



Introduction to CSS

CSS (Cascading Style Sheets) is used to style and layout HTML elements. It controls color, spacing, fonts, borders, positioning, and more.

💡 Why CSS?

Without CSS, all HTML elements would look plain and default. CSS brings beauty and control to your web pages.

🎨 CSS Syntax

```
selector {
    property: value;
}
```

🌐 Example:

```
<!DOCTYPE html>
<html>
<head> <title>css </title>
<style>
    h1 {
        color: blue;
        font-size: 24px;
    }
</style>
</head>
<body>
    <h1>Heading with Internal CSS</h1>
    <h2> Heading without CSS </h2>
</body>
</html>
```

◆ CSS Selectors

Selector Type	Syntax	Example
Element	tagname	All elements with that tag
Class	.classname	All elements with that class
ID	#idname	A single element with that id
Universal	*	All elements
Grouping	h1, p	Multiple elements

Types of CSS

Type	How it's Used	Example
Inline	Inside an HTML tag using style=" "	<p style="color:blue">Text</p>
Internal	Inside a <style> tag in the HTML <head>	<style>p { color: red; }</style>
External	Separate .css file linked to HTML	<link rel="stylesheet" href="style.css">

◆ Inline CSS:

An inline style may be used to apply a unique style for a single element. To use inline styles, add the style attribute to the relevant element. The style attribute can contain any CSS property.

Example (Inline CSS):

```
<!DOCTYPE html>
<html>
<head>
<title>Inline css</title>
</head>
<body>
<h1 style= "color: red; font-family: Arial;">Welcome to Inline CSS</h1>
<h1> Heading without CSS </h1>
</body>
</html>
```

◆ Internal CSS:

An internal style sheet may be used if one single HTML page has a unique style. The internal style is defined inside the <style> element, inside the head section.

Example (Internal CSS):

```
<!DOCTYPE html>
<html>
<head>
<title>Internal css</title>
<style>
  body { background-color: pink; font-family: Arial;}
  h1 { color: green;}
  .note { font-style: italic; color: gray;}
</style>
</head>
<body>
<h1>Welcome to CSS</h1>
<p class="note">This paragraph is styled with a class.</p>
</body>
</html>
```

◆ External CSS:

With an external style sheet, you can change the look of an entire website by changing just one file! Each HTML page must include a reference to the external style sheet file inside the `<link>` element, inside the head section.

✓ Steps to Set Up External CSS

◆ Step 1: Create the CSS File

Create a new file and save it with the “`.css`” extension.

Example: `style.css`

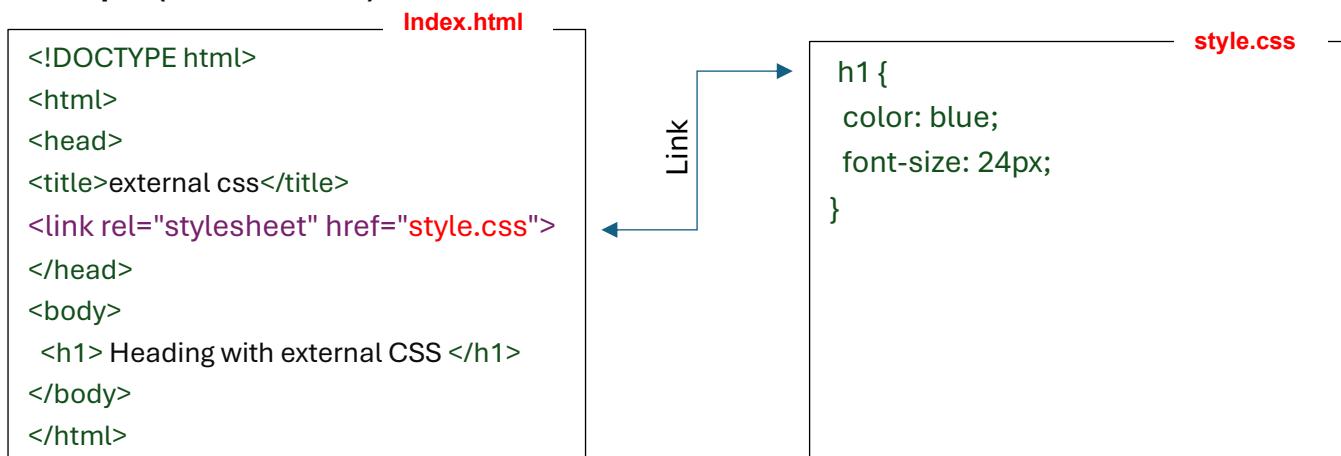
◆ Step 2: Link the CSS File to HTML

Use the `<link>` tag inside the `<head>` of your HTML file.

```
<head>
<title>External CSS link</title>
<link rel="stylesheet" type="text/css" href="style.css">
</head>
```

⚠ Note: `href="style.css"` should match the exact file name and path of your CSS file.

Example (External CSS):



⚠ Note: (An external style sheet can be written in any text editor, and must be saved with a `.css` extension.)

CSS Styling – Text, Fonts

This chapter covers how to style **text**, change **fonts**, and apply **backgrounds** to elements.

A Text Styling

Property	Description	Example
color	Text color	color: red;
Font-family	Change the font style	Font-family:arial,sans-serif;
Font-size	Sets the size of text	Font-size:19px;
Font-weight	Sets thickness (boldness) of text	Font-weight: bold;

Font-style	Sets italic or normal text	font-style: italic;
text-align	Horizontal alignment	text-align: center;
text-decoration	Underline, overline, line-through, none, etc	text-decoration: underline;
text-transform	Uppercase, lowercase, capitalize	text-transform: uppercase;
letter-spacing	Space between letters	letter-spacing: 2px;
line-height	Space between lines	line-height: 1.5;
direction	Sets text direction (LTR/RTL)	direction: rtl;
text-shadow	Adds shadow effect to text	text-shadow: 2px 2px 5px gray;

⊕ color

This property help's to set the color of a text on your web page which is inside an element or inside the body tag if no element is parenting it.

