



Java™ Education & Technology Services

Introduction to Web Technologies

1. Web Building



2. Web Hosting

Chapter 1

Web Hosting





Chapter 1 (Web Hosting)

What is Internet ?

How does it work?

What is The Internet Backbone?

How does your computer find a website?

What is a Web Host?

What is an Internet Service Provider ISP?

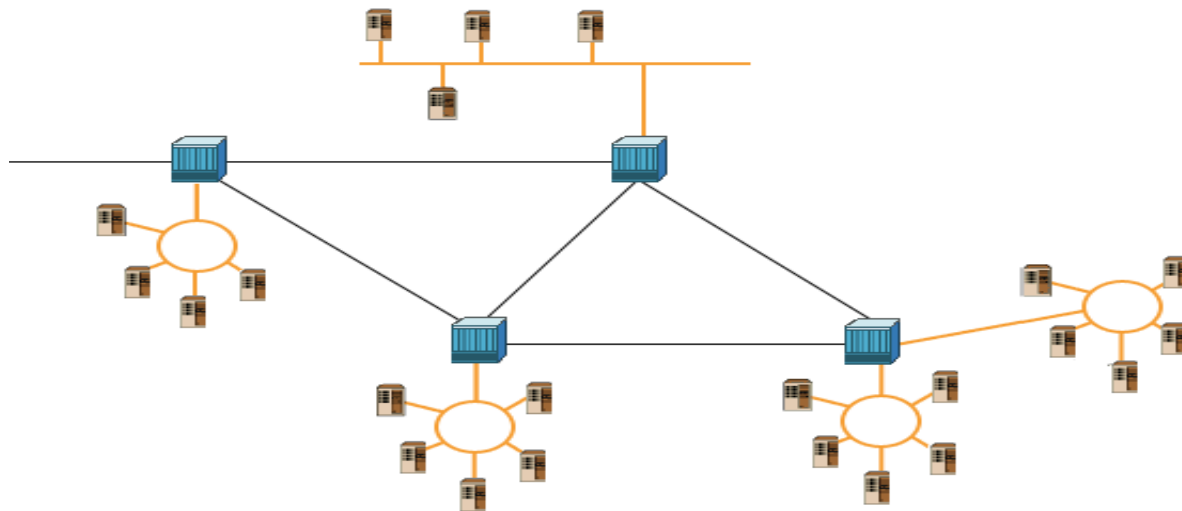
What is the WWW. ?



Chapter 1 (Web Hosting)

❑ What is Internet ?

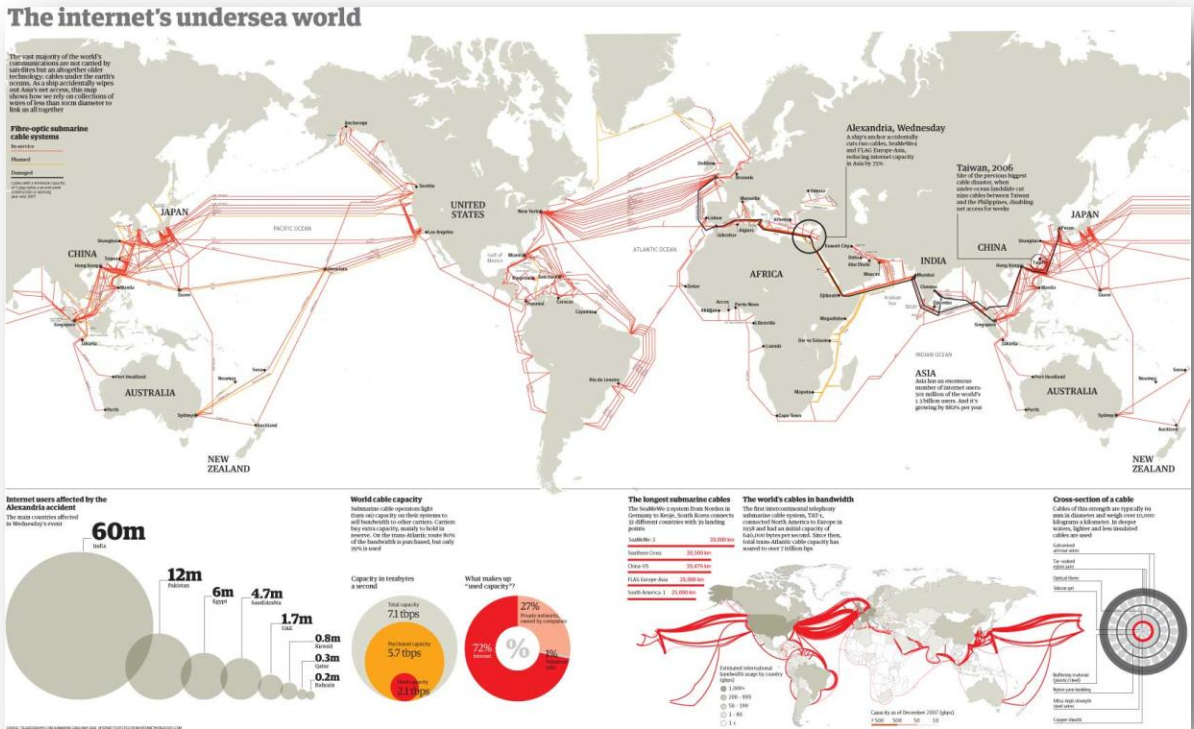
Millions of computer **networks** [*private, public, academic, business, and government*] connected to each other via the '**Internet Backbone**'



Chapter 1 (Web Hosting)

❑ What is The Internet Backbone?

The Internet Backbone is an infrastructure of fiber optic cable owned by private companies.



wordpress.com

Chapter 1 (Web Hosting)

❑ What is the World Wide Web **WWW**?

