2.1 HTML LEARNING

2.1.1 *WHAT IS HTML*

- HTML stands for Hyper Text Markup Language
- HTML is the standard markup language for creating Web pages
- HTML describes the structure of a Web page
- HTML consists of a series of elements
- HTML elements tell the browser how to display the content
- HTML elements label pieces of content such as "this is a heading", "this is a paragraph", "this is a link", etc.

A Simple HTML Document

```
<!DOCTYPE html>
<html>
<head>
<title>Page Title</title>
</head>
<body>

<h1>My First Heading</h1>
<p>My first paragraph. </p>

</body>
</html>
```

2.1.2 HTML EDITORS

Web pages can be created and modified by using professional HTML editors.
However, for learning HTML we recommend a simple text editor like Notepad (PC) or TextEdit (Mac).
We believe that using a simple text editor is a good way to learn HTML.
Follow the steps below to create your first web page with Notepad or TextEdit.

2.1.3 HTML ELEMENTS

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

2.1.4 HTML ATTRIBUTES

- All HTML elements can have **attributes**
- The `href` attribute of `<a>` specifies the URL of the page the link goes to
- The `src` attribute of `<img>` specifies the path to the image to be displayed
- The `width` and `height` attributes of `<img>` provide size information for images
- The `alt` attribute of `<img>` provides an alternate text for an image
- The `style` attribute is used to add styles to an element, such as color, font, size, and more
- The `lang` attribute of the `<html>` tag declares the language of the Web page
- The `title` attribute defines some extra information about an element

2.1.5 HTML HEADINGS

<!DOCTYPE html>
<html>
<body>

<h1>Heading 1</h1>
<h2>Heading 2</h2>
<h3>Heading 3</h3>
<h4>Heading 4</h4>
<h5>Heading 5</h5>
<h6>Heading 6</h6>

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

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

2.1.6 HTML STYLES

- Use the `style` attribute for styling HTML elements
- Use `background-color` for background color
- Use `color` for text colors
- Use `font-family` for text fonts
- Use `font-size` for text sizes
- Use `text-align` for text alignment

```
<tagname style="property:value;">
<body style="background-color:powderblue;">
<h1 style="background-color:powderblue;">This is a heading</h1>
<h1 style="color:blue;">This is a heading</h1>
<h1 style="font-family:verdana;">This is a heading</h1>
<h1 style="font-size:300%;">This is a heading</h1>
<h1 style="text-align:center;">Centered Heading</h1>
```

2.1.7 HTML FORMATTING

Formatting elements were designed to display special types of text:

- `<b>` - Bold text
- `<strong>` - Important text
- `<i>` - Italic text
- `<em>` - Emphasized text
- `<mark>` - Marked text

- `<small>` - Smaller text
- `<del>` - Deleted text
- `<ins>` - Inserted text
- `<sub>` - Subscript text
-
- `<sup>` - Superscript text

2.1.8 HTML COMMENTS

Comments are not displayed by the browser, but they can help document your HTML source code.

```
<! -- Write your comments here -->
```

2.1.9 HTML COLORS

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

<h1 style="background-color:Tomato;">Tomato</h1>
<h1 style="background-color:Orange;">Orange</h1>
<h1 style="background-color:DodgerBlue;">DodgerBlue</h1>
<h1 style="background-color:MediumSeaGreen;">MediumSeaGreen</h1>
<h1 style="background-color:Gray;">Gray</h1>
<h1 style="background-color:SlateBlue;">SlateBlue</h1>
<h1 style="background-color:Violet;">Violet</h1>
<h1 style="background-color:LightGray;">LightGray</h1>

</body>
</html>
```

2.1.10 HTML CSS

- Use the HTML `style` attribute for inline styling
- Use the HTML `<style>` element to define internal CSS

- Use the HTML `<link>` element to refer to an external CSS file
- Use the HTML `<head>` element to store <style> and <link> elements
- Use the CSS `color` property for text colors
- Use the CSS `font-family` property for text fonts
- Use the CSS `font-size` property for text sizes
- Use the CSS `border` property for borders
- Use the CSS `padding` property for space inside the border
- Use the CSS `margin` property for space outside the border

2.1.11 HTML LINKS

The HTML `<a>` tag defines a hyperlink. It has the following syntax:

`<a href="url">link text</a>`

The most important attribute of the `<a>` element is the `href` attribute, which indicates the link's destination.

The *link text* is the part that will be visible to the reader.

Clicking on the link text, will send the reader to the specified URL address.

2.1.12 HTML IMAGES

The HTML `<img>` 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 `<img>` tag creates a holding space for the referenced image.

The `<img>` tag is empty, it contains attributes only, and does not have a closing tag.

The `<img>` tag has two required attributes:

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

`<img src="url" alt="alternatetext">`

2.1.13 HTML PAGE TITLE

The `<title>` element adds a title to your page:

`<!DOCTYPE html>`

`<html>`

`<head>`

```html
    <title>HTML Tutorial</title>
</head>
<body>

The content of the document......

</body>
</html>
```

2.1.14 HTML TABLES

```html
<!DOCTYPE html>
<html>
<head>
<style>
table {
  font-family: arial, sans-serif;
  border-collapse: collapse;
  width: 100%;
}

td, th {
  border: 1px solid #dddddd;
  text-align: left;
  padding: 8px;
}


tr:nth-child(even) {
  background-color: #dddddd;
}
</style>
</head>
<body>
```

```
<h2>HTML Table</h2>

<table>
  <tr>
    <th>Company</th>
    <th>Contact</th>
    <th>Country</th>
  </tr>
  <tr>
    <td>Alfreds Futterkiste</td>
    <td>Maria Anders</td>
    <td>Germany</td>
  </tr>
  <tr>
    <td>Centro comercial Moctezuma</td>
    <td>Francisco Chang</td>
    <td>Mexico</td>
  </tr>
  <tr>
    <td>Ernst Handel</td>
    <td>Roland Mendel</td>
    <td>Austria</td>
  </tr>
  <tr>
    <td>Island Trading</td>
    <td>Helen Bennett</td>
    <td>UK</td>
  </tr>
  <tr>
    <td>Laughing Bacchus Winecellars</td>
    <td>Yoshi Tannamuri</td>
```

```
    <td>Canada</td>
  </tr>
  <tr>
    <td>Magazzini Alimentari Riuniti</td>
    <td>Giovanni Rovelli</td>
    <td>Italy</td>
  </tr>
</table>

</body>
</html>
```

2.1.15 HTML LAYOUT

HTML has several semantic elements that define the different parts of a web page:

- `<header>` - Defines a header for a document or a section
- `<nav>` - Defines a set of navigation links
- `<section>` - Defines a section in a document
- `<article>` - Defines independent, self-contained content
- `<aside>` - Defines content aside from the content (like a sidebar)
- `<footer>` - Defines a footer for a document or a section
- `<details>` - Defines additional details that the user can open and close on demand
- `<summary>` - Defines a heading for the `<details>` element