



1420-7001

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Web Programming



IT융합대학 컴퓨터공학부(컴퓨터공학전공)

Summary of the Previous Lesson

Part III

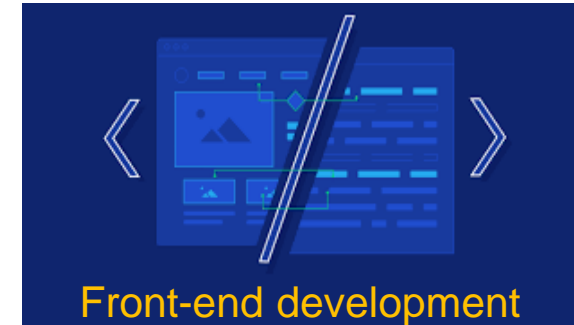
CSS introduction on Tables

- ☐ Border
- ☐ Size
- ☐ Alignment
- ☐ Styles
- ☐ Etc.

Part IV

Working with divs

- ☐ Concepts
- ☐ Examples of simple div
- ☐ Placement of multiple divs
- ☐ Styles addition to divs
- ☐ Etc.



Part I

Custom and third-party CSS

- ☐ Case I (WITHOUT TP)
- ☐ Case II (With TP)

Part II

Review of Table coding

- ☐ Tags test
- ☐ Arrangement of Table codes

Note: Please execute all codes at least once on your computers.

Class Activity #: 05

1	2	3	4
5	6		
7	8	9	10
11			
12	13	14	15
16			

<Fig. #: 01>

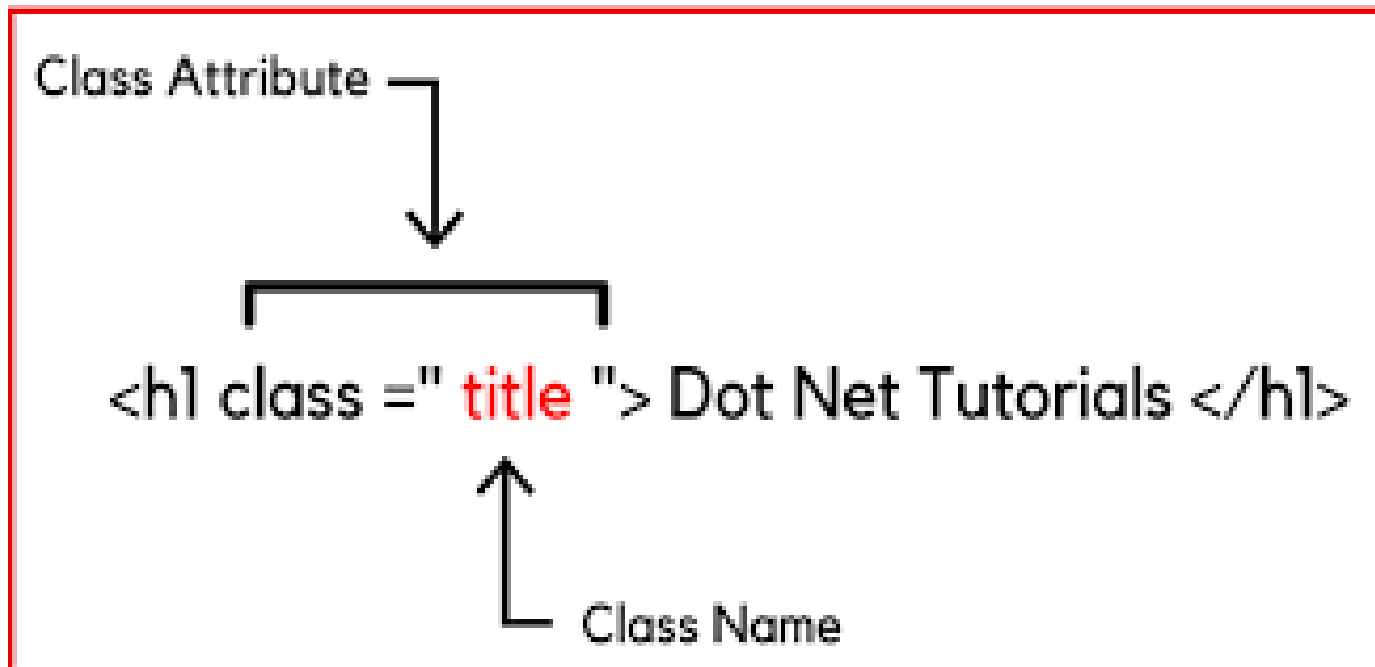
- What is the difference between Fig. 1 and Fig. 2?

- Why do we need div in the website development?
- Is there any other way to arrange content on the website rather than using divs?
- Is it possible to use different HTML tags inside a div?
- Can we apply different css to different div? yes/no

1	2	3	4	5	6
7	8	9	10	11	
12	13	14	15	16	

<Fig. #: 02>

Working with HTML Classes



HTML Concepts-**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.

HTML Coding examples-Class Attribute

- ❖ In the following example we have three `<div>` elements with a `class` attribute with the value of "city". All of the three `<div>` elements will be styled equally according to the `.city` style definition in the head section.

London

London is the capital of England.

Paris

Paris is the capital of France.

Tokyo

Tokyo is the capital of Japan.

```
<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>
```

HTML Coding examples-**Class Attribute <Write once and use for multiple>**

- ⌘ In the following example we have two `` elements with a `class` attribute with the value of "note". Both `` elements will be styled equally according to the `.note` style definition in the head section

```
<html>
<head>
<style>
.note {
  font-size: 120%;
  color: red;
}
</style>
</head>
<body>

<h1>My <span class="note">Important</span> Heading</h1>
<p>This is some <span class="note">important</span> text.</p>

</body>
</html>
```

Output of the code

My **Important** Heading

This is some **important** text.

Tip: The `class` attribute can be used on **any** HTML element.

Note: The class name is case sensitive!

HTML Coding examples-Syntax for the Class

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

```
<html>
<head>
<style>
.city {
  background-color: tomato;
  color: white;
  padding: 10px;
}
</style>
</head>
<body>

<h2>The class Attribute</h2>
<p>Use CSS to style elements with the class name "city":</p>

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

<h2 class="city">Paris</h2>
<p>Paris is the capital of France.</p>

<h2 class="city">Tokyo</h2>
<p>Tokyo is the capital of Japan.</p>

</body>
</html>
```



The class Attribute

Output of the code

Use CSS to style elements with the class name "city":

London

London is the capital of England.

Paris

Paris is the capital of France.

Tokyo

Tokyo is the capital of Japan.

HTML Coding examples-Syntax for the Multiple Class

- ⌘ HTML elements can belong to more than one class.
- ⌘ To define multiple classes, separate the class names with a space, e.g. `<div class="city main">`. The element will be styled according to all the classes specified.
- ⌘ In the following example, the first `<h2>` element belongs to both the city class and also to the main class, and will get the CSS styles from both of the classes:

HTML Coding examples-Syntax for the Multiple Class

```
<html>
<head>
<style>
.city {
  background-color: tomato;
  color: white;
  padding: 10px;
}

.main {
  text-align: center;
}
</style>
</head>
<body>
```

```
<h2>Multiple Classes</h2>
<p>Here, all three h2 elements belongs to the "city" class. In addition, London also belongs to

<h2 class="city main">London</h2>
<h2 class="city">Paris</h2>
<h2 class="city">Tokyo</h2>

</body>
</html>
```

Multiple Classes

Here, all three h2 elements belongs to the "city" class. In addition, London also belongs to the "main" class, which center-aligns the text.