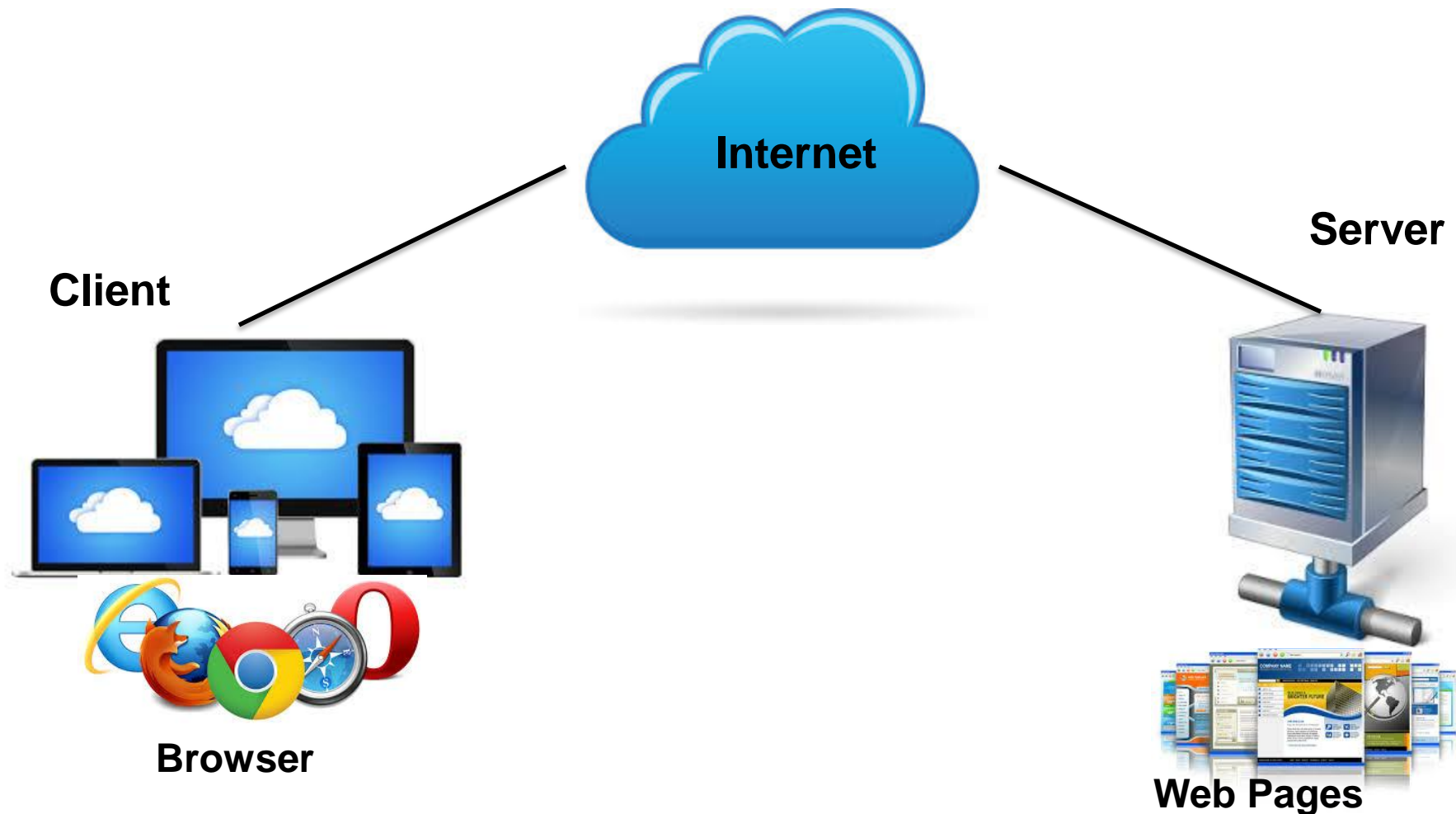
- The Web is a network of computers *all over the world*.
- All the computers in the Web can communicate with *each other*.
- All the computers use a communication protocol called [*TCP/IP , HTTP , FTP*].





Chapter 1 (Web Hosting)

❑ How does the **WWW** work?





Chapter 1 (Web Hosting)

