

Frameset Tag

The <frameset> tag in HTML was used before HTML5 to divide the browser window into multiple sections (frames), where each frame could display a different HTML document.

Syntax:

```
<frameset rows="value1, value2 , ..">
```

```
<frame src="page1.html">
```

```
<frame src="page2.html">
```

```
</frameset>
```

using cols:

```
<frameset cols="value1,value2 , ...">
```

```
<frame src="page1.html">
```

```
<frame src="page2.html">
```

```
</frameset>
```

Attributes of <frameset>:

Attribute	Description
-----------	-------------

rows	Defines horizontal division of the window (e.g., 50%,50%)
------	---

cols	Defines vertical division of the window (e.g., 30%,70%)
------	---

Attributes of <frame>:

Attribute	Description
src	Specifies the HTML file to load in the frame
name	Names the frame (used with target in links)
scrolling	Yes / No / Auto – controls scrollbars
noresize	Prevents user from resizing the frame
frameborder	0 or 1 – hides or shows border
marginwidth / marginheight	Sets space around content inside the frame

Example: Vertical Split (2 Columns)

```
<frameset cols="30%,70%">  
  <frame src="left.html">  
  <frame src="right.html">  
</frameset>
```

Example: Horizontal Split (2 Rows)

```
<frameset rows="20%,80%">  
  <frame src="top.html">  
  <frame src="bottom.html">  
</frameset>
```

Example with Nested <frameset>:

```
<frameset rows="20%,80%">  
  <frame src="header.html">  
  <frameset cols="30%,70%">  
    <frame src="menu.html">  
    <frame src="content.html">  
  </frameset>  
</frameset>
```

When to Use:

- Legacy Projects Only (old HTML versions)
- Educational Purpose for learning how older websites worked.

Why Avoid:

- Not responsive
- Poor accessibility
- Not supported in HTML5

Modern Alternative:

Use <iframe> with CSS Grid/Flexbox or <div> layout.

```
<iframe src="page.html" width="100%" height="500px"></iframe>
```

Basic Table Structure in HTML

HTML allows you to organize data in a tabular format using the `<table>` element and its child tags.

1. `<table>` – Table Tag

- Used to define the start and end of an HTML table.
- All table content (rows, headers, data) goes inside this tag.

Syntax:

```
<table>  
  <!-- Table content goes here -->  
</table>
```

2. `<tr>` – Table Row

- Represents a **row** in a table.
- Contains one or more `<td>` (data cells) or `<th>` (header cells).

Syntax:

```
<tr>  
  <!-- Row cells here -->  
</tr>
```

3. `<td>` – Table Data Cell

- Defines a **standard data cell** inside a row.
- Stands for "table data."

Syntax:

```
<td>Data</td>
```

4. <th> – Table Header Cell

- Defines a **header cell**.
- Text is bold and centered **by default**.
- Usually used in the **first row** or **first column** for headings.

Syntax:

```
<th>Header</th>
```

Simple Example of a Table:

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

```
<tr>
```

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

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

```
<th>Marks</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Anil</td>
```

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

```
<td>95</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Trisha</td>
```

```
<td>CSS</td>
```

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

```
</tr>
```

```
</table>
```

Table Attributes in HTML

These attributes help improve the appearance and spacing of a table:

1. border

- Defines the **thickness of the border** around the table and its cells.
- Value is given in **pixels (px)**.
- If not set, the table has **no visible border**.

Syntax:

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

2. cellpadding

- Sets the **space between individual table cells** (the gap between cell borders).
- Value is in **pixels**.
- Makes the cells appear spaced apart.

Syntax:

```
<table border="1" cellpadding="5">
```

3. cellspacing

- Sets the **space between the cell content and its border** (padding inside the cell).
- Value is in **pixels**.
- Increases space **within** each cell.

Syntax:

```
<table border="1" cellspacing="10">
```

Example Using All Attributes:

```
<table border="2" cellspacing="5" cellpadding="10">
```

```
<tr>
```

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

```
<th>Subject</th>
```

```
<th>Marks</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Avijit</td>
```

```
<td>Java</td>
```

```
<td>88</td>
```

```
</tr>
```

```
<tr>
```

```
<td>Neha</td>
```

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

```
<td>92</td>
```

```
</tr>
```

```
</table>
```

Quick Summary Table

Attribute	Purpose	Value Type	Example
border	Sets table border thickness	Number (px)	border="2"
cellspacing	Sets space between cells	Number (px)	cellspacing="5"

Attribute	Purpose	Value Type	Example
cellpadding	Sets space inside each cell (inner space)	Number (px)	cellpadding="10"

Rowspan and Colspan

rowspan and colspan are **cell-merging attributes** used in <td> or <th> to **merge cells vertically or horizontally**.

1. rowspan

- **Merges cells vertically (rows)**
- Specifies how **many rows** a cell should span (cover).
- Used when you want **one cell to extend across multiple rows**.

Syntax:

```
<td rowspan="2">Merged Row</td>
```

Example of rowspan:

```
<table border="1">
<tr>
<th>Name</th>
<th rowspan="2">Subject</th>
<th>Marks</th>
</tr>
<tr>
<td>Avijit</td>
<td>95</td>
</tr>
```


</table>

2. colspan

- **Merges cells horizontally (columns)**
- Specifies how **many columns** a cell should span.
- Used when you want **one cell to extend across multiple columns**.

