2022

WEB SYSTEM LAB

LECTURE#02

HTML-Part 2

Collage of Computers & Information Technology

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Lab instructions

- Students should come prepared for the lab practice.
- Quizzes are expected anytime so students should review everything they have taken after class.
- In case a student misses a class, it is his/her responsibility to complete and understand the missed lab exercises.
- They should implement the given exercises individually OR in groups depend on exercise.
- Use meaningful names.
- Once the exercise(s) get executed, they should show the program and results to the instructors.
- Questions for lab tests and exam need **not** necessarily be **limited** to the questions in the manual, but could involve some **variations and / or combinations** of the questions

Objective of this lab:

- Defining an HTML Table
- Defining forms & know input types
- Mapping Image

Tables:

- An HTML table is defined with the <table> tag. Within the <table> tag each table has 1 or more rows & row is defined with the <tr> tag. A table column is ether defined with the <th> tag as heading, or as table data/cell is defined with the <td> tag. By default, table headings are bold and centered.

```
<!DOCTYPE html>
<html>
  <body>
    <table border ="1" width="80%" align="center" bordercolor=black>
      <tr>
        <th>Firstname</th>
        <th>Lastname</th>
        <th>Age</th>
      </tr>
      <tr align=center>
        <td>Alia</td>
        <td>Bhatt☺</td>
      </tr>
```

- Adding a **border** to a HTML Table**:** A border is set using the table attribute border. If you do not specify a border for the table, it will be displayed without borders.

```
</tr>
<tr align=center>
        <td>Shahro</td>
        <td>Khan☺</td>
        <td>52</td>
    </tr>
    <tr>
     <td>Emran</td>
     <td>Hashemi</td>
     <td>49</td>
    </tr>
  </table>
 </body>
</html>
```

Output:

Firstname	Lastname	Age
Alia	Bhatt😄	23
Shahro	Khan😄	52
Emran	Hashemi	49

- **Adding Cells that Span Many Columns** in HTMl Tables: To make a cell span more than one column in the **same row**, we must use the colspan attribute.

```
<h2>Cell that spans two columns:</h2>
  <table width=50% border="1">
     <tr>
      <th>Name</th>
      <th colspan="2">Phone No</th>
     </tr>
     <tr>
      <td>Abhimanio Rathod</td>
      <td>9125577854</td>
      <td>8565557785</td>
     </tr>
   </table>
```

- Output:

Cell that spans two columns:

Name	Phone No	
Abhimanio Rathod	9125577854	8565557785

- **Adding Cells that Span Many Rows** in HTML Tables: To make a cell span **multiple rows** (more than one row), we must use the rowspan attribute:

```
<h2>Cell that spans two Rows:</h2>
  <table width=50% border="1">
   <tr>
    <th>Name:</th>
    <td>Abhimanio Rathod</td>
   </tr>
   <tr>
    <th rowspan="2">Telephone:</th>
    <td>9125577854</td>
   </tr>
   <tr>
    <td>8565557785</td>
   </tr>
  </table>
```

- Output:

Cell that spans two Rows:

Name:	Abhimanio Rathod
Telephone:	9125577854
	8565557785

- Adding a **Caption** in a HTML Table: To add a caption to a table, we must use the <caption> tag.

```
  <table width=50% border="1">
  <caption><h2>DETAILS:</h2></caption>
   <tr>
    <th>Name:</th>
    <td>Abhimanio Rathod</td>
   </tr>
   <tr>
    <th rowspan="2">Telephone:</th>
    <td>9125577854</td>
   </tr>
   <tr>
    <td>8565557785</td>
   </tr>
</table>
```

- **Tables, Additional tags**

  - `<thead>...</thead>` tag is used to group header content in an HTML table.
  - `<tbody>...</tbody>` is used to group the body content in an HTML table.
  - `<tfoot>...</tfoot>` is used to group footer content in an HTML table.
- EX:

```
<table border = "1" width=50%>
      <thead>
        <tr>
          <th>Month</th>
          <th>Savings</th>
        </tr>
      </thead>
      <tfoot>
        <tr>
          <td>Sum</td>
          <td>$180</td>
        </tr>
      </tfoot>
      <tbody>
        <tr>
          <td>January</td>
          <td>$100</td>
        </tr>
        <tr>
          <td>February</td>
          <td>$80</td>
        </tr>
      </tbody>
    </table>
```

- Output:

Month	Savings
January	$100
February	$80
Sum	$180

Forms:

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

```
<form>
input
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 <input> 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)
<input type="password">	defines a **password field** masked (shown as asterisks or circles).
<input type="reset">	defines a reset button that will reset all form values to their default values
<input type="checkbox">	defines a checkbox that let a user select ZERO or MORE options of a limited number of choices
<input type="email">	used for input fields that should contain an e-mail address. the e-mail address can be automatically validated when submitted.
<input type="file">	Select a file: <input type="file" name="myFile">
<input type="number">	defines a numeric input field. You can also set restrictions on what numbers are accepted.

