HTML BASIC STRUCTURE

```
<!DOCTYPE>

<html>

<head>

<title>Web page title</title>

</head>

<body>

<h1>Write Your First Heading</h1>

<p>Write Your First Paragraph.</p>

</body>

</html>
```

Output :

Write Your First Heading

Write Your First Paragraph.

HTML TAGS:

HTML tags are like keywords which defines that how web browser will format and display the content. With the help of tags, a web browser can distinguish between an HTML content and a simple content. HTML tags contain three main parts: opening tag, content and closing tag.

```
<!DOCTYPE>

<html>

<body>

<p> Paragraph Tag </p>

<h2> Heading Tag </h2>

<b> Bold Tag </b>

<i> Italic Tag </i>

<u> Underline Tag</u>
```

```
</body>

</html>
```

Output:

Paragraph Tag

Heading Tag

Bold Tag *Italic Tag* Underline Tag

HTML attributes

- All HTML elements can have **attributes**
- Attributes provide **additional information** about elements
- Attributes are always specified in **the start tag**
- Attributes usually come in name/value pairs like: **name="value"**

```
<!DOCTYPE html>

<html>

<head>

</head>

<body>

   <h1> This is Style attribute</h1>

  <p style="height: 50px; color: blue">It will add style property in element</p>

   <p style="color: red">It will change the color of content</p>

</body>

</html>
```

Output:

This is Style attribute

It will add style property in element

It will change the color of content

HTML Elements:

An element in HTML usually consist of a start tag <tag name>, close tag </tag name> and content inserted between them. Technically, an element is a collection of start tag, attributes, end tag, content between them.

Block-level and Inline HTML elements

For the default display and styling purpose in HTML, all the elements are divided into two categories:

Block-level element

Inline element

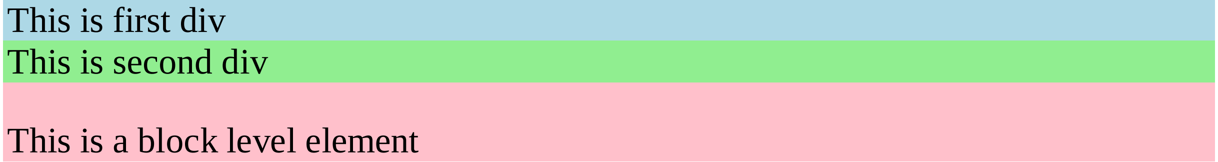
Following are the block-level elements in HTML.

<address>, <article>, <aside>, <blockquote>, <canvas>, <dd>, <div>, <dl>, <dt>, <fieldset>, <figcaption>, <figure>, <footer>, <form>, <h1>-<h6>, <header>, <hr>, <li>, <main>, <nav>, <noscript>, <ol>, <output>, <p>, <pre>, <section>, <table>, <tfoot>, <ul> and <video>.

Example:

```
<!DOCTYPE html>

<html>

          <head>

         </head>

<body>

   <div style="background-color: lightblue">This is first div</div>

   <div style="background-color: lightgreen">This is second div</div>
   <p style="background-color: pink">This is a block level element</p>
</body>
</html>
```

Output:



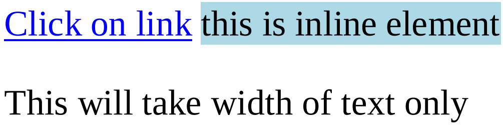
```
This is first div
This is second div

This is a block level element
```

Inline Elements:

<a>, <abbr>, <acronym>, <b>, <bdo>, <big>, <br>, <button>, <cite>, <code>, <dfn>, <em>, <i>, <img>, <input>, <kbd>, <label>, <map>, <object>, <q>, <samp>, <script>, <select>, <small>, <span>, <strong>, <sub>, <sup>, <textarea>, <time>, <tt>, <var>.

```
<!DOCTYPE html>
<html>
   <head>
         </head>
<body>
   <a href="https://www.javatpoint.com/html-tutorial">Click on link</a>
   <span style="background-color: lightblue">this is inline element</span>
   <p>This will take width of text only</p>
 </body>
</html>
```

Output:



```
Click on link this is inline element

This will take width of text only
```

HTML Headings

HTML headings are titles or subtitles that you want to display on a webpage.

```
<!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

HTML Paragraphs

The HTML `<p>` element defines a paragraph.

A paragraph always starts on a new line, and browsers automatically add some white space (a margin) before and after a paragraph.