Syntax

```
element_selector {
    color: color-name;
}
```

(color name: red, blue, green, tomato, gold, medium sea green, pink)

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Document</title>
</head>
<body>
    <p style="color: red;">This text is red.</p>
    <p style="color: blue;">This text is blue. </p>
    <p style="color: green;">This text is green. </p>
</body>
</html>
```

⊕ font-family

The **CSS font-family property** specifies the font for an element. It can list multiple fonts as fallbacks. If the browser doesn't support the first font, it tries the next. It includes specific font names like "Arial" and generic families like "serif" or "sans-serif".

Syntax

```
element_selector{
    font-family: family_name;
}
```

(family_name: consolas, Monotype Corsiva, Freestyle Script, Book Antiqua, Lucida Handwriting)

```
<!DOCTYPE html>
<html lang="en">
<head>
    <title>Document</title>
</head>
<body>
    <p style="font-family: Monotype Corsiva;">This text uses Monotype Corsiva.</p>
    <p style="font-family: Lucida Handwriting;">This text uses Lucida Handwriting.</p>
    <p style="font-family: Goudy Stout;">This text uses Goudy Stout.</p>
```

```
</body>
</html>
```

Font-size

The **font-size** property in CSS is used to specify the size of the text. It can be set using different units like pixels, em, rem, percentages, and more, making it flexible for responsive designs. **Font size** plays a key role in readability, improving the user experience, and maintaining the overall aesthetics of a website.

Syntax

```
element_selector{
  font-size: length ;
}

(length: 1px.....100px , 1em.....100 em, 1rem.....100rem, 1%.....100%,)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
<p style="font-size: 20px;">This is 20px text size.</p>
<p style="font-size: 28px;">This is 28px text size.</p>
</body>
</html>
```

font-weight

The CSS font-weight property is used to set the weight or thickness of the font used with HTML text. The font-weight applied will depend on the font family used and the browser. Some font families are available only in specific weights. Understanding how to use the font-weight property effectively can greatly enhance the visual appeal and readability of your web content.

Syntax:

```
element_selector {
  font-weight: weight_value;
}

(value: normal| bold| lighter| bolder| number)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
<p style="font-weight: bold;">This text is bold.</p>
<p style="font-weight: 100;">This text is thin (100).</p>
</body>
</html>
```

font-style

Font style is an important element that enhances the readability of the text. CSS provides several properties to change the text appearance and font style. The font style property allows you to define how the text should appear **normal**, **italic**, or **oblique**.

Syntax

```
Element_selector {
  font-style:value;
}
(value: normal| italic| oblique)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
  <p style="font-style: italic;">This is italic text.</p>
  <p style="font-style: oblique;">This is oblique text.</p>
</body>
</html>
```

+ text-align

The text-align property in CSS controls the horizontal alignment of inline content (such as text) and inline-block elements within their containing block-level element.

Syntax:

```
element_selector {
text-align:value;
}
(value: left| right| center| justify)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
  <p style="text-align: left;">This text is left. </p>
  <p style="text-align: center;">This text is centered. </p>
  <p style="text-align: right;">This text is aligned to the right. </p>
</body>
</html>
```

+ text-decoration

The text-decoration-line property is used to add a decoration line to text.

Syntax:

```
element_selector {
text-decoration: underline| overline| line-through;
}
(Value: underline| overline| line-through)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
  <p style="text-decoration: underline;">Underlined text</p>
```

```
<p style="text-decoration: overline;">Overlined text</p>
<p style="text-decoration: line-through;">This text has a line through it </p>
</body>
</html>
```

text-transform

The **text-transform** property in CSS is used to control the **capitalization of text**. It allows you to transform text to **uppercase**, **lowercase**, or **capitalize** the first letter of each word.

Syntax

```
element_selector {
  text-transform: value;
}

(value: none | capitalize | uppercase | lowercase)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
  <p style="text-transform: uppercase;">this text becomes uppercase</p>
  <p style="text-transform: capitalize;">this text is capitalized</p>
  <p style="text-transform: lowercase;">This Text is Lowercase</p>
</body>
</html>
```

letter-spacing

The letter-spacing property in CSS is used to adjust the space between characters in a block of text. It helps to control the spacing, allowing you to increase or decrease the space for better readability or to create a specific visual effect. This property is especially useful when fine-tuning the appearance of headings or paragraphs.

Syntax

```
element_selector{
  letter-spacing: normal | length;
}

(length: -1px, 2px, 0.2em, 0.1rem, normal)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
  <p style="letter-spacing: 2px;">2px Spaced text</p>
  <p style="letter-spacing: 5px;"> 5px Spaced text</p>
  <p style="letter-spacing: 10px;"> 10px Spaced text</p>
</body>
</html>
```

line-height

The **CSS line height property** determines the height of each line of text within an element. It can be set as a specific length, percentage of the font size, or unitless number, affecting spacing between lines for improved readability and aesthetics.

Syntax:

```
element_selector{
line-height: normal| number| length| percentage;
}
(length: 10px, 1em, 150%, 1.5, normal)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
<style>
p{
line-height:5;
}
</style>
</head>
<body>
  <p>Double line spacing</p>
  <p>Double line spacing</p>
  <p>Double line spacing</p>
</body>
</html>
```

+ direction

The **direction** property specifies the text direction/writing direction within a block-level element.

Syntax:

```
element_selector{
direction: value;
}
(value: rtl| ltr)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
  <p style="direction: rtl;">This text goes right to left.</p>
  <p style="direction: ltr;">This text goes left to right.</p>
</body>
</html>
```

+ text-shadow

The **CSS text-shadow property** adds shadows to text for depth and emphasis. It accepts values for horizontal and vertical shadow positions, blur radius, and shadow color. The default is no shadow is none.

Syntax

```
element_selector{
text-shadow: h-shadow v-shadow blur-radius color;
}
(text-shadow: 2px 2px 2px gray;)
```

