



Web programming I

Section 7

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The Element Box

In CSS, every HTML element is considered a **box**,
and that box is made up of **four layers**:

- **Content** → the actual text or image inside.
- **Padding** → space between content and border.
- **Border** → the frame around the padding.
- **Margin** → space outside the border, separating elements.

example

```
Welcome 12.html X
< 12.html > < html > < head > < style > &gt; div
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <meta charset="UTF-8">
5  <title>CSS Box Model</title>
6  <style>
7  div {
8      width: 200px;          /* content width */
9      background-color: #ffe4b5; /* content background */
10
11     padding: 20px;         /* inside spacing */
12     border: 5px solid orange; /* border thickness */
13     margin: 30px;          /* space outside */
14 }
15 </style>
16 </head>
17
18 <body>
19   <h2>CSS Box Model Example</h2>
20   <div>
21     This is a simple box.
22     The text inside is the **content**,
23     around it is the **padding**,
24     then the **border**,
25     and outside is the **margin**.
26   </div>
27 </body>
28 </html>
29
```

12.0.0.1:5500/12.html

CSS Box Model Example

This is a simple box. The text inside is the **content**, around it is the **padding**, then the **border**, and outside is the **margin**.

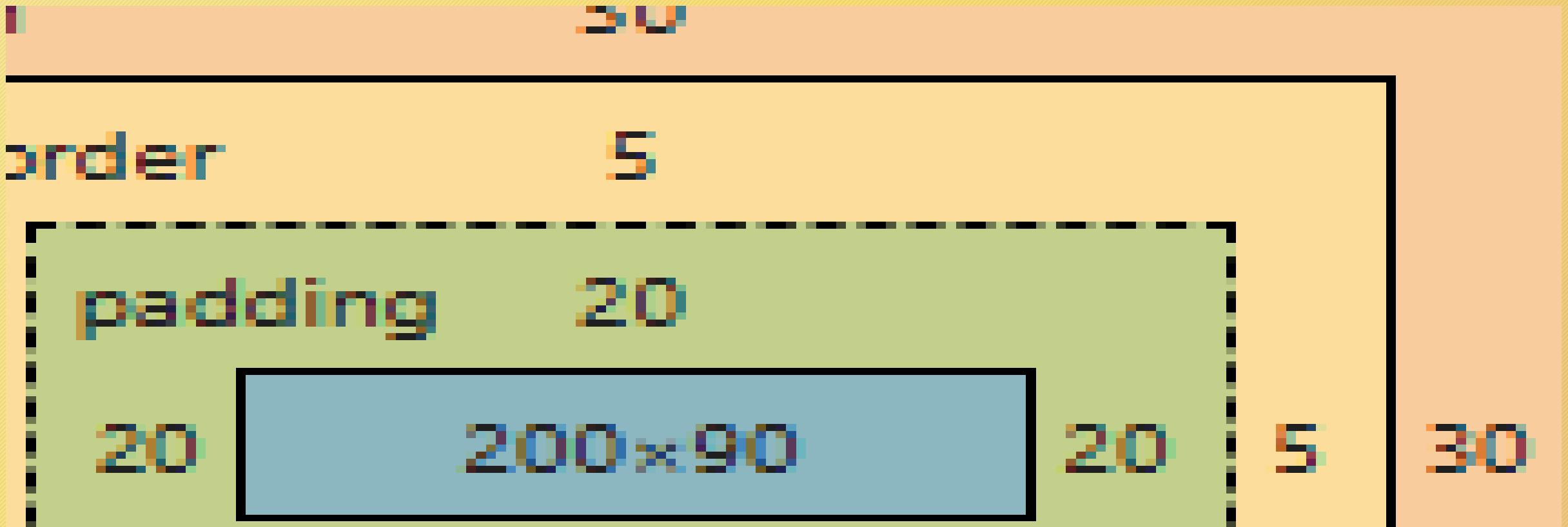
The diagram illustrates the CSS Box Model with four nested rectangular layers:

- Outermost layer (orange)**: margin, value 30px.
- Second layer (yellow)**: border, value 5px.
- Third layer (green)**: padding, value 20px.
- Innermost layer (blue)**: content, value 200x90px.

Dimensions for each side (top, bottom, left, right) are labeled: top-left: 30, top-right: 5, bottom-left: 20, bottom-right: 20, left: 5, right: 5, bottom: 30.

