

LAB # 01

Statement Purpose:

To familiarize the students with HTML Basics, Elements, Attributes, Style, Formatting, Links, Page Layouts

- ▣ HTML page structure
- ▣ Text formatting in HTML
- ▣ Lists in HTML
- ▣ Add images to web pages
- ▣ Use images as links
- ▣ Add video and audio files to webpages

Activity Outcomes:

After this lab the students should be able to understand HTML and its basic tags

- ▣ Students should be able to design basic web page using HTML Tags
- ▣ Student should be able to add text formatting tags
- ▣ Student should be able to add lists to web pages
- ▣ Student should be able to add images and videos to the web pages

1) Introduction

HTML

HyperText Markup Language (HTML) is the main markup language for displaying web pages and other information that can be displayed in a web browser. HTML is written in the form of HTML elements consisting of tags enclosed in angle brackets (like `<html>`), within the web page content. HTML tags most commonly come in pairs like `<h1>` and `</h1>`, although some tags, known as empty elements, are unpaired, for example ``. The first tag in a pair is the start tag, the second tag is the end tag (they are also called opening tags and closing tags). In between these tags web designers can add text, tags, comments and other types of text-based content.

The purpose of a web browser is to read HTML documents and compose them into visible or audible web pages. The browser does not display the HTML tags but uses

the tags to interpret the content of the page.

HTML Basic Structure

```
<html>

  <head>
    <title> Page Title Goes Here </title>
  </head>

  <body>

    //content goes here

  </body>
</html>
```

How To Create basic web page

1. Open Notepad
2. Click on File -> Save as...
3. In the File name pull-down box, type in webpage.html
4. Click on Save
5. Type in content for your file
6. Once you finished the content, click on File -> Save

HTML Elements

The HTML element is everything from the start tag to the end tag:

<tagname>Content goes here...</tagname>

Start tag	Element content	End tag
<h1>	My First Heading	</h1>
<p>	My first paragraph.	</p>
 	<i>none</i>	<i>none</i>

Nested HTML Elements

HTML elements can be nested (this means that elements can contain other elements). All HTML documents consist of nested HTML elements. The following example contains four HTML elements (<html>, <body>, <h1> and <p>):

```
<!DOCTYPE html>
<html>

<body>

  <h1> ... </h1>
  <p> ... <p>
```

```
</body>
</html>
```

Example Explained

The `<html>` element is the root element, and it defines the whole HTML document. It has a start tag `<html>` and an end tag `</html>`. Then, inside the `<html>` element there is a `<body>` element. The `<body>` element defines the document's body. It has a start tag `<body>` and an end tag `</body>`. Then, inside the `<body>` element there are two other elements: `<h1>` and `<p>`:

HTML Attributes

HTML attributes provide additional information about HTML elements.

HTML Attributes

- ▣ All HTML elements can have attributes
- ▣ Attributes provide additional information about elements
- ▣ Attributes are always specified in the start tag
- ▣ Attributes usually come in name/value pairs like: `name="value"`

href Attribute

The `<a>` tag defines a hyperlink. The `href` attribute specifies the URL of the page the link goes to:

```
<a href="https://www.google.com">Visit Google</a>
```

src Attribute

The `` tag is used to embed an image in an HTML page. The `src` attribute specifies the path to the image to be displayed:

```

```

There are two ways to specify the URL in the `src` attribute:

- 1. Absolute URL** - Links to an external image that is hosted on another website. Example: `src="https://www.example.com/images/img.jpg"`.
- 2. Relative URL** - Links to an image that is hosted within the website. Here, the URL does not include the domain name. If the URL begins without a slash, it will be relative

to the current page. Example: `src="img.jpg"`. If the URL begins with a slash, it will be relative to the domain. Example: `src="/images/img.jpg"`.

width and height Attributes

The `` tag should also contain the `width` and `height` attributes, which specifies the width and height of the image (in pixels):

Example

```

```

alt Attribute

The required `alt` attribute for the `` tag specifies an alternate text for an image, if the image for some reason cannot be displayed. This can be due to slow connection, or an error in the `src` attribute, or if the user uses a screen reader.

Example

```

```

style Attribute

The `style` attribute is used to add styles to an element, such as color, font, size, and more.

Example

```
<p style="color:red;">This is a red paragraph.</p>
```

title Attribute

The `title` attribute defines some extra information about an element. The value of the title attribute will be displayed as a tooltip when you mouse over the element:

Example

```
<p title="I'm a tooltip">This is a paragraph.</p>
```

HTML Styles

The HTML `style` attribute is used to add styles to an element, such as color, font, size, and more.

HTML Style Attribute

Setting the style of an HTML element, can be done with the `style` attribute.

The HTML `style` attribute has the following syntax:

```
<tagname style="property:value;">
```

The **property** is a CSS property. The **value** is a CSS value.

