

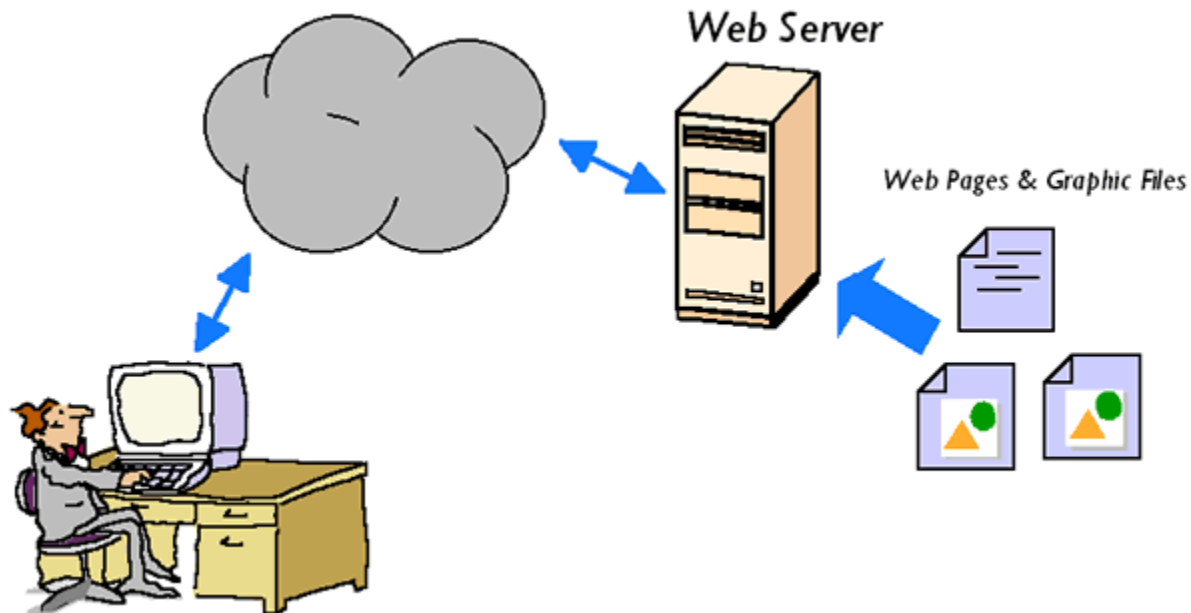
Welcome

Learning: Web Development for beginners

By Shantanu Mishra

What is Web?

- The **Web**, or World Wide Web (W3), is basically a system of Internet servers that support specially formatted documents.
- A **server** is a computer program that provides services to other computer programs (and their users) in the same or other computers.
- A **client** is a piece of computer hardware or software that accesses a service made available by a server.



What is a Web Browser?

- **Web browser**, is the software application (a program) that we use to search for, reach and explore websites.
- There are many web browser available nowadays which retrieve data from the servers and display that data to the client, in a format as described in its code by the **Web Developer**.
- An information resource is identified by a Uniform Resource Identifier (URI/URL) that may be a web page, image, video or other piece of content.