CSS Padding

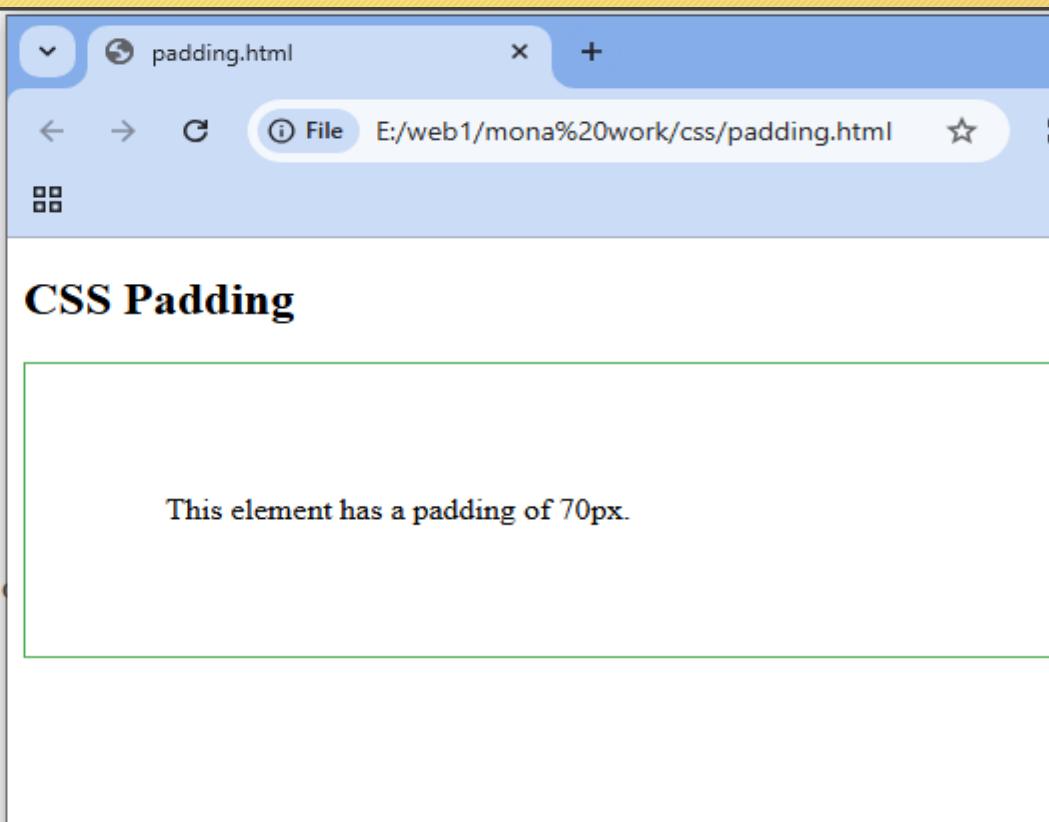
- Padding is used to create space around an element's content, inside of any defined borders.



CSS Margins

- Margins are used to create space around elements, outside of any defined borders.

