



Web Programming

Spring 2021



#15

Chi-Jen Wu

Topics

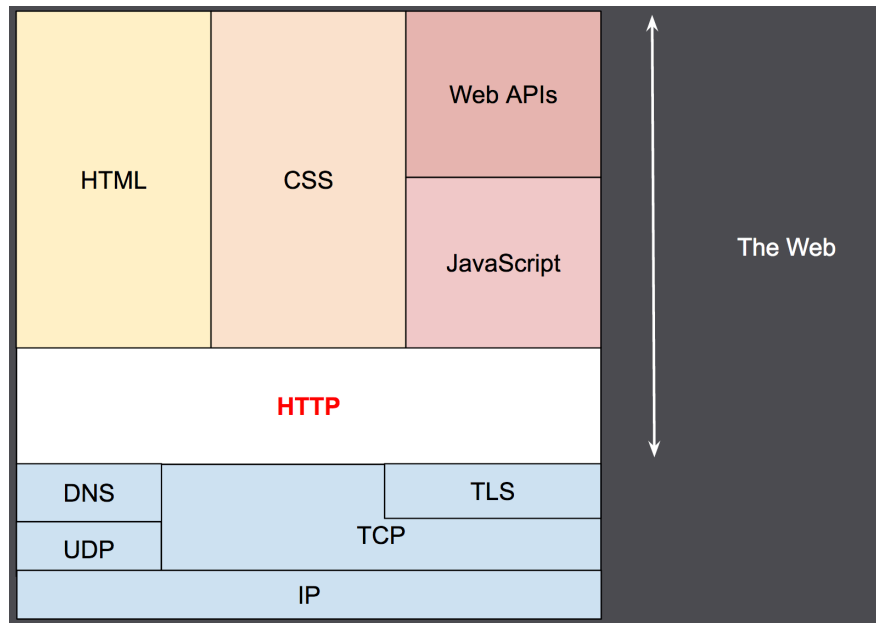
- The concepts of Web Services
- Web data protocols
 - HTTP, WebSocket, WebRTC
 - HTML, CSS
- **Web JavaScript programming**
- Cookies and sessions
- Web Frontend frameworks
- Web Backend frameworks
- RESTful API design



Google Analytics

Web data protocols

- HTTP, HTTPS
- Web APIs
- HTML, HTML5
- CSS, CSS3
- JavaScript
- Conclusion



JavaScript

- Introduction
- Basics
- Document Object Model
- Browser Object Model
- jQuery & AJAX
- JavaScript ES6



jQuery

- jQuery Introduction
- jQuery BASIC
- jQuery EFFECTS
- jQuery MANIPULATION
- jQuery Ajax



