Environment
環境
Linux + Apache, of course

當然是 Linux + Apache
Do you need to learn Linux?
Don’t resist because of resistance
不要為反而反
But…
This is I using Linux
It is not that scary

- Download PieTTY and login
  - just like any BBS client (even journalists can use them) with secure shell (SSH)
  - actually, this is the remote desktop (遠端桌面) of Linux
- Make the directory, or folder, to store your web site
  - $ mkdir public_html ← this name is just a configuration of Apache
- Write a HTML file
  - $ vi public_html/index.html
  - vi is a legend text editor, see the appendix
  - you may use any FTP client with SFTP support, such as WinSCP
- Now you can see your web site via browsers
  - http://merry.ee.ncku.edu.tw/~xxx/
Any Questions?

about our environment
HyperText Markup Language (HTML)

- HyperText
  - contains images, sounds and links to other documents

- Markup Language
  - define how to mark things
  - what is marking?
HTML is plain text

- The content is divided into two types
  - tag, used to mark things
  - text which can be seen in the web page
- `<b>Text in tag 'b' is usually shown in bold</b>`

- A tag can contain, but not cross, other tags
  - `<b><i>bold and italic</i></b>`
  - `<b><i>what the hell?</i></b>`
Only tags are not enough

- The same link tag, different destinations
  - `<a href="http://here/">here</a>`
  - `<a href="http://there/">there</a>`

- Attribute
  - `href` in the above example is an attribute of `<a>`
  - Just consider tag as type. For example, phone and camera are two types of things. Then attribute is specification. For example, two cameras could have different resolutions.
    - yes, two different tags could have similar attributes
  - attributes are various, since they might be invisible
    - `<a target="_blank" title="cursor here">`
Considerable tag-attribute pairs

- But we don’t teach here
  - HTML Tutorial
  - consulting is always needed

- Here are some guidelines
  - Correct: in addition to look up services, there are validation services.
  - Reasonable: since the document is yours, there is no standard answer of marking. However, please make it reasonable. Many frequently used facilities have common practices (see the next slide).
  - Cooperating with CSS: today HTML is just for architecture

- 今天就用 HTML5 的新語意標籤
- 10項關於HTML5令人興奮的預測
The Road to Enlightenment

Littering a dark and dreary road lay the past relics of browser-specific tags, incompatible DOMs, and broken CSS support.

Today, we must clear the mind of past practices. Web enlightenment has been achieved thanks to the tireless efforts of folk like the W3C, WaSP and the major browser creators.

The css Zen Garden invites you to relax and meditate on the important lessons of the masters. Begin to see with clarity. Learn to use the (yet to be) time-honored techniques in new and invigorating fashion. Become one with the web.
How to cooperate with CSS

- General tags (without logical meaning)
  - <div>
    - block
    - <div class="footer">
      - actually, it is too frequently used so that HTML5 defines the <footer> tag

- <span>
  - inline
  - <span class="date">

- Developing HTML is not programming but designing how to mark your document
Any Questions?

about HTML
Cascading Style Sheets (CSS)

- Sheets
  - list

- Style
  - how to render elements

- Cascading (串接)
  - the famous CSS selector
  - understanding this is a big step in web design
## CSS selector

<table>
<thead>
<tr>
<th>Selector</th>
<th>Description</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>select tag</td>
<td><code>&lt;a&gt;</code></td>
</tr>
<tr>
<td>.date</td>
<td>select class</td>
<td><code>&lt;a class=&quot;date&quot;</code>&gt;,</td>
</tr>
<tr>
<td></td>
<td></td>
<td><code>&lt;span class=&quot;date&quot;</code>&gt;, ...</td>
</tr>
<tr>
<td>a.date</td>
<td>mixed</td>
<td><code>&lt;a class=&quot;date&quot;</code>&gt;</td>
</tr>
<tr>
<td>#footer</td>
<td>select id (faster)</td>
<td><code>&lt;div id=&quot;footer&quot;</code> &gt;</td>
</tr>
<tr>
<td>div#footer</td>
<td>(unnecessary)</td>
<td><code>&lt;div id=&quot;footer&quot;</code> &gt;</td>
</tr>
<tr>
<td>#footer a.date</td>
<td>cascading</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td><code>&lt;div id=&quot;footer&quot;</code> &gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td><code>&lt;a class=&quot;date&quot;&gt;selected&lt;/a&gt;</code></td>
</tr>
<tr>
<td></td>
<td></td>
<td><code>&lt;a&gt;not selected&lt;/a&gt;</code></td>
</tr>
<tr>
<td></td>
<td></td>
<td><code>&lt;/div&gt;</code></td>
</tr>
<tr>
<td></td>
<td></td>
<td><code>&lt;a class=&quot;date&quot;&gt;not selected&lt;/a&gt;</code></td>
</tr>
</tbody>
</table>
Selected something, then?

