

# **BIT 2331 WEB PROGRAMMING**

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# Content

**I. Introduction to Client/Server Computing**

**II. Web Programming**

**III. Web Database**

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- Chapter 3: JavaScript
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# INTRODUCTION TO HTML

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# INTRODUCTION OF HTML

- HTML is a language for describing web pages.
- HTML stands for **H**yper **T**ext **M**arkup **L**anguage
- HTML is not a programming language, it is a **markup language**
- A markup language is a set of **markup tags**
- HTML uses **markup tags** to describe web pages

# INTRODUCTION OF HTML

- HTML (Hypertext Markup Language) is used to create document on the World Wide Web. It is simply a collection of certain key words called 'Tags' that are helpful in writing the document to be displayed using a browser on Internet.
- It is a platform independent language that can be used on any platform such as Windows, Linux, Macintosh, and so on.
- To display a document in web it is essential to mark-up the different elements(headings, paragraphs , tables , form, list, and so on) of the document with the HTML tags.
- To view a mark-up document user has to open the document in a browser. A browser understands and interpret the HTML tags, identifies the structure of the document (which part are which) and makes decision about presentation (how the parts look) of the document.
- HTML also provides tags to make the document look attractive using graphics, font size and colors. User can make a link to the other document or the different section of the same document by creating Hypertext Links also known as Hyperlinks

# OBJECTIVE OF HTML

- create, save and view a HTML document
- format a web page using section heading tags
- describe Ordered and Unordered lists
- explain graphics in HTML document
- describe hypertext links and making text/image link



# WORLD WIDE WEB

- The **World Wide Web** (abbreviated as **WWW** or **W3** and commonly known as **the Web**) is a system of interlinked hypertext documents accessed via the Internet.
- With a web browser, one can view web pages that may contain text, images, videos, and other multimedia and navigate between them via hyperlinks.

# HTML TOOLS

- There are two tools of HTML.
- a) **HTML Editor:** it is the program that one uses to create and save HTML documents. They fall into two categories:
  - Text based or code based which allows one to see the HTML code as one is creating a document.e.g. Notepad.
  - Netscape composer

# HTML TOOLS

b) **Web Browser:** it is the program that one uses to view and test the HTML documents. They translate Html encoded files into text,image,sounds and other features user see. Microsoft Internet Explorer,Netscape,Mosaic Chrome are examples of browsers that enables user to view text and images and many more other World Wide Web featureres.They are software that must be installed on user computer.

# HTML TERMINOLGY

- Some commonly used terms in HTML are:
  - a) **Tag:** Tags are always written within angles brackets. it is a piece of text is used to identify an element so that the browser realizes how to display its contents. e.g.<HTML> tag indicates the start of an HTML document .HTML tag can be two types. They are:-
    - **-Paired Tags:** A tag is said to be a paired tag if text is placed between a tag and its companions tag. In paired tag ,the first tag is referred to as opening tag and the second tag is referred to as closing tag. **Eg. <p></p>**
    - **-Unpaired Tags:** An unpaired tag does not have a companion tag .unpaired tag also known as singular or Stand-Alone tags. e.g: <br>,<hr> etc.

# HTML TERMINOLOGY

- b) **Attribute:** Attribute is the property of an tag that specified in the opening angle brackets. It supplies additional information like color,size,home font-style etc to the browser about a tag. E.g. most of the common attributes are height, color,width,src,border,align etc.
- c) **DTD:** Document Type Definition is a collection of rules written in standard Generalized Markup Language(SGML). HTML is define in terms of its DTDS. All the details of HTML tags, entities and related document structure are defined in the DTDS.
- d) **ELEMENT:** Element is the component of a document's structure such as a title, a paragraph or a list. It can include an opening and a closing tag and the contents within it.