London

Paris

Tokyo

Output of the code

HTML Coding examples-Same Class sharing between multiple Attributes

- ⌘ Different HTML elements can point to the same class name.
- ⌘ In the following example, both `<h2>` and `<p>` point to the "city" class and will share the same style

Output of the code

```
<html>
<head>
<style>
.city {
  background-color: tomato;
  color: white;
  padding: 10px;
}
</style>
</head>
<body>
```

Different Elements Can Share Same Class

Even if the two elements do not have the same tag name, they can both point to the same class, and get the same CSS styling:

Paris

Paris is the capital of France.

```
<h2>Different Elements Can Share Same Class</h2>

<p>Even if the two elements do not have the same tag name,

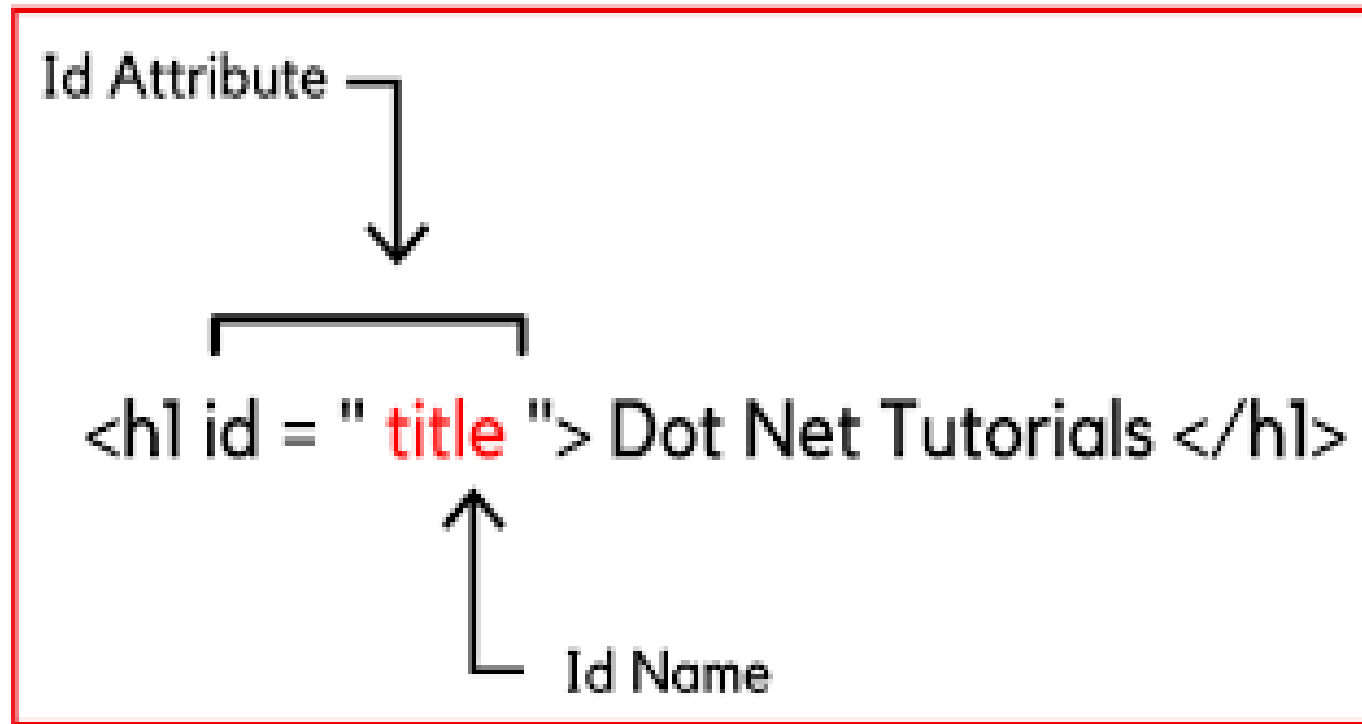
<h2 class="city">Paris</h2>
<p class="city">Paris is the capital of France.</p>

</body>
</html>
```

Summary of the CSS Concepts-**Class Attribute**

- ⌘ The HTML class attribute specifies one or more class names for an element
- ⌘ Classes are used by CSS and JavaScript to select and access specific elements
- ⌘ The class attribute can be used on any HTML element
- ⌘ The class name is case sensitive
- ⌘ Different HTML elements can point to the same class name

Working with HTML id



HTML Concepts-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 `{}`.

HTML Concepts-ID Attribute Example

- ⌘ 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.

```
<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>
```

The id Attribute

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

Output of the code

My Header



Note: The id name is case sensitive!

Note: The id name must contain at least one character, cannot start with a number, and must not contain whitespaces (spaces, tabs, etc.).

HTML Concepts-ID & Class Attribute (Difference)

A class name can be used by multiple HTML elements, while an id name must only be used by one HTML element within the page.

HTML Concepts-ID & Class Attribute (Difference)

Output of the code



Difference Between Class and ID

A class name can be used by multiple HTML elements, while an id name must only be used by one HTML element within the page:

My Cities

London

London is the capital of England.

Paris

Paris is the capital of France.

Tokyo

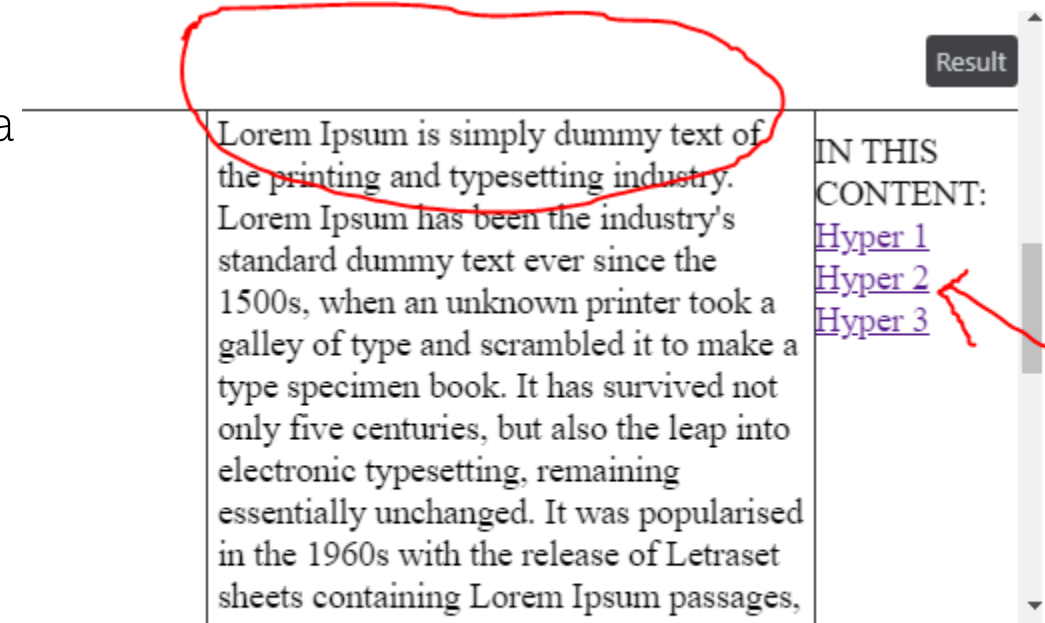
Tokyo is the capital of Japan.

```
<html>
<head>
<style>
/* Style the element with the id "myHeader" */
#myHeader {
  background-color: lightblue;
  color: black;
  padding: 40px;
  text-align: center;
}

/* Style all elements with the class name "city" */
.city {
  background-color: tomato;
  color: white;
  padding: 10px;
}
</style>
</head>
<body>
<h2>Difference Between Class and ID</h2>
<p>A class name can be used by multiple HTML elements, while an id
<!-- An element with a unique id -->
<h1 id="myHeader">My Cities</h1>
<!-- Multiple elements with same class -->
<h2 class="city">London</h2>
<p>London is the capital of England.</p>
<h2 class="city">Paris</h2>
<p>Paris is the capital of France.</p>
<h2 class="city">Tokyo</h2>
<p>Tokyo is the capital of Japan.</p>
</body>
</html>
```

HTML Concepts-HTML Bookmarks

- ⌘ HTML bookmarks are used to allow readers to jump to specific parts of a webpage.
- ⌘ Bookmarks can be useful if your page is very long.
- ⌘ To use a bookmark, you must first create it, and then add a link to it.
- ⌘ Then, when the link is clicked, the page will scroll to the location with the bookmark.



