Box Model, Border, Margin, Padding

Cascading Style Sheets (CSS3)

Table of Content
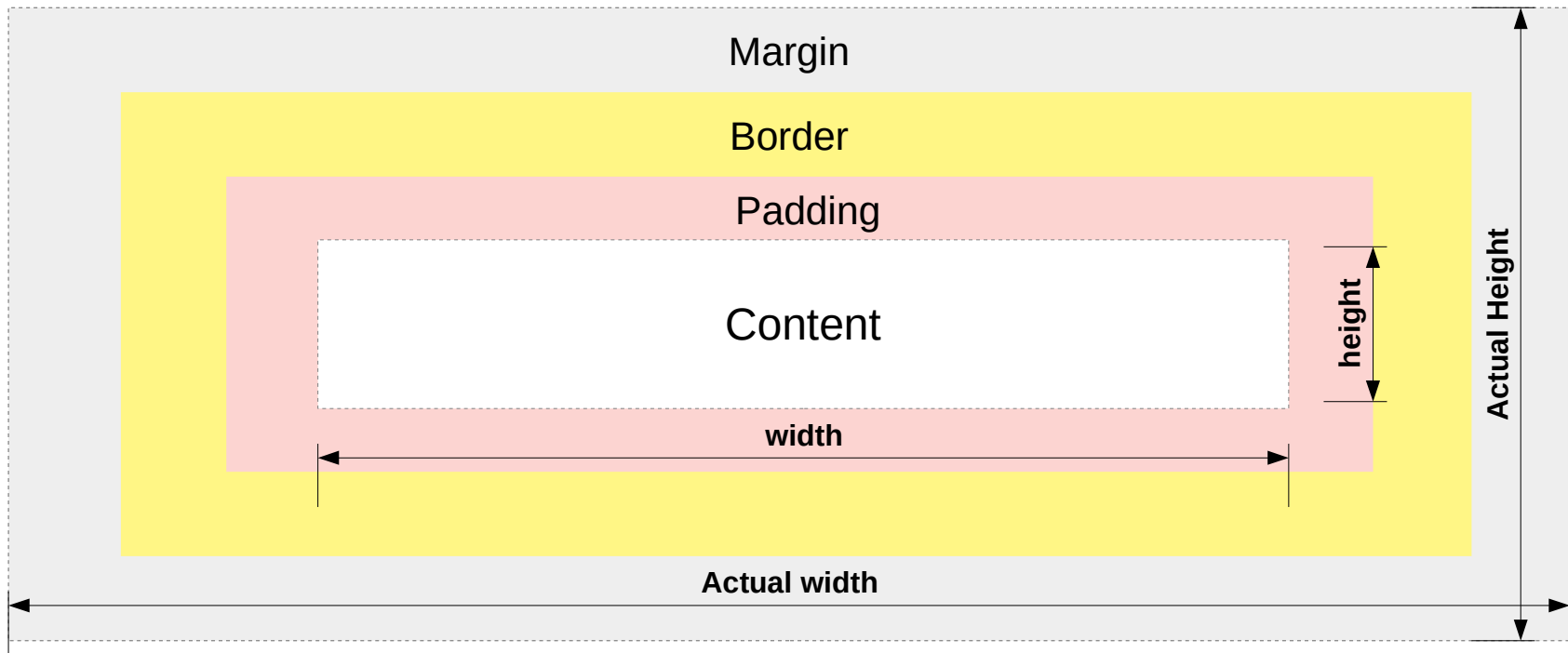
- Box Model

- Border

- Margin

- Padding

Box Model

(Cascading Style Sheets 3)

Box Model

- In CSS, every HTML element is considered a box

- The box consists of margins, borders, padding, and the actual content

- Box model is helpful in designing layouts

Box Model

Box Model

- Content – Inner most area of the box where text and images appear

- Padding - Clears an area around the content

  – The padding is transparent

- Border - A border goes around the padding and content

- Margin - Clears an area outside the border

  – The margin is transparent

Box Model

- Height of element - height of the content area

- Width of element – width of the content area

- Actual width = width + (left + right padding) + (left + right border) + (left + right margin)

- Actual height = height + (top + bottom padding) + (top + bottom border) + (top + bottom margin)

Outline

- A line that is drawn around elements, OUTSIDE the borders, to make the element "stand out"

- Outline is NOT border!