```
<!DOCTYPE html>

<html>

<body>


<p>This is a paragraph1.</p>

<p>This is a paragraph2.</p>

<p>This is a paragraph3.</p>


</body>

</html>
```

Output:

```
This is a paragraph1.

This is a paragraph2.

This is a paragraph3.
```

HTML Comments

HTML comments are not displayed in the browser, but they can help document your HTML source code.

```
<!DOCTYPE html>

<html>

<body>


<!-- This is a comment -->

<p>This is a paragraph.</p>

<!-- Comments are not displayed in the browser -->
```

```
</body>

</html>
```

Output:

This is a paragraph.

HTML Links:

Links allow users to click their way from page to page.

HTML links are hyperlinks.

You can click on a link and jump to another document.

When you move the mouse over a link, the mouse arrow will turn into a little hand.

The `target` attribute specifies where to open the linked document.

The `target` attribute can have one of the following values:

- `_self` - Default. Opens the document in the same window/tab as it was clicked
- `_blank` - Opens the document in a new window or tab
- `_parent` - Opens the document in the parent frame
- `_top` - Opens the document in the full body of the window

```
<!DOCTYPE html>

<html>

<body>


<h2>The target Attribute</h2>


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

```
<p>If target="_blank", the link will open in a new browser window or tab.</p>


</body>

</html>
```

Output:

The target Attribute
Visit google!

If target="_blank", the link will open in a new browser window or tab.

Absolute URLs vs. Relative URLs

Both examples above are using an **absolute URL** (a full web address) in the `href` attribute.

A local link (a link to a page within the same website) is specified with a **relative URL** (without the "https://www" part):

```
<!DOCTYPE html>

<html>

<body>



<h2>Absolute URLs</h2>

<p><a href="https://www.unsplash.org/">Org</a></p>

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



<h2>Relative URLs</h2>

<p><a href="html_images.asp">HTML Images</a></p>

<p><a href="/css/default.asp">CSS Tutorial</a></p>
```

```
</body>

</html>
```

Output:

Absolute URLs

Org

Google

Relative URLs

HTML Images

CSS Tutorial

HTML Links - Use an Image as a Link

To use an image as a link, just put the `<img>` tag inside the `<a>` tag:

```
<!DOCTYPE html>

<html>

<body>


<h2>Image as a Link</h2>


<p>The image below is a link. Try to click on it.</p>


<a href="default.asp"><img src="smiley.gif" alt="HTML tutorial"
style="width:42px;height:42px;"></a>
```

```
</body>

</html>
```

Output:

Image as a Link

The image below is a link. Try to click on it.

HTML Images

Images can improve the design and the appearance of a web page.

The `<img>` tag is empty, it contains attributes only, and does not have a closing tag.

The `<img>` tag has two required attributes:

- src - Specifies the path to the image
- alt - Specifies an alternate text for the image

Image Size - Width and Height

Alternatively, you can use the `width` and `height` attributes:

```
<!DOCTYPE html>

<html>

<body>


<h2>Alternative text</h2>


<p>The alt attribute should reflect the image content, so users who cannot see the image get an understanding of what the image contains:</p>


<img src="img_chania.jpg" alt="Flowers in Chania" width="460" height="345">
```

```
</body>

</html>
```

Output:

```
Alternative text
```

The alt attribute should reflect the image content, so users who cannot see the image get an understanding of what the image contains:

Images on Another Server/Website

Some web sites point to an image on another server.

To point to an image on another server, you must specify an absolute (full) URL in the `src` attribute:

```
<!DOCTYPE html>

<html>

<body>
```

```
<h2>Images on Another Server</h2>


<img src="https://www.w3schools.com/images/w3schools_green.jpg"
alt="W3Schools.com" style="width:104px;height:142px;">


</body>

</html>
```

Output:

Images on Another Server

Notes on external images: External images might be under copyright. If you do not get permission to use it, you may be in violation of copyright laws. In addition, you cannot control external images; they can suddenly be removed or changed.

HTML Tables :

A table in HTML consists of table cells inside rows and columns.

Each table cell is defined by a `<td>` and a `</td>` tag.

Everything between `<td>` and `</td>` are the content of the table cell.

Note: A table cell can contain all sorts of HTML elements: text, images, lists, links, other tables, etc.

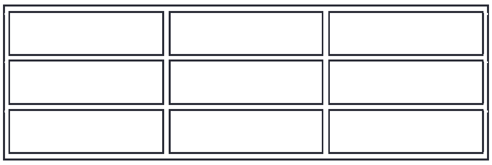
Each table row starts with a `<tr>` and ends with a `</tr>` tag.

