# Unit 2 : Introduction to HTML

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## **Topics**

- Understanding HTML.
- HTML Structure
- HTML Tags.
  - Basic HTML tags
  - Text formatting tags
  - Character entities
  - Lists
  - Links
  - Images
  - Background
  - Table
  - Form





#### What is an HTML File?

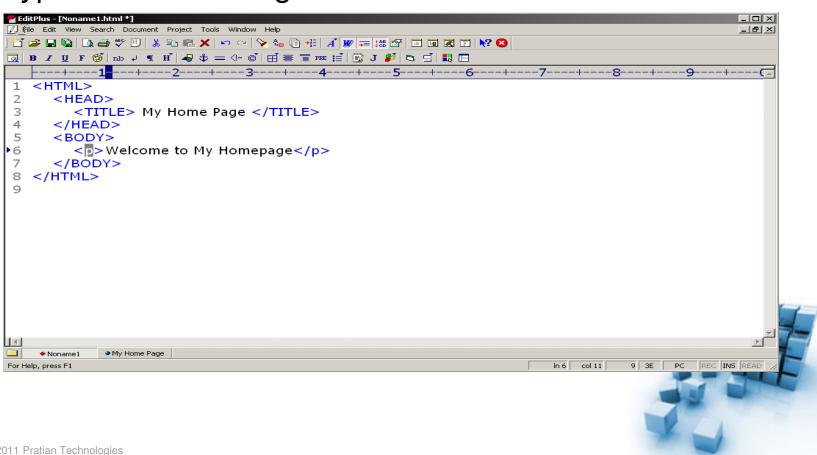
- HTML stands for Hyper Text Markup Language
- An HTML file is a text file containing small markup tags
- The markup tags tell the Web browser how to display the page
- An HTML file must have an htm or html file extension
- An HTML file can be created using a simple text editor





## Do You Want to Try It?

- If you are running Windows, start Notepad.
- If you are on a Mac start SimpleText.
- Type in the following text:





## Save and Display

- Save the file as "mypage.htm".
- Start your Internet browser. Select "Open" (or "Open Page") in the File menu of your browser.
- A dialog box will appear. Select "Browse" (or "Choose File") and locate the HTML file you just created -"mypage.htm" - select it and click "Open".
- Now you should see an address in the dialog box, for example "C:\MyDocuments\mypage.htm". Click OK, and the browser will display the page.



#### **HTM or HTML Extension?**

- When you save an HTML file, you can use either the .htm or the .html extension.
- We have used .htm in our examples. It might be a bad habit inherited from the past when some of the commonly used software only allowed three letter extensions.
- With newer software we think it will be perfectly safe to use .html.





#### **Note on HTML Editors:**

- You can easily edit HTML files using a WYSIWYG (what you see is what you get) editor like FrontPage, Claris Home Page, or Adobe PageMill or Dreamviewer instead of writing your markup tags in a plain text file.
- But if you want to be a skillful Web developer, I strongly recommend that you use a plain text editor to learn your primer HTML.





- An HTML document is contained within <html> tags.
- The <html> consists of a <head> and a <body>, in that order.
- The <head> typically contains a <title>, which is used as the title of the browser window.
- Almost all other content goes in the <body>.





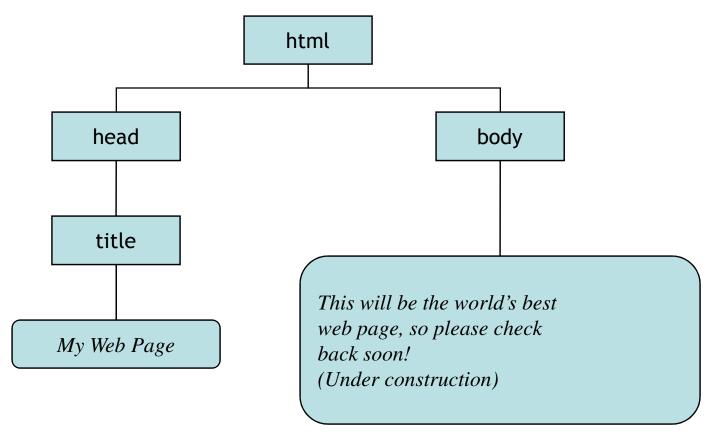
HTML documents should almost always have the following structure:

```
    <HTML>
        <HEAD>
            inside here: information about the document
        </HEAD>
            <BODY>
                inside here: actual document content
        </BODY>
        </HTML>
```

 Omitting <HTML>, <HEAD> and <BODY> elements may have drastic consequences for your web pages!



