Week 2 - HTML Part I

FACULTY OF ENGINEERING, RUPP

COURSE: WEB AND CLOUD TECHNOLOGY PART I

INSTRUCTOR: TOUCH NGUONCHHAY

What Is HTML?

- **H**yper **T**ext **M**arkup **L**anguage

- HTML stands for hyper text markup language

- Describes the structure of web pages using tags

- Each tags represents a format of content.

- WYSINWYG

- File extensions: *.html* or *.hml*

HTML Elements

Text   Image   Link   Audio   Video

TAG

Sample HTML

```
<!DOCTYPE html>
<html>
    <body>
        <!-- HTML tags -->
    </body>
</html>
```

HTML Tags

- HTML tags are element names surrounded by angle brackets

    \<tagname\>content goes here...**\</tagname\>**

- Tag comes in pair: start and end tag

- Tag names are not case sensitive

- Everything between start and end tag is called content or tag value

- Everything inside start tag is called attribute

HTML Attribute

- Additional information to a tag

- Located inside start tag

- Syntax: **ATTR_NAME = ATTR_VALUE**

- Different tag has different attribute

- HTML supports custom attribute

HTML Page Structure

```
<html>

    <head>

        <title>Page title</title>

    </head>

    <body>

            <h1>This is a heading</h1>

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

            <p>This is another paragraph.</p>

    </body>

</html>
```

How To Display Content On Page?

- **html**: indicate localization

- **head**: style and script, page meta data

- **body**: page content

Sample Content

Heading →

A Component Using External Plugins

Paragraph →

React allows you to interface with other
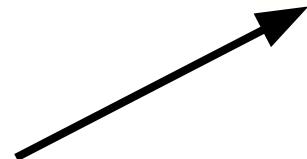libraries and frameworks. This example uses

Bold →

remarkable, an external Markdown library, to
convert the `<textarea>`'s value in real time.

Highlight ↗

New line ←

Keep In Mind

- Each HTML tag represent a special format

- The more you remember, the more you can represent content

- WYSINWYG

Tags

- Heading: from <h1> to <h6>

- Format text: <b>, <strong>, <i>, <em>, <small>, <ins>, <sub>, <sup>,...

- Quotation and citation: <address>, <abbr>, <cite>, <blockquote>, <q>

Unorder List

- Unorder list

       …   ⟶
  - Coffee
  - Tea
  - Milk

- CSS "list-style-type" is used to determine list item marker
  - disc (default), circle, square, none

Table

- Represent data as row and column
- <table> : main tag
- <tr>: table row
- <td>: table column
- <th>
- <thead>, <tbody>, <tfoot>

Firstname	Lastname	Age
Jill	Smith	50
Eve	Jackson	94
John	Doe	80

Table Structure

<table>

    <tr>

        <td>…</td>

    </tr>

</table>

Note: <thead>, <th>, and <tbody> are optional

Table Attributes

- border: table border

- colspan: merge columns

- rowspan: merge row

Table Style

- border-collapse : border style

- padding: cell padding

- text-align: cell content alignment

- nth-child: select odd or even row

HTML Entities

- < : less than

- > : greater than

-   : a space

- & : ampersand

- © : copyright

- ® : registered trademark

HTML Link

- Allow user to navigate from one page to another page

  Link Text

- Link colors:
  - An unvisited link is underlined and blue
  - A visited link is underlined and purple
  - An active link is underlined and red

Target Attribute

- The "target" attribute specifies where to open the linked document.

  - **_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

Link Target Types

- **In page**: a link to specific part of document within the same page
  - Define link: \…\
  - Define document to link to: \<tag id="**TARGET**">…\</tag>

Link Target Types (con't)

- **Internal**: a link to specific page within the same domain. A link target could exclude the domain

  Link text

- **External**: a link to external page

- **Special link**: to email client or phone
  - Email: Email
  - Phone: Phone

iframe Tag

- Load page content into page

  <iframe src="URL"></iframe>

- Attributes:
  - height
  - width
  - name
  - style

Picture Tag

- Display image base on the view port

    ```
    <picture>

        <source media="(min-width: 650px)" srcset="LINK">

        <img src="LINK">

    </picture>
    ```

Audio Tag

- Play sound in web page

  <audio controls>

  <source src="horse.ogg" type="audio/ogg">

  <source src="horse.mp3" type="audio/mpeg">

  Your browser does not support the audio element.
</audio>

Audio – Browser Support

Browser	MP3	WAV	Ogg
Edge / IE	✔	✖	✖
Chrome	✔	✔	✔
Firefox	✔	✔	✔
Safari	✔	✔	✖
Opera	✔	✔	✔

Audio – Media Types

File Format	Media Type
MP3	audio/mpeg
Ogg	audio/ogg
WAV	audio/wav

Video Tag

● Play video in web page

    `<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>`

Video – Browser Support

Browser	MP4	WebM	OGG
Edge / IE	✔	✖	✖
Chrome	✔	✔	✔
Firefox	✔	✔	✔
Safari	✔	✖	✖
Opera	✔ from Opera 25	✔	✔

Video – Media Types

File Format	Media Type
MP4	video/mp4
WebM	video/webm
Ogg	video/ogg

Container Tags

- Wrap another tags
  - html, head, body, footer
  - nav, section, aside, article
  - div

Forms

- Collection user input

  <form>

     <!– Form elements -->

  </form>

- Attribute
  - method: GET, POST
  - action: where to submit data

Form Attributes

- accept-charset

- enctype

- autocomplete

- novalidate

- name

- id

Form Elements

- input: collect user information base on its type

    ○ text

    ○ file

    ○ submit: display button to submit the form

    ○ email

    ○ date

    ○ number

    ○ radio

    ○ checkbox

Form Elements (con't)

- textarea: multiple text input

- select: choice

- label

- fieldset

- button

Element Syntax

- Input

  <input type="INPUT_TYPE" name="" value="" />

- Text area

  <textarea rows="" cols=""></textarea>

- Select

  <select><option>…</option></select>

- Button

  <button>…</button>

Input Tag Types

- color

- password

- hidden

- reset

- range

- month

- datetime-local

Input Type Validation

- checked: for checkbox and radio

- maxlength

- min, max

- readonly

- required

- disabled