## HOW TO CREATE AN HTML DOCUMENT

- The essential tags that are required to create a HTML document are:
- `<HTML>.....</HTML>`
- `<HEAD>.....</HEAD>`
- `<BODY>.....</BODY>`

# HTML Tag <HTML>

- The <HTML> tag encloses all other HTML tags and associated text within your document. It is an optional tag. You can create an HTML document that omits these tags, and your browser can still read it and display it. But it is always a good form to include the start and stop tags. The format is:

- <HTML>

Your Title and Document (contains text with HTML tags) goes here

- </HTML>

Most HTML tags have two parts, an opening tag and closing tag. The closing tag is the same as the opening tag, except for the slash mark e.g. </HTML>. The slash mark is always used in closing tags.

# An HTML document has two distinct parts HEAD and BODY

- <HTML>
- <HEAD>
- .....
- .....
- .....
- </HEAD>
- <BODY>
- .....
- .....
- .....
- </BODY>
- </HTML>



# HEAD Tag <HEAD>

- HEAD tag comes after the HTML start tag. It contains TITLE tag to give the document a title that displays on the browsers title bar at the top. The Format is:

<HEAD>

<TITLE>

Your title goes here

</TITLE>

</HEAD>

# BODY Tag <BODY>

- The BODY tag contains all the text and graphics of the document with all the HTML tags that are used for control and formatting of the page. The Format is:

<BODY>

Your Document goes here

</BODY>

An HTML document, web page can be created using a text editor, Notepad or WordPad. All the HTML documents should have the extension .htm or html. It require a web browser like Internet Explorer or Netscape Navigator/Communicator to view the document.

# Attributes used with <BODY>

- BGCOLOR: used to set the background color for the document Example:

```
<BODY BGCOLOR="yellow">
```

Your document text goes here.

```
</BODY>
```

- TEXT: used to set the color of the text of the document Example:

```
<BODY TEXT="red">Introduction to HTML:: 77
```

Document text changed to red color

```
</BODY>
```

Document text changed to red color

# Attributes used with <BODY>

- **MARGINS:** set the left hand/right hand margin of the document  
LEFTMARGIN: set the left hand margin of the document Example:

<BODY LEFTMARGIN="60">

This document is indented 60 pixels from the left hand side of the page.

</BODY>

- TOPMARGIN: set the left hand margin of the document Example:

<BODY TOPMARGIN="60">

This document is indented 60 pixels from the top of the page.

</BODY>

# Attributes used with <BODY>

- **BACKGROUND:** It is used to point to an image file (the files with an extension .gif, .jpeg) that will be used as the background of the document. The image file will be tiled across the document. Example:

<BODY BACKGROUND="filename. if">

Your document text goes here

</BODY>

# Follow the steps to create and view in browser

- Step-1: Open text editor, Notepad (click on Start→ all Programs→ Accessories Notepad), Search: sublimetext, vs code
- Step-2: Enter the following lines of code:

```
<HTML>
<HEAD>
<TITLE>
My first Page
</TITLE>
</HEAD>
<BODY>
WELCOME TO MY FIRST WEB PAGE
</BODY>
</HTML>
```

# SAVING AND VIEWING AN HTML DOCUMENT

- Step-3: Save the file as myfirstpage.html (go to File-Save As give File name: myfirstpage.html-choose save as type: All Files-click save)
- Step-4: Viewing document in web browser (open Internet Explorer-click on File-Open-Browse-select the file myfirstpage.html-click open-click ok)

# TEXT TAGS

- Text tags are divided into two categories as:
  - Character-level tags and attributes which apply to formatting of individual letters or words.
  - Paragraph level tags and attributes which apply
    - =To formatting of sections of text.



# Character Formatting Tag

- The character formatting tags are used to specify how a particular text should be displayed on the screen to distinguish certain characters within the document.

