Course name:O level   **SUBJECT:WEB DESIGNING AND PUBLISHING**

Topic:CSS   **DATE:27/3/2020**

The CSS Box Model

All HTML elements can be considered as boxes. In CSS, the term "box model" is used when talking about design and layout.

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

Explanation of the different parts:

- **Content** - The content of the box, where text and images appear
- **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

The box model allows us to add a border around elements, and to define space between elements.

Example

Demonstration of the 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>
```

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.

Important: When you set the width and height properties of an element with CSS, you just set the width and height of the **content area**. To calculate the full size of an element, you must also add padding, borders and margins.

Example

This <div> element will have a total width of 350px:

```
<!DOCTYPE html>
<html>
<head>
<style>
div {
  width: 320px;
  padding: 10px;
  border: 5px solid gray;
  margin: 0;
}
</style>
</head>
<body>

<h2>Calculate the total width:</h2>

<img src="klematis4_big.jpg" width="350" height="263" alt="Klematis">
<div>The picture above is 350px wide. The total width of this element is also
350px.</div>

</body>
</html>
```

Here is the calculation:

320px (width)
+ 20px (left + right padding)
+ 10px (left + right border)
+ 0px (left + right margin)
= 350px

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

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Assignments

1.what is box model in CSS?

2.how to display box model in CSS?