



HTML & CSS

1. HTML Introduction

HTML stands for **HyperText Markup Language**.
It is used to create the **structure of webpages**.

Basic Example

```
<!DOCTYPE html>

<html>

<head>

  <title>My First Webpage</title>

</head>

<body>

  <h1>Welcome to HTML</h1>

  <p>HTML is used to create webpages.</p>

</body>

</html>
```

Output

Welcome to HTML

HTML is used to create webpages.

2. HTML Structure



An HTML document normally contains:

- `<!DOCTYPE html>` – Defines HTML5
- `<html>` – Root element
- `<head>` – Contains page information
- `<title>` – Page title
- `<body>` – Visible webpage content

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>HTML Structure</title>
```

```
</head>
```

```
<body>
```

```
  <h1>My Webpage</h1>
```

```
  <p>This is the body of the webpage.</p>
```

```
</body>
```

```
</html>
```

Output





My Webpage

This is the body of the webpage.

3. Headings

HTML provides **six heading levels**, from <h1> to <h6>.

- <h1> – Largest heading
- <h2> – Second level
- <h3> – Third level
- <h4> – Fourth level
- <h5> – Fifth level
- <h6> – Smallest heading

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>Heading 1</h1>
```

```
<h2>Heading 2</h2>
```

```
<h3>Heading 3</h3>
```

```
<h4>Heading 4</h4>
```

```
<h5>Heading 5</h5>
```

```
<h6>Heading 6</h6>
```





</body>

</html>

Output

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

4. Paragraphs

The <p> tag is used to create a **paragraph**.

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1>About HTML</h1>
```

```
<p>HTML is a markup language.</p>
```

```
<p>HTML is used to create the structure of a webpage.</p>
```





</body>

</html>

Output

About HTML

HTML is a markup language.

HTML is used to create the structure of a webpage.

5. Text Formatting

HTML provides different tags for formatting text.

Tag	Purpose
-----	---------

	Bold text
-----	-----------

	Important/bold text
----------	---------------------

<i>	Italic text
-----	-------------

	Emphasized text
------	-----------------

<u>	Underline
-----	-----------

<mark>	Highlight text
--------	----------------

<small>	Small text
---------	------------

	Deleted text
-------	--------------

<sub>	Subscript
-------	-----------

<sup>	Superscript
-------	-------------

Coding

<!DOCTYPE html>



```
<html>
```

```
<body>
```

```
<p><b>Bold Text</b></p>
```

```
<p><i>Italic Text</i></p>
```

```
<p><u>Underline Text</u></p>
```

```
<p><mark>Highlighted Text</mark></p>
```

```
<p><strong>Important Text</strong></p>
```

```
<p>H<sub>2</sub>O</p>
```

```
<p>10<sup>2</sup> = 100</p>
```

```
</body>
```

```
</html>
```

Output

Bold Text

Italic Text

Underline Text



Highlighted Text

Important Text

H₂O

10² = 100

6. Links

The <a> tag is used to create a **hyperlink**.

Syntax

```
<a href="URL">Link Text</a>
```

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>Useful Website</h2>
```

```
<a href="https://www.google.com">Open Google</a>
```

```
</body>
```

```
</html>
```

Output

Useful Website

Open Google



When the user clicks **Open Google**, the Google website opens.

Open in New Tab

```
<a href="https://www.google.com" target="_blank">
```

Open Google

```
</a>
```

7. Images

The `<img>` tag is used to display an **image**.

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>My Image</h2>
```

```

```

```
</body>
```

```
</html>
```

Output

A **flower image** will be displayed with:

- Width: 300 pixels
- Height: 200 pixels



alt provides alternative text if the image cannot be displayed.

Another Example

```

```

8. Lists

HTML supports mainly **ordered lists** and **unordered lists**.

A. Ordered List

The tag creates a numbered list.

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>Computer Courses</h2>
```

```
<ol>
```

```
<li>MS Office</li>
```

```
<li>HTML</li>
```

```
<li>Python</li>
```

```
<li>Tally</li>
```

```
</ol>
```

```
</body>
```





</html>

Output

Computer Courses

1. MS Office
2. HTML
3. Python
4. Tally

B. Unordered List

The tag creates a bullet list.