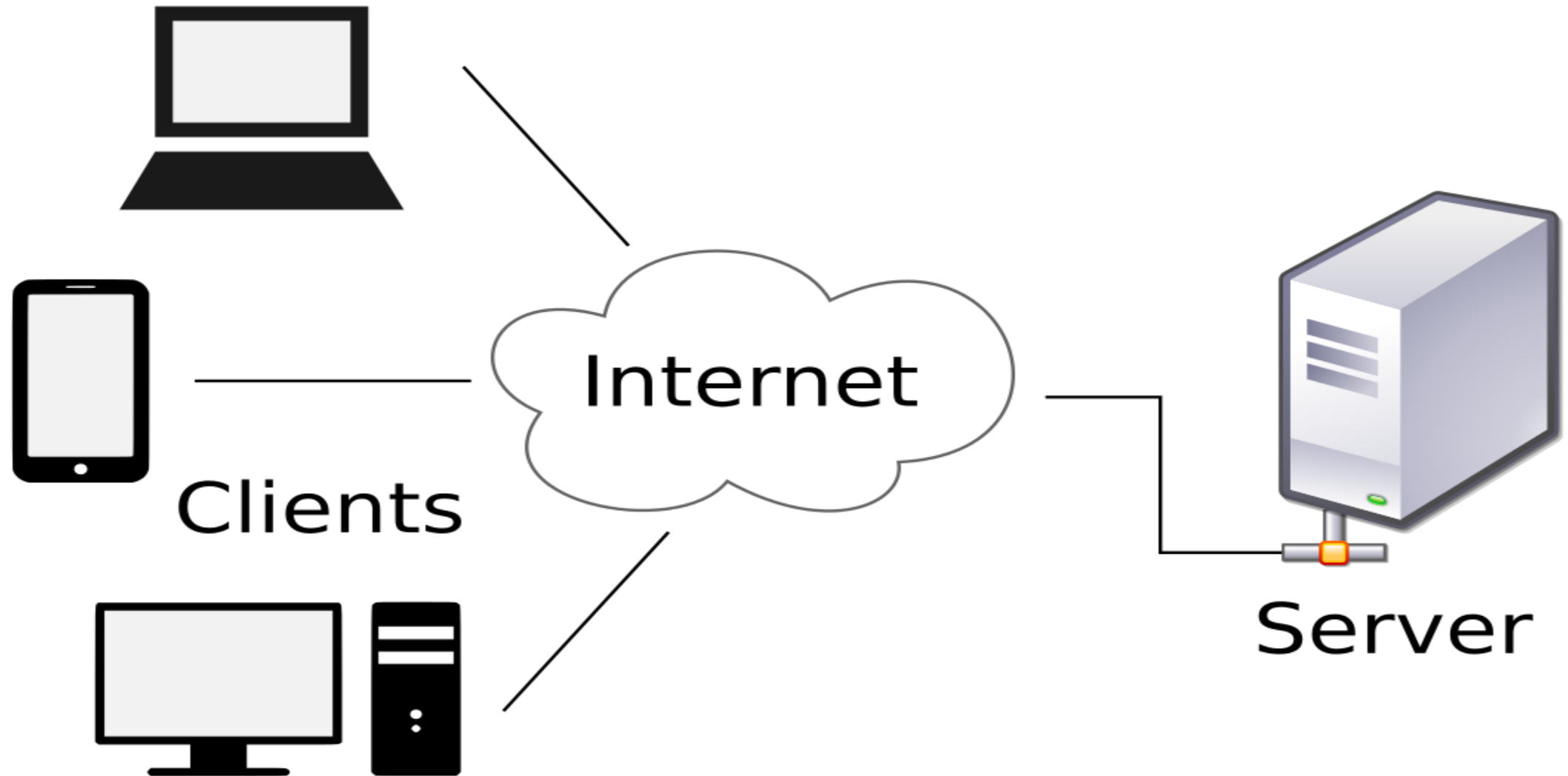


Then what is Internet?

