

# **Web Technologies (ICDT6004) – Lecture 1**

Introduction to HTML5

# Aims of lecture

- At the end of today's lecture students should be able to
  - Create a web page using an editor
  - Use the `<html>`, `<h1>`, `<p>`, `<br/>`, `<ul>`, `<ol>`, `<li>` tags
  - Insert an image in a web page using the `<img>` tag
  - Link a page to another page using the `<a>` tag

# Introduction to HTML

- HTML - HyperText Markup Language
- HTML
  - Used to format documents to be displayed in browsers
  - Used to create forms to accept user data to be sent to Web/Application Server

# Introduction to HTML (2)

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>My first html page</title>
```

```
</head>
```

```
<body>
```

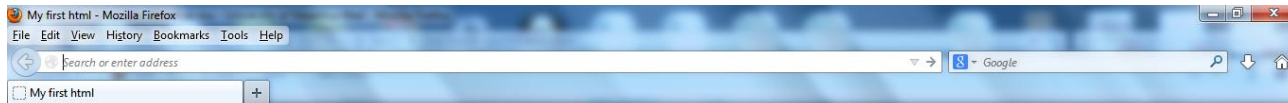
```
This is my first html page
```

```
</body>
```

```
</html>
```

# Introduction to HTML (3)

- The above can be typed in any editor, saved as first.html and viewed in any browser



This is my first html page

# The tags

- `<!DOCTYPE html>` - This tag defines the document type and HTML version.
- `<html>` - This tag encloses the complete HTML document and mainly comprises of document header which is represented by `<head>...</head>` and document body which is represented by `<body>...</body>` tags.
- Each open tag has a corresponding close tag
  - Some tags will not produce an error if not closed but it is good practice to close all tags
- Tags are properly nested (although not a strict requirement in HTML, adhere to this convention to avoid surprises when writing Javascript codes)

# The tags (2)

- Some HTML elements have **empty content**.
- Empty elements can be closed **closed in the start tag** itself e.g. `<input type="text"/>`
- Most HTML elements can have **attributes**
- HTML is case insensitive
- It is good practice to write the corresponding closing tag as soon as you write any tag.

# Explanation of code

- In the above example, The `<HTML>` informs the browser that the document is HTML
- There are 2 subsections the `<head>` and `<body>` tags.
- The content in the `<head>` does not display on the page
- The content in the `<body>` displays on the page



# Introduction to HTML (4) – the heading tag

```
<!DOCTYPE html>  
<html>  
  <head>  
    <title>My first html page</title>  
  </head>  
  <body>  
    <h1>My web page </h1>  
    This is my first html page  
  </body>  
</html>
```

# Heading tag

- Can have headings in HTML
- `<h1>`, `<h2>` upto `<h6>`
- Headings are important - search engines use them to index the structure and content of web pages.
- Since users get an idea of a webpage by its headings, it is important to use headings to show the document structure.
- H1 headings should be used as main headings, followed by H2 headings, then the less important H3 headings, and so on.

# Paragraph tag and `<br/>`

- The paragraph tag `<p>` is used to indicate paragraphs in a document
- The `<br/>` tag is used to change line
- Comments are indicated by  
`<!-- This is a comment in html-->`

# Classwork 1

- Will be discussed in class.

# Lists in HTML

- HTML can also be used to create lists
  - ordered and unordered
- Ordered list are created using the `<ol>` tag and the items in the list are created using `<li>`

Level 1 modules are:

```
<ol><li>Programming Principles and Algorithms</li>  
<li>Database Systems and Administration</li>  
<li>Web Design and Development</li></ol>
```

# Lists in HTML (2)



Level 1 modules are:

1. Programming Principles and Algorithms
2. Database Systems and Administration
3. Web Design and Development

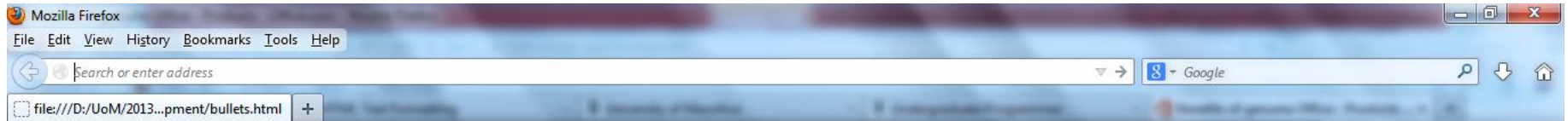
# Lists in HTML (3)

- UnOrdered list are created using the `<ul>` tag and the items in the list are created using `<li>`

Level 1 modules are:

```
<ul><li>Programming Principles and Algorithms</li>  
<li>Database Systems and Administration</li>  
<li>Web Design and Development</li></ul>
```

# Lists in HTML (4)



Level 1 modules are:

- Programming Principles and Algorithms
- Database Systems and Administration
- Web Design and Development



# Investigate

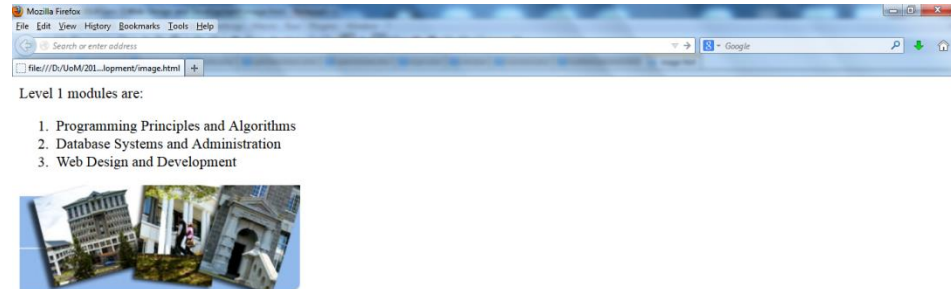
- How do we change the numbers or bullets such that instead of 1,2,3 or default bullet a,b,c or some other bullet is displayed?
- `<ol type="a">`
- `<ol type="I">`

# Attributes in html

- HTML elements can have attributes
- Attributes provide additional information about an element
- Attributes are always specified in the start tag
- Attributes come in name/value pairs like:  
name="value"

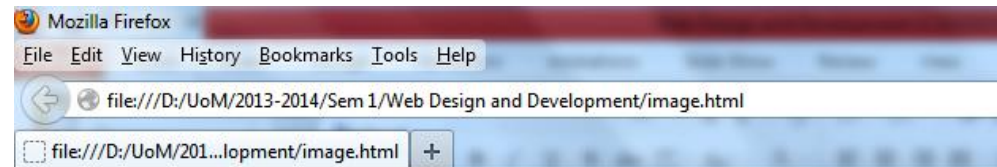
# Image tag

- The image tag `<img>` is used to add an image
- The name of the file is indicated by the attribute `src` E.g. `<img src = "banner.jpg"/>`
- Images are often found in subfolders called `images` E.g. `<img src = "images/banner.jpg"/>`



# Image tag (2)

- Images can also have some text displayed in case the image cannot be displayed
- E.g. `<img src = "images/banner.jpg" alt="banner"/>`



Level 1 modules are:

1. Programming Principles and Algorithms
2. Database Systems and Administration
3. Web Design and Development

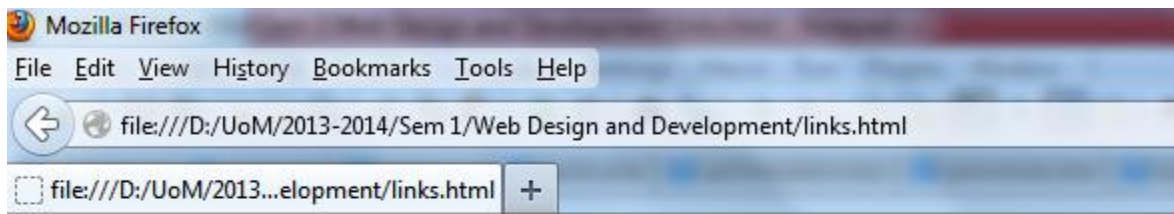
banner

# Image tag (3)

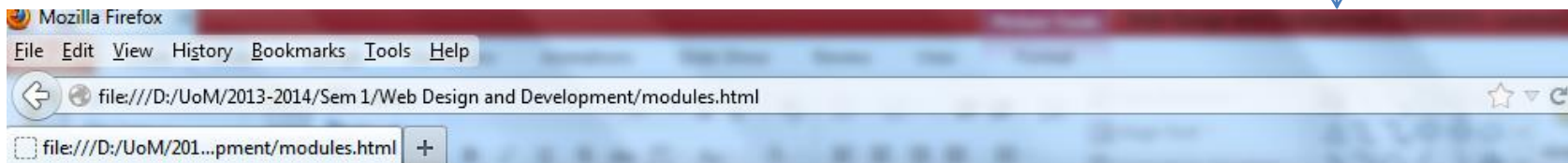
- The height and width attributes can be used to resize the appearance of the image.
- E.g. `<img src = "banner.jpg" width="50%" />`