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>Programming Languages</h2>
```

```
<ul>
```

```
<li>HTML</li>
```

```
<li>Python</li>
```

```
<li>Java</li>
```

```
<li>C++</li>
```

```
</ul>
```



</body>

</html>

Output

Programming Languages

- HTML
- Python
- Java
- C++

9. Tables

The <table> tag is used to create a **table**.

Important tags:

- <table> – Creates table
- <tr> – Table row
- <th> – Table heading
- <td> – Table data

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>Student Mark List</h2>
```



```
<table border="1">
```

```
<tr>
```

```
<th>Name</th>
```

```
<th>Course</th>
```

```
<th>Mark</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Priya</td>
```

```
<td>HTML</td>
```

```
<td>90</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Ravi</td>
```

```
<td>Python</td>
```

```
<td>85</td>
```

```
</tr>
```

```
</table>
```





</body>

</html>

Output

Name	Course	Mark
------	--------	------

Priya	HTML	90
-------	------	----

Ravi	Python	85
------	--------	----

10. Forms

HTML forms are used to **collect information from users.**

Common form controls:

- Text box
- Email box
- Password box
- Radio button
- Checkbox
- Submit button

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>Student Registration</h2>
```



<form>

Name:

<input type="text">

Email:

<input type="email">

Password:

<input type="password">

<input type="submit" value="Register">

</form>

</body>

</html>

Output

Student Registration

Name: [_____]

Email: [_____]

Password: [_____]

[Register]





11. Buttons

The <button> tag is used to create a **clickable button**.

Simple Button

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h2>My Button</h2>
```

```
<button>Click Me</button>
```

```
</body>
```

```
</html>
```

Output

My Button

[Click Me]



Button in a Form

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```



<h2>Registration</h2>

<form>

Name:

<input type="text">

<button type="submit">Submit</button>

<button type="reset">Clear</button>

</form>

</body>

</html>

Output

Registration

Name: [_____]

[Submit] [Clear]

Button Types

Button	Use
submit	Submit form



Button	Use
reset	Clear form
button	Normal clickable button

Beginner practice: Create one HTML page containing a heading, paragraph, image, list, table, registration form, and buttons. This combines all 11 topics into one mini project.

1. CSS Introduction

CSS means **Cascading Style Sheets**.

CSS is used to **design and style HTML webpages**.

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
h1 {
```

```
    color: blue;
```

```
}
```

```
</style>
```

```
</head>
```

```
<body>
```





```
<h1>Welcome to CSS</h1>
```

```
<p>CSS makes webpages beautiful.</p>
```

```
</body>
```

```
</html>
```

Output

Welcome to CSS → Blue color

CSS makes webpages beautiful.

2. Types of CSS

There are **three types of CSS**:

1. Inline CSS
2. Internal CSS
3. External CSS

Example

```
<p style="color:red;">Inline CSS</p>
```

```
<style>
```

```
p{
```

```
  color: blue;
```

```
}
```

```
</style>
```

```
<link rel="stylesheet" href="style.css">
```

Output



The paragraph can appear **red or blue**, depending on which CSS method is applied.

3. Inline CSS

CSS is written inside the HTML element using the style attribute.

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<h1 style="color:red;">Welcome</h1>
```

```
<p style="font-size:20px;">
```

This is Inline CSS.

```
</p>
```

```
</body>
```

```
</html>
```

Output

Welcome

This is Inline CSS.

The heading is **red** and paragraph is **20px**.

4. Internal CSS



Internal CSS is written inside the <style> tag.

Coding

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<style>
```

```
h1 {  
  color: blue;  
}
```

```
p {  
  color: green;  
  font-size: 20px;  
}
```

```
</style>
```

```
</head>
```

```
<body>
```

```
<h1>My Website</h1>
```





<p>Welcome to CSS.</p>

</body>

</html>

Output

My Website

Welcome to CSS.

The heading is blue and paragraph is green.

5. External CSS

External CSS is written in a separate .css file.

HTML – index.html

<!DOCTYPE html>

<html>

<head>

<link rel="stylesheet" href="style.css">

</head>

<body>

<h1>My Website</h1>

<p>External CSS Example</p>



```
</body>
```

```
</html>
```

CSS – style.css

```
h1 {
```

```
    color: blue;
```

```
}
```

```
p {
```

```
    color: green;
```

```
    font-size: 20px;
```

```
}
```

Output

My Website

External CSS Example

The styling comes from the separate **style.css** file.

6. CSS Syntax

CSS syntax contains:

Selector + Property + Value

Syntax

