Html for advanced:

HTML Tables

HTML tables allow web developers to arrange data into rows and columns.

Define an HTML Table

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

Example

A simple HTML table:

```
<table>
  <tr>
    <th>Company</th>
    <th>Contact</th>
    <th>Country</th>
  </tr>
  <tr>
    <td>Alfreds Futterkiste</td>
    <td>Maria Anders</td>
    <td>Germany</td>
  </tr>
  <tr>
    <td>Centro comercial Moctezuma</td>
    <td>Francisco Chang</td>
    <td>Mexico</td>
  </tr>
</table>
```

Table Cells

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

`td` stands for table data.

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

Example

```
<table>
  <tr>
    <td>Emil</td>
    <td>Tobias</td>
    <td>Linus</td>
  </tr>
</table>
```

Table Rows

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

`tr` stands for table row.

Example

```
<table>
  <tr>
    <td>Emil</td>
    <td>Tobias</td>
    <td>Linus</td>
  </tr>
  <tr>
    <td>16</td>
    <td>14</td>
    <td>10</td>
  </tr>
</table>
```

You can have as many rows as you like in a table; just make sure that the number of cells are the same in each row.

Note: There are times when a row can have less or more cells than another. You will learn about that in a later chapter.

Table Headers

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.

Example

Let the first row be table header cells:

```
<table>
  <tr>
    <th>Person 1</th>
    <th>Person 2</th>
    <th>Person 3</th>
  </tr>
  <tr>
    <td>Emil</td>
    <td>Tobias</td>
    <td>Linus</td>
  </tr>
  <tr>
    <td>16</td>
    <td>14</td>
    <td>10</td>
  </tr>
</table>
```

HTML Table Borders

HTML tables can have borders of different styles and shapes.

How To Add a Border

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

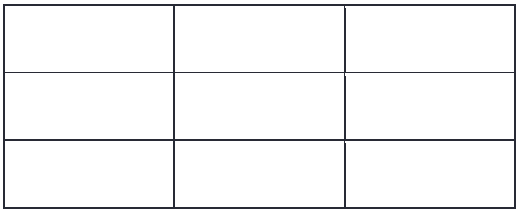
Example

```
table, th, td {
  border: 1px solid black;
}
```

Collapsed Table Borders

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:

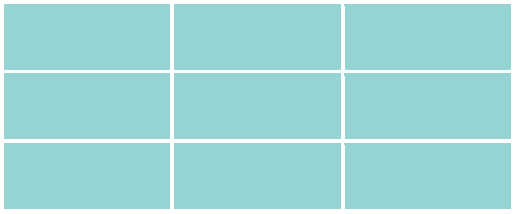


Example

```
table, th, td {
  border: 1px solid black;
  border-collapse: collapse;
}
```

Style Table Borders

If you set a background color of each cell, and give the border a white color (the same as the document background), you get the impression of an invisible border:



Example

```
table, th, td {
  border: 1px solid white;
  border-collapse: collapse;
}
th, td {
  background-color: #96D4D4;
}
```

Round Table Borders

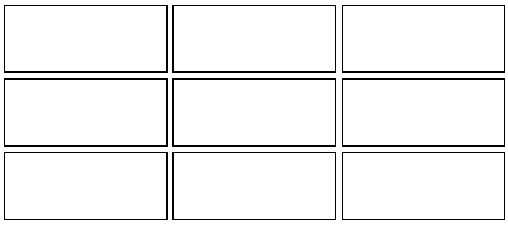
With the `border-radius` property, the borders get rounded corners:

Example

```
table, th, td {
  border: 1px solid black;
```

```
  border-radius: 10px;
}
```

Skip the border around the table by leaving out `table` from the css selector:

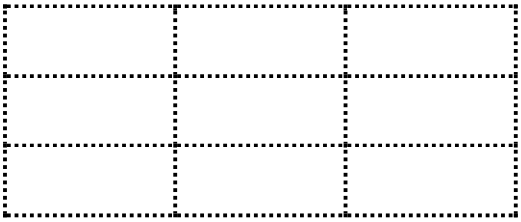


Example

```
th, td {
  border: 1px solid black;
  border-radius: 10px;
}
```

Dotted Table Borders

With the `border-style` property, you can set the appearance of the border.



The following values are allowed:

- dotted
- dashed
- solid
- double
- groove
- ridge
- inset
- outset

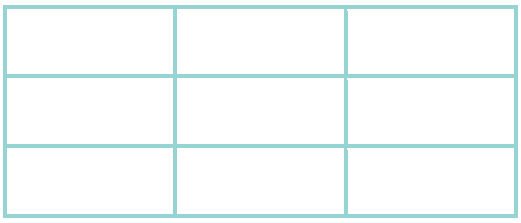
- none
- hidden

Example

```
th, td {
  border-style: dotted;
```

Border Color

With the `border-color` property, you can set the color of the border.