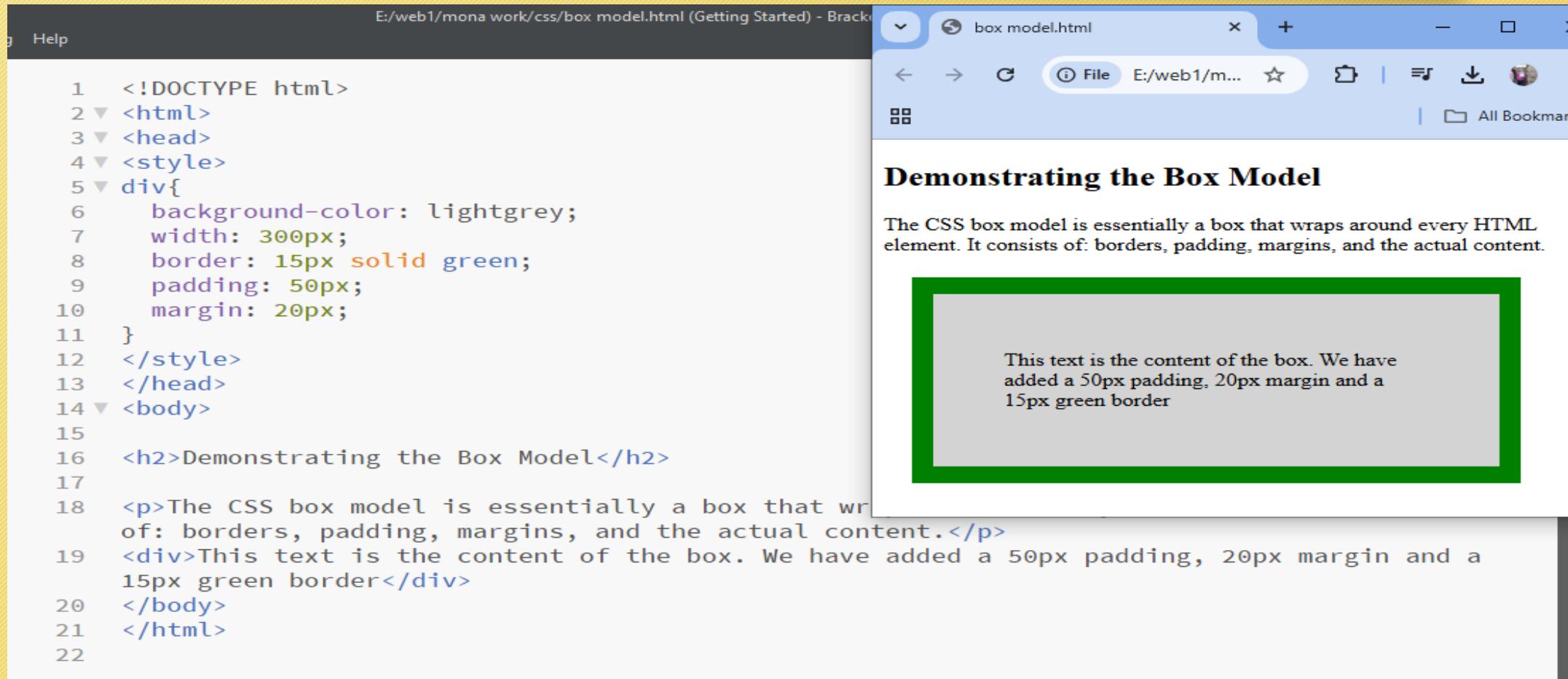
```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <style>
5  div {
6      padding: 70px;
7      border: 1px solid #4CAF50;
8  }
9  </style>
10 </head>
11 <body>
12
13 <h2>CSS Padding</h2>
14 <div>This element has a padding
15
16 </body>
17 </html>
```



Total Element Size

- Total width of an element =
width + padding-left + padding-right + border-left + border-right +
margin-left + margin-right

example



The screenshot shows a code editor on the left and a web browser on the right. The code editor displays the following HTML and CSS code:

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <style>
5 <div{
6   background-color: lightgrey;
7   width: 300px;
8   border: 15px solid green;
9   padding: 50px;
10  margin: 20px;
11 }
12 </style>
13 </head>
14 <body>
15
16 <h2>Demonstrating the Box Model</h2>
17
18 <p>The CSS box model is essentially a box that wraps around every HTML element. It consists of: borders, padding, margins, and the actual content.</p>
19 <div>This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border</div>
20 </body>
21 </html>
22
```

The browser window shows the resulting page with the title "box model.html". The page contains the heading "Demonstrating the Box Model" and a paragraph explaining the box model. A large green-bordered box is displayed below, containing the text "This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border".

CSS Display Property

- The CSS display property is used to adjust the layout of an element (whether it appears as a block, inline, flex container, grid, etc.)
- the syntax of display **Display:value**
- **Inline:** Displays an element as an inline element
- **Block:** Displays an element as block element
- **Inline-block :** formats the element as inline-level but also allows to set height/width like block-level element
- **flex :** sets the element as a flex container to have a flexible layout of its child elements (one column or one row)
- **Grid :** sets the element as a grid container to create complex layouts (both column and row)

In-line example

The screenshot shows the Brackets IDE interface with an open file named `display.html`. The code editor displays the following HTML and CSS:

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <style>
5        div {
6          border: 2px solid black;
7          margin-bottom: 12px;
8          padding: 4px;
9        }
10
11  div.after {
12    display: inline;
13  }
14  </style>
15  </head>
16  <body>
17  <h2>Before display: inline</h2>
18  <div>I am a first div element.</div>
19  <div>I am a second div element.</div>
20
21  <!-- Adding display: inline in divs -->
22
23  <h2>After display: inline</h2>
24  <div class="after">I am a first div element.</div>
25  <div class="after">I am a second div element.</div>
26
27  </body>
</html>
```

The status bar at the bottom indicates "Line 15, Column 12 — 27 Lines".