```
<!DOCTYPE html>
<html lang="en">
<head>
  <title>Document</title>
</head>
<body>
  <p style="text-shadow: 2px 2px 5px gray;">Shadowed text</p>
  <p style="text-shadow: 1px 1px 1px black, 3px 3px 5px blue;">Shadowed text</p>
</body>
</html>
```

Practice Task:

Write a HTML and design with CSS to show the following result.

Result:

EXPLORING TEXT STYLING IN CSS

CSS allows us to make our text beautiful and readable. Let's play with colors, fonts, and shadows!

Learning web design is fun when you experiment with styles!

Let's Get Creative

"Design is not just what it looks like and feels like. Design is how it works." — Steve Jobs

Created by [Your Name]

■ Background Styling

The CSS background properties are used to add background effects for elements.

Property	Description	Example
background-color	Sets background color	background-color: lightblue;
background-image	Sets background image	background-image: url('bg.jpg');
background-size	Size of background (cover, etc.)	background-size: cover;
background-repeat	Repeat or not	background-repeat: no-repeat;
background-position	Image position	background-position: center;

❖ background-color

The **background-color** CSS property sets the background color of an element, allowing you to create a solid color backdrop. You can define the color using named colors, hexadecimal values, **RGB**, **RGBA**, **HSL**, or **HSLA**. This property applies to both the content and padding areas of the element.

Syntax

```
element {
  background-color : color | transparent;
}
```

background-color >> Body

```
<!DOCTYPE html>
<html>
<head>
  <title>Body Background</title>
  <style>
    body {
      background-color: blue;
      color: white;
      font-family: Arial;
    }
  </style>
</head>
<body>
  <h2>Body Background Color Example</h2>
  <p>This page has a background color on the entire body.</p>
</body>
</html>
```

background-color >> text

```
<!DOCTYPE html>
<html>
<head>
  <title>Text Background</title>
```

```
<style>
  h1 {
    background-color: orange;
    padding: 10px;
  }
  p {
    background-color: greenyellow;
    padding: 10px;
  }
</style>
</head>
<body>
<h1>This is a heading with background-color</h1>
<p>This is a paragraph with background color.</p>
</body>
</html>
```

background-color >> table

```
<!DOCTYPE html>
<html>
<head>
  <title>Table Background</title>
  <style>
    table {
      border-collapse: collapse;
      width: 1000px;
      height: 400px;
      font-size: 25px;
      text-align: center;
    }
    th {
      background-color: hotpink;
    }
    td {
      background-color: burlywood;
    }
  </style>
</head>
<body>
  <table border="1">
    <tr>
      <th>ID</th>
      <th>Name</th>
```

```

</tr>
<tr>
    <td>1</td>
    <td>Ankit</td>
</tr>
<tr>
    <td>2</td>
    <td>Anita</td>
</tr>
</table>
</body>
</html>

```

❖ background-image

The **background-image property** allows you to set one or more background images for an element. It allows you to specify the image URL and combine it with other background properties to control its position, size, repeat behavior, and more, enhancing the visual design of web pages.

Syntax

```

element_selector {
    background-image: url('image_url');
}

```

```

<!DOCTYPE html>
<html lang="en">
<head>
    <title>Background Image Example</title>
    <style>
        body {
            background-image: url("example.jpg");
            background-color: bisque;
            font-family: Arial, sans-serif;

            h1, h3 {
                color: white;
                text-align: center;
            }
            p {
                background-color: white;
                color: brown;
                width: 50%;
                font-size: 18px;
                line-height: 1.9;
            }
        }
    </style>
</head>
<body>
    <h1>CCC BACKGROUND IMAGE</h1>
    <h3>background-image: url("")</h3>
    <p>

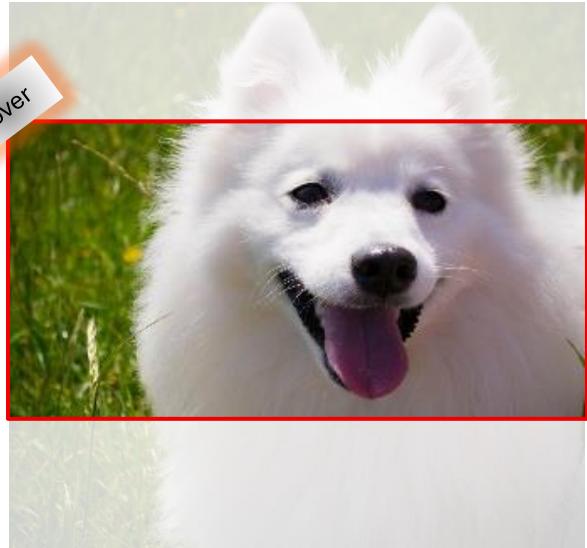
```

The **background-image** property allows you to set one or more background images for an element. It lets you specify the image URL and combine it with other background properties such as background-size, repeat, and position to control how the image appears. This enhances the visual design of web pages and adds aesthetic value.

```
</p>
</body>
</html>
```

❖ Background- image | size | repeat | position

Size: auto | cover | contain | width & height



contain



Repeat: repeat | no-repeat | repeat-x | repeat-y | space | round

Position: center, left, right | top, bottom | x% y% | 10px 20px

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Background Properties Demo</title>
<style>
body{
    background-color: gold;
}
.box {
    width: 45%; height: 300px;
    display: inline-block;
    margin: 20px; vertical-align: top;
    border: 5px solid black;
}
/* With Background Properties */
.with-bg {
    background-color: #ffffff;
    background-image: url("example.jpg");
    background-size: cover;
    background-repeat: no-repeat;
    background-position: center;
```

```

}
/* repeat-background properties */
.repeat-bg {
  background-color: #ffffff;
  background-image: url("example.jpg");
  background-size: 50%;
  background-repeat: repeat;
  background-position: center;
}
/* Without Background Properties */
.without-bg {
  background-image: url(' example.jpg ');
}
h2 {
  text-align: center;
}
p{
  text-align:center; color:white;
  font-size: 20px;
  background-color: blue;
}
</style>
</head>
<body>
<h2>CSS Background Properties </h2>

<div class="box with-bg">
  <p >With background properties</p>
</div>

<div class="box repeat-bg">
  <p>repeat background properties</p>
</div>
<div class="box without-bg">
  <p> Without background properties</p>
</div>
</body>
</html>

