

# HTML Programming Basic Skills (1)

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# What is HTML?

- HTML is a language for describing web pages.
- HTML stands for **Hyper Text Markup Language**
- HTML is not a programming language, it is a **markup language**
- A markup language is a set of **markup tags**
- HTML uses **markup tags** to describe web pages

# HTML Structure

- A HTML document
  - consists of **HTML's (markup) tags** and **plain text contents**
  - HTML tags are **keywords** surrounded by **angle brackets**
    - Tag example: `<head>` 、 `<p>` 、 `<br>` 、 `<img>`
  - The plain text is described between “`<html>`” and `</html>` tags
    - A HTML document is divided into two sections
      - **Heading section** : represented by tag “`<head>`”
      - **Body section** : represented by tag “`<body>`”
  - <http://www.w3schools.com/html/default.asp>

# HTML Document Example

```
<!DOCTYPE HTML>
```

```
<html>
```

```
  <head>
```

```
    <title>The title of this webpage</title>
```

```
  </head>
```

```
  <body>
```

```
    <h1>My First Homepage</h1>
```

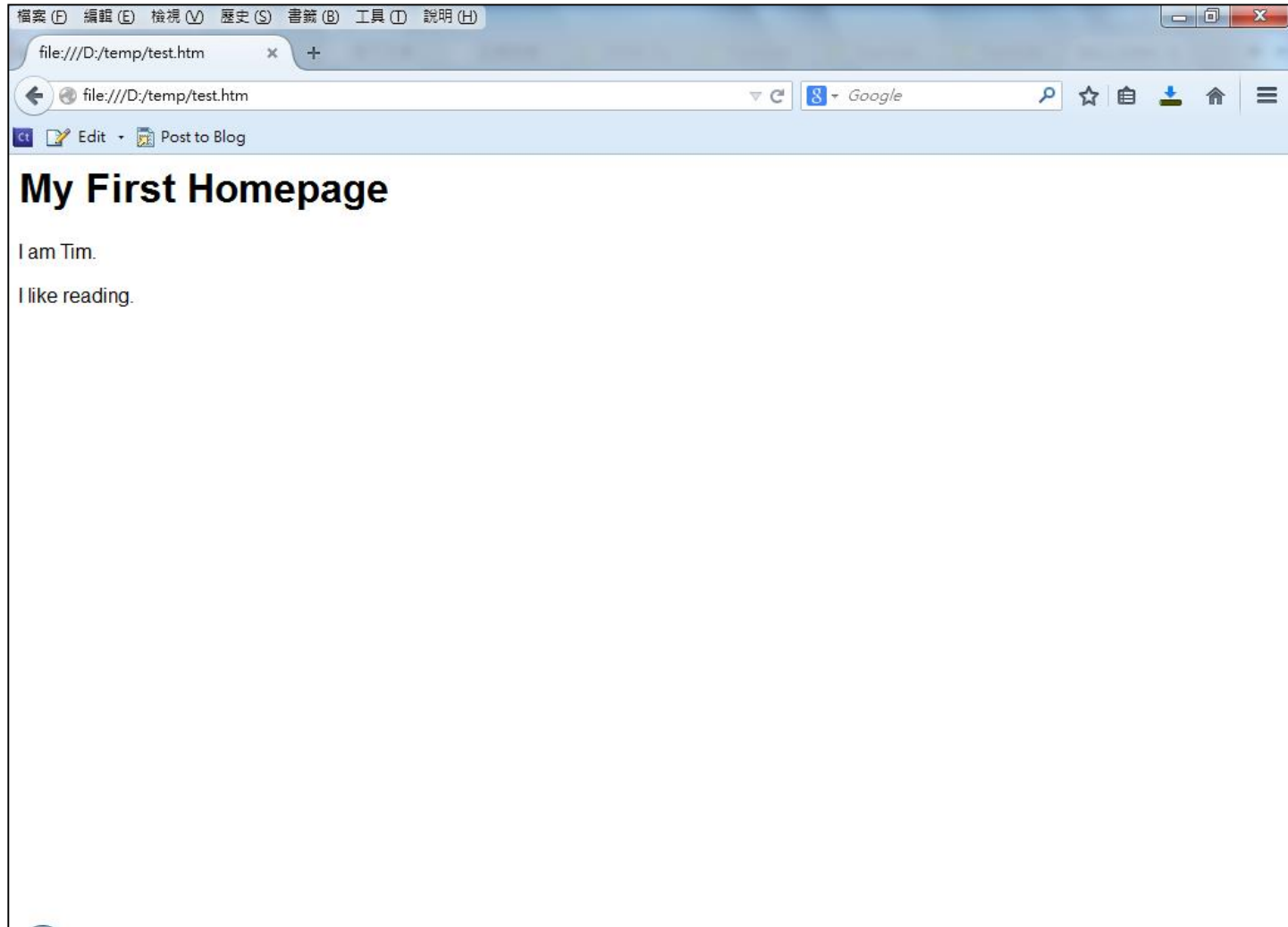
```
    <p>I am Tim.</p>
```

```
    I like reading.
```

```
  </body>
```

```
</html>
```