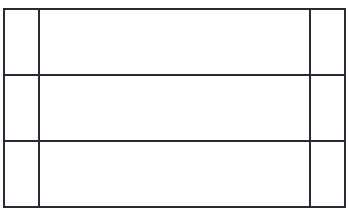


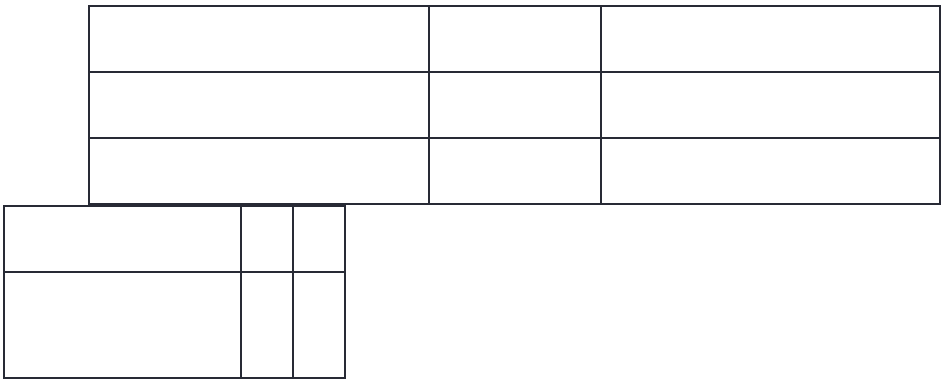
Example

```
th, td {
  border-color: #96D4D4;
}
```

HTML Table Sizes

HTML tables can have different sizes for each column, row or the entire table.





Use the `style` attribute with the `width` or `height` properties to specify the size of a table, row or column.

HTML Table Width

To set the width of a table, add the `style` attribute to the `<table>` element:

Example

Set the width of the table to 100%:

```
<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>
```

HTML Table Column Width

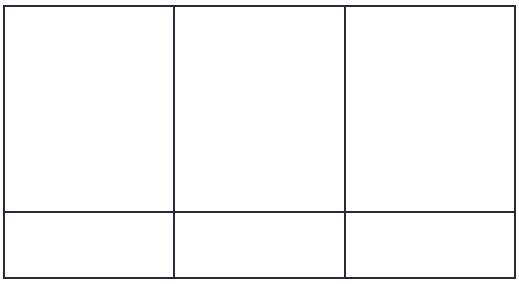
To set the size of a specific column, add the `style` attribute on a `<th>` or `<td>` element:

Example

Set the width of the first column to 70%:

```
<table style="width:100%">
  <tr>
    <th style="width:70%">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>
```

HTML Table Row Height



To set the height of a specific row, add the `style` attribute on a table row element:

Example

Set the height of the second row to 200 pixels:

```
<table style="width:100%">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr style="height:200px">
    <td>Jill</td>
    <td>Smith</td>
    <td>50</td>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```

HTML Table Headers

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

Example

```
<table>
  <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>
```

Vertical Table Headers

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

Example

```
<table>
  <tr>
    <th>Firstname</th>
    <td>Jill</td>
    <td>Eve</td>
  </tr>
  <tr>
    <th>Lastname</th>
    <td>Smith</td>
    <td>Jackson</td>
  </tr>
  <tr>
    <th>Age</th>
    <td>94</td>
    <td>50</td>
  </tr>
</table>
```

Align Table Headers

By default, table headers are bold and centered:

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94

To left-align the table headers, use the CSS `text-align` property:

Example

```
th {
  text-align: left;
}
```

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:

Example

```
<table>
  <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>
```

You will learn more about colspan and rowspan in the Table colspan & rowspan chapter.

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:

Example

```
<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>
```

HTML Table - Colspan

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

Example

```
<table>
  <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>
```

HTML Table - Rowspan

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

Example

```
<table>
  <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>
```

HTML Lists

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

Example

An unordered HTML list:

- Item
- Item
- Item
- Item

An ordered HTML list:

1. First item
2. Second item
3. Third item
4. Fourth item

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:

Example

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

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:

Example

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

HTML Description Lists

HTML also supports description lists.

A description list is a list of terms, with a description of each term.

The `<dl>` tag defines the description list, the `<dt>` tag defines the term (name), and the `<dd>` tag describes each term:

Example

