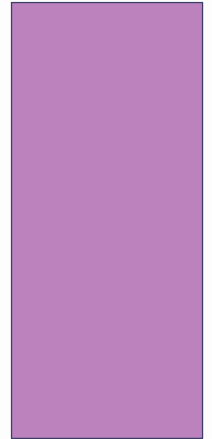


TOPIC 5 : BASIC WEB DEVELOPMENT

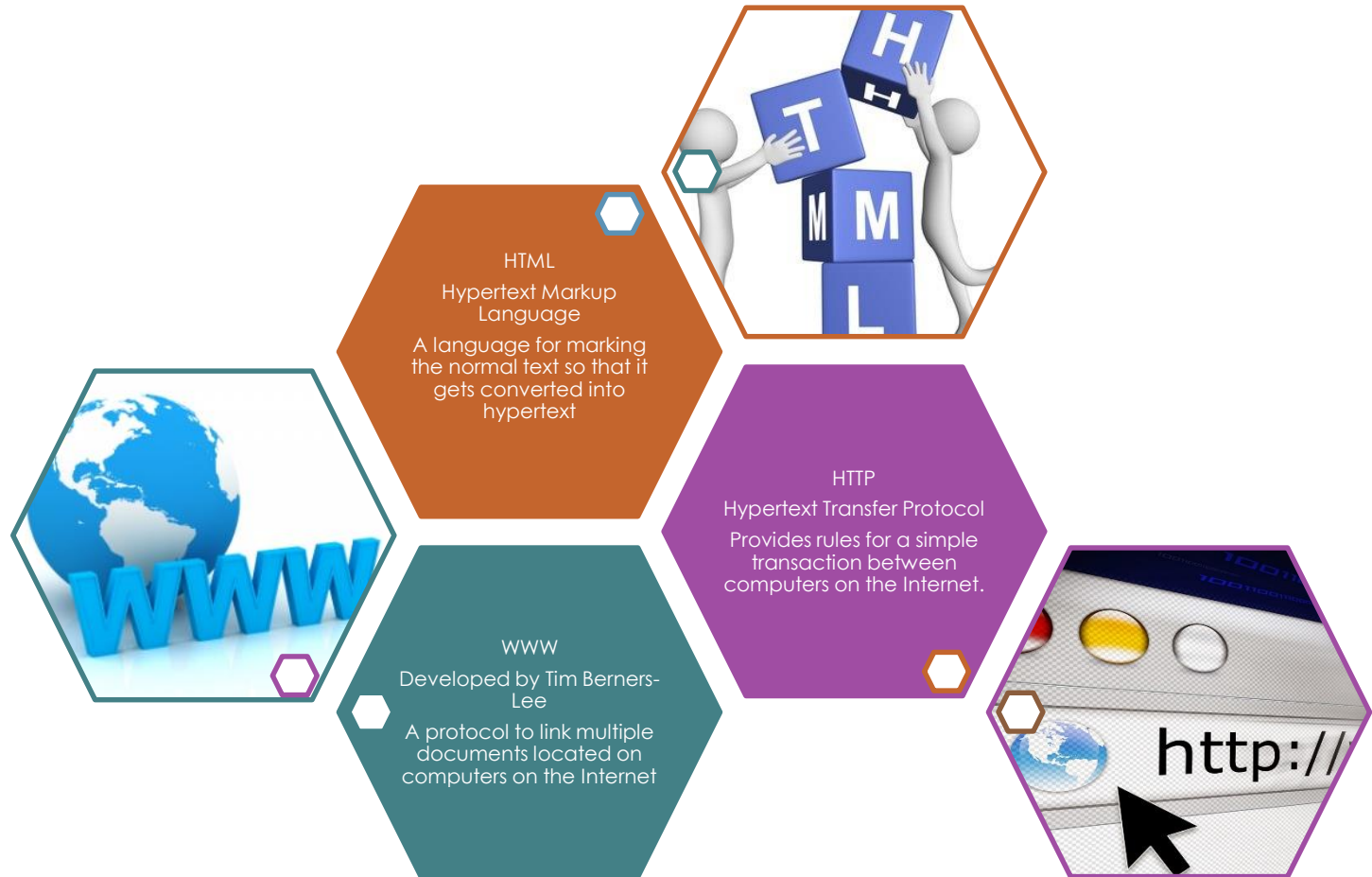
LECTURES 12 & 13



HTML

PART I

INTRODUCTION



HTML



Originally designed to mark up text and its structure -title, headings, lists, etc