- Outline is drawn outside the element's border, and may overlap other content

- Outline is NOT a part of the element's dimensions; the element's total width and height is not affected by the width of the outline

Outline Style

- Property – outline-style

- Values are given in table

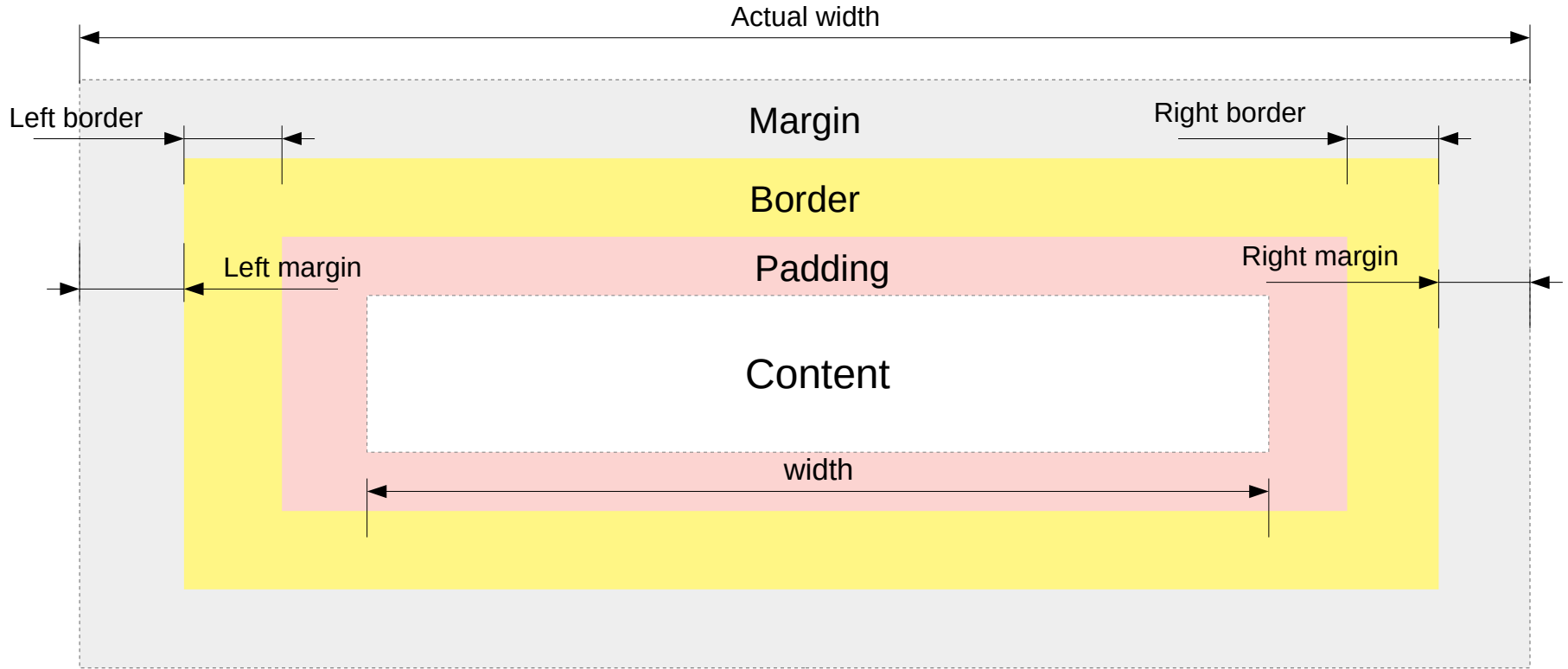| dotted	Dotted outline	ridge	3D ridge outline
dashed	Dashed outline	inset	3D inset outline
solid	Solid outline	outset	3D outset outline
double	Double outline	none	No outline
groove	3D grooved outline	hidden	hidden outline