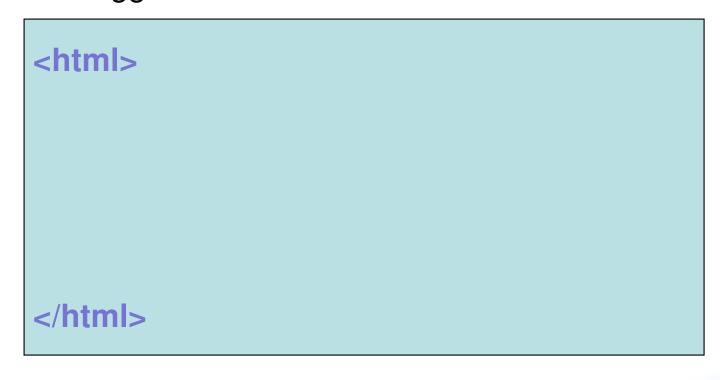
#### **HTML** documents are trees







- Think of HTML as a set of boxes
- Each box starts and finishes with a tag.
- The biggest box identifies the file as an HTML file



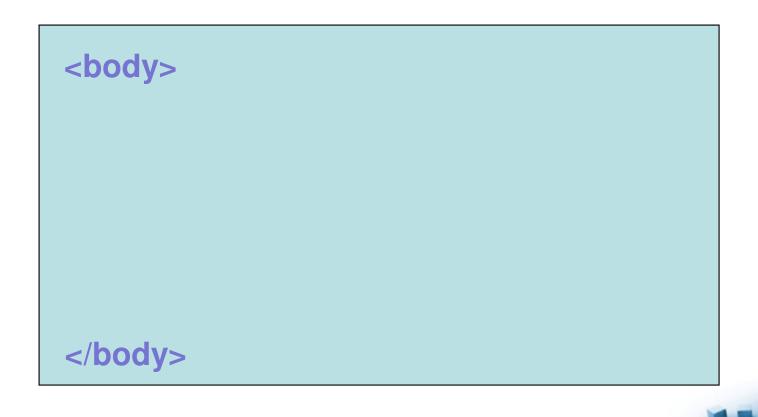


 The second box identifies the <head>, which includes the <title> and other information that is not shown on the screen.

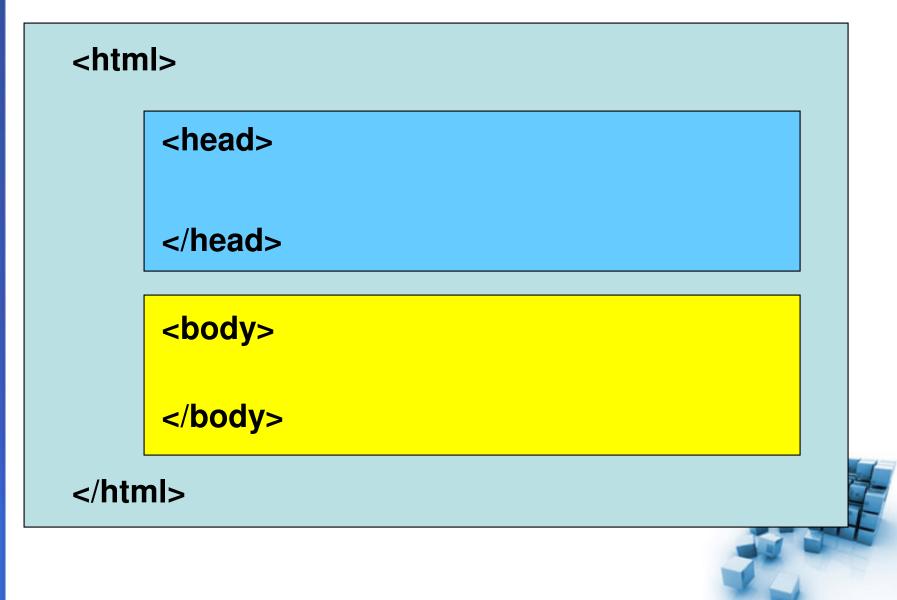
<head>
<title> My first page </title>
</head>



 The next box defines the <body> which holds everything else on a webpage.









