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## UNIT 4 –CSS BOX MODEL AND IMAGES

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### Structure of CSS Box Model and Images

- 4.1 Learning Outcomes
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  - 4.4 Self-Assessment Questions
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  - 4.6 Multiple-Choice Questions
  - 4.7 Key answers to multiple-choice questions
  - 4.8 Summary
  - 4.9 Keywords
  - 4.10 Recommended resources for further reading
- 

#### 4.1 Learning Outcomes:

After the successful completion of this unit, the student will be able to:

- Explain the concept of the CSS Box Model.
  - Describe the use of border, padding, and margin properties and their variations to develop presentable web pages using CSS.
  - Describe the use of background images to enhance the visual design of web pages and create effective layouts.
  - Create web pages using CSS Box Model and background images.
- 

#### 4.2 CSS BOX MODEL

CSS Box Model refers to the layout of an XHTML element. By default, each element in an XHTML document is rendered as a rectangular box on a web page. The CSS Box Model describes the rectangular box of each XHTML element that consists of the following components -

- Content
- Padding
- Borders
- Margins

**Content:** It is an area where the actual text, image, or other media appears. [Content of XHTML element]. It has dimensions defined by the width and height properties.

**Padding:** It is the area around the content. Padding is the space between the content and the element's border. It can be set by using padding properties and its variations.

**Border:** The border surrounds the padding area. It is used to define the element's boundaries. By default, the border is not visible, but it can be made visible by setting the border properties and their variations.

**Margin:** The margin is the space outside the element's border and is used to separate it from other elements on the web page. It controls the spacing between elements on a web page. The margin can be set by using margin properties and their variations.