HTML Coding Example-HTML Bookmarks

Output of the code

Chapter 10

This chapter explains ba bla bla

Chapter 11

This chapter explains ba bla bla

Chapter 12

This chapter explains ba bla bla

Chapter 13

This chapter explains ba bla bla

Chapter 14

This chapter explains ba bla bla

Chapter 15

This chapter explains ba bla bla

Chapter 16

This chapter explains ba bla bla

Chapter 17

[Jump to Chapter 4](#)

[Jump to Chapter 10](#)

Chapter 1

This chapter explains ba bla bla

Chapter 2

This chapter explains ba bla bla

Chapter 3

This chapter explains ba bla bla

Chapter 4

This chapter explains ba bla bla

Chapter 5

This chapter explains ba bla bla

Chapter 6

This chapter explains ba bla bla

Chapter 7

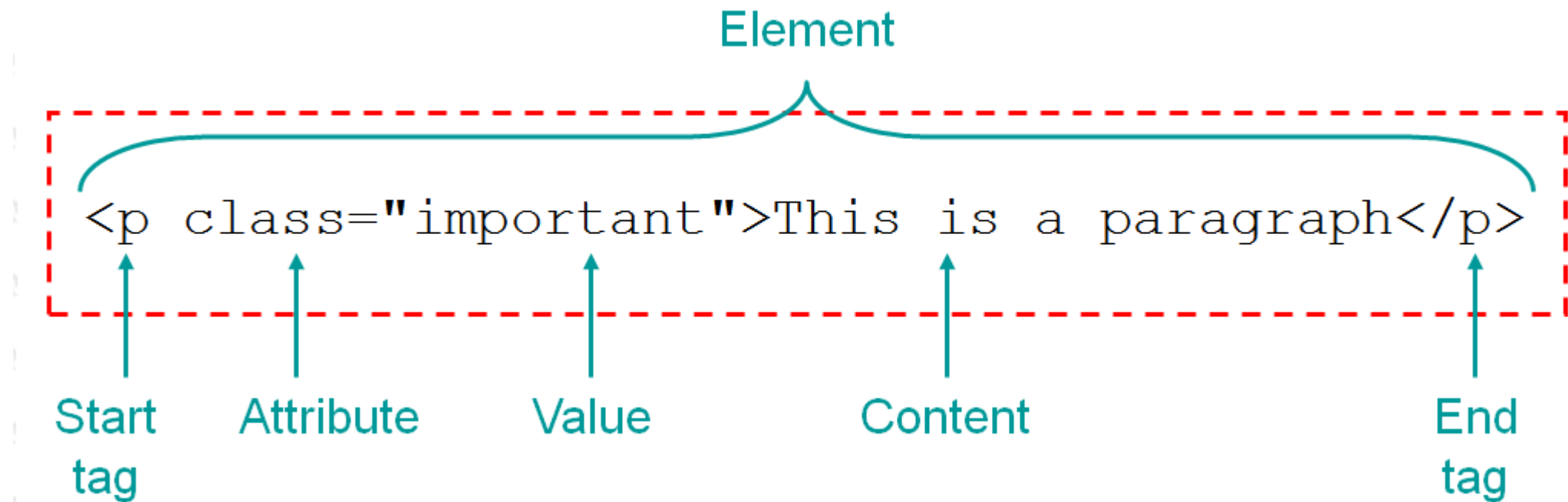
```
<body>
<p><a href="#C4">Jump to Chapter 4</a></p>
<p><a href="#C10">Jump to Chapter 10</a></p>
<h2>Chapter 1</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 2</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 3</h2>
<p>This chapter explains ba bla bla</p>
<h2 id="C4">Chapter 4</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 5</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 6</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 7</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 8</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 9</h2>
<p>This chapter explains ba bla bla</p>
<h2 id="C10">Chapter 10</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 11</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 12</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 13</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 14</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 15</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 16</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 17</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 18</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 19</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 20</h2>
<p>This chapter explains ba bla bla</p>
<h2>Chapter 21</h2>
```

Summary of the **id Attribute**

- ⌘ The **id** attribute is used to specify 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 by CSS and JavaScript to style/select a specific element.
- ⌘ The value of the **id** attribute is case sensitive.
- ⌘ The **id** attribute is also used to create HTML bookmarks.

Self Test

What are the **Elements**, **Tags**, and **Attributes** in HTML?



Links in HTML

href attribute

target attribute

name attribute



HTML Concepts-Text Links

- ⌘ A webpage can contain various links that take us directly to other web pages or resources and even specific parts of a given page. These links are known as **hyperlinks**.
- ⌘ Hyperlinks allow visitors to navigate between Web sites by clicking on words, phrases, and images.
- ⌘ Thus, you can create hyperlinks using text or images available on a webpage.

[Linking document](#)

A link is specified using HTML tag `<a>`. This tag is called **anchor tag** and anything between the opening `<a>` tag and the closing `` tag becomes part of the link and a user can click that part to reach the linked document. Following is the simple syntax to use `<a>` tag.

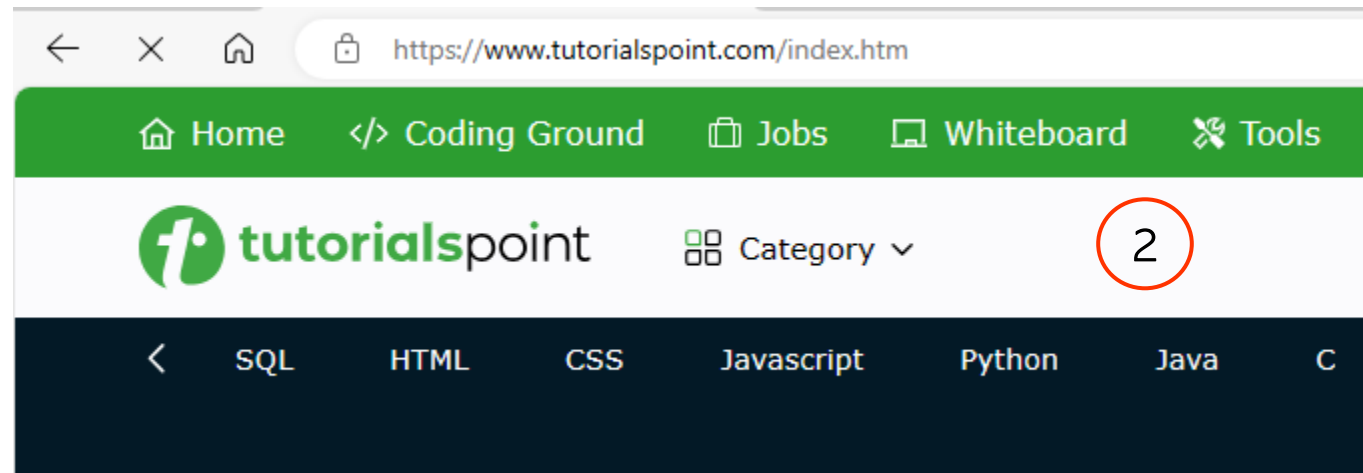
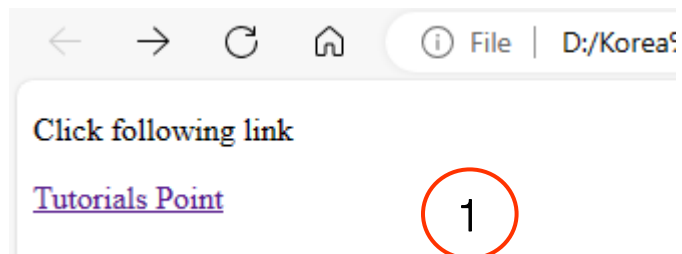
```
<a href="Document URL" ... attributes-list>Link Text</a>
```


HTML Coding Example-Text Links

Let's try following example which links <http://www.tutorialspoint.com>.

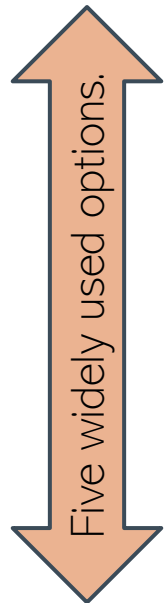
```
<!DOCTYPE html>
<html>
<head>
  <title>Hyperlink Example</title>
</head>
<body>
  <p>Click following link</p>
  <a href="https://www.tutorialspoint.com/" target="_self">Tutorials Point</a>
</body>
</html>
```

Output of the code



HTML Concepts-Text Links-The "target" Attribute

⌘ We have used target attribute in our previous example ([slide](#)). This attribute is used to specify the location where linked document is opened. Following are the possible values of target attribute



S.No.	Option & Description
1	_blank Opens the linked document in a new window or tab.
2	_self Opens the linked document in the same frame.
3	_parent Opens the linked document in the parent frame.
4	_top Opens the linked document in the full body of the window.
5	targetframe Opens the linked document in a named targetframe.

