```

Example

- Add the CSS part of the next page to "ex5-9.html" and save it.

(ex5-9.html)

Azalea



Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and foliage.
With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought inside to make a fabulous bouquet.

Balsam



Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat and handle damp soil.
Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.

```
<style>
  img { width:200px; height:140px; margin:0px 5px; }
  #box { border:1px solid darkgreen;
         width:500px; padding:10px 20px; margin:10px 0px; }
</style>
```

<div id="box">

Apply to sentences



Azalea



Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and foliage.

With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought inside to make a fabulous bouquet.

Balsam



Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat and handle damp soil.

Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.

Example cont'd

```
7 ④ <body>
8 ④ <div id="box">    <h3>Azalea</h3>
9      <div>  </div>
10     <p>Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and
11       foliage.</p>
12     <p>With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought
13       inside to make a fabulous bouquet. </p> </div>
14
15 <div id="box">    <h3>Balsam</h3>
16      <div>  </div>
17      <p>Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat
18       and handle damp soil.</p>
19     <p>Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.
20       </p> </div>
21   </div>
22 </body>
```

save after editing ex5-9.html.

Solution

```
1 <title>Float Property example1</title>
2 <style>
3   img {width : 200px; height : 140px; margin : 0px 5px;}
4   #box {border : 1px solid darkgreen; width : 500px;
5         padding : 10px 20px; margin : 10px 0px;}
6 </style>
7 <body>
8   <div id="box">    <h3>Azalea</h3>
9     <div> </div>
10    <p>Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and
foliage.</p>
11    <p>With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought
inside to make a fabulous bouquet. </p></div>
12   <div id="box">    <h3>Balsam</h3>
13     <div> </div>
14    <p>Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat
and handle damp soil.</p>
15    <p>Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.
</p></div>
16   </div>
17 </body>
```

save after editing ex5-9.html.

Exercise 5-4

Add the float section to "ex5-9.html".

Azalea



Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and foliage.

With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought inside to make a fabulous bouquet.

Balsam



Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat and handle damp soil.

Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.

Apply to images

```
#f1 { float:right; }  
#f2 { float:left; }
```

```
<div id="f1">  
<div id="f2">
```

Azalea

Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and foliage.

With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought inside to make a fabulous bouquet.

If the image is set to "float:right",
Next text is placed to the left.



Balsam



Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat and handle damp soil.

Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.

If the image is set to "float:left",
Next text is placed to the right.

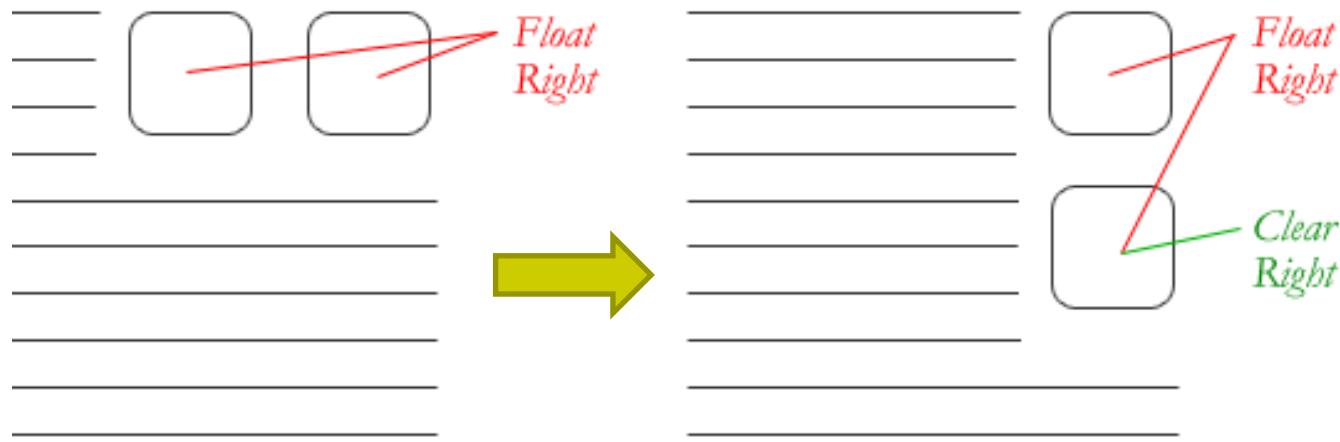
(After editing ex5-9.html, save it as exercise5-4.html)

Solution