# The most common character formatting tags are

- Boldface <B>: displays text in BOLD

Example: Welcome to the <B> Internet World </B>

Output: Welcome to the Internet World

- Italics <I>: displays text in Italic

Example: Welcome to the <I> Internet World </I>

Output: Welcome to the Internet World

- Subscript <SUB>: displays text in Subscript
- Superscript <SUP>: displays text in Superscript
- Small <SMALL>: displays text in smaller font as compared to normal font
- Big <BIG>: displays text in larger font as compared to normal font
- Underline<U>specifies that the enclosed text be underline

Example:<U> hello</u>

Output: hello

# Font Colors and Size:<FONT>

- By using <FONT> Tag one can specify the colors, size of the text. Example:

<FONT> Your text goes here </FONT>

Attributes of <FONT> are:

- COLOR: Sets the color of the text that will appear on the

screen. It can be set by giving the value as #rr0000 for red (in RGB hexadecimal format), or by name.

Example: <FONT COLOR="RED"> Your text goes here </FONT>

# Font Colors and Size:<FONT

- SIZE: Sets the size of the text, takes value between 1 and 7, default is 3. Size can also be set relative to default size for example; SIZE=+X, where X is any integer value and it will add with the default size.
- Example:  
<FONT SIZE=5> Font Size changes to 5 </FONT>
- FACE: Sets the normal font type, provided it is installed on the user's machine.
- Example:
- <FONT FACE="ARIAL"> the text will be displayed in Arial</FONT>

# An HTML document formatText.html shows the use of Character Formatting Tags.

<HTML>

<HEAD>

<TITLE>

Use of Character Formatting Text Tags

</TITLE>

</HEAD>

<BODY>

<H1><I> Welcome to the world of Internet</I></H1>

It is a

<FONT COLOR="BLUE" SIZE="4">

<U>Network of Networks</U>

</FONT>

</BODY>

</HTML>

# OUTPUT

*Welcome to the world of Internet*

It is a Network of Networks

# MARQUEE TAG

- This tag is used text horizontally across the screen. it is mainly used to deliver a specific message to the visitor or to scroll Ads on a page.
- Example: `<marquee> hello world</marquee>`

# Attributes of marquee tag

- Bgcolor : Sets the background color of the marquee.
- Direction :Sets the direction of the marquee box to either left-to-right, right-to-left, up-to-down and down-to-up.
- Width: This sets how wide the marquee should be.
- Loop: This sets how many times the marquee should 'Loop' its text. Each trip counts as one loop.



# paragraph Formatting Tag

- Paragraph level formatting applies to formatting of an entire portion of text unlike character level tags where only individual letters or words are formatted.

# The most common paragraph formatting tags are

- Using paragraph tag: <P>

This tag <p> indicates paragraph, used to separate to paragraphs with a blank line Example:

<P> Welcome to the world of HTML </P>

<P> First paragraph. Text of First paragraph goes here</P>

- Output:

Welcome to the world of HTML

First paragraph. Text of First paragraph goes here

# Using Line Break Tag: <BR>

- The empty tag <BR> is used, where the text needs to start from a new line and not continue on the same line. To get every sentence on a new line, it is necessary to use a line break.

- Example:

```
<BODY>University of Rwanda<BR>  
College of Business and Economics<BR>  
HUYE</BODY>
```

- Output:

```
University of Rwanda  
College Business and Economics  
Huye
```

# Using Preformatted Text Tag: <PRE>

- <PRE> tag can be used, where it requires total control over spacing and line breaks such as typing a poem. Browser preserves your space and line break in the text written inside the tag.

- Example:

<PRE>

National Institute of Open Schooling

B-31B, Kailash Colony

New Delhi-110048

</PRE>

- Output:

National Institute of Open Schooling

B-31B, Kailash Colony

New Delhi-11004

An HTML document control.html shows the use of <P>,  
<BR> and <PRE>

<HTML>

<HEAD>

<TITLE>

Use of Paragraph, Line break and preformatted text Tag

</TITLE>

</HEAD>

<BODY>

HTML Tutorial

<P>

HTML stands for Hypertext Markup Language

It is used for creating web page. It is very simple  
and easy to learn.