To the right of the code editor is a browser window titled "display.html" showing the rendered content. The browser output is divided into two sections:

- Before display: inline:** Contains two separate `<div>` elements, each with a border and margin.
 - I am a first div element.
 - I am a second div element.
- After display: inline:** Contains two `<div>` elements merged into a single horizontal line, each with a border and margin.
 - I am a first div element.
 - I am a second div element.

The system tray at the bottom right shows the date and time as "8°C مشمس ENG 7:50 AM".

CSS Display Block

E:/web1/mona work/css/display.html (Getting Started) - Brackets

Working Files

- 1.html – svg
- form.html
- s.css
- m.css
- style.css
- inline.html
- colors.html – css
- outline.html
- display.html

Getting Started

- screenshots
- index.html
- main.css

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <style>
5  div {
6      border: 2px solid black;
7      margin-bottom: 12px;
8      padding: 4px;
9  }
10 </style>
11 <div>
12     display: inline;
13 </div>
14 </head>
15 <body>
16 <h2>Before display: inline</h2>
17 <div>I am a first div element.</div>
18 <div>I am a second div element.</div>
19
20     
21
22 <h2>After display: inline</h2>
23 <div class="after">I am a first div element.</div>
24 <div class="after">I am a second div element.</div>
25
26 </body>
27 </html>
```

Line 15, Column 12 — 27 Lines

INS UTF-8 HTML Spaces: 4

Search

display.html

All Bookmarks

Before display: inline

I am a first div element.

I am a second div element.

After display: inline

I am a first div element. I am a second div element.

8°C مشرقي ENG 7:50 AM

CSS inline-block element

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <style>
5  span {
6      width: 60px;
7      height: 30px;
8      padding: 10px;
9      margin: 20px;
10
11     border: 2px solid black;
12     background-color: greenyellow;
13 }
14 span.after {
15     display: inline-block;
16 }
17 </style>
18 </head>
19 <body>
20 <h2>Before display: inline-block</h2>
21 <p>
22     In this paragraph, the <span>span</span> element is color in
23     green-yellow color. The width and height don't work, the padding
24     value doesn't push surrounding content away, and the top/bottom
25     margins don't work.
26 </p>
27 <!-- Adding display: inline-block the divs -->
28 <h2>After display: inline-block</h2>
29 <p>
30     In this paragraph, the <span>span</span> element is color in
```

The screenshot shows a web browser window titled "display.html". The address bar indicates the file is located at "E:/web1/mona%20...". The browser interface includes standard controls like back, forward, and search.

Before display: inline-block

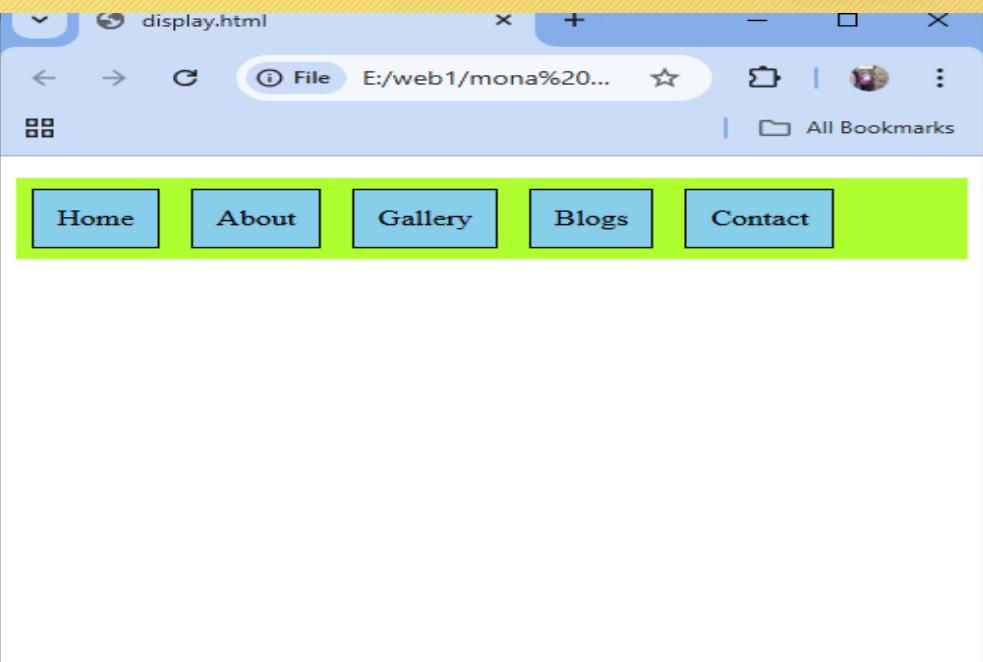
In this paragraph, the span element is color in green-yellow color. The width and height don't work, the padding value doesn't push surrounding content away, and the top/bottom margins don't work.

