

自我省視：偵錯

前端工程開發實務訓練 (5/8)

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偵錯

開發程式就是一連串的 try and error
JavaScript 有哪些方法及工具能幫助我們解決問題呢？

- Log - 開發人員用的提示訊息
- Error Handling - 錯誤處理機制
- Breakpoint - 利用工具追蹤問題
- Fiddler - 如何線上偵錯

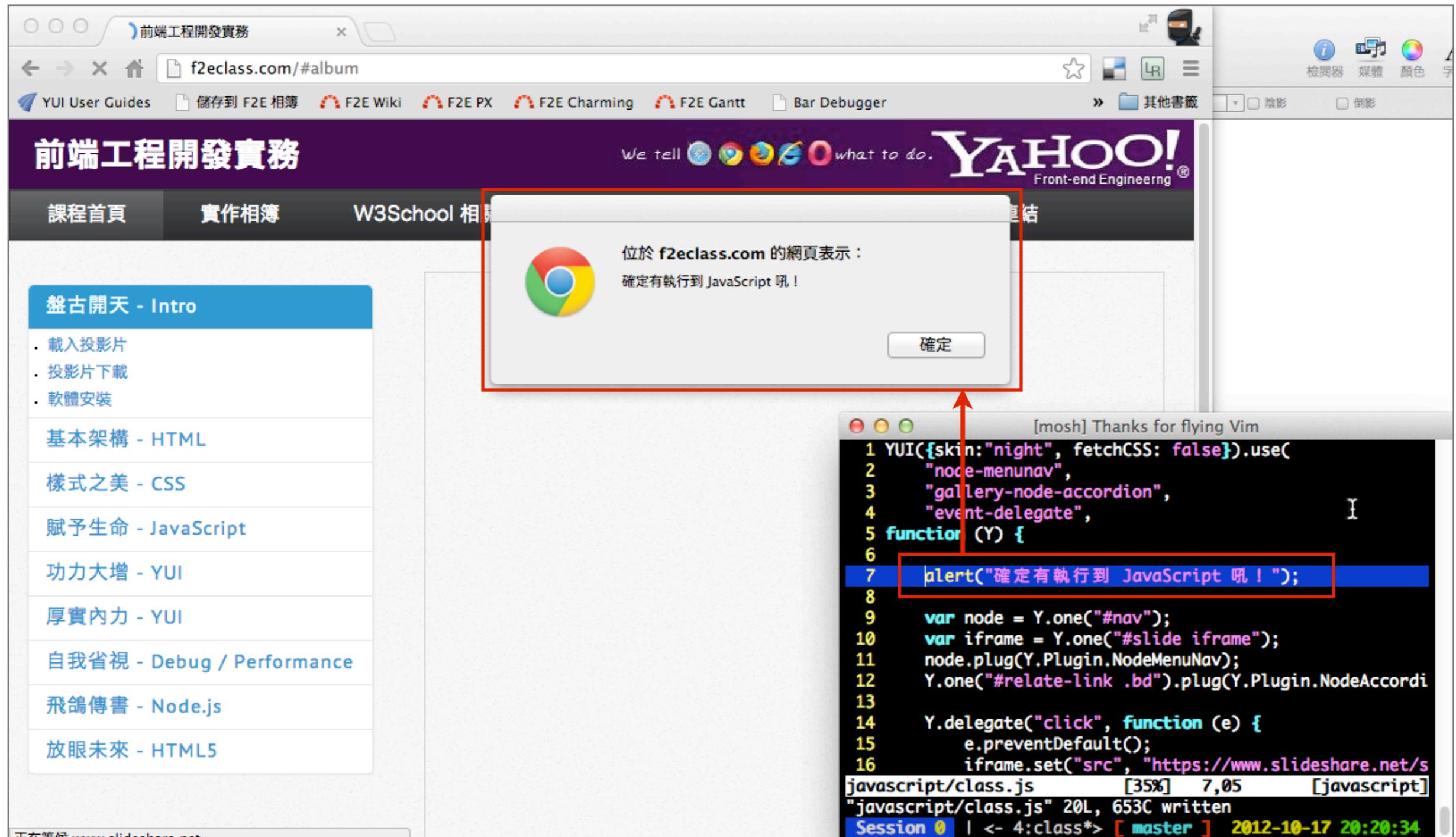
Log

找問題最直覺的作法就是直接顯示訊息
可以很快地知道變數的值或有沒有跑到

alert();

過去 JavaScript 還沒有良好偵錯環境的唯一作法
但因簡單及直覺的特性、到現在還是很常用

alert();



alert 的優缺點

○ 優點：

- ❖ 直覺：不用安裝、通用於每個瀏覽器。
- ❖ 同步：可以暫停執行 JS 在目前的行數。

○ 缺點：

- ❖ 干擾：因同步、需要點選才能取消。
- ❖ 很難對快速 loop 類型的程式做偵錯。
例如：音樂播放、拖拉、動畫...