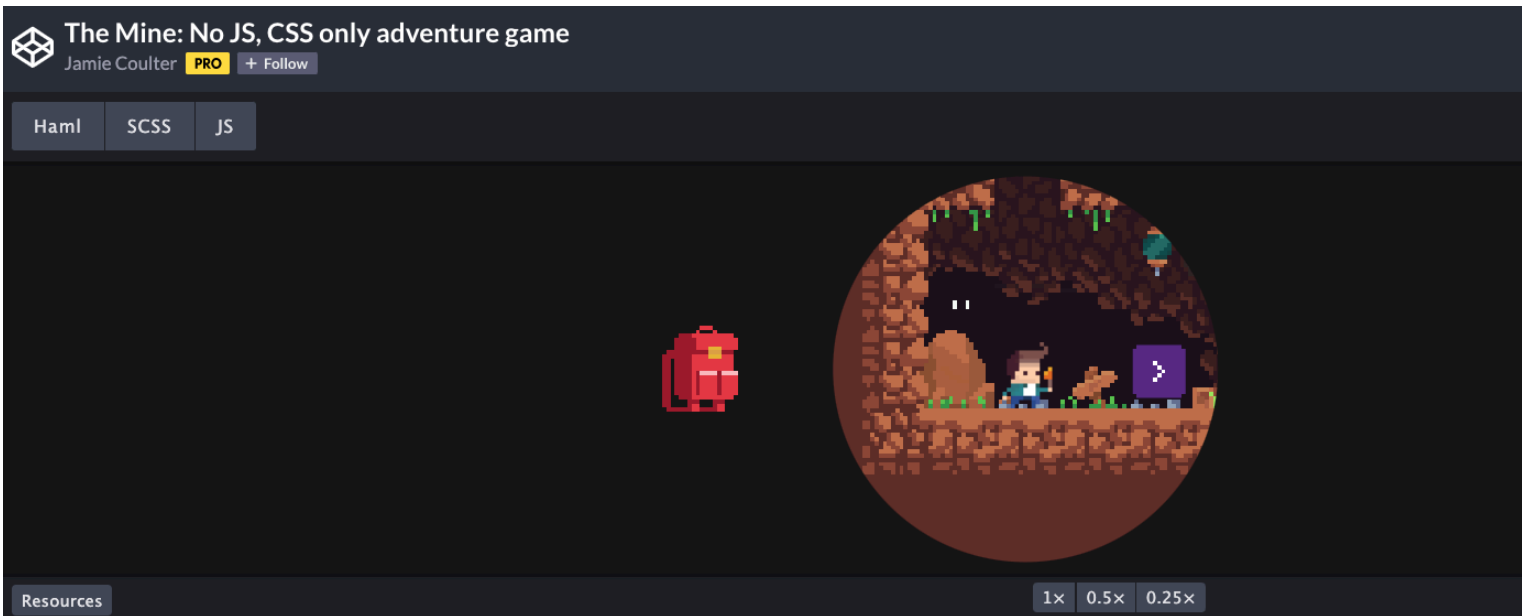
Ajax

- Introduction
- XMLHttpRequest
- Request
- Response
- Promises



CSS寫的遊戲

<https://codepen.io/jcoulterdesign/details/NOMeEb>



嚴格來說是SCSS寫的遊戲

- 把程式的概念引入到 CSS
 - 變數 (Variable)
 - 繼承 (Extend)
 - 函式 (Function)
 - 混用 (Mixin)



* Dcard 拉拉長庚版練習



長庚大學

追蹤

熱門

最新

板規



長庚大學

工學院B1後方要小心

提醒大家！，工學院B1後方（靠近吸煙區），有一個水溝蓋破裂了，那邊掉下去...



21



3



收藏



長庚大學

問柏X

最近常在板上看到X智，聽說他會打球，明星賽的時候他好像腳有扭到，我有去看他比賽但他都沒...



14



8



收藏



寫程式測試程式

自己的程式自己測喔！！！！

以

*** Dcard 拉拉長庚版為例**



```
<script>
```

```
var dataUrl = "https://www.dcard.tw/service/api/v2/forums/cgu/  
posts?popular=true&limit=30";
```

```
var data = $.getJSON(dataUrl);
```

```
data.done( function( msg ) {  
    update_dcard_cgu_forums(msg);  
});
```

```
data.fail( function( msg ) {  
    // just do it  
});
```

```
function update_dcard_cgu_forums(msg) {  
    // updating forums  
}
```

```
</script>
```

要資料

處理資料

```
<script>
function update_dcard_cgu_forums(msg) {
  // updating forums
}
</script>
```



處理資料

造一個假的msg (Mock Data)

```
<script>
function test_update_dcard_cgu_forums(msg) {
  var mock_msg = ...
  update_dcard_cgu_forums(mock_msg); //check results
  return true or false;
}
</script>
```



```
<script>
```

```
var dataUrl = "https://www.dcard.tw/service/api/v2/forums/cgu/posts?popular=true&limit=30";
```

```
</script>
```

< > ↺ 88 | VPN 🔒 www.dcard.tw/service/api/v2/forums/cgu/posts

```
[  
{▶ 38 properties, 1 KB "id": 235707468, "title": "工學院B1後方要小心", "excerpt": "提醒大家！，工學院B1後方（靠近吸煙區），有一個水溝蓋破裂了，那邊掉下去大概有一層... },  
{▶ 38 properties, 877 bytes "id": 235709382, "title": "問柏X", "excerpt": "最近常在板上看到X智，聽說他會打球，明星賽的時候他好像腳有扭到，我有去看他比賽但他都沒什麼上場... },  
{▶ 39 properties, 1 KB "id": 235706106, "title": "醫管週，沒賣粥🍲", "excerpt": "肚子餓了嗎？充斥在整間學餐油膩膩的幸福滋味🍲，熱騰騰現炸薯條、香噴噴的香腸～35元品... },  
{▶ 39 properties, 955 bytes "id": 235709401, "title": "歡迎年紀20~30歲成年人踴躍參與", "excerpt": "您好：以下聯結為長庚大學職能治療系沈宜璇老師新的研究計劃，歡迎年紀20~... },  
{▶ 38 properties, 1 KB "id": 235706683, "title": "歹麗郎-北友週", "excerpt": "北部人的懷念古早味，有錢也買不到的那些童年，週二到週五的中午及晚上，開放大家一同品嚐囉... },  
{▶ 38 properties, 1 KB "id": 235705359, "title": "協尋一支筆", "excerpt": "有人在撿到這種筆嗎？百樂換芯筆，上面的顏色是：自動鉛筆 藍色 紅色 紫色，最後一次見到是在B0... },  
{▶ 39 properties, 1 KB "id": 235703495, "title": "工設週第二波預購來嘍～", "excerpt": "嗨～大家！！，如果想要來一份甜甜點心，就來看看工設週販賣的"法式吐司"，真材實... },  
{▶ 38 properties, 1 KB "id": 235710076, "title": "我看不懂", "excerpt": "有沒有人能教他停一下車拜託 我真的看不懂", "anonymousSchool": false, "anonymousDepa... },  
{▶ 38 properties, 867 bytes "id": 235709445, "title": "撿到錢包", "excerpt": "在二醫拾獲一個動物造型錢包，（因為內容物無法辨識身分 造型不多做形容），已送到學務處", "ano... },  
{▶ 38 properties, 1 KB "id": 235712233, "title": "AirPods協尋，500懸賞🙏", "excerpt": "連假前 4/1 中午在學餐消失～不知道有沒有人撿到，上面有鐫刻六個英文字母，有撿... },  
{▶ 38 properties, 1 KB "id": 235711547, "title": "怎麼停車的", "excerpt": "", "anonymousSchool": false, "anonymousDepartment": true, "pinned": false, ... }  
]
```