```
selector {
```

```
    property: value;
```

```
}
```



```
}
```

Coding

```
<style>
```

```
p{
```

```
  color: red;
```

```
  font-size: 20px;
```

```
}
```

```
</style>
```

```
<p>Hello CSS</p>
```

Output

Hello CSS

The text appears **red** and **20px** in size.

7. CSS Selectors

A selector selects the HTML element that you want to style.

Common selectors:

- Element selector
- ID selector
- Class selector

Coding



```
<style>
```

```
p {
  color: red;
}
```

```
h1 {
  color: blue;
}
```

```
</style>
```

```
<h1>Welcome</h1>
```

```
<p>Hello Students</p>
```

Output

Welcome

Hello Students

h1 becomes blue and p becomes red.

8. ID Selector

An ID selector starts with #.

Coding

```
<style>
```



```
#title {  
    color: blue;  
    font-size: 30px;  
}
```

```
</style>
```

```
<h1 id="title">HTML and CSS</h1>
```

Output

HTML and CSS

The heading is blue and 30px.

9. Class Selector

A class selector starts with ..

Coding

```
<style>
```

```
.course {  
    color: green;  
    font-size: 20px;  
}
```





</style>

<p class="course">HTML</p>

<p class="course">CSS</p>

<p class="course">Python</p>

Output

HTML

CSS

Python

All three texts are green and 20px.

10. Colors

CSS can change text colors.

Coding

<style>

h1 {

color: red;

}

p {

color: blue;

}





</style>

<h1>Red Heading</h1>

<p>Blue Paragraph</p>

Output

Red Heading

Blue Paragraph

11. Backgrounds

background-color changes the background color.

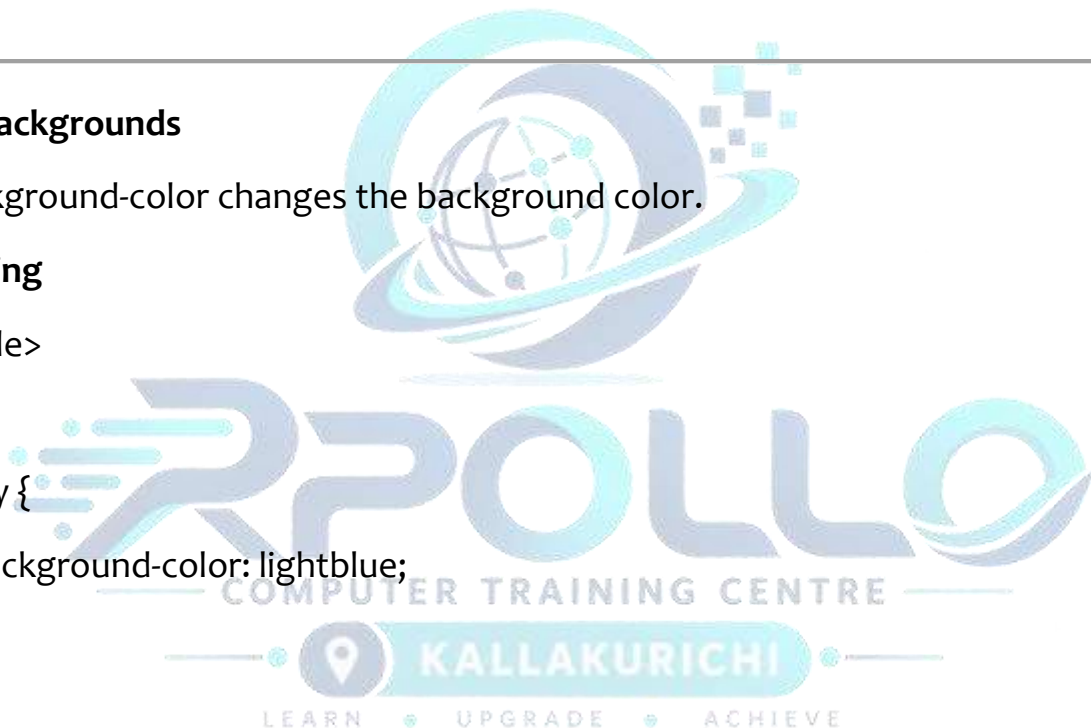
Coding

<style>