```
1 <title>Float Property example2</title>
2 ⊲ <style>
3     img {width : 200px; height: 140px; margin : 0px 5px;}
4     #box {border : 1px solid darkgreen; width : 500px;
5             padding : 10px 20px; margin : 10px 0px;}
6     #f1 {float : right;}
7     #f2 {float : left;}
8 </style>
9 ⊲ <body>
10 ⊲   <div id="box"><h3>Azalea</h3> <div id="f1"> </div>
11     <p>Often referred to as "the royalty of the garden," these elegant flowers are
12       known for their outstanding colors and foliage.</p>
13     <p>With thousands of varieties to choose from, Azaleas require little maintenance
14       once planted and can be brought inside to make a fabulous bouquet. </p></div>
15 ⊲   <div id="box"><h3>Balsam</h3>    <div id="f2"> </div>
16     <p>Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives
17       in shadier spots, can tolerate heat and handle damp soil.</p>
18     <p>Flowers come in almost every color of the rainbow, including red, orange,
19       yellow, violet, white and pink. </p></div>
20 </body>
```

(After editing ex5-9.html, save it as exercise5-4.html)

Clear Property



property: value	Description
<code>clear: left</code>	Turn off the setting of "float: left".
<code>clear: right</code>	Turn off the setting of "float: right".
<code>clear: both</code>	Turn off all floats (left, right).

Exercise 5-5

- Add the clear section to "exercise5-4.html" and save it as "exercise5-5.html".

Azalea

Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and foliage.



With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought inside to make a fabulous bouquet.

Balsam



Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat and handle damp soil.

Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.

```
#c { clear:both; }
```

```
<p id="c">
```

**Apply to the second paragraph
of the sentence**

Azalea

Often referred to as "the royalty of the garden," these elegant flowers are known for

If "clear:both" is set, the attribute of "float:right" is deleted.



With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be brought inside to make a fabulous bouquet.

Balsam



Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shad da

If "clear:both" is set, the attribute of "float:left" is deleted.

Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.

Solution

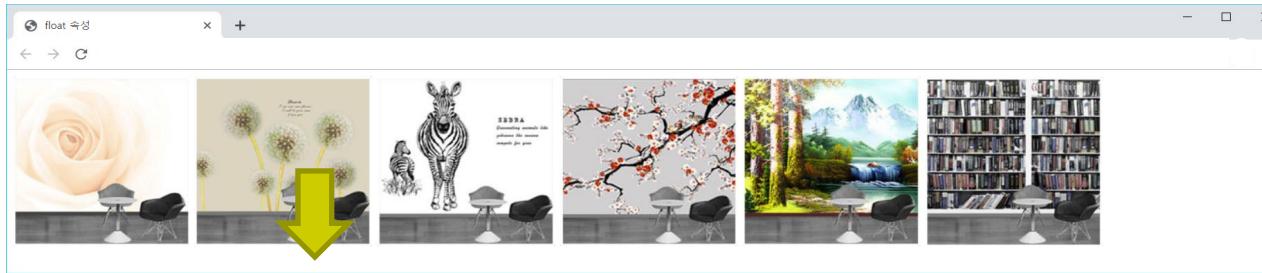
```
1 <title>clear Property example</title>
2 <style>
3   img {width : 200px; height: 140px; margin : 0px 5px;}
4   #box {border : 1px solid darkgreen; width : 500px;
5         padding : 10px 20px; margin : 10px 0px;}
6   #f1 {float : right;}
7   #f2 {float : left;}
8   #clear {clear : both;}
9 </style>
10 <body>
11   <div id="box"><h3>Azalea</h3> <div id="f1"></div>
12   <p>Often referred to as "the royalty of the garden," these elegant flowers are known for their outstanding colors and
foliage.</p>
13   <p id="clear">With thousands of varieties to choose from, Azaleas require little maintenance once planted and can be
brought inside to make a fabulous bouquet. </p></div>
14   <div id="box"><h3>Balsam</h3> <div id="f2"></div>
15   <p>Bring the tropics to your garden with a Balsam plant. Easy to care for, it thrives in shadier spots, can tolerate heat
and handle damp soil.</p>
16   <p id="clear">Flowers come in almost every color of the rainbow, including red, orange, yellow, violet, white and pink.
</p></div>
17 </body>
```

(After editing exercise5-4.html, save it as exercise5-5.html)

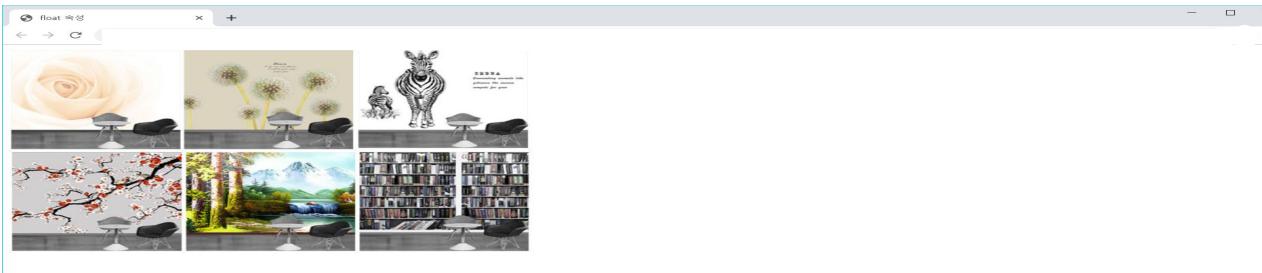
Exercise 5-6

- Using the **exercise5-6.html** file (shown on the next page), place 3 images on a single line from the left using the **float** property.

- Because of the float property, the 4th image is affected by "float: left".
- So, using the "clear" attribute, the 4th to 6th images are placed on the second line.
 - <<Hint>> Declare "#clear" and add "id=clear" to the <div> tag.



< Before modification >



< After modification >

(save after editing **exercise5-6.html**.)

Solution

