Lecture 3

Webpage design using HTML

1- Web Design and Web Development

Web designing is the process of creating websites. It includes different aspects, including webpage layout, content production, and graphic design. Web design and web development are often used interchangeably, web design is technically a subset of web development.

- ***Web Designers*** work on the website style to create good visual looks and user experience of a website. The designer may use different software like Photoshop and Corel Draw to make the website more attractive.

- ***Web Developers*** are generally called programmers, they take the design created by the web designers and convert it into a fully functioning website. They use different software and tools like Javascript, Node.js, PHP, Python, etc.

2- Web Site key Points

The web designer must to consider some main point to make the website usable (user friendly), providing a satisfying experience.

1- **Availability and Accessibility:** A website must be available to users around the clock and accessible to everyone, including those with disabilities.

2- **Simplicity and Consistency:** is the best way to provide the usability of the website, the designer must think about the style such as:

- Color has the power to trigger the user responses to the website and affect the usability of the site.
- Typography that gets the user attention and his includes still photography, illustration, video and all forms of graphics.
- Imagery: includes images, illustration, video and all forms of graphics.

While **Consistency** means the website structure has a consistent layout of elements, fonts and language, within a website.

3-**Clarity**: The site should present information in a clear way so that users can easily understand what they can do and find what they are looking for without confusion.

3-**Learnability**: A website should be easy to learn, allowing users to quickly become familiar with the interface.

5-**Credibility**: The website must be trustworthy, providing content that is accurate so that users feel confident in the information provided by the site.

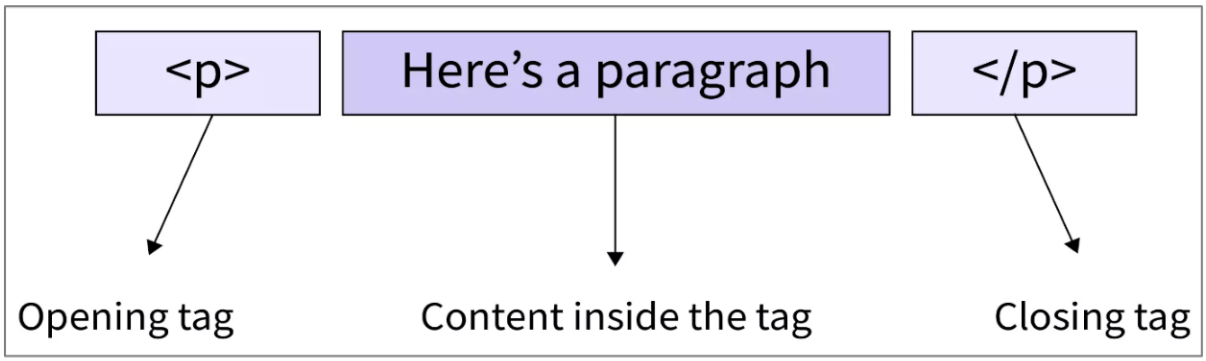
6- **Mobile Responsiveness**: the web site must be a mobile-friendly since most people browse the internet on their phones than on desktops, the site must look good and work well on smaller screens.

3- **SGML and HTML Standard**:

HTML is the standard markup language used for structing and presenting hypertext documents content on the web page. The letter **H** of **HTML** represent the hyperlink operation to link the web pages on the internet, while **TML represent Text Markup Language. HTML** is a member of the **Standard Generalized Markup Language (SGML). GML** is a defining markup language, allow the users to work on standardized formatting styles for electronic documents. It was developed and standardized by the International Organization for Standards (ISO) in 1986. SGML specifies the rules for tagging elements and provide **Document Type Definition**

(DTD)that describe each element of the document in a form that the computer can understand. Example of file name of type sgml: (File_Name.sgml)

Tage is the backbone to build websites. A markup language use Tags < > indicate the beginning and end of an HTML element in an HTML document, HTML tags help web browsers convert HTML documents into web pages. The tags consist of an opening < and >close angled bracket, between the **tags** < *there are the Markup Elements* >**.** The document can have multiple tags to describe document content.