## **HTML Tags**

- HTML tags are used to mark-up HTML elements
- HTML tags are surrounded by the two characters
   and >
- The surrounding characters are called angle brackets
- HTML tags normally come in pairs like <b> and </b>
- The first tag in a pair is the start tag, the second tag is the end tag
- The text between the start and end tags is the element content
- HTML tags are not case sensitive, <b> means the same as <B>

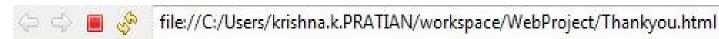


## **HTML Tag Attributes**

- Tags can have attributes.
- Attributes provide additional information about the HTML elements on your page
- Examples
  - <body bgcolor="red">
  - <a href="home.htm">Click here</a>
  - This is a test paragraph
- Attribute values should always be enclosed in quotes



## **HTML Tag Attributes**



Welcome to HTML!!!



#### **Basic HTML Tags**

- The most important tags in HTML are tags that define headings, paragraphs and line breaks
- The basic HTML tags will help display information, format text that is being displayed
- The best way to learn HTML is to work with examples





# **Basic HTML Tags**

Tag	Description
<html></html>	Defines an HTML document
<body></body>	Defines the document's body
<h1> to</h1>	Defines header 1 to header 6
<h6></h6>	
<	Defines a paragraph
<u> </u>	Inserts a single line break
<hr/> >	Defines a horizontal rule
<u>&lt; &gt;</u>	Defines a comment



#### **Heading Tag**

- The headings tag are defined with the <h1> to <h6> tags
- <h1> defines the largest heading
- <h6> defines the smallest heading
- HTML adds an extra blank line before and after the heading tag





#### **Heading Tag**

```
<head>
 <title>Second page</title>
</head>
<body>
   <h1>Welcome to HTML!!!</h1>
   <h2>Welcome to HTML!!!</h2>
   <h3>Welcome to HTML!!!</h3>
   <h4>Welcome to HTML!!!</h4>
   <h5>Welcome to HTML!!!</h5>
   <h6>Welcome to HTML!!!</h6>
</body>
```





## **Heading Tag - Output**

# Welcome to HTML!!!





#### Paragraph Tag

- Paragraphs are defined with a tag
- Used when we have do display information in the form of a paragraph
- HTML adds an extra blank line before and after the paragraph tag





## Paragraph Tag

```
<html>
<head>
 <title>Second page</title>
</head>
<body>
   This is a paragraph
   Paragraphs are defined with a
      <p&gt; tag. Used when we have to
      display information in the form of a
      paragraph. HTML adds an extra blank
      line before and after the paragraph
      tag
   </body>
</html>
```





#### Paragraph Tag - Output







file://C:/Users/krishna.k.PRATIAN/workspace/WebProject/paragraphdemo.html

## This is the first paragraph

Paragraphs are defined with a tag. Used when we have to display information in the form of a paragraph. HTML adds an extra blank line before and after the paragraph tag





#### Line break Tag

- The <br/>but don't want to start a new paragraph.
- The <br/>tag is an empty tag. It has no closing tag.





#### **Line Break Tag**

```
<html>
<head>
<title>Second page</title>
</head>
<body>
<font size="6">Pratian Technologies <br>
  is a training and consulting company. <br>
  Has come out with an new training framework<br>
  - <b>Skill Assure</b>

</body>
</html>
```





## **Line Break Tag - Output**







file://C:/Users/krishna.k.PRATIAN/workspace/WebProject/linebreakdemo.html

## Pratian Technologies is a training and consulting company. Has come out with a new training framework

- Skill Assure





#### Horizontal rule Tag

- The <hr> element causes the browser to display a horizontal line (rule) on your document
- The <hr> tag is an empty tag. It has no closing tag.