```
1 <html>
2  $\square$  <head> <title>float property</title>
3   <style>
4     
5   </style>
6 </head>
7  $\square$  <body>
8   
9   
10  
11    
12   
13   
14   
15 </body>
16 </html>
```



```
1 <html>
2  $\square$  <head> <title>float property</title>
3   <style>
4     img {float : left;}
5     #clear {clear : both;}
6   </style>
7 </head>
8  $\square$  <body>
9   
10  
11  
12  <div id="clear"></div>
13  
14  
15  
16 </body>
17 </html>
```

(save after editing exercise5-6.html)

Exercise 5-7

Section 1

This is a paragraph in Section 1.

Section 2

This is a paragraph in Section 2.



Section 1 Section 2

This is a paragraph in Section 1. This is a paragraph in Section 2.



```
1  <!DOCTYPE html>
2  <html>
3  <head>
4      <meta charset="utf-8">
5      <title>div tag</title>
6  <style text="text/css">
7      #section1 { border: dotted;
8                      text-align: center;
9                      float: left; }
10     #section2 { color: blue; }
11 </style>
12 </head>
13 <body>
14 <div id="section1">
15     <h1>Section 1</h1>
16     <p>This is a paragraph in Section 1.</p>
17 </div>
18 <div id="section2">
19     <h1>Section 2</h1>
20     <p>This is a paragraph in Section 2.</p>
21 </div>
22 </body>
23 </html>
```

(save after editing exercise5-7.html)

CSS Display

- The display property specifies the display behavior (the type of rendering box) of an element.
- Some property values

property	value	Description
display	block	Assign elements in a block format
	inline	Assign an element in an inline format
	inline-block	Assign elements to factor line-block format

● Block elements

- Elements that take up a full line; A line break is added before/after it.
- examples: <h1>, <p>, <tr>, , <div>

● Inline elements

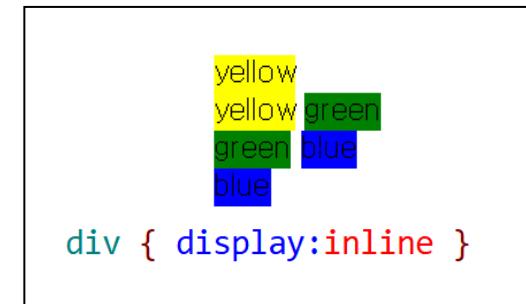
- Elements that take up as much width as necessary; Does not force a line break.
- examples: , , <a>,

Illustration

