Basic Web Design

HTML

LECTURE - 02

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Think first before you build

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The department of Computer Science and Engineering at University of Barishal (**CSEBU**), in collaboration with the Bangladesh Computer Council (**BCC**) aims to offer various skilled development courses to prepare smart citizen in Bangladesh.

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- Training Kits will be provided
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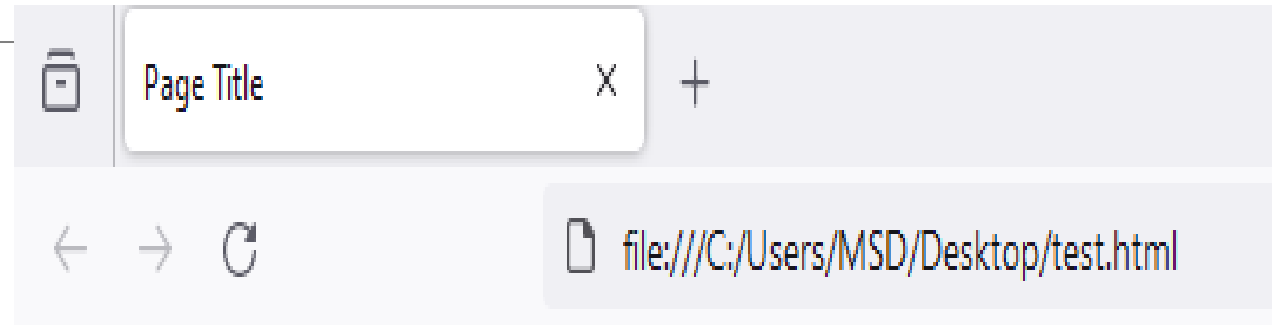- Certificate after completing courses

HTML

- HTML stands for *HyperText 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 (such as text, images, links, and other elements)**
- HTML was invented by **Tim Berners-Lee** in **1991** and the latest version is *HTML 5.2 (2017)*

- *HyperText*: Refers to the **ability to link** to other documents and resources on the web.
- *Markup Language*: Refers to using tags to define the *structure and layout of the content* on the web page.

Simple HTML Document

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

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

</body>
</html>
```

Page Title | X | +

← → C   file:///C:/Users/MSD/Desktop/test.html

My First Heading

My first paragraph.

Environment for HTML

- **Text Editors**:
  - **Notepadd++**
  - Sublime Text
  - **Visual Studio Code**
  - Brackets
- **Web Browsers:**
  - **Google Chrome**
  - Mozilla Firefox
  - Microsoft Edge

Write your first code:

> *Create a file with extension* **html** *(e.g.* **test.html***) and write the following code on it.*

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

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

</body>
</html>
```

Structure of HTML Document

```
<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>
```
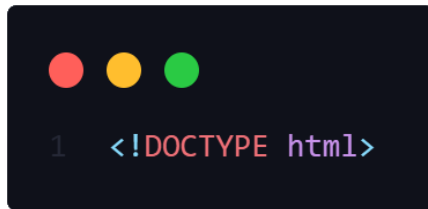
Explanation of main elements

- **<!DOCTYPE html>:** it defines that this document is an ***HTML5 document***.

- **<html>:** This is the ***root*** element of an HTML page.

- **<head>:** This element contains ***meta*** information about the HTML page.

- **<title>:** This element specifies a title for the HTML page (which is shown in the ***browser's title bar*** or in the page's tab).

- **<body>:** This element defines the document's body, and is a container for all the visible contents in the browser, such as headings, paragraphs, images, hyperlinks, tables, lists, etc.

- **<h1>:** This element defines a large heading.

- **<p>:** This element defines a paragraph

HTML Documents

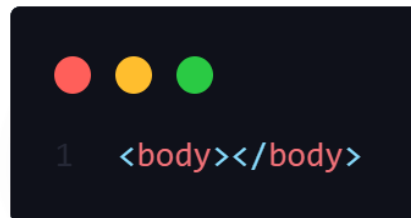All HTML documents must start with a document type declaration

```
<!DOCTYPE html>
```

The HTML document itself begins and end with

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

The visible part of the HTML document is between

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

HTML Elements

- An HTML element is a **building block** of an HTML document that defines **content and structure on a web page**.

- HTML elements can be used to **create everything in web page** from text, headings, images, links, to forms and more complex structures.

- It is represented by a start tag, content, and an end tag. :

  - **Start Tag:** This tag marks the beginning of the element. It consists of the element's name enclosed in angle brackets (< >). Example: <p> for a paragraph.

  - **Content**: The actual text, images, or other HTML elements that go inside the tag.

  - **End Tag**: This marks the end of the element. It is similar to the start tag but with a forward slash (/) before the element's name. Example: </p>.

HTML Elements (Cont..)

- **Tag types:**
  - ***Single Tag/ Self-closing Tag***: this element doesn't need an end tag. It contains a single tag such as <img>, <br>.
  - ***Double Tag***: It contains both start and end tag such as <p> </p> or <h1> </h1>

- **Example of HTML Elements**

  - *<h1>Welcome to My Website</h1>*
  - *<p>This is a paragraph on the web page.</p>*
  - *Click here to visit Example*
  - *<img src="image.jpg" alt="An example image">*

HTML Headings

- HTML headings are **titles or subtitles** that you want to display on a webpage.

- HTML headings are defined with the `<h1>` to `<h6>` tags.

- `<h1>` defines the most important heading. `<h6>` defines the least important heading.

- Browsers typically display heading tags with different **font sizes by default.**

- Search engines use the headings to index the structure and content of your web pages. Crucial for **SEO** as they understand the structure.

HTML Headings (Examples)

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

Heading 1

Heading 2

Heading 3

Heading 4

Heading 5

Heading 6

HTML Paragraphs

- The HTML <p> element defines a paragraph.

- A paragraph always starts on a new line, and is usually a block of text.

- Browsers automatically add some white space (a margin) before and after a paragraph.

HTML Paragraphs (Examples)

```
1   <p>This is a paragraph.</p>
2   <p>This is another paragraph.</p>
```

This is a paragraph.

This is another paragraph.

Common elements

- **\<hr> : Horizontal rule**→ This element represents a horizontal line across the page

- **\
: Line Break**→ The \
 tag is used to insert a ***single line break*** within the text. Unlike paragraphs, this does not start a new block but simply moves content to the next line.

- **\<pre>\</pre>: Preformatted Text**→ The \<pre> tag preserves both spaces and line breaks in the content, ***displaying it exactly as it is written in the HTML source***. Useful for displaying code or text that requires specific formatting.

- **\<marque>\</marque>:** The \<marquee> element is used to create ***scrolling text or images across the screen***. This tag is deprecated and should be avoided in modern HTML development due to poor accessibility and lack of cross-browser support.

Common elements (Example)

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

<h1>This is test</h1>
<hr>
<p>The pre tag preserves <br> both
spaces and line breaks</p>

<pre>
    My Bonnie lies over the ocean.

    My Bonnie lies over the sea.

    My Bonnie lies over the ocean.

    Oh, bring back my Bonnie to me.
</pre>

<marquee>This is news headline
</marquee>

</body>
</html>
```

This is test

The pre tag preserves
both spaces and line breaks

    My Bonnie lies over the ocean.

    My Bonnie lies over the sea.

    My Bonnie lies over the ocean.

    Oh, bring back my Bonnie to me.

This is news headline

Exercises

THANK YOU