## Horizontal rule Tag

```
<html>
<head>
 <title>Second page</title>
</head>
<body>
   <font size="6">This is the first paragraph
   </font>
    <hr>
   <font size="6">Paragraphs are defined with a<br>
      <p&gt; tag. Used when we have to<br>
      display information in the form of a <br
      paragraph. HTML adds an extra blank<br>
      line before and after the paragraph <br>
      tag</font>
   </body>
</html>
```



## Horizontal rule Tag - Output



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## This is the first paragraph

Paragraphs are defined with a tag. Used when we have to display information in the form of a paragraph. HTML adds an extra blank line before and after the paragraph tag





#### **Comments in HTML**

- Comments can be given in HTML
- <!-- --> is used to define comments
- Comments entered in the source code of the HTML will be ignored by the browser





#### **Comments in HTML**





#### **Comments in HTML**



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## **HTML** – Text Formatting

 HTML offers lot of elements to format output on the browser

Tag	Description
<u><b></b></u>	Defines bold text
<big></big>	Defines big text
<u><i></i></u>	Defines italic text
<small></small>	Defines small text
<sub></sub>	Defines subscripted text
<sup></sup>	Defines superscripted text
<u><u></u></u>	Defines a underlined text



# **HTML – Text Formatting**

Tag	Description
<ins></ins>	Defines inserted text
<del></del>	Defines deleted text
<pre>&lt;</pre>	Defines pre-formatted text





# HTML – Text Formatting

```
<html>
<head>
 <title>Format Text page</title>
</head>
<body>
   <big>Skill Assure Learning Solutions</pig><br><br>
   <small>Skill Assure Learning Solutions/small><br>>
   <i>Skill Assure <del>Training</del>
      <ins>Learning</ins> Solutions</i><br><br>
   Skill Assure Learning
                            Solutions
   <b>Subscript and Superscript examples</b><br>
   H \leq b \geq 2 \leq b \geq 0 \leq e = mc \leq sup \geq 2 \leq sup \geq 0
</body>
</html>
```



# HTML - Text Formatting - Output

Skill Assure Learning Solutions Skill Assure Learning Solutions Skill Assure Learning Solutions

Skill Assure Learning Solutions

Skill Assure Learning Solutions

Skill Assure Training Learning Solutions

Skill Assure Learning

Solutions

Subscript and Superscript examples

$$H_2O = mc^2$$





- Some characters have a special meaning in HTML, like the less than sign (<) that defines the start of an HTML tag
- If we want the browser to actually display these characters we must insert character entities in the HTML source.
- A character entity has three parts: an ampersand (&), an entity name or a # and an entity number, and finally a semicolon (;)





- To display a less than sign in an HTML document we must write: &It; or <
- The advantage of using a name instead of a number is that a name is easier to remember
- The disadvantage is that not all browsers support the newest entity names, while the support for entity numbers is very good in almost all brows
- Note: Entities are case sensitive





```
<html>
 The root element for the document.
 <title>Character entities demo</title>
</head>
 <body>
    <
        if(a < b)
            display " b is greater "
    </body>
</html>
```





# **Character Entities - Output**







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```
if(a < b)
{
    display "b is greater";
}</pre>
```





Result	Description	<b>Entity Name</b>	Entity Number
	non-breaking space		
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
11	quotation mark	"	"
ī	apostrophe	' (does not work in IE)	'



Result	Description	<b>Entity Name</b>	Entity Number
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
§	section	§	§
©	copyright	©	©
R	registered trademark	®	®
×	multiplication	×	×
÷	division	÷	÷



#### **HTML - Lists**

- HTML supports different types of lists to display information in the form of a list
- Ordered List [OL]
- Unordered List [UL]
- Definition List [DL]
- Nested List





#### **HTML – Ordered List**

- It is a list of items
- List items are marked with numbers
- An ordered list starts with the tag
- Each list item starts with tag
- List items can be marked with numbers of different patterns. Attribute 'type' can be given to ordered list





#### HTML - Ordered List

```
<html>
  <head>
     <title>List Demo!!!</title>
  </head>
  <body>
     Web Fundamentals
     HTML
        <1i>CSS</1i>
        Javascript
        Advanced Javascript
        JQuery Essentials
     </body>
</html>
```



#### **HTML – Ordered List**







file://C:/Users/krishna.k.PRATIAN/workspace/WebProject/listdemo.html

### Web Fundamentals

i. HTML

ii. CSS

iii. Javascript

iv. Advanced Javascript

v. JQuery Essentials





#### **HTML** – Unordered List

- It is a list of items
- List items are marked with different shapes
- An unordered list starts with the tag
- Each list item starts with tag
- List items can be marked with different shapes.
   Attribute 'type' can be given to unordered list





#### HTML – Unordered List