- Change almost anything on the selected elements
  - background color, border, text color, typeface, font size, margin, padding...
  - CSS Tutorial
  - CSS 語法教學
- Even switch between block and inline (display)
- More position schemes that HTML does not provide (float and position)
  - this advanced (very common today) layout is only in CSS
- It means you can use arbitrary tags in HTML. But in practice people would use correct tags and use such attributes for special purposes
CSS3

- The Most Important CSS3 Properties Explained
- A Word About CSS4
Any Questions?

about CSS
Demo

示範
Today’s assignment
今天的任務
Implement designs with HTML+CSS

- Strive for preferred designs and implement them with HTML and CSS

- Reference
  - Build a Twitter Clone From Scratch: The Design
  - Ultimate Guide to Website Wireframing
  - 30 Fresh Web UI, Mobile UI and Wireframe Kits
  - Google 文件範本
  - Free CSS Templates

- Your web site ([http://merry.ee.ncku.edu.tw/~xxx/cur/](http://merry.ee.ncku.edu.tw/~xxx/cur/)) will be checked not before 23:59 3/5 (Tue). You may send a report (such as some important modifications) to me in case I did not notice your features.
Tiddly Resume

CONAN DOYLE

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OBJECTIVES

EXPERIENCE
JAN 1890 - PRESENT
FREELANCE, LONDON

JAN 1870 - DEC 1889
COAL TRIMMER, DOYLE & SONS, BRIGHTON

OPTIONS
- SAVE BACKUP
- NORD (RTF)
- PLAIN TEXT
Layout tips

- **Table is dead**
  - A List Apart: Articles: Practical CSS Layout Tips, Tricks, & Techniques

- **Responsive design**
  - Responsive Web Design: What It Is and How To Use It
  - Responsive Web Design: 50 Examples and Best Practices – Designmodo
  - A List Apart: Articles: Responsive Web Design
  - Responsive Web Design - Wikipedia, the free encyclopedia
Quick start

- Environment
  - mkdir public_html # you don’t need this in following exercises
  - cd public_html
  - mkdir ex1 # change the index in each exercise
  - ln -fsT ex1 cur # so we can reach the latest version of your website

- How to put HTML?
  - a file named index.html in the directory you just created

- How to put CSS?
  - a line <link href="main.css" rel="stylesheet" />
  - a file named as the href above in the same directory
Tip

- The first thing you do in each exercise
  - `cd public_html`
  - `cp -r ex1 ex2 # clone ex1 to ex2`
  - `ln -fsT ex2 cur # make cur point to ex2`

- Indent / 縮排 (in vi)
  - `gg=G`

- You may use
  - edit in Windows, FTP files and refresh the browser
  - edit in merry and refresh the browser
  - use playground tools such as dabblet
  - use in-browser helpers
    - 使用Google Chrome開發者工具，快速調校網頁並偵錯、寫CSS超快速！
    - Google Chrome 開發人員工具,調整部落格版面實作
Appendix
附錄
Reference for vi

- [HCI] 淺談模式 "mode" 與文字編輯的技術與學習
- 給程式設計師的Vim入門圖解說明
- Commanding Your Text Editor
- Vimcasts - free screencasts about the text editor Vim
HTML5

- Very advanced technology: won’t be standard before 2012
- Multimedia: `<audio>`, `<canvas>`, `<video>`...
- Interactive form (without Javascript)
- Storage
- Backward compatibility: compatible older HTML and even XHTML
- Semantic: `<header>`, `<footer>`, `<nav>`, `<aside>`...
CSS specificity

```
ul#nav li.active a
```

- **Style attribute**
- **ID**
- **Class, pseudo-class, attribute**
- **Elements**

CSS box model

Top

Margin (transparent)

TB

Border

TP

Padding

Content

Bottom

LM

Left

LB

LP

Right

RM

RP

BB

BM

http://ofps.oreilly.com/titles/9780596516482/language_and_browser_utilities.html
http://www.w3.org/TR/css3-box/
http://www.w3.org/TR/CSS2/box.html
CSS float and position

- float is neither block nor inline
  - #sidebar { float: left; width: 100px; }

- In general, block and inline elements obey a main flow
  - #element_id { position: relative; left: 100px; top: 100px; }

- Use absolute to position elements precisely
  - #element_id { position: absolute; left: 100px; top: 100px; }

- Use fixed to pin elements on screen
  - #element_id { position: fixed; left: 100px; top: 100px; }

- CSS In Depth Part 2: Floats & Positions
- CSS Float Theory: Things You Should Know

- Please practice to experience the above concepts