



DHA SUFFA UNIVERSITY

Department of Computer Science

CS-1201L

Introduction to Information and Communication Technology Fall 2019

LAB 05 – HTML Layout and Forms

OBJECTIVE(S)

- Learn about HTML Layouts
- Learn about HTML Forms
- Learn about some new input types in HTML5.

HTML Layouts

A webpage layout is very important to give better look to your website. It takes considerable time to design a website's layout with great look and feel.

HTML Layout using DIV

The <div> element is a block level element used for grouping HTML elements. It is used in HTML to make divisions of content in the web page like text, images, header, footer, navigation bar, etc. It has both open and closing tag.

The Div is the most usable tag in web development because it helps us to separate out data in the web page and we can create a particular section for particular data or function in the web pages.

Example Code

File.html

```
<!DOCTYPE html>
<html>

  <head>
    <title>HTML Layouts using DIV</title>
    <link rel="stylesheet" type="text/css" href="file.css">
  </head>

  <body>
    <div id=i1>

      <div id=i2>
        <h1>Gardening</h1>
      </div>
```

```

<div id=i3>
  <b>Types of Gardening</b><br><br>
  Indoor<br>
  Container<br>
  Residential
</div>

<div class=i4>
  <p> Gardening is the practice of growing and cultivating plants
    as part of horticulture. In gardens, ornamental plants are often
    grown for their flowers, foliage, or overall appearance; useful
    plants, such as vegetables, fruits, and herbs, are grown for
    consumption, for use as dyes, or for medicinal or cosmetic use.</p>
</div>

    <div class=i4>
      <p> Gardening ranges in scale from fruit orchards, to long boulevard
        plantings with one or more different types of shrubs, trees, and
        herbaceous plants, to residential back gardens including lawns and
        foundation plantings, and to container gardens grown inside or outside. </p>
</div>

    <div class=i4>
      <p> Gardening may be very specialized, with only one type of plant
        grown, or involve a variety of plants in mixed plantings.
        It involves an active participation in the growing of plants,
        and tends to be labor-intensive, which differentiates it
        from farming or forestry. </p>
</div>

<div id=i5>
  <b>Social Aspects</b><br><br>
  Ornamental Plantings<br>
  Green gardening
</div>
<div id=i6>
  Copyright © 2007 Tutorialspoint.com
</div>
</div>
</body>
</html>

```

```

File.css

*
{
    padding: 0px;
    margin: 0px;
}

```

```
#i1
{
    width:100%;
}

#i2
{
    background-color:#b5d586;
    width:100%;
    text-align: center;
}

#i3
{
    background-color:#aaa;
    height:200px;
    width:12.5%;
    float:left;
    text-align: center;
}

.i4
{
    background-color:#eee;
    height:200px;
    width:25%;
    float:left;
    text-align: center;
    overflow: scroll;
}

#i5
{
    background-color:#aaa;
    height:200px;
    width:12.5%;
    float:right;
    text-align: center;
}

#i6
{
    background-color:#b5dcb3;
    clear:both;
    text-align: center;
}
```

HTML Forms

HTML Forms are required, when you want to collect some data from the site visitor. For example, during user registration you would like to collect information such as name, email address, credit card, etc.

A form will take input from the site visitor and then will post it to a back-end application. The back-end application will perform required processing on the passed data based on defined business logic inside the application.

There are various form elements available like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc.

The HTML <form> tag is used to create an HTML form and it has following syntax:

```
➤ <form>  
    Form elements  
</form>
```

Form Attributes

Following is a list of the most frequently used form attributes

Attribute	Description
Action	Backend script ready to process your passed data.
Method	It is used to upload data. The most frequently used methods are GET and POST methods.
Target	Specify the target window or frame where the result of the script will be displayed. It takes values like _blank, _self, _parent etc.
Enctype	You can use the enctype attribute to specify how the browser encodes the data before it sends it to the server.

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 as:

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

- It appends form-data into the URL in name/value pairs
- Never use GET to send sensitive data! (It 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.

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

HTML Form Controls

There are different types of form controls that you can use to collect data using HTML form.

Text Input Controls

There are three types of text input used on forms.

Single-line text input controls

This control is used for items that require only one line of user input, such as search boxes or names. They are created using HTML `<input>` tag.

Example code

```
<form >  
  First name: <input type = "text" name = "first_name" />  
  <br>  
  Last name: <input type = "text" name = "last_name" />  
</form>
```

Attribute	Description
Type	Indicates the type of input control. For text input control it will be set to text.
Name	Used to give a name to the control which is sent to the server to be recognized and get the value.
Value	This can be used to provide an initial value inside the control.
Size	Allows to specify the width of the text-input control in terms of characters.
maxlength	Allows to specify the maximum number of characters a user can enter into the text box.

Same attributes can be used for other input controls as are used for Text input control.

Password input controls

This is also a single-line text input but it masks the character as soon as a user enters it. They are also created using HTML `<input>` tag but type attribute is set to password.

Example code

```
<form >
  User ID : <input type = "text" name = "user_id" />
  <br>
  Password: <input type = "password" name = "password" />
</form>
```

Multiple-Line Text Input Controls

This is used when the user is required to give details that may be longer than a single sentence. Multi-line input controls are created using HTML <textarea> tag.

