IT WORKSHOP I

HTML

14-Dec-22

Topics

- Markup Languages
- SGML
- HTML
- Page Structure
- Elements & Attributes
- Types of Elements
- Heading Tags
- Text Formatting Tags
- Lists
- Images

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Markup Language

- The term "markup" originated from editors making revisions to writers' manuscripts.
- An editor "marks up" the manuscript to highlight certain fields.
- In computer technology, a markup language is a set of words and symbols that highlights text to define it for a web document.
- Traditionally used to provide typesetting information to printers where text should be indented, margin sizes, bold text, special font sizes and styles, etc.
- Word processors like MS Word, and typesetting systems like LaTex are also forms of mark-up languages.

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Markups

enlarged font
Fourscore and seven   Indent and
years ago our fathers   bold. up
brought forth on this   to "our"
continent a new nation,
conceived in liberty,
and dedicated to the
proposition that all
men are created equal. put in italics
new
paragraph Now we are engaged in a
great civil war,
skip a line testing whether that
nation, or any nation
align text to both margins

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SGML

- In this family of markup languages, Standard Generalized Markup Language (SGML) is the parent.   1986
- SGML is a system for defining structured document types (DTD) and markup languages to represent instances of those document types
- SGML can be used to produce files which can be read by people, and exchanged between machines and applications in a straightforward manner.
- HTML is an application of SGML
- XML is subset of SGML

Generalized Markup Language (GML) was developed at IBM in 1969 is a meta-language for arbitrary data

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SGML

... but the spin may not wash with Ferguson

Daniel Taylor

David Beckham's advisers claimed yesterday that he had "been given no reason whatsoever" for being banished from training and dropped from Manchester United's first-team after incurring the wrath of his manager Sir Alex Ferguson.

As Beckham attempted to focus on England's game against Argentina tomorrow, the London-based public relations company

league about the potentially damaging effect his millionaire lifestyle could have on his playing career.

His omission at Elland Road shows that Ferguson is no longer willing to tolerate the 24-year-old leading his dual life between Old Trafford and the Hertfordshire home he shares with his pop-star wife Victoria Adams, although his advisers are adamant he is not seeking a move. Ferguson was refusing to discuss the

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SGML

```
<story id=7809 date=2000-02-22 section=sport>
<data> <author><surname>Taylor</surname>
<firstname>Daniel</firstname></author>
<location>Manchester</location> <keywords>Beckham, Posh
Spice, Manchester United, childcare, Sir Alex
Ferguson</keywords> </data>
<title>&ellipsis; but the spin may not wash with
Ferguson</title>
<p><name type="person" reg="BeckhamD">David Beckham</name>'s
advisers claimed yesterday that he had <q>been given no
reason whatsoever</q> for being banished from training and
dropped from <name type="org" reg="ManU">&ManU;</name>'s
first-team after incurring the wrath of his manager <name
type="person" reg="FergusonA">&SAF;</name></p>

<p>As <name type="person" reg="BeckhamD">Beckham</name>
attempted to focus on…</p>
</story>
```

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HTML

- Stands for HyperText Markup Language
- The primary scripting language for developing web pages is HTML.
- HTML allows us to write formatting instructions to describe how a web page should appear in a browser's window.
- Web browsers interpret the formatting instructions specified for the web page and display the web page on the screen.
- HTML provides simple mechanisms for formatting text, creating links and lists, inserting images, embedding audio and video etc.
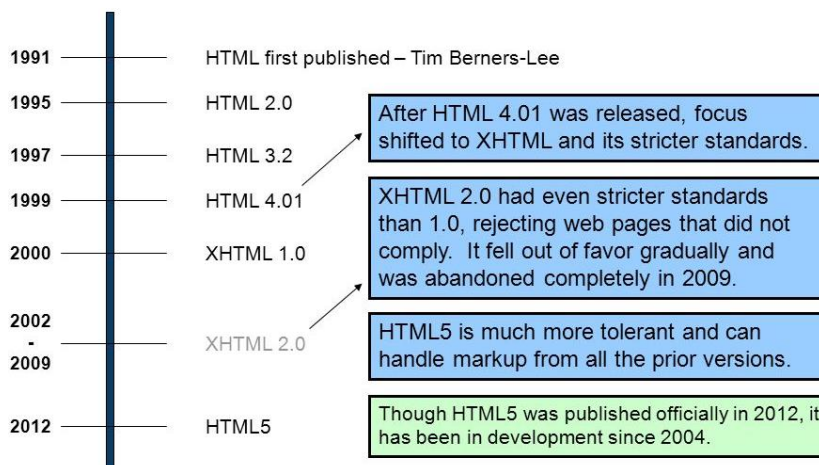
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HTML

