HTML

Hyper Text Markup Language

HTML

1. Basic Terminology

- HTML was first created by Tim Berners-Lee, Robert Cailliau, and others starting in **1989**.
- It stands for Hyper Text Markup Language.
- **HyperTex**t: document contains links that allow the reader to jump to other places in the document or to another document altogether.
- A **Markup Language** is a way that computers speak to each other to control how text is processed and presented. To do this HTML uses two things: tags and **attributes**.
- The latest version is known as **HTML 5**.

1. Basic Terminology (cont.)

Tags and attributes are the basis of HTML.

- Tags are used to **mark up the start of an HTML element** and they are usually enclosed in angle brackets. An example of a tag is: <h1>.
- Attributes contain **additional pieces of information**. Attributes take the form of an opening tag and additional info is **placed inside**.

```
<img src="mydog.jpg" alt="A photo of my dog.">
```

📣 **Golden Rules To Remember**

```
<strong><em>This is really important to close tag !</em></strong>
```

2. HTML Editors

- We recommend you to use visual studio code:

- Install & Setup Plugin

  Plugin: Live Server, Open in Browser, Auto Rename Tag, Auto Close Tag

- Browser: Chrome,

3. First Web Page

Basic Construction of an HTML Page

```
<html>
    <head>
        <title>This Is Your Title </title>
    </head>

    <body>
        <h1> This Is Your Header </h1>
        <p> This is your paragraph. </p>
    </body>

</html>
```

3. First Web Page

Explain:

<!DOCTYPE html> tag specifies the language you will write on the page.

<html> This tag signals that from here on we are going to write in HTML code.

<head> This is where all the metadata for the page goes — stuff mostly meant for search engines and other computer programs.

<body> This is where the content of the page goes.

4. Further Tags

<title> This is where we **insert the page name** as it will appear at the top of the browser window or tab. <meta> This is where information *about* the document is stored: character encoding, name (page context), description.

```
<head>
<title>My First Webpage</title>
<meta charset="UTF-8">
<meta name="description" content="This field contains information ab
out your page. It is usually around two sentences long.">.
<meta name="author" content="Conor Sheils">
</header>
```

5. Adding Content

The HTML <body> is where we add the content which is designed for viewing by human eyes includes text, images, tables, forms and everything else that we see on the internet each day.

Adding Heading to HTML
In HTML, heading are written in the following elements:

- `<h1>`
- `<h2>`
- `<h3>`
- `<h4>`
- `<h5>`
- `<h6>`

5. Adding Content

Adding Text to HTML

Using an element opened with the tag <p> which creates a new paragraph. When we write text in HTML, we also have a number of other elements we can use to control the text or make it appear in a certain way.

Other key elements:

These tags **must** be opened and closed around the text in question.

```
<p>Welcome to <em>my</em> website. This will be<strong>new<strong> on the web.</p>
```

