Information Technology Institute

INTRODUCTION TO HTML

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HTML &CSS …

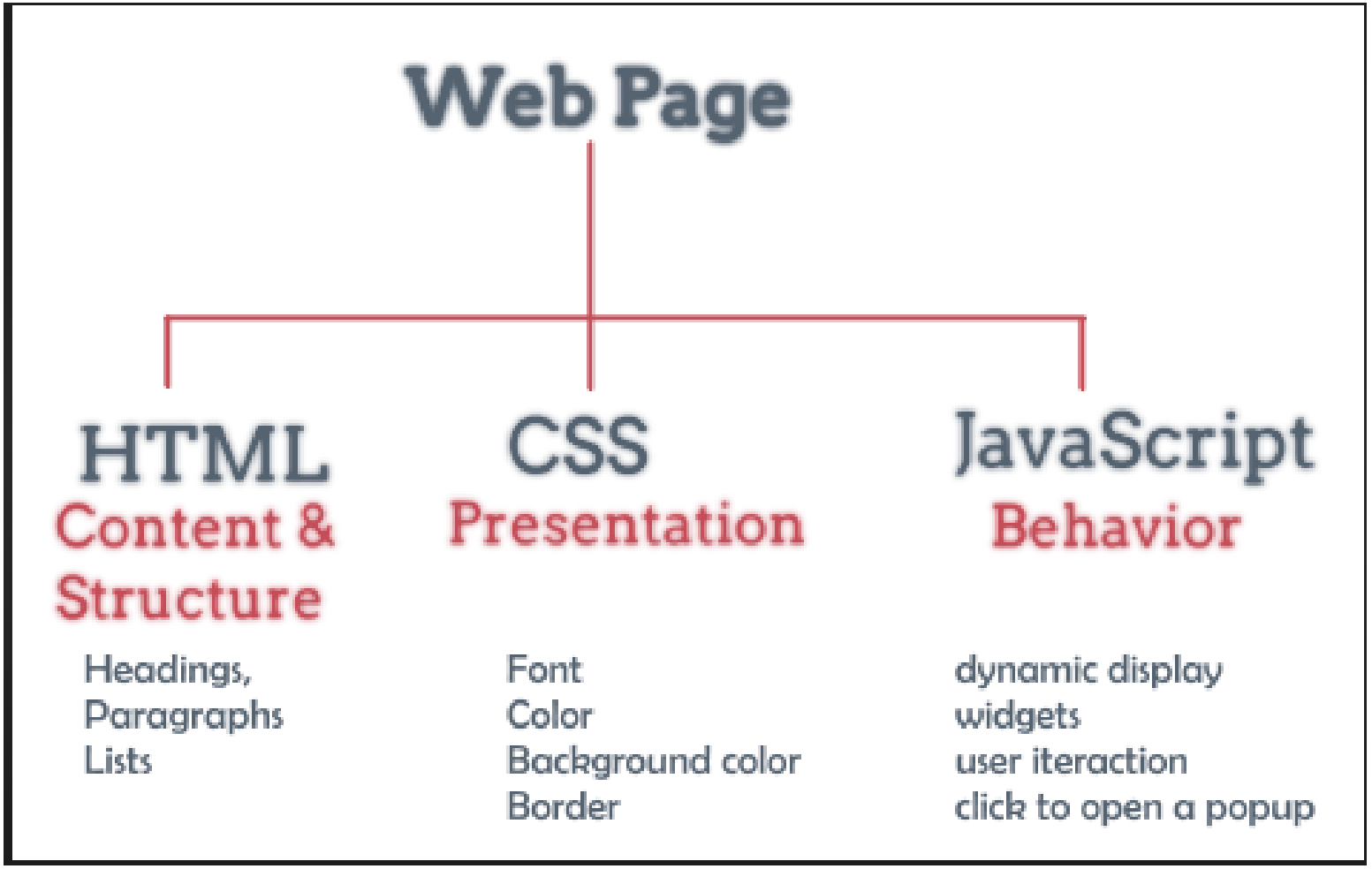

Web Page
HTML
Content & Structure
Headings,
Paragraphs
Lists
CSS
Presentation
Font
Color
Background color
Border
JavaScript
Behavior
dynamic display
widgets
user iteraction
click to open a popup