Sometimes you want your cells to be table header cells. In those cases use the `<th>` tag instead of the `<td>` tag:

th stands for table header.

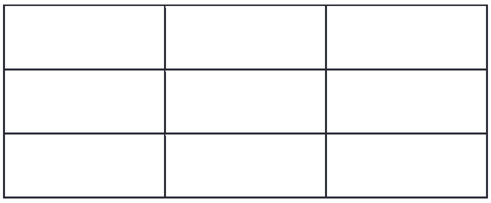
HTML tables can have borders of different styles and shapes.

To add a border, use the CSS `border` property on `table`, `th`, and `td` elements:



To avoid having double borders like in the example above, set the CSS `border-collapse` property to `collapse`.

This will make the borders collapse into a single border:



```
<!DOCTYPE html>

<html>

<head>

<style>

table, th, td {

  border: 1px solid black;

}

</style>

</head>

<body>



<h2>Table With Border</h2>



<p>Use the CSS border property to add a border to the
table.</p>
```

```
<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
  <tr>
    <td>John</td>
    <td>Doe</td>
    <td>80</td>
  </tr>
```

```
</table>


</body>

</html>
```

Output :

Table With Border

Use the CSS border property to add a border to the table.

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

HTML Table Headers

Table headers are defined with `th` elements. Each `th` element represents a table cell.

```
<!DOCTYPE html>

<html>

<head>

<style>

table, th, td {

  border: 1px solid black;

  border-collapse: collapse;

}

</style>
```

```
</head>
<body>

<h2>Table Headers</h2>

<p>Use the TH element to define table headers.</p>

<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```

```
</body>

</html>
```

Output:

Table Headers

Use the TH element to define table headers.

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94

Vertical Table Headers

To use the first column as table headers, define the first cell in each row as a `<th>` element:

Header for Multiple Columns

You can have a header that spans over two or more columns.

Name		Age
Jill	Smith	50
Eve	Jackson	94

To do this, use the `colspan` attribute on the `<th>` element:

```
<!DOCTYPE html>

<html>

<head>

<style>
```

```
table, th, td {

  border: 1px solid black;

  border-collapse: collapse;

}

</style>

</head>

<body>



<h2>A header that spans two columns</h2>



<p>Use the colspan attribute to have a header span over multiple
columns.</p>



<table style="width:100%">

  <tr>

    <th colspan="2">Name</th>

    <th>Age</th>

  </tr>

  <tr>

    <td>Jill</td>

    <td>Smith</td>

    <td>50</td>

  </tr>

  <tr>

    <td>Eve</td>
    <td>Jackson</td>

    <td>94</td>

  </tr>

</table>

</body>

</html>
```

Output:

A header that spans two columns

Use the colspan attribute to have a header span over multiple columns.

Name		Age
Jill	Smith	50
Eve	Jackson	94

Table Caption

You can add a caption that serves as a heading for the entire table.

Monthly savings

Month	Savings
January	$100
February	$50

To add a caption to a table, use the `<caption>` tag:

```
<!DOCTYPE html>
```

```
<html>
<head>
<style>
table, th, td {
  border: 1px solid black;
  border-collapse: collapse;
}
th, td {
  padding: 5px;
  text-align: left;
}
</style>
</head>
<body>

<h2>Table Caption</h2>
<p>To add a caption to a table, use the caption tag.</p>

<table style="width:100%">
  <caption>Monthly savings</caption>
  <tr>
    <th>Month</th>
    <th>Savings</th>
  </tr>
  <tr>
```

```
    <td>January</td>
    <td>$100</td>
  </tr>
  <tr>
    <td>February</td>
    <td>$50</td>
  </tr>
</table>

</body>
</html>
```

Output:

Table Caption

To add a caption to a table, use the caption tag.

Monthly savings

Month	Savings
January	$100
February	$50

HTML Table - Colspan

To make a cell span over multiple columns, use the `colspan` attribute:

```
<!DOCTYPE html>
<html>
```

```
<head>
<style>
table, th, td {
  border: 1px solid black;
  border-collapse: collapse;
}
</style>
</head>
<body>

<h2>Cell that spans two columns</h2>
<p>To make a cell span more than one column, use the colspan attribute.</p>

<table style="width:100%">
  <tr>
    <th colspan="2">Name</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Jill</td>
    <td>Smith</td>
    <td>43</td>
  </tr>
  <tr>
```