- Good practice requires we use **relative** paths v/s **absolute** paths to specify the source of the image (any file for that matter)
  - Allows easy maintenance and portability amongst others
- One common mistake students make is to write `scr` instead of `src` for the source of the image.

# Hyperlinks

- The `<a>` tag
  - Used to provide a link to another document or section in a document
  - Used to provide link to a mail composer
  - Used to define a section within a document
  - Used for local and parallel navigation
- `<p><a href="modules.html">Modules</a></p>`



# Modules



Level 1 modules are:

- Programming Principles and Algorithms
- Database Systems and Administration
- Web Design and Development

# Link to a mail composer

- Clicking on link opens email client with email specified in the “to” field

`<p><a href="mailto:help@uom.ac.mu">Help</a>`

`</p>`

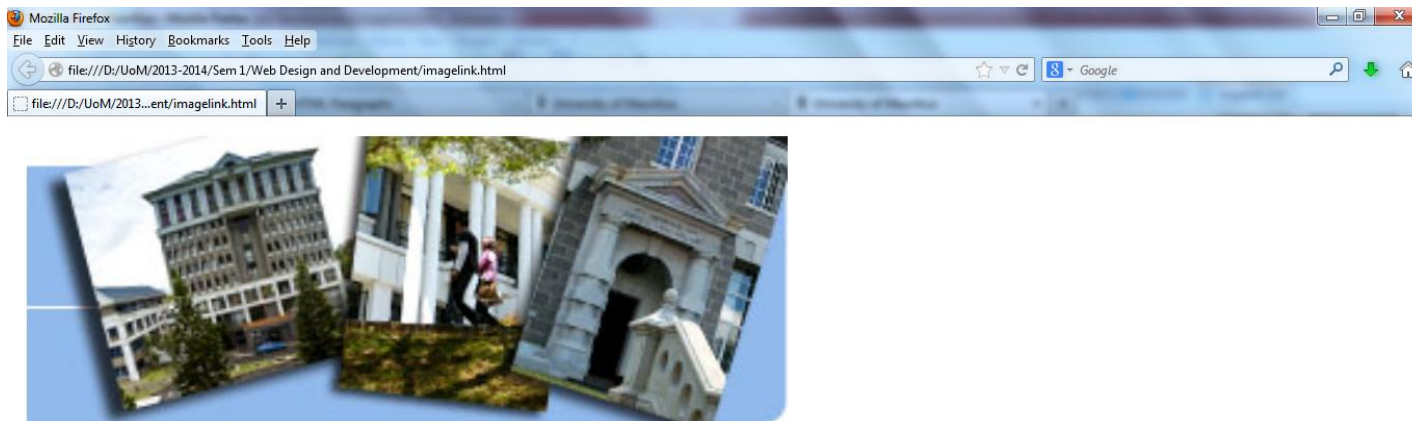


[Help](mailto:help@uom.ac.mu)



# Adding an image as a link

- `<p><a href="modules.html"></a></p>`



# Used to define a section within a document

- `<a name="Outline">`
- `<h2>Outline</h2>`
- `..`
- `<a name="Grading">`
- `<h2>Grading Policy</h2>`
- `...`

# Specifying a link to move to a specific section of a web page

```
<!DOCTYPE html>
```

```
<html>
```

```
<head>
```

```
<title>Link to a section of a document</title>
```

```
</head>
```

```
<body>
```

```
...
```

```
<a href="firstpage.html#outline">Outline of the course
```

```
</a>
```

```
</body>
```

```
</html>
```

# Classwork 2

- Write the HTML code to create a link that links to the Google website.

Questions?