```
body {  
    background-color: lightblue;  
}
```

```
h1 {  
    background-color: yellow;  
}
```

</style>





<h1>Welcome</h1>

<p>Learn CSS</p>

Output

The webpage has a **light-blue background**.

The heading has a **yellow background**.

12. Fonts

CSS can control font family, size and style.

Coding

<style>

p {

font-family: Arial;

font-size: 25px;

font-style: italic;

}

</style>

<p>Welcome to CSS</p>

Output

Welcome to CSS

The text uses **Arial**, 25px, italic style.





13. Text Properties

CSS provides several text properties.

Coding

```
<style>
```

```
h1 {
```

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

```
    text-decoration: underline;
```

```
    text-transform: uppercase;
```

```
}
```

```
</style>
```

```
<h1>welcome to css</h1>
```

Output

WELCOME TO CSS

LEARN • UPGRADE • ACHIEVE

The text is:

- Center aligned
- Underlined
- Uppercase

14. Borders



The border property creates a border around an element.

Coding

```
<style>
```

```
p {
```

```
  border: 2px solid black;
```

```
  padding: 10px;
```

```
}
```

```
</style>
```

```
<p>This is a border example.</p>
```

Output

A black border appears around:

This is a border example.

15. Width and Height

width controls width.

height controls height.

Coding

```
<style>
```

```
.box {
```

```
  width: 300px;
```



```
height: 100px;  
border: 2px solid black;  
}
```

</style>

```
<div class="box">
```

CSS BOX

```
</div>
```

Output

A box appears with:

- Width = 300px
- Height = 100px
- Border = 2px



16. Margin

Margin creates space **outside** an element.

Coding

```
<style>
```

```
.box {  
margin: 50px;  
border: 2px solid black;
```



```
}
```

```
</style>
```

```
<div class="box">
```

```
    Hello CSS
```

```
</div>
```

Output

The box has **50px external space** around it.

17. Padding

Padding creates space **inside** an element.

Coding

```
<style>
```

```
.box {
```

```
    padding: 30px;
```

```
    border: 2px solid black;
```

```
}
```

```
</style>
```

```
<div class="box">
```





Hello CSS

</div>

Output

The text has **30px space inside the box.**

18. Box Model

The CSS box model consists of:

Content → Padding → Border → Margin

Coding

<style>

.box {

width: 200px;

padding: 20px;

border: 5px solid black;

margin: 30px;

}

</style>

<div class="box">

CSS Box Model

</div>





Output

A box is displayed with:

- Content
- 20px padding
- 5px border
- 30px margin

19. Display

The display property controls how an element appears.

Common values:

- block
- inline
- none

Coding

```
<style>
```

```
span {  
  display: block;  
  background-color: lightblue;  
}
```

```
</style>
```





HTML

CSS

Output

HTML

CSS

The two elements appear on separate lines.

20. Position

CSS position controls where an element is placed.

Common values:

- static
- relative
- absolute
- fixed
- sticky

Coding

<style>

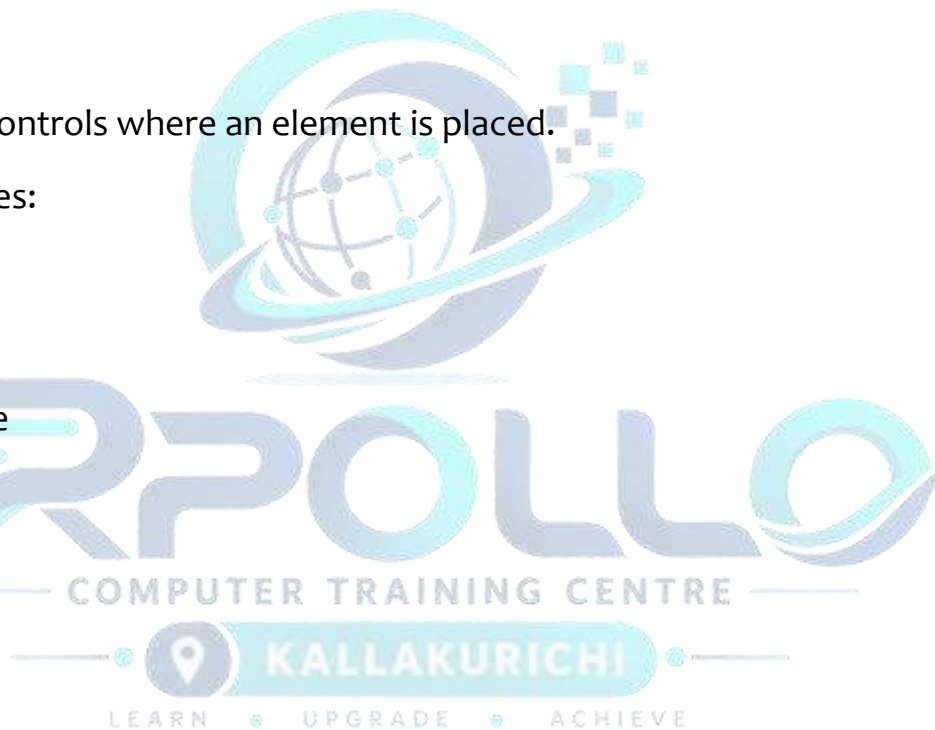
.box {

position: relative;

left: 50px;

border: 2px solid black;

width: 200px;