HTML Coding Example-Text Links

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Hyperlink Example</title>
```

```
  <base href="https://www.tutorialspoint.com/">
```

```
</head>
```

```
<body>
```

```
  <p>Click any of the following links</p>
```

```
  <a href="/html/index.htm" target="_blank">Opens in New</a> |
```

```
  <a href="/html/index.htm" target="_self">Opens in Self</a> |
```

```
  <a href="/html/index.htm" target="_parent">Opens in Parent</a> |
```

```
  <a href="/html/index.htm" target="_top">Opens in Body</a>
```

```
</body>
```

```
</html>
```

Output of the code

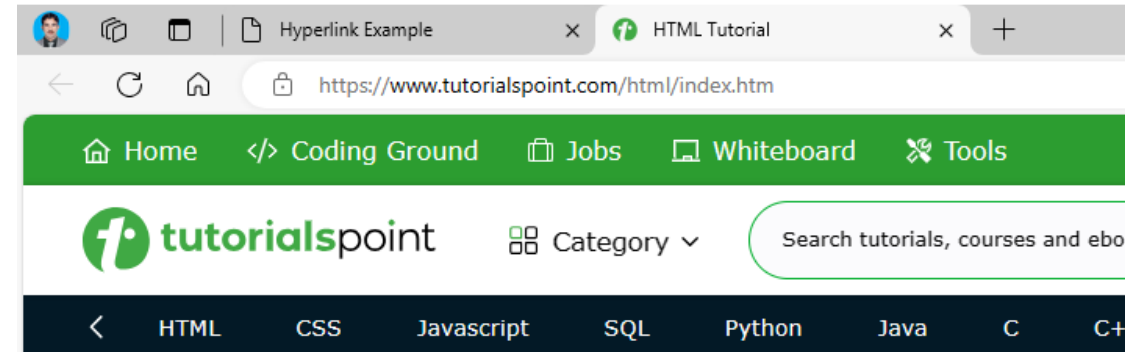
← ↻ 🏠 ⓘ File | D:/Korea%20Stuff/GU%20Courses/2024/WEB%20Progr

Click any of the following links

[Opens in New](#) | [Opens in Self](#) | [Opens in Parent](#) | [Opens in Body](#)



target="_blank"



HTML Coding Example-Text Links

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Hyperlink Example</title>
```

```
  <base href="https://www.tutorialspoint.com/">
```

```
</head>
```

```
<body>
```

```
  <p>Click any of the following links</p>
```

```
  <a href="/html/index.htm" target="_blank">Opens in New</a> |
```

```
  <a href="/html/index.htm" target="_self">Opens in Self</a> |
```

```
  <a href="/html/index.htm" target="_parent">Opens in Parent</a> |
```

```
  <a href="/html/index.htm" target="_top">Opens in Body</a>
```

```
</body>
```

```
</html>
```

Output of the code

← ↻ 🏠 ⓘ File | D:/Korea%20Stuff/GU%20Courses/2024/WEB%20Progr

Click any of the following links

[Opens in New](#) | [Opens in Self](#) | [Opens in Parent](#) | [Opens in Body](#)



target="_self"

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HTML Coding Example-Text Links

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Hyperlink Example</title>
```

```
  <base href="https://www.tutorialspoint.com/">
```

```
</head>
```

```
<body>
```

```
  <p>Click any of the following links</p>
```

```
  <a href="/html/index.htm" target="_blank">Opens in New</a> |
```

```
  <a href="/html/index.htm" target="_self">Opens in Self</a> |
```

```
  <a href="/html/index.htm" target="_parent">Opens in Parent</a> |
```

```
  <a href="/html/index.htm" target="_top">Opens in Body</a>
```

```
</body>
```

```
</html>
```

Output of the code

← ↻ 🏠 ⓘ File | D:/Korea%20Stuff/GU%20Courses/2024/WEB%20Progr

Click any of the following links

[Opens in New](#) | [Opens in Self](#) | [Opens in Parent](#) | [Opens in Body](#)



target="_parent"

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HTML Coding Example-Text Links

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
  <title>Hyperlink Example</title>
```

```
  <base href="https://www.tutorialspoint.com/">
```

```
</head>
```

```
<body>
```

```
  <p>Click any of the following links</p>
```

```
  <a href="/html/index.htm" target="_blank">Opens in New</a> |
```

```
  <a href="/html/index.htm" target="_self">Opens in Self</a> |
```

```
  <a href="/html/index.htm" target="_parent">Opens in Parent</a> |
```

```
  <a href="/html/index.htm" target="_top">Opens in Body</a>
```

```
</body>
```

```
</html>
```

Output of the code

← ↻ 🏠 ⓘ File | D:/Korea%20Stuff/GU%20Courses/2024/WEB%20Progr

Click any of the following links

[Opens in New](#) | [Opens in Self](#) | [Opens in Parent](#) | [Opens in Body](#)



target="_top"

← ↻ 🏠 🔒 https://www.tutorialspoint.com/html/index.htm

🏠 Home </> Coding Ground 📁 Jobs 🖥️ Whiteboard

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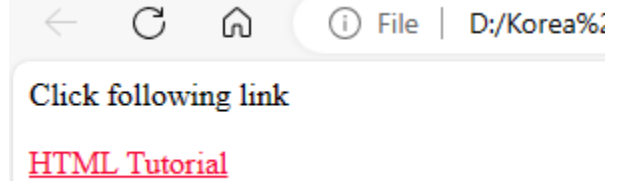
< HTML CSS Javascript SQL Python Java

HTML Coding Example-Text Links (Link Colors)

⌘ You can set colors of your links, active links and visited links using `link`, `alink` and `vlink` attributes of `<body>` tag.

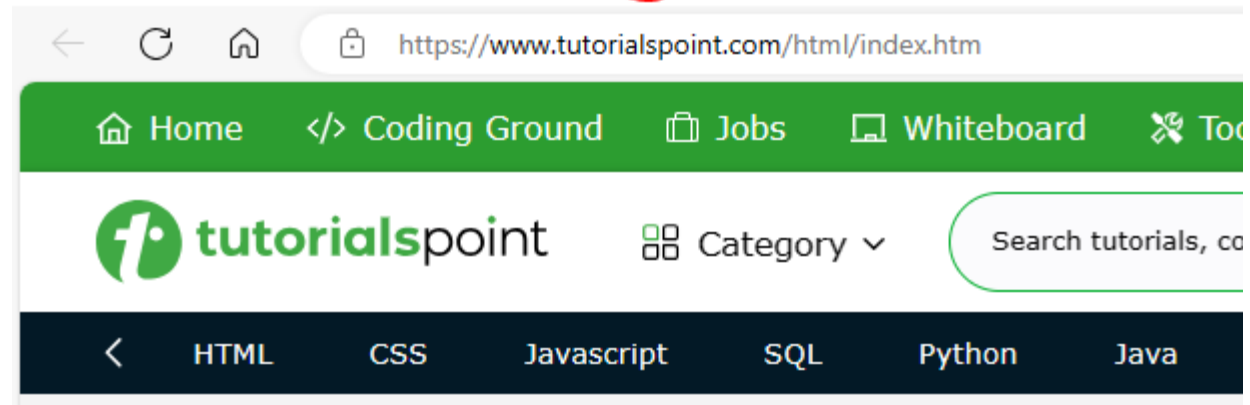
```
<html>
<head>
  <title>Hyperlink Example</title>
  <base href="https://www.tutorialspoint.com/">
</head>
<body alink="#54A250" link="#040404" vlink="#F40633">
  <p>Click following link</p>
  <a href="/html/index.htm" target="_blank">HTML Tutorial</a>
</body>
</html>
```

Output of the code



Click following link
[HTML Tutorial](#)