```
    <td>Eve</td>

    <td>Jackson</td>

    <td>57</td>

  </tr>

</table>

</body>

</html>
```

Output:

Cell that spans two columns

To make a cell span more than one column, use the colspan attribute.

Name		**Age**
Jill	Smith	43
Eve	Jackson	57

HTML Table - Rowspan

To make a cell span over multiple rows, use the `rowspan` attribute:

```
<!DOCTYPE html>

<html>

<head>

<style>

table, th, td {

  border: 1px solid black;

  border-collapse: collapse;

}

</style>
```

```
</head>

<body>



<h2>Cell that spans two rows</h2>

<p>To make a cell span more than one row, use the rowspan
attribute.</p>



<table style="width:100%">

  <tr>

    <th>Name</th>

    <td>Jill</td>

  </tr>

  <tr>

    <th rowspan="2">Phone</th>

    <td>555-1234</td>

  </tr>

  <tr>

    <td>555-8745</td>

  </tr>

</table>

</body>

</html>
```

Output:

Cell that spans two rows

To make a cell span more than one row, use the rowspan attribute.

Name	Jill
Phone	555-1234
	555-8745

HTML Lists

HTML lists allow web developers to group a set of related items in lists.

Unordered HTML List

An unordered list starts with the `<ul>` tag. Each list item starts with the `<li>` tag.

The list items will be marked with bullets (small black circles) by default:

```
<!DOCTYPE html>
<html>
<body>

<h2>An unordered HTML list</h2>

<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>

</body>
</html>
```

Output:

An unordered HTML list

- Coffee
- Tea
- Milk

Ordered HTML List

An ordered list starts with the `<ol>` tag. Each list item starts with the `<li>` tag.

The list items will be marked with numbers by default:

```
<!DOCTYPE html>
<html>
<body>

<h2>An ordered HTML list</h2>

<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>

</body>
</html>
```

Output:

An ordered HTML list

1. Coffee
2. Tea
3. Milk

HTML Div Element

The `<div>` element is used as a container for other HTML elements.

The <div> Element

The `<div>` element is by default a block element, meaning that it takes all available width, and comes with line breaks before and after.

The `<div>` element has no required attributes, but `style`, `class` and `id` are common.

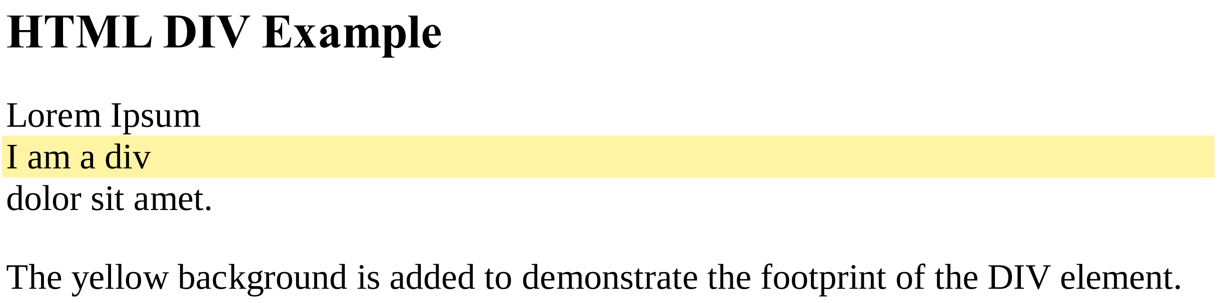
<div> as a container

The `<div>` element is often used to group sections of a web page together.

```
<!DOCTYPE html>

<html>

<style>

div {

  background-color: #FFF4A3;

}

</style>

<body>



<h1>HTML DIV Example</h1>
```

```
Lorem Ipsum <div>I am a div</div> dolor sit amet.

<p>The yellow background is added to demonstrate the footprint of the DIV element.</p>

</body>

</html>
```

Output:



HTML DIV Example

Lorem Ipsum
I am a div
dolor sit amet.

The yellow background is added to demonstrate the footprint of the DIV element.

Center align a <div> element

If you have a `<div>` element that is not 100% wide, and you want to center-align it, set the CSS `margin` property to `auto`.

