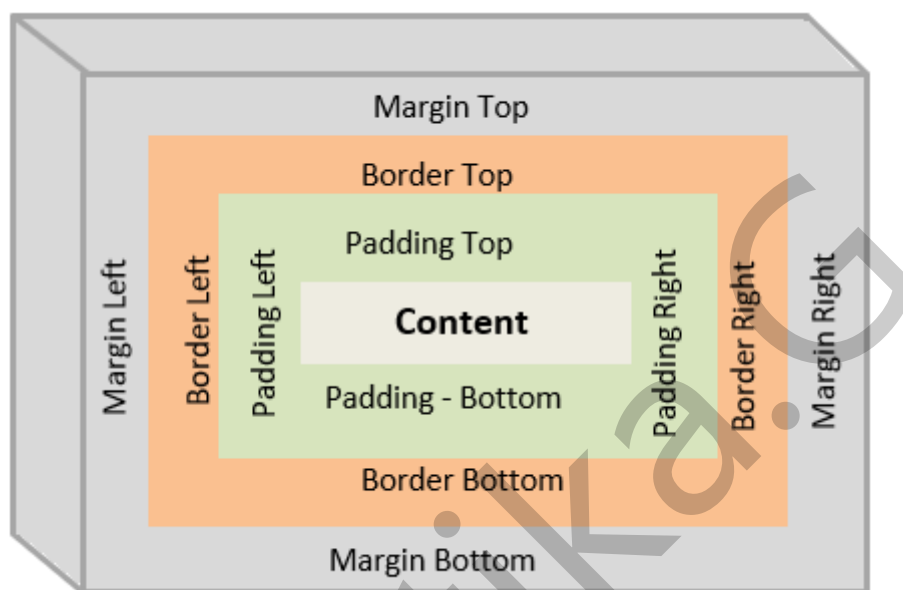# CSS Box Model

- Every Element or tag placed on a web page may be imagined of as a box. This box contains an invisible environment around it's edges marking it's features. These features are margins -> borders -> padding -> content

- Property-Value Set related to CSS box-model is 'box-sizing'.

- box-sizing: border-box | content-box

- By Default, the box-sizing property is set to the value content-box which means that padding and borders will not be included in the width and height of an element and will add their values to the width and height of the element , changing it's desired width and height.

- Let's take an example to understand this concept in detail:
  We have a 'div' tag whose total width should be 300px and height should be 100px, border-width should be 3px and padding should be 20px from all edges.

- box-sizing: content-box will make total width of div = 346px (width of div 300px + padding-left 20px + padding-right 20px + border-width-left 3px + border-width-right 3px) violating the requirement of width to be 300px only.

- box-sizing: content-box will make total height of div = 146px (height of div 100px + padding-top 20px + padding-bottom 20px + border-width-top 3px + border-width-bottom 3px) violating the requirement of height to be 100px only.

- To solve this problem: we have box-sizing: border-box

- box-sizing: border-box, helps to consume dimensions for padding and border value from mentioned value of width and height of 'div' tag.

- For an example: we have given width = 300px and height = 100px for 'div' padding = 20px and border = 3px, hence values for padding and border are auto adjusted from width and height values.

- box-sizing: border-box, will keep total height of div 100px by adjusting values like height 54px (height of div 100px - padding top 20px - padding bottom 20px - border top 3px - border-bottom 3px)

- box-sizing: border-box, will keep total width of div 300px by adjusting values like width 254px (width of div 300px - padding left 20px - padding right 20px - border right 3px - border left 3px)