```
<form>
  Quantity (between 1 and 5):
  <input type="number" name="quantity" min="1" max="5">
</form>
```

Text Input

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

```
<form>

<!--default width of a text field is 20 characters.-->

  First name:<br> <input type="text" name="firstname"><br>

Last name:<br> <input type="text" name="lastname">
```

- Output

First name:

Last name:

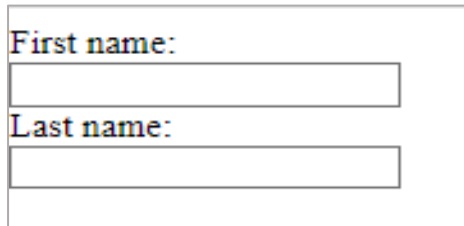## Radio Button Input

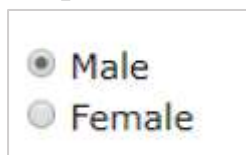`<input type="radio">` defines a **radio button**. Radio buttons let a user select ONE of a limited number of choices:

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

- Output

⦿ Male
◯ Female

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(Backend) with a script for processing input data. The form-handler is specified in the form's **action** attribute:

```
<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 <select> Element

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

```
<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 <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:

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

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

```
<select name="cars" size="4" multiple>
```

The

<textarea> Element

The <textarea> element defines a multi-line input field (a text area): The rows attribute specifies the visible number of lines in a text area. The cols attribute specifies the visible width of a text area.

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

The <button> Element

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

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.

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.".

The Method Attribute

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

```
<form action="/action_page.php" target="_blank" method="get">
Or
<form action="/action_page.php" target="_blank" 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** (URL):

Notes on GET:

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

- o POST has no size limitations, and can be used to send large amounts of data.
- o 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.

The placeholder Attribute

The placeholder attribute specifies a hint that describes the expected value of an input field (a sample value or a short description of the format). The hint is displayed in the input field before the user enters a value. The placeholder attribute works with the following input types: text, search, url, tel, email, and password.

```
<input type="text" name="fname" placeholder="First name">
```

The required Attribute

The required attribute specifies that an input field must be filled out before submitting the form. The required attribute works with the following input types: text, search, url, tel, email, password, date pickers, number, checkbox, radio, and file.

```
Username: <input type="text" name="usrname" required>
```
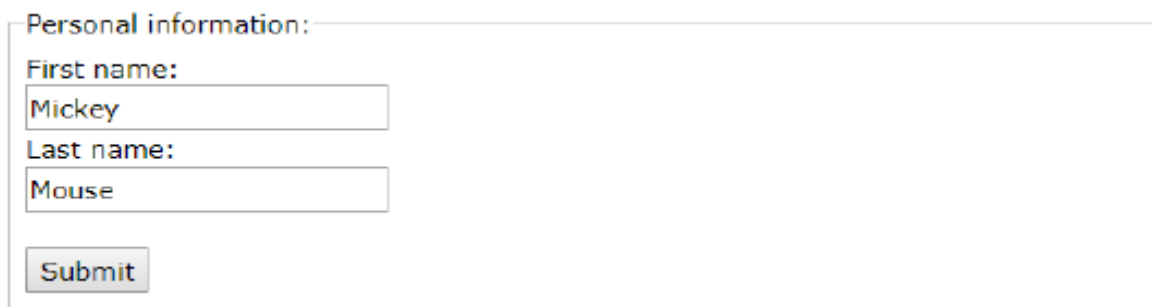
Grouping Form Data with <fieldset>

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

The <legend> element defines a caption for the <fieldset> element:

```
<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>
```

Output:

Personal information:
First name:
Mickey
Last name:
Mouse

Submit

For more HTML input attributes (checked, disabled, maxlength, required, etc…), refer to:
https://www.w3schools.com/tags/tag_input.asp