2

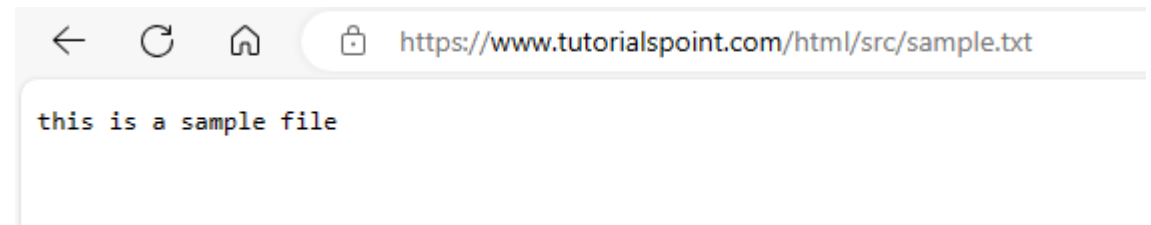
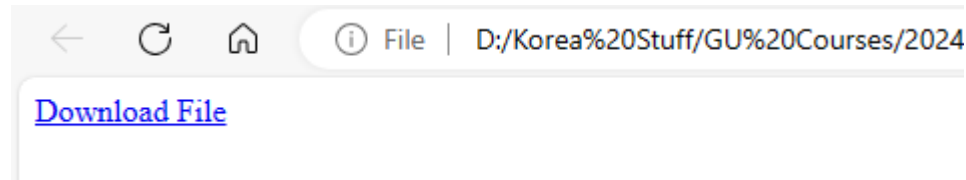


HTML Coding Example-Text Links (Download Link)

⌘ You can create text link to make your PDF, or DOC or ZIP files downloadable. This is very simple; you just need to give complete URL of the downloadable file as follows.

```
<html>
<head>
  <title>Hyperlink Example</title>
</head>
<body>
  <a href="https://www.tutorialspoint.com/html/src/sample.txt">Download File</a>
</body>
</html>
```

Output of the code



HTML Concepts-Image Links

- ⌘ Similar to text, images can also be used as links in HTML which means by clicking these images, we can navigate to another web pages or resources.
- ⌘ Image links are very useful in creating websites like photo galleries, portfolio, online stores and so on. In this tutorial, we will learn how to use images to create hyperlinks.

To create an **HTML image link**, we need `` tag and an anchor element. The image element is used to display the image on the web page, and the anchor element is used to specify the destination URL of the link.

The syntax of an HTML image link is as follows –

```
<a href=" destination URL">  
    
</a>
```

HTML Coding Example-Image Links

```
<!DOCTYPE html>
<html>
<head>
  <title>Image Hyperlink Example</title>
</head>
<body>
  <a href="https://www.tutorialspoint.com">
    
  </a>
</body>
</html>
```

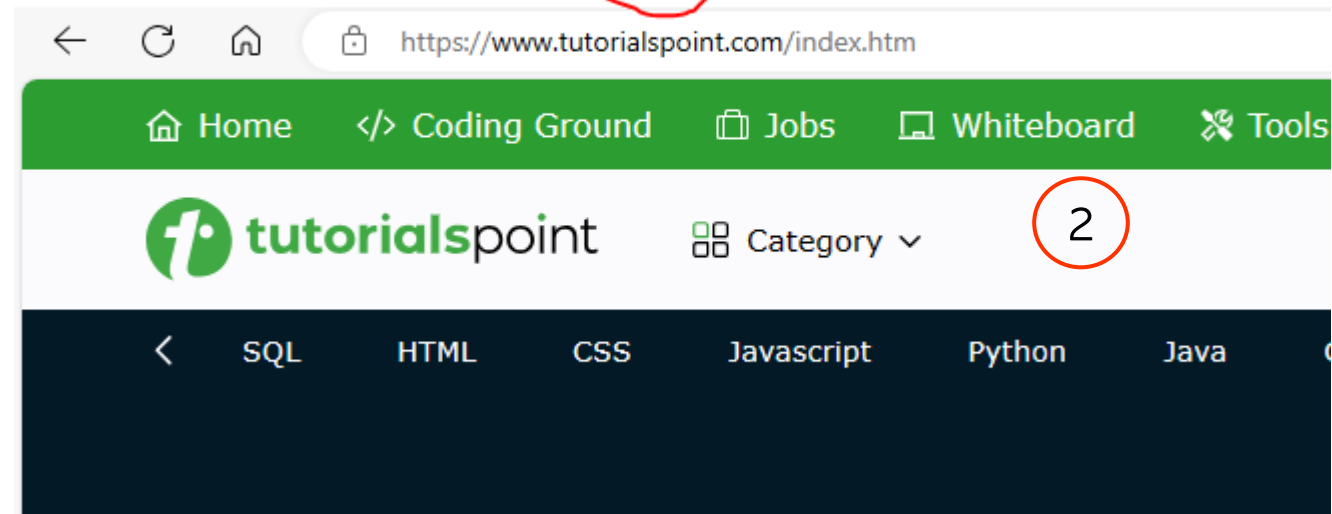
Note: This was the simplest way of creating hyperlinks using images.

Output of the code

← ↻ 🏠 ⓘ File | D:/Korea%20Stuff/GU%20Courses/202



1



HTML Concepts-Email Links

- ⌘ HTML **email links** allows us to send an email to a specific address by clicking on a hyperlink. It is not difficult to put an HTML email link on our web page but it can cause unnecessary spamming problem for the email account.
- ⌘ There are people, who can run programs to harvest these types of emails and later use them for spamming in various ways.

Email Link in HTML

In HTML, the `<a>` tag provides an option to specify recipient's email address to send an email. While using `<a>` tag as an email tag, we will use **mailto: email address** within **href** attribute. Following is the syntax of using **mailto** –

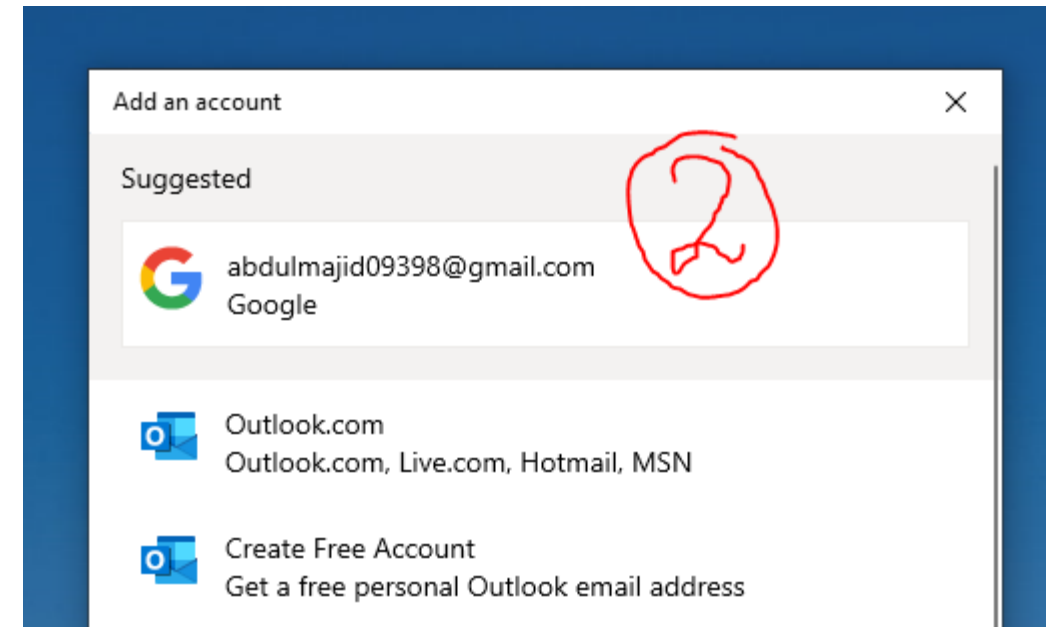
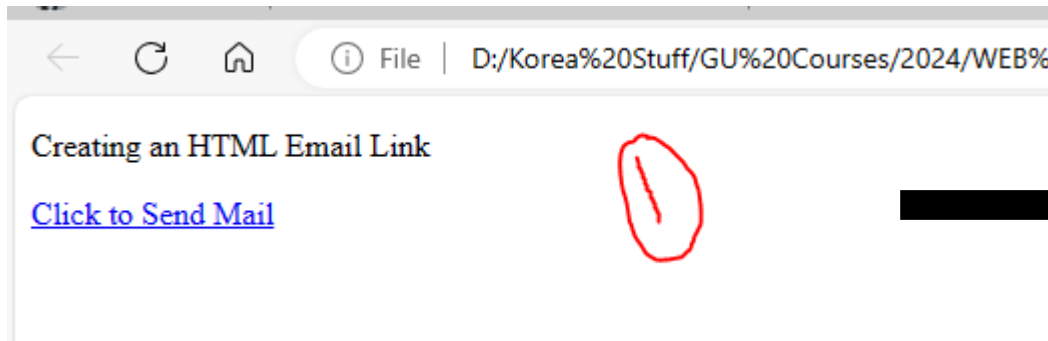
```
<a href= "mailto: name@email.com"> ... </a>
```

HTML Coding Example-Email Links

```
<!DOCTYPE html>
<html>
<body>
  <p>
    Creating an HTML Email Link
  </p>
  <a href= "mailto: abdulmajid09398@email.com"> Click to Send Mail</a>
</body>
</html>
```

On executing the code, a link will be displayed on the screen. If a user clicks this link, it launches one pop-up with list of Email Clients (like Gmail, Outlook etc.) installed on user's computer. If the user do not have any email client installed on their computer then it would not be possible to send email.