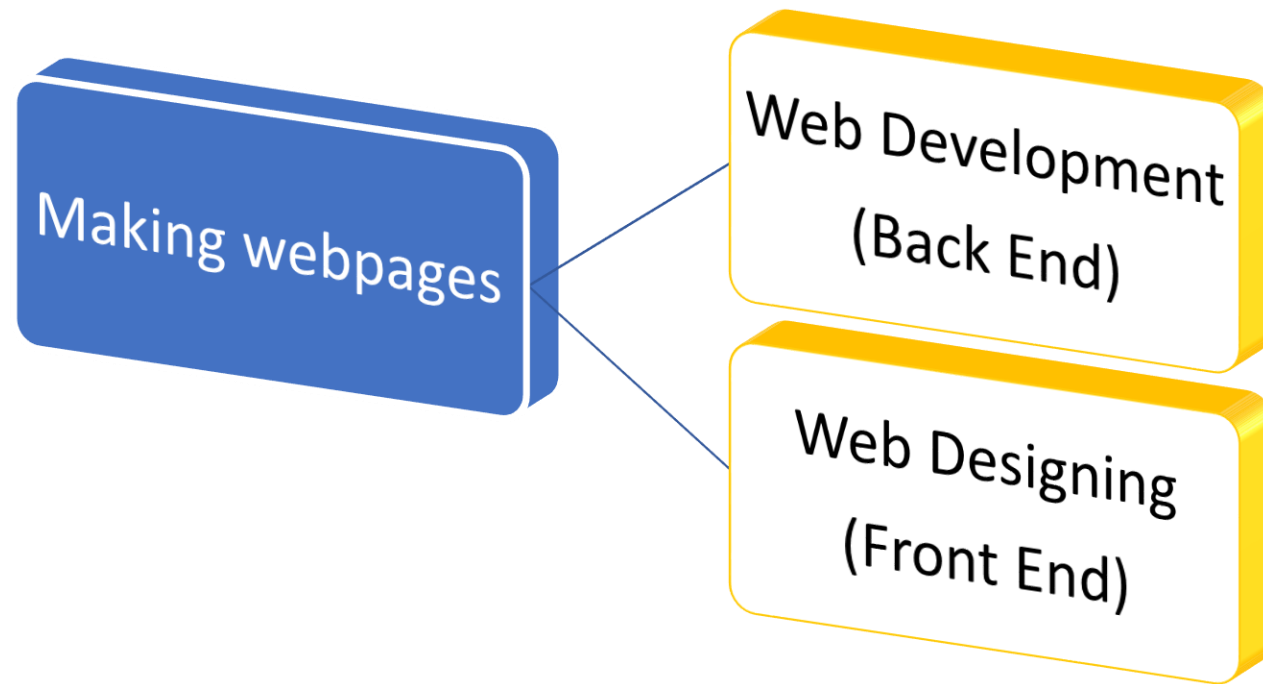
- If web is the main machine behind the working of websites, i.e., if web provides the information and resources then internet is the **medium of communication** to transfer the information.
- Internet is a global computer network providing a variety of information and communication facilities, consisting of interconnected networks using standardized communication protocols.



How the things work?



Developing Websites



Although, the Web Development and Designing are two different streams of making a webpage but developers try learn both, as using only one stream cannot help develop a good interactive webpage.

HTML or PHP is the main framework in which all these two streams are embedded and synchronized to work like a single webpage.

Web Development

It is the backbone of a webpage, it gives “life” to a webpage by making it “responsive” to user actions and providing data ‘about’ or ‘to’ the user.

Scripting

Scripting help making pages dynamic, i.e., making web pages responsive to user actions.

Languages used: PHP(server side), Java, JavaScript, jQuery, etc.

Database

Database is another aspect of backend working of webpages it provides essential data to the webpages stored at the server. Such as, username, password, phone no., etc.

It works only at server side.

It is the most targeted resource of a web server and hence, security of database should be the prime motive of a web developer.

Languages used: MySQL, MS Access, APPML, XML, etc.

Web Designing

It is the appearance of a webpage, which the user sees and interacts with. Interactive user interface and presentation is the main aspect which increases usability of a webpage.

Hand coding from scratch

Writing a design script from the beginning using Web Designing languages. Using resources or templates freely available on the web.

Languages used: HTML, CSS, JavaScript, jQuery, W3.CSS, W3.JS, Bootstrap etc.

WYGYSYG (wiz-ee-wig)

Visually design your website

(What-You-See-Is-What-You-Get).

Design your website using WYGSYG softwares and merge it with your backend code. Simple.

Softwares: Adobe Dreamweaver, WYSIWYG 12, etc.

So, how the code is written?

Remember, all these web development languages are written in the form of text(script) and are interpreted by the interpreter(like, web browser) directly, i.e., no compilation or generation of byte code is required to execute.

These scripts are a set of instructions written in the form of simple text and are read by the web browser, which displays the resources in the format described in the code.

HTML or PHP is the main framework in which all the languages are embedded or merged to create a single webpage.

Although, the Web Development and Designing are two different streams of making a webpage but developers try learn both, as using only one stream cannot help develop a good interactive webpage.

HTML or PHP is the main framework in which all these two streams are embedded and synchronized to work like a single webpage.