3-1 HTML Versions:

HTML version **1.0** is the first version of introduced in 1991by Tim Berners-Lee, it was very simple. During the 1990s, the version developed and modified to 2.0 then came version 3.0 in 1997 that supported tables and text form, then version 4.0 provided support scripting through CSS (Cascading Style Sheets) and Java Script. The latest version is HTML 5.0 released in 2014 bringing the major changes and new features allowing more dynamic and interactive web pages.

⇒ NOTE :

HTML 4.0 Developed throughout 1997 by the W3C HTML Working Group, HTML 4.0 makes the Web more accessible, and more international. Then the version developed to HTML 5.0.

⇒ NOTE : The World Wide Web Consortium (W3C) is the main international standards organization for the World Wide Web. Founded in 1994 by Tim Berners-Lee. The W3C is responsible for the standards of HTTP, HTML, and other Web technologies providing more web security. W3C Recommended many HTML version like v3,4,5 and HTML5.2

Another version of HTML is XHTML (Extensible Hypertext Markup Language), version 1.0 produced in 2000 by (W3C) the difference between them is that HTML is has flexible syntax and follow SGML, standard while XHTML has a strict syntax and definitions, it follows the **Extensible Markup Language** (XML) rules.

4-HTML Editors

The HTML document is plain text files contain codes that a web browser uses to display information on the computer screen. Web pages can be created and modified by using text editors. HTML Editors enable users to generate the HTML source code documents quickly and easily. A simple text editor to write HTML code is Notepad (windows) or TextEdit (Macintosh).

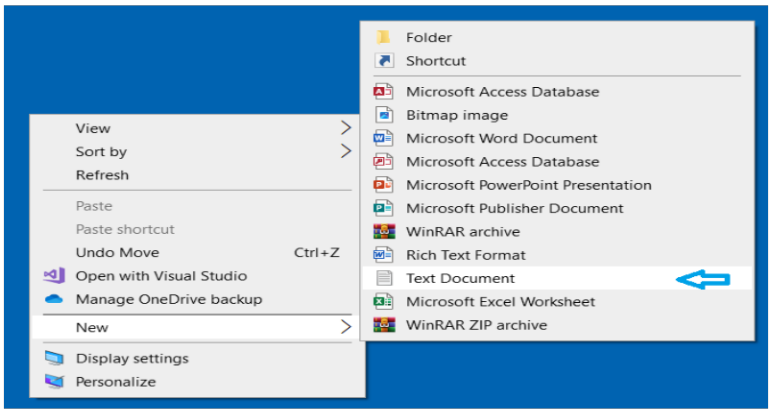
- **What is Notepad and where do I get it?**

A Notepad is the default Windows text editor. To open the Notepad in Windows systems:

- Right click on the disk top then select new the select **Notepad**
- Write the HTML source code.
- HTML file may include text, images, and other multimedia.
- Save the code file in **htm** or **html** file extension.
- After saving the file its icon will change to a web **browser**.

Now the HTML file will be stored on the web server, then the client (web browser) can request the file from the web server when you double click the file from the computer or mobile phone.

⇒ NOTE : HTML **code** can be written using any text editor, however, the **compiler** is the browser that will be used such as Chrome or Microsoft edge.



5- Main structure of webpage

A webpage, is a document written in HTML, **to build a webpage, the following main components must be included**:

- **Title**: The title is the text that appears in the browser's title bar. This will also appear in search engine results.
- **Headline**: The headline is the text that appears at the top of the page. Include the brand name and messaging.
- **Body**: The body is the main content of the page.
- **Images**: Images can be added to a web page to supplement the content.
- **Videos**: Videos can be used to add multimedia dimensions to a web page.
- **Links**: Links can be used to navigate to other web pages and to establish the hierarchy of web pages within a website.

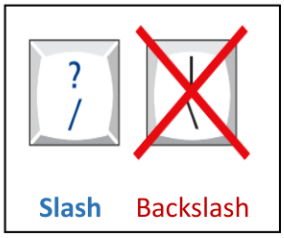
When including resources in a page (style sheet, icon, multimedia object), the designer must specify the type of data, the following is a table lists of some *Multipurpose Internet Mail Extensions* (MIME) or **Internet Media (MIME)** types showing the file type and extension.