- It can also include CSS to specify the style and layout of text and other components.
- Scripts written in various languages such as JS and VBScript may also be used to change the appearance of web pages and make them interactive.
- HTML documents are written using HTML "tags" embedded in angular brackets.
- The set of tags that we can use to write HTML documents is defined by the world wide web consortium (W3C).
- W3C has published many standards for HTML

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HTML History

Year	Version	Note
1991	HTML first published – Tim Berners-Lee	
1995	HTML 2.0	After HTML 4.01 was released, focus shifted to XHTML and its stricter standards.
1997	HTML 3.2	
1999	HTML 4.01	XHTML 2.0 had even stricter standards than 1.0, rejecting web pages that did not comply. It fell out of favor gradually and was abandoned completely in 2009.
2000	XHTML 1.0	
2002 - 2009	XHTML 2.0	HTML5 is much more tolerant and can handle markup from all the prior versions.
2012	HTML5	Though HTML5 was published officially in 2012, it has been in development since 2004.

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HTML

- HTML documents are simply text documents with a specific form
  - Documents comprised of content and markup tags
  - Content is actual information being conveyed
  - The markup tags tell the Web browser how to display the page
  - An HTML file must have an htm or html file extension

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HTML - First Page

Step 1: Open Notepad

Step 2: Write Some HTML code

Step 3: Save the HTML Page

   Select File > Save as in the Notepad menu.

   Name the file "index.html" and

   Select Save as Type "All Files (*.*)

Step 4: View the HTML Page in Browser
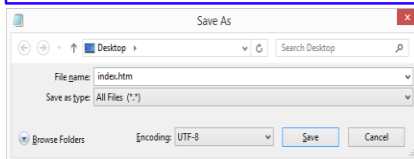
```
<HTML>

<HEAD>
    <TITLE> My web page </TITLE>
</HEAD>

<BODY bgcolor="blue">

    This is the Content of the document

</BODY>

</HTML>
```

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HTML - First Page
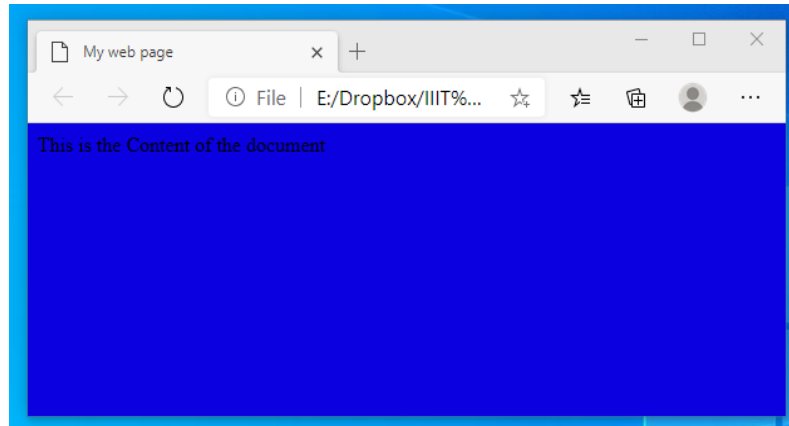
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HTML Elements

- HTML documents consist of a number of elements where text is placed in containers between tags
- HTML tags are used to mark-up HTML elements
  - Surrounded by angle brackets < and >
  - HTML tags normally come in pairs, like <tagname> (start tag) and </tagname> (end tag)
  - The text between the start and end tags is the element content
  - Not case-sensitive
 - Follow the latest web standards: Use lowercase tags

  - Example: <head>,</head>, <p></p>,<h1>

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Attributes

- Tags can have *attributes that provide additional information* to an HTML element
  - Attributes always come in name/value pairs like: name="value"
  - Attributes are always specified in the start tag
  - Attribute values should always be enclosed in quotes. *Double quotes are most common*.
  - Also case-insensitive: however, lowercase is recommended
  - <tagname a1="v1" a2="v2"></tagname>
  - For example, <body bgcolor="blue"> defines a body of the page should be blue color