Syntax:

```
<td colspan="2">Merged Columns</td>
```

Example of colspan:

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

```
<tr>
```

```
<th colspan="2">Student Info</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Name</td>
```

```
<td>Avijit</td>
```

```
</tr>
```

```
</table>
```

Combined Example (rowspan + colspan)

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

```
<tr>
```

```
<th rowspan="2">Name</th>
```

```
<th colspan="2">Scores</th>
```

```
</tr>
```

```
<tr>
```

```

<td>Math</td>
<td>Science</td>
</tr>
<tr>
<td>Avijit</td>
<td>90</td>
<td>85</td>
</tr>
</table>

```

Quick Summary Table

Attribute	Purpose	Used In	Value	Example
rowspan	Merge cells across rows	<td>, <th>	Number	rowspan="2"
colspan	Merge cells across columns	<td>, <th>	Number	colspan="3"

Table Caption and Styling in HTML

HTML allows you to add **titles to tables** using <caption> and apply **styling** with attributes or CSS for better appearance.

1. <caption> – Table Title

- Adds a **title or description** to the table.
- Appears **above** the table by default.
- Should be placed **immediately after the <table> tag**.

Syntax:

```
<table>
```

```
<caption>Student Marks Table</caption>
```

```
<!-- rows go here -->
```

```
</table>
```

Example:

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

```
<caption>Student Result</caption>
```

```
<tr>
```

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

```
<th>Subject</th>
```

```
<th>Marks</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Avijit</td>
```

```
<td>Java</td>
```

```
<td>95</td>
```

```
</tr>
```

```
</table>
```

2. Table Styling (Using Attributes)

Basic styling can be done using these attributes:

- border: Adds border to table and cells.
- cellspacing: Space between cells.
- cellpadding: Space inside cells.
- bgcolor: Sets background color.
- align: Aligns the table (left, center, right).
- width, height: Sets table size.

Example:

```
<table border="2" cellpadding="10" cellspacing="5" bgcolor="#f2f2f2"
align="center" width="60%">
```

```
<caption><b>Class Attendance</b></caption>
```

```
<tr bgcolor="lightblue">
```

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

```
<th>Date</th>
```

```
<th>Status</th>
```

```
</tr>
```

```
<tr>
```

```
<td>Neha</td>
```

```
<td>29 June</td>
```

```
<td>Present</td>
```

```
</tr>
```

```
</table>
```

Forms and Input Elements

What is a Form?

A form is an HTML element used to collect user input. Forms are widely used in websites for tasks like login, registration, feedback, payments, etc.

Syntax:

```
<form >  
  <!-- form elements go here -->  
</form>
```

Common Form Input Elements

Text Input Field

```
<input type="text" name="username" placeholder="Enter Username">
```

Password Field

```
<input type="password" name="password" placeholder="Enter Password">
```

Radio Buttons

```
<input type="radio" name="gender" value="male"> Male
```

```
<input type="radio" name="gender" value="female"> Female
```

Checkbox

```
<input type="checkbox" name="hobby" value="music"> Music
```

```
<input type="checkbox" name="hobby" value="sports"> Sports
```

Textarea

```
<textarea name="message" rows="4" cols="30"></textarea>
```

Dropdown / Select Box

```
<select name="city">  
  <option value="delhi">Delhi</option>  
  <option value="mumbai">Mumbai</option>  
</select>
```

File Upload

Allows users to upload files (like documents, images, etc.).

```
<input type="file" name="resume">
```

Date Picker

For selecting a date.

```
<input type="date" name="dob">
```

Number Input

Allows only numeric input.

```
<input type="number" name="age">
```

Email Input

Validates email format automatically.

```
<input type="email" name="user_email">
```

Submit Button

```
<input type="submit" value="Submit">
```

Reset Button

```
<input type="reset" value="Clear">
```

Button

```
<button type="button">Click Me</button>
```

HTML5 Input Types

Type	Purpose
email	Email input (validates format)
url	URL input
number	Numeric input
range	Slider for numeric range
date	Date picker
color	Color picker
tel	Telephone number
search	Search field
datetime-local	Local date and time input

Input Element Common Attributes

Attribute	Description
name	Name of the input (used when sending data)
value	Default value
placeholder	Short hint inside the field
required	Makes field mandatory
readonly	Field cannot be edited
disabled	Field is inactive
maxlength	Max number of characters allowed

Fieldset and Legend

Used to group form elements:

```
<fieldset>  
  <legend>Personal Info</legend>  
  <input type="text" placeholder="Name">  
</fieldset>
```


Label Tag

Used to define labels for input fields. Improves accessibility.

```
<label for="email">Email:</label>
```

```
<input type="email" id="email" name="email">
```

Example: Complete Form

```
<form>
```

```
  <label for="name">Name:</label>
```

```
  <input type="text" id="name" name="username" required><br><br>
```

```
  <label for="email">Email:</label>
```

```
  <input type="email" id="email" name="useremail"><br><br>
```

```
  <label>Gender:</label>
```

```
  <input type="radio" name="gender" value="male"> Male
```

```
  <input type="radio" name="gender" value="female"> Female<br><br>
```

```
  <label for="city">City:</label>
```

```
  <select id="city" name="city">
```

```
    <option value="delhi">Delhi</option>
```

```
    <option value="mumbai">Mumbai</option>
```

```
  </select><br><br>
```

```
  <input type="submit" value="Submit">
```

```
</form>
```

<form> Tag Attributes

Attribute	Description
action	The URL where form data will be sent
method	HTTP method: GET (visible in URL) or POST (secure)
target	Specifies where to display the response (_blank, _self, etc.)
autocomplete	Enables/disables auto-completion of form fields