Example code:

```
<form>
  Description : <br />
  <textarea rows = "5" cols = "50" name = "description">
    Enter description here...
  </textarea>
</form>
```

Attribute	Description
Rows	Indicates the number of rows of text area box.
Cols	Indicates the number of columns of text area box.

Checkbox Control

Checkboxes are used when more than one option is required to be selected. They are also created using HTML <input> tag but type attribute is set to checkbox.

Example code

```
<form>
  <input type = "checkbox" name = "maths" value = "on"> Maths
  <input type = "checkbox" name = "physics" value = "on"> Physics
</form>
```

Attribute	Description
value	The value that will be used if the checkbox is selected.
checked	Set to checked if you want to select it by default.

Radio Button Control

Radio buttons are used when out of many options, just one option is required to be selected. They are also created using HTML `<input>` tag but type attribute is set to radio.

Example code

```
<form>
  <input type = "radio" name = "subject" value = "maths"> Maths
  <input type = "radio" name = "subject" value = "physics"> Physics
</form>
```

Select Box Control

A select box, also called drop down box which provides option to list down various options in the form of drop down list, from where a user can select one or more options.

Example code

```
<form>
  <select name = "dropdown">
    <option value = "Maths" selected>Maths</option>
    <option value = "Physics">Physics</option>
  </select>
</form>
```

Attribute	Description
size	This can be used to present a scrolling list box.
multiple	If set to multiple then allows a user to select multiple items from the menu.

Following is the list of important attributes of `<option>` tag.

Attribute	Description
value	The value that will be used if an option in the select box is selected.
selected	Specifies that this option should be the initially selected value when the page loads.
label	An alternative way of labeling options.

File Upload Box

If you want to allow a user to upload a file to your web site, you will need to use a file upload box, also known as a file select box. This is also created using the `<input>` element but type attribute is set to file.

Example code

```
<form>
  <input type = "file" name = "fileupload" accept = "image/*" />
</form>
```

Attribute	Description
accept	Specifies the types of files that the server accepts.

Button Controls

There are various ways in HTML to create clickable buttons. You can also create a clickable button using `<input>` tag by setting its type attribute to button.

```
<form>
  <input type = "submit" name = "submit" value = "Submit" />
  <input type = "reset" name = "reset" value = "Reset" />
  <input type = "button" name = "ok" value = "OK" />
  <input type = "image" name = "imagebutton" src = "image.png" />
</form>
```

Attribute	Description
submit	This creates a button that automatically submits a form.
reset	This creates a button that automatically resets form controls to their initial values.
button	This creates a button that is used to trigger a client-side script when the user clicks that button.
image	This creates a clickable button but we can use an image as background of the button.

Fieldset element

Defines a group of controls within a form.

Example code

```
<form action="/subscribe" method="post">
  <fieldset>
    <legend>Subscribe to the Newsletter</legend>
    <input type="email" name="email">
    <button>Ok</button>
  </fieldset>
</form>
```


New Input Types:

HTML5 introduces a number of new input types. These new input types give hints to the browser about what type of values need to be entered.

Attribute	Description
url	For entering a URL. It must start with a valid URI scheme like http://, etc.
tel	For entering phone numbers. It does not enforce a particular syntax for validation, so if you want to ensure a particular format, you can use pattern.
email	For entering phone numbers. It does not enforce a particular syntax for validation, so if you want to ensure a particular format, you can use pattern.
search	A text input field styled in a way that is consistent with the platform's search field.
number	For numeric input, can be any rational integer or float value.
color	For choosing colors.
range	For number input, but unlike the number input type, the value is less important. It is displayed to the user as a slider control.
datetime	For entering a date and time value where the time zone is provided as GMT.
datetime-local	For entering a date and time value where the time zone provided is the local time zone.
date	For entering a date (only) with no time zone provided.
time	For entering a time (only) with no time zone provided.
week	For entering a date that consists of a week-year number and a week number, but no time zone.
month	For entering a date with a year and a month, but no time zone.

Font Awesome Basic Icons

To use the Font Awesome icons, add the following line inside the <head> section of your HTML page:

```
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
```

You can place Font Awesome icons by using the prefix fa and the icon's name.

Example Code:

```
<head>
<link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-
awesome/4.7.0/css/font-awesome.min.css">
</head>
<body>
<ul class="fa-ul">
  <li><i class="fa-li fa fa-check-square"></i>List icons</li>
  <li><i class="fa-li fa fa-spinner fa-spin"></i>List icons</li>
  <li><i class="fa-li fa fa-square"></i>List icons</li>
</ul>
</body>
```

LAB ASSIGNMENT

1. Create webpages that have the following templates.

Sign Up

1 Your basic info

Name:

Email:

Password:

Age:

☐ Under 13

☐ 13 or older

2 Your profile

Biography:

Job Role:

Interests:

☐ Development

☐ Design

☐ Business

Sign Up

FLAT SIGN UP FORM

SIGN UP

SIGN UP

SUBMISSION GUIDELINES

- Take a screenshot of each task.
- Place all the screenshots in a single word file labeled with Roll No and Lab No. e.g. **'cs191xxx_Lab01'**.
- Convert the file into PDF.
- Place all the related files along with the PDF file in a folder labeled with Roll No and Lab No. e.g. 'cs192xxx_Lab01'.
- Submit the folder at [LMS](#)
- **-100%** policies for plagiarism.