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Elements and attributes
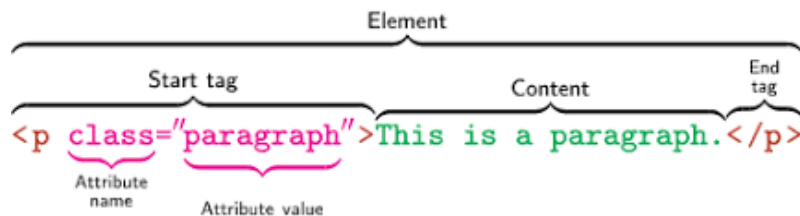
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Basic Constructs

○ All tags must be **nested** correctly:

<p> … </p> contains a paragraph and
 … contains emphasized text
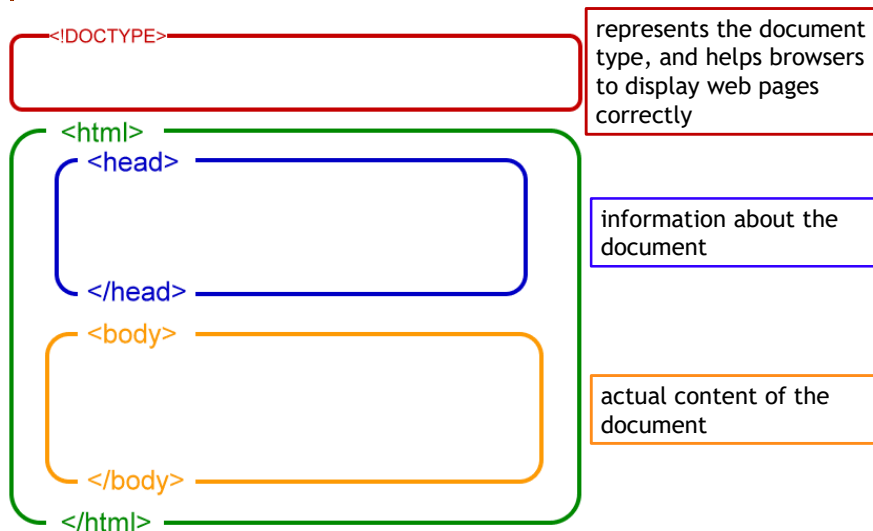
Invalid:
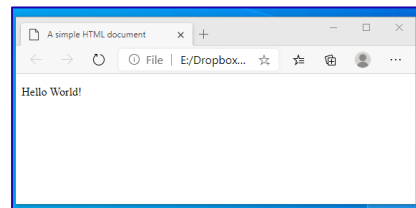<p>This overlap is not nested. </p> So it is invalid.

Valid:
<p>This is correct nesting. It is valid!</p>

HTML Page Structure

<!DOCTYPE>	represents the document type, and helps browsers to display web pages correctly
<html> <head> … </head>	information about the document
<body> … </body> </html>	actual content of the document

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First HTML Page

```
<!DOCTYPE html>
<html>
<head>
    <title>A simple HTML document</title>
</head>
<body>
    <p>Hello World!<p>
</body>
</html>
```

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HTML Structure

- A pre-processor directive at the top of the document tells the browser what kind of standards apply to the document.
- The HTML document is divided into two major parts:
  - HEAD: contains information about the document
    - Title of the page (which appears at the top of the browser window)
    - JavaScript and Stylesheets generally require statements in the document Head
  - BODY: contains the actual content of the document
    - This is the part that will be displayed in the browser window

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Types of Elements

- Two types of Elements
  - Block Elements and Inline Elements
- Block elements
  - A block-level element always starts on a new line and takes up the full width available
  - Can contain other block or inline elements (nested elements)
  - Contains large amount of content spanning many lines
- Example

  <p>, <h1>, <h2>, <h3>, <h4>, <h5>, <h6>, <ul>, <ol>,<li>, <dl>, <pre>, <hr>, <div> .