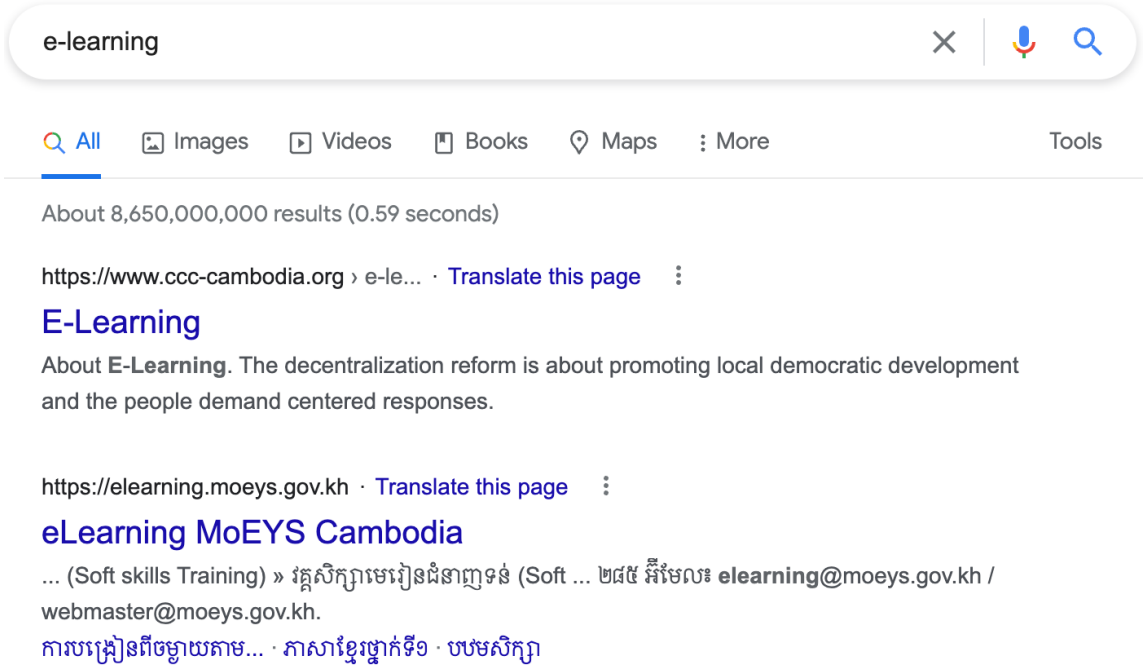
5. Adding Content

Other key elements:

Tag	Description
<b>	Defines bold text
	Defines emphasized text
<i>	Defines a part of text in an alternate voice or mood
<small>	Defines smaller text
	Defines important text
<sub>	Defines subscripted text
<sup>	Defines superscripted text
<ins>	Defines inserted text
<del>	Defines deleted text
<mark>	Defines marked/highlighted text

6. SEO

SEO stands for Search Engine Optimization; is the process of improving the quality and quantity of website traffic to a website or a web page from search engines.



6. SEO

```
<title>SEAP</title>

<!-- SEO meta -->
<meta name="title" content="SEAP">
<meta name="description" content="Software Engineering of Phnom Penh">
<meta name="author" content="SEAP">
<meta name="keywords" content="education, programming, technology, IT, school">
<meta name="thumbnail" content="https://www.seap.tech/resources/img/logo/seao-slogan.png">
<!-- Facebook meta -->
<meta property="fb:pages" content="100160758281264">
<meta property="fb:app_id" content="570646357500469">
<meta property="fb:article_style" content="default">
<meta property="fb:use_automatic_ad_placement" content="enable=true ad_density=default">
<!-- Common meta -->
<meta charset="ISO-8859-1">
<meta charset="utf-8">
<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">
<meta http-equiv="X-UA-Compatible" content="IE=edge">
```

7. HTML basic styles

Apply basic styles of CSS into HTML file to make it better look of webpage!

```
<style>
    p{
        color: red;
    }
</style>
```

8. HTML Images

The HTML <img> tag is used to embed an image in a web page

The <img> tag has two required attributes:

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

```
<img src="doctor.png" alt="logo" width="500" height="600">
```

Free site to download quality images:

https://www.freepik.com/, https://thenounproject.com/

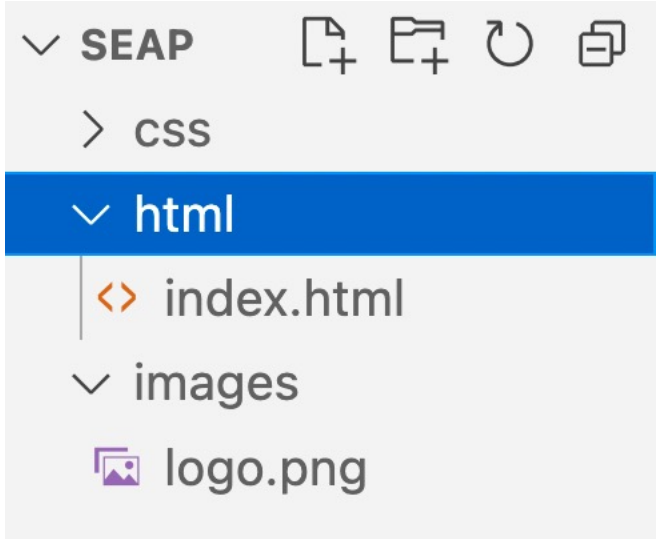
https://pixabay.com/, flaticons, icons8, material-icons

https://www.iconfinder.com/

8. HTML Images (cont.)

File Path describes the location of a file in a web site's folder structure. It is used when linking to external files, like:

- Web pages
- Images
- Style sheets
- JavaScript




```
<img src="../images/logo.png" alt="Logo">
```

8. HTML Images (cont.)

Other example of file path with webpage icons;

```
<link rel="shortcut icon" href="../images/logo.png" type="image/x-icon">
```

Here is result:

9. HTML Color

- Color Name: red, green, blue, yellow, black, white, purple, pink, etc.
- HEX: #2c2c2c
- RGB: rgb(255, 0, 0)

HTML cheat sheet: https://docs.emmet.io/cheat-sheet/

10. Block & Inline

A block-level element always starts on a new line, and the browsers automatically add some space (a margin) before and after the element.

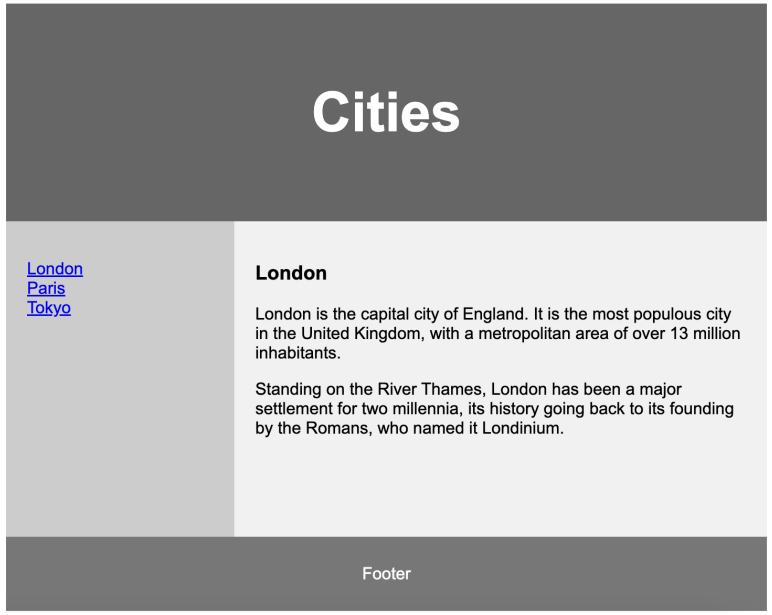
<address>	<article>	<aside>	<blockquote>	<canvas>	<dd>	
<dt>	<fieldset>	<figcaption>	<figure>	<footer>	<form>	<h1>–<h6>
<hr>	<li>	<main>	<nav>	<noscript>	<ol>	<p>
<section>	<table>	<tfoot>	<ul>	<video>		

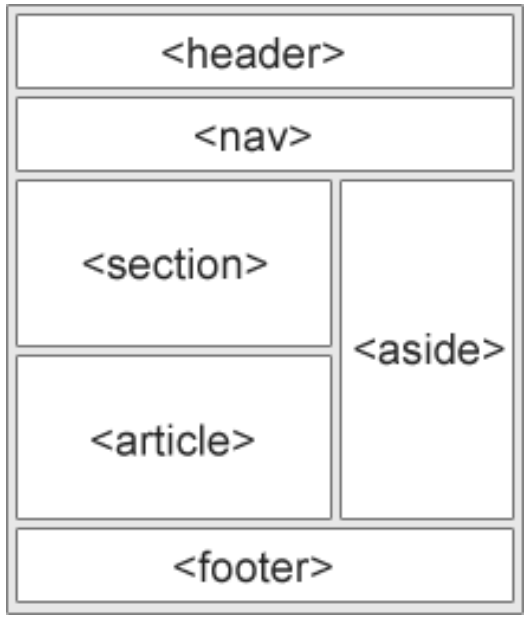
An inline element does not start on a new line, only takes up as much width as necessary.