Image Floating

Use the CSS `float` property to let the image float to the right or to the left of a text:

Example

```
<p><img src="smiley.gif" alt="Smiley face" style="float:right;width:42px;height:42px;">
The image will float to the right of the text.</p>

<p><img src="smiley.gif" alt="Smiley face" style="float:left;width:42px;height:42px;">
The image will float to the left of the text.</p>
```

HTML Lists

HTML List Example

An Unordered List:

- Item
- Item
- Item
- Item

An Ordered 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>
```

Unordered HTML List - Choose List Item Marker

The CSS `list-style-type` property is used to define the style of the list item marker:

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>
```

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>
```

Control List Counting

By default, an ordered list will start counting from 1. If you want to start counting from a specified number, you can use the `start` attribute:

Example

```
<ol start="50">
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
```

HTML Block

HTML grouping (container) tags:

- Often used as a container for other HTML elements.
- ** ** Defines a section in a document (block-level).
- **** Defines a section in a document (inline).

HTML Block and Inline Elements:

- Every HTML element has a default display value depending on what type of element it is. The default display value for most elements is **block** or **inline**.

Block-level Elements:

- A block-level element always starts on a new line and takes up the full width available (stretches out to the left and right as far as it can).
- Examples of **block-level elements:** ** , <h1> - <h6>, <p>, <form>.**

Inline Elements:

- An inline element does not start on a new line and only takes up as much width as necessary.
- Examples of **inline elements:** **, <a>, <img>.**

Meta Tages

- **Meta Tags:** used to store information usually relevant to browsers and search engines.

```
<head>
    <meta charset="UTF-8">
    <meta name="description" content="Free Web tutorials">
    <meta name="keywords" content="HTML,CSS,XML,JavaScript">
    <meta name="author" content="ITI">
    <meta http-equiv="refresh" content="30;URL='http://www.iti.gov.eg/'">

    <title>My page </title>
</head>
```

HTML Tables

Defining an HTML Table

An HTML table is defined with the `<table>` tag.

Each table row is defined with the `<tr>` tag. A table header is defined with the `<th>` tag. By default, table headings are bold and centered. A table data/cell is defined with the `<td>` tag.

HTML Tables

```
<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 Tables

If you do not specify a border for the table, it will be displayed without borders.

A border is set using the CSS `border` property:

Example

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

HTML Tables

If you want the borders to collapse into one border, add the CSS `border-collapse` property:

Example

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

HTML Table - Adding Cell Padding

HTML Table - Adding Cell Padding

Cell padding specifies the space between the cell content and its borders.

If you do not specify a padding, the table cells will be displayed without padding.

To set the padding, use the CSS `padding` property:

Example

```
th, td {
  padding: 15px;
}
```

HTML Table - Left-align Headings

By default, table headings are bold and centered.

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

Example

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

HTML Table - Adding Border Spacing

```
table {
  border-spacing: 30px;
}
```

HTML Table - Adding Border Spacing

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

HTML Table - Cells that Span Many Columns

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

Example

```
<table style="width:100%">
  <tr>
    <th>Name</th>
    <th colspan="2">Telephone</th>
  </tr>
  <tr>
    <td>Bill Gates</td>
    <td>55577854</td>
    <td>55577855</td>
  </tr>
</table>
```

HTML Table - Cells that Span Many Columns

Name	Telephone	
Bill Gates	55577854	55577855

HTML Table - Cells that Span Many Rows

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

Example

```
<table style="width:100%">
  <tr>
    <th>Name:</th>
    <td>Bill Gates</td>
  </tr>
  <tr>
    <th rowspan="2">Telephone:</th>
    <td>55577854</td>
  </tr>
  <tr>
    <td>55577855</td>
  </tr>
</table>
```

HTML Table - Cells that Span Many Rows

Name:	Bill Gates
Telephone:	55577854
	55577855

HTML Table - Adding a Caption

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 - Adding a Caption

Monthly savings

Month	Savings
January	$100
February	$50

A Special Style for One Table

To define a special style for a special table, add an `id` attribute to the table:

Example

```
<table id="t01">
  <tr>
    <th>Firstname</th>
    <th>Lastname</th>
    <th>Age</th>
  </tr>
  <tr>
    <td>Eve</td>
    <td>Jackson</td>
    <td>94</td>
  </tr>
</table>
```

A Special Style for One Table

Now you can define a special style for this table:

```
table#t01 {
  width: 100%;
  background-color: #f1f1c1;
}
```

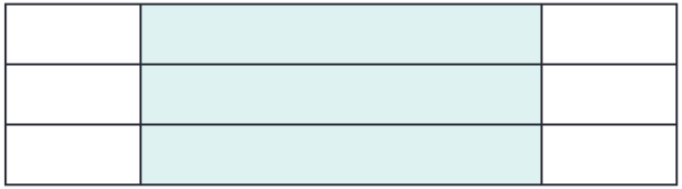
A Special Style for One Table

And add more styles:

```
table#t01 tr:nth-child(even) {
  background-color: #eee;
}
table#t01 tr:nth-child(odd) {
  background-color: #fff;
}
table#t01 th {
  color: white;
  background-color: black;
}
```

HTML Table Sizes

HTML Table Column Width



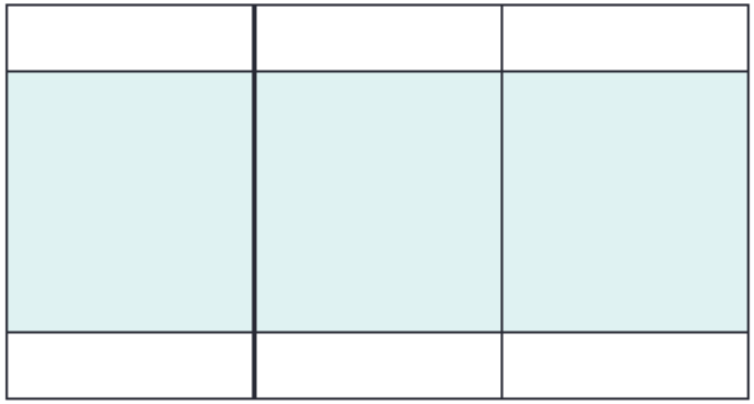
To set the size of a specific column, add the `style` attribute on a `<th>` or `<td>` element:

HTML Table Sizes

```
<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 Sizes

HTML Table Row Height



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

HTML Table Sizes

```
<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 Sizes

If you use a transparent color you will get an overlapping effect.

Use an `rgba()` color to specify the transparency of the color:

Example

```
tr:nth-child(even) {
  background-color: rgba(150, 212, 212, 0.4);
}

th:nth-child(even),td:nth-child(even) {
  background-color: rgba(150, 212, 212, 0.4);
}
```

HTML Table Hover

Hoverable Table

Use the `:hover` selector on `tr` to highlight table rows on mouse over:

First Name	Last Name	Savings
Peter	Griffin	$100
Lois	Griffin	$150
Joe	Swanson	$300

Example

```
tr:hover {background-color: #D6EEEE;}
```

HTML Table Colgroup

The `<colgroup>` element is used to style specific columns of a table.

HTML Table Colgroup

If you want to style the two first columns of a table, use the `<colgroup>` and `<col>` elements.

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

The `<colgroup>` element should be used as a container for the column specifications.

Each group is specified with a `<col>` element.

The `span` attribute specifies how many columns that get the style.

The `style` attribute specifies the style to give the columns.

HTML Table Colgroup

```
<table style="width: 100%;">
<colgroup>
  <col span="2" style="background-color: #D6EEEE">
</colgroup>
<tr>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
<th>SUN</th>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
```

HTML Table Colgroup

Multiple Col Elements

Add multiple col elements in the colgroup:

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

HTML Table Colgroup

```
<table style="width: 100%;">
  <colgroup>
    <col span="2" style="background-color: #D6EEEE">
    <col span="3" style="background-color: pink">
  </colgroup>
<tr>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
<th>SUN</th>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
```

HTML Table Colgroup

Empty Colgroups

Add "empty" col elements that represents the columns before the columns you want to style:

MON	TUE	WED	THU	FRI	SAT	SUN
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28

HTML Table Colgroup

```
<table style="width: 100%;">
<colgroup>
  <col span="3">
  <col span="2" style="background-color: pink">
</colgroup>
<tr>
<th>MON</th>
<th>TUE</th>
<th>WED</th>
<th>THU</th>
<th>FRI</th>
<th>SAT</th>
<th>SUN</th>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
```

HTML Iframes

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

Iframe Syntax

An HTML iframe is defined with the `<iframe>` tag:

```
<iframe src="URL"></iframe>
```

The `src` attribute specifies the URL (web address) of the inline frame page.