An HTML document control.html shows the use of <P>, <BR> and <PRE>

</P>

<P>

HTML stands for Hypertext Markup Language.<BR>  
It is used for creating web page. It is very simple<BR>  
and easy to learn.<BR>

</P>

<PRE>

HTML stands for Hypertext Markup Language  
It is used for creating web page. It is very simple  
and easy to learn.

</PRE>

</BODY>

</HTML>

# OUTPUT

- HTML

HTML stands for Hypertext Markup Language. It is used for creating web pages. It is very simple and easy to learn.

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It is used for creating web pages. It is very simple  
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and easy to learn.

# Using Horizontal Rule Tag: <HR>

- An empty tag <HR> basically used to draw lines and horizontal rules. It can be used to separate two sections of text.

- Example:

<BODY>

Your horizontal rule goes here. <HR>

The rest of the text goes here.

</BODY>

- Output:

Your horizontal rule goes here.

---

The rest of the text goes her



# <HR> accepts following attributes

- **SIZE:** Determines the thickness of the horizontal rule. The value is given as a pixel value.

Example: <HR SIZE="3">

- **WIDTH:** Specifies an exact width of HR in pixels, or arelative width as percentage of the document width.

Example: <HR WIDTH="50% ">, horizontal rule a width a 50 percent of the page width.

- **ALIGN:** Set the alignment of the rule to LEFT, RIGHT and CENTER. It is applicable if it is not equal to width of the page.
- **NOSHADE:** If a solid bar is required, this attribute is used; it specifies that the horizontal rule should not be shaded at all.
- **COLOR:** Set the color of the Horizontal rule.

Example: <HR COLOR="BLUE">

Example of <HR> with its attribute:

<HR ALIGN=' 'CENTER' ' WIDTH=' '50%' ' SIZE=' '3" NOSHADE  
COLOR="BLUE">

# HEADING:

<H1>.....<H6>tags

HTML has six header tags <H1>, <H2>.....<H6> used to specify section headings. Text with header tags is displayed in larger and bolder fonts than the normal body text by a web browser. Every .header leaves a blank line above and below it when displayed in browse.

Example: An HTML document, headings.html shows  
the different section headings

```
.  
<HTML>  
<HEAD>  
<TITLE>  
Section Heading  
</TITLE>  
</HEAD>  
<BODY>  
<H1> This is Section Heading 1 </H1>  
<H2> This is Section Heading 2 </H2>  
<H3> This is Section Heading 3 </H3>  
<H4> This is Section Heading 4 </H4>  
<H5> This is Section Heading 5 </H5>  
<H6> This is Section Heading 6 </H6>  
</BODY>  
</HTML>
```

# Viewing output of HTML document headings.html in browse

This is Section Heading 1

This is Section Heading 2

This is Section Heading 3

This is Section Heading 4

This is Section Heading 5

This is Section Heading 6

# SPECIAL CHARACTER

- There are certain special characters that can be used while creating document. Following are some special character:

Symbols	Entity
©, ®	&copy, &reg
1/4, 1/2, 3/4	&frac14, &frac12, &frac34
÷, <, >, ≤, ≥	&divide, &lt;, &gt;, &le, &ge
&	&amp
♣ ♠ ♥	&spades, &clubs, &hearts

All these special character must be ended with a semicolon;

# Example:

<PRE>

The copyright symbol is: &COPY;

The registered rank is: &REG;

</PRE>

- Output:

The copyright symbol is:©

The registered rank is:®

# ADVANTAGES OF HTML

- Easy to use
- Loose syntax (although, being too flexible will not comply with standards).
- Supported on almost every browser, if not all browsers.
- Widely used; established on almost every website, if not all websites.
- Very similar to XML syntax, which is increasingly used for data storage.
- Free - You need not buy any software.
- Easy to learn & code even for novice programmers.