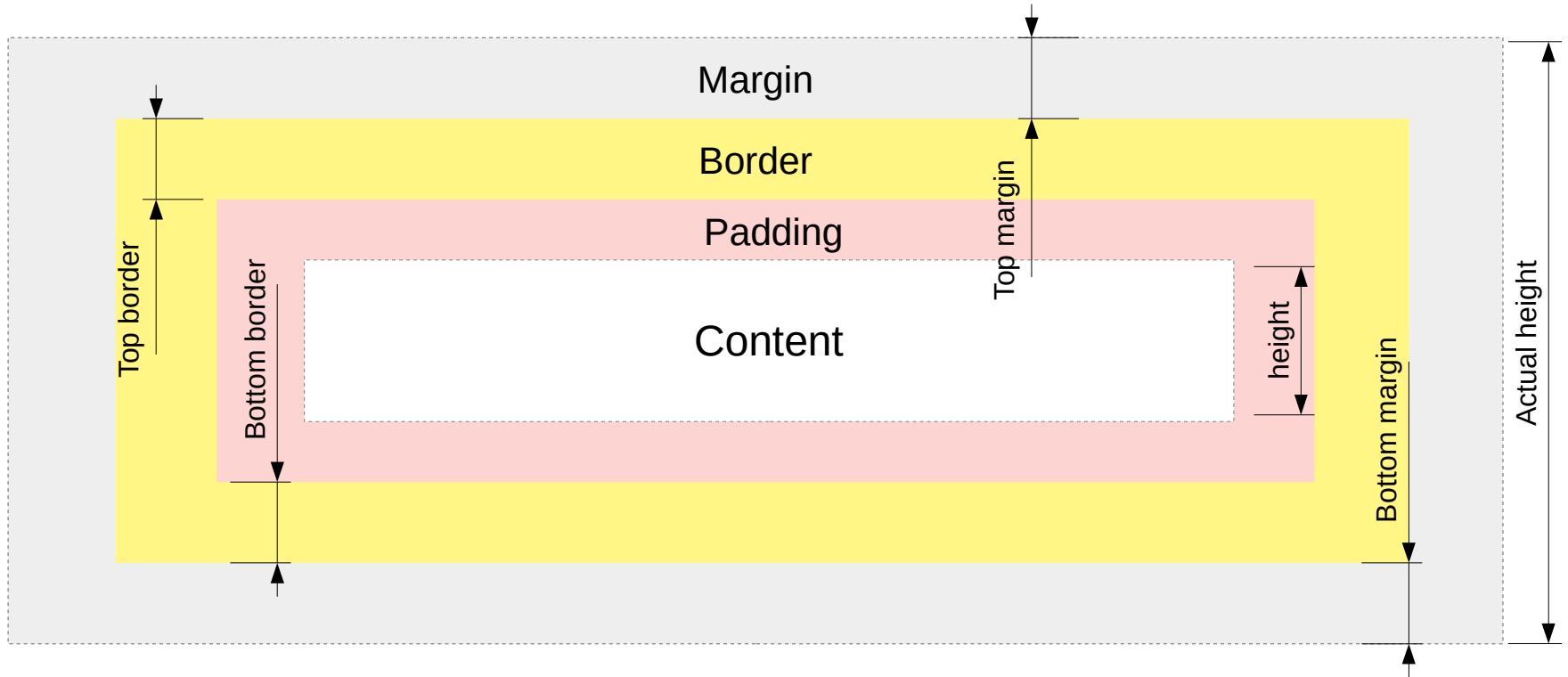# Box Sizing

(Cascading Style Sheets 3)

Box Model Size

- By default, "Actual width" and "Actual height" of an element is calculated as follows :

    - Actual width = width + padding + border

        - Padding = left padding + right padding

        - Border = left border + right border

    - Actual height = height + padding + border

        - Padding = top padding + bottom padding

        - Border = top border + bottom border

Actual width

Actual height

Box Sizing Property

- CSS box-sizing property allows us to include the padding and border in an element's total width and height

Syntax :

box-sizing: content-box | border-box | initial | inherit;

Box Sizing Property

Value	Description
content-box	The width and height properties (and min/max properties) includes only the content (default)
border-box	The width and height properties (and min/max properties) includes content, padding and border
initial	Sets this property to its default value
inherit	Inherits this property from its parent element