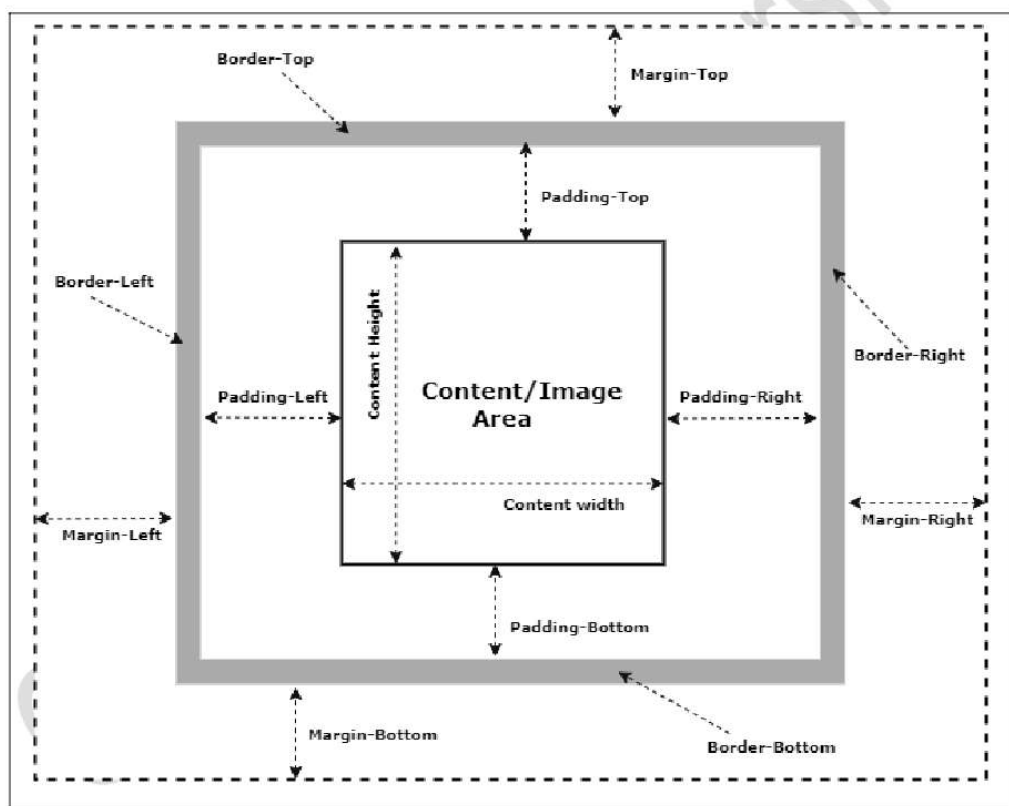


Figure 4.1: CSS Box Model

In CSS, the properties and dimensions of each part of the box model can be adjusted to control the layout and spacing of elements in a web page. It is essential to understand the box model for creating responsive and visually appealing web layouts. The CSS Box Model properties allow for control of the positioning and spacing of elements relative to each other within the browser window.

### 4.2.1 CSS Border Properties

Border is a line, a CSS property that is used to set the border of an element. A border has these aspects – color, width or thickness, and style or appearance. The CSS properties that are used to specify the color, width, and style of the border are :

- `border-style`
- `border-width`
- `border-color`
- `border`

#### `border-style:`

It is used to specify the type of line of the border i.e., whether the border line should be solid, dotted, dashed, double, etc. Accordingly, the values “solid”, “dotted”, “dashed”, and “double”, etc can be specified. If no border is to be displayed then the value “none” is given which is a default style.

Example: To specify a border of a dotted line for a paragraph it can be given at the inline level as :

```
<p style="border-style: dotted"> Dotted line around this paragraph </p>
```

By default, the same style is assumed for all the sides of the paragraph element. If different styles are to be specified for each of the sides then the following properties can be used –

- `border-top-style`
- `border-bottom-style`
- `border-left-style`
- `border-right-style`

Each single side can have a different value.

Example: Using CSS border styles in an XHTML document

```
<?xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html>
<head>
  <title>Example of border-styles of CSS Box Model</title>
</head>
<body>
```

```

<h2> Graphic Era University </h2>
<h3> Example of border styles of CSS Box Model </h3>

<p style="border-style:dotted; color:red">
    border-style - dotted used around the paragraph
</p>

<p style="border-style:dashed; color:blue">
    border-style - dashed used around the paragraph
</p>

<p style="border-style:solid; color:maroon">
    border-style - solid used around the paragraph
</p>

<p style="border-top-style:solid; border-bottom-style: dashed;
    color : blue" >
    border-top-style - solid, border-bottom-style: dashed
    used around the paragraph
</p>
<p>No Style used for this paragraph </p>
</body>
</html>

```

Output :

## Graphic Era University

### Example of border styles in CSS Box Model

border-style - dotted used around the paragraph

border-style - dashed used around the paragraph

border-style - solid used around the paragraph

border-top-style - solid, border-bottom-style: dashed used around the paragraph

No Style used for this paragraph

Figure 4.2: Example of using CSS "border-style" in XHTML document



## border-width:

This property is used to set the thickness i.e. the width of the border. It can take the values "thin", "thick", "medium", or the length can be given in terms of px, pt, cm, etc.

The border-width property is always used with other border properties like "border" and "border-style" and cannot be used alone. If it is used alone it doesn't affect the display.

Example: To specify a border width for a paragraph, "border" or "border-style" is set first and then it can be given at the inline level as :

```
<p style="border-style: solid; border-width: thick">
```

Border-style Solid and border-width thin used around this paragraph

```
</p>
```

By default, the same width is assumed for all the sides of the paragraph element. If different widths are to be specified for each of the sides then the following properties can be used –

- border-top-width
- border-bottom-width
- border-left-width
- border-right-width

Each single side can have a different value.