# DISADVANTAGES OF HTML

- It cannot produce dynamic output alone, since it is a static language
- Sometimes, the structuring of HTML documents is hard to grasp
- You have to keep up with deprecated tags, and make sure not to use them
- Deprecated tags appear because another language that works with HTML has replaced the original work of the tag; thus the other language needs to be learned (most of the time, it is CSS)
- Security features offered by HTML are limited



# Exercise(Basic)

Write the basic html document with two paragraphs

```
<html>
```

```
<head>
```

```
<title>My First HTML Page</title>
```

```
</head>
```

```
<body>
```

```
<h1>Hello World!</h1>
```

```
<p>This is my first HTML page.</p>
```

```
</body>
```

```
</html>
```

# Explication

This HTML page has a `<!DOCTYPE html>` declaration, which specifies that this is an HTML5 document. The `<html>` element is the root element of the HTML document and contains all other elements.

The `<head>` element contains information about the document that is not displayed in the actual webpage, such as the title of the page (which is displayed in the browser's tab).

The `<body>` element contains the content that is displayed on the webpage, such as headings and paragraphs. In this case, the page contains an `<h1>` heading with the text "Hello World!" and a `<p>` paragraph with the text "This is my first HTML page."

## Exercise 2(Links)

Write an html page without css. The page must have 3 links Home, about us and contact us in the navigation bar. on the home page display lorem ipsum text, on the about us populate it with lorem ipsum, and finally on the contact us put on the list.

# Check code

In this HTML page, there is a navigation bar with three links: Home, About Us, and Contact Us. Each link points to a different section of the page with an id attribute that matches the link's href attribute.

The **<header>** element contains the navigation bar, which is defined with a **<nav>** element and an unordered list **<ul>**. The list items **<li>** represent the links and are defined with anchor elements **<a>**.

The **<main>** element contains the main content of the page, which is split into three sections with unique id attributes. Each section contains a heading and a block of text or a list.

## Exercise 3(specialTags)

design an html page with 5 pages Home, list, form, table, radio button. On the homepage put lorem ipsum, on list put on a list of any ten items, on form put on a form of student object, on table put on the table of student object data members for radio button put anything with radio button.

# Summarize

```
<!DOCTYPE html>
<html>
<head>
  <title>Simple Menu with Separate Divs (Fixed)</title>
</head>
<body>

  <div style="display: flex; align-items: center;">

    <div> 
    </div>

    <div style="display: flex; flex: 1;"> <div> <a href="#">Home</a>
      <a href="#">About</a>
    </div>

    <div style="flex: 1; text-align: right;">
      <a href="#">Contact</a>
      <a href="#">Login</a>
    </div>
  </div>

</div>

</body>
</html>
```

# HTML Tags: Basic HTML

Tag	Description
<a href="#"><u>&lt;!DOCTYPE&gt;</u></a>	Defines the document type
<a href="#"><u>&lt;html&gt;</u></a>	Defines an HTML document
<a href="#"><u>&lt;head&gt;</u></a>	Contains metadata/information for the document
<a href="#"><u>&lt;title&gt;</u></a>	Defines a title for the document
<a href="#"><u>&lt;body&gt;</u></a>	Defines the document's body
<a href="#"><u>&lt;h1&gt; to &lt;h6&gt;</u></a>	Defines HTML headings
<a href="#"><u>&lt;p&gt;</u></a>	Defines a paragraph
<a href="#"><u>&lt;br&gt;</u></a>	Inserts a single line break
<a href="#"><u>&lt;hr&gt;</u></a>	Defines a thematic change in the content
<a href="#"><u>&lt;!--...--&gt;</u></a>	Defines a comment

