

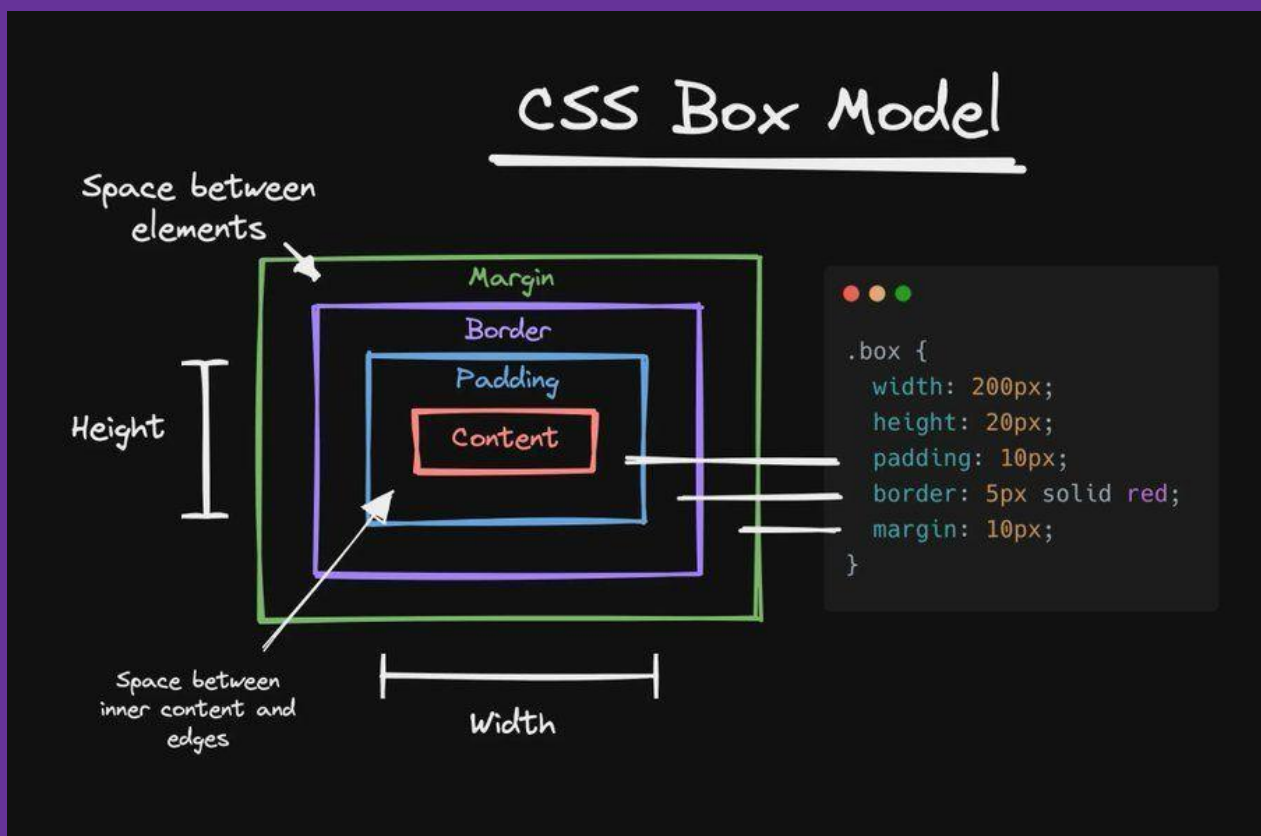
Class 05 CSS Box Model

CSS Box Model

The CSS Box Model is a fundamental concept for understanding how web elements are structured and displayed. It describes the rectangular boxes generated for elements in the document tree and defines the space each element occupies. The box model consists of the following parts: content, padding, border, and margin.

Components of the Box Model

- **Content:** This is where the actual content of the element (text, images, etc.) is displayed.
- **Padding:** The space between the content and the border. Padding is inside the element and affects the element's size.
- **Border:** A border that surrounds the padding and content. The border is between the padding and the margin.
- **Margin:** The space outside the border, which separates the element from other elements. Margins are transparent and do not affect the element's size directly.



CASCADING STYLE SHEET (CSS)

CSS

1. Content

The area where text, images, or other HTML elements are displayed. The width and height properties define the content's size.

```
.box {  
  width: 200px;  
  height: 100px;  
  background-color: lightblue;  
}
```

2. Padding

Padding creates space between the content and the border. It can be set for all sides together or individually.

```
.box {  
  padding: 20px; /* Applies to all sides */  
  padding-top: 10px;  
  padding-right: 15px;  
  padding-bottom: 10px;  
  padding-left: 15px;  
}
```

3. Border

The border surrounds the content and padding. It can have different styles, widths, and colors.

```
.box {  
  border: 5px solid black; /* 5px width, solid style, black color */  
}
```

Border styles include:

- **solid** – A continuous line.
- **dashed** – A dashed line.
- **dotted** – A dotted line.
- **double** – A double line.
- **none** – No border.

4. Margin

Margin is the space outside the border, separating elements from each other.

```
.box {  
  margin: 30px; /* Applies to all sides */  
  margin-top: 20px;  
  margin-right: 25px;  
  margin-bottom: 20px;  
  margin-left: 25px;  
}
```

Full Example: CSS Box Model in Action

```
<!DOCTYPE html>  
<html lang="en">  
<head>  
  <meta charset="UTF-8">  
  <meta name="viewport" content="width=device-width, initial-scale=1.0">  
  <title>CSS Box Model</title>  
  <style>  
    .box {  
      width: 200px;  
      height: 100px;  
      padding: 20px;  
      border: 5px solid black;  
      margin: 30px;  
      background-color: lightblue;  
    }  
  </style>  
</head>  
<body>  
  <div class="box">This is a box!</div>  
</body>  
</html>
```

Box-Sizing Property

The box-sizing property allows you to control how the width and height of an element are calculated. The two main values are -

- **content-box (default):** Width and height include only the content. Padding, border, and margin are added outside.
- **border-box:** Width and height include content, padding, and border, but not the margin.