Box Sizing Property

Example :

```
.div-sized {

        width: 100px;

        height: 100px;

        border: 2px solid blue;

        padding: 20px;

        margin: 20px;

        box-sizing: border-box;

}
```
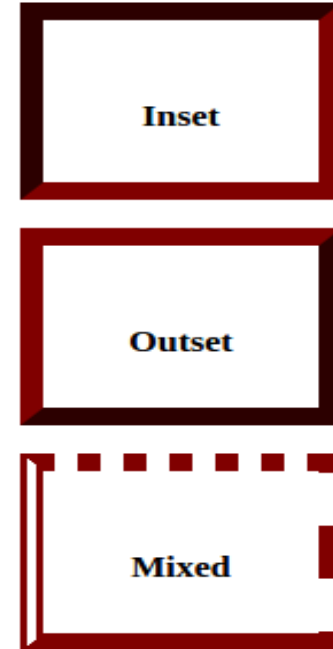
Border
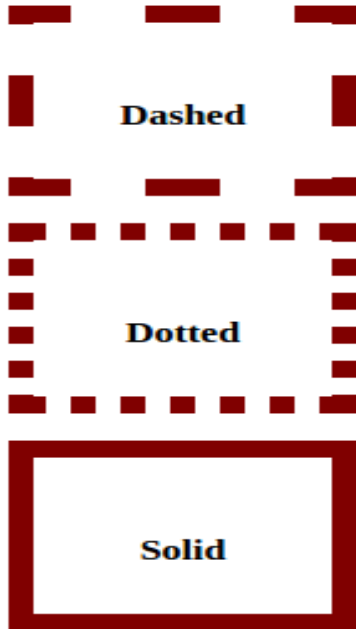
(Cascading Style Sheets 3)

CSS Border

CSS Border property allows to customize the borders around an HTML element. We can set the thickness or width ,color and style of each border.

Border Properties

- The border-style :- Specifies whether a border should be solid, dashed line, double line, or other possible values.

- The border-color :- Specifies the color of a border.

- The border-width :- Specifies the width of a border.

Border-Style

Border Width

The width can be set as a specific size (in px , pt, cm, em, etc) or by using one of the three pre-defined values: thin, medium, or thick.

- The border-width property can have from one to four values (for the top border, right border, bottom border, and the left border).

- Syntax :

border-width:(top)(right)(bottom)(left)

Example :

border-width:5px 10 px 15 px 20px;

border-width:thick;

border-width:10px;

Border Color

The border-color property is used to set the color of the four borders.

The color can be set by:

- name – color name like "red"
- Hex - a hex value, like "#ff0000"
- RGB - RGB value, like "rgb(255,0,0)"
- transparent
- The border-color property can have from one to four values (for the top border, right border, bottom border, and the left border).

Border Color
(Example)

<html><head><style>

p{

  border-style :solid;

  border-width:10px 10px 15px 20px;

  border-color:#00FF00 #FFFF00 #008080 #000080;

  width:100px;

  padding :10px;

}

</style></head>

<body>

<p align="center"> Emertxe </p></body></html>

Margin

(Cascading Style Sheets 3)

Margin

The CSS margin properties are used to generate space around elements.

- The margin properties set the size of the white space outside the border.

- There are CSS properties for setting the margin for each side of an element (top, right, bottom, and left).

Margin

The margin property can be set for the top, left, right and bottom of an element.

- margin-top

- margin-right

- margin-bottom

- margin-left

Margin

All the margin properties can have the following values:

- auto - the browser calculates the margin

- length - specifies a margin in px, pt, cm, etc.

- % - specifies a margin in % of the width of the containing element

- inherit - specifies that the margin should be inherited from the parent element

Note : Negative values are allowed.

Margin Properties
(Example)

```
p {
border: 1px solid black;
margin-top: 120px;
margin-bottom: 120px;
margin-right: 150px;
margin-left: 90px;
background-color: grey;
  }
```

Margin
(Shorthand Property)

To shorten the code, it is possible to specify all the margin properties in one property.

The margin property is a shorthand property for the individual properties(margin-top, margin-right, margin-bottom, margin-left)

- Example

```
p {
margin: 100px 150px 100px 80px;
}
```

Padding

(Cascading Style Sheets 3)

CSS Padding

- The CSS padding properties are used to generate space around content

- There are CSS properties for setting the padding for each side of an element (top, right, bottom, and left)

Padding Properties

- padding-top

- padding-right

- padding-bottom

- padding-left

CSS Padding

All the padding properties can have the following values:

- length - specifies a padding in px, pt, cm, etc.

- % - specifies a padding in % of the width of the containing element

- inherit - specifies that the padding should be inherited from the parent element

CSS Padding
(Example)

```
p {
    border: 1px solid black;
    padding-top: 120px;
    padding-bottom: 120px;
    padding-right: 150px;
    padding-left: 90px;
    background-color: grey;
}
```

Padding
(Shorthand Property)

- To shorten the code, it is possible to specify all the padding properties in one property

- The padding property is a shorthand property for the individual properties (padding-top, padding-right, padding-bottom, padding-left)

Thank you

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