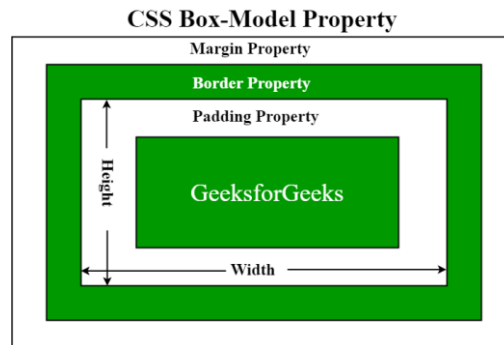# CSS Box Model

What is the CSS Box Model?

In CSS, every HTML element is a rectangular box.
The Box Model defines how that box is structured and how space is calculated.

The box has 4 layers (inside → outside): **Content --> Padding --> Border --> Margin**

- **Content (The actual data):** This is **where text, images, videos live**.
    - .box {
        ```
        width: 200px;
        height: 100px;
        ```
    }

- **Padding (Space inside the box):** Padding creates space **between content and border**.
    - .box {
        ```
        padding: 20px;
        ```
    }
    - padding: 10px 20px;   top-bottom | left-right
    - padding: 10px 20px 5px;   top | left-right | bottom
- **Border (The box boundary):** Border wraps padding + content.
    - .box {
        ```
        border: 2px solid black;
        ```

```
        }
```

- **Margin (Space outside the box):** Margin creates **distance between elements**
    - ```
      .box {
              margin: 20px;
      }
      ```
    - margin: 10px 20px; margin: auto; center block elements horizontally

What is box-sizing?

The CSS box-sizing property defines how to calculate the width and height of an element: should the calculation include padding and borders, or not.

By default, the width and height of an element is calculated like this:

- width + padding + border = actual width of an element
- height + padding + border = actual height of an element

- **box-sizing: content-box (Default):** Padding and border are **added outside** the width and height.
    - ```
      .box {
              box-sizing: content-box;
              width: 200px;
              padding: 20px;
              border: 10px solid black;
      }
      ```
- **box-sizing: border-box (Recommended):** Padding & border are taken **inside** the width.
    - ```
      .box {
              box-sizing: border-box;
              width: 200px;
              padding: 20px;
              border: 10px solid black;
      }
      ```