<a>	<abbr>	<acronym>	<b>	<bdo>	<big>	
<cite>	<code>	<dfn>		<i>	<img>	<input>
<label>	<map>	<object>	<output>	<q>	<samp>	<script>
<small>			<sub>	<sup>	<textarea>	<time>
<var>						

11. Layout

Many web sites contain HTML code like: to indicate navigation, header, and footer.





In HTML there are some semantic elements that can be used to define different parts of a web page:

12. Semantic Tags

What is Semantic Elements?

A semantic element describes its meaning to both the browser and the developer.

- non-semantic elements: and - Tells nothing about its content.
- semantic elements: <form>, <table>, and <article> - Clearly defines its content.

Benefits:

Search engines will consider its contents as important keywords to influence the page's search rankings

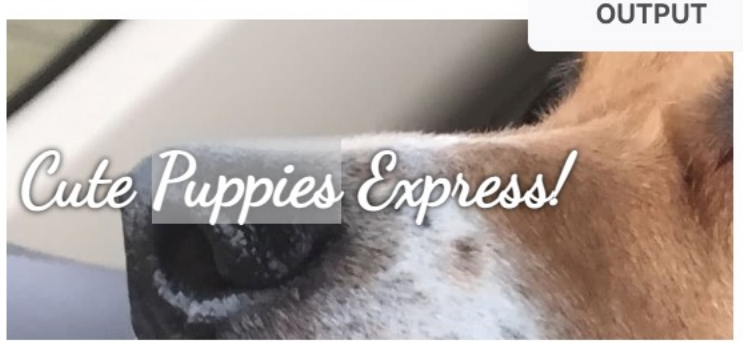
12. Semantic Tags (cont.)

<header></header>: represents introductory content, typically a group of introductory or navigational aids.

HTML CSS

```
1  <header class="page-header">
2      <h1>Cute Puppies Express!</h1>
3  </header>
4
5  <main>
6      <p>I love beagles <em>so</em> much! Like,
   really, a lot. They're adorable and their ears
   are so, so snuggly soft!</p>
7  </main>
8
```

OUTPUT



I love beagles ***so*** much! Like, really, a lot. They're adorable and their ears are so, so snuggly soft!

12. Semantic Tags (cont.)

<main></main>: represents the dominant content of the <body> of a document

HTML CSS

```
1  <header>Gecko facts</header>
2
3  <main>
4      <p>Geckos are a group of usually small,
   usually nocturnal lizards. They are found on
   every continent except Australia.</p>
5
6      <p>Many species of gecko have adhesive toe
   pads which enable them to climb walls and even
   windows.</p>
7  </main>
8
```

OUTPUT

Gecko facts

Geckos are a group of usually small, usually nocturnal lizards. They are found on every continent except Australia.

Many species of gecko have adhesive toe pads which enable them to climb walls and even windows.

12. Semantic Tags (cont.)

<nav></nav>: represents a section of a page whose purpose is to provide navigation links, either within the current document or to other documents

HTML CSS

```html
<nav class="crumbs">
    <ol>
        <li class="crumb"><a href="#">Bikes</a></li>
        <li class="crumb"><a href="#">BMX</a></li>
        <li class="crumb">Jump Bike 3000</li>
    </ol>
</nav>

```

OUTPUT

Bikes > BMX > Jump Bike 3000

Jump Bike 3000

This BMX bike is a solid step into the pro world. It looks as legit as it rides and is built to polish your skills.

12. Semantic Tags (cont.)

<section></section>: represents a generic standalone section of a document, which doesn't have a more specific semantic element to represent it

HTML CSS

```html
<h1>Choosing an Apple</h1>
<section>
    <h2>Introduction</h2>
    <p>This document provides a guide to help with the important task of choosing the correct Apple.</p>
</section>

<section>
    <h2>Criteria</h2>
    <p>There are many different criteria to be considered when choosing an Apple — size, color, firmness, sweetness, tartness...</p>
</section>

```

OUTPUT

Choosing an Apple

Introduction

This document provides a guide to help with the important task of choosing the correct Apple.