# HTML Tags: Formatting

Tag	Description
<a href="#"><u>&lt;acronym&gt;</u></a>	Not supported in HTML5. Use <abbr> instead. Defines an acronym
<a href="#"><u>&lt;abbr&gt;</u></a>	Defines an abbreviation or an acronym
<a href="#"><u>&lt;address&gt;</u></a>	Defines contact information for the author/owner of a document/article
<a href="#"><u>&lt;b&gt;</u></a>	Defines bold text
<a href="#"><u>&lt;bdi&gt;</u></a>	Isolates a part of text that might be formatted in a different direction from other text outside it
<a href="#"><u>&lt;bdo&gt;</u></a>	Overrides the current text direction
<a href="#"><u>&lt;big&gt;</u></a>	Not supported in HTML5. Use CSS instead. Defines big text
<a href="#"><u>&lt;blockquote&gt;</u></a>	Defines a section that is quoted from another source
<a href="#"><u>&lt;center&gt;</u></a>	Not supported in HTML5. Use CSS instead. Defines centered text
<a href="#"><u>&lt;cite&gt;</u></a>	Defines the title of a work
<a href="#"><u>&lt;code&gt;</u></a>	Defines a piece of computer code



# HTML Tags: Formatting

Tag	Description
<a href="#"><u>&lt;del&gt;</u></a>	Defines text that has been deleted from a document
<a href="#"><u>&lt;dfn&gt;</u></a>	Specifies a term that is going to be defined within the content
<a href="#"><u>&lt;em&gt;</u></a>	Defines emphasized text
<a href="#"><u>&lt;font&gt;</u></a>	<b>Not supported in HTML5. Use CSS instead.</b> Defines font, color, and size for text
<a href="#"><u>&lt;i&gt;</u></a>	Defines a part of text in an alternate voice or mood
<a href="#"><u>&lt;ins&gt;</u></a>	Defines a text that has been inserted into a document
<a href="#"><u>&lt;kbd&gt;</u></a>	Defines keyboard input
<a href="#"><u>&lt;mark&gt;</u></a>	Defines marked/highlighted text
<a href="#"><u>&lt;meter&gt;</u></a>	Defines a scalar measurement within a known range (a gauge)
<a href="#"><u>&lt;pre&gt;</u></a>	Defines preformatted text
<a href="#"><u>&lt;progress&gt;</u></a>	Represents the progress of a task
<a href="#"><u>&lt;q&gt;</u></a>	Defines a short quotation
<a href="#"><u>&lt;rp&gt;</u></a>	Defines what to show in browsers that do not support ruby annotations
<a href="#"><u>&lt;rt&gt;</u></a>	Defines an explanation/pronunciation of characters (for East Asian typography)

# HTML Tags: Formatting

Tag	Description
<a href="#"><u>&lt;ruby&gt;</u></a>	Defines a ruby annotation (for East Asian typography)
<a href="#"><u>&lt;s&gt;</u></a>	Defines text that is no longer correct
<a href="#"><u>&lt;samp&gt;</u></a>	Defines sample output from a computer program
<a href="#"><u>&lt;small&gt;</u></a>	Defines smaller text
<a href="#"><u>&lt;strike&gt;</u></a>	<b>Not supported in HTML5. Use &lt;del&gt; or &lt;s&gt; instead.</b> Defines strikethrough text
<a href="#"><u>&lt;strong&gt;</u></a>	Defines important text
<a href="#"><u>&lt;sub&gt;</u></a>	Defines subscripted text
<a href="#"><u>&lt;sup&gt;</u></a>	Defines superscripted text
<a href="#"><u>&lt;template&gt;</u></a>	Defines a container for content that should be hidden when the page loads
<a href="#"><u>&lt;time&gt;</u></a>	Defines a specific time (or datetime)
<a href="#"><u>&lt;tt&gt;</u></a>	<b>Not supported in HTML5. Use CSS instead.</b> Defines teletype text
<a href="#"><u>&lt;u&gt;</u></a>	Defines some text that is unarticulated and styled differently from normal text

# HTML Tags: Formatting

Tag	Description
<a href="#"><u>&lt;var&gt;</u></a>	Defines a variable
<a href="#"><u>&lt;wbr&gt;</u></a>	Defines a possible line-break