Types of Elements

- Inline elements
  - Inline elements don't break the text before and after them
  - Inline elements, on the other hand, can appear within sentences and do not have to appear on a new line of their own.
- Example

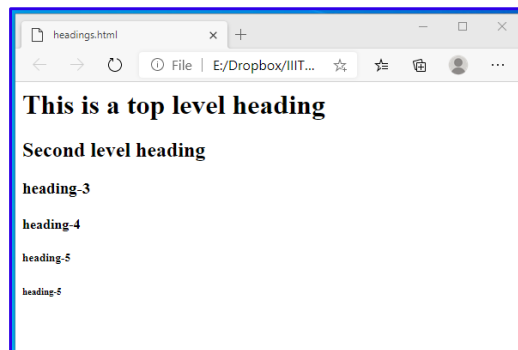 <b>, <i>, <u>, <strong>, <sup>, <sub>, <del>, <span>

HTML Headings

- HTML defines six levels of headings.
- The heading elements are H1, H2, H3, H4, H5, and H6 with H1 being the highest (or most important) level and H6 the least.
- For example:

  <H1>This is a top level heading</H1> Here is some text.
  <H2>Second level heading</H2> Here is some more text.

  <h1>Main heading</h1>

  <h2>sub heading</h2>

  <h3>sub heading</h3>

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HTML Headings

```
<html>
<body>
<h1>This is a top level heading</h1>
<h2>Second level heading</h2>
<h3> heading-3</h3>
<h4>heading-4</h4>
<h5> heading-5</h5>
<h6> heading-5</h6>
</body>
</html>
```

HTML Paragraphs

- A paragraph always starts on a new line, and browsers automatically add some white space (a margin) before and after a paragraph.
- The browser will automatically remove any extra spaces
- Eg.

        <p>This is first paragraph.</p>
        <p>This is second paragraph.</p>

Try this,

    <p>   Hi   </p>
    <p>   Hello   </p>

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Text Formatting Tags

Tag		Description
		bold
<i>	</i>	italic
<u>	</u>	underlined
<sup>	<sup>	Sample^{superscript}
<sub>	<sub>	Sample$_{subscript}$
<mark>	<mark>	Defines marked/highlighted text
		To change style of text
<pre>	</pre>	Preformatted text
<del>	</del>	Deleted text – strike through
<hr>		Defines horizontal line
		Emphasized text
		Important text

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Font tag

- It is used to change style of specific text

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Color Name	RGB Triplet	Hexadecimal	Color Name	RGB Triplet	Hexadecimal
Aqua	(0,255,255)	00FFFF	Navy	(0,0,128)	000080
Black	(0,0,0)	000000	Olive	(128,128,0)	808000
Blue	(0,0,255)	0000FF	Purple	(128,0,128)	800080
Fuchsia	(255,0,255)	FF00FF	Red	(255,0,0)	FF0000
Gray	(128,128,128)	808080	Silver	(192,192,192)	C0C0C0
Green	(0,128,0)	008000	Teal	(0,128,128)	008080
Lime	(0,255,0)	00FF00	White	(255,255,255)	FFFFFF
Maroon	(128,0,0)	800000	Yellow	(255,255,0)	FFFF00

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HTML Lists

- HTML lists are used to display information in a concise, organized manner without having to use tables.
- There are three different types of list in HTML,
  - Unordered list — Used to create a list of related items, in no particular order.
  - Ordered list — Used to create a list of related items, in a specific order.
  - Definition list — Used to create a list of terms and their descriptions.

Unordered List	Ordered List	Description List
• The first item • The second item • The third item • The fourth item	1. The first item 2. The second item 3. The third item 4. The fourth item	**The first item** Description of item **The second item** Description of item

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Unordered lists

- An unordered list is a collection of related items that have no special order or sequence.
- Each item in the list is marked with a bullet.
- An unordered list starts with the <ul> tag.
  - Each list item starts with the <li> tag.

```
<ul>
  <li>Coffee</li>
  <li>Tea</li>
  <li>Milk</li>
</ul>
```
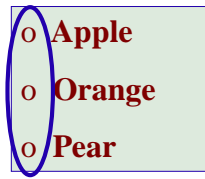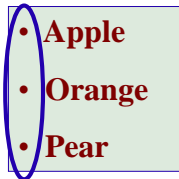
- Coffee
- Tea
- Milk

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Unordered lists

- The type attribute
- You can use type attribute for <ul> tag to specify the type of bullet you like. By default it is a disc.
- Following are the possible options:
  - <ul type="disc">
  - <ul type="circle">
  - <ul type="square">

- Apple
- Orange
- Pear

o Apple
o Orange
o Pear

▪ Apple
▪ Orange
▪ Pear

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Unordered lists

```
<h1>Explaining about bullet lists</h1>
<ul type="disc">
<li>Tea</li>
<li>Coffee</li>
<li>Ice Cream</li>
<li>Juice</li>
</ul>
```

