

# CSS Margins

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

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

## Margin - Individual Sides

CSS has properties for specifying the margin for each side of an element:

- `margin-top`
- `margin-right`
- `margin-bottom`
- `margin-left`

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

The following example sets different margins for all four sides of a `<p>` element:

### Example

```
p {  
  margin-top: 100px;  
  margin-bottom: 100px;  
  margin-right: 150px;  
  margin-left: 80px;  
}
```

## 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 following individual margin properties:

- `margin-top`
- `margin-right`
- `margin-bottom`
- `margin-left`

### Example

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

## The auto Value

You can set the margin property to `auto` to horizontally center the element within its container.

### Example

```
div {  
  width: 300px;  
  margin: auto;  
  border: 1px solid red;  
}
```

---

# CSS Padding

The CSS `padding` properties are used to **generate space around content**.

The padding clears an area around the content (**inside the border**) of an element

## Padding - Individual Sides

CSS has properties for specifying the padding for each side of an element:

- `padding-top`
- `padding-right`
- `padding-bottom`
- `padding-left`

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

The following example sets different padding for all four sides of a `<p>` element:

### Example

```
p {  
  padding-top: 50px;  
  padding-right: 30px;  
  padding-bottom: 50px;  
  padding-left: 80px;  
}
```

## 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 following individual padding properties:

- `padding-top`
- `padding-right`
- `padding-bottom`
- `padding-left`

### Example

```
p {  
  padding: 50px 30px 50px 80px;  
}
```

So, here is how it works:

If the `padding` property has four values:

- **padding: 25px 50px 75px 100px;**
  - top padding is 25px
  - right padding is 50px
  - bottom padding is 75px
  - left padding is 100px
- **padding: 25px 50px 75px;**
  - top padding is 25px
  - right and left paddings are 50px

- bottom padding is 75px

- **padding: 25px 50px;**
  - top and bottom paddings are 25px
  - right and left paddings are 50px

If the **padding** property has one value:

- **padding: 25px;**
  - all four paddings are 25px

### Example

```
div.ex1 {  
  padding: 25px 50px 75px 100px;  
}  
  
div.ex2 {  
  padding: 25px 50px 75px;  
}  
  
div.ex3 {  
  padding: 25px 50px;  
}  
  
div.ex4 {  
  padding: 25px;  
}
```

---

## height and width

The **height** and **width** properties are used to set the height and width of an element.

The **height** and **width** can be set to auto (this is default. Means that the browser calculates the height and width), or be specified in *length values*, like px, or in percent (%) of the containing block.

### Example

```
div {  
  height: 200px;  
  width: 50%;  
  background-color: powderblue;  
}
```

### Example

**Note:** The **height** and **width** properties do not include padding, borders, or margins; they set the height/width of the area inside the padding, border, and margin of the element!

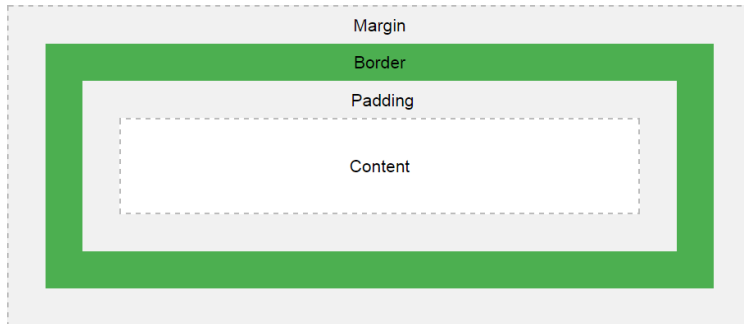
---

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## The CSS Box Model

All HTML elements can be considered as boxes.

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



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

### Example

```
div {  
  width: 300px;  
  border: 25px solid green;  
  padding: 25px;  
  margin: 25px;  
}
```