# HTML Tags: Forms and Input

Tag	Description
<a href="#"><u>&lt;form&gt;</u></a>	Defines an HTML form for user input
<a href="#"><u>&lt;input&gt;</u></a>	Defines an input control
<a href="#"><u>&lt;textarea&gt;</u></a>	Defines a multiline input control (text area)
<a href="#"><u>&lt;button&gt;</u></a>	Defines a clickable button
<a href="#"><u>&lt;select&gt;</u></a>	Defines a drop-down list
<a href="#"><u>&lt;optgroup&gt;</u></a>	Defines a group of related options in a drop-down list
<a href="#"><u>&lt;option&gt;</u></a>	Defines an option in a drop-down list
<a href="#"><u>&lt;label&gt;</u></a>	Defines a label for an <input> element
<a href="#"><u>&lt;fieldset&gt;</u></a>	Groups related elements in a form
<a href="#"><u>&lt;legend&gt;</u></a>	Defines a caption for a <fieldset> element
<a href="#"><u>&lt;datalist&gt;</u></a>	Specifies a list of pre-defined options for input controls
<a href="#"><u>&lt;output&gt;</u></a>	Defines the result of a calculation

# HTML Tags: Frames

Tag	Description
<a href="#"><u>&lt;frame&gt;</u></a>	<b>Not supported in HTML5.</b> Defines a window (a frame) in a frameset
<a href="#"><u>&lt;frameset&gt;</u></a>	<b>Not supported in HTML5.</b> Defines a set of frames
<a href="#"><u>&lt;noframes&gt;</u></a>	<b>Not supported in HTML5.</b> Defines an alternate content for users that do not support frames
<a href="#"><u>&lt;iframe&gt;</u></a>	Defines an inline frame

# HTML Tags: Images

Tag	Description
<a href="#"><u>&lt;img&gt;</u></a>	Defines an image
<a href="#"><u>&lt;map&gt;</u></a>	Defines a client-side image map
<a href="#"><u>&lt;area&gt;</u></a>	Defines an area inside an image map
<a href="#"><u>&lt;canvas&gt;</u></a>	Used to draw graphics, on the fly, via scripting (usually JavaScript)
<a href="#"><u>&lt;figcaption&gt;</u></a>	Defines a caption for a <figure> element
<a href="#"><u>&lt;figure&gt;</u></a>	Specifies self-contained content
<a href="#"><u>&lt;picture&gt;</u></a>	Defines a container for multiple image resources
<a href="#"><u>&lt;svg&gt;</u></a>	Defines a container for SVG graphics

# HTML Tags: Audio / Video

Tag	Description
<a href="#"><u>&lt;audio&gt;</u></a>	Defines sound content
<a href="#"><u>&lt;source&gt;</u></a>	Defines multiple media resources for media elements (<video>, <audio> and <picture>)
<a href="#"><u>&lt;track&gt;</u></a>	Defines text tracks for media elements (<video> and <audio>)
<a href="#"><u>&lt;video&gt;</u></a>	Defines a video or movie

# HTML Tags: Links

Tag	Description
<a href="#"><u>&lt;a&gt;</u></a>	Defines a hyperlink
<a href="#"><u>&lt;link&gt;</u></a>	Defines the relationship between a document and an external resource (most used to link to style sheets)
<a href="#"><u>&lt;nav&gt;</u></a>	Defines navigation links



# HTML Tags: Lists

Tag	Description
<a href="#"><u>&lt;menu&gt;</u></a>	Defines an alternative unordered list
<a href="#"><u>&lt;ul&gt;</u></a>	Defines an unordered list
<a href="#"><u>&lt;ol&gt;</u></a>	Defines an ordered list
<a href="#"><u>&lt;li&gt;</u></a>	Defines a list item
<a href="#"><u>&lt;dir&gt;</u></a>	<b>Not supported in HTML5. Use &lt;ul&gt; instead.</b> Defines a directory list
<a href="#"><u>&lt;dl&gt;</u></a>	Defines a description list
<a href="#"><u>&lt;dt&gt;</u></a>	Defines a term/name in a description list
<a href="#"><u>&lt;dd&gt;</u></a>	Defines a description of a term/name in a description list