```

🔗 CSS Color Properties

Property	Description	Example
color	Sets the text color	color: blue;
background-color	Sets the background color	background-color: yellow;
border-color	Sets the color of borders	border-color: red;
outline-color	Sets the color of outlines	outline-color: green;

Color Value Types

Type	Example	Note
Color names	red, blue, green	Predefined names
HEX	#FF0000 (red), #00FF00 (green)	Hexadecimal color code
RGB	rgb(255, 0, 0)	Red, Green, Blue
RGBA	rgba(0, 0, 0, 0.5)	RGB with alpha (opacity)
HSL	hsl(120, 100%, 50%)	Hue, Saturation, Lightness
HSLA	hsla(240, 100%, 50%, 0.7)	HSL with alpha
Transparent	transparent	Fully transparent color
currentColor	currentColor	Uses the current text color

❖ color

The **color** property is used to specify the text color. It accepts color values as color name, HEX, RGB, RGBA, HSL, or HSLA values. This property plays a crucial role in defining text appearance, ensuring readability, and enhancing the overall design aesthetics of web content.

Syntax

```
color: color_value ;
```

❖ background-color

The **background-color** CSS property sets the background color of an element, allowing you to create a solid color backdrop. You can define the color using named colors, hexadecimal values, **RGB**, **RGBA**, **HSL**, or **HSLA**. This property applies to both the content and padding areas of the element.

By using the background-color property, you can easily enhance the visual appearance of your webpage. It provides flexibility in how you style the background, whether for a specific element or the entire page.

Syntax

```
element {
    background-color : color_value;
}
```

❖ border-color

The border-color property sets the color of the border of an element. You can apply it to all four sides or individually (top, right, bottom, left).

```
<!DOCTYPE html>
<html>
<head>
<title>Border Color Example</title>
<style>
.box1 {
    height: 100px;
    border: 15px solid;
    border-color: red;
    padding: 10px;
    margin: 10px;
}
.box2 {
    height: 100px;
    border-width: 20px;
```

```

border-style: solid;
border-top-color: blue;
border-right-color: green;
border-bottom-color: orange;
border-left-color: purple;
text-align: center;
}
</style>
</head>
<body>
<div class="box1">This box has red borders on all sides.</div>

<div class="box2">This box has different border colors on each side.</div>
</body>
</html>

```

⚠ Note:

- You must define border-style (like solid, dashed, etc.) for the border to be visible.
- You can also use shorthand:

Syntax:

border: width style color;

(Example: **border:** 3px solid green;) This sets width, style, and color in one line.

Border style: none | solid | dotted | dashed | double | groove | ridge | inset | outset | hidden

❖ Outline-color

An outline is a line that is drawn around elements, outside the borders, to make the element "stand out".

The **outline-color** property specifies the color of an outline.

⚠ Note: Always declare the outline-style property before the **outline-color** property. An element must have an outline before you change the color of it.

```

<!DOCTYPE html>
<html>
<head>
<title>Outline Color Example</title>
<style>
.with-outline {
  border: 4px solid rgb(242, 4, 4);
  outline-style: solid;
  outline-width: 4px;
  outline-color: blue;
  padding: 10px;
  margin: 20px;
}
textarea{

```

```
height: 200px; width: 800px; font-size: 25px;  
}  
.outline-input:focus {  
    outline: 3px dashed green;  
}  
</style>  
</head>  
<body>  
<div class="with-outline">This box has a blue outline outside the red border.</div>  
<textarea name="" id="" class="outline-input" placeholder="Click me to see green  
outline"></textarea>  
</body>  
</html>
```

Practice Task:

Create a table and design with CSS to show the following result.

Result:

ID	Name	Marks
1	Ram	96
2	Anita	56
3	Raju	88

CSS Gradient Types

Gradients in CSS are used to create smooth transitions between two or more colors. There are **3 main types**:

Gradient Type	Description	Example
linear-gradient()	Colors transition in a straight line	background: linear-gradient(red, blue);
radial-gradient()	Colors spread from a center point outward	background: radial-gradient(circle, red, blue);
conic-gradient()	Colors rotate around a center point	background: conic-gradient(red, yellow, blue);

Linear Gradient Syntax

background: `linear-gradient(direction, color1, color2, ...);`

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Linear Gradient Examples</title>
<style>
div{
  height: 150px;
}
.linear-top {
  background: linear-gradient(to top, #0b486b, #f56217);
}
.linear-diagonal {
  background: linear-gradient(135deg, #00feba, #8e44ad);
}
.linear-right {
  background: linear-gradient(to right, #ffecd2, #fcb69f);
  color: #000;
}
.linear-multi {
  background: linear-gradient(to right, red, orange, yellow, green, blue);
}
.linear-transparent {
  background: linear-gradient(to right, rgba(255, 0, 0, 0.7), transparent);
}
</style>
</head>
<body style="text-align: center;">
<h2 class="section-title">Linear Gradient Examples</h2>
<div class="linear-top">Linear Gradient — Top</div>
<div class="linear-diagonal">Linear Gradient — Diagonal 135°</div>
<div class="linear-right">Linear Gradient — Right</div>
<div class="linear-multi">Multi-Color Linear Gradient</div>
<div class="linear-transparent">Linear Gradient with Transparency</div>
</body>
</html>
```

Radial Gradient Syntax

background: radial-gradient(shape size at position, color1, color2);

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Radial Gradient Examples</title>
<style>
div {
  height: 150px;
}
.radial-center {
  background: radial-gradient(circle, #e6fb00, #07ef2d);
  color: #000;
}
.radial-soft {
  background: radial-gradient(circle, #43cea2, #185a9d);
}
.radial-ellipse {
  background: radial-gradient(ellipse at top left, #5f0202, #ffa751);
  color: #000;
}
.radial-multi {
  background: radial-gradient(circle, red, orange, yellow, green, blue);
}
.radial-transparent {
  background: radial-gradient(circle, rgba(255, 0, 0, 0.6), transparent);
}
</style>
</head>
<body style="text-align: center;">
<h2 class="section-title">Radial Gradient Examples</h2>
<div class="radial-center">Radial Gradient — Circle Center</div>
<div class="radial-soft">Radial Gradient — Soft Blended</div>
<div class="radial-ellipse">Radial Gradient — Ellipse at Top Left</div>
<div class="radial-multi">Radial Gradient — Multi Color</div>
<div class="radial-transparent">Radial Gradient with Transparency</div>
</body>
</html>
```