Criteria

There are many different criteria to be considered when choosing an Apple — size, color, firmness, sweetness, tartness...

12. Semantic Tags (cont.)

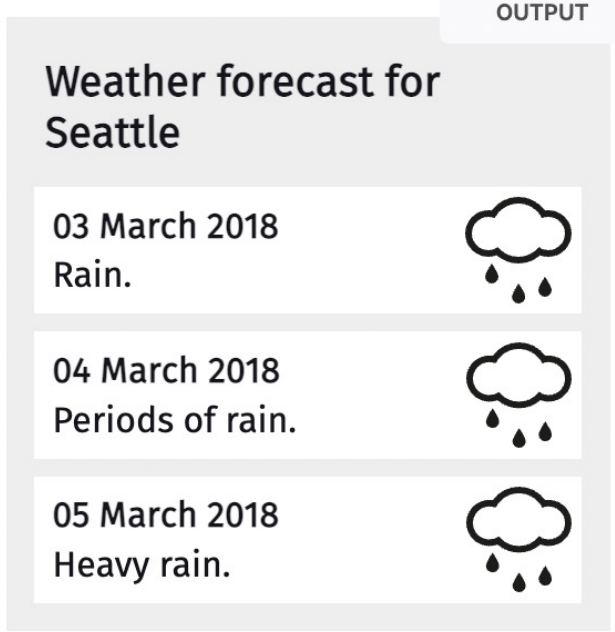
<article></article>: represents a self-contained composition in a document, page, application, or site. Examples include: a forum post, a magazine or newspaper article, or a blog entry, a product card, a user-submitted comment, an interactive widget or gadget, or any other independent item of content.

HTML CSS

```
<article class="forecast">
    <h1>Weather forecast for Seattle</h1>
    <article class="day-forecast">
        <h2>03 March 2018</h2>
        <p>Rain.</p>
    </article>
    <article class="day-forecast">
        <h2>04 March 2018</h2>
        <p>Periods of rain.</p>
    </article>
    <article class="day-forecast">
        <h2>05 March 2018</h2>
        <p>Heavy rain.</p>
    </article>
</article>

```

OUTPUT



12. Semantic Tags (cont.)

<footer></footer>: typically contains information about the author of the section, copyright data or links to related documents.

HTML CSS

```
<article>
    <h1>How to be a wizard</h1>
    <ol>
        <li>Grow a long, majestic beard.</li>
        <li>Wear a tall, pointed hat.</li>
        <li>Have I mentioned the beard?</li>
    </ol>
    <footer>
        <p>© 2018 Gandalf</p>
    </footer>
</article>
```

OUTPUT

How to be a wizard

1. Grow a long, majestic beard.
2. Wear a tall, pointed hat.
3. Have I mentioned the beard?

© 2018 Gandalf

12. Semantic Tags (cont.)

<address></address>: indicates that the enclosed HTML provides contact information for a person or people, or for an organization.

HTML CSS

```
1  <p>Contact the author of this page:</p>
2
3  <address>
4    <a href="mailto:jim@rock.com">jim@rock.com</a>
   <br>
5    <a href="tel:+13115552368">(311) 555-2368</a>
6  </address>
7
```

OUTPUT

Contact the author of this page:

jim@rock.com
(311) 555-2368

Classwork – 001
Resume Design

11. Links

As you may have noticed, the internet is made up of lots of links. Links are included in an attribute opened by the **<a>** tag

The Anchor Tag

The <a> (or anchor) opening tag is written in the format:

```
<a href="https://www.seap.tech">Your Link Text Here </a>
```

Link to Email Address

```
<a href="mailto:someone@example.com">Send mail</a>
```