Background Color

The CSS **background-color** property defines the background color for an HTML element.

```
<body style="background-color:powderblue;">
```

Text Color

The CSS **color** property defines the text color for an HTML element:

Example

```
<h1 style="color:blue;">This is a heading</h1>  
<p style="color:red;">This is a paragraph.</p>
```

Fonts

The CSS **font-family** property defines the font to be used for an HTML element:

Example

```
<h1 style="font-family:verdana;">This is a heading</h1>  
<p style="font-family:courier;">This is a paragraph.</p>
```

Text Size

The CSS **font-size** property defines the text size for an HTML element:

Example

```
<h1 style="font-size:300%;">This is a heading</h1>  
<p style="font-size:160%;">This is a paragraph.</p>
```

Text Alignment

The CSS **text-align** property defines the horizontal text alignment for an HTML element:

Example

```
<h1 style="text-align:center;">Centered Heading</h1>  
<p style="text-align:center;">Centered paragraph.</p>
```

HTML Formatting Elements

Formatting elements were designed to display special types of text:

- **** - Bold text

- `` - Important text
- `<i>` - Italic text
- `` - Emphasized text
- `<mark>` - Marked text
- `<small>` - Smaller text
- `` - Deleted text
- `<ins>` - Inserted text
- `<sub>` - Subscript text
- `<sup>` - Superscript text

2) Lab Activities:

Activity 1:

```
<!DOCTYPE html>
<html>

<body style="background-color:powderblue;">

    <h1>This is a heading</h1>
    <p>This is a paragraph.</p>

</body>
</html>
```

Activity 2:

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

    <p><b>This text is bold</b></p>
    <p><i>This text is italic</i></p>
    <p>This is<sub> subscript</sub> and <sup>superscript</sup></p>
    <b>This text is bold</b>
    <strong>This text is important!</strong>
    <em>This text is emphasized</em>
    <small>This is some smaller text.</small>
    <p>Do not forget to buy <mark>milk</mark> today.</p>
    <p>My favorite color is <del>blue</del> red.</p>
    <p>My favorite color is <del>blue</del> <ins>red</ins>.</p>

</body>
```

```
</html>
```

Activity 3:

```
<!DOCTYPE html>
<html>
<body>
  <h1>My First Heading</h1>
  <p>My first paragraph.</p>
</body>
</html>
```

Activity 4:

```
<!DOCTYPE html>
<html>
<body>
  <h2>The href Attribute</h2>
  <p>HTML links are defined with the a tag. The link address is specified in the href attribute.</p>
  <a href="https://www.google.com">Visit W3Schools</a>
</body>
</html>
```

Activity 5:

- ☐ Create basic page
- ☐ Add text about and apply text formatting

Solution:

```
<!DOCTYPE html>
<html>
<head>
  <title>Home</title>
</head>
<body bgcolor="#98E0F0">
```

```

<h1>
  <font color="#1322D6"> Air University </font>
</h1>
<hr width="100%" color="#030303" size="4" />
<Center>
  <p>
    <h2><b>
      <pre> Home Department Admissions Academics Exams</pre>
    </b></h2>
  </p>
</center>
<hr width="100%" color="#030303" size="4" />
<br />
<p>
  <h2>
    <font color="#1322D6"> Historic Perspective:</font>
  </h2>
</p>
<a href="page.html"> click here </a>
<!-- Write your comments here -->
  <p>WWF's goal is to: <q>Build a future where people live in harmony with
nature.</q></p>
</body>
</html>

```


➤ **Activity 6: HTML Images**

The HTML tag is used to embed an image in a web page. Images are not technically inserted into a web page; images are linked to web pages. The tag creates a holding space for the referenced image. tag is empty, it contains attributes only, and does not have a closing tag.

The tag has two required attributes:

- ▣ src - Specifies the path to the image
- ▣ alt - Specifies an alternate text for the image

Syntax:

➤ **Add images, list of topics, and videos to your website**

Sample Example 1 – Images:

```
<!DOCTYPE html>
<html>
<body>
  <h2>The src Attribute</h2>
  <p>HTML images are defined with the img tag, and the filename of the image
source is specified in the src attribute:
  </p>

  
</body>
</html>
```

```
<!DOCTYPE html>
<html>
<body>
  <h2>Alternative text</h2>
  <p>The alt attribute should reflect the image content, so users who cannot see
the image gets an understanding of
  what the image contains:</p>

  
</body>
</html>
```

Sample Example 2 - Images:

```
<!DOCTYPE html>
```

```

<html>
<head>
  <style>
    p {
      background-image: url('img.jpg');
    }
  </style>
</head>
<body>
  <h2>Background Image</h2>
  <p>You can specify background images<br>
  for any visible HTML element.<br>
  In this example, the background image<br>
  is specified for a div element.<br>
  By default, the background-image<br>
  will repeat itself in the direction(s)<br>
  where it is smaller than the element<br>
  where it is specified. (Try resizing the<br>
  browser window to see how the<br>
  background image behaves.</p>
</body>
</html>

```

Sample Example – Lists:

```

<!DOCTYPE html>
<html>
<body>
  <h2>An unordered HTML list</h2>
  <ul>
    <li>Coffee</li>
    <li>Tea</li>
    <li>Milk</li>
  </ul>

```

```

</ul>
<h2>An ordered HTML list</h2>
<ol>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ol>
<h2>A Description List</h2>
<dl>
  <dt>Coffee</dt>
  <dd>- black hot drink</dd>
  <dt>Milk</dt>
  <dd>- white cold drink</dd>
</dl>
</body>
</html>

```

Sample Example – Video

```

<!DOCTYPE html>
<html>
<body>
  <video width="320" height="240" controls>
    <source src="movie.mp4" type="video/mp4">
    <source src="movie.ogg" type="video/ogg">
    Your browser does not support the video tag.
  </video>
</body>
</html>

```

3) Lab Task

1. Apply different tags and formatting options on your webpage of Air University.
2. Create a webpage for Air University library. Add lists and apply text formatting to your page. Add videos and images of the library to your page.