How these languages are merged together?

logincheck - Notepad

HTML Framework

```
<HTML>
<HEAD>
<link rel='shortcut icon' href='icon.png' type='image/x-icon' / >
<link rel="stylesheet" href="css\dev.css">
<link rel="stylesheet" href="css\w3.css">
<style>
body {
    background-image: url("bg-mum.png");
    background-repeat: repeat;
    background-position: left top;
    background-attachment: fixed;
}
</style>
</HEAD>
<BODY>
<?php session_start();?>
<?php
    $userid=$_POST['user'];|
    $password=$_POST['pass'];

    $con=mysqli_connect('localhost','root','','mumdat');
    if(mysqli_connect_errno())
    { echo "Failed to connect to my sql".mysqli_connect_error();}

    $check="SELECT * FROM user_cred WHERE username='$userid' and BINARY password='$password' and active=0";
```

Reference to CSS files

CSS Design Code

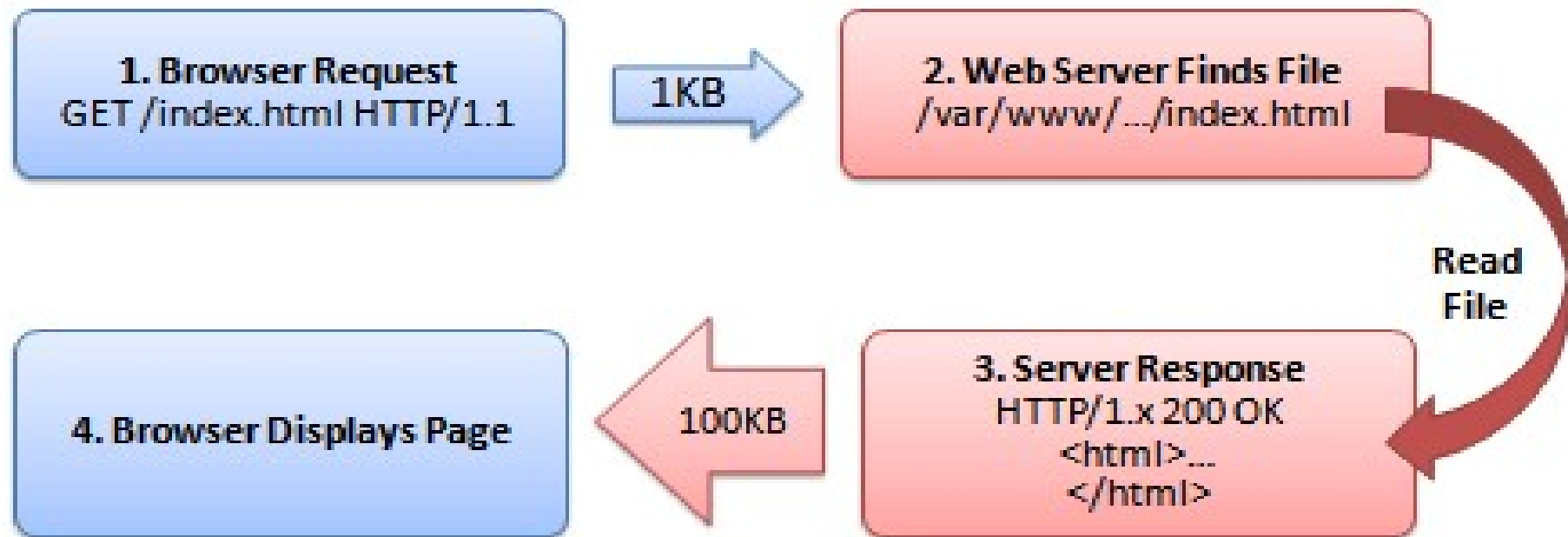
Scripting using PHP

MySQL database query

Building Static Webpages using HTML

How HTML really works?