# HTML Document Displayed



# Heading Section

- HTML head elements

Tag	Description	
<a href="#"><u>&lt;head&gt;</u></a>	Defines information about the document	
<a href="#"><u>&lt;title&gt;</u></a>	Defines the title of a document	
<a href="#"><u>&lt;base&gt;</u></a>	Defines a default address or a default target for all links on a page	
<a href="#"><u>&lt;link&gt;</u></a>	Defines the relationship between a document and an external resource	
<a href="#"><u>&lt;meta&gt;</u></a>	Defines <b>metadata</b> about an HTML document	<a href="#"><u>part1-1.htm</u></a>
<a href="#"><u>&lt;script&gt;</u></a>	Defines a <b>client-side script</b> , e.g., JavaScript and VBScript	<a href="#"><u>part1-2.htm</u></a>

# <meta> Tag (1)

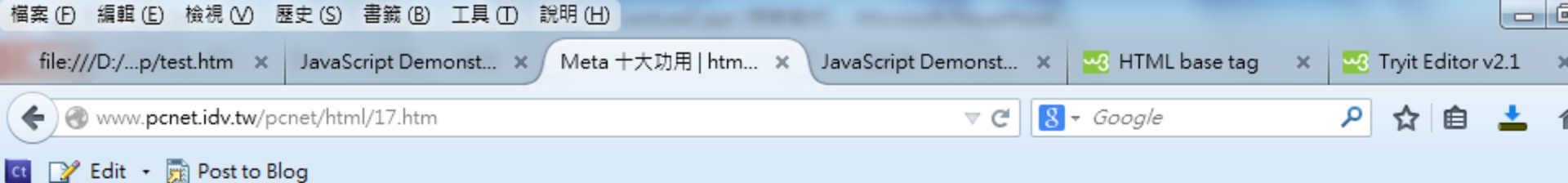
- Metadata is **information about data**.
- The <meta> tag provides metadata about the HTML document. Metadata will not be displayed on the page, but will be machine parsable.
- The <meta> tag always goes inside the head element.
- The metadata can be used by **browsers** (how to display content or **reload page**), **search engines** (**keywords**), or other web services.