Output of the code





HTML Forms

A Tool/Way of Data
Collection in Web Apps

HTML-Forms

- In web applications, data is usually collected with forms.
- An HTML form is used to collect user input. The user input is most often sent to a server for processing.
- In this course, we need to learn how to create forms for data collection.



First name:

Last name:

E-mail:

☐ Male

☐ Female

Designing HTML-Forms

- ⌘ **Label:** It describes the purpose of the form element.
- ⌘ **Input:** It accepts the data entered in the form, such as text, password, email, address, etc.
- ⌘ **Textarea:** This allows people to enter long text content.
- ⌘ **Button:** It provides a clickable button so an element can perform a function.
- ⌘ **Select:** It lets users scroll through a list of available options in a drop-down list box and choose one from them.
- ⌘ **Fieldset:** It can enclose the various form elements and group-related data in a box.
- ⌘ **Legend:** It puts captions for fieldset components.
- ⌘ **Datalist:** It identifies pre-defined list options for input controls.
- ⌘ **Output:** It displays the results of the performed calculations.
- ⌘ **Option:** It defines available choices in a drop-down list.
- ⌘ **Opt group:** It creates group options in a drop-down list.

To create forms, you need to put input fields, preformatted text, lists, and tables.

Designing HTML-Forms

- To create forms, you need to put input fields, preformatted text, lists, and tables.

Class Activity: Identify the elements of the below forms.

First name: ← What is the name of the element?

Last name: ← What is the name of the element?

← What is the name of the element?

Designing HTML-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.

Designing HTML-Forms

⌘ To create forms, you need to put input fields, preformatted text, lists, and tables. Below is one example of creating forms.

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

<h2>HTML Forms</h2>

<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>

<p>If you click the "Submit" button, the form-data will be sent to a page called
"/action_page.php".</p>

</body>
</html>
```

HTML Forms

First name:

Last name:

If you click the "Submit" button, the form-data will be sent to a page called "/action_page.php".

Designing HTML-Forms

- ⌘ To create forms, you need to put input fields, preformatted text, lists, and tables.
- ⌘ Below is one example of creating forms.

Type	Description
<code><input type="text"></code>	Displays a single-line text input field
<code><input type="radio"></code>	Displays a radio button (for selecting one of many choices)
<code><input type="checkbox"></code>	Displays a checkbox (for selecting zero or more of many choices)
<code><input type="submit"></code>	Displays a submit button (for submitting the form)
<code><input type="button"></code>	Displays a clickable button



HTML Forms

How to develop forms

HTML-Forms

- In web applications, data is usually collected with forms.
- An HTML form is used to collect user input. The user input is most often sent to a server for processing.
- In this course, we need to learn how to create forms for data collection.



A screenshot of a web form enclosed in a red rectangular border. The form contains the following elements: a text input field labeled "First name:", a text input field labeled "Last name:", a text input field labeled "E-mail:", two radio buttons labeled "Male" and "Female", and two buttons labeled "Submit" and "Reset". The form is set against a light gray background with a faint grid pattern.

Designing HTML-Forms

- ⌘ **Label:** It describes the purpose of the form element.
- ⌘ **Input:** It accepts the data entered in the form, such as text, password, email, address, etc.
- ⌘ **Textarea:** This allows people to enter long text content.
- ⌘ **Button:** It provides a clickable button so an element can perform a function.
- ⌘ **Select:** It lets users scroll through a list of available options in a drop-down list box and choose one from them.
- ⌘ **Fieldset:** It can enclose the various form elements and group-related data in a box.
- ⌘ **Legend:** It puts captions for fieldset components.
- ⌘ **Datalist:** It identifies pre-defined list options for input controls.
- ⌘ **Output:** It displays the results of the performed calculations.
- ⌘ **Option:** It defines available choices in a drop-down list.
- ⌘ **Opt group:** It creates group options in a drop-down list.

To create forms, you need to put input fields, preformatted text, lists, and tables.

Designing HTML-Forms

- To create forms, you need to put input fields, preformatted text, lists, and tables.

Class Activity: Identify the elements of the below forms.

First name: ← What is the name of the element?

Last name: ← What is the name of the element?

← What is the name of the element?

Designing HTML-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.

Designing HTML-Forms

⌘ To create forms, you need to put input fields, preformatted text, lists, and tables. Below is one example of creating forms.

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

<h2>HTML Forms</h2>

<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>

<p>If you click the "Submit" button, the form-data will be sent to a page called
"/action_page.php".</p>

</body>
</html>
```

HTML Forms

First name:

Last name:

If you click the "Submit" button, the form-data will be sent to a page called "/action_page.php".

Designing HTML-Forms

- ⌘ To create forms, you need to put input fields, preformatted text, lists, and tables.
- ⌘ Below is one example of creating forms.

Type	Description
<code><input type="text"></code>	Displays a single-line text input field
<code><input type="radio"></code>	Displays a radio button (for selecting one of many choices)
<code><input type="checkbox"></code>	Displays a checkbox (for selecting zero or more of many choices)
<code><input type="submit"></code>	Displays a submit button (for submitting the form)
<code><input type="button"></code>	Displays a clickable button

Designing HTML-Forms {Elements of the forms}

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

• Name:

• Email:

• Password:

• Please check all the emotions that apply to you:

- Angry ☒
- Sad ☐
- Happy ☐
- Ambivalent ☐

• How satisfied were you with our service?

- Very satisfied ☒
- Satisfied ☐
- Didn't care ☐
- Dissatisfied ☐
- Very dissatisfied ☐

• Further comments:

• Bio photo:

• Location visited:

Designing HTML-Forms {Elements of the forms}

Input in HTML forms

- ⌘ 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.

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

<h2>The input Element</h2>

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

</body>
</html>
```

The input Element

First name:



Different types of Inputs in HTML

HTML Input Types

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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">
```

Different types of Inputs in HTML



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

Designing HTML-Forms [Elements of the forms-Inputs]

```
% <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 single-line text input field:

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

<h2>Text field</h2>
<p>The <strong>input type="text"</strong> defines a one-line text input field:</p>

<form action="/action_page.php">
  <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"><br><br>
  <input type="submit" value="Submit">
</form>

<p>Note that the form itself is not visible.</p>
<p>Also note that the default width of a text field is 20 characters.</p>

</body>
</html>
```

Text field

The **input type="text"** defines a one-line text input field:

First name:

Last name:

Submit

Note that the form itself is not visible.

Also note that the default width of a text field is 20 characters.

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Password

`<input type="password">` defines a password field.

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

<h2>Password field</h2>

<p>The <strong>input type="password"</strong> defines a password field:</p>

<form action="/action_page.php">
  <label for="username">Username:</label><br>
  <input type="text" id="username" name="username"><br>
  <label for="pwd">Password:</label><br>
  <input type="password" id="pwd" name="pwd"><br><br>
  <input type="submit" value="Submit">
</form>

<p>The characters in a password field are masked (shown as asterisks or circles).</p>

</body>
</html>
```

Password field

The `input type="password"` defines a password field:

Username:

Password:

The characters in a password field are masked (shown as asterisks or circles).

Designing HTML-Forms [Elements of the forms-Inputs]

Input Type Submit

```
% <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="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

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

<h2>Submit Button</h2>

<p>The <strong>input type="submit"</strong> defines a button for submitting form data to a
form-handler:</p>

<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>

<p>If you click "Submit", the form-data will be sent to a page called "/action_page.php".</p>

</body>
</html>
```

Submit Button

The **input type="submit"** defines a button for submitting form data to a form-handler:

First name:

Last name:

If you click "Submit", the form-data will be sent to a page called "/action_page.php".

Designing HTML-Forms [Elements of the forms-Inputs]

Input Type Submit

```
⌘ <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="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
- If you omit the submit button's value attribute, the button will get a default text.