Example: Using CSS border width in an XHTML document

"border-style" has to be set before using the "border-width" property

```
<?xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html>
<head>
  <title>Example of border-width in CSS Box Model</title>
</head>
<body>
  <h2> Graphic Era University </h2>
  <h3> Example of border width in CSS Box Model </h3>

  <p style="border-style:solid; border-width:thin; color:red">
    border-style - solid and border-width - thin used around the
    paragraph
  </p>
```

```
<p style="border-style:solid; border-width:medium; color:maroon">
    border-style - solid and border-width - medium used around the
    paragraph
</p>

<p style="border-style:solid; border-width:thick; color:blue">
    border-style - solid and border-width - thick used around the
    paragraph
</p>

<p style="border-style:solid; border-width:8px; color:green">
    border-style - solid and border-width: 8px used around the
    paragraph
</p>

<p>No Style used for this paragraph </p>

</body>
</html>
```

Output:

**Graphic Era University**

**Example of border width in CSS Box Model**

border-style - solid and border-width - thin used around the paragraph

border-style - solid and border-width - medium used around the paragraph

border-style - solid and border-width - thick used around the paragraph

border-style - solid and border-width: 8px used around the paragraph

No Style used for this paragraph

Figure 4.3: Example of using CSS "border-width" in an XHTML document

## border-color:

This property is used to set the color of the border. The color value can be given by specifying the name of the color, a hexadecimal color code, or the rgb() property. This property is used along with other border properties like "border" and "border-style" and cannot be used alone.

Example: To specify a border color for a paragraph, "border" or "border-style" is set first and then it can be given at the inline level as :

```
<p style="border-style: solid; border-color: red">  
    Border-style Solid and border-color red used around this paragraph  
</p>
```

By default, the same color is assumed for all the sides of the paragraph element. If different colors are to be specified for each of the sides then the following properties can be used –

- border-top-color
- border-bottom-color
- border-left-color
- border-right-color

Each single side can have a different value.

Example: Using CSS border color in an XHTML document

"border-style" has to be set before using the "border-color" property

```
<?xml version="1.0" encoding="utf-8" ?>  
<!DOCTYPE html>  
<html>  
<head>  
    <title>Example of border-color in CSS Box Model</title>  
</head>  
<body>  
    <h2> Graphic Era University </h2>  
    <h3> Example of border color in CSS Box Model </h3>  
    <p style="border-style:solid; border-width:thin; border-color:  
        blue; color:red">  
        border-style - solid, border-width - thin and border-color - blue  
        used around the paragraph
```



```

</p>

<p style="border-style:solid; border-width:medium; border-color:
    maroon; color: blue">
    border-style - solid and border-width - medium and
    border-color - maroon used around the paragraph
</p>

<p style="border-style:solid; border-width:thick; border-color: blue;
    color:green">
    border-style - solid and border-width - thick and
    border-color - blue used around the paragraph
</p>

<p style="border-style:solid; border-width:8px;
    border-top-color: green ; border-bottom-color:blue">
    border-style - solid , border-width: 5px ,
    border-top-color: green, border-bottom-color:blue used around the
    paragraph
</p>
<p>No Style used for this paragraph </p>
</body>
</html>

```

Output:

## Graphic Era University

### Example of border color in CSS Box Model

border-style - solid , border-width - thin and border-color - blue used around the paragraph

border-style - solid and border-width - medium and border-color - maroon used around the paragraph

border-style - solid and border-width - thick and border-color - blue used around the paragraph

border-style - solid , border-width: 5px , border-top-color: green , border-bottom-color:blue used around the paragraph

No Style used for this paragraph

Figure 4.4: Example of using CSS "border-color" in XHTML document

## border:

This "border" property is used as a shorthand property for the properties given below-

**border-width**  
**border-style**  
**border-color**

Example: To specify a border for a paragraph, with width as – "2px", border style as "double" and color as blue, it can be given at the inline level as :

```
<p style="border: 2px double blue">
```

Border-style double, width of 2px, and border-color blue used around this paragraph

```
</p>
```

By default, the same specifications are assumed for all the sides of the element. If different specifications are to be specified for each of the sides then the following properties can be used –

- border-top
- border-bottom
- border-left
- border-right

Each single side can have a different value.