```
<html>
  <head>
     <title>List Demo!!!</title>
  </head>
  <body>
     Web Fundamentals
     HTML
        CSS
        Javascript
        Advanced Javascript
        JQuery Essentials
     </body>
</html>
```





#### **HTML** – Unordered List







file://C:/Users/krishna.k.PRATIAN/workspace/WebProject/listdemo.html

#### Web Fundamentals

- o HTML
- 。CSS
- Javascript
- Advanced Javascript
- JQuery Essentials





#### **HTML – Definition List**

- It is not a list of items
- List of terms and explanation of the terms
- A definition list starts with the <dl> tag
- Each definition list item starts with <dt> tag
- Each definition list definition starts with <dd> tag





#### **HTML** – Definition List

```
<html>
   <head>
       <title>List Demo!!!</title>
   </head>
   <body>
       Web Fundamentals
       <dl style="font-size:25px;">
           <dt>HTML</dt>
           <dd>Hyper Text Markup Language !!!</dd>
           <dt>CSS</dt>
           <dd>Cascading Style Sheet !!!</dd>
           <dt>Javascript</dt>
           <dd>Scripting language of the web !!!</dd>
       </dl>
   </body>
</html>
```



### **HTML – Definition List**







file://C:/Users/krishna.k.PRATIAN/workspace/WebProject/listdemo.html

#### Web Fundamentals

HTML

Hyper Text Markup Language !!!

CSS

Cascading Style Sheet !!!

Javascript

Scripting language of the web!!!





#### HTML – Nested List

- A list can be nested in HTML
- We can have a combination of any of the lists available
- For Ex: An ordered list can have an unordered list as a list item





#### HTML – Nested List

```
<html>
  <head><title>List Demo!!!</title></head>
  <body>
     Training topics
     Database Fundamentals
          Introduction to database
            Relational DBMS
            SQL
          </1i>
       Web Fundamentals
          <1i>HTML</1i>
            CSS
            Javascript
          </1i>
     </01>
  </body>
```



#### **HTML – Nested List**





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### Training topics

- i. Database Fundamentals
  - Introduction to database
  - Relational DBMS
  - SQL
- ii. Web Fundamentals
  - HTML
  - . CSS
  - Javascript





# HTML - Nested List - Case Study





#### HTML - Links

- HTML uses a hyperlink to link to another document on the Web
- HTML uses the <a> (anchor) tag to create a link to another document
- An anchor can point to any resource on the Web: an HTML page, an image, a sound file, a movie, etc
- The syntax for creating an anchor:
   <a href="url">Text to be displayed</a>





- The <a> tag is used to create an anchor to the link specified
- href attribute is used to mention the address of the document to link to
- The words between the open and close of the anchor tag will be displayed as a hyperlink
- This anchor defines a link to Pratian Technologies:
   <a href="http://www.pratian.com/">Visit Pratian!</a>
- The line above will look like this in a browser:
  <u>Visit Pratian!</u>



### Target attribute

- With the target attribute, you can define where the linked document will be opened
- The line below will open the document in a new browser window

```
<a href="http://www.pratian.com" target="_blank">
    Visit Pratian!
    </a>
```





#### Named anchor

- The name attribute is used to create a named anchor
- When using named anchors we can create links that can jump directly into a specific section on a page, instead of letting the user scroll around to find what he/she is looking for
- Below is the syntax of a named anchor:
   <a name="label">Text to be displayed</a>





#### Named anchor

- <a name="history">History</a>
- <a href="#history">Go to history</a>
- Wikipedia is one of the sites where we can find named anchors
- Link to email

<a href=<u>mailto:kk@pratian.com</u>>Mail to me</a>



- In HTML, images are defined with the <img> tag
- The <img> tag is empty, which means that it contains attributes only and it has no closing tag
- To display an image on a page, you need to use the src attribute. src stands for "source"
- The value of the src attribute is the URL of the image you want to display on your page
- The syntax of defining an image: <img src="url">