msg

```
<script>
function test_update_dcard_cgu_forums(msg) {
  var mock_msg = 
  update_dcard_cgu_forums(mock_msg); //check results
  return true or false;
}
</script>

var mock_msg = {
  "title": "護理週又來",
  "excerpt": "對的繼上次的奶凍捲之後，護理週又來了，今年除了有大家最愛的冰淇淋，我們也帶來了特別且美味的自製商品，你各位絕對不能錯過！",
  "mediaMeta": [ { "url": "https://i.imgur.com/xGYbMZgl.jpg", } ],
}
```



```
<script>
```

```
function update_dcard_cgu_forums(msg) {  
  $.each(msg.items, function(i,item) {  
    $("#contain").html();  
    $("#contain").append($("#<h2/>").text(item.title));  
    $("#contain").append($("#<h3/>").text(item.excerpt));  
    if (item.mediaMeta) {  
      $("#contain").append($("#<img/>")  
        .attr("src", item.mediaMeta[0].url));  
    }  
  });  
}
```

```
</script>
```

第一張圖



寫程式測試程式

自己的程式自己測喔！！！！

在業界非常重要！

程式開發大概有三分之一時間

在寫測試程式

不然你就會



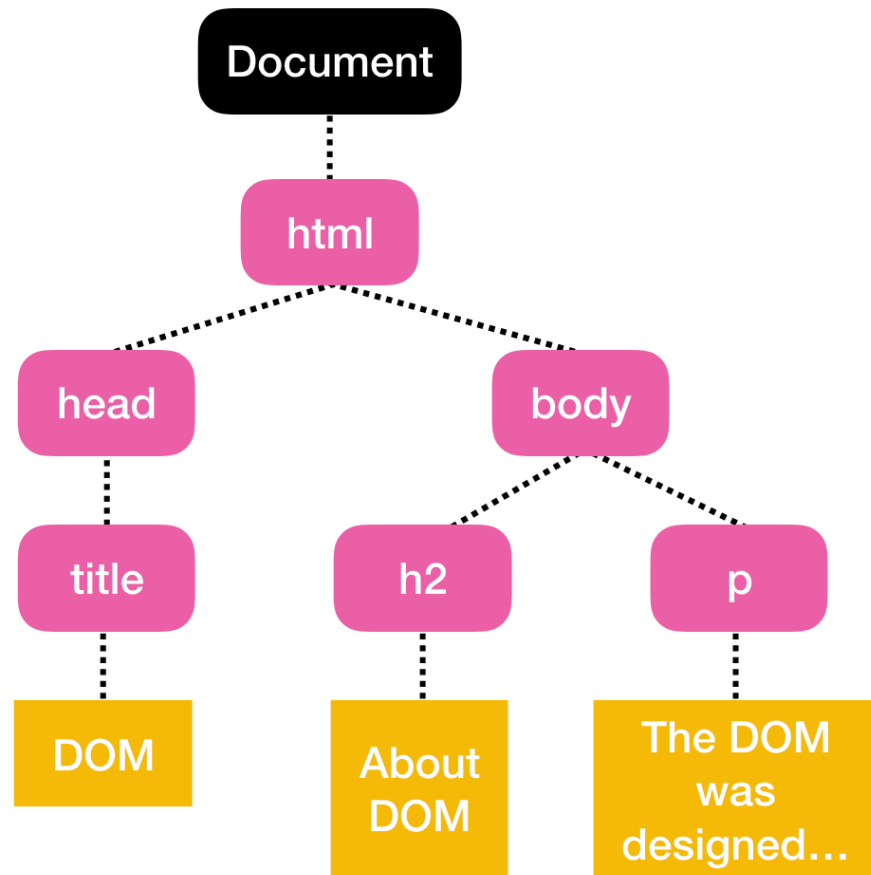
Review 一下

那些年我們講過的東西



```
<!doctype html>
<html>
  <head>
    <title>
      DOM
    </title>
  </head>
  <h2>
    About DOM
  </h2>
  <p>
    The DOM was designed...
  </p>
</body>
</html>
```