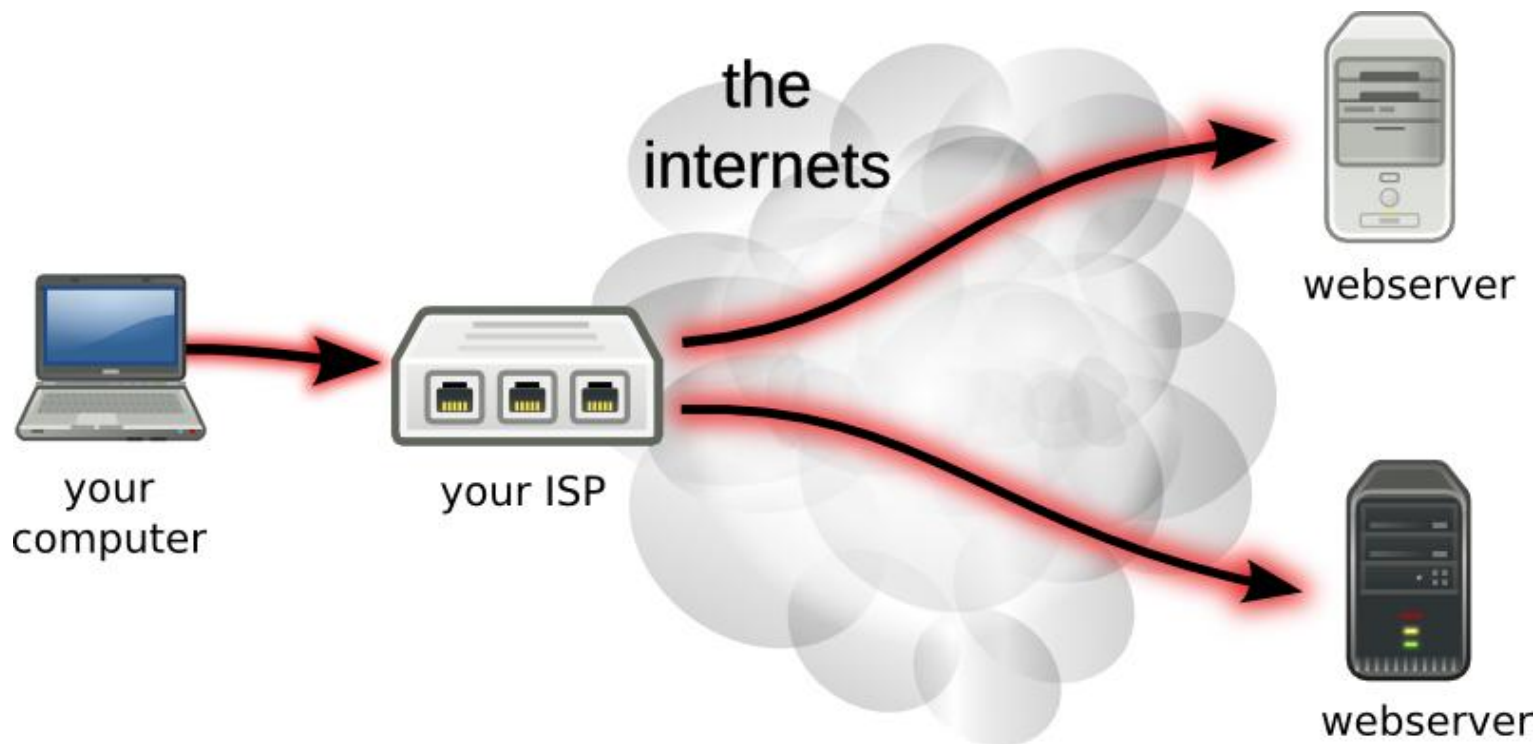
□ How does the **WWW** work?

- Web information is stored in documents **web pages**
- Web pages are files stored on computers **web servers**
- Computers reading the web pages **web clients**
- Web clients view the pages with a program called a **web browser** [*Google Chrome, Firefox, and Internet Explorer*]

Chapter 1 (Web Hosting)

❑ How does your computer find a website?

1. Connect To An Internet Service Provider **ISP**





Chapter 1 (Web Hosting)

❑ How does your computer find a website?

2. type a website **URL** [*Uniform Resource Locator*] into your browser

<http://www.Google.com>



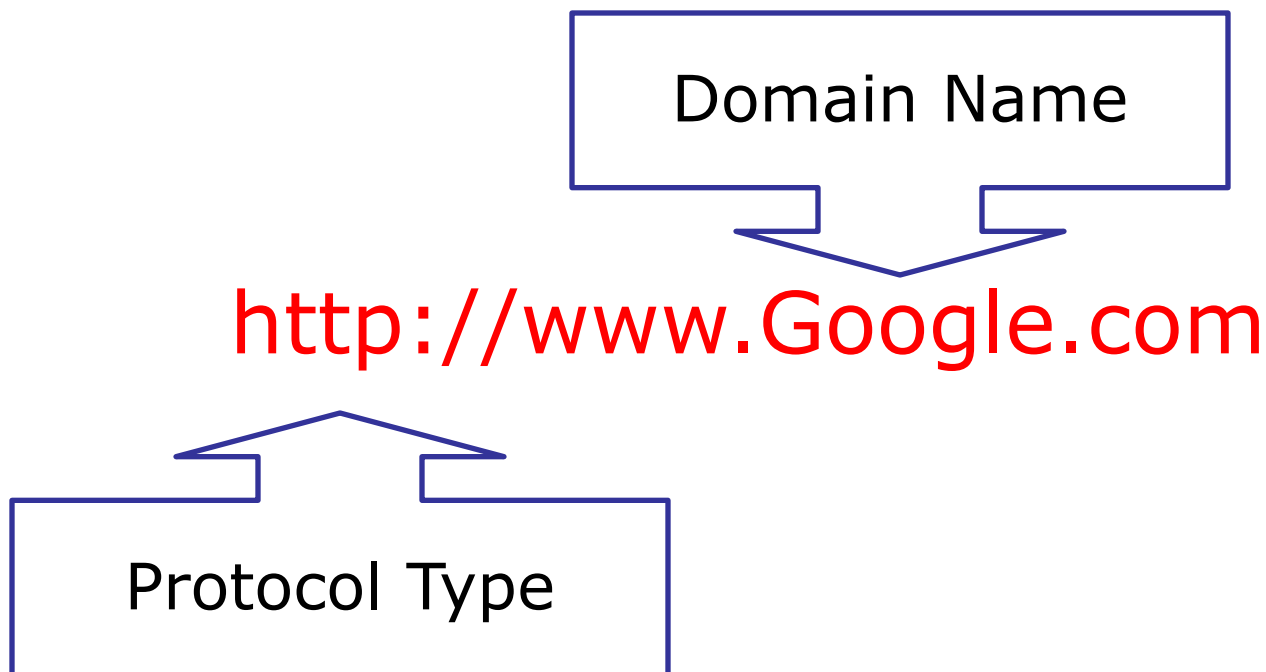
Unique address of a web page on the internet



Chapter 1 (Web Hosting)

❑ How does your computer find a website?