Conic Gradient Syntax (CSS3+)

background: conic-gradient(from angle at position, color1, color2, ...);

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Conic Gradient Examples</title>
```

```

<style>
div {
  height: 150px;
}
.conic-wheel {
  background: conic-gradient(from 0deg, red, orange, yellow, green, blue, indigo, violet, red);
}
.conic-center {
  background: conic-gradient(at center, #ff9a9e, #edddd9, #d806c3);
  color: #000;
}
.conic-purple {
  background: conic-gradient(from 90deg at 50% 50%, #8e2de2, #4a00e0, #8e2de2);
}
.conic-pie {
  background: conic-gradient(red 25%, green 25% 50%, blue 50% 75%, yellow 75%);
}
.conic-slice {
  background: conic-gradient(from 45deg, #00f0ff, #ff00f0, #00f0ff);
}
</style>
</head>
<body style="text-align: center;">
<h2 class="section-title">Conic Gradient Examples</h2>
<div class="conic-wheel">Conic Gradient — Color Wheel</div>
<div class="conic-center">Conic Gradient — Peach Swirl</div>
<div class="conic-purple">Conic Gradient — Electric Purple</div>
<div class="conic-pie">Conic Gradient — Pie Style Slices</div>
<div class="conic-slice">Conic Gradient — Angled Slice Repeat</div>
</body>
</html>

```



CSS Border Properties

Property	Description	Example
border	Shorthand to set width, style, and color	border: 1px solid red;
border-width	Sets the thickness of the border	border-width: 2px;
border-style	Sets the style of the border	border-style: dashed;
border-color	Sets the color of the border	border-color: blue;
border-top	Shorthand for the top border	border-top: 2px solid green;
border-right	Shorthand for the right border	border-right: 2px dotted red;
border-bottom	Shorthand for the bottom border	border-bottom: 3px double orange;
border-left	Shorthand for the left border	border-left: 1px solid black;
border-radius	Rounds the corners of the border	border-radius: 10px;

border-top-left-radius	Rounds top-left corner	border-top-left-radius: 15px;
border-top-right-radius	Rounds top-right corner	border-top-right-radius: 15px;
border-bottom-left-radius	Rounds bottom-left corner	border-bottom-left-radius: 10px;
border-bottom-right-radius	Rounds bottom-right corner	border-bottom-right-radius: 10px;

❖ CSS Border

Borders in CSS are used to create a visible outline around an element. They can be customized in terms of

- **Width:** The thickness of the border.
- **Style:** The appearance of the border (solid, dashed, dotted, etc.).
- **Color:** The color of the border.

Syntax:

```
element {
    border: width style color;
}
```

```
<!DOCTYPE html>

<html>
<head>
    <title>css border</title>
</head>
<body>
    <div style="border: 8px dashed red; height: 100px;">Dashed Border</div><br>
    <div style="border: 8px dotted blue; height: 100px;">Dotted Border</div><br>
    <div style="border: 8px double green; height: 100px;">Double Border</div><br>
    <div style="border: 8px groove orange; height: 100px;">Groove Border</div>
</body>
</html>
```

❖ border-top | bottom | right | left

In CSS, you can style the borders of individual sides of an element using the **top**, **bottom**, **right**, **left**, properties:

```
border-top: 2px solid green;
border-right: 2px solid red;
border-bottom: 2px solid blue;
border-left: 2px solid black;
```

HTML:

```
<!DOCTYPE html>
<html>
<head>
    <title>Border Sides Example</title>
```

```

<style>
  .custom-border-box {
    width: 300px;
    height: 150px;
    padding: 20px;
    border-top: 8px solid green;
    border-right: 8px solid red;
    border-bottom: 8px solid blue;
    border-left: 8px solid black;
    margin: 50px auto;
    text-align: center;
  }
</style>
</head>
<body>
<div class="custom-border-box">
  This box has<br>
  Green top border,<br>
  Red right border,<br>
  Blue bottom border,<br>
  and Black left border.
</div>
</body>
</html>

```

❖ border-radius

The border-radius property is used to round the **corners** of an element's border.

Syntax:

```
border-radius: <length>;
```

length: (50px, 50% for circular)

⌚ HTML+CSS:

```

<!DOCTYPE html>
<html>
<head>
  <title>Border Radius Demo</title>
<style>
  .shape {
    width: 120px; height: 120px;
    background-color: #3498db;
    text-align: center;
    line-height: 120px;
    margin: 20px;
  }
  .circle {
    border-radius: 50%;
  }
  .soft-corners {

```