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

<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">
</form>

</body>
</html>
```

First name:
John

Last name:
Doe

Submit

Designing HTML-Forms [Elements of the forms-Inputs]

- ⌘ `<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 Reset

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

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

<h2>Reset Button</h2>

<p>The <strong>input type="reset"</strong> defines a reset button that resets all form values
to their default values:</p>

<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">
  <input type="reset">
</form>

<p>If you change the input values and then click the "Reset" button, the form-data will be
reset to the default values.</p>

</body>
</html>
```

Reset Button

The `input type="reset"` defines a reset button that resets all form values to their default values:

First name:

Last name:

If you change the input values and then click the "Reset" button, the form-data will be reset to the default values.

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Radio

- ⌘ `<input type="radio">` defines a radio button.
- ⌘ Radio buttons let a user select ONLY ONE of a limited number of choices.

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

<h2>Radio Buttons</h2>

<p>The <strong>input type="radio"</strong> defines a radio button:</p>

<p>Choose your favorite Web language:</p>
<form action="/action_page.php">
  <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="JavaScript">
  <label for="javascript">JavaScript</label><br><br>
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Radio Buttons

The `input type="radio"` defines a radio button:

Choose your favorite Web language:

- ☐ HTML
- ☐ CSS
- ☐ JavaScript

Submit

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Checkbox

- ⌘ `<input type="checkbox">` defines a **checkbox**.
- ⌘ Checkboxes let a user select ZERO or MORE options of a limited number of choices.

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

<h2>Checkboxes</h2>
<p>The <strong>input type="checkbox"</strong> defines a checkbox:</p>

<form action="/action_page.php">
  <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><br><br>
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Checkboxes

The `input type="checkbox"` defines a checkbox:

- ☐ I have a bike
- ☐ I have a car
- ☐ I have a boat

Submit

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Button

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

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

<h2>Input Button</h2>

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

</body>
</html>
```

Input Button

Click Me!

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Color

- ⌘ The `<input type="color">` is used for input fields that should contain a color.
- ⌘ Depending on browser support, a color picker can show up in the input field.

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

<h2>Show a Color Picker</h2>

<p>The <strong>input type="color"</strong> is used for input fields that should contain a
color.</p>

<form action="/action_page.php">
  <label for="favcolor">Select your favorite color:</label>
  <input type="color" id="favcolor" name="favcolor" value="#ff0000">
  <input type="submit" value="Submit">
</form>

<p><b>Note:</b> type="color" is not supported in Internet Explorer 11 or Safari 9.1 (or
earlier).</p>

</body>
</html>
```

Show a Color Picker

The `input type="color"` is used for input fields that should contain a color.

Select your favorite color:

Note: type="color" is not supported in Internet Explorer 11 or Safari 9.1 (or earlier).

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Date

- ⌘ The `<input type="date">` is used for input fields that should contain a date.
- ⌘ Depending on browser support, a date picker can show up in the input field.

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

<h2>Date Field</h2>

<p>The <strong>input type="date"</strong> is used for input fields that should contain a
date.</p>

<form action="/action_page.php">
  <label for="birthday">Birthday:</label>
  <input type="date" id="birthday" name="birthday">
  <input type="submit" value="Submit">
</form>

<p><strong>Note:</strong> type="date" is not supported in Internet Explorer 11 or prior
Safari 14.1.</p>

</body>
</html>
```

Date Field

The `input type="date"` is used for input fields that should contain a date.

Birthday:

Note: type="date" is not supported in Internet Explorer 11 or prior Safari 14.1.

Designing HTML-Forms [Elements of the forms-Inputs]

Input Type Date

- You can also use the `min` and `max` attributes to add restrictions to dates:

```
⌘ <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">
```

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

<h2>Date Field Restrictions</h2>

<p>Use the min and max attributes to add restrictions to dates:</p>

<form action="/action_page.php">
  <label for="datemin">Enter a date after 2000-01-01:</label>
  <input type="date" id="datemin" name="datemin" min="2000-01-02"><br><br>

  <label for="datemax">Enter a date before 1980-01-01:</label>
  <input type="date" id="datemax" name="datemax" max="1979-12-31"><br><br>

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

<p><strong>Note:</strong> type="date" is not supported in Internet Explorer 11 or prior
Safari 14.1.</p>

</body>
</html>
```

Date Field Restrictions

Use the min and max attributes to add restrictions to dates:

Enter a date after 2000-01-01:

Enter a date before 1980-01-01:

Note: type="date" is not supported in Internet Explorer 11 or prior Safari 14.1.

Designing HTML-Forms [Elements of the forms-Inputs]

Input Type Datetime-local

```
⌘ <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">
```

- The `<input type="datetime-local">` specifies a date and time input field, with no time zone.
- Depending on browser support, a date picker can show up in the input field.

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

<h2>Local Date Field</h2>

<p>The <strong>input type="datetime-local"</strong> specifies a date and time input field,
with no time zone.</p>

<form action="/action_page.php">
  <label for="birthdaytime">Birthday (date and time):</label>
  <input type="datetime-local" id="birthdaytime" name="birthdaytime">
  <input type="submit" value="Submit">
</form>

<p><strong>Note:</strong> type="datetime-local" is not supported in Internet Explorer 11 or
prior Safari 14.1.</p>

</body>
</html>
```

Local Date Field

The `input type="datetime-local"` specifies a date and time input field, with no time zone.

Birthday (date and time):

Note: type="datetime-local" is not supported in Internet Explorer 11 or prior Safari 14.1.

Designing HTML-Forms [Elements of the forms-Inputs]

⌘ `<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 Email

- ⌘ The `<input type="email">` is used for input fields that should contain an e-mail address.
- ⌘ Depending on browser support, the e-mail address can be automatically validated when submitted.
- ⌘ Some smartphones recognize the email type, and add ".com" to the keyboard to match email input.

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

<h2>Email Field</h2>

<p>The <strong>input type="email"</strong> is used for input fields that should contain an e-
mail address:</p>

<form action="/action_page.php">
  <label for="email">Enter your email:</label>
  <input type="email" id="email" name="email">
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Email Field

The `input type="email"` is used for input fields that should contain an e-mail address:

Enter your email:

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Image

- ⌘ The `<input type="image">` defines an image as a submit button.
- ⌘ The path to the image is specified in the `src` attribute.

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

<h2>Display an Image as the Submit button</h2>

<form action="/action_page.php">
  <label for="fname">First name: </label>
  <input type="text" id="fname" name="fname"><br><br>
  <label for="lname">Last name: </label>
  <input type="text" id="lname" name="lname"><br><br>
  <input type="image" src="img_submit.gif" alt="Submit" width="48" height="48">
</form>

<p><b>Note:</b> The input type="image" sends the X and Y coordinates of the click that
activated the image button.</p>

</body>
</html>
```

Display an Image as the Submit button

First name:

Last name:



Note: The input type="image" sends the X and Y coordinates of the click that activated the image button.

Designing HTML-Forms [Elements of the forms-Inputs]

```
% <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 File

The `<input type="file">` defines a file-select field and a "Browse" button for file uploads.

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

<h1>File upload</h1>

<p>Show a file-select field which allows a file to be chosen for upload:</p>
<form action="/action_page.php">
  <label for="myfile">Select a file:</label>
  <input type="file" id="myfile" name="myfile"><br><br>
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

File upload

Show a file-select field which allows a file to be chosen for upload:

Select a file: No file chosen

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Hidden

- ❑ The `<input type="hidden">` defines a hidden input field (not visible to a user).
- ❑ A hidden field lets web developers include data that cannot be seen or modified by users when a form is submitted.
- ❑ A hidden field often stores what database record that needs to be updated when the form is submitted.
- ❑ **Note:** While the value is not displayed to the user in the page's content, it is visible (and can be edited) using any browser's developer tools or "View Source" functionality. Do not use hidden inputs as a form of security!

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

<h1>A Hidden Field (look in source code)</h1>

<form action="/action_page.php">
  <label for="fname">First name:</label>
  <input type="text" id="fname" name="fname"><br><br>
  <input type="hidden" id="custId" name="custId" value="3487">
  <input type="submit" value="Submit">
</form>

<p><strong>Note:</strong> The hidden field is not shown to the user, but the data is sent
when the form is submitted.</p>

</body>
</html>
```

A Hidden Field (look in source code)

First name:

Note: The hidden field is not shown to the user, but the data is sent when the form is submitted.