3. ISP finds the URL you request



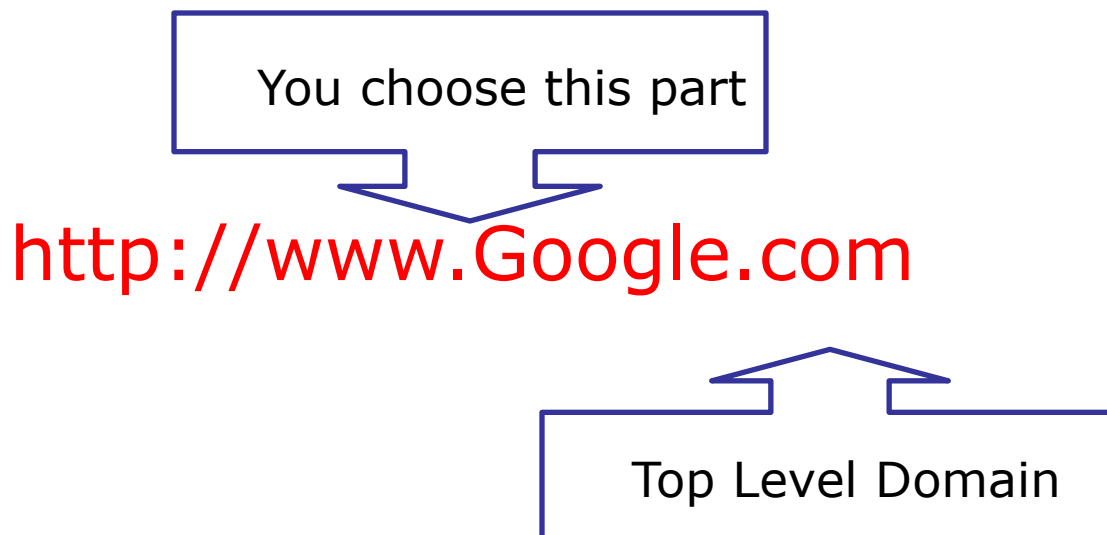


Chapter 1 (Web Hosting)

❑ How does your computer find a website?

3. ISP finds the URL you request

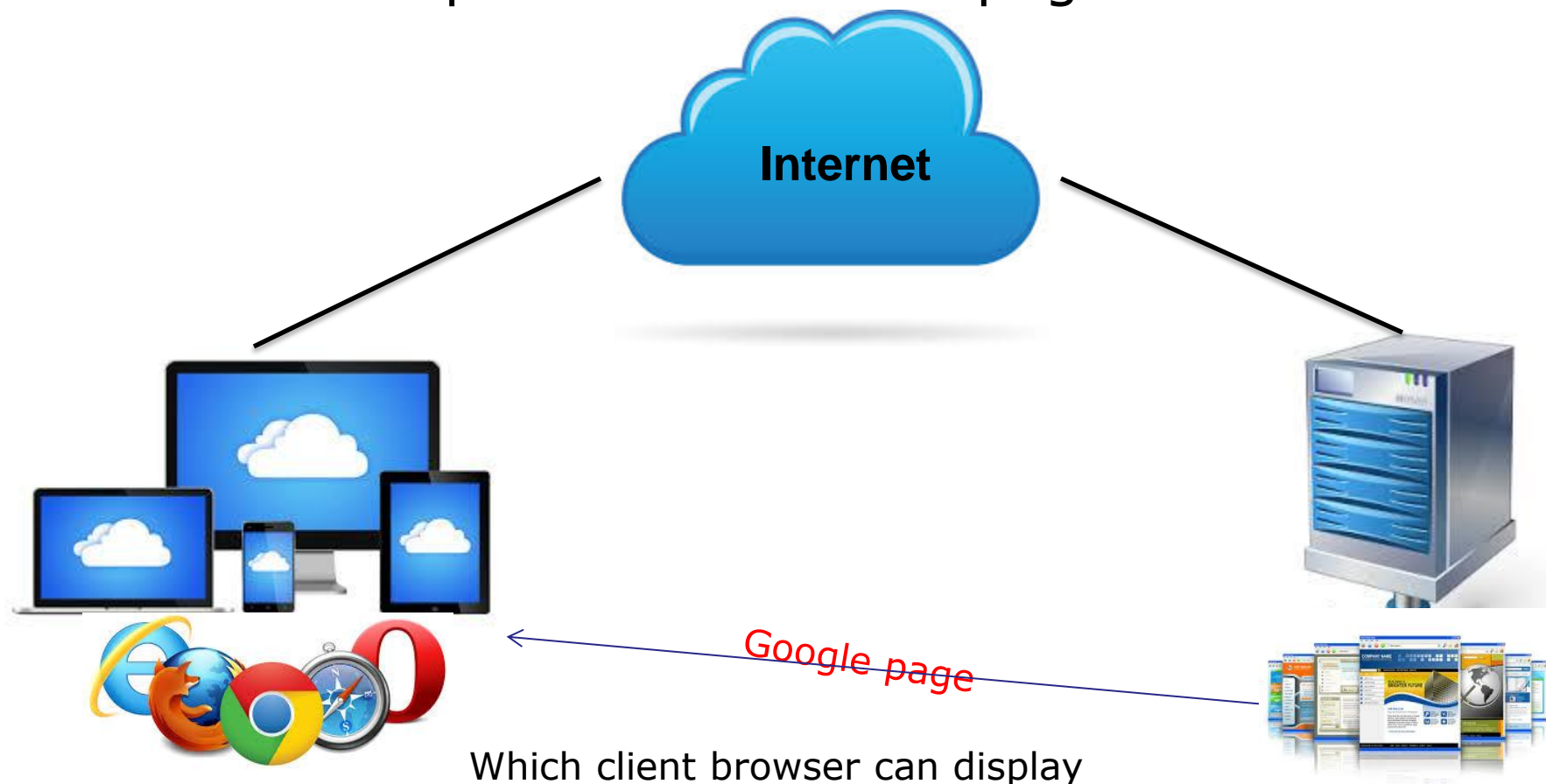
- A Domain Name is a unique identifier for a resource on the Internet
- Domain Name System (DNS) Server translate domain names meaningful to humans into the numerical IP address



Chapter 1 (Web Hosting)

❑ How does your computer find a website?

4. Server replies with the web page





Lab Exercise

- **1st Assignment :**

- Make a short report to answer these questions?
 - What is the ISP? What are its functions and things to consider with it?
 - How you can Host your own Web site?
 - How to choose and register a Domain name for your website?
 - What are Web Hosting Technologies?