console.log();

從 Firebug (火狐瀏覽器外掛) 開始所提供的功能
後來變成每個瀏覽器的標準、甚至在 Node.js 也可用

console.log();

http://getfirebug.com/wiki/index.php/Console_API

The screenshot shows a browser window with a purple header bar containing the text "前端工程開發實務" and the Yahoo! logo. Below the header, there are tabs for "課程首頁", "實作相簿", and "W3School 相關資源". On the left, a sidebar lists various topics: "盤古開天 - Intro", "載入投影片", "投影片下載", "軟體安裝", "基本架構 - HTML", "樣式之美 - CSS", "賦予生命 - JavaScript", "功力大增 - YUI", "厚實內力 - YUI", "自我省視 - Debug / Performance", and "飛鴿傳書 - Node.js".

A red arrow points from the bottom-left of the sidebar towards the developer tools interface. The developer tools interface has tabs at the top: "Elements", "Resources", "Network", "Sources", "Timeline", "Profiles", "Audits", and "Console". The "Console" tab is active, showing the following text:

```
[mosh] Thanks for flying Vim
3   "gallery-node-accordion",
4   "event-delegate",
5 function (Y) {
6
7   console.log("1 - 確定有執行到 JavaScript ?");
8
9   var node = Y.one("#nav");
10  var iframe = Y.one("#slide_iframe");
11  node.plug(Y.Plugin.NodeMenuNav);
12  Y.one("#relate-link .bd").plug(Y.Plugin.NodeAccordi
13
14  Y.delegate("click", function (e) {
15    e.preventDefault();
16    iframe.set("src", "https://www.slideshare.net/s
17    iframe.ancestor(".player").one(".site-link").se
18  }, "#relate-link", ".slide-link");
19
20  console.log("2 - 是否順利跑完所有程式 ?");
21});
```

Below the code, the status bar displays: "javascript/class.js [38%]" and "Session 0 | <- 4:class*> [master] 2012-10-17 20:35:48".

At the bottom of the developer tools interface, two lines of text are displayed: "1 - 確定有執行到 JavaScript ?" and "2 - 是否順利跑完所有程式 ?".

On the right side of the slide, the text "各大瀏覽器按 F12 都會有開發工具" is written in orange.

console.log 的優缺點

- 優點：
 - ❖ 干擾性低，大多數情況都適用。
- 缺點：
 - ❖ IE6, 7 不支援、甚至會產生錯誤。
 - ❖ 不是每個瀏覽器都直接可看。
 - ◆ Firefox 得安裝 Firebug。
 - ❖ 沒辦法 Block 後續 Script 執行。
 - ◆ 此時用 alert 即可。
- 維護不易、寫多了反而一團亂。
上線後不應該存在。

Y.log();