Example: Using shorthand border CSS property in an XHTML document

```
<?xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html>
<head>
  <title>Example of border in CSS Box Model</title>
  <style type="text/css">
    p {
      border: 6px double blue;
    }
    .p1 {
      border-top: 5px dotted;
      border-bottom: 8px dashed;
```

```

        border-color:green ;
        color:red"
    }
</style>
</head>
<body>
    <h2> Graphic Era University </h2>
    <h3> Example of short hand border property of CSS Box Model </h3>
    <p style="border:4px solid red">
        Inline Border - 4px solid red used around the paragraph
    </p>
    <p class="p1" >
        Border-top: dotted , border-bottom - dashed used
        around this paragraph
    </p>
    <p>
        border shorthand property used here - width is 6px,
        border-style double and border-color blue used around this
        paragraph
    </p>
    <div>No Style used for this div section </div>
</body>
</html>

```

Output :

## Graphic Era University

### Example of short hand border property of CSS Box Model

Inline Border - 4px solid red used around the paragraph

Border-top: dotted , border-bottom - dashed used around this paragraph

border shorthand property used here - width is 6px, border-style double and border-color blue used around this paragraph

No Style used for this div section

Figure 4.5: Example of using CSS shorthand "border" property in XHTML document

### 4.2.2 CSS Padding Properties

**Padding:** It is the area around the content of an XHTML element. Padding is the space between the content and the element's border. It can be set by using padding properties and its variations. The effect of the padding can be more clearly visible when used along with the background-color property. The value of the property can be given in terms of length - px, pt, cm, etc.

Example: To specify equal padding for a paragraph on all 4 sides, it can be given at the inline level as :

```
<p style="padding: 5px; background-color:orange" >  
    This is the content of the paragraph.  
</p>
```

By default, the same padding i.e. space is assumed around all the sides of the content of an XHTML element. If different padding is to be specified around the four sides of the content then the following padding properties can be used –

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

Each side can have a different value.

Example: Using CSS padding property in an XHTML document.

Different padding is used around each size of the content in the first <div> tag.

The same padding is used around the content in the second <div> tag.

No padding is used around the content in the third <div> tag

```
<?xml version="1.0" encoding="utf-8" ?>  
<!DOCTYPE html>  
<html>  
  
<head>  
    <title>Example of padding in CSS Box Model</title>
```

```
<style type="text/css">
  .p1 {
    width:400px;
    padding-top: 20px;
    padding-right: 30px;
    padding-bottom: 50px;
    padding-left: 100px;
    border:2px;
    border-color:green ;
    color:blue;
    font-weight:bold;
    background-color:cyan;
  }

  .p2 {
    width:400px;
    padding: 10px;
    background-color:yellow;
    border:2px solid;
  }

  .p3 {
    width:400px;
    background-color:pink;
    font-weight:bold;
    color:blue;
  }
</style>

</head>
<body>
  <h2> Graphic Era University </h2>

  <h3> Example of CSS padding property - CSS Box Model </h3>

  <div class="p1" >
```



```

        Different padding used around the content of this division,
        padding-top is 20px, padding-bottom is 50px,
        padding-left is 100px, padding-right is 30px
    </div>

    <br/>

    <div class="p2">
        Padding of 10px around the content of this division,
        it is same on all sides
    </div>

    <br/>
    <div class="p3"> No padding used for this division </div>

</body>
</html>

```

Output :