Web Building



❑ Step 1

❑ Think about the 4_{w's}:

- ❑ **What** is the purpose of the web page/site?
- ❑ **Who** is your target audience?
- ❑ **What** will bring your audience back?
- ❑ **Where** will your audience be using the site?



❑ Step 2

❑ Follow The Rules :

- ❑ **Rule 1:** YOU are NOT the USER.
- ❑ **Rule 2:** USERS are NOT PROFESIONALS
- ❑ **Rule 3:** Give the common user a little control
- ❑ **Rule 4:** Make sure the visual contents of a site relates to its function
- ❑ **Rule 4:** Know and respect the Web and Internet medium constraints



Web Building

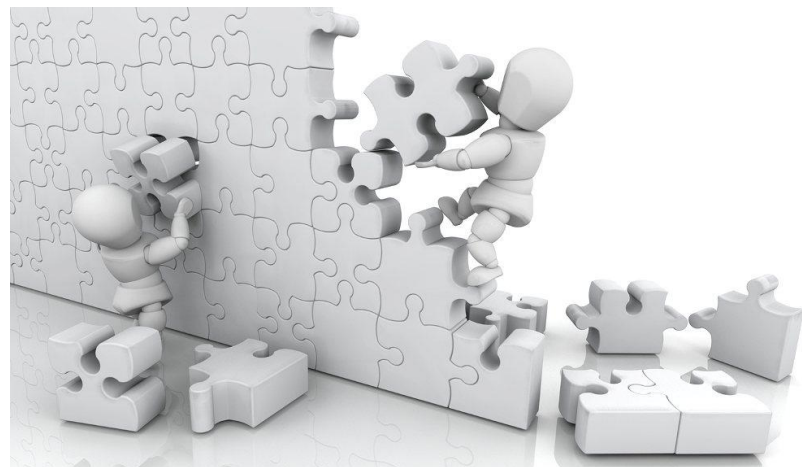
❑ What We Will Do ?

❑ For Client side :

- ❑ Create static web pages using **HTML 4/5**
- ❑ Add a style using **CSS**
- ❑ Add client script using **JavaScript**

❑ For Server side:

- ❑ Create dynamic web pages using **JSP, JSF**



Web Building

Full Stack Web Developer

- ❑ Build complex *server-side web applications* that use *databases*.
- ❑ Build applications that can support any *front-end*.





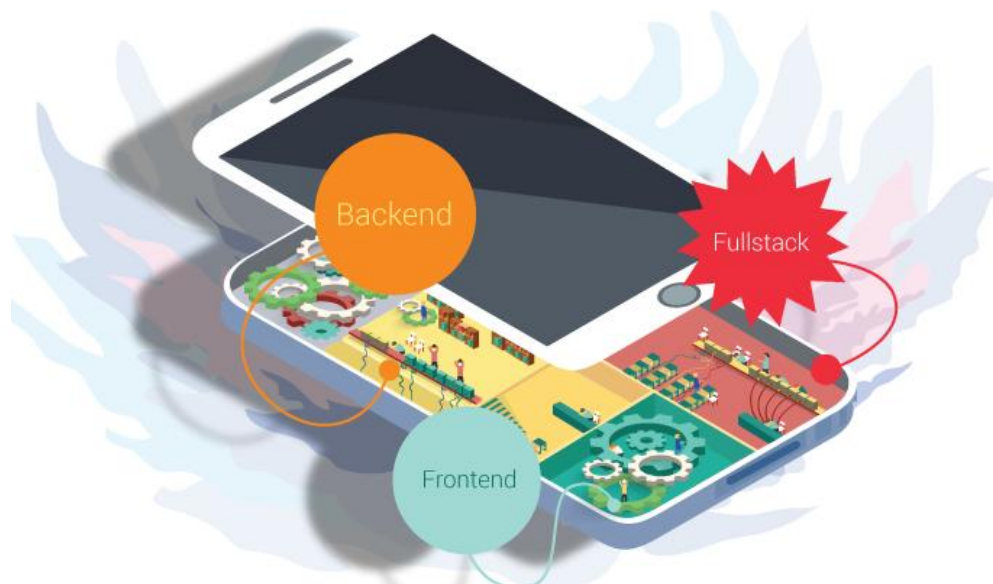
Web Building



Full Stack Web Developer



Bootstrap



ORACLE[®]
PL SQL



Java™ Education & Technology Services

Chapter 2

Web Building

HTML

(Hyper-text Markup Language)

- ❑ HTML stands for **Hyper Text Markup Language**
- ❑ HTML is a **Text based language**.
- ❑ A markup language is a set of **markup tags**
 - ❑ Each HTML tag describes different document content
 - ❑ a Web browser (Chrome, IE, Firefox, Safari) is to read HTML documents and display them.
- ❑ International Standards **ISO 8879** - Standard Generalized Mark-up Language (**SGML**).