After display: inline-block

In this paragraph, the span element is color in green-yellow color. The width and height work, the padding value push surrounding content away, and the top/bottom margins work.

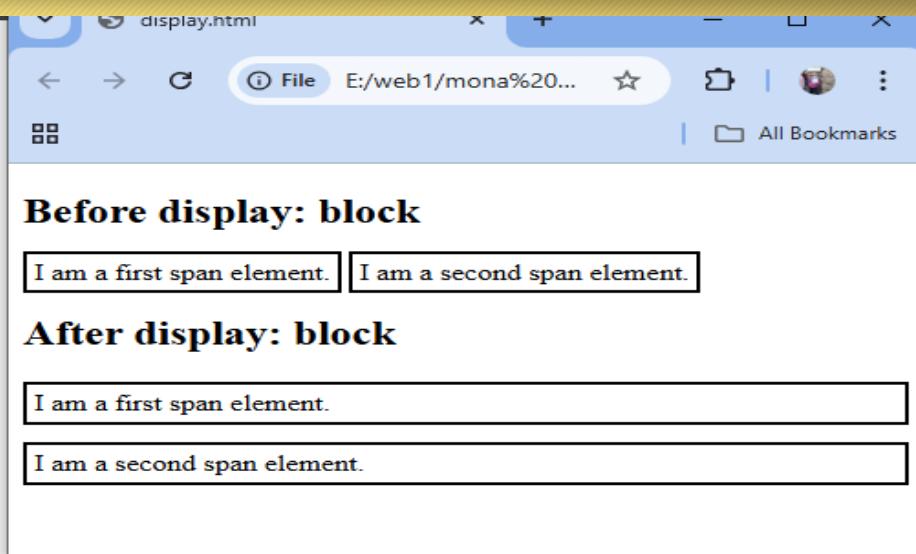
CSS flex

```
1  <!DOCTYPE html>
2  <html>
3  <head>
4  <style>
5  ul.parent {
6      display: flex;
7      background-color: greenyellow;
8      padding: 0px;
9  }
10
11 li {
12     background: skyblue;
13     border: 1px solid black;
14     padding: 12px;
15     margin: 8px;
16     list-style: none;
17 }
18 </style>
19 </head>
20 <body>
21 <ul class="parent">
22     <li>Home</li>
23     <li>About</li>
24     <li>Gallery</li>
25     <li>Blogs</li>
26     <li>Contact</li>
27 </ul>
28 </body>
29 </html>
```



CSS inline-block element

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <style>
5        span {
6          border: 2px solid black;
7          margin-bottom: 12px;
8          padding: 4px;
9        }
10
11     span.after {
12       display: block;
13     }
14   </style>
15   </head>
16   <body>
17     <h2>Before display: block</h2>
18     <span>I am a first span element.</span>
19     <span>I am a second span element.</span>
20
21     <!-- Adding display: block in spans-->
22
23     <h2>After display: block</h2>
24     <span class="after">I am a first span element.</span>
25     <span class="after">I am a second span element.</span>
26   </body>
27 </html>
```



CSS flex