HTTP Request and Response

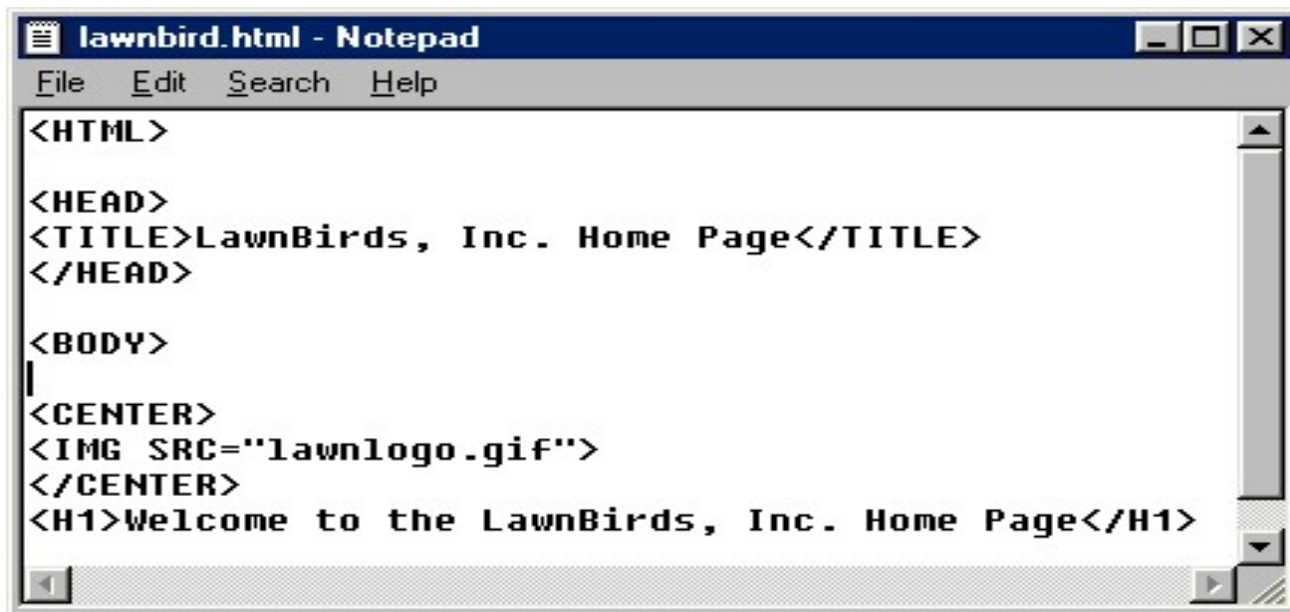


Some points...

- HTML is the standard markup language for creating Web pages.
- HTML stands for Hyper Text Markup Language
- HTML describes the structure of Web pages using markup
- HTML elements are the building blocks of HTML pages
- HTML elements are represented by tags
- HTML tags label pieces of content such as "heading", "paragraph", "table", and so on
- Browsers do not display the HTML tags, but use them to render the content of the page

Where to code?

- Any text editor can be used to write the HTML code.
- Example, Notepad, Wordpad, MS Word, Net Beans, Notepad++, etc.
- I'll recommend using Notepad++ or Net Beans.
- Write the HTML code and Save the document as **<any_filename>.html** or **<any_filename>.htm** and then just Double Click to Open it.

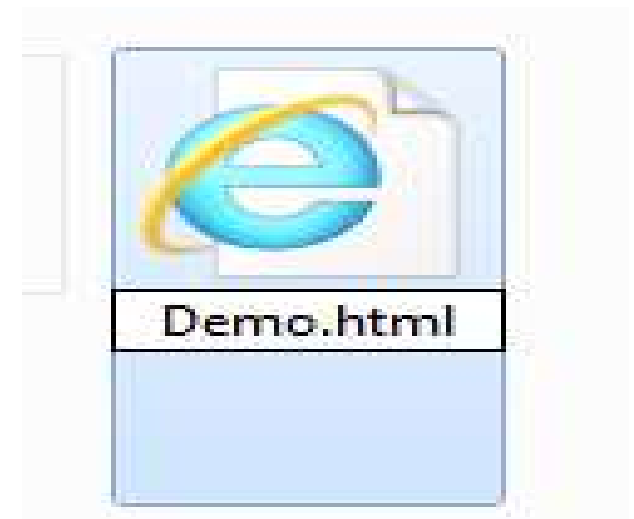


```
lawnbird.html - Notepad
File Edit Search Help

<HTML>

<HEAD>
<TITLE>LawnBirds, Inc. Home Page</TITLE>
</HEAD>

<BODY>
|
<CENTER>
<IMG SRC="lawnlogo.gif">
</CENTER>
<H1>Welcome to the LawnBirds, Inc. Home Page</H1>
```