MIME type	file extension
text/html	.html
text/plain	.txt
Microsoft Word	. docx
image/gif	.gif
image/jpeg	.jpg
video	.mov
application	.exe

4- HTML Tages and Elements:

HTML <tags> are keywords (tag names) used to mark up the start and the end of HTML **element** surrounded by angle brackets:

<tagname>content</tagname>



- HTML tags normally come in pairs like and
- The end tag is written like the start tag, but with forward
- slash (/) before the tag name

- Tag name, and sometimes followed by optional attributes and all appears between angle brackets < >
- The slash (/) character is found under the question mark (?) on the standard keyboard. The backslash character (\)s found under the bar character (|) in the. The backslash key will not work in **Tags or URLs.**
- Nothing within the **tag** brackets will be displayed in the browser. The tag name is generally abbreviation to the tag function. Example: <h1> …….. </h1>

HTML code depends on using **tags** and **elements**. **Elements** are created and identified by tags in the text source, HTML marks-up the text with <tags> that instruct the browser to do things, like create a hyperlink, make text bold, make text a title. An HTML element is defined by a starting tag name. For example, is a start and close tag of a paragraph. The string **> This is a paragraph <** is a paragraph element.

Tage Syntax: <Tage name> content </ Tage name >
**Example: This is a paragraph **
** HTML Element **

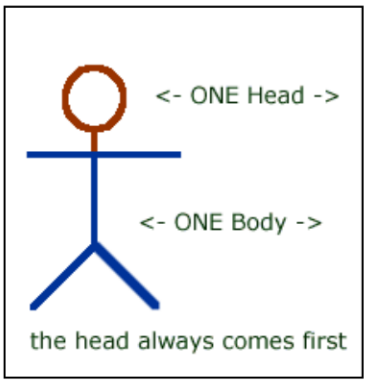
⇒ *NOTE*: The **Browser** does not display the HTML tags, but uses them to determine how to **display** the document:

5- Basic HTML Documents Structure

The HTML defines the structure and content of web pages. HTML documents contain plain text files only and provide link to other types of files (MIME) that will appear in Web pages. To create a true HTML document, you will start with three elements, the HTML document basic structure is:

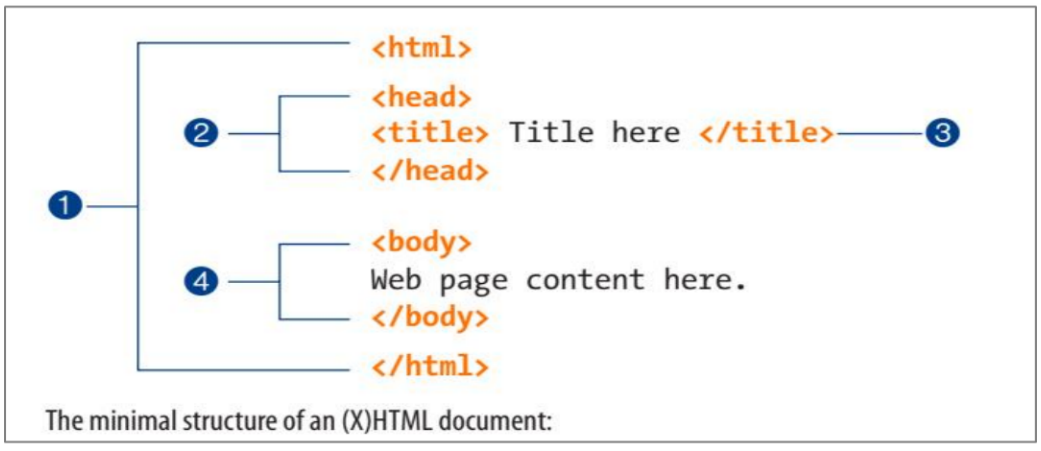
<head>The head provides information about the document. You can include information about the Web page. (sometimes called the header)

<body>: This body contains the content of the web page that displays in the browser, it's what we want to appear in the browser.



The next figure shows the minimal skeleton of an HTML document. First, the entire document is contained within an **html** element. The **html** element is called the root element because it contains all the elements in the document. The **head** comes next and contains the **title** element (**title** element required for every document). The title appears in in the browser toolbar.

The **body** element comes after the **head** and contains everything that we want to show up in the browser window. This document structure elements required to make the document **valid**.



The minimal structure of an (X)HTML document: