

Class Outline

Day 1

Basic Terms

- Internet and World Wide Web
 - Web Servers and Web Browsers
 - Peer-to-Peer and Client/Server Architecture
 - HTTP and HTTPS
 - Web Page and HTML
 - URL and FQDN
 - IP Address and TCP Port
 - Static Web Pages and Dynamic Web Pages
 - Server-side Script and Client-side Script
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Day 2

Writing a Very Basic Web Page

- Tools needed
- Writing the content
- Verifying the syntax
- Checking the output
- Checking the page source from the browser

Text Layout in HTML

- Headings: <h1> to <h6>
- New Line:

- Non-breaking Space:
- Paragraph: <p>
- Horizontal Rule: <hr>

Text Formatting in HTML

- Bold, Strong: ,
- Italics, Emphasized: <i>,
- Underline, Inserted Text: <u>, <ins>
- Strike-through, Deleted Text: <s>,
- Subscript: <sub>
- Superscript: <sup>
- Pre-formatted Text: <pre>
- Text Highlight: <mark>
- Small Text: <small>
- Quote, Block-quote: <q>, <blockquote>
- Abbreviation: <abbr>

Lab Work

1. Create a Web Page which shows how to use *Comments* in HTML.
 2. Create a Web Page to demonstrates the use of all the *Heading tags*.
 3. Check how to use the following tags, and create a Web Page to show their output: , , <ins>, <s>, , <pre>, <sub>, <sup>, <small>, <mark>, <q>, <blockquote>, <abbr>, <code>, <samp>, <kbd>, <var>
 4. Check how to insert special characters (eg. Copyright symbol, Trademark Symbol etc.), and Emojis in a Web Page.
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Day 3

Lists in HTML

- Unordered Lists: ,
- Ordered Lists: ,
- Description Lists: <dl>, <dt>, <dd>

Using image in a Web Page:

Links in HTML (Hyperlinks)

- The anchor tag: <a>
- Absolute vs. Relative link
- Target of a link: _self, _blank, _parent, _top
- Image as a link
- Link to E-mail address
- Bookmark in HTML

Table in HTML: <table>, <tr>, <th>, <td>

Lab Work

1. Create a Web Page to show how to use *Ordered Lists* and *Description Lists*.
 2. Create a Web Page to demonstrate the use of *Nested Lists*.
 3. Create a Web Page to show the use of *image as a link*.
 4. Create a Web Page to create a *link to an e-mail address*.
 5. Create a Web page to show the use of *bookmark*.
 6. Create a table in a Web Page to show the usage of <caption> tag, and colspan, rowspan properties.
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Day 4

Inline Frame in HTML: <iframe>

Image Map in HTML: <map>

Playing audio & Video in an Web Page: <audio>, <video>

Page Redirect in HTML

Semantic elements in HTML5.

Lab Work

1. Create a Web Page to show how to load a HTML document in an iFrame, when the user clicks on a link (i.e. iFrame as the target of a link).
 2. Create a Web Page to show how to play a YouTube video in the page.
 3. Create a Web Page to play a video file in the page.
 4. Create a Web Page to show how to include a *Favicon*.
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Day 5

Working with Forms: <form>

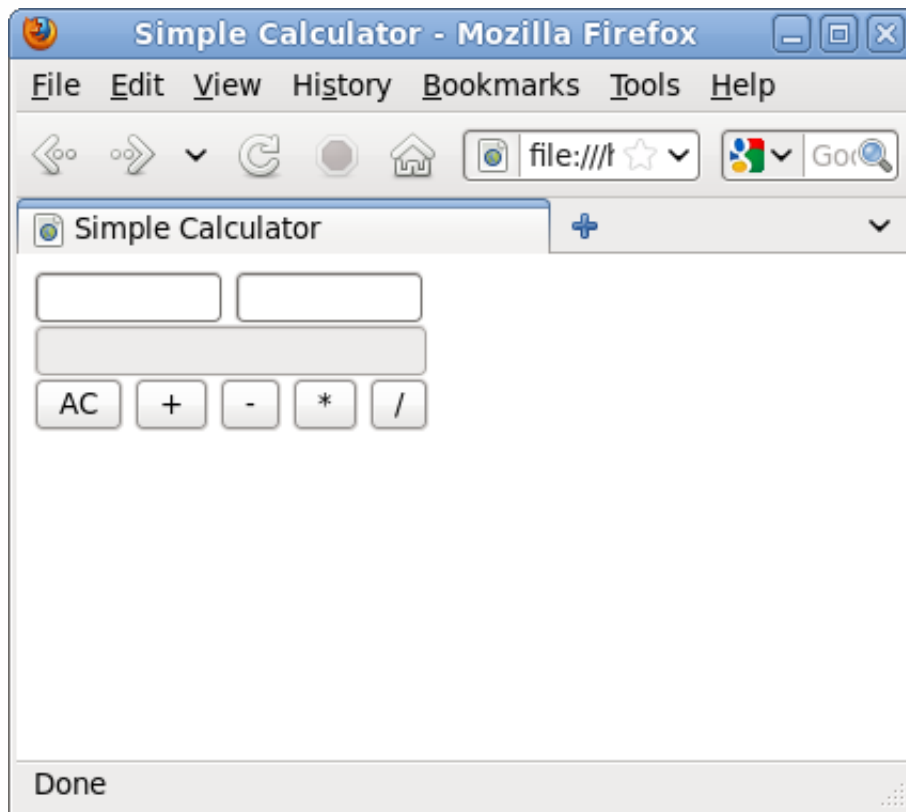
- Form attributes:
 - method:
 - get (default)
 - post

- enctype: (for 'post' method only)
 - application/x-www-form-urlencoded (default)
 - multipart/form-data
 - text/plain
- name
- action , and few more...
- Form elements:
 - <input>
 - <label>
 - <select>
 - <textarea>
 - <button>
 - <option>
 - <optgroup>
 - <fieldset>
 - <legend> , and few more...
- <input> types:
 - text (default)
 - password
 - button
 - checkbox
 - radio
 - date
 - color
 - file
 - hidden
 - submit
 - reset , and few more...
- <input> attributes:
 - value
 - readonly
 - disabled
 - size

- `maxlength`, and few more...

Lab Work

1. Create a Web Page to demonstrate the following `<form>` elements:
 - `<fieldset>` and `<legend>`
 - input types: `date`, `file` and `color`
 - `<datalist>`
 - `<optgroup>`
2. Create a Web Page to generate a form as shown below. The form should have the following features:
 - The first two text boxes must not allow input of more than 10 characters.
 - The contents of the third text box should not be modifiable.
 - Clicking on the 'AC' button should clear the contents of the first two text boxes.



Day 6

Introduction to CSS (Cascading Style Sheets)

- What is CSS
- Why use CSS
- A Simple Demo

Ways to include styling information in HTML (i.e. different ways of using CSS)

1. Inline (inside a tag)
2. Internal (within the <head> tag)
3. External CSS File

CSS Cascading Order

- Browser default / No style sheet (**Lowest priority**)
- Internal or External style sheet (based on order of inclusion)
- Inline styles (**Highest priority**)

Note: Multiple style sheets can be used in a single HTML file. Moreover, all the different types of style sheets (inline, internal, external) can also be used in a single HTML file. In those cases, unique style properties would be cascaded.

Day 7

HTML Generic Elements:

- <div> (block level)

- `` (inline)

CSS Syntax

- Rules
- Selector
- Declaration
- Property
- Value

Some of the Selector Types:

1. Element Name (eg. p, h1, a)
2. Class (eg. .class_name)
3. ID (should be unique in a document) (eg. #id_name)
4. Pseudo-selector or State (eg. :hover)
5. Class or ID attached to an element (eg. h1.class_name)
6. Grouping of Selectors
7. The Default Selector (Specified with an asterisk: *)

The CSS Box Model

- Margin
- Border
- Padding
- Element

Lab Work:

1. Create a web page to demonstrate different ways to specify colors in CSS (*Predefined color names, RGB, RGBA, Hex, HSL, HSLA*).
2. Create a web page to demonstrate some of the common font

properties in CSS (eg. font-family, font-style, font-weight, font-variant, font-size).

3. Create a web page to demonstrate how to use *Web Fonts* in CSS.