# HTML Tags: Tables

Tag	Description
<a href="#"><code>&lt;table&gt;</code></a>	Defines a table
<a href="#"><code>&lt;caption&gt;</code></a>	Defines a table caption
<a href="#"><code>&lt;th&gt;</code></a>	Defines a header cell in a table
<a href="#"><code>&lt;tr&gt;</code></a>	Defines a row in a table
<a href="#"><code>&lt;td&gt;</code></a>	Defines a cell in a table
<a href="#"><code>&lt;thead&gt;</code></a>	Groups the header content in a table
<a href="#"><code>&lt;tbody&gt;</code></a>	Groups the body content in a table
<a href="#"><code>&lt;tfoot&gt;</code></a>	Groups the footer content in a table
<a href="#"><code>&lt;col&gt;</code></a>	Specifies column properties for each column within a <code>&lt;colgroup&gt;</code> element
<a href="#"><code>&lt;colgroup&gt;</code></a>	Specifies a group of one or more columns in a table for formatting

# HTML Tags: Styles and Semantics

Tag	Description
<a href="#"><code>&lt;style&gt;</code></a>	Defines style information for a document
<a href="#"><code>&lt;div&gt;</code></a>	Defines a section in a document
<a href="#"><code>&lt;span&gt;</code></a>	Defines a section in a document
<a href="#"><code>&lt;header&gt;</code></a>	Defines a header for a document or section
<a href="#"><code>&lt;hgroup&gt;</code></a>	Defines a header and related content
<a href="#"><code>&lt;footer&gt;</code></a>	Defines a footer for a document or section
<a href="#"><code>&lt;main&gt;</code></a>	Specifies the main content of a document
<a href="#"><code>&lt;section&gt;</code></a>	Defines a section in a document
<a href="#"><code>&lt;search&gt;</code></a>	Defines a search section
<a href="#"><code>&lt;article&gt;</code></a>	Defines an article
<a href="#"><code>&lt;aside&gt;</code></a>	Defines content aside from the page content
<a href="#"><code>&lt;details&gt;</code></a>	Defines additional details that the user can view or hide
<a href="#"><code>&lt;dialog&gt;</code></a>	Defines a dialog box or window
<a href="#"><code>&lt;summary&gt;</code></a>	Defines a visible heading for a <code>&lt;details&gt;</code> element
<a href="#"><code>&lt;data&gt;</code></a>	Adds a machine-readable translation of a given content

# HTML Tags: Meta Info

Tag	Description
<a href="#"><u>&lt;head&gt;</u></a>	Defines information about the document
<a href="#"><u>&lt;meta&gt;</u></a>	Defines metadata about an HTML document
<a href="#"><u>&lt;base&gt;</u></a>	Specifies the base URL/target for all relative URLs in a document
<a href="#"><u>&lt;basefont&gt;</u></a>	<b>Not supported in HTML5. Use CSS instead.</b> Specifies a default color, size, and font for all text in a document

# HTML Tags: Programming

Tag	Description
<a href="#"><code>&lt;script&gt;</code></a>	Defines a client-side script
<a href="#"><code>&lt;noscript&gt;</code></a>	Defines an alternate content for users that do not support client-side scripts
<a href="#"><code>&lt;applet&gt;</code></a>	<b>Not supported in HTML5. Use <code>&lt;embed&gt;</code> or <code>&lt;object&gt;</code> instead.</b> Defines an embedded applet
<a href="#"><code>&lt;embed&gt;</code></a>	Defines a container for an external (non-HTML) application
<a href="#"><code>&lt;object&gt;</code></a>	Defines an embedded object
<a href="#"><code>&lt;param&gt;</code></a>	Defines a parameter for an object

# Exercise 4(multimedia)

Home	About	Contact	Table	Form	List	Audio	Video	Any	Settings

- Write html code that mimic this webpage. The contents are videos and their captions. The one on the right side are videos as link and caption.

More tags

Again

# CSS

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