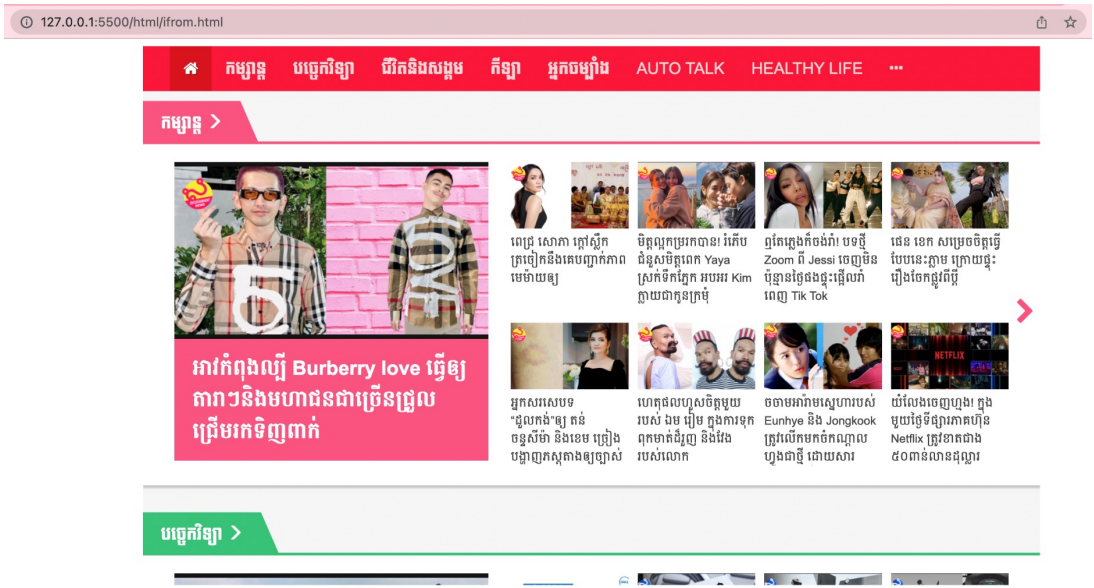
Target Attribute: _blank, _new,

12. Iframe

An HTML Iframe is used to display a web page within a web page. Some sites block iframe!

Iframe Syntax

```
<iframe src=https://news.sabay.com.kh/ frameborder="0"></iframe>
```



13. Tables

A table is a structured set of data made up of rows and columns (**tabular data**)

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Public Swim 06:30 - 10:30	Public Swim 06:30 - 09:00	Public Swim 06:30 - 09:00	Public Swim 06:30 - 11:15	Public Swim 06:30 - 09:00	Lane Swim 08:00 - 09:00	Lane Swim 08:00 - 09:00
Aquacise 10:30 - 11:15	Aqua Jog 09:15 - 10:00	Education Swimming Lessons 09:00 - 12:00	Aquacise 11:15 - 12:00	Education Swimming Lessons 09:00 - 12:00	Oldham Active Kids Swimming Lessons 09:00 - 13:00	Public Swim 09:00 - 11:00
Lane Swim 11:30 - 13:00	Parent & Baby Class 09:30 - 10:15	Lane Swim 12:00 - 13:00	Lane Swim 12:00 - 13:00	Lane Swim 12:00 - 13:00	Parent and Baby 12:00 - 12:45	Aquacise 11:00 - 11:45
Education Swimming Lessons	Public Swim 10:00 - 11:45	Public Swim 13:00 - 16:00	Education Swimming Lessons	Oldham Active Kids Swimming	Public Swim 13:00 - 17:00	Public Swim 11:45 - 13:00

13. Tables

An example of an HTML table is as follows:

```
<table>
<tr>
<td>Row 1 - Column 1</td>
<td>Row 1 - Colunm 2 </td>
<td>Row 1 - Column 3 </td>
</tr>
<tr>
<td>Row 2 - Column 1</td>
<td>Row 2 - Column 2</td>
<td>Row 2 - Column 3</td>
</tr>
</table>
```

13. Tables

More table tags:

Table Tag	Meaning	Location
<thead>	Table Head	Top of the table
<tbody>	Table Body	Content of the table
<tfoot>	Table Foot	Bottom of the table
<colgroup>	Column Group	Within the table
<th>	Table Header	Data cell for the table header

14. Lists

In web design, there are **3 different types of lists** which you may wish to add to your site.

