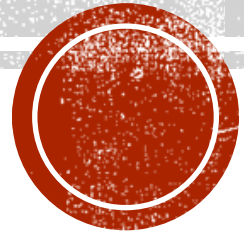
CSS BOX MODEL



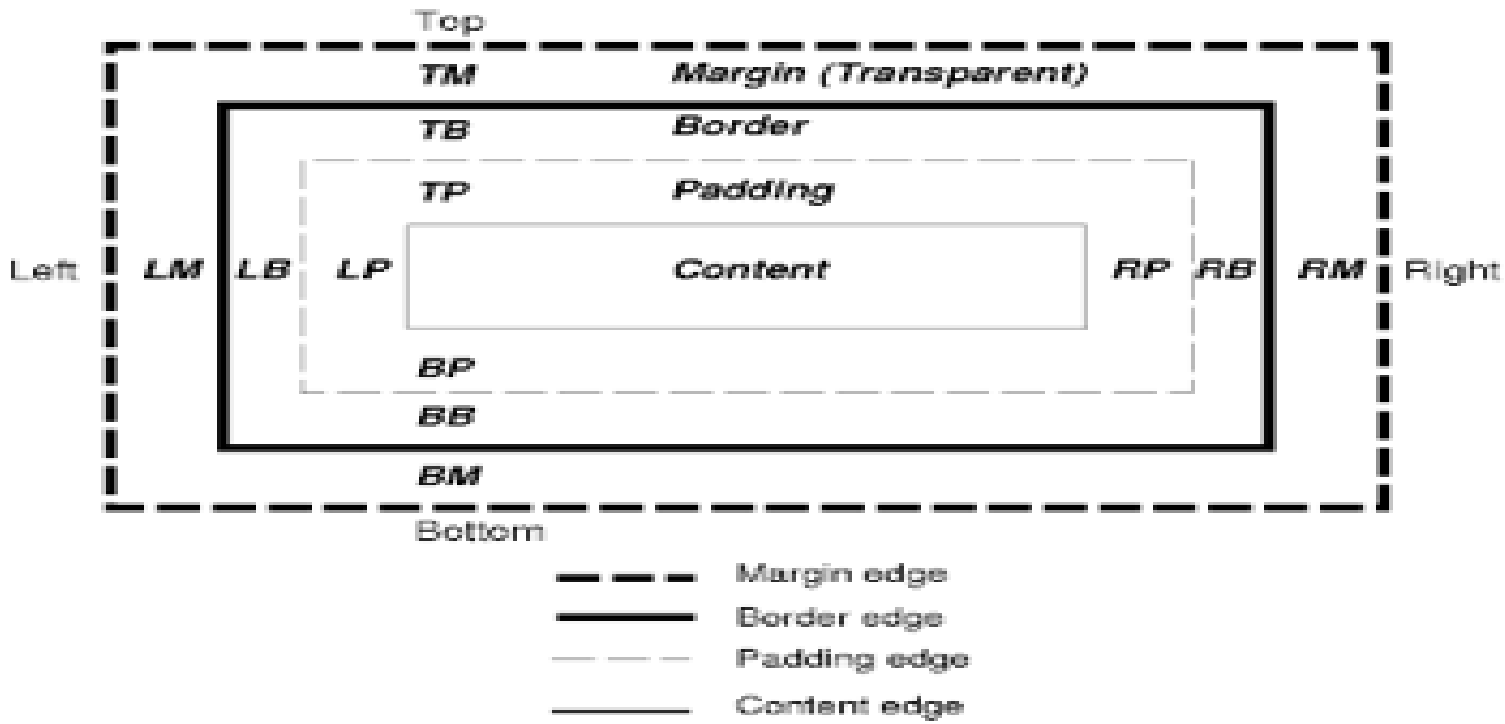
CSS BOX MODEL

- The CSS Box Model defines how elements are sized, positioned, and rendered on a webpage.
- When a browser loads an HTML document, it creates a DOM tree and assigns a box to each element.
- This box calculates the element's dimensions and position relative to its parent or the root <html> element, ensuring accurate layout and spacing.
- box model is the basic building block of CSS.
- every element in web design is a rectangular box