```
<!DOCTYPE html>

<html>

<style>

div {

  width: 300px;

  margin: auto;

  background-color: #FFF4A3;

}

</style>
```

```
<body>


<h1>Center align a DIV element</h1>


<div>
  <h2>London</h2>
  <p>London is the capital city of England.</p>
  <p>London has over 13 million inhabitants.</p>
</div>


</body>
</html>
```

Output :

Center align a DIV element

London

London is the capital city of England.

London has over 13 million inhabitants.

Multiple <div> elements

You can have many `<div>` containers on the same page.

HTML class Attribute

The HTML `class` attribute is used to specify a class for an HTML element.

Multiple HTML elements can share the same class.

The `class` attribute is often used to point to a class name in a style sheet. It can also be used by a JavaScript to access and manipulate elements with the specific class name.

The Syntax For Class

To create a class; write a period (.) character, followed by a class name. Then, define the CSS properties within curly braces {}:

```
<!DOCTYPE html>
<html>
<head>
<style>
.city {
  background-color: tomato;
  color: white;
  border: 2px solid black;
  margin: 20px;
  padding: 20px;
}
</style>
</head>
<body>

<div class="city">
<h2>London</h2>
<p>London is the capital of England.</p>
</div>
```

```
<div class="city">

<h2>Paris</h2>

<p>Paris is the capital of France.</p>

</div>


<div class="city">

<h2>Tokyo</h2>

<p>Tokyo is the capital of Japan.</p>

</div>


</body>

</html>
```

Output:

London

London is the capital of England.

Paris

Paris is the capital of France.

Tokyo

Tokyo is the capital of Japan.

HTML id Attribute

The HTML `id` attribute is used to specify a unique id for an HTML element.

You cannot have more than one element with the same id in an HTML document.

The `id` attribute specifies a unique id for an HTML element. The value of the `id` attribute must be unique within the HTML document.

The `id` attribute is used to point to a specific style declaration in a style sheet. It is also used by JavaScript to access and manipulate the element with the specific id.

The syntax for id is: write a hash character (#), followed by an id name. Then, define the CSS properties within curly braces {}.

In the following example we have an `<h1>` element that points to the id name "myHeader". This `<h1>` element will be styled according to the `#myHeader` style definition in the head section:

```
<!DOCTYPE html>

<html>

<head>

<style>

#myHeader {

  background-color: lightblue;

  color: black;

  padding: 40px;

  text-align: center;

}

</style>

</head>

<body>
```

```
<h2>The id Attribute</h2>

<p>Use CSS to style an element with the id "myHeader":</p>


<h1 id="myHeader">My Header</h1>


</body>

</html>
```

Output :

The id Attribute

Use CSS to style an element with the id "myHeader":

My Header

HTML Iframes

An HTML iframe is used to display a web page within a web page.

```
<!DOCTYPE html>

<html>

<body>


<h2>HTML Iframes</h2>

<p>You can use the height and width attributes to specify the size of the
iframe:</p>
```

```
<iframe src="demo_iframe.htm" height="200" width="300" title="Iframe
Example"></iframe>


</body>

</html>
```

Output :

HTML Iframes

You can use the height and width attributes to specify the size of the iframe:

HTML Forms

An HTML form is used to collect user input. The user input is most often sent to a server for processing.

The HTML `<form>` element is used to create an HTML form for user input:

The HTML `<input>` element is the most used form element.

An `<input>` element can be displayed in many ways, depending on the `type` attribute.

The `<input type="text">` defines a single-line input field for text input.

The `<label>` tag defines a label for many form elements.

The `<label>` element is useful for screen-reader users, because the screen-reader will read out loud the label when the user focuses on the input element.

The `<label>` element also helps users who have difficulty clicking on very small regions (such as radio buttons or checkboxes) - because when the user clicks the text within the `<label>` element, it toggles the radio button/checkbox.

The `for` attribute of the `<label>` tag should be equal to the `id` attribute of the `<input>` element to bind them together.

Radio Buttons

The `<input type="radio">` defines a radio button.

Radio buttons let a user select ONE of a limited number of choices.

Checkboxes

The `<input type="checkbox">` defines a **checkbox**.

Checkboxes let a user select ZERO or MORE options of a limited number of choices.

The Submit Button

The `<input type="submit">` defines a button for submitting the form data to a form-handler.

The form-handler is typically a file on the server with a script for processing input data.

The form-handler is specified in the form's `action` attribute.

The Name Attribute for <input>

Notice that each input field must have a `name` attribute to be submitted.

If the `name` attribute is omitted, the value of the input field will not be sent at all.

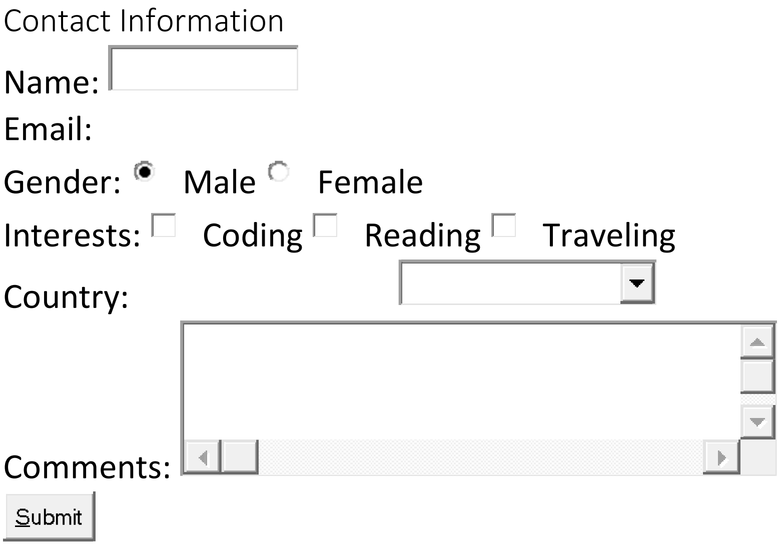
```
<!DOCTYPE html>