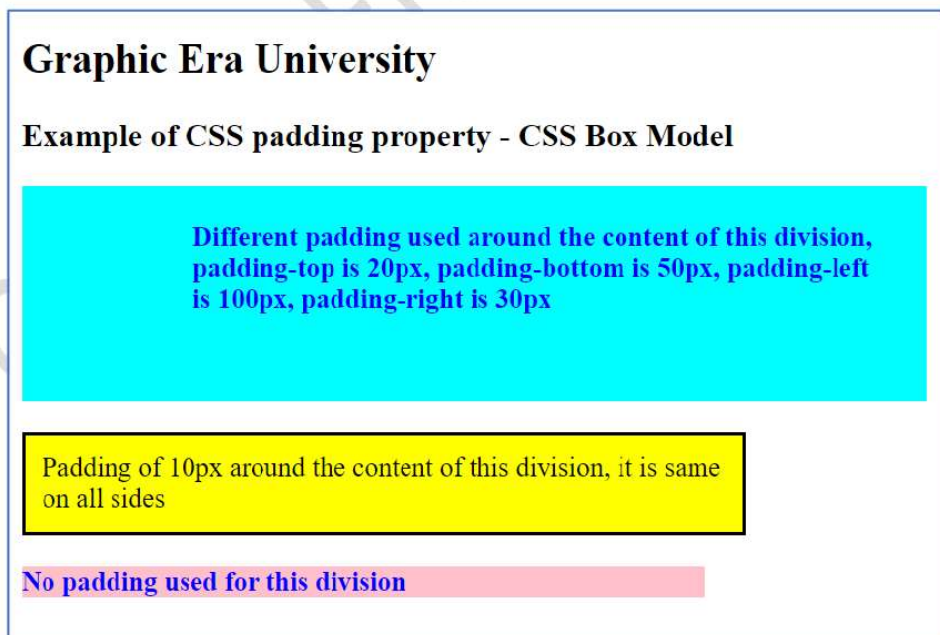


Figure 4.6: Example of using CSS "padding" property in XHTML document

### 4.2.3 CSS Margin Properties

The **margin** is the space outside the element's border and is used to separate it from other elements on the web page. It controls the spacing between elements on a web page. The margin can be set by using margin properties and their variations. The value of the property can be given in terms of length - px, pt, cm, percentage %, etc. Negative values can be used to overlap content.

Example: To specify the same margin for a paragraph on all four sides, it can be given at the inline level as :

```
<p style="margin: 5px; background-color:orange" >  
    This is the content of the paragraph.  
</p>
```

By default, the same margin i.e. space is assumed outside all the sides of the content of an XHTML element. If a different margin is to be specified around the four sides of the content then the following padding properties can be used –

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

Each side can have a different value.

Example:

```
<?xml version="1.0" encoding="utf-8" ?>  
<!DOCTYPE html>  
<html>  
<head>  
    <title>Example of Margin in CSS Box Model</title>  
    <style type="text/css">  
        .p1 {  
            width:400px;  
            margin-top: 20px;  
            margin-bottom: 40px;  
            margin-left:30px;
```

```

        margin-right:20px;
        border:2px solid;
        border-color:red ;
        color:blue;
        font-weight:bold;
        background-color:cyan;
    }

    .p2 {
        width:400px;
        margin: 10px;
        background-color:yellow;
        border:2px solid;
    }

    .p3 {
        width:400px;
        background-color:orange;
        font-weight:bold;
        color:blue;
    }
</style>
</head>
<body>
    <h2> Graphic Era University </h2>
    <h3> Example of CSS margin property - CSS Box Model </h3>

    <div style="width:400px; border:solid; border-color:blue;
        color:red">
        Division with border property margin not set
    </div>

    <div class="p1" >
        Different margin used around the content of this division,
        margin-top is 20px, margin-bottom is 40px,
        margin-left is 30px, margin-right is 20px
    </div>

```

```

</div>
<br/>

<div class="p2">
    Margin of 10px around the content of this division,
    it is same on all sides
</div>

<br/>
<div class="p3"> No margin used for this division </div>

</body>
</html>

```

Output:

# Graphic Era University

## Example of CSS margin property - CSS Box Model

Division with border property margin not set

Different margin used around the content of this division, margin-top is 20px, margin-bottom is 40px, margin-left is 30px, margin-right is 20px