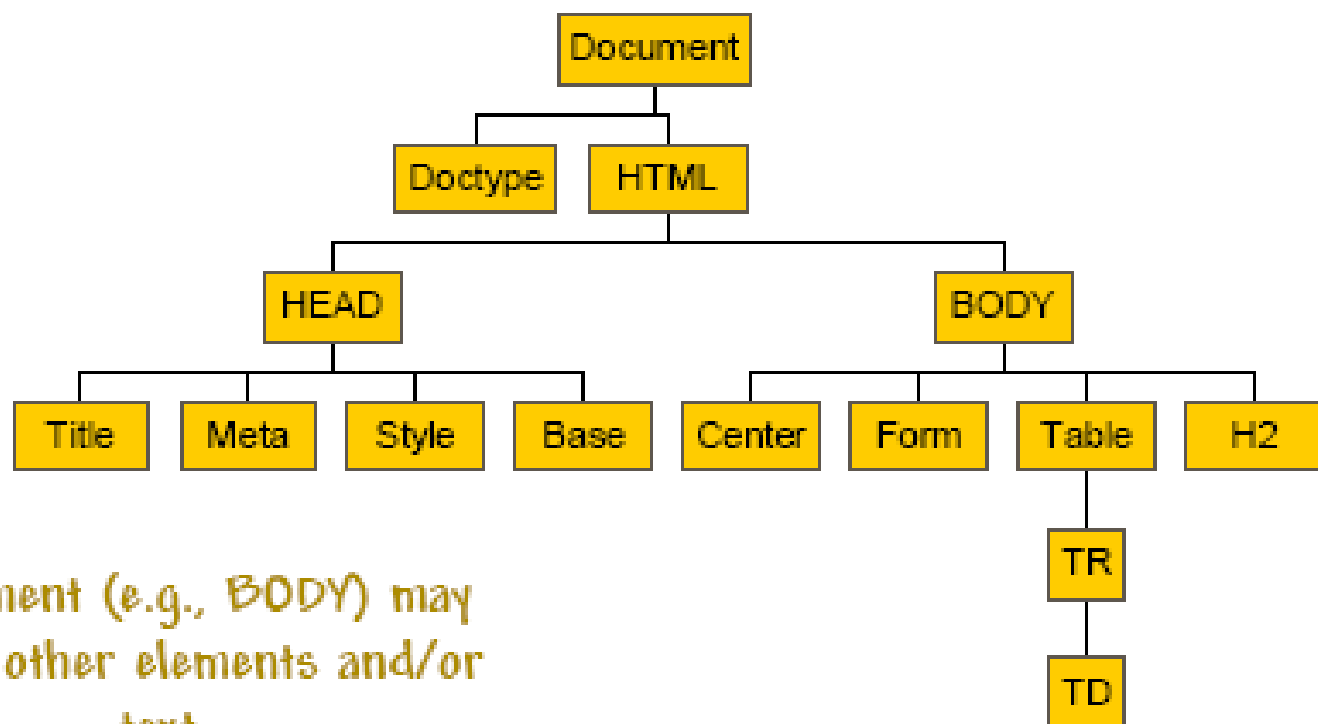




HTML

- ☐ The browser does not display the HTML tags, but uses them to determine how to display the document.
- ☐ To display a document correctly, the browser must know all HTML versions you used.

Version	Year
HTML	1991
HTML 2.0	1995
HTML 3.2	1997
HTML 4.0.1	1999
XHTML	2000
HTML 5	2014



An element (e.g., BODY) may contain other elements and/or text

- ❑ Begin with a (<); end with a (>)
- ❑ Most tags are paired into beginning and ending tags; for example,

** Hello world**

Hi *<i> Ahmed </i> Ali*

**
**

<i> Hello </i> world

Hello world Hi *Ahmed* Ali

Hello world

HTML Tags



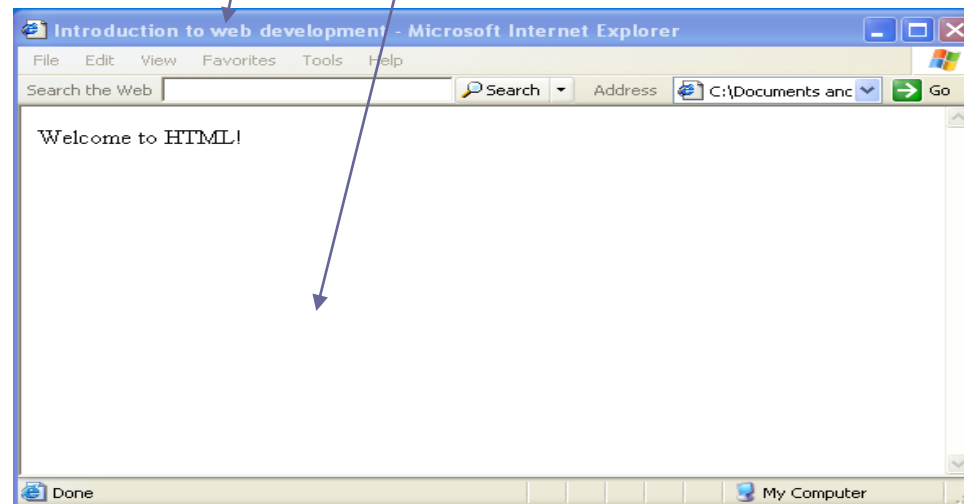
HTML Tags

web page's file extension is .htm or .html

```
<html>
  <head>
    <title> Introduction to web
      development </title>
  </head>
  <body>
    <p>Welcome to HTML!</p>
  </body>
</html>
```

Title tags

Body tags



❑ Head Section

- ❑ `<title>` window Title `</title>`
- ❑ `< Meta>` tags are used to store information usually relevant to browsers and search engines.
 - ❑ `<META name="DESCRIPTION" content="AN HTML Tutorial" >`
 - ❑ `<META name="KEYWORDS" content="html, webdesign, javascript" >`
 - ❑ `<META name="AUTHOR" content="JETS" >`
 - ❑ `<META http-equiv="REFRESH" content="5; url=http://www.echoecho.com" >`
 - ❑ `<META http-equiv="expires" content="Sun, 31 Jan 2025 17:35:00 GMT" >`



- ❑ Body Section
 - ❑ Body Attributes
 - ❑ Body Tags



☐ Body Section

☐ Body Attributes

☐ link

☐ vlink

☐ alink

☐ Bgcolor

☐ Background

☐ Bgproperties [Default: empty string, fixed and/or repeat] *IE only*

☐ Topmargin / leftmargin / bottommargin / rightmargin

```
<body bgcolor="#FFFFFF" link="#C0C0C0"
vlink="#808080" alink="#FF0000" >
```

```
<body alink="RED" background="mylg.bmp"
bgproperties="fixed" >
```