Provides instruction to browsers how to display content

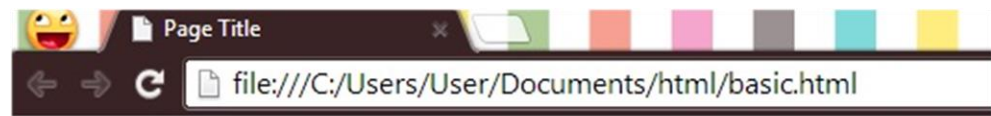
Consist of markup tags

DOCTYPE declaration defines the document type to be HTML

<html> </html> describes an html document

<head> </head> describes information about document

<body> </body> describes visible page content



PMF0101: Multimedia Fundamental

Basic Web Development

A screenshot of a Notepad window titled 'basic.html - Notepad'. The window displays the following HTML code:

```
File Edit Format View Help
<!DOCTYPE html>
<html>
<head>
  <title>Page Title</title>
</head>
<body>

  <h1>PMF0101: Multimedia Fundamental</h1>

  <p>Basic web Development</p>

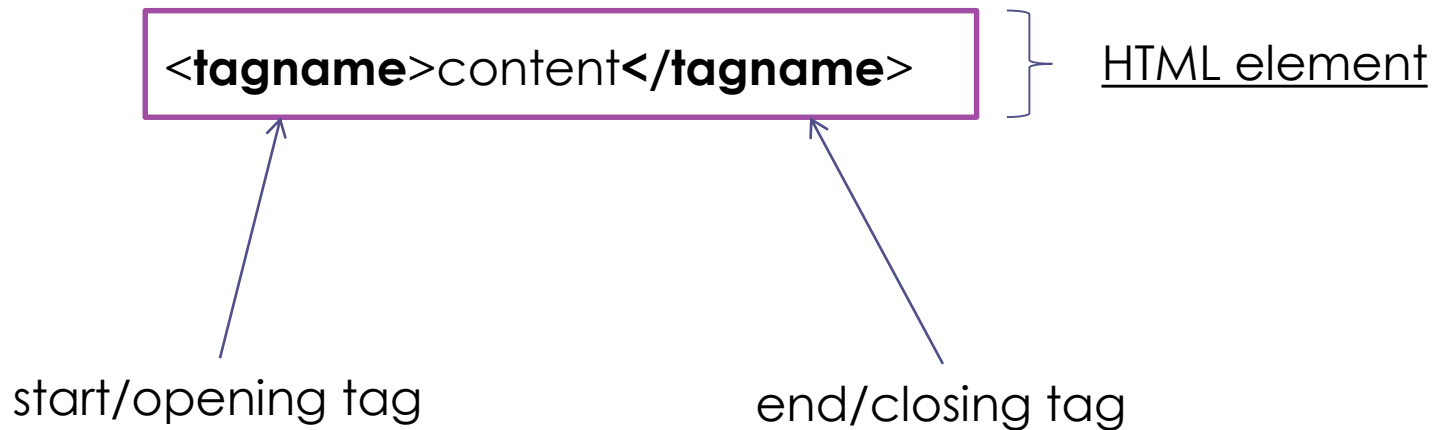
</body>
</html>
```

HTML

BASIC PAGE CODE

HTML TAGS

- Html tags are keywords in between angle brackets



- Empty tag: tags without closing tags;
 - Example: `<meta name="author" content="Ahmad Jais" />`

HTML: HEADINGS & PARAGRAPHS

Line break: add

Heading 1

Heading 2

Heading 3

Heading 4

This is a paragraph. "Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua."