HTML Tags

HTML tags are element names surrounded by angle brackets:

<tagname> content goes here...**</tagname>**

- HTML tags normally come **in pairs** like <p> and </p>
- The first tag in a pair is the **start tag**, the second tag is the **end tag**
- The end tag is written like the start tag, but with a **forward slash** inserted before the tag name
- The <!DOCTYPE> Declaration
- The <!DOCTYPE> declaration represents the document type, and helps browsers to display web pages correctly.
- It must only appear once, at the top of the page (before any HTML tags).
- The <!DOCTYPE> declaration is not case sensitive.
- The <!DOCTYPE> declaration for HTML is:

Example

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph.</p>

</body>
</html>
```

My First Heading

My first paragraph.

- The **<!DOCTYPE html>** declaration defines this document to be HTML5
- The **<html>** element is the root element of an HTML page
- The **<head>** element contains meta information about the document
- The **<title>** element specifies a title for the document
- The **<body>** element contains the visible page content
- The **<h1>** element defines a large heading
- The **<p>** element defines a paragraph

Building Static Webpages using HTML

HTML Body Tag

```
<!DOCTYPE html>
<html>
<head>
<title>Title of the document</title>
</head>

<body alink="green" vlink="red">
The content of the document.....
<a href="https://unacademy.com/">Click here...</a>
</body>

</html>
```

The content of the document..... [Click here...](#)

ATTRIBUTE	DESCRIPTION
alink	Color Specifies the color of an active link in a document
background	URL Specifies a background image for a document
bgcolor	Color Specifies the background color of a document
link	Color Specifies the color of unvisited links in a document
text	Color Specifies the color of the text in a document
vlink	Color Specifies the color of visited links in a document

HTML Head Tag

The **<head>** element is a container for metadata (data about data) and is placed between the <html> tag and the <body> tag.

HTML metadata is data about the HTML document. Metadata is not displayed.

Metadata typically define the document title, character set, styles, links, scripts, and other meta information.

Title

```
<!DOCTYPE html>
<html>

<head>
  <title>Page Title</title>
</head>

<body>
The content of the document.....
</body>

</html>
```

Style

```
<style>
  body {background-color: powderblue;}
  h1 {color: red;}
  p {color: blue;}
</style>
```

Link

```
<link rel="stylesheet" href="mystyle.css">
```

HTML Head Tag

The **<meta>** element is used to specify which character set is used, page description, keywords, author, and other metadata.

Metadata is used by browsers (how to display content), by search engines (keywords), and other web services.

Charset

```
<meta charset="UTF-8">
```

Refresh

```
<meta http-equiv="refresh" content="30">
```

Search Engine Keywords

```
<meta name="keywords" content="HTML, CSS, XML, JavaScript">
```

Author

```
<meta name="author" content="John Doe">
```

Description

```
<meta name="description" content="Free Web tutorials">
```

Script

```
<script>
function myFunction {
    document.getElementById("demo").innerHTML = "Hello JavaScript!";
}
</script>
```

Base

```
<base href="https://www.any_website.com/images/" target="_blank">

<!DOCTYPE html>
<html>
<head>
  <title>Page Title</title>
  <base href="https://www.any_website.com/images/" target="_blank">
</head>
<body>


<p>Since we have specified a base URL, the browser will look for the
image "html5.gif" at "https://www.anywebsite.com/images/html5.gif"</p>

<p><a href="https://www.any_website.com">Website</a></p>
<p>The link above opens in a new window. This is because the base
target is set to "_blank".</p>

</body>
</html>
```



Since we have specified a base URL, the browser will look for the image "html5.gif" at "https://www.anywebsite.com/images/html5.gif"

[Website](https://www.any_website.com)

The link above opens in a new window. This is because the base target is set to "_blank".

Viewport

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">

<meta name="viewport" content="width=device-width, user-scalable=no, initial-scale=1, maximum-scale=1.2" />
```

TAGS

PREVIEW

HTML Headings

```
<h1>This is heading 1</h1>  
<h2>This is heading 2</h2>  
<h3>This is heading 3</h3>  
<h4>This is heading 4</h4>  
<h5>This is heading 5</h5>  
<h6>This is heading 6</h6>
```

This is heading 1

This is heading 2

This is heading 3

This is heading 4

This is heading 5

This is heading 6

HTML Paragraphs

```
<p>This is a paragraph.</p>
```

This is a paragraph.