HTML Tags

- ❑ Body Section

- ❑ Body Attributes

- ❑ Body Tags

- ❑ Text [[Formatting](#), [Resizing](#), [Layout](#), [Listing](#)]

- ❑ Tables

- ❑ Links [[To local pages](#), [To pages at other sites](#), [To bookmarks](#)]

- ❑ Forms

- ❑ Images [[Inserting images \(GIF and jpg\)](#), [Adding a link to an image](#)]



HTML Tags



- Body Section

- Body Tags

- Text----Formatting

text	writes text as bold
<i>text</i>	writes text in italics
<u>text</u>	writes underlined text
_{text}	lowers text and makes it smaller
^{text}	lifts text and makes it smaller
<blink>text</blink>	guess yourself! (Note: Netscape only.)
<strike>text</strike>	strikes a line through the text
<pre>text</pre>	writes text exactly as it is, including spaces.
text	usually makes text bold

□ Body Section

□ Body Tags

□ Text --- size

<code><big>text</big></code>	increase the size by one
<code><small>text</small></code>	decrease the size by one
<code><h1>text</h1></code>	writes text in biggest heading
<code><h6>text</h6></code>	writes text in smallest heading
<code>text</code>	writes text in smallest font size. (8 pt)
<code>text</code>	writes text in biggest font size (36 pt)



HTML Tags

- Body Section

- Body Tags

- TextLayout

<code><p>text</p></code>	Adds a paragraph break after the text. (2 linebreaks).
<code><p align="left">text</p></code>	Left justify text in paragraph.
<code><p align="center">text</p></code>	Center text in paragraph.
<code><p align="right">text</p></code>	Right justify text in paragraph.
<code>text
</code>	Adds a single linebreak where the tag is.
<code><center>text</center></code>	Center text.
<code><div align="center">text</div></code>	Center text.
<code><div align="left">text</div></code>	Left justify text.
<code><div align="right">text</div></code>	Right justify text.

❑ Body Section

❑ Body Tags

❑ Text

```
<font color="red" face="arial" size="2">
```

This local text looks different.

```
</font>
```

```
<basefont face="arial, verdana, courier" size="4" color="green">
```

- ☐ Body Section

- ☐ Body Tags

- ☐ Links

- ☐ Normal Links

- ☐ Email Links

- ☐ Anchor Links



- ❑ Body Section

- ❑ Body Tags

- ❑ Links

- ❑ Normal Links

- Create a Link

Click `` here `` to go to yahoo.

- Colors on Text Links

`<body link="#C0C0C0" vlink="#808080" alink="#FF0000">`

- Link Targets

``

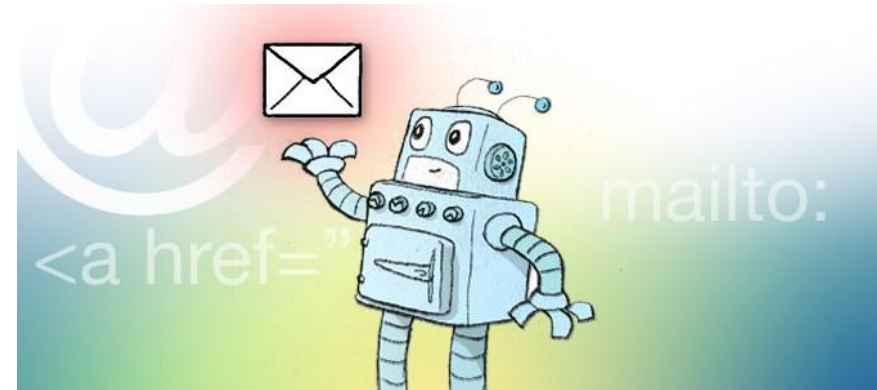


❑ Body Section

❑ Body Tags

❑ Links

❑ Email Links



Mail to

Click ` Email Me`

Subject

` Send Mail `

Body

`<a href="mailto:email@hotmail.com?subject=Welcome
&body=Please send me a copy of your new program!">Email Me`

- ❑ Body Section

- ❑ Body Tags

- ❑ Links

- ❑ Anchor Links

1. Create a link pointing to the anchor

``

2. Create the anchor itself.

Click `` Here `` to read Chapter 4

When you link to anchors on external pages use this syntax

`` Here ``



❑ Body Section

❑ Body Tags

❑ List

❑ Unordered List

`<ul type="disc">`

`Coffee`

`Tea`

`Milk`

``

- Coffee
- Tea
- Milk

- Coffee
- Tea
- Milk

`<ul type="circle">`

`<ul type="square">`

- Coffee
- Tea
- Milk

□ Body Section

□ Body Tags

□ List

I. Hindi II. English III. Maths IV. Physics	i. Hindi ii. English iii. Maths iv. Physics	a. Hindi b. English c. Maths d. Physics	A. Hindi B. English C. Maths D. Physics
--	--	--	--

□ ordered List

- Plain numbers ` `
- Capital Letters `<ol type="A">`
- Small Letters `<ol type="a">`
- Capital Roman Numbers `<ol type="I">`
- Small Roman Numbers `<ol type="i">`
- Start from `<ol start="5">`