This is a new paragraph. "Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat. ←

Duis aute irure dolor in reprehenderit in voluptate velit

Heading:
<h1>...</h1>

- Available in 6 levels of importance <h1> to <h6>
- Change the size of text

Paragraph:
<p>...</p>

- Functions as a container for paragraphs of text
- Paragraphs are separated by blank lines

HTML: LISTS

Unordered list

- Trimester 1
- Trimester 2
- Trimester 3

```
<ul>  
  <li>Trimester 1</li>  
  <li>Trimester 2</li>  
  <li>Trimester 3</li>  
</ul>
```

Ordered list

1. Trimester 1
2. Trimester 2
3. Trimester 3

```
<ol>  
  <li>Trimester 1</li>  
  <li>Trimester 2</li>  
  <li>Trimester 3</li>  
</ol>
```

Definition list

Trimester 2
14 weeks
Trimester 3
8 weeks

```
<dl>  
  <dt>Trimester 2</dt>  
  <dd>14 weeks</dd>  
  <dt>Trimester 3</dt>  
  <dd>8 weeks</dd>  
</dl>
```


HTML: LINKS

- A HTML link is a hyperlink;

- ☐ an element, a text, or an image that can be clicked
- ☐ allows users to navigate from one document to another document

- A link has two ends or anchors; source and destination

- Syntax: `link text`

Example:

```
<a href="http://fci.mmu.edu.my/main/">Click to visit FCI</a>
```

HTML: LINKS

- **Relative vs. Absolute Links**

- Absolute link : full URL address
 - <http://fci.mmu.edu.my/main/>
- Relative link: uses a path relative to the current page
 - Depends on the file structure
 - In the same folder, use `About Us`
 - To go up one level use `../` `Foundation`

- **Interior link**

- To link to a section of content within a webpage, use the name or id attribute
 - ` `
 - ` `
- Then add the destination name (preface by #) for linking
- `Contact Us`

- **Email link:** ``

HTML: TABLES

- A table is a section of information divided into columns and rows of blocks, called cells.
- Four basic table elements:
 - **<table></table>** : container for elements to create a table in HTML
 - **<tr></tr>** : creates a new table row
 - **<td></td>** : creates a new table cell
 - **<th></th>** : (optional) creates a new table header cell; is used in place of td element for that cell. By default, the content is boldface and centered.

HTML: TABLES

- Example:

Student Name	Subject	Marks
Student 1	PMF0101	56
Student 2	PEN0055	91
Student 2	PMT0101	75

```
<table style="width:50%">
  <tr>
    <th>Student Name</th>
    <th>Subject</th>
    <th>Marks</th>
  </tr>
  <tr>
    <td>Student 1</td>
    <td>PMF0101</td>
    <td>56</td>
  </tr>
  <tr>
    <td>Student 2</td>
    <td>PEN0055</td>
    <td>91</td>
  </tr>
  <tr>
    <td>Student 2</td>
    <td>PMT0101</td>
    <td>75</td>
  </tr>
</table>
```

HTML: FORMS

- Basic structure:
 - Opening and closing *form* tags
 - to put all other form related tags
 - Input controls
 - allows user input; includes text fields, checkboxes, radio buttons, submit buttons, and more.
 - Processing methods
 - action and method attributes

HTML: FORMS

- Input control – Input elements
- commonly used elements:

Type	Description
text	Defines normal text input
radio	Defines radio button input (for selecting one of many choices)
submit	Defines a submit button (for submitting the form)

Input text

Student Name:

Student ID:

Radio Button

☒ Male ☐ Female

Submit Button

Submit

HTML: FORMS

```
<form action="script.php" method="post">
```



Submit



- Processing methods
 - Action attribute:
 - Defines the action to be performed when the form is submitted.
 - Most web forms use some sort of scripting (ASP, PHP or CGI) to process data.
 - When a form is submitted, the contents of the form are sent to the script.

HTML: FORMS

```
<form action="script.php" method="get">
```



Submit

- Method attribute:
 - specifies the HTTP method to use during form submission
 - GET
 - form's data added at the end of the script; it will be visible in the page address.
 - For passive submission and without sensitive information
 - POST
 - writes the form's data to the message body; it is not visible in the page address (better security)
 - For updating data, or includes sensitive information (password).