<html lang="en">

<head>

    <meta charset="UTF-8">

    <meta name="viewport" content="width=device-width, initial-scale=1.0">
```

```
   <title>Sample Form</title>
</head>
<body>

<h2>Contact Information</h2>

<form action="/submit_form" method="post">
   <!-- Text Input -->
   <label for="name">Name:</label>
   <input type="text" id="name" name="name" required>

   <br>

   <!-- Email Input -->
   <label for="email">Email:</label>
   <input type="email" id="email" name="email" required>

   <br>

   <!-- Radio Buttons -->
   <label>Gender:</label>
   <input type="radio" id="male" name="gender" value="male" checked>
   <label for="male">Male</label>
   <input type="radio" id="female" name="gender" value="female">
```

```html
  <label for="female">Female</label>

  <br>

  <!-- Checkboxes -->
  <label>Interests:</label>
  <input type="checkbox" id="coding" name="interests" value="coding">
  <label for="coding">Coding</label>
  <input type="checkbox" id="reading" name="interests" value="reading">
  <label for="reading">Reading</label>
  <input type="checkbox" id="traveling" name="interests" value="traveling">
  <label for="traveling">Traveling</label>

  <br>

  <!-- Dropdown Menu -->
  <label for="country">Country:</label>
  <select id="country" name="country">
    <option value="usa">United States</option>
    <option value="canada">Canada</option>
    <option value="uk">United Kingdom</option>
    <!-- Add more options as needed -->
  </select>
```

```
    <br>


    <!-- Textarea for Comments -->

    <label for="comments">Comments:</label>

    <textarea id="comments" name="comments" rows="4" cols="50"></textarea>


    <br>


    <!-- Submit Button -->

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

</form>


</body>

</html>
```

Output:



Contact Information

Name:

Email:

Gender: ● Male ○ Female

Interests: □ Coding □ Reading □ Traveling

Country:

Comments:

HTML Video

The HTML `<video>` element is used to show a video on a web page.

To show a video in HTML, use the `<video>` element:

The `controls` attribute adds video controls, like play, pause, and volume.

It is a good idea to always include `width` and `height` attributes. If height and width are not set, the page might flicker while the video loads.

The `<source>` element allows you to specify alternative video files which the browser may choose from. The browser will use the first recognized format.

The text between the `<video>` and `</video>` tags will only be displayed in browsers that do not support the `<video>` element.

To start a video automatically, use the `autoplay` attribute:

```
<!DOCTYPE html>
<html>
<body>

<video width="320" height="240" autoplay>
  <source src="movie.mp4" type="video/mp4">
  <source src="movie.ogg" type="video/ogg">
  Your browser does not support the video tag.
</video>

</body>
</html>
```

HTML Audio

The HTML `<audio>` element is used to play an audio file on a web page.

To play an audio file in HTML, use the `<audio>` element:

The `controls` attribute adds audio controls, like play, pause, and volume.

The `<source>` element allows you to specify alternative audio files which the browser may choose from. The browser will use the first recognized format.

The text between the `<audio>` and `</audio>` tags will only be displayed in browsers that do not support the `<audio>` element.

```
<!DOCTYPE html>
<html>
<body>

<audio controls autoplay>
  <source src="horse.ogg" type="audio/ogg">
  <source src="horse.mp3" type="audio/mpeg">
Your browser does not support the audio element.
</audio>

</body>
</html>
```