Lecture No: 4 PART1
Topic: Links, Images, Audio and Videos

LINKS / HYPERLINKS
- With links or hyperlinks, it is possible for the users / readers of the page to jump from one page to another page.
- Links can be in a form of some text that is highlighted, underlined or colored blue or red. It can be also a graphic image.

The <a> Tag
- <a> means anchor, is used to create links to other documents and to name anchors for fragment identifiers within documents.
- **href** is an attribute which stands for "Hypertext Reference" is used to specifies the name or URL of the file where this link points.
- Sample:
   Back to HOME

Absolute and Relative Links
- Absolute Link – a link that links you to another website
  ex:
   Google
- Relative Link – a link that links you to pages within your site
  ex:
  **   template **

HTML Link Colors
- By default, a link will appear like this (in all browsers):
- An unvisited link is underlined and blue
- A visited link is underlined and purple
- An active link is underlined and red
- You can change the default colors, by using CSS.
- In addition, links can be styled differently depending on what state they are in.
- The four links states are:
- a:link - a normal, unvisited link
- a:visited - a link the user has visited
- a:hover - a link when the user mouse over it
- a:active - a link the moment it is clicked

The target Attribute
The target attribute specifies where to open the linked document.
The target attribute can have one of the following values:
- **_blank** - Opens the linked document in a new window or tab
- **_self** - Opens the linked document in the same window/tab as it was clicked (this is default)
- **_parent -** Opens the linked document in the parent frame
- **_top -** Opens the linked document in the full body of the window
- **framename** - Opens the linked document in a named frame

Example:
- Visit W3Schools!
- HTML5 tutorial!

HTML Links - Image as Link

-
  <img src="Rudolph.jpg" alt="rudolph" style="width:42px;height:42px;border:0;">

External Paths
- External pages can be referenced with a full URL or with a path relative to the current web page.
- **This example uses a full URL to link to a web page:**
  HTML Table
- **This example links to a page located in the html folder on the current web site:**
  IMAGES

IMAGES
Comparing Graphics formats
- Three (3) best graphic format suited for use on the Web
- GIF (Graphics Interchange Format)
  – Pronounced as jiff
  – Best for navigation buttons; clip arts, banners, drawings or anything that has large blocks of the same color
- JPEG (Joint Photographic Experts Group)
  – Pronounced as jay-peg
  – Best for photos for the web
- PNG (Portable Network Graphics)
  – Pronounced as ping
  – Combines the best qualities of both GIF and JPEG but doesn't have very broad browser support.

Understanding Image Formats
- **GIF** Graphics Interchange Format (GIF)
  – was first developed for image transfer among users of the CompuServe online service.
  – Best used for flat line drawings containing solid tones and simple images such as clip art.
  – **Features:**
    - Its encoding is cross-platform.
    - GIF uses special compression technology that can significantly reduce the size of the image file for faster transfer over a network. GIF compression is "lossless"; none of an image's original data is altered or deleted, so the uncompressed and decoded image exactly matches its original. Also, GIF images can be easily animated.
  – The maximum number of colors in a GIF file is 256 .
  – The GIF images have a .gif file extension.
  – Two GIF versions: the original GIF87 and an expanded GIF89a, which supports several new features including transparent backgrounds, interlaced storage, and animation that are popular with web authors.
- Transparent GIF : images are great for any graphic that you want to meld into the document and not stand out as a rectangular block.
  – The browser simply ignores any pixel in the image that uses that background color, thereby letting the display window's background show through. By carefully cropping its dimensions and by using a solid, contiguous background color, you can make a transparent image seamlessly meld into or float above a page's surrounding content.
- Interlacing: interlaced GIFs open like a Venetian blind. That's because interlacing sequences every fourth row of the image. Users get to see a full image top to bottom, albeit fuzzy in a quarter of the time it takes to download and display the remainder of the image. The resulting quarter-done image usually is clear enough so that users with slow network connections can evaluate whether to take the time to download the remainder of the image file.

- Animation: special GIF-animation software utilities, you may prepare a single GIF89a file that contains a series of GIF images. The browser displays each image in the file, one after the other, special control segments between each image in the GIF file let you set the number of times the browser runs through the complete sequence (looping).

- **JPEG** Joint Photographic Experts Group (JPEG)
    – is a standards body that developed what is now known as the JPEG image-encoding format. Like GIFs, JPEG images are platform independent and specially compressed for high-speed transfer via digital communication technologies.
    – JPEG supports tens of thousands of colors for more detailed, photorealistic digital images.
    – JPEG is an excellent choice for photographs, it's not a particularly good choice for illustrations.
    – The JPEG format, usually designated by the *.jpg* (or *.JPG*) filename suffix

- **PNG** Portable Network Graphics (PNG)
    – PNG has a broader selection of color formats (24-bit true-color RGB, a grayscale and GIF-like 8-bit palette) and better lossless compression.
    – PNG's unique and attractive features include alpha channels which let you specify many more than GIF's one layer of transparency (more than 65,000, actually) and can simulate 3D imagery, gamma correction which controls cross-platform image brightness for more vivid graphics, and two-dimensional interlacing which provides for a finer progressively developing image.
    – PNG does not support animation.

HTML Images
- Images can improve the design and the appearance of a web page.
    Images Syntax:
- In HTML, images are defined with the <img>tag.
- The <img> tag is empty, it contains attributes only, and does not have a closing tag.
- The src attribute specifies the URL (web address) of the image:
- <img src="*url*">

The alt Attribute
- The alt attribute provides an alternate text for an image, if the user for some reason cannot view it (because of slow connection, an error in the src attribute, or if the user uses a screen reader).
- The value of the alt attribute should describe the image.

 Example:
- <img src="grizzly.png" alt="grizzly">
- <img src="panda.png" alt="panda">
- <img src="polar.png" alt="ice">

Image Size - Width and Height
- You can use the style attribute to specify the width and height of an image.

Example:
    <img src="panda.png" alt="Panda Bear" style="width:500px;height:600px;">

Images in Another Folder
- If not specified, the browser expects to find the image in the same folder as the web page.
- However, it is common to store images in a sub-folder. You must then include the folder name in the src attribute.
    Example
- <img src="images/circle.jpg" alt="Circle" style="width:128px;height:128px;">

Images on Another Server
- Some web sites store their images on image servers.
- Actually, you can access images from any web address in the world.
- Example:
  <img src="https://www.ue.edu.ph/manila/main/misc/ccss.png" alt="UE-CCSS">

Image as a Link
To use an image as a link, put the <img> tag inside the <a> tag:

 <img src="panda.png" alt="Lect1" style="width:42px;height:42px;border:0;">

Image Floating
- Use the CSS float property to let the image float to the right or to the left of a text:

Example
<p><img src="polar.png" alt="Ice bear face" style="float:right;width:42px;height:42px;">
The image will float to the right of the text.</p>
<p><img src="grizzly.png" alt="Grizzly face" style="float:left;width:42px;height:42px;">
The image will float to the left of the text.</p>

References:
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