```
<html>
    <head>
        <title>Image Demo!!!</title>
    </head>
    <body>
        <h2>Welcome to Pratian Technologies</h2>
        <img src="pratian logo.jpg"/>
    </body>
</html>
```







🐤 🔷 🔳 🔗 🛘 file://C:/Users/krishna.k.PRATIAN/workspace/WebProject/linkdemo.html

#### Welcome to Pratian Technologies







#### Alt attribute

- The alt attribute is used to define an "alternate text" for an image
- The value of the alt attribute is an author-defined text
- The alt attribute tells the reader what he or she is missing on a page if the browser can't load images
- It is a good practice to include the alt attribute for each image on a page



#### Welcome to Pratian Technologies



- If the image is not displayed then 'Pratian Logo' text would be displayed
- You can also see the same when you move mouse over the image



# HTML – Background

- The background in HTML can be a color or an image
- The bgcolor attribute specifies a background-color for an HTML page. (The value of this attribute can be a hexadecimal number, an RGB value, or a color name)
- The background attribute specifies a backgroundimage for an HTML element
- The value of this attribute is the URL of the image you want to use

<body><br/>body background="pratian\_logo.jpg"></br>



# HTML – Background





# HTML – Background

#### Note

Loading images take time, so my best advice is: Use images carefully

# If you want to use a background image, you should keep in mind

- Will the background image increase the loading time too much?
- Will the background image look good with other images on the page?
- Will the background image look good with the text colors on the page?
- Will the background image look good when it is repeated on the page?
- Will the background image take away the focus from the text?



# HTML – Table tag

- Tables are defined with the tag
- A table is divided into rows (with the 
   tag), and each row is divided into data cells (with the tag)
- The letters td stands for "table data," which is the content of a data cell
- A data cell can contain text, images, lists, paragraphs, forms, horizontal rules, tables, etc
- - <*tr>* 
    - </
  - 011 Pratian Technologies





# HTML – Table tag

Headings in a table are defined with the tag

```
Heading
     Another Heading
  row 1, cell 1
     row 1, cell 2
  row 2, cell 1
     row 2, cell 2
```





# HTML – Table tag and colspan attribute

 colspan attribute is used to define table cells that span more than one column



# HTML – Table tag and rowspan attribute

 rowspan attribute is used to define table cells that span more than one row

```
First Name
  Bill Gates
Telephone No:
  3344 113 121
1212 323 556
```





# HTML – Table tag – more attributes

- cellspacing represents the space between cells and is specified in pixels
- cellpadding is the space between the cell border and the cell contents and is specified in pixels
- align cell data can have left, right or center alignment
- valign cell data can have top, middle or bottom alignment
- width to specify the width as an absolute no of pixels or a percentage of the document width
- height to specify the height as an absolute no of pixels or a percentage of the document height





# HTML – Form Tag

- A form is an area that can contain form elements
- Form elements are elements that allow the user to enter information (like text fields, textarea fields, drop-down menus, radio buttons, checkboxes, etc.) in a form
- A form is defined with the <form> tag.

<form>

</form>





# HTML – Form input

- The most used form tag is the <input> tag.
- The type of input is specified with the type attribute.
- Text fields are used when you want the user to type letters, numbers, etc. in a form.

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





#### HTML – Form radio button

 Radio Buttons are used when you want the user to select one of a limited number of choices.

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





#### HTML – Form checkbox

 Checkboxes are used when you want the user to select one or more options of a limited number of choices.





# HTML – Form select tag

Select is used to create a drop down list





# HTML – Form – more tags

- Password Used to allow entry of passwords
  - <input type="password">
- File Upload Used to upload file to web server.
  - <input type="file">
- Reset Used to clear all the input in the form.
  - <input type="reset">
- Text Area Used for free form text entry.
   <textarea id="comments"></textarea>





### HTML - Form - Action and Submit

- When the user clicks on the "Submit" button, the content of the form is sent to another file.
- The form's action attribute defines the name of the file to send the content to.
- The file defined in the action attribute usually does something with the received input

</form>



# Question time

Please try to limit the questions to the topics discussed during the session. Thank you.