Margin of 10px around the content of this division, it is same on all sides

No margin used for this division

Figure 4.7: Example of using CSS "margin" property in XHTML document

## 4.3 Background Images

In CSS, background images can be added to XHTML elements. The background image covers the entire XHTML element. The various background properties that control the display of the image in an XHTML element are

**background-image:** It is used to set the background image to be displayed

**background-repeat:** By default the background image is replicated horizontally and vertically to cover the entire area of the XHTML element. This process of replication is called tiling. This tiling can be controlled by using the background-repeat property. It can take the values –

- **repeat-x** – The image to be displayed is repeated horizontally to cover the entire area in the XHTML element.
- **repeat-y** - The image to be displayed is repeated vertically to cover the entire area in the XHTML element.
- **no-repeat** – It displays only one copy of the background image in the XHTML element. The position of the display can be specified by using the background-position property.

**background-position:** It can take the values --- center, top, bottom, left, right. The values can also be used in different combinations like “top center”, “top left”, “top right”, “bottom right”, etc.

Example: Displaying images in the background using various background image properties. Repeating the image horizontally, vertically, and displaying at the center.

```
<?xml version="1.0" encoding="utf-8" ?>
<!DOCTYPE html>
<html>
<head>
  <title>Example of Background image in CSS Box Model</title>
  <style type="text/css">
    .p1 {
      width:400px;
      height:50px;
      color:blue;
      font-weight:bold;
      background-color:cyan;
      background-image:url('geulogo-css.png');
      border:2px solid red;
```



```

    }
    .p2 {
        width:400px;
        height:50px;
        color:blue;
        font-weight:bold;
        background-color:orange;
        background-image:url('geulogo-css.png');
        background-repeat:repeat-x;
        border:2px solid red;
    }
    .p3 {
        width:100px;
        height:100px;
        color:blue;
        font-weight:bold;
        background-color:cyan;
        background-image:url('geulogo-css.png');
        background-repeat:repeat-y;
        border:2px solid red;
    }
    .p4 {
        width:200px;
        height:50px;
        color:blue;
        font-weight:bold;
        background-color:yellow;
        background-image:url('geulogo-css.png');
        background-repeat:no-repeat;
        background-position:center;
        border:2px solid red;
    }
    b {
        color:blue;
        font-weight:blue;
    }

```

```

    </style>
</head>
<body>

    <h2> Graphic Era University </h2>

    <h3> Example of CSS Background image property - CSS Box Model
</h3>

    <b> Image displayed in the background repeated vertically and
horizontally by default </b>
    <div class="p1" >
        Image displayed in the background repeated vertically and
horizontally by default
    </div>
    <br/>
    <br/>

    <b>Image displayed in the background repeated horizontally </b>
<div class="p2">
    Image displayed in the background repeated horizontally
</div>

    <br/>
    <br/>

    <b>Image displayed in the background repeated vertically </b>
    <div class="p3">
        Image displayed in the background repeated vertically
    </div>
    <br/>
    <br/>

    <b> Image displayed in the background at the center - no-
repeat </b>

```

```

<div class="p4">
    Image displayed in the background at the center no-repeat
</div>
<br / >

```

</body>

</html>

Output:

## Graphic Era University

### Example of CSS Background image property - CSS Box Model

**Image displayed in the background repeated vertically and horizontally by default**



**Image displayed in the background repeated horizontally**



**Image displayed in the background repeated vertically**



**Image displayed in the background at the center - no-repeat**



Figure 4.8: Example of using CSS "background-image" property in XHTML document

## 4.4 Self-Assessment Questions

- Q1. What is CSS Box Model ? Explain the components of the CSS Box Model with a neat diagram. [8 marks, L2]
- Q2. Explain the CSS Border properties with suitable examples. [ 8 marks, L2]
- Q3. Explain with suitable examples the following border properties in CSS [8 marks, L2]
- border
  - border-width
  - border-style
  - border-color
- Q4. Explain CSS Padding properties with suitable examples.[8 marks, L2]
- Q5. Explain with suitable examples the following Padding properties in CSS [8 marks, L2]
- padding
  - padding-top
  - padding-bottom
  - padding-left
  - padding-right
- Q6. Explain CSS Margin properties with suitable examples. [8 marks, L2]
- Q7. Explain with suitable examples the following Margin properties in CSS [8 marks, L2]
- margin
  - margin-top
  - margin-bottom
  - margin-left
  - margin-right
- Q8. Discuss how background image can be added to XHTML element with suitable example. [ 8 marks, L2]
- Q9. Explain the use of the background-repeat property to control the display of the image in an XHTML element. [6 marks, L2]
- Q10. Write the required XHTML markup and CSS code to demonstrate the display of background-image at the center of an XHTML element. [8 marks, L2]

## 4.5 Self-Assessment Activities

- A1. Design a web page to demonstrate the properties of the CSS Box Model
- A2. Design a web page to demonstrate the display of background images in an XHTML document.

## 4.6 Multiple-Choice Questions

1. The primary purpose of the CSS Box Model is \_\_\_\_\_. [1 mark, L1]
  - a) To define the layout and positioning of elements on a webpage.
  - b) To specify the font size and type for text content.
  - c) To control the color scheme of a webpage.
  - d) To manage database connections for dynamic content.
  
2. In the CSS Box Model, the \_\_\_\_\_ is the area where actual text or image is displayed. [1 mark, L1]
  - a) Padding
  - b) Borders
  - c) Margin
  - d) Content
  
3. In the CSS Box Model, the \_\_\_\_\_ is the area around the content. It is the space between the content and the element's border. [ 1 mark, L1]
  - a) Padding
  - b) Borders
  - c) Margin
  - d) Content
  
4. In the CSS Box Model, \_\_\_\_\_ is the space outside the element's border and is used to separate it from other elements on the web page. [ 1 mark, L1]
  - a) Padding
  - b) Borders
  - c) Margin
  - d) Content
  
5. The background image is replicated horizontally and vertically to cover the entire area of the XHTML element. This process of replication is called as \_\_\_\_\_. [1 mark, L1]
  - a) Positioning
  - b) Tiling
  - c) Sizing
  - d) Padding



6. The image to be displayed is repeated horizontally to cover the entire area in the XHTML element by using the property value \_\_\_\_\_. [1 mark, L1]
- a) background-repeat: repeat-x
  - b) background-repeat: repeat-y
  - c) background-repeat: vertically
  - d) background-repeat: horizontally
7. The \_\_\_\_\_ border property can take any one of the values "solid", "dotted", "dashed" and "double". [1 mark, L1]
- a) border-color
  - b) border-width
  - c) border-height
  - d) border-style
8. The purpose of the CSS property "background-color" is \_\_\_\_\_. [1 mark, L1]
- a) To set the color of an element's border.
  - b) To define the font color of text content.
  - c) To specify the background color of an element.
  - d) To add a shadow effect to an element.
9. The "border-color" property is used along with other border property \_\_\_\_\_ and cannot be used alone. [1 mark, L1]
- a) border-style
  - b) border-thin
  - c) border-thick
  - d) border-image
10. The "border-width" property is always used with other border property \_\_\_\_\_ and cannot be used alone. [1 mark, L1]
- a) border-thin
  - b) border-style
  - c) border-thick
  - d) border-image