```

    border-radius: 10px;
}
.pill {
width: 180px;
height: 50px;
line-height: 50px;
border-radius: 999px;
background-color: #2ecc71;
}
.one-side {
border-radius: 0 30px 30px 0;
background-color: #e67e22;
}
.oval {
width: 160px;
height: 100px;
border-radius: 50% / 25%;
background-color: #9b59b6;
}

```

</style>

</head>

<body>

<h2>  Perfect Circle</h2>

<div class="shape circle">Circle</div>

<h2>  Soft Corners</h2>

<div class="shape soft-corners">10px</div>

<h2>  Pill Shape</h2>

<div class="shape pill">Pill Button</div>

<h2>  One Side Rounded</h2>

<div class="shape one-side">Right Round</div>

<h2>  Oval Shape</h2>

<div class="shape oval">Oval</div>

</body>

</html>

Practice Task:

Write a HTML and design with CSS to show the following result.

Result:

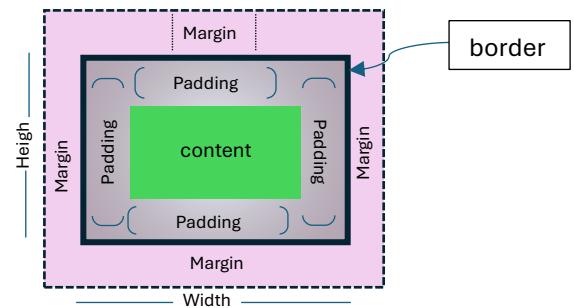




CSS Dimensional Properties Table

CSS dimension defines the size and space occupied by elements on a webpage. The dimension properties like height, width, max-height, max-width, line-height and many more are used to define width, height of HTML elements in every screen sizes. In this tutorial we will learn how to manage dimension and layout of HTML elements in varying screen sizes.

Part	Description
Content	The actual text or image
Padding	Space between content and border
Border	Line surrounding the content
Margin	Space outside the border to other elements



Property	Description	Example
width	Sets the width of an element	width: 200px;
height	Sets the height of an element	height: 100px;
padding	Space inside element border	padding: 10px;
padding-top	Padding at the top	padding-top: 20px;
padding-right	Padding on the right	padding-right: 15px;
padding-bottom	Padding at the bottom	padding-bottom: 10px;
padding-left	Padding on the left	padding-left: 5px;
margin	Space outside the element	margin: 20px;
margin-top	Margin at the top	margin-top: 10px;
margin-right	Margin on the right	margin-right: 10px;
margin-bottom	Margin at the bottom	margin-bottom: 10px;
margin-left	Margin on the left	margin-left: 10px;
Box-shadow	Adds shadow around an element (x-offset, y-offset, blur, spread, color)	Box-shadow: 20px 20px 20px grey;

❖ Width, height,

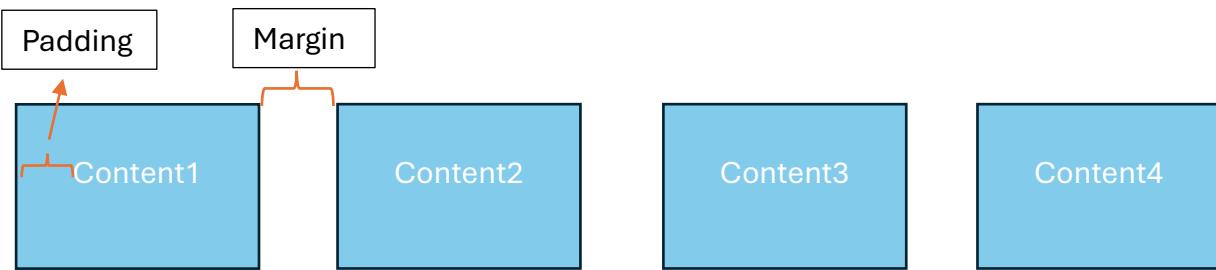
Sets the width and height of an element.

```
div {
  height: 100px;
  width: 500px;
  background-color: powderblue;
}
```

❖ Margin, padding

Margin: Controls space around the element. (outside the border)

Padding: Controls space inside the element, between the content and the border.



🔗 HTML + CSS:

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Profile Card Project</title>
<style>
h1 {
  text-align: center;
  margin-bottom: 40px;
}
.card-container {
  display: flex;
  justify-content: center;
  gap: 20px; /* space between cards */
}
.card {
  background-color: white;
  border: 1px solid #ccc;
  border-radius: 10px;
  width: 250px;
  padding: 20px; /* inner space */
  margin: 10px; /* outer space */
  text-align: center;
}
.card img {
  width: 80px;
  height: 80px;
  border-radius: 50%;
  margin-bottom: 15px;
}
.card h3 {
  margin: 10px 0;
}
.card p {
  font-size: 14px;
  color: #555;
}
</style>
</head>
<body>

<h1>Our Team</h1>
```

```

<div class="card-container">
  <div class="card">
    
    <h3>John Doe</h3>
    <p>Frontend Developer</p>
  </div>
  <div class="card">
    
    <h3>Jane Smith</h3>
    <p>Backend Developer</p>
  </div>
  <div class="card">
    
    <h3>Alex Johnson</h3>
    <p>UI/UX Designer</p>
  </div>
</div>
</body>
</html>

```

❖ box-shadow

The CSS box-shadow property is used to add a shadow effect to the edges of an element. You can apply multiple shadows by separating them with commas. The shadow is defined by the X and Y offsets (which position the shadow), a blur radius, a spread radius, and a color.

Syntax

box-shadow: h-offset v-offset blur-radius spread-radius color ;

(Example: box-shadow: 5px 5px 10px 0px red;)

🌐 HTML+CSS:

```

<!DOCTYPE html>
<html>
<head>
  <title>Box Shadow Examples</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      padding: 40px;
      background: #f0f0f0;
    }
    .box {
      width: 200px;
      height: 100px;
      margin: 30px;
      padding: 20px;
      background: white;
    }
  </style>
</head>
<body>
  <div class="box"></div>
</body>

```

```

border: 1px solid #ccc;
text-align: center;
display: inline-block;
}
.shadow1 {
  box-shadow: 15px 15px 10px greenyellow;
}
.shadow2 {
  box-shadow: 0px 10px 15px grey;
}
.shadow3 {
  box-shadow: 1px 1px 20px 10px gold; /* red glow */
}
.shadow4 {
  box-shadow: inset 0px 0px 10px grey; /* inner shadow */
}
</style>
</head>
<body>
<h2>CSS Box Shadow Examples</h2>

<div class="box shadow1">Basic Shadow</div>
<div class="box shadow2">Soft Shadow</div>
<div class="box shadow3">Color Glow</div>
<div class="box shadow4">Inset Shadow</div>

</body>
</html>

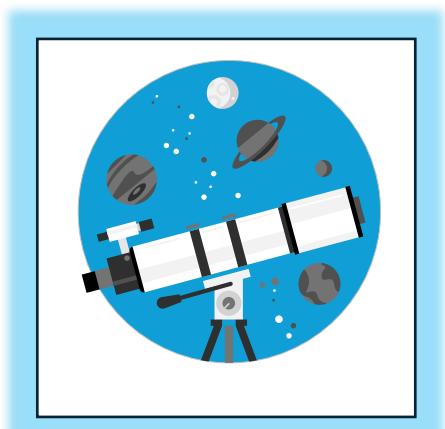
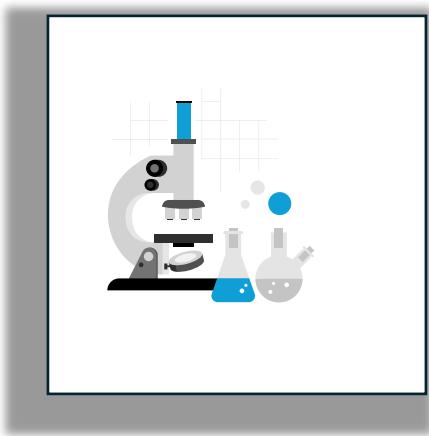
```

Practice Task:

Write a HTML and design with CSS to show the following result.

Note: Select three images and apply different shadow styles.

Result:



CSS Pseudo Classes

Hover:

CSS hover effects are styles that change when the user hovers the mouse over an element (usually a button, link, image, etc.). Here are **some popular and useful CSS hover effects**:

```
selector:pseudo-class {
    property: value;
}
```

HTML+CSS:

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Chapter 15: CSS Pseudo Classes & Transitions</title>
<style>
.box {
    width: 100px; height: 100px;
    background-color: lightgray;
    transition: background-color 0.5s ease, transform 0.5s ease;
    margin-bottom: 20px; }

.box:hover {
    background-color: orange;
    transform: scale(1.1);
}
</style>
</head>
<body style="font-family: Arial, sans-serif; padding: 20px;">

<h1>Chapter 15: CSS Pseudo Classes</h1>

<h2>Pseudo-Classes</h2>
<h2>CSS Transitions and Hover Effects</h2>
<p>Hover the box below to see a transition effect:</p>

<div class="box"></div>
</body>
</html>
```

Hover >> font-size

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>font-size</title>
<style>
```

```

h1 {
  font-size: 25px;
  background-color: red;
  color: white;
  transition: 0.3s;
}
.fontsize:hover {
  font-size: 30px;
}
</style>
</head>
<body>
  <h1 class="hover fontsize">Hover me to see the font size changes</h1>
</body>
</html>

```

⌚ Hover>>color

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>font-size</title>
  <style>
    h1 {
      font-size: 25px;
      background-color: red;
      color: white;
      transition: 0.3s;
    }
    .fontsize:hover {
      font-size: 30px;
    }
    .color:hover{
      color: blue;
    }
  </style>
</head>
<body>
  <h1 class="hover fontsize">Hover me to see the font size changes</h1>
  <h1 class="hover color">Hover me to see the color changes</h1>
</body>
</html>

```

⌚ Hover>>background-color

```

<!DOCTYPE html>
<html lang="en">

```

```

<head>
  <title>font-size</title>
  <style>
    h1 {
      font-size: 25px;
      background-color: red;
      color: white;
      transition: 0.3s;
    }
    .fontsize:hover {
      font-size: 30px;
    }
    .color:hover{
      color: blue;
    }
    .background:hover{
      background-color: blue;
    }

  </style>
</head>
<body>
  <h1 class="hover fontsize">Hover me to see the font size changes</h1>
  <h1 class="hover color">Hover me to see the color changes</h1>
  <h1 class="hover background">Hover me to see the background changes</h1>

</body>
</html>

```

④ Hover > div_box

```

<!DOCTYPE html>
<html lang="en">
<head>
  <title>Simple Hover Effects</title>
  <style>
    .box {
      text-align: center;
      width: 300px;
      padding: 20px;
      margin: 20px;
      border: 2px solid #333;
      transition: 0.3s ease;
    }
    .box:hover{

```

```
color: white;
background-color: blue;
border: 5px solid red;
scale: 1.3;
}
</style>
</head>
<body>
<div class="box">
<p>Hover me</p>
</div>
</body>
</html>
```

⌚ Hover > table

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Table Hover</title>
<style>
table {
    width: 80%;
    border-collapse: collapse;
    margin: 20px auto;
    font-size: 18px;
}
table, th, td {
    border: 1px solid #333;
}
th{background-color: blue;color: white;}
th, td {
    padding: 12px;
    text-align: center;
}
td:hover {
    background-color: #fc15ab;
    cursor: pointer;
    transition: 0.5s;
}
</style>
</head>
<body>

<table>
<tr>
```

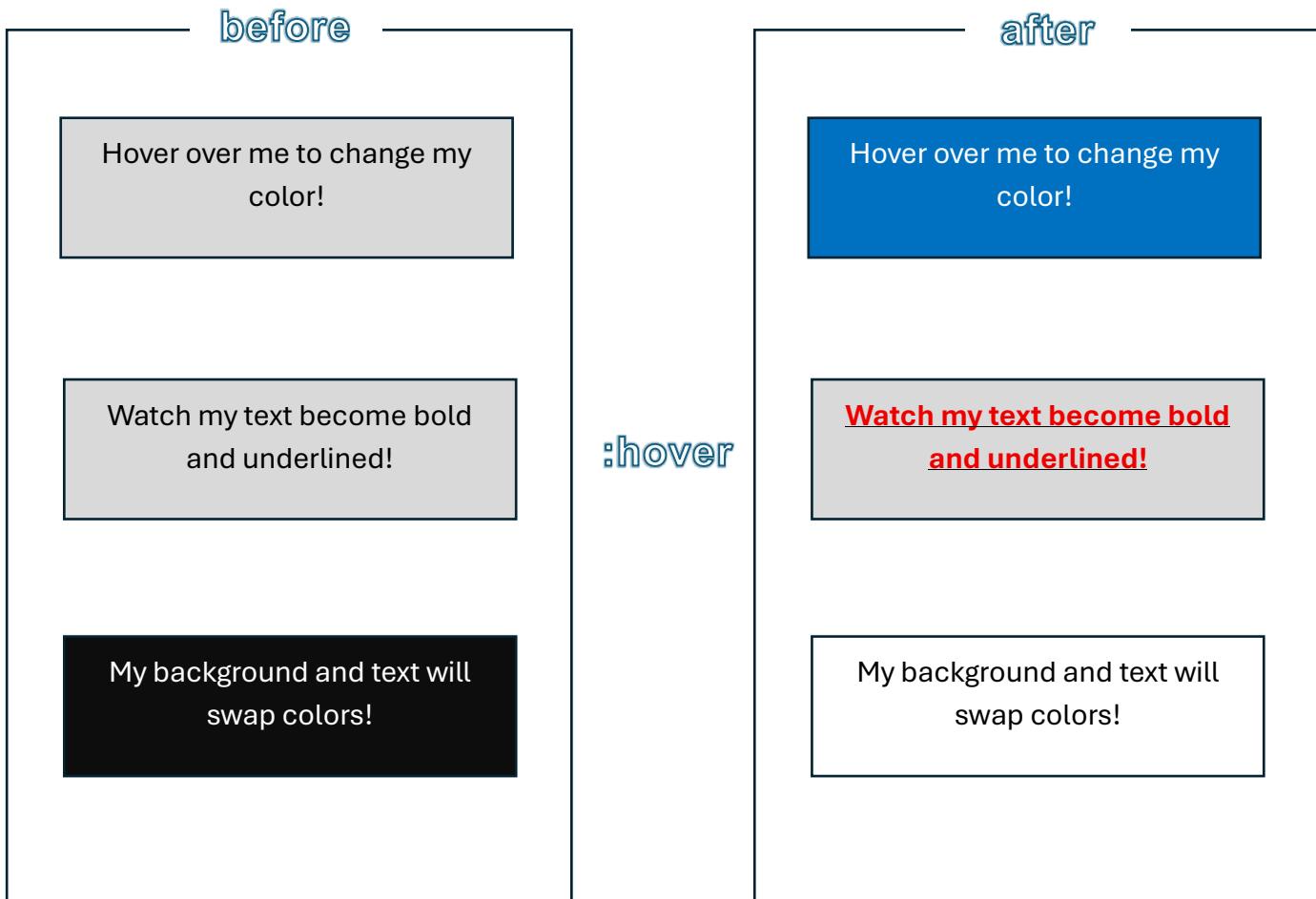
```
<th>ID</th>
<th>Name</th>
<th>Marks</th>
</tr>
<tr>
  <td>1</td>
  <td>Raju</td>
  <td>85</td>
</tr>
<tr>
  <td>2</td>
  <td>Rekha</td>
  <td>90</td>
</tr>
<tr>
  <td>3</td>
  <td>Tejas</td>
  <td>88</td>
</tr>
</table>

</body>
</html>
```

ID	Name	Marks
1	Raju	85
2	Rekha 	90
3	Tejas	88

Practice Task:

Create a file named **hover.html** with this basic content and apply hover effect:



HTML and CSS Project: Techno IT Student Profile Page

HTML:

```
<!DOCTYPE html>
<html lang="en">
<head>
<title>Techno IT Student Profile</title>
<link rel="stylesheet" href="style.css">
</head>
<body>
<div class="container">
<marquee>✿ Welcome to Techno IT Computer Institute Student Portal ✿</marquee>
<h1>Student Profile Page</h1>


<h2>Basic Information</h2>
```

```
<p><strong>Name:</strong> Write Your Name</p>
<p><strong>Course:</strong> Diploma in Web Design</p>
<p><strong>Gender:</strong> Male</p>
<p><strong>Email:</strong> example@gmail.com</p>
<p><strong>Phone:</strong> +91-9876543210</p>
```

Educational Qualifications

Exam	Board	Year	Percentage
10th	SEBA	2017	85%
12th	AHSEC	2019	78%

Contact Form

Full Name:
Email:
Upload Photo:
Gender:
 Male
 Female

Select Course:
--Select Course--ADCAPGDCAMS Office
Write about yourself:

```
<h2>Our Location</h2>
<iframe
src="https://maps.google.com/maps?q=kokrajhar&t=&z=13&ie=UTF8&iwloc=&output=embed"
width="100%" height="200" style="border:1px solid #333;"></iframe>
<hr>
<p style="text-align:center;">© 2025 Techno IT Computer Institute</p>
</div>
</body>
</html>
```

style.css

```
body {
background-color: black;
background-image: radial-gradient (circle, white 1px, transparent 2px);
background-size: 20px 20px;
}
.container {
width: 90%;
max-width: 900px;
margin: 20px auto;
background: whitesmoke;
padding: 20px;
border-radius: 10px;
box-shadow: 0 0 10px gray;
}
h1, h2 {
color: #2c3e50;
text-align: center;
}
.profile-img {
display: block;
margin: 10px auto;
width: 120px;
height: 120px;
border-radius: 50%;
border: 3px solid #4CAF50;
}
p {
font-size: 16px;
line-height: 1.5;
}
table {
width: 100%;
border-collapse: collapse;
margin: 20px 0;
}
table, th, td {
border: 1px solid #ddd;
}
th {
background-color: #4CAF50;
color: white;
```

```
}
```

```
td, th {
```

```
    padding: 10px;
```

```
    text-align: center;
```

```
}
```

```
form {
```

```
    background-color: #f0f0f0;
```

```
    padding: 15px;
```

```
    border-radius: 8px;
```

```
}
```

```
input[type="text"],
```

```
input[type="email"],
```

```
input[type="file"],
```

```
textarea,
```

```
select {
```

```
    width: 100%;
```

```
    padding: 8px;
```

```
    margin-top: 6px;
```

```
    margin-bottom: 15px;
```

```
    border-radius: 5px;
```

```
    border: 1px solid #ccc;
```

```
}
```

```
input[type="submit"] {
```

```
    background-color: #4CAF50;
```

```
    color: white;
```

```
    border: none;
```

```
    padding: 12px 20px;
```

```
    cursor: pointer;
```

```
    border-radius: 5px;
```

```
}
```

```
input[type="submit"]:hover {
```

```
    background-color: #45a049;
```

```
}
```

```
marquee {
```

```
    font-weight: bold;
```

```
    color: #d35400;
```

```
    margin-bottom: 10px;
```

```
}
```

"To learn more about advanced features of CSS and HTML, you can either delve into an **advanced HTML and CSS course** or join a comprehensive **web design course**. Both options will provide you with a deeper understanding and practical skills in these areas."