Explaining about bullet lists

- Tea
- Coffee
- Ice Cream
- Juice

- Tea
  - Green Tea
  - Ginger Tea
- Coffee
  - Strong
  - Light
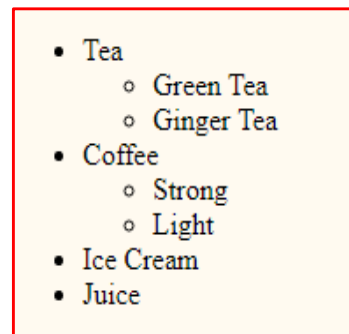- Ice Cream
- Juice

?????

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Unordered lists

```
<ul type="disc">
<li>Tea</li>
<ul>
    <li>Green Tea</li>
    <li>Ginger Tea</li>
</ul>
<li>Coffee</li>
<ul>
    <li>Strong</li>
    <li>Light</li>
</ul>
<li>Ice Cream</li>
<li>Juice</li></ul>
```

Nested List - Lists can be placed within lists to indicate sub-items.

- Tea
  - Green Tea
  - Ginger Tea
- Coffee
  - Strong
  - Light
- Ice Cream
- Juice

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Ordered lists

- An ordered list is also a list of items marked with letter or number.
- Use this style of list when order is important..
- An ordered list starts with the <ol> tag. Each list item starts with the <li> tag.
- The numbering starts at one and is incremented by one for each successive ordered list element tagged with <li>.

```
<ol>
 <li>Coffee</li>
 <li>Tea</li>
 <li>Milk</li>
</ol>
```

1. Coffee
2. Tea
3. Milk

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Ordered lists

<ol type="A"|"I"|"i"|"1">

```
<ol type="A">
<li>Tea</li>
<ol>
   <li>Green Tea</li>
   <li>Ginger Tea</li>
</ol>
<li>Coffee</li>
<ol>
   <li>Strong</li>
   <li>Light</li>
</ol>
<li>Ice Cream</li>
</ol>
```

Type	Description
type="1"	numbers (default)
type="A"	uppercase letters
type="a"	lowercase letters
type="I"	uppercase roman numbers
type="i"	lowercase roman numbers

start attribute???

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Ordered lists

<ol type="A"|"I"|"i"|"1">

```
<ol type="A">
<li>Tea</li>
<ol>
   <li>Green Tea</li>
   <li>Ginger Tea</li>
</ol>
<li>Coffee</li>
<ol>
   <li>Strong</li>
   <li>Light</li>
</ol>
<li>Ice Cream</li>
</ol>
```

Type	Description
type="1"	numbers (default)
type="A"	uppercase letters
type="a"	lowercase letters
type="I"	uppercase roman numbers
type="i"	lowercase roman numbers

A. Tea
    1. Green Tea
    2. Ginger Tea
B. Coffee
    1. Strong
    2. Light
C. Ice Cream

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Definition Lists

- A definition list is not a list of single items.
- It is a list of items (terms), with a description of each item (term).
- The definition list is the ideal way to present a glossary, list of terms, or other name/value list.
- A definition list starts with a <dl> tag (definition list).
- Each term starts with a <dt> tag (definition term).
- Each description starts with a <dd> tag (definition description).

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Definition Lists

```
<dl>
   <dt><b>HTML</b></dt>
   <dd>This stands for Hyper Text Markup Language</dd>
   <dt><b>HTTP</b></dt>
   <dd>This stands for Hyper Text Transfer Protocol</dd>
</dl>
```

HTML
 This stands for Hyper Text Markup Language
HTTP
 This stands for Hyper Text Transfer Protocol

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HTML Images

- The <img> tag is used to insert/link images in the HTML documents.
- It is an empty element and contains attributes only.
- The <img> tag creates a holding space for the referenced image.
- Syntax: <img src="Image URL">

Attribute	Value	Description
align	Top, bottom, middle, left, right	Specifies the alignment of an image
alt	text	Specifies an alternate text for an image
height	pixels	Specifies the height of an image
width	pixels	Specifies the width of an image
src	URL	Specifies the URL of an image

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HTML Images

```
<html>
<body>

<img src="rd.jpg" height="420" width="420" align="right"/>

<img src = "C:\pic\selfie01.bmp"  alt="No image found" />

<img src = "www.images.com\image.jpeg"/>

</body>
</html>
```

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End

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