BOX MODEL COMPONENT LAYOUT

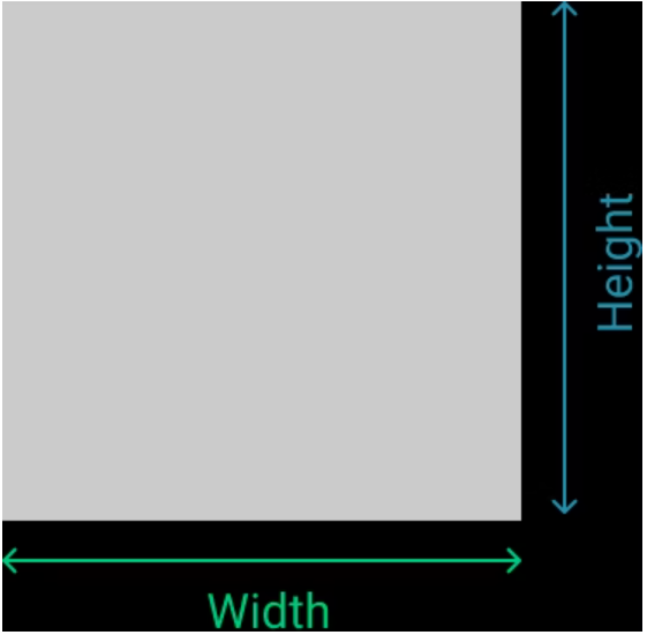
- Content - The content of the box, where text and images appear (**height and width),**
- Padding - Clears an area around the content. The padding is transparent
- Border - A border that goes around the padding and content
- Margin - Clears an area outside the border. The margin is transparent