HTML: IMAGE

- Images
 - *img* element is an empty tag and has no closing tag.

```

```

- Key attributes:
 - *src* : identifies the location of the image file
 - *alt* : alternate text description for non visual browser
 - *width*, *height*: define the width and height, values are in pixels (px)

HTML: IMAGE

```

```

```

```

Examples from <http://www.w3schools.com/>



In HTML5, It is recommended to use the style attribute to prevent styles sheets to change the default size of an image

HTML: MULTIMEDIA

- 2 primary ways to incorporate multimedia; link or embed

1. Link

- same as other link: a and href attributes

```
<a href="lectureslides.mov" title="Click to view lecture  
slides"> Watch PMF0101 slide show </a>
```

HTML: MULTIMEDIA



2. Embed

- `<video>`: HTML5 support MP4, WebM, and Ogg video
- `<audio>`: HTML5 support MP3, WAV, and Ogg audio

```
<video width="320" height="240" controls>  
  <source src="movie.mp4" type="video/mp4">  
</video>
```

```
<audio controls>  
  <source src="horse.mp3" type="audio/ogg">  
</audio>
```

- `<object>` and `<embed>`: for plug-ins
- `<iframe>`: Youtube video

```
<object width="40" height="50" data="ani_banner.swf"></object>
```

```
<embed width="40" height="50" src="ani_banner.swf">
```

```
<iframe width="320" height="240"  
src="http://www.youtube.com/embed/XyZ_r2H8k"></iframe>
```

CSS

PART II

CSS

- CSS (Cascading Style Sheet)
 - Use to dictate or handling page layout i.e. how to style content area
 - External Style Sheets are stored in CSS files

CSS

- CSS syntax: consist of a selector and a declaration block

selector



Declaration block



```
h1 {font-family:'century gothic'; color:blue;}
```

- Selector: refers to the HTML element to be styled.
- Declaration block:
 - Surrounded by curly braces { }
 - consist of declaration(s) separated by semicolons
 - A declaration: consist of a property name and a value, separated by a colon.

SELECTORS

- Selectors
 - Is used to select and apply styles to page elements
 - Can be an HTML element (such as p or div) or custom words
- Element Selectors
 - Selection based on the element name

```
p {  
    text-align:center;  
    color:blue;  
}
```


SELECTORS

- ID Selectors

- Uniquely style sections of a page, based on the id attribute.
- Select a single, unique element.
- No two id values can be the same.
- Use a hash character, followed by the id of the element

```
#p1 {  
    text-align:center;  
    color:blue;  
}
```

....

```
<p id="p1">This paragraph will appear in blue color</p>  
<p>This paragraph is not affected by the style.</p>
```

SELECTORS

- Class Selectors
 - Custom selector, similar to id selector but can be applied multiple times
 - Use a period character, followed by the name of the class

```
.highlight{  
    color:blue;  
}
```

....

```
<h1 class="highlight">This heading will appear in blue  
color</h1>
```

```
<p class="highlight">This paragraph will also appear in  
blue color</p>
```

LINK STYLES

- 4 Link styles:
 - a:link
 - a:visited
 - a:hover
 - a:active

APPLYING CSS

- 3 ways to insert a style sheet:
 - External style sheet
 - Internal style sheet
 - Inline style

APPLYING CSS

- External style sheet
 - Suitable when the style is used in many pages
 - Allows to change the look of an entire website just by changing one file
 - Each web page has to include a link to the css file

```
<head>  
<link rel="stylesheet" type="text/css" href="style1.css">  
</head>
```
 - An external style file with extension .css (should not contain html tags)

APPLYING CSS

- External style sheet
 - An example of an external style sheet file:

```
body {  
    margin: 0px;  
    padding: 0px;  
    background-color: green  
}  
  
h1 {  
    color: blue;  
}
```

APPLYING CSS

- Internal style sheet
 - Suitable when a single document has a unique style
 - Definition at the head section in the HTML file

```
<!DOCTYPE html>
<html>
  <head>
    <style>
      body {
        background-color: #ff00B8;
      }
    </style>
  </head>
  <body>
    ...
  </body>
</html>
```

To specified color:

- HEX value :
"#ff0000"
- RGB value :
"rgb(255,0,0)"
- color name :
"red"

APPLYING CSS

- Inline style
 - add the style attribute to the selected tag

```
h1 style="color:blue;text-align:center;">This is a heading.</h1>
```

- Order of importance:
External style sheet < Internal style sheet < inline style