## 4.7 Key Answers to Multiple-Choice Questions

1. The primary purpose of the CSS Box Model is to define the layout and positioning of elements on a webpage. [a]
2. In the CSS Box Model, the Content is the area where actual text or image is displayed. [d]
3. In the CSS Box Model, padding is the area around the content. It is the space between the content and the element's border.[a]
4. In the CSS Box Model, the margin is the space outside the element's border and is used to separate it from other elements on the web page.[c]
5. The background image is replicated horizontally and vertically to cover the entire area of the XHTML element. This process of replication is called tiling.[b]
6. The image to be displayed is repeated horizontally to cover the entire area in the XHTML element by using the property-value background-repeat: repeat-x. [a]
7. The border-style border property can take any one of the values "solid", "dotted", "dashed" and "double". [d]
8. The purpose of the CSS property "background-color" is to specify the background color of an element.[c]
9. The "border-color" property is used along with other border property border-style and cannot be used alone.[a]
10. The "border-width" property is always used with other border property border-style and cannot be used alone.[b]

## 4.8 Summary

CSS Box Model refers to the layout of an XHTML element. By default, each element in an XHTML document is rendered as a rectangular box on a web page. The CSS Box Model describes the rectangular box of each XHTML element that consists of the following components - Content, Padding, Borders, Margins.

**Content:** It is an area where the actual text, image or other media appears. [Content of XHTML element]. It has dimensions defined by the width and height properties.

**Padding:** It is the area around the content. Padding is the space between the content and the elements border. It can be set by using padding properties and its variations.

**Border:** The border surrounds the padding area. It is used to define the elements boundaries. By default the border is not visible, but it can be made visible by setting the border properties and its variations.

**Margin:** The margin is the space outside the element's border and is used to separate it from other elements on the web page. It controls the spacing between elements on a web page. The margin can be set by using margin properties and their variations.

**CSS Border Properties:** The Border is a line, a CSS property that is used to set the border of an element. A border has these aspects – color, width or thickness, and style or appearance. The CSS Border properties that are used to specify the color, width, and style of the border are: border-style, border-width, border-color, border

**The CSS Padding properties -** Padding is the area around the content of an XHTML element. Padding is the space between the content and the element's border. It can be set by using padding properties and its variations. The effect of the padding can be more clearly visible when used along with the background-color property. The value of the property can be given in terms of length - px, pt, cm, etc. By default, the same padding i.e. space is assumed around all the sides of the content of an XHTML element. If different padding is to be specified around the four sides of the content then the following padding properties can be used – padding-top, padding-bottom, padding-left, padding-right. Each side can have a different value.

The margin is the space outside the element's border and is used to separate it from other elements on the web page. It controls the spacing between elements on a web page. The margin can be set by using margin properties and their variations. The value of the property can be given in terms of length - px, pt, cm, percentage %, etc. Negative values can be used to overlap content. By default, the same margin i.e. space is assumed outside all the sides of the content of an XHTML element. If a different margin is to be specified around the four sides of the content then the following padding properties can be used – margin-top, margin-bottom, margin-left, margin-right. Each side can have a different value.

In CSS, background images can be added to XHTML elements. The background image covers the entire XHTML element. The various background properties that control the display of the image in an XHTML element are : background-image, background-repeat background-position, etc.

## 4.9 Keywords

- CSS Box Model (CSS)
- border
- border-style
- border-width
- border-color
- padding

- padding-top and padding-bottom
- padding-left and padding-right
- margin
- margin-top and margin-bottom
- margin-left and margin-right
- background-image
- background-repeat
- background-position

## 4.10 Recommended resources for further reading

### a. Essential Reading

1. Sebesta, R. W. (2010). Programming the World Wide Web (6th ed.), Pearson education.
2. Subramanian, V. (2019). Pro MERN Stack: Full Stack Web App Development with Mongo, Express, React, and Node (2nd Ed.), Apress.

### b. Recommended Reading

1. DT Editorial Services. (2016). HTML 5: Covers CSS3, JavaScript, XML, XHTML, AJAX, PHP & jQuery: Black Book, Dreamtech Press.
2. Koroliova, E. W. I., (2018). MERN Quick Start Guide: Build Web applications with MongoDB, Express.js, React and Node, Packt.

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