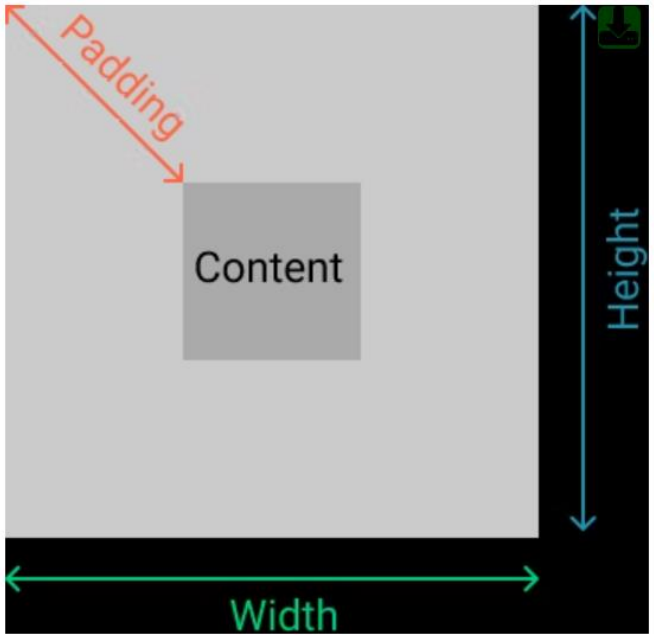
BOX MODEL COMPONENT LAYOUT

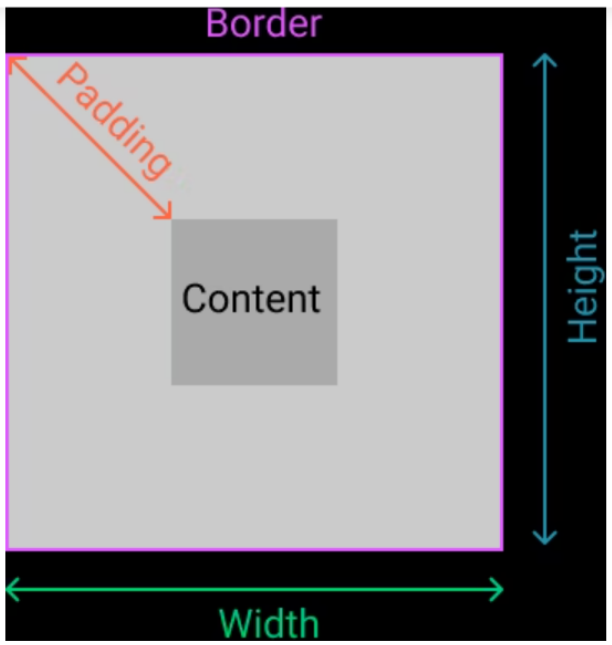


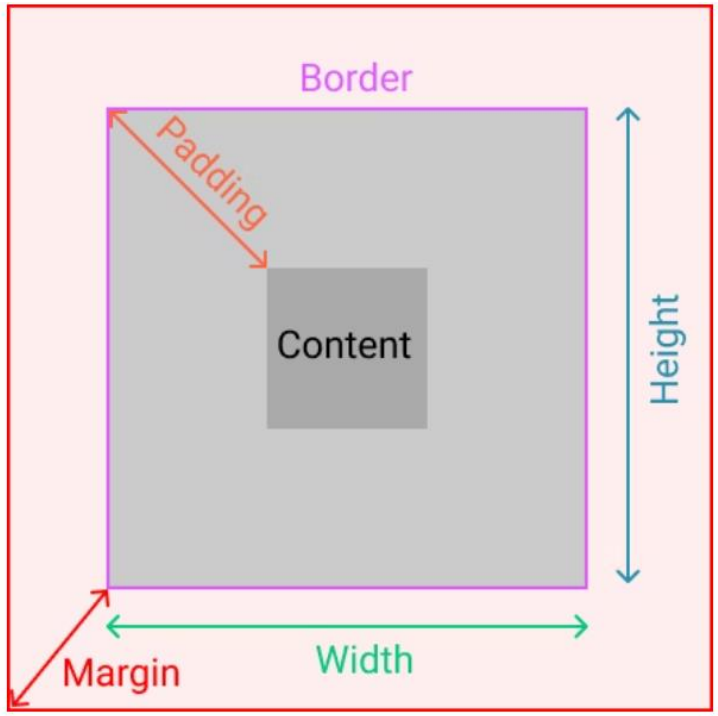
THE CSS BOX MODEL (CONT.)

- width = content width + L/R padding + L/R border + L/R margin
- height = content height + T/B padding + T/B border + T/B margin


Height
Width


Padding
Content
Height
Width


Border
Padding
Content
Height
Width


Border
Padding
Content
Height
Margin
Width

BOX MODEL

```
<!DOCTYPE html>
<html>
<head>
<style>
div {
 background-color: lightgrey;
 width: 300px;
 border: 15px solid green;
 padding: 50px;
 margin: 20px;
}
</style>
</head>
<body>
<h2>Demonstrating the Box Model</h2>
<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>

<div>This text is the content of the box. We have added a 50px padding, 20px margin

and a 15px green border. Ut enim ad minim veniam, quis nostrud exercitation ullamco

laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in

reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur.

Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt

mollit anim id est laborum.</div>

</body>

</html>
```

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Demonstrating the Box Model

The CSS box model is essentially a box that wraps around every HTML element. It consists of: borders, padding, margins, and the actual content.

This text is the content of the box. We have added a 50px padding, 20px margin and a 15px green border. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum.

Type here to search

31°C

ENG

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21-01-2024

WIDTH AND HEIGHT OF AN ELEMENT

- Assume that you had only 250px of space. Let's make an element with a total width of 250px:
- Example
- width:320px;
  padding:10px;
  border:5px solid gray;
  margin:0px;

The total width of an element should be calculated like this:

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

The total height of an element should be calculated like this:

- Total element height = height + top padding + bottom padding + top border + bottom border + top margin + bottom margin

WIDTH AND HEIGHT OF AN ELEMENT

- In order to set the width and height of an element correctly in all browsers, you need to know how the box model works.
- Here is the calculation: 320px (width) + 20px (left + right padding) + 10px (left + right border) + 0px (left + right margin) = 350px

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file:///F:/Web_Prog/Codes/Module_1/lab/manual/css3.html

Calculate the total width:

The picture above is 350px wide. The total width of this element is also 350px.

Type here to search

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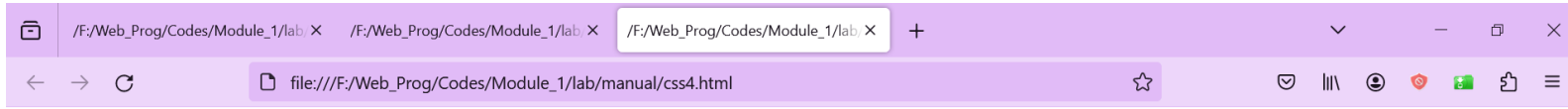
```
<style>
div {
  border: 1px solid black;
  margin-top: 100px;
  margin-bottom: 100px;
  margin-right: 150px;
  margin-left: 80px;
  background-color: lightblue;
}
</style>
</head>
<body>
<h2>Using individual margin properties</h2>
<div>This div element has a top margin of 100px, a right margin of 150px, a bottom margin of 100px, and a left margin of 80px.</div>
</body>
```