# <meta> Tag (2)

- Meta elements are typically used to specify
  - page description
  - **keywords**
  - author of the document
  - last modified
  - other metadata.

```
<head>
<meta name="description" content="Free Web tutorials" />
<meta name="keywords" content="HTML, CSS, XML, JavaScript" />
<meta name="author" content="Tim Lee" />
<meta http-equiv="content-type" content="text/html; charset=UTF-8" />
</head>
```





## 一、顯示及排列中文

```
<META http-equiv="Content-Type" content="text/html; charset=big5">
```

說明：

Content-Type==>文件內容格式

;==>CONTENT內要作的每件事" "，分別以分號區隔

text/html==>純文字/超文字

charset==>字元組為中文繁體大五碼，如用iso-2022-jp是指日文

## 二、讓搜索引擎容易找到您

```
<META NAME="Key Words" CONTENT="電腦教學'網路教學'Linux教學'CSS教學'  
'HTML教學'軟體教學'發信教學'SEO教學'交換連結">
```

```
<META NAME="Key Words" CONTENT="css'HomePage'html'linux'seo">
```

說明：網頁內文關鍵字，可使用中、英文均可

## 三、關於網站的內容描述

```
<META NAME="Description" CONTENT="這是一個免費學習網頁製作的好地方，  
網路研究所">
```

說明：Description==>內容的主要描述

## 四、這個網頁的作者是誰

```
<META NAME="Author" CONTENT="PCNET">
```

說明：標註本網頁作者姓名等資料

# <!DOCTYPE>

- The <!DOCTYPE> declaration is not an HTML tag; it is an instruction to the web browser about what version of HTML the page is written in.
  - <!DOCTYPE html>
  - <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
  - <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Transitional//EN" "http://www.w3.org/TR/html4/loose.dtd">
  - <!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01 Frameset//EN" "http://www.w3.org/TR/html4/frameset.dtd">
  - <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1//EN" "http://www.w3.org/TR/xhtml11/DTD/xhtml11.dtd">

# Notes of HTML

- `<!-- ***** -->`
- `<!-- Example -->`
- `<!-- ***** -->`
- `<!-- Content of this paragraph is demonstrated  
by JavaScript code -->`
- Notes can cross columns
- Notes do not display on web page
  - [Example] [part1-2.htm](#)

# Tags

- Tag types
  - **paired tag** : `<html>...</html>` , `<a>...</a>`
  - single tag : `<br>` , `<p>`
- Tag's name has no difference with uppercase and lowercase
- It is not allowed to define tag's name by yourself
- Tags can contain **attributes**
  - `<img src=Photo.gif>`
  - `<a href=http://www.ncku.edu.tw/>Cheng Kung University</a>`
  - Three formats of tag attributes
    - `<body bgcolor= green>`
    - `<body bgcolor= 'green' >`
    - `<body bgcolor= “green” >`

# Paragraph Layout (1)

- `<br>` : Change to a new line (line break)
- `<pre>...</pre>` : Maintain the original text layout
- `<p>` : Paragraph tags
- `<div>` : a **block level** element used for grouping HTML elements.
- Special characters : `<` 、 `>` 、 `”` 、 `&`
  - `&nbsp;`; => Whitespace
  - `&lt;`; => `<`
  - `&gt;`; => `>`
  - `&quot;`; => `”`
  - `&amp;`; => `&`
- [Example] [part2-1.htm](#)

# Paragraph Layout (2)

- <blockquote>: Indent (縮排) tag
- <address>: Special post/mail format
- <center>: text position alignment
- [Example] [part2-1.htm](#)

# Paragraph Layout (3)

- `<hr>`: line tag
  - size attribute (line thickness)
  - width attribute (line width)
  - align attribute (line position alignment)
  - noshade attribute (shadow lines)
- [Example] [part2-1.htm](#)

# Paragraph Layout (4)

- Example: use five **div** elements to create a multiple column layout.

```
<html>
<body>

<div id="container" style="width:500px">

<div id="header" style="background-color:#FFA500;">
<h1 style="margin-bottom:0;">Main Title of Web Page</h1>
</div>

<div id="menu" style="background-color:#FFD700;
height:200px;width:100px;float:left;">
<b>Menu</b><br>
HTML<br>
CSS<br>
JavaScript</div>

<div id="content" style="background-color:#EEEEEE;
height:200px;width:400px;float:left;">
Content goes here</div>

<div id="footer" style="background-color:#FFA500;
clear:both;text-align:center;">
Copyright © W3Schools.com</div>

</div>

</body>
</html>
```