```
1  <!DOCTYPE html>
2  <html>
3    <head>
4      <style>
5        span {
6          width: 60px;
7          height: 30px;
8          padding: 10px;
9          margin: 20px;
10
11         border: 2px solid black;
12         background-color: greenyellow;
13     }
14   span.after {
15     display: inline-block;
16   }
17 </style>
18 </head>
19 <body>
20 <h2>Before display: inline-block</h2>
21 <p>
22   In this paragraph, the <span>span</span> element is color in
23   green-yellow color. The width and height don't work, the padding
24   value doesn't push surrounding content away, and the top/bottom
25   margins don't work.
26 </p>
27 <!-- Adding display: inline-block the divs -->
28 <h2>After display: inline-block</h2>
29 <p>
```

display.html

Before display: inline-block

In this paragraph, the span element is color in green-yellow color. The width and height don't work, the padding value doesn't push surrounding content away, and the top/bottom margins don't work.

After display: inline-block

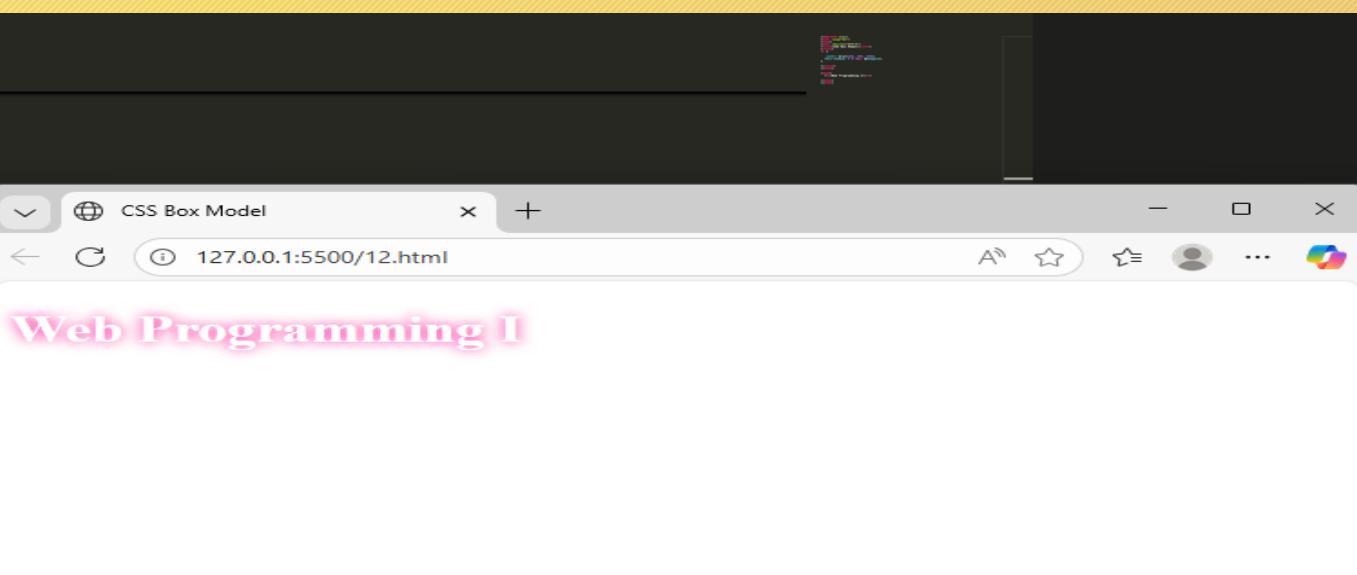
In this paragraph, the span element is color in green-yellow color. The width and height work, the padding value push surrounding content away, and the top/bottom margins work.

CSS Shadow

- With CSS you can add shadow to text and to elements.
- In these chapters you will learn about the following properties:
 - ✓ `text-shadow`
 - ✓ `box-shadow`

Text shadow

- Text-shadow adds a shadow behind the text.
It is used to create effects like glow, depth, neon, 3D, or blurry soft shadows.
- Syntax: ***text-shadow: offset-x offset-y blur-radius color;***



A screenshot of a web browser window titled "CSS Box Model". The address bar shows the URL "127.0.0.1:5500/12.html". The page content is a single heading: "Web Programming I". The text is colored pink (#ff00ff) and has a text shadow applied, appearing as a darker pink glow around the letters. To the left of the browser window, there is a code editor displaying the HTML and CSS code for this page.