```
1 <style>
2     div { display:inline } → yellow green blue
3 </style>
4
5 <div style="background-color:yellow">yellow</div>
6 <div style="background-color:green">green</div>
7 <div style="background-color:blue">blue</div>
```

```
<style>
    div{ display:block; } → yellow
</style>           green
                           blue
```

```
1 <style>
2     div { display:inline-block } → yellow green blue
3 </style>           yellow green blue
4
5 <div style="background-color:yellow">yellow<br>yellow</div>
6 <div style="background-color:green">green<br>green</div>
7 <div style="background-color:blue">blue<br>blue</div>
```



Block Property

Lava Characters



| Yellow | Red | Pink | Brown

Lava Characters



- ✓ display:block cannot be placed next to other elements.

```
1 <html>
2 <head> <title>display block property</title>
3 <style>
4 span {display : block; background-color : lightblue;
5 width : 100px; height : 30px; margin : 10px; padding : 5px;}
6 </style>
7 </head>
8 <body>
9 <h2>Lava Characters</h2>
10 <div>
11 <span>| Yellow </span> <span>| Red </span>
12 <span>| Pink </span> <span>| Brown </span>
13 </div>
14 </body>
15 </html>
```



Lava Characters



- ✓ How do I remove the gap between "span tag"?
- You can set it to margin=0.

(After editing ex5-10.html, save it as ex5-10-1.html)

Inline Property

Lava Characters

| Yellow | Red | Pink | Brown



- <div>Elements are placed with other elements in the line
- Width and height properties are not applied
- Margin properties are applied only to <div>elements left and right

```
1 <html>
2 
```

(After editing ex5-10-1.html, save it as ex5-10-2.html)

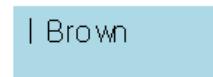
Lava Characters

| Yellow | Red | Pink | Brown

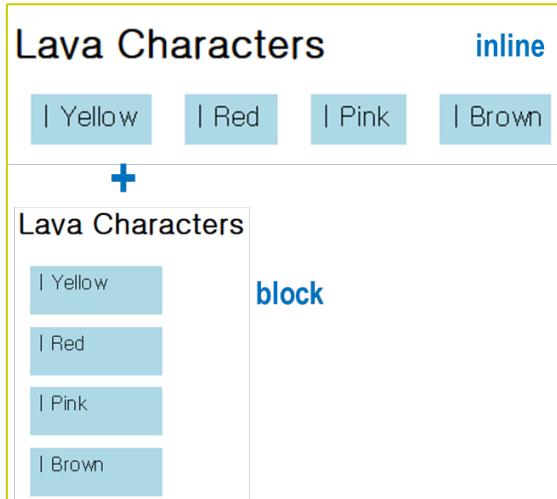
- ✓ How do I remove the gap between "span tag"?
 - You can set it to margin=0.

Inline-Block Property

Lava Characters inline-block



- ✓ "inline-block" applies to both inline and block characteristics.



```
1 <html>
2  $\square$  <head> <title>display inline-block property</title>
3 <meta name="Description" content="run it in chrome">
4  $\square$  <style>
5  $\square$  div {display : inline-block; background-color : lightblue;
6 width : 100px; height : 30px;
7 margin : 10px; padding : 5px;}
8 </style></head>
9  $\square$  <body>
10 <h2>Lava Characters</h2>
11 <div>| Yellow </div> <div>| Red </div>
12 <div>| Pink </div> <div>| Brown </div>
13 </body>
14 </html>
```

(After editing ex5-10-2.html, save it as ex5-10-3.html)

Display Property [cont.]

- Specifies the type of box used for an HTML element

display : block	display : inline	display : inline-block
Always start with a new line	It can't start on a new line and is in line	It can't start on a new line and is in line
It is not possible to place other elements next to it.	Other elements can be placed next to each other	Other elements can be placed next to each other
Width, height can be resized.	Width, height cannot be resized	Width, height can be resized.
Padding, margin adjustable	Margin-top, margin-bottom unadjustable	Padding, margin adjustable

display : none

The element will not be displayed at all (has no effect on the layout)

Example

A normal text.
a paragraph element with "inline" display
Another normal text.
A normal text. a span element with "block" display Another normal text.
A normal text.
a paragraph element with "none" display
Another normal text.



A normal text. a paragraph element with "inline" display Another normal text.
A normal text.
a paragraph element with "block" display
Another normal text.
A normal text. Another normal text.