```
}
```

```
</style>
```

```
<div class="box">
```

Positioned Box

```
</div>
```

Output

The box moves **50px to the right** from its normal position.

21. CSS Buttons

CSS can make buttons attractive.

Coding

```
<style>
```

```
button {
```

```
background-color: blue;
```

```
color: white;
```

```
padding: 12px 25px;
```

```
border: none;
```

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

```
}
```





</style>

<button>Click Me</button>

Output

[Click Me]

A styled button appears with rounded corners.

22. CSS Images

CSS can control image size, border and rounded corners.

Coding

<style>

img {

width: 300px;

height: 200px;

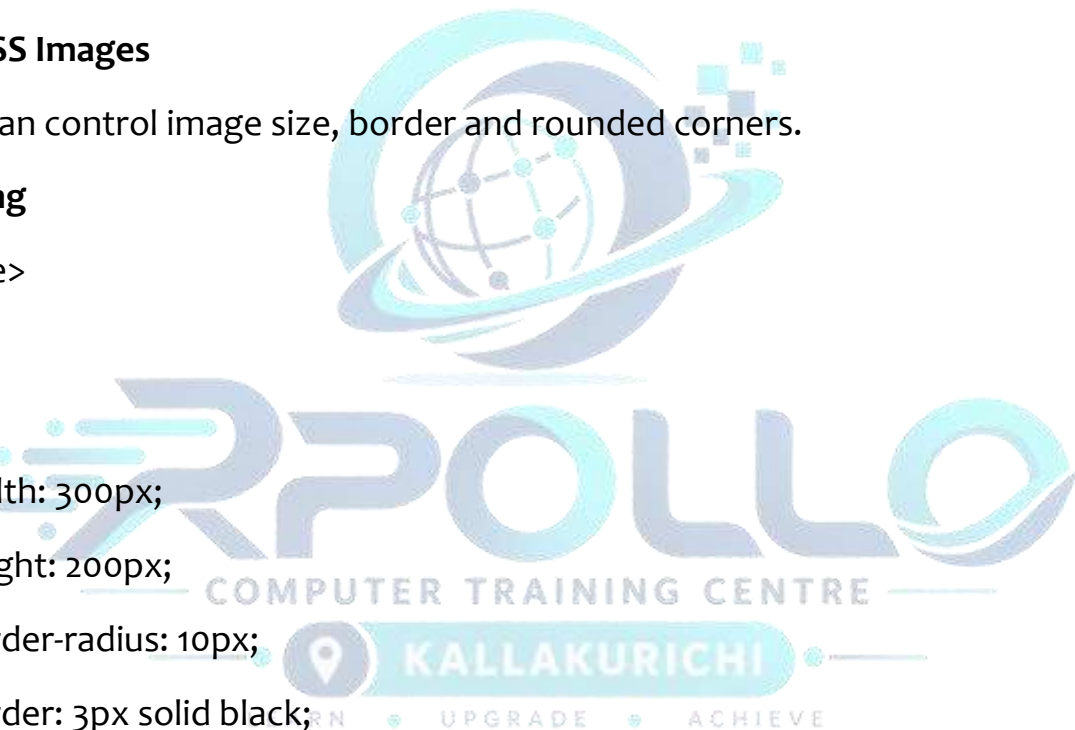
border-radius: 10px;

border: 3px solid black;

}

</style>

Output





A 300 × 200 image appears with a border and rounded corners.

23. CSS Links

CSS can style hyperlinks.

Coding