```
<12.html > html > head > style > h1
2   <html lang="en">
3   <head>
4     <title>CSS Box Model</title>
5   <style>
6     h1 {
7       color: #ff00ff;
8       text-shadow: 0 0 10px #deppink;
9     }
10
11   </style>
12 </head>
13
14 <body>
15   <h1>Web Programming I</h1>
16
17 </body>
18 </html>
19
20
21
```

10 effects example

```
12.html > html > head > style > .fire
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4  <meta charset="UTF-8">
5  <title>Text Shadow Effects</title>
6  <style>
7  body {
8      background-color: #000;
9      font-family: Arial, sans-serif;
10     text-align: center;
11     padding: 40px;
12     color: white;
13 }
14
15 /* ===== 1. Soft Shadow ===== */
16 .soft {
17     font-size: 50px;
18     text-shadow: 2px 2px 5px rgba(255,255,255,0.3);
19 }
20
21 /* ===== 2. Neon Pink ===== */
22 .neon {
23     font-size: 50px;
24     color: #ff66cc;
25     text-shadow: 0 0 10px #ff66cc, 0 0 20px #ff66cc, 0 0 40px #ff0088;
26 }
27
28 /* ===== 3. 3D Shadow ===== */
29 .threed {
30     font-size: 50px;
31     text-shadow: 4px 4px 0 #555, 8px 8px 0 #777;
32 }
33
34
35 /* ===== 4. Glow Blue ===== */
36 .glow {
37     font-size: 50px;
38     color: #66ccff;
39     text-shadow: 0 0 15px #66ccff;
40 }
41
42 /* ===== 5. Retro Shadow ===== */
43 .retro {
44     font-size: 50px;
45     color: #ffdd00;
46     text-shadow: 4px 4px 0px #ff5500;
47 }
48
49 /* ===== 6. Embossed (Raised Text) ===== */
50 .emboss {
51     font-size: 50px;
52     text-shadow: -2px -2px 3px #fff, 2px 2px 3px #444;
53 }
54
55 /* ===== 7. Outer Glow White ===== */
56 .whiteglow {
57     font-size: 50px;
58     color: #ffff;
59     text-shadow: 0 0 15px #rgba(255,255,255,0.8);
60 }
61
62 /* ===== 8. Double Shadow ===== */
63 .double {
64     font-size: 50px;
65     text-shadow: 3px 3px 5px #ff00aa, -3px -3px 5px #00ccff;
66 }
67
68 /* ===== 9. Deep Shadow ===== */
69 .deep {
70     font-size: 50px;
71     text-shadow: 6px 6px 10px rgba(0,0,0,0.8);
72 }
73
74 /* ===== 10. Fire Text ===== */
75 .fire {
76     font-size: 50px;
77     color: #f3300;
78     text-shadow:
79         0 0 10px #ff6600,
80         0 0 20px #ff3300,
81         0 0 30px #ff0000,
82         0 0 40px #ff2200;
83 }
84
85 </style>
86 </head>
87
88 <body>
89
90     <h1 class="soft">Soft Shadow</h1>
91     <h1 class="neon">Neon Pink</h1>
92     <h1 class="threed">3D Shadow</h1>
93     <h1 class="glow">Glow Blue</h1>
94     <h1 class="retro">Retro Shadow</h1>
95     <h1 class="emboss">Embossed</h1>
96     <h1 class="whiteglow">White Glow</h1>
97     <h1 class="double">Double Shadow</h1>
98     <h1 class="deep">Deep Shadow</h1>
99     <h1 class="fire">Fire Glow</h1>
100
101 </body>
102 </html>
```

output

Soft Shadow

Neon Pink

3D Shadow

Glow Blue

Retro Shadow

Embossed

White Glow

Double Shadow

Deep Shadow

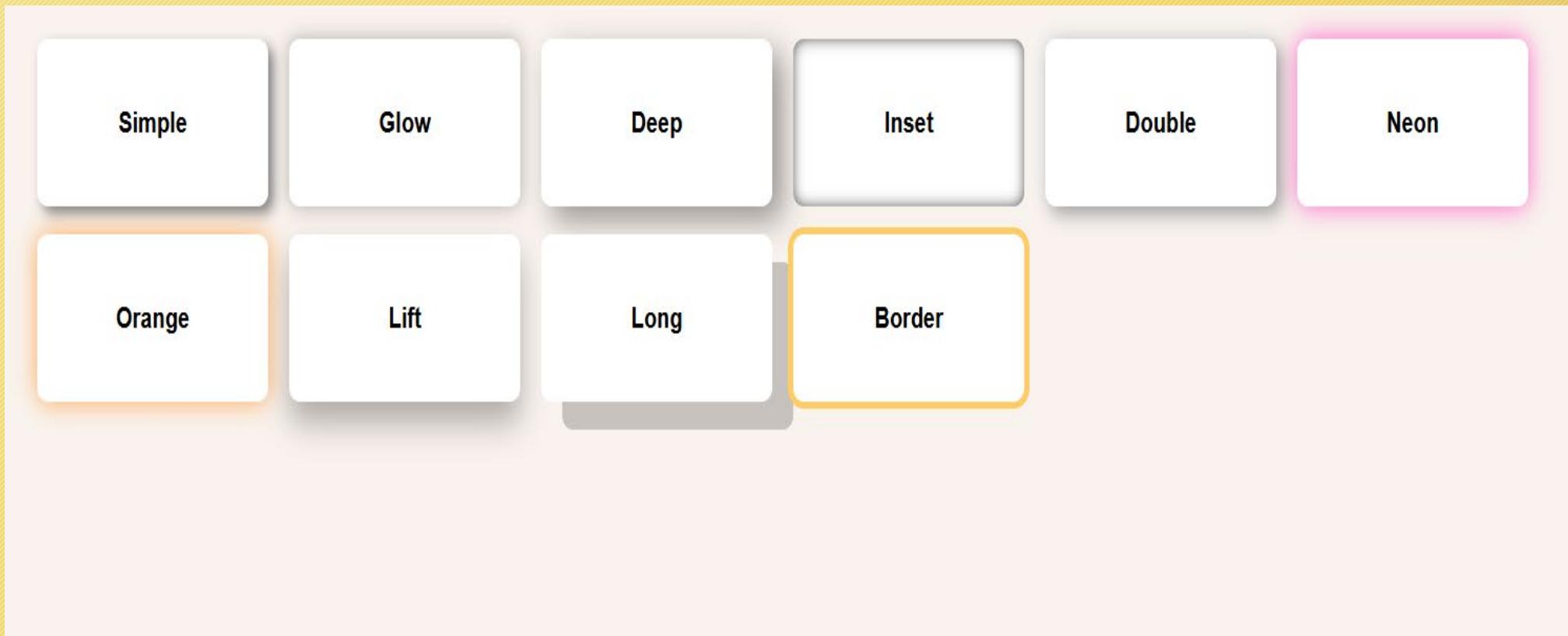
Fire Glow

Box shadow

- The box-shadow property adds a **shadow effect** around an element's box. You can control its **position, blur, spread, and color**.
- syntax

box-shadow: offset-x offset-y blur-radius spread-radius color;

example