Iframe - Set Height and Width

Use the `height` and `width` attributes to specify the size of the iframe.

The attribute values are specified in pixels by default, but they can also be in percent (like "80%").

Example

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

Iframe - Remove the Border

By default, an iframe has a border around it.

To remove the border, add the `style` attribute and use the CSS `border` property:

Example

```
<iframe src="demo_iframe.htm" style="border:none;"></iframe>
```

Iframe - Make the Border

With CSS, you can also change the size, style and color of the iframe's border:

Example

```
<iframe src="demo_iframe.htm" style="border:2px solid red;"></iframe>
```

Iframe - Target for a Link

An iframe can be used as the target frame for a link.

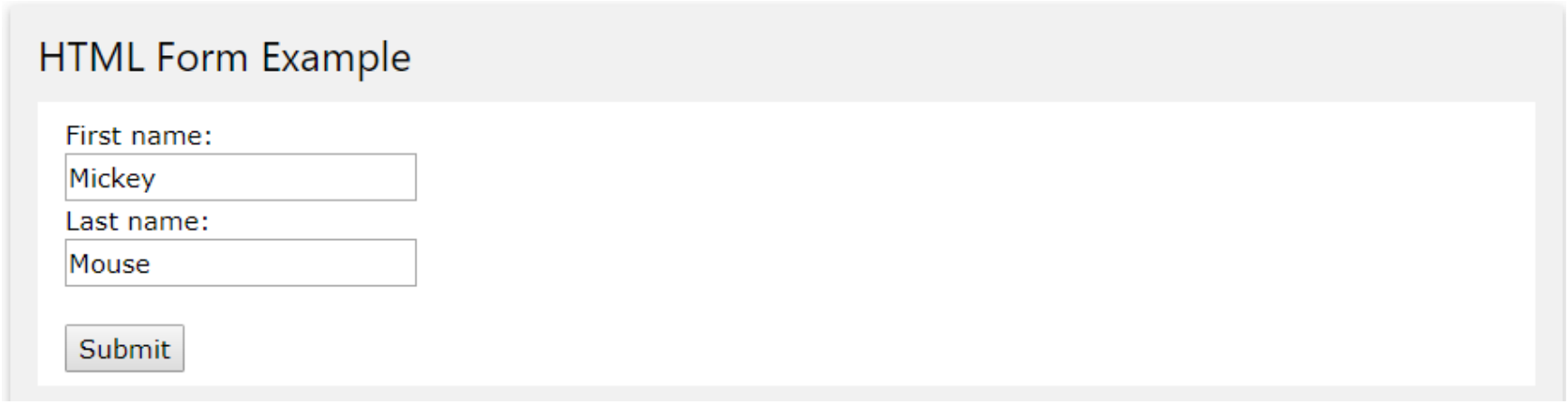
The `target` attribute of the link must refer to the `name` attribute of the iframe:

Example

```
<iframe src="demo_iframe.htm" name="iframe_a"></iframe>

<p><a href="https://www.w3schools.com" target="iframe_a">W3Schools.com</a></p>
```

HTML Forms



The <form> Element

The <form> Element

The HTML `<form>` element defines a form that is used to collect user input:

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

An HTML form contains **form elements**.

Form elements are different types of input elements, like text fields, checkboxes, radio buttons, submit buttons, and more.

The <form> Element

The `<input>` element is the most important form element.