Ordered List

```
<ol>
<li>An item </li>
<li>Another item </li>
<li>Another goes here </li>
</ol>
```

14. Lists

Unordered List

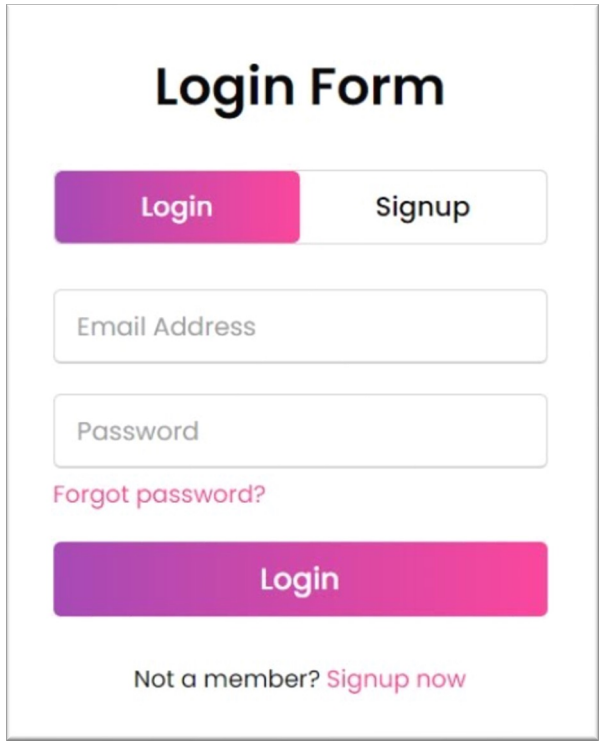
```
<ul>
<li>This is </li>
<li>An Unordered </li>
<li>List </li>
</ul>
```

Definition List

```
<dl>
<dt>Item</dt>
<dd>The definition goes here</dd>
</dl>
```

15. Form & Media

The <form> **HTML** element represents a document section containing interactive controls for submitting information. The HTML <form> element can contain one or more of the following form elements: input, label, select, textarea, button, fieldset, legend, datalist, output, option,



15. Form & Media

Form Attribute

```
<form
        action="/html/index.html"
        method="post"
        target="_blank"
        enctype="multipart/form-data">

    { body of form }

</form>
```

15. Form & Media

Input Types:

<input type="button">

<input type="text">

More type values:

checkbox, color, date, email, file, hidden, image, month, number, password, radio, range, reset, search, submit, tel, time, url, week,...

15. Form & Media

Media or multimedia

Multimedia comes in many different formats. It can be almost anything you can hear or see, like images, music, sound, videos, records, films, animations, and more.

<video>, <audio>, <iframe> - *youtube embed*

16. Responsive

Responsive Web Design is about making a website look good on all devices (desktops, tablets, and phones):

Viewport

```
<meta name="viewport" content="width=device-width, initial-scale=1.0">
```

Media Queries

Media Queries plays an important role in responsive web pages. We will detail next chapter.

17. Charsets

To display an HTML page correctly, the browser must know what character set (encoding) to use:

```
<meta charset="UTF-8">
```

- Later, from HTML 2.0 to HTML 4.01, ISO-8859-1 was considered as the standard character set.
- With XML and HTML5, UTF-8 finally arrived and solved a lot of character encoding problems.
- Charsets contains ASCII, WIN-1252, ISO-8859, Symbol, UTF-8

Homework-001 (Layout)

Recap (Group Discussions)

1. Basic Terminology of HTML
2. HTML Structure Explain!
3. How to make tables?
4. Design Register Form
5. Explain Charsets
6. Explain SEO and the way to implement in HTML?

Thank you

Perfect Practice, Does Perfect Thing