```
.box {
  width: 220px;
  height: 120px;
  background: white;
  border-radius: 10px;
  display: flex;
  align-items: center;
  justify-content: center;
  font-weight: bold;
  font-size: 20px;
}

/* 1 - Simple */
.s1 { box-shadow: 5px 5px 10px gray; }

/* 2 - Soft Glow */
.s2 { box-shadow: 0 0 15px rgba(0,0,0,0.3); }

/* 3 - Deep Shadow */
.s3 { box-shadow: 10px 10px 25px rgba(0,0,0,0.4); }

/* 4 - Inner Shadow */
.s4 { box-shadow: inset 0 0 10px #5555; }

/* 5 - Double Shadow */
.s5 { box-shadow: 5px 5px 15px #999, -5px -5px 15px #eeee; }

/* 6 - Neon Glow */
.s6 { box-shadow: 0 0 20px #ff66cc; }

/* 7 - Soft Orange */
.s7 { box-shadow: 0 0 20px rgba(255,150,50,0.8); }

/* 8 - Lift Effect */
.s8 { box-shadow: 0 15px 25px rgba(0,0,0,0.3); }

/* 9 - Flat Long Shadow */
.s9 { box-shadow: 20px 20px 0 rgba(0,0,0,0.2); }

/* 10 - Border-like Shadow */
.s10 { box-shadow: 0 0 0 5px #ffcc66; }
```