```
<style>
```

```
a {  
  color: blue;  
  text-decoration: none;  
  font-size: 20px;  
}
```

```
a:hover {  
  text-decoration: underline;  
}
```

```
</style>
```

```
<a href="#">Visit Website</a>
```

Output

Visit Website

When the mouse moves over the link, it becomes underlined.





24. CSS Lists

CSS can change list style.

Coding

```
<style>
```

```
ul {
```

```
    list-style-type: square;
```

```
}
```

```
</style>
```

```
<ul>
```

```
    <li>HTML</li>
```

```
    <li>CSS</li>
```

```
    <li>Python</li>
```

```
</ul>
```

Output

- HTML
- CSS
- Python

25. CSS Tables

CSS can make tables attractive.



Coding

```
<style>
```

```
table {  
    border-collapse: collapse;  
    width: 400px;  
}
```

```
th, td {  
    border: 1px solid black;  
    padding: 10px;  
    text-align: center;  
}
```

```
th {  
    background-color: lightblue;  
}
```

```
</style>
```

```
<table>
```

```
<tr>
```





```
<th>Name</th>
<th>Course</th>
<th>Mark</th>
</tr>
```

```
<tr>
  <td>Priya</td>
  <td>HTML</td>
  <td>90</td>
</tr>
```

```
<tr>
  <td>Ravi</td>
  <td>CSS</td>
```

Output

Name Course Mark

Priya HTML 90

Ravi CSS 85

The heading row has a light-blue background.

26. CSS Forms

CSS can style form controls.

Coding



<style>

input {

width: 250px;

padding: 10px;

margin: 5px;

border: 1px solid gray;

}

button {

padding: 10px 20px;

}

</style>

<form>

Name:

<input type="text">

Email:

<input type="email">





<button>Submit</button>

</form>

Output

Name:

[_____]

Email:

[_____]

[Submit]

27. Flexbox

Flexbox is used to arrange elements in a row or column.

Coding

<style>

```
.container {
```

```
  display: flex;
```

```
  gap: 10px;
```

```
}
```

```
.box {
```

```
  width: 100px;
```

```
  padding: 30px;
```





```
border: 2px solid black;  
text-align: center;  
}
```

```
</style>
```

```
<div class="container">
```

```
<div class="box">HTML</div>
```

```
<div class="box">CSS</div>
```

```
<div class="box">Python</div>
```

```
</div>
```

Output

[HTML] [CSS] [Python]

The boxes appear **side by side**.

28. CSS Grid

CSS Grid is used to create **rows and columns**.

Coding

```
<style>
```

```
.container {
```



```
display: grid;  
grid-template-columns: 1fr 1fr 1fr;  
gap: 10px;  
}
```

```
.box {  
padding: 30px;  
border: 2px solid black;  
text-align: center;  
}
```

```
</style>
```

```
<div class="container">
```

```
<div class="box">HTML</div>
```

```
<div class="box">CSS</div>
```

```
<div class="box">Python</div>
```

```
<div class="box">Java</div>
```

```
<div class="box">C++</div>
```

```
<div class="box">Tally</div>
```

```
</div>
```





Output

[HTML] [CSS] [Python]

[Java] [C++] [Tally]

29. Responsive Design

Responsive design makes a webpage adjust to different screen sizes such as mobile, tablet and desktop.

Coding

<style>

.box {

width: 80%;

margin: auto;

padding: 30px;

background-color: lightblue;

text-align: center;

}

@media (max-width: 600px) {

.box {

width: 100%;

padding: 15px;





}

}

</style>

<div class="box">

<h2>Responsive Website</h2>

<p>This page works on different screen sizes.</p>

</div>

Output

Desktop: The box uses 80% of the available width.

Mobile: The box adjusts to fit the smaller screen.

30. HTML + CSS Mini Project

Student Registration Page

This project combines: EARN • UPGRADE • ACHIEVE

- HTML
- CSS
- Heading
- Paragraph
- Form
- Input boxes



- Button
- Table
- CSS styling

Complete Coding

Save this as **index.html**:

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Student Registration</title>
```

```
<style>
```

```
body {
```

```
font-family: Arial;
```

```
background-color: #f2f2f2;
```

```
}
```

```
.container {
```

```
width: 500px;
```

```
margin: 30px auto;
```

```
padding: 25px;
```

```
}
```