Using individual margin properties

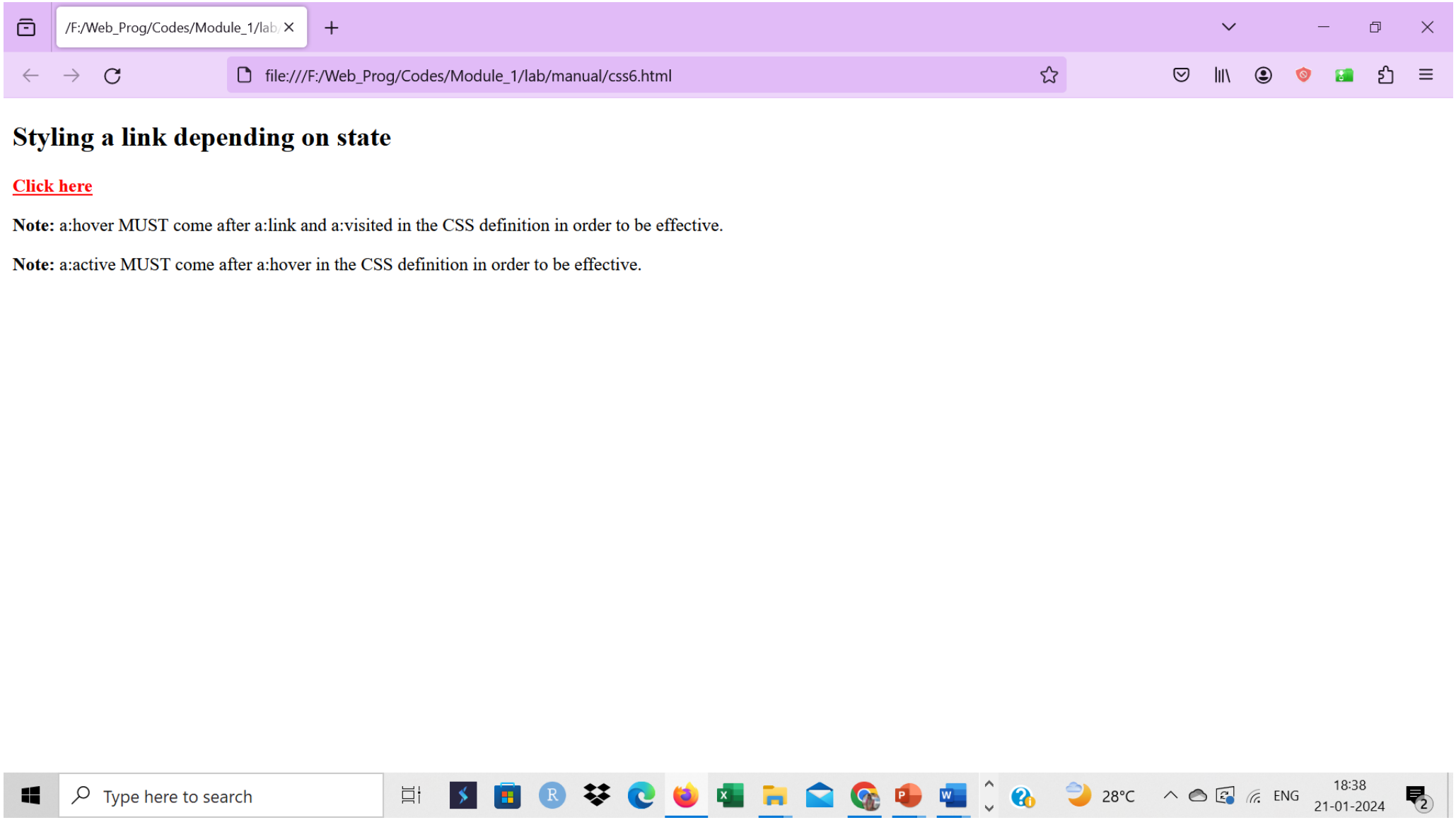
This div element has a top margin of 100px, a right margin of 150px, a bottom margin of 100px, and a left margin of 80px.

CSS LINKS

- links can be styled in many different ways.
- links can be styled differently depending on what state they are in.
- The four links states are:
- 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

LINKS

```
<!DOCTYPE html>
<html>
<head>
<style>
/* unvisited link */
a:link {
  color: red;
}
/* visited link */
a:visited {
  color: green;
}
/* mouse over link */
a:hover {
  color: hotpink;
}
/* selected link */
a:active {
  color: blue;
}
</style>
</head>
```


/F:/Web_Prog/Codes/Module_1/lab/
file:///F:/Web_Prog/Codes/Module_1/lab/manual/css6.html
Styling a link depending on state
Click here
Note: a:hover MUST come after a:link and a:visited in the CSS definition in order to be effective.
Note: a:active MUST come after a:hover in the CSS definition in order to be effective.
Type here to search
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18:38
21-01-2024

LIST

```
<head>
<style>
ol {
  background: #ff9999;
  padding: 20px;
}
ul {
  background: #3399ff;
  padding: 20px;
}
ol li {
  background: #ffe5e5;
  color: darkred;
  padding: 5px;
  margin-left: 35px;
}
ul li {
  background: #cce5ff;
  color: darkblue;
  margin: 5px;
}
</style>
</head>
<body>
<h1>Styling Lists With Colors</h1>
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Coca Cola</li>
</ol>
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Coca Cola</li>
</ul>
</body>
</html>
```

Styling Lists With Colors

1. Coffee
2. Tea
3. Coca Cola

- Coffee
- Tea
- Coca Cola