COURSEWARE

Spatial Attributes

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Overview

Spaital attributes in HTML include the margins, borders, and padding of HTML elements, which can assist us in formatting our content in a meaningful and pleasing way to the end user.

Box model

The **Box model** asserts that all HTML elements can be considered as boxes, or at the very least that every HTML element has a box-shaped margin.

This can be handy for conceptually laying out the information we store on a Web page, as well as being inherently useful for styling.

The Box model asserts that each element contains four layers of information, arranged in a concentric-box shape:

Box model

Each of these four layers have different roles:

- The `margin` is a transparent area around the outside of the content, allowing for easily spacing elements apart
- The `border` encases the padding and content, and can be coloured
- The `padding` is a transparent area around the content itself, which can be useful for spacing content apart within a `border`
- The `content` is the actual information stored within the HTML tag

(*note: the `border`, `padding` and `content` are all affected by the `background` colour of an element.*)

Margin and border properties

All HTML elements have four sides – `top`, `bottom`, `left` and `right`.

Properties can be set for each dimension or in a compound rule in CSS`:

```
{
  margin: 10px; /*10px in all directions*/
  margin: 10px 5px; /*10px top and bottom, 5px left and right*/
  margin: 0px 5px 10px 15px; /*top, left, bottom, right*/
  margin-bottom: 2em; /*Individual direction*/
}
```

- `margin` - The space between the border of the element and other elements in the window. If left unset, the browser defines the margin.
- `width` and `height` - The dimensions of the box; if left undefined, these dimensions are determined by the browser
- `padding` - The space between the border and the content; if left undefined the size is set to 0

- `background` - The space behind the content and padding of the element; can be transparent, a solid colour, one or more background images, or a background gradient
- `border` - A ruled line that surrounds the element; can be set separately on each side; can be a colour, image, or styled (e.g. dotted); if left undefined the size is set to 0

Border-box model

When you set the `width` and `height` properties of an element with CSS you only set them for the `content` area.

The full size of an element is determined by adding together all four layers of the element (`width`+ 2(`padding`) + 2(`border`) + 2(`margin`)).

Here, the total `width` of the space the element takes up is 300 pixels:

```
{
  width: 250px;
  padding: 10px;
  border: 5px solid gray;
  margin: 10px;
}
```

Tutorial

There is no tutorial for this module.

Exercises

There are no exercises for this module.