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

Here are some examples:

Type	Description
<input type="text">	Defines a one-line text input field
<input type="radio">	Defines a radio button (for selecting one of many choices)
<input type="submit">	Defines a submit button (for submitting the form)

Text Input

`<input type="text">` defines a one-line input field for **text input**:

Example

```
<form>
  First name:<br>
  <input type="text" name="firstname"><br>
  Last name:<br>
  <input type="text" name="lastname">
</form>
```

Text Input

This is how it will look like in a browser:

First name:

Last name:

Note: The form itself is not visible. Also note that the default width of a text field is 20 characters.

Radio Button Input

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

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

Example

```
<form>
  <input type="radio" name="gender" value="male" checked> Male<br>
  <input type="radio" name="gender" value="female"> Female<br>
  <input type="radio" name="gender" value="other"> Other
</form>
```

Radio Button Input

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

- (•) Male
- ( ) Female
- ( ) Other

The Submit Button

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

The form-handler is typically a server page with a script for processing input data.

The form-handler is specified in the form's **action** attribute:

Example

```
<form action="/action_page.php">
  First name:<br>
  <input type="text" name="firstname" value="Mickey"><br>
  Last name:<br>
  <input type="text" name="lastname" value="Mouse"><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.

Normally, the form data is sent to a web page on the server when the user clicks on the submit button.

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

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

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

The Target Attribute

The `target` attribute specifies if the submitted result will open in a new browser tab, a frame, or in the current window.

The default value is "`_self`" which means the form will be submitted in the current window.

To make the form result open in a new browser tab, use the value "`_blank`":

Example

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

The Method Attribute

The `method` attribute specifies the HTTP method (**GET** or **POST**) to be used when submitting the form data:

Example

```
<form action="/action_page.php" method="get">
```

Try it Yourself »

or:

Example

```
<form action="/action_page.php" method="post">
```

When to Use GET?

The default method when submitting form data is GET.

However, when GET is used, the submitted form data will be **visible in the page address field**:

```
/action_page.php?firstname=Mickey&lastname=Mouse
```

Notes on GET:

- Appends form-data into the URL in name/value pairs
- The length of a URL is limited (about 3000 characters)
- Never use GET to send sensitive data! (will be visible in the URL)
- Useful for form submissions where a user wants to bookmark the result
- GET is better for non-secure data, like query strings in Google

When to Use POST?

Always use POST if the form data contains sensitive or personal information. The POST method does not display the submitted form data in the page address field.

Notes on POST:

- POST has no size limitations, and can be used to send large amounts of data.
- Form submissions with POST cannot be bookmarked

The Name Attribute

Each input field must have a `name` attribute to be submitted.

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

This example will only submit the "Last name" input field:

Example

```
<form action="/action_page.php">
  First name:<br>
  <input type="text" value="Mickey"><br>
  Last name:<br>
  <input type="text" name="lastname" value="Mouse"><br><br>
  <input type="submit" value="Submit">
</form>
```

Grouping Form Data with <fieldset>

The `<fieldset>` element is used to group related data in a form.

The `<legend>` element defines a caption for the `<fieldset>` element.

Example

```
<form action="/action_page.php">
  <fieldset>
    <legend>Personal information:</legend>
    First name:<br>
    <input type="text" name="firstname" value="Mickey"><br>
    Last name:<br>
    <input type="text" name="lastname" value="Mouse"><br><br>
    <input type="submit" value="Submit">
  </fieldset>
</form>
```

Grouping Form Data with <fieldset>

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

Personal information:

First name:

Mickey

Last name:

Mouse

Submit

The <input> Element

The most important form element is the `<input>` element.

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

Example

```
<input name="firstname" type="text">
```

If the `type` attribute is omitted, the input field gets the default type: "text"

The <select> Element

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

Example

```
<select name="cars">
  <option value="volvo">Volvo</option>
  <option value="saab">Saab</option>
  <option value="fiat">Fiat</option>
  <option value="audi">Audi</option>
</select>
```

The <select> Element –selected element

The `<option>` elements 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>
```

The <select> Element –size

Visible Values:

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

Example

```
<select 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>
```

The <select> Element –multiple

Allow Multiple Selections:

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

Example

```
<select 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 <textarea> Element

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

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

The <textarea> Element

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>
```

The <button> Element

The `<button>` element defines a clickable **button**:

Example

```
<button type="button" onclick="alert('Hello World!')">Click Me!</button>
```