Parsing





jQuery Selectors

- Selecting Elements by ID

```
<script>
$(document).ready(function(){
    // Highlight element with id mark
    $("#mark").css("background", "yellow");
});
</script>
```

select and highlight an element having the ID attribute `id="mark"`



jQuery Selectors

- Selecting Elements by Class Name

```
<script>
$(document).ready(function(){
    // Highlight elements with class mark
    $(".mark").css("background", "yellow");
});
</script>
```

select and highlight the elements having the class attribute **class="mark"**



jQuery Selectors

- Selecting Elements by Name

```
<script>
$(document).ready(function(){
    // Highlight paragraph <p> elements
    $("p").css("background", "yellow");
});
</script>
```

select and highlight the the `<p>` elements



jQuery callback function

- 事件被觸發 Event fired -> 處理事件 Event Handler

```
<script>
$(document).ready(function(){
    $("button").click(function(){
        $("p").slideToggle("slow", function(){
            // Code to be executed once effect is complete
            alert("The slide toggle effect has completed.");
        });
    });
});
</script>
```

callback

A blue arrow originates from the word "callback" and points to the inner function passed as the second argument to the slideToggle method in the code block above.

Ajax + jQuery



第三層	<code>\$.getJSON(), \$.getScript()</code>
第二層	<code>load(), \$.get(), \$.post()</code>
底層	<code>\$.ajax(), \$.ajaxSetup()</code>



Inside a function

不要超過80行

變數命名原則



```
let numberOfStudents
```

```
const numberOfLegs
```

```
function setBackgroundColor()
```

```
class Student{}
```



* 台北動物園 動物介紹 練習

```
<html>
```

```
<h1>動物介紹</h1>
```

```
<div id="contain"></div>
```

```
<script type="text/javascript"  
src="https://cdnjs.cloudflare.com/ajax/  
libs/jquery/3.1.0/jquery.min.js">
```

```
</html>
```

HTML 61 unsaved changes x

```
1 <h1>台北動物園 動物介紹</h1>
2 <div id="contain"></div>
3 <script type="text/javascript"
  src="https://cdnjs.cloudflare.com/ajax/libs/jquery/3.1.0/jquery.min.js">
```

CSS

JS

```
1 var dataUrl = "https://data.taipei/opendata/datalist/apiAccess?scope=resourceAquire&rid=a3e2b221-
2
3 var data = $.getJSON(dataUrl);
4
5 data.done( function( msg ) {
```

台北動物園 動物介紹

Console

```
// [object Object]
{
  "result": {
    "limit": 1000,
    "offset": 0,
    "count": 750,
    "sort": "",
    "results": [
      {
        "A_Behavior": "1.獨居的動物，除了交配季節或雌性的育幼時期，牠們都是獨自居住的。\\n 2.最活躍的時間在早晨和黃昏，但竹子所含熱量低，為減少能量的消耗，牠們每天的睡眠時間約10小時，剩餘時間則大多在覓食和進食。",
        "A_Distribution": "目前僅存於中國四川、甘肅和陝西三省境內。",
        "A_Voice03_URL": "http://mediasys.taipei.gov.tw/tcg/service/KMStorage/355/ADB04074-6156-5C7C-1630-B4E88BAD5147/Panda_Voice03.mp3",
        "A_POIGroup": "",
        "A_Code": "Panda",
        "A_Pic04_ALT": "大貓熊「團團」和「圓圓」",
        "A_Voice03_ALT": "山豬老大ABC第13集Bears",
        "A_Theme_URL": "http://newweb.zoo.gov.tw/panda/",
        "A_Summary": ""
```



```
<script>
var dataUrl = "https://data.taipei/opendata/datalist/
apiAccess?
scope=resourceAquire&rid=a3e2b221-75e0-45c1-8f97-75acbd4
3d613";

var data = $.getJSON(dataUrl);

data.done( function( msg ) {
// just do it
});

data.fail( function( msg ) {
// just do it
});
</script>
```

```
<html>
```

```
<h1>動物介紹</h1>
```

```
<div id="contain"></div>
```

```
<h2>大貓熊</h2> (A_Name_Ch)
```

```
<h3>1. 獨居的動物，除了交配季節或雌性的育幼時期，牠們都是獨自居住的。</h3> (A_Behavior)
```

```
<img> (A_Pic01_URL)
```

```
</html>
```

jQuery要增加的





線上練習 quiz#3

<https://codepen.io/pen/>

1. Commit **quiz3.html, quiz3.js**
to quiz and push to quiz
repository



Thanks!

Open for any questions

CJ Wu

cjwu@mail.cgu.edu.tw