HTML Links

```
<a href="https://unacademy.com">This is a link</a>
```

This is a link

HTML Images

```

```



TAGS

Single Line Break

```
<p>  
To break lines<br>in a text,<br>use the br element.  
</p>
```

Horizontal Line

```
<body>  
<h1>HTML</h1>  
<p>HTML is a language for describing web pages.</p>  
<hr>  
<h1>CSS</h1>  
<p>CSS defines how to display HTML elements.</p>  
</body>
```

Comment Tags

```
<!-- This is a comment -->  
<p>This is a paragraph.</p>  
<!-- Comments are not displayed in the browser -->
```

PREVIEW

To break lines
in a text,
use the br element.

HTML

HTML is a language for describing web pages.

CSS

CSS defines how to display HTML elements.

This is a paragraph.

TAGS

<acronym>

Can I get this <acronym title="as soon as possible">ASAP</acronym>?

<abbr>

<p>The <abbr title="World Health Organization">WHO</abbr> was founded in 1948.</p>

<address>

<address>
Written by Mr. X.
</address>

PREVIEW

```
<!DOCTYPE html>
<html>
<body>
|
Can I get this <acronym title="as soon as possible">ASAP</acronym>?

<p><strong>Note:</strong> The acronym element is not supported in
HTML5.</p>

</body>
</html>
```

Can I get this ASAP?

as soon as possible

Note: The acronym element is not supported in HTML5.

The WHO was founded in 1948.

World Health Organization

Written by Mr. X

TAGS

`<mark>`

`<p>Do not forget to buy <mark>milk</mark> today.</p>`

`<meter>`

`<p>Display a gauge:</p>`

`<meter value="2" min="0" max="10">2 out of
10</meter>
`

`<meter value="0.6">60%</meter>`

`<pre>`

`<pre>`

Text in a pre element
is displayed in a fixed-width
font, and it preserves
both spaces and
line breaks

`</pre>`

PREVIEW

Do not forget to buy milk today.

Display a gauge:



Text in a pre element
is displayed in a fixed-width
font, and it preserves
both spaces and
line breaks

TAGS

`<progress>`

Downloading progress:

`<progress value="22" max="100">`

`</progress>`

`<bdo>` Bi-Directional Override

`<p>`This paragraph will go left-to-right.`</p>`

`<p><bdo dir="rtl">`This paragraph will go right-to-left.`</bdo></p>`

`<bdi>` Bi-Directional Isolation

The `<bdi>` tag isolates a part of text that might be formatted in a different direction from other text outside it.

User `<bdi>/>`ایان`<bdi>`: 90 points

``Emphasized text`
`

``Strong text`
`

`<code>`A piece of computer code`</code>
`

`<samp>`Sample output from a computer program`</samp>
`

`<kbd>`Keyboard input`</kbd>
`

`<var>`Variable`</var>`

PREVIEW

Downloading progress:



This paragraph will go left-to-right.

.tfel-ot-thgir og lliw hpargarap sihT

User `<bdi>/>`ایان`<bdi>`: 90 points

Emphasized text

Strong text

A piece of computer code

Sample output from a computer program

Keyboard input

Variable

TAGS

```
<!DOCTYPE html>
```

```
<html>
```

```
<body>
```

```
<b>Bold Text</b><br>
```

```
<i>Italic Text</i><br>
```

```
<strike>Strike Through Text</strike><br>
```

```
<u>Underlined Text</u><br><br>
```

```
<q>Quoted Text</q><br><br>
```

```
Text<sup>Superscripted Text</sup><br><br>
```

```
Text<sub>Subscripted Text</sub><br>
```

```
<center><h1>My Website</h1></center>
```

```
<p>Hey,</p>
```

```
<blockquote>Welcome to my website.</blockquote>
```

```
<font face="Times new Roman" size="+3">Sample Text 1</font><br>
```

```
<font face="Calibri" size="15" color="Green">Sample Text 2</font>
```

```
</body>
```

```
</html>
```

PREVIEW

Bold Text

Italic Text

~~Strike Through Text~~

Underlined Text

"Quoted Text"

Text^{Superscripted Text}

Text_{Subscripted Text}

My Website

Hey,

Welcome to my website.