```
<dl>
  <dt>Coffee</dt>
  <dd>- black hot drink</dd>
  <dt>Milk</dt>
```

```
  <dd>- white cold drink</dd>
</dl>
```

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:

Example

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

Unordered HTML List - Choose List Item Marker

The CSS `list-style-type` property is used to define the style of the list item marker. It can have one of the following values:

Value	Description
disc	Sets the list item marker to a bullet (default)
circle	Sets the list item marker to a circle

square	Sets the list item marker to a square
none	The list items will not be marked

Example - Disc

```
<ul style="list-style-type:disc;">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Example - Circle

```
<ul style="list-style-type:circle;">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Example - Square

```
<ul style="list-style-type:square;">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Example - None

```
<ul style="list-style-type:none;">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```

Nested HTML Lists

Lists can be nested (list inside list):

Example

```
<ul>
  <li>Coffee</li>
  <li>Tea
    <ul>
      <li>Black tea</li>
      <li>Green tea</li>
    </ul>
  </li>
  <li>Milk</li>
</ul>
```

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:

Example

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

Ordered HTML List - The Type Attribute

The `type` attribute of the `<ol>` tag, defines the type of the list item marker:

Type	Description
type="1"	The list items will be numbered with numbers (default)
type="A"	The list items will be numbered with uppercase letters
type="a"	The list items will be numbered with lowercase letters
type="I"	The list items will be numbered with uppercase roman numbers
type="i"	The list items will be numbered with lowercase roman numbers

Numbers:

```
<ol type="1">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

Uppercase Letters:

```
<ol type="A">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

Lowercase Letters:

```
<ol type="a">
  <li>Coffee</li>
  <li>Tea</li>
```

```
  <li>Milk</li>
</ol>
```

Uppercase Roman Numbers:

```
<ol type="I">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

Lowercase Roman Numbers:

```
<ol type="i">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

The 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.

Example

A element takes up all available width:

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

Result

Lorem Ipsum

I am a div

dolor sit amet.

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

as a container

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

Example

A element with HTML elements:

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

Result

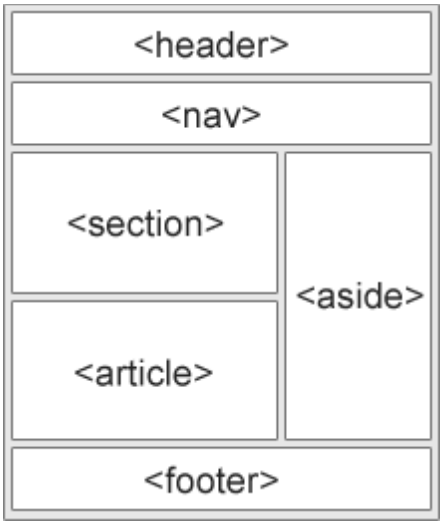
London

London is the capital city of England.

London has over 13 million inhabitants.

HTML Layout Elements

HTML has several semantic elements that define the different parts of a web page:



- `<header>` - Defines a header for a document or a section
- `<nav>` - Defines a set of navigation links
- `<section>` - Defines a section in a document
- `<article>` - Defines an independent, self-contained conte
- `<aside>` - Defines content aside from the content (like a s
- `<footer>` - Defines a footer for a document or a section
- `<details>` - Defines additional details that the user can o on demand
- `<summary>` - Defines a heading for the `<details>` element

You can read more about semantic elements in our HTML Sema

HTML Layout Techniques

There are four different techniques to create multicolumn layouts. Each technique has its pros and cons:

- CSS framework
- CSS float property
- CSS flexbox
- CSS grid

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

Example

First name:

Last name:

Try it Yourself »

The <form> Element

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

```
<form>
.
form elements
.
</form>
```

The `<form>` element is a container for different types of input elements, such as: text fields, checkboxes, radio buttons, submit buttons, etc.

All the different form elements are covered in this chapter: HTML Form Elements.

The <input> Element

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

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

Here are some examples:

Type	Description
<input type="text">	Displays a single-line text input field

<input type="radio">	Displays a radio button (for selecting one of many choices)
<input type="checkbox">	Displays a checkbox (for selecting zero or more of many ch
<input type="submit">	Displays a submit button (for submitting the form)
<input type="button">	Displays a clickable button

All the different input types are covered in this chapter: HTML Input Types.

Text Fields

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

Example

A form with input fields for text:

```
<form>
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname">
</form>
```

This is how the HTML code above will be displayed in a browser:

First name:

Last name:

The <label> Element

Notice the use of the `<label>` element in the example above.

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.

Example

A form with radio buttons:

```
<p>Choose your favorite Web language:</p>

<form>
  <input type="radio" id="html" name="fav_language" value="HTML">
  <label for="html">HTML</label><br>
  <input type="radio" id="css" name="fav_language" value="CSS">
  <label for="css">CSS</label><br>
```

```
  <input type="radio" id="javascript" name="fav_language" value="JavaScri
pt">
  <label for="javascript">JavaScript</label>
</form>
```

This is how the HTML code above will be displayed in a browser:

Choose your favorite Web language:

HTML
CSS
JavaScript

Checkboxes

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

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

Example

A form with checkboxes:

```
<form>
  <input type="checkbox" id="vehicle1" name="vehicle1" value="Bike">
  <label for="vehicle1"> I have a bike</label><br>
  <input type="checkbox" id="vehicle2" name="vehicle2" value="Car">
  <label for="vehicle2"> I have a car</label><br>
  <input type="checkbox" id="vehicle3" name="vehicle3" value="Boat">
  <label for="vehicle3"> I have a boat</label>
</form>
```

This is how the HTML code above will be displayed in a browser:

I have a bike
I have a car
I have a boat

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.

Example

A form with a submit button:

```
<form action="/action_page.php">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="John"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="Doe"><br><br>
  <input type="submit" value="Submit">
</form>
```

This is how the HTML code above will be displayed in a browser:

First name:

Last name:

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.

Example

This example will not submit the value of the "First name" input field:

```
<form action="/action_page.php">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" value="John"><br><br>
  <input type="submit" value="Submit">
</form>
```

The Action Attribute

The `action` attribute defines the action to be performed when the form is submitted.

Usually, the form data is sent to a file on the server when the user clicks on the submit button.

In the example below, the form data is sent to a file called "action_page.php". This file contains a server-side script that handles the form data:

Example

On submit, send form data to "action_page.php":

```
<form action="/action_page.php">
  <label for="fname">First name:</label><br>
  <input type="text" id="fname" name="fname" value="John"><br>
  <label for="lname">Last name:</label><br>
  <input type="text" id="lname" name="lname" value="Doe"><br><br>
  <input type="submit" value="Submit">
</form>
```

Tip: If the `action` attribute is omitted, the action is set to the current page.

The Target Attribute

The `target` attribute specifies where to display the response that is received after submitting the form.

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

Value	Description
_blank	The response is displayed in a new window or tab
_self	The response is displayed in the current window
_parent	The response is displayed in the parent frame
_top	The response is displayed in the full body of the window
framename	The response is displayed in a named iframe

The default value is `_self` which means that the response will open in the current window.

Example

Here, the submitted result will open in a new browser tab:

```
<form action="/action_page.php" target="_blank">
```

The HTML <form> Elements

The HTML `<form>` element can contain one or more of the following form elements:

- `<input>`
- `<label>`
- `<select>`
- `<textarea>`
- `<button>`
- `<fieldset>`
- `<legend>`
- `<datalist>`
- `<output>`
- `<option>`
- `<optgroup>`

The <input> Element

One of the most used form elements is the `<input>` element.

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

Example

```
<label for="fname">First name:</label>
<input type="text" id="fname" name="fname">
```

All the different values of the `type` attribute are covered in the next chapter: HTML Input Types.

The <label> Element

The `<label>` element defines a label for several form elements.

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

The `<label>` element also help 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.

The <select> Element

The `<select>` element defines a drop-down list:

Example

```
<label for="cars">Choose a car:</label>
<select id="cars" name="cars">
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
```

The `<option>` element defines an option that can be selected.

By default, the first item in the drop-down list is selected.

To define a pre-selected option, add the `selected` attribute to the option:

Example

```
<option value="fiat" selected>Fiat</option>
```

Visible Values:

Use the `size` attribute to specify the number of visible values:

Example

```
<label for="cars">Choose a car:</label>
<select id="cars" name="cars" size="3">
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
```

Allow Multiple Selections:

Use the `multiple` attribute to allow the user to select more than one value:

Example

```
<label for="cars">Choose a car:</label>
<select id="cars" name="cars" size="4" multiple>
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
```

The <textarea> Element

The `<textarea>` element defines a multi-line input field (a text area):

Example

```
<textarea name="message" rows="10" cols="30">
The cat was playing in the garden.
</textarea>
```

The `rows` attribute specifies the visible number of lines in a text area.

The `cols` attribute specifies the visible width of a text area.

This is how the HTML code above will be displayed in a browser:

You can also define the size of the text area by using CSS:

Example

```
<textarea name="message" style="width:200px; height:600px;">
The cat was playing in the garden.
</textarea>
```