## Main Title of Web Page

### Menu

HTML

CSS

JavaScript

Content goes here

Copyright © W3Schools.com



# Page Background: <body> Tag

- The attributes of tag <body>
  - **bgcolor** attribute (background color)
    - » [Example] [part3-1.htm](#)
  - **background** attribute (background image)
  - **text** attribute (text color)
  - **leftmargin**, **topmargin** attribute (page's left & top border)
- [Example] [part3-2.htm](#)

# Text Formatting (1)

Effect	Tag	Effect	Tag
title	<h1>, <h2>, ..., <h6>	Delete Line	<s> <strike> <del>
Bold	<b> <strong>	Small font	<tt>
Italic	<i> <em> <var> <cite>	Increase font	<big>
		Reduce Font	<small>
		Superscript font	<sup>
		Subscript font	<sub>
Underline	<u> <ins>		

# Text Formatting (2)

- `<h?>`: Text heading tag(? is the value between 1 to 6)
  - **align** attributes : left 、 center 、 right
- `<b>` 、 `<strong>`: Bold tag
- `<i>` 、 `<em>` 、 `<var>` 、 `<cite>`: Italic tag
- `<u>` 、 `<ins>` : Underline tag
- `<s>` 、 `<strike>` 、 `<del>` : Strike tag
- [Example] [part4-1.htm](#)

# Text Formatting (3)

- <tt>: Small font tag
- <big> 、 <small>: Increase and reduce font size tag
- <sub> 、 <sup>: Subscript and Superscript tag
- <blink>: Blinking text tag
- [Example] [part4-2.htm](#)

# Multifunction Text Formatting

- <font>: Multifunction text layout tag
  - size attribute (font size)
  - color attribute (font color)
  - face attribute (font type)
- [Example] [part4-2.htm](#)

# List Tags

- `<li>`: Item tag
- `<ol>`: Ordered list
- `<ul>`: Unordered list (Standard list with indent (縮排))
- `<lh>`: Unordered list (Standard list without indent)
- Nested list
- [Example] [part5-1.htm](#)

# Table Tag (1)

- Table declaration : `<table>...</table>`
  - row : `<tr>...</tr>`
  - cell : `<td>...</td>`
  - cell header : `<th>...</th>`
- [Example] [part6-1.htm](#)

# Table Tag (2)

- Table attributes
  - border width: `<table border="3">...</table>`
  - width of the internal borders:  
`<table border="3" cellpadding="5">`
  - width: `<table border="3" width="600">`
  - height: `<table border="3" height="30%">`
  - position: `<table align="left">` [center, right]
  - background color: `<table bgcolor="FFFF00">`
  - border color : `<table bordercolor="FF0000">`
  - background image: `<table background="bg1.gif">`
- [Example] [part6-1.htm](#)



# Table Tag (3)

- `<tr>` row's attributes
  - row's background color : `<tr bgcolor="FFFF00">`
  - Align content in a table row : `<tr align="left">` [center, right]
  - Vertically align content in a table row :  
`<tr valign="top">` [middle, bottom]
- [Example] [part6-2.htm](#)

# Table Tag (4)

- `<th>``<td>` cells' attributes
  - cell width : `<td width="100">`
  - cell height : `<td height="50">`
  - Align content in a cell : `<td align="left">` [center, right]
  - Vertically align content in a cell :  
`<td valign="top">` [middle, bottom]
  - cell background color : `<td bgcolor="FFFF00">`
- [Example] [part6-3.htm](#)

# Table Tag (5)

- `<th><td>` cells' attributes
  - Specify the number of columns the current cell spans across :  
`<td colspan="2">`
  - Specify the number of rows the current cell spans across :  
`<th rowspan="2">`
- Table caption : `<caption>...</caption>`
  - Align the caption : `<caption align="left">` [center, right]
- Nested Table
- [Example] [part6-4.htm](#)