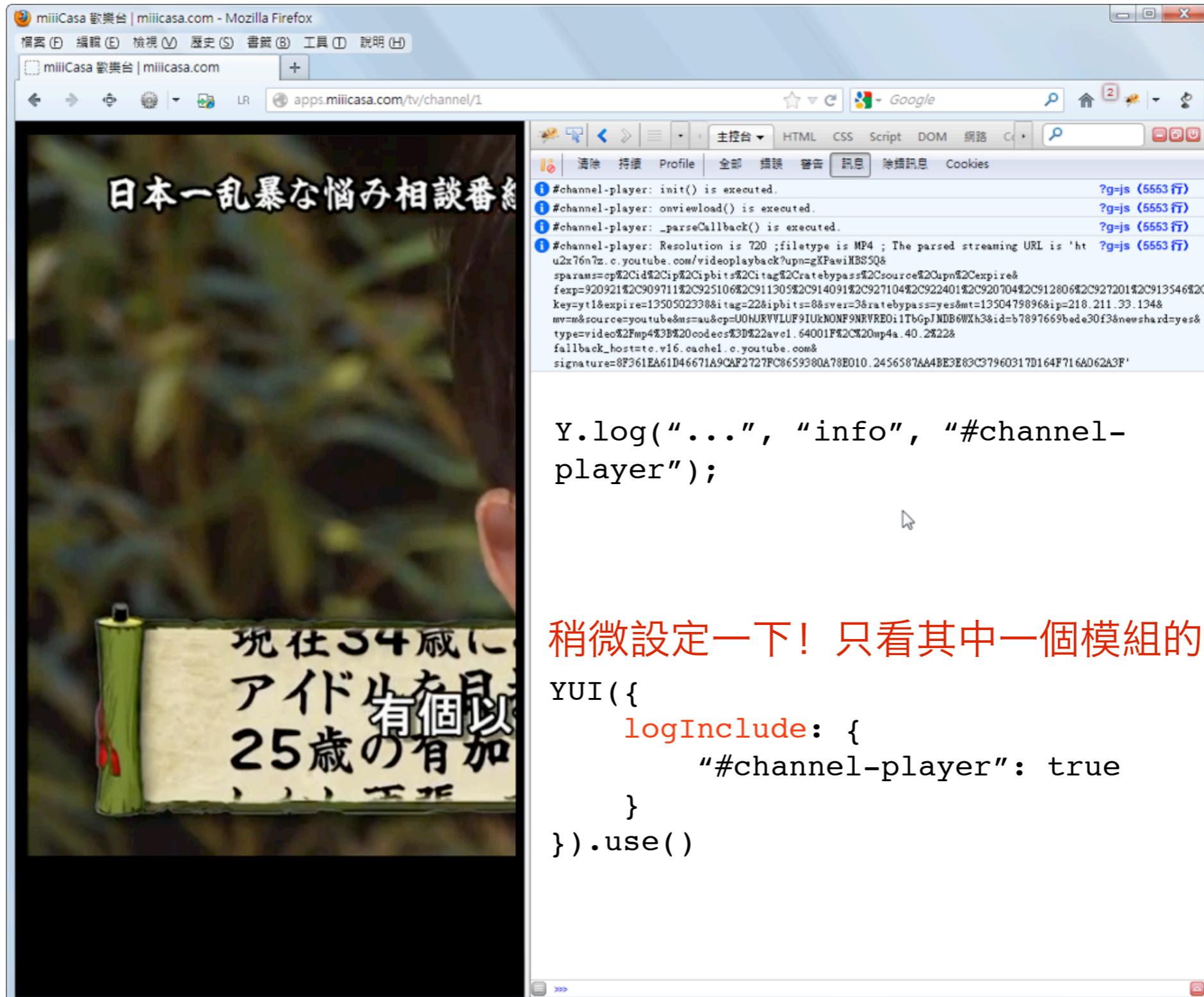
YUI 內建改良版的 console.log。

Log 會碰到的問題



Y.log();

Y.log(<Message 訊息>, <Severity 等級>, <Group 組別>);



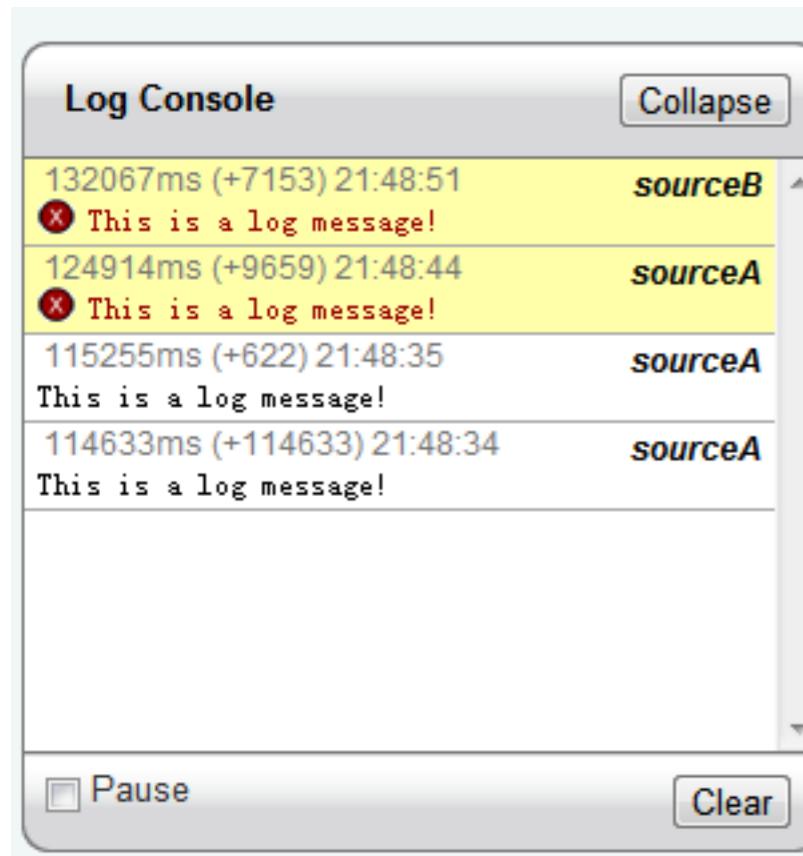
Y.log 的優點

○ 優點：

- ❖ 可依 Severity (info, warn, error) 分類，開發工具可直接做 filter。
- ❖ 可自訂 Group、透過 YUI 的 logInclude 或 logExclude 設定做分類。
- ❖ 在使用 YUI 的前提下，每個瀏覽器都可以用，即使 IE6-7 也不會有錯誤。
- ❖