```
1 <html>
2 ⚡<head>
3 ⚡  <style type="text/css">
4      #disp1 { background-color:red; display:inline; }
5      #disp2 { background-color:red; display:block; }
6      #disp3 { background-color:red; display:none; }
7  </style>
8 </head>
9 ⚡<body>
10     A normal text. <p id=disp1>a paragraph element with "inline" display</p>
11     Another normal text.
12     <br><br>
13     A normal text. <span id=disp2>a span element with "block" display</span>
14     Another normal text.
15     <br><br>
16     A normal text. <p id=disp3>a paragraph element with "none" display</p>
17     Another normal text.
18 </body>
19 </html>
```

(save after editing exercise5-11.html)

Example

```
1 <html>
2  
3    <style type="text/css">
4      #leftnav { width: 20%; background-color: #cfcfff; }
5      .navlink { padding: 3px 0 3px 5px; display: block; }
6    </style>
7  </head>
8  
9    <div id="leftnav">
10      <a href="index1.html" class="navlink">Home</a>
11      <a href="href.html" class="navlink">HTML</a>
12      <a href="css1.html" class="navlink">CSS</a>
13      <a href="javascript.html" class="navlink">JavaScript</a>
14    </div>
15  </body>
16 </html>
```

[Home](#) [HTML](#) [CSS](#) [Javascript](#)



[Home](#)
[HTML](#)
[CSS](#)
[JavaScript](#)



(save after editing exercise5-12.html)

Exercise 5-8

- Use the provided css3.png file to create a web page like the result screen.



[Home](#)

Examples

Reference

save it as exercise5-8.html

Position Property

- Position properties are used to place specific elements in web documents

property	value	Description
position	static	<ul style="list-style-type: none">• Default value.• Elements positioned in order, as they appear in the document flow
	relative	<ul style="list-style-type: none">• Set to relative location• Move from the default position to the relative position by the size of top, right, bottom, and left.
	absolute	<ul style="list-style-type: none">• Set to absolute position• Use page-based top, right, bottom, and left values to display in a location
	fixed	<ul style="list-style-type: none">• Set a fixed position• Position the element in the same way as the absolute positioning.• However, when you scroll through the browser window, the element does not disappear and remains in a fixed position.

Example

location settings

H
E
L
L
O



location settings

H | E | L | L | O



```
1 <html>
2   <head><title>position example</title>
3   <style>
4     div{display : inline-block; background-color : darkgreen;
5       color : #ffffff; font-size : 25pt;
6       width : 50px; height : 50px; text-align : center;}
7   </style>
8   </head>
9   <body>
10    <h2>location settings</h2>
11    <div>H</div> <div>E</div> <div>L</div>
12      <div>L</div> <div>O</div>
13    </body>
14  </html>
```

(After editing ex5-13.html, save it as ex5-13-1.html)

Solution

static positioning



location settings



```
1 <html>
2  <head><title>position example</title>
3  <style>
4    div{display : inline-block; background-color : darkgreen;
5      color : #ffffff; font-size : 25pt; width : 50px;
6      height : 50px; text-align : center;}
7 .p1 {position : static ; background-color : magenta;}
8 .p2 {position : static ; background-color : darkorange;}
9 </style>
10 </head>
11 <body>
12 <h2>static positioning</h2>
13 <div>H</div> <div class="p1">E</div> <div>L</div>
14 <div>L</div> <div class="p2">O</div>
15 </body>
16 </html>
```

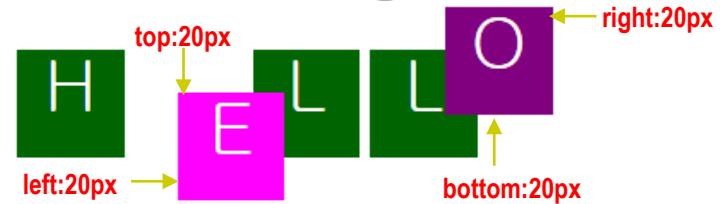
(After editing ex5-13-1.html, save it as ex5-13-2.html)

Relative Position

static positioning



location settings



- "position : relative" moves by left, right, top, and bottom values, placing them relatively.
- If top and bottom are specified at the same time, bottom is ignored.
- If left and right are specified at the same time, right is ignored.

(After editing ex5-13-2.html, save it as ex5-13-3.html)

Example: Relative Position