HTML Input Types

Here are the different input types you can use in HTML:

- `<input type="button">`
- `<input type="checkbox">`
- `<input type="color">`
- `<input type="date">`
- `<input type="datetime-local">`
- `<input type="email">`
- `<input type="file">`
- `<input type="hidden">`
- `<input type="image">`
- `<input type="month">`
- `<input type="number">`
- `<input type="password">`
- `<input type="radio">`
- `<input type="range">`
- `<input type="reset">`
- `<input type="search">`
- `<input type="submit">`
- `<input type="tel">`
- `<input type="text">`
- `<input type="time">`
- `<input type="url">`
- `<input type="week">`

Input Type Text

`<input type="text">` defines a **one-line text input field**:

Example

```
<form>
  First name:<br>
  <input type="text" name="firstname"><br>
  Last name:<br>
  <input type="text" name="lastname">
</form>
```

Input Type Password

`<input type="password">` defines a **password field**:

Example

```
<form>
  User name:<br>
  <input type="text" name="username"><br>
  User password:<br>
  <input type="password" name="psw">
</form>
```

Input Type Submit

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

The form-handler is typically a server page with a script for processing input data.

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

Example

```
<form action="/action_page.php">
  First name:<br>
  <input type="text" name="firstname" value="Mickey"><br>
  Last name:<br>
  <input type="text" name="lastname" value="Mouse"><br><br>
  <input type="submit" value="Submit">
</form>
```

Input Type Reset

`<input type="reset">` defines a **reset button** that will reset all form values to their default values:

Example

```
<form action="/action_page.php">
  First name:<br>
  <input type="text" name="firstname" value="Mickey"><br>
  Last name:<br>
  <input type="text" name="lastname" value="Mouse"><br><br>
  <input type="submit" value="Submit">
  <input type="reset">
</form>
```

Input Type Radio

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

Radio buttons let a user select ONLY ONE of a limited number of choices:

Example

```
<form>
  <input type="radio" name="gender" value="male" checked> Male<br>
  <input type="radio" name="gender" value="female"> Female<br>
  <input type="radio" name="gender" value="other"> Other
</form>
```

Input Type Checkbox

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

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

Example

```
<form>
  <input type="checkbox" name="vehicle1" value="Bike"> I have a bike<br>
  <input type="checkbox" name="vehicle2" value="Car"> I have a car
</form>
```

Input Type Button

`<input type="button">` defines a **button**:

Example

```
<input type="button" onclick="alert('Hello World!')" value="Click Me!">
```

HTML5 Input Types

HTML5 added several new input types:

- color
- date
- datetime-local
- email
- month
- number
- range
- search
- tel
- time
- url
- week

HTML Input Attributes

The value Attribute

The `value` attribute specifies the initial value for an input field:

Example

```
<form action="">
  First name:<br>
  <input type="text" name="firstname" value="John">
</form>
```

The readonly Attribute

The `readonly` attribute specifies that the input field is read only (cannot be changed):

Example

```
<form action="">
  First name:<br>
  <input type="text" name="firstname" value="John" readonly>
</form>
```

The disabled Attribute

The disabled Attribute

The `disabled` attribute specifies that the input field is disabled.

A disabled input field is unusable and un-clickable, and its value will not be sent when submitting the form:

Example

```
<form action="">
  First name:<br>
  <input type="text" name="firstname" value="John" disabled>
</form>
```

The maxlength Attribute

The `maxlength` attribute specifies the maximum allowed length for the input field:

Example

```
<form action="">
  First name:<br>
  <input type="text" name="firstname" maxlength="10">
</form>
```

Try it Yourself »

With a `maxlength` attribute, the input field will not accept more than the allowed number of characters.

The `maxlength` attribute does not provide any feedback. If you want to alert the user, you must write JavaScript code.

HTML5 Attributes

HTML5 added the following attributes for `<input>`:

- autocomplete
- autofocus
- form
- formaction
- formenctype
- formmethod
- formnovalidate
- formtarget
- height and width
- list
- min and max
- multiple
- pattern (regexp)
- placeholder
- required
- step

and the following attributes for `<form>`:

- autocomplete
- novalidate