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Month

- The `<input type="month">` allows the user to select a month and year.
- Depending on browser support, a date picker can show up in the input field.

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

<h2>Month Field</h2>

<p>The <strong>input type="month"</strong> allows the user to select a month and year.</p>

<form action="/action_page.php">
  <label for="bdaymonth">Birthday (month and year):</label>
  <input type="month" id="bdaymonth" name="bdaymonth">
  <input type="submit" value="Submit">
</form>

<p><strong>Note:</strong> type="month" is not supported in Firefox, Safari, or Internet Explorer 11.</p>

</body>
</html>
```

Month Field

The `input type="month"` allows the user to select a month and year.

Birthday (month and year):

Note: type="month" is not supported in Firefox, Safari, or Internet Explorer 11.

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Number

- The `<input type="number">` defines a **numeric** input field.
- You can also set restrictions on what numbers are accepted.
- The following example displays a numeric input field, where you can enter a value from 1 to 5:

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

<h2>Number Field</h2>

<p>The <strong>input type="number"</strong> defines a numeric input field.</p>

<p>You can use the min and max attributes to add numeric restrictions in the input field:</p>

<form action="/action_page.php">
  <label for="quantity">Quantity (between 1 and 5):</label>
  <input type="number" id="quantity" name="quantity" min="1" max="5">
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Number Field

The `input type="number"` defines a numeric input field.

You can use the min and max attributes to add numeric restrictions in the input field:

Quantity (between 1 and 5):

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Number- Restrictions

Attribute	Description
checked	Specifies that an input field should be pre-selected when the page loads (for type="checkbox" or type="radio")
disabled	Specifies that an input field should be disabled
max	Specifies the maximum value for an input field
maxlength	Specifies the maximum number of character for an input field
min	Specifies the minimum value for an input field
pattern	Specifies a regular expression to check the input value against
readonly	Specifies that an input field is read only (cannot be changed)
required	Specifies that an input field is required (must be filled out)
size	Specifies the width (in characters) of an input field
step	Specifies the legal number intervals for an input field
value	Specifies the default value for an input field

Designing HTML-Forms [Elements of the forms-Inputs]

Input Type Number- Example

```
⌘ <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">
```

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

<h2>Numeric Steps</h2>

<p>Depending on browser support: Fixed steps will apply in the input field.</p>

<form action="/action_page.php">
  <label for="quantity">Quantity:</label>
  <input type="number" id="quantity" name="quantity" min="0" max="100" step="10" value="30">
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Numeric Steps

Depending on browser support: Fixed steps will apply in the input field.

Quantity:

Designing HTML-Forms [Elements of the forms-Inputs]

```
% <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 Range

- The `<input type="range">` defines a control for entering a number whose exact value is not important (like a slider control). Default range is 0 to 100. However, you can set restrictions on what numbers are accepted with the `min`, `max`, and `step` attributes:

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

<h2>Range Field</h2>


<p>Depending on browser support: The input type "range" can be displayed as a slider control.
</p>

<form action="/action_page.php" method="get">
  <label for="vol">Volume (between 0 and 50):</label>
  <input type="range" id="vol" name="vol" min="0" max="50">
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Range Field

Depending on browser support: The input type "range" can be displayed as a slider control.

Volume (between 0 and 50): 

Designing HTML-Forms [Elements of the forms-Inputs]

- ⌘ `<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 Search

The `<input type="search">` is used for search fields (a search field behaves like a regular text field).

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

<h2>Search Field</h2>
<p>The <strong>input type="search"</strong> is used for search fields (behaves like a regular
text field):</p>

<form action="/action_page.php">
  <label for="gsearch">Search Google:</label>
  <input type="search" id="gsearch" name="gsearch">
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Search Field

The `input type="search"` is used for search fields (behaves like a regular text field):

Search Google:

Designing HTML-Forms [Elements of the forms-Inputs]

```
% <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 Tel

The `<input type="tel">` is used for input fields that should contain a telephone number.

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

<h2>Telephone Field</h2>

<p>The <strong>input type="tel"</strong> is used for input fields that should contain a
telephone number:</p>

<form action="/action_page.php">
  <label for="phone">Enter a phone number:</label><br><br>
  <input type="tel" id="phone" name="phone" placeholder="123-45-678" pattern="[0-9]{3}-[0-9]{2}-[0-9]{3}" required><br><br>
  <small>Format: 123-45-678</small><br><br>
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Telephone Field

The `input type="tel"` is used for input fields that should contain a telephone number:

Enter a phone number:

Format: 123-45-678

Designing HTML-Forms [Elements of the forms-Inputs]

```
% <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 Time

- ✓ The `<input type="time">` allows the user to select a time (no time zone).
- ✓ Depending on browser support, a time picker can show up in the input field.

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

<h1>Show a Time Input Control</h1>

<p>The <strong>input type="time"</strong> allows the user to select a time (no time zone):
</p>

<p>If the browser supports it, a time picker pops up when entering the input field.</p>

<form action="/action_page.php">
  <label for="appt">Select a time:</label>
  <input type="time" id="appt" name="appt">
  <input type="submit" value="Submit">
</form>

<p><strong>Note:</strong> type="time" is not supported in Internet Explorer 11 or prior
Safari 14.1.</p>

</body>
</html>
```

Show a Time Input Control

The `input type="time"` allows the user to select a time (no time zone):

If the browser supports it, a time picker pops up when entering the input field.

Select a time:

Note: type="time" is not supported in Internet Explorer 11 or prior Safari 14.1.

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Url

- The `<input type="url">` is used for input fields that should contain a URL address.
- Depending on browser support, the url field can be automatically validated when submitted.
- Some smartphones recognize the url type and adds ".com" to the keyboard to match url input.

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

<h1>Display a URL Input Field</h1>

<p>The <strong>input type="url"</strong> is used for input fields that should contain a URL
address:</p>

<form action="/action_page.php">
  <label for="homepage">Add your homepage:</label>
  <input type="url" id="homepage" name="homepage">
  <input type="submit" value="Submit">
</form>

</body>
</html>
```

Display a URL Input Field

The `input type="url"` is used for input fields that should contain a URL address:

Add your homepage:

Designing HTML-Forms [Elements of the forms-Inputs]

```
⌘ <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 Week

- The `<input type="week">` allows the user to select a week and year.
- Depending on browser support, a date picker can show up in the input field.

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

<h1>Display a Week Input Control</h1>

<p>The <strong>input type="week"</strong> allows the user to select a week and year.</p>
<p>If the browser supports it, a date picker pops up when entering the input field.</p>

<form action="/action_page.php">
  <label for="week">Select a week:</label>
  <input type="week" id="week" name="week">
  <input type="submit" value="Submit">
</form>

<p><strong>Note:</strong> type="week" is not supported in Firefox, Safari or Internet Explorer 11.</p>

</body>
</html>
```

Display a Week Input Control

The `input type="week"` allows the user to select a week and year.

If the browser supports it, a date picker pops up when entering the input field.

Select a week:

Note: type="week" is not supported in Firefox, Safari or Internet Explorer 11.

Designing HTML-Forms [Elements of the forms-Label]

- ❖ 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.

Summary of the Today's Lesson

Part I

HTML Attributes <Classes, id, etc.>

- ☐ Style
- ☐ Class
- ☐ Id
- ☐ Examples of all concepts
- ☐ Differences b/w them

Part II

Working with Links

- ☐ Text links
- ☐ Image links
- ☐ Download link
- ☐ Email links
- ☐ Etc.

Part III

Working with forms

- ☐ Simple forms
- ☐ Elements of forms
- ☐ Input element (14 different types)
- ☐ Etc.



Note: Please execute all codes at least once on your computers.