```
1 <html>
2 2 2 <head><title>position relative example</title>
3 2 2 <style>
4 2 2 2 div{display : inline-block; background-color : darkgreen;
5 2 2 2 color : #ffffff; font-size : 25pt; text-align : center;
6 2 2 2 width : 50px; height : 50px; }
7 2 2 2 .p1 {position : relative ; left :20px ; top : 20px;
8 2 2 2 background-color : magenta;}
9 2 2 2 .p2 {position : relative ; right : 20px ; bottom: 20px;
10 2 2 2 background-color : purple;}
11 </style></head>
12 2 <body>
13 <h2>location settings</h2>
14 <div>H</div> <div class="p1">E</div> <div>L</div>
15 <div>L</div> <div class="p2">O</div>
16 </body>
17 </html>
```

(After editing ex5-13-2.html, save it as ex5-13-3.html)

Example: Relative Position cont'd

location settings



location settings



```
1 <html>
2  $\square$  <head><title>position relative example</title>
3  $\square$    <style>
4     img {width : 200px; height : 250px;}
5     span {background-color : red;
6           color : white; width : 150px;
7           text-align : center;}
8   </style>
9 </head>
10  $\square$  <body>
11   <h2>location settings</h2>
12   
13   <span>Merry Christmas~!!</span>
14 </body>
15 </html>
```

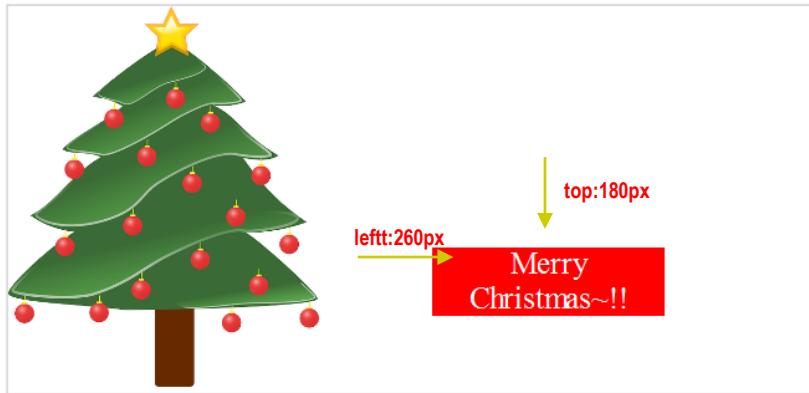


(After editing ex5-14.html, save it as ex5-14-1.html)

Absolute Position

- Pin to the absolute position of the window regardless of the size of the window (no visible when the screen is smaller)

Absolute position setting



Absolute position setting



This is the result of reducing the size of the web browser.

- It is positioned based on the location of the nearest parent element. Therefore, it is necessary to take the position of the parent element into consideration and place it where it is desired.

(After editing ex5-14-1.html, save it as ex5-14-2.html)

Example: Absolute Position

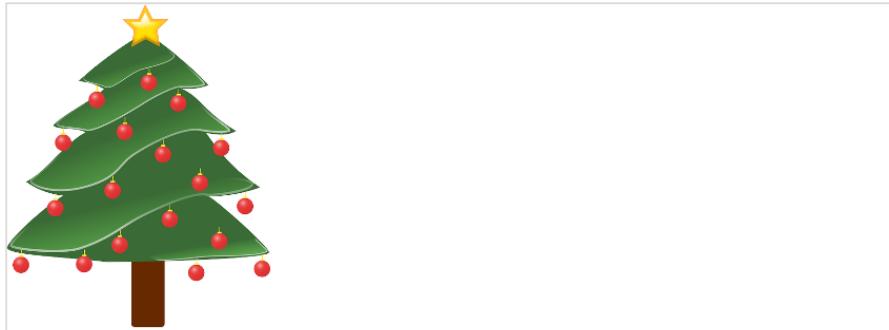
```
1 <html>
2  
```

(After editing ex5-14-1.html, save it as ex5-14-2.html)

Fixed Position

- Pin the bottom right of the window, regardless of the size of the window (even if the screen is smaller)

fixed position setting



fixed position setting



This is the result of reducing the size of the web browser.



- Fix the browser's specific location with values of left, top, right and bottom (Make the element always visible in the browser)

(After editing ex5-14-2.html, save it as ex5-14-3.html)

Example: position fixed