HTML Tags

- ❑ Body Section

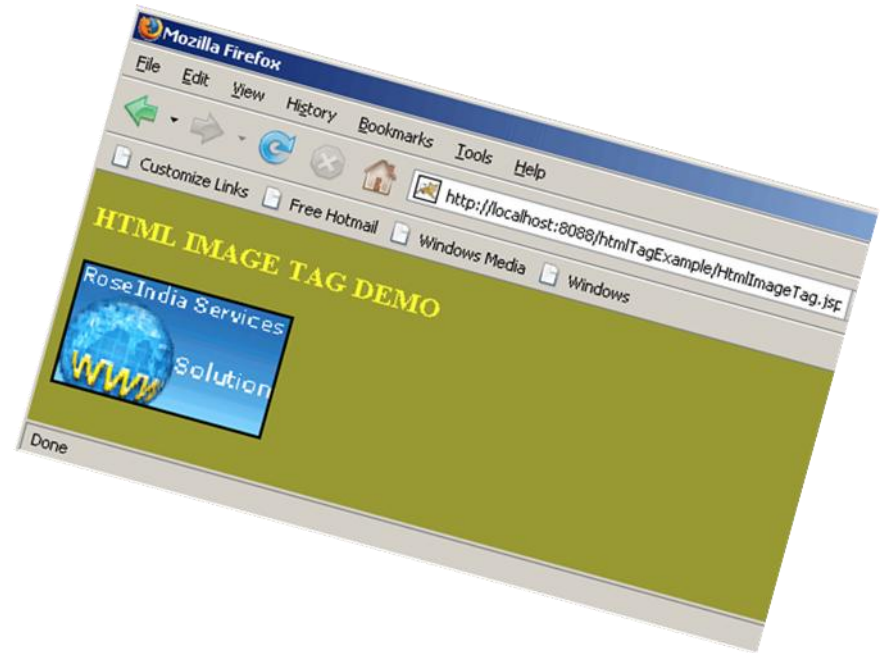
- ❑ Body Tags

- ❑ Images

- ❑ Normal Image

- ❑ Image Alignement

- ❑ Image Map.



❑ Body Section

❑ Body Tags

❑ Images

❑ Normal Image

```

```

```

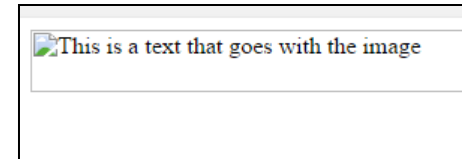
```

```

```

```

```








❑ Body Section

❑ Body Tags

❑ Images

❑ Image Alignment

Value	Description
left	Align the image to the left
right	Align the image to the right
middle	Align the image in the middle
top	Align the image at the top
bottom	Align the image at the bottom

Alignment	Result
LEFT	 <p>This positions the image at the left side, with text flowing around it on the right.</p>
RIGHT	<p>This positions the image at the right side, with text flowing around it on the left.</p> 
TOP	 <p>Here, the image runs into the paragraph and the line containing the image is aligned with the image top.</p>
BOTTOM	 <p>Here, the image runs into the paragraph and the line containing the image is aligned with the image bottom.</p>
MIDDLE	 <p>Here, the image runs into the paragraph and the line containing the image is aligned with the image center.</p>

❑ Body Section

❑ Body Tags

❑ Images

❑ Image Map

```

```

```
<map name="example">
```



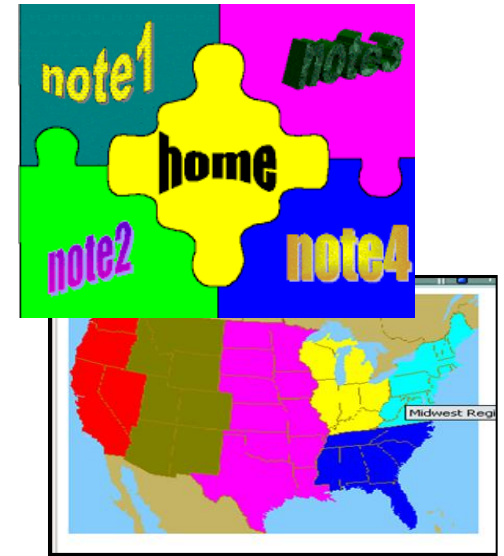
```
<area shape="Rect" Coords="0,0,29,29" href="http://www.yahoo.com">
```

```
<area shape="circle" Coords="30,30,59,59" Href="http://www..com">
```

```
<area shape="polygon" Coords="30,30,59,59,70,75" Href="http://www..com">
```

```
</map>
```

```
</img>
```



- Body Section

- Body Tags

- bgsound



```
<bgsound src="123.mid" loop=infinite volume=-500>
```

```
</bgsound>
```


- ❑ Body Section

- ❑ Body Tags

- ❑ object



```
<object type="audio/mpeg" data="sound.mp3">
  <param name="controller" value="true" />
  <param name="autoplay" value="false" />
</object>
```



HTML Tags



□ Body Section

□ Entity Name

Result	Description	Entity Name	Entity Number
	non-breaking space	 	
<	less than	<	<
>	greater than	>	>
&	ampersand	&	&
¢	cent	¢	¢
£	pound	£	£
¥	yen	¥	¥
€	euro	€	€
§	section	§	§
©	copyright	©	©
®	registered trademark	®	®
™	trademark	™	™

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN"
    "http://www.w3.org/TR/html4/strict.dtd">
<HTML>
  <HEAD>
    <TITLE>The document title</TITLE>
  </HEAD>
  <BODY>
    <H1>Main heading</H1>
    <P>A paragraph.</P>
    <P>Another paragraph.</P>
    <UL>
      <LI>A list item.</LI>
      <LI>Another list item.</LI>
    </UL>
  </BODY>
</HTML>
```



Lab Exercise

- **2nd Assignment :**

- Create your personal web site which contains three pages:
 1. welcome page
 - This page should include an image that links to the home page (page 2),
 - if the user didn't click the image, he will be redirected automatically to page3 (sites directory).
 - The page should also include a welcome marquee.



• 2nd Assignment :

- Create your personal web site which contains three pages:
 - 2. Home page
 - Your name (Heading)
 - Your e-mail address (with link)
 - Add three paragraphs with headings for your personal data, interests and plans.
 - List all computer related experience.
 - Your picture, the image tags must have the alternate text attribute.
 - Use at least four of the Text Formatting Tags.
 - Use either a colored background or background image for your web page.
 - From it user can go to sites directory page.

• 2nd Assignment :

- Create your personal web site which contains three pages:
 3. Sites directory page
 - This page should include an image map that each name should link to the corresponding website in another browser window, the "my site" part should link to your current.






using notepad or any HTML editor