Sample Text 1

Sample Text 2

Forms And Input

TAGS

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

<form action="/action_page.php">
First name: <input type="text" name="FirstName" placeholder="Type here"><br>
Last name: <input type="text" name="LastName" placeholder="Type Here"><br>
Gender: <input type="radio" name="gender" value="male">Male<input type="radio" name="gender"
value="female">Female<br>
<input type="submit" value="Submit">
</form>
```

PREVIEW

First name:

Last name:

Gender: ☐ Male ☐ Female

```
<form action="/action.php">
First name: <input type="text" name="FirstName" placeholder="Type here">
Last name: <input type="text" name="LastName" placeholder="Type Here"><br>
Gender: <input type="radio" name="gender" value="male">Male<input type="radio" name="gender" value="female">Female<br>
Select Plan: <input type="button" name="plan" value="Rs. 199" onClick="selectPlan()"><input type="button" name="plan" value="Rs. 299" onClick="selectPlan()"><input type="button" name="plan" value="Rs. 499" onClick="selectPlan()"><input type="button" name="plan" value="Rs. 999" onClick="selectPlan()"><br>
Select Pay-Cycle:<br><input type="checkbox" name="payCycle" value="1">1 Month
<input type="checkbox" name="payCycle" value="3">3 Months<br>
<input type="checkbox" name="payCycle" value="6">6 Months<input type="checkbox" name="payCycle" value="12">1 Year<br><br>
```

First name: Last name:

Gender: ☒ Male ☐ Female

Select Plan:

Select Pay-Cycle:

☐ 1 Month ☒ 3 Months

☐ 6 Months ☐ 1 Year

Other Examples:

```
<br>
Color: <input type="color" name="colorSelection">
Birthday: <input type="date" name="dob"><br>
Date and Time: <input type="datetime-local" name="dobtime">
E-mail: <input type="email" name="mailId"><br>
File: <input type="file" name="profile">
Image: <input type="image" src="next.png" alt="Next">
Event: <input type="month" name="event"><br>
Quantity: <input type="number" name="quantity" min="1" max="5" step="0.5" value="0">
<input type="range" name="points" min="0" max="1" step="0.01">
Slide the bar <input type="search" name="search_query" placeholder="Type Here"><br>
<input type="reset"> Time: <input type="time" name="time"><br><input type="password" name="pass">
<br><br><input type="submit" value="Submit">
</form>
```

Other Examples:

Color:

Birthday:

Date and Time:

E-mail:

File: No file chosen

Image:

Event:

Quantity:

Slide the bar

Time:

Ram	▼
Family	
Ram	
Shyam	
Friends	
Sam	
John	

0  100 + 50  + 3 = 120

```

<input list="sharewith" name="sharewith" value="All">
  <datalist id="sharewith">
    <option value="Ram">
    <option value="Shyam">
    <option value="John">
    <option value="Sam">
  </datalist><br>
<select name="Menu" multiple required size="3">
  <option value="sam">Sam</option>
  <option value="john">John</option>
  <option value="shyam">Shyam</option>
  <option value="ram">Ram</option>
</select>
</fieldset><br>
<button type="submit" onClick="success_Ani()" name="finish" value="Submit">Submit</button><br><br>
</form>
<form oninput="x.value=parseInt(y.value)+parseInt(z.value)+parseInt(w.value)">0
<input type="range" id="y" value="50">100
+<input type="number" id="z" value="50">
+<input type="number" min="0" max="50" step="3" id="w" value="0">
=<output name="x" for="y z w"></output><br>
</form>

```

Post Something

Write here...

Post Enable Comments ☒

Share with:

Sam
John
Shyam

Submit

Please fill out this field.

0 100 + + = 120

S

Shyam

Sam

0 100 + + = 120