```
1 <html>
2  $\square$  <head><title>position fixed example</title>
3  $\square$    <style>
4     div {position : relative; border : 1px solid #cccccc;}
5     img {width : 200px; height : 250px;}
6  $\square$    span {background-color : red; color : white;
7           width : 150px; text-align : center;}
8     .p3 {position : fixed; right : 100px; bottom : 50px;}
9   </style>
10 </head>
11  $\square$  <body>
12   <h2>fixed position setting</h2>
13  $\square$    <div>
14     <span class="p3">Merry Christmas~!!</span>
15   </div>
16 </body>
17 </html>
```

(After editing ex5-14-2.html, save it as ex5-14-3.html)

Exercise 5-9 (1/3)

- Load the ex5-4.html file and complete
and save the CSS according to the following conditions.
 - ID selector #p1 attribute
 - ✓ Border : 1px solid #cccccc , All directions of padding is 20px, width 85%
 - ✓ Use relative position and set the top to 20px, Place the div tag 30px to the left
 - ID selector #p2 attribute
 - ✓ Background color : violet, Text color : white, Center aligned, width 100%
 - ✓ Use a fixed position and set the bottom to 2px, Place the div tag 1px to the left

Exercise 5-9 (2/3)

Aladdin

<Before modification>



If you imagine Aladdin in a videotape as a child, you are mistaken.

Aladdin, which has emerged as the hottest musical in New York, is Klook's first pick!

If you listen to the splendid stage directing of Disney Productions that you can't take your eyes off of and the familiar music that you've heard before, you'll fall in love with the performance in an instant.

Aladdin, a musical that sings of infinite possibilities with one lamp and three wishes, is the best for everyone from adults to children.

A new song created for the musical by Oscar-winning composer Alan Menken also provides another level of enjoyment.

Aladdin's performance runs until July 7, 2022.

Aladdin

<After modification>



If you imagine Aladdin in a videotape as a child, you are mistaken.

Aladdin, which has emerged as the hottest musical in New York, is Klook's first pick!

If you listen to the splendid stage directing of Disney Productions that you can't take your eyes off of and the familiar music that you've heard before, you'll fall in love with the performance in an instant.

Aladdin, a musical that sings of infinite possibilities with one lamp and three wishes, is the best for everyone from adults to children.

A new song created for the musical by Oscar-winning composer Alan Menken also provides another level of enjoyment.

Aladdin's performance runs until July 7, 2022.

(save after editing exercise5-9.html.)

Exercise 5-9 (3/3)

```
1  <head> <title>Position</title>
2  <style>
3      #p1 {border : 1px solid #cccccc; padding : 20px; width : 85%; top : 20px ; left : 30px;}
4      #p2 { width : 100%; bottom: 2px; left : 1px;}
5  </style>
6 </head>
7 <body>
8 <h2>Aladdin</h2>
9 <div id="p1"> 
10 <p><em>If you imagine Aladdin in a videotape as a child, you are mistaken.</em><br>
11 Aladdin, which has emerged as the hottest musical in New York, is Klook's first pick! <br>
12 If you listen to the splendid stage directing of Disney Productions that you can't take your eyes off of
13 <br>and the familiar music that you've heard before, you'll fall in love with the performance in an instant.<br></p>
14 <p>Aladdin, a musical that sings of infinite possibilities with one lamp and three wishes, is the best for everyone from
15 adults to children.<br>
16 A new song created for the musical by Oscar-winning composer Alan Menken also provides another level of
17 enjoyment.</p>
18 </div>
19 <div id="p2">Aladdin's performance runs until July 7, 2022.</div>
20 </body>
```

- p1 is relative position, p2 is absolute position.
- p2 sets the background color to violet, the text color to white, and center alignment.
- After adding the style, Save it as exercise5-9.html.

End of Class