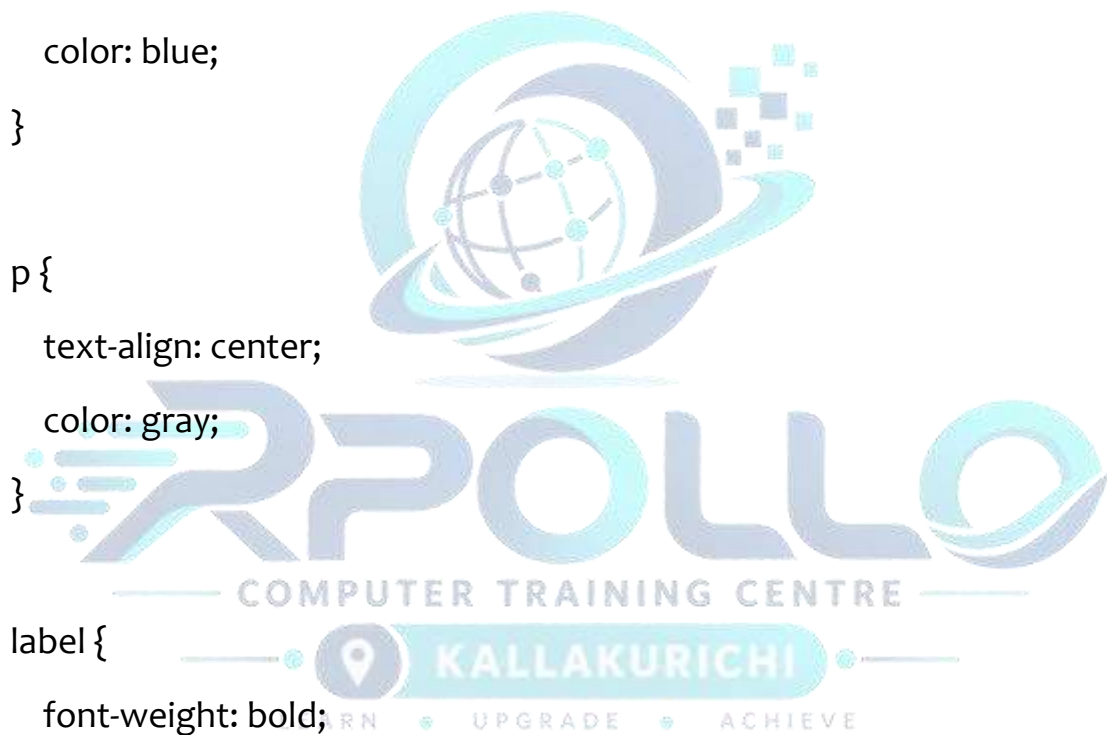
```
background-color: white;  
border: 2px solid black;  
border-radius: 10px;  
}
```

```
h1 {  
  text-align: center;  
  color: blue;  
}
```

```
p {  
  text-align: center;  
  color: gray;  
}
```

```
label {  
  font-weight: bold;  
}
```

```
input, select {  
  width: 100%;  
  padding: 10px;  
  margin: 8px 0 15px 0;
```





```
    box-sizing: border-box;  
  }
```

```
button {  
  width: 100%;  
  padding: 12px;  
  background-color: blue;  
  color: white;  
  border: none;  
  border-radius: 5px;  
  font-size: 16px;  
}
```

```
button:hover {  
  background-color: darkblue;  
}
```

```
</style>
```

```
</head>
```

```
<body>
```





```
<div class="container">
```

```
<h1>Student Registration</h1>
```

```
<p>Register for Computer Courses</p>
```

```
<form>
```

```
<label>Student Name</label>
```

```
<input type="text" placeholder="Enter your name">
```

```
<label>Email</label>
```

```
<input type="email" placeholder="Enter your email">
```

```
<label>Mobile Number</label>
```

```
<input type="text" placeholder="Enter mobile number">
```

```
<label>Select Course</label>
```

```
<select>
```

```
<option>HTML & CSS</option>
```

```
<option>Python</option>
```

```
<option>MS Office</option>
```




Mobile Number	
[Enter mobile number]	
Select Course	
[HTML & CSS ▼]	
[Register Now]	

What students learn from this project

HTML: Structure, headings, paragraphs, forms, inputs, select and button.

CSS: Colors, fonts, background, borders, padding, margin, width, border-radius, hover effect and responsive basics.

This gives you a complete **CSS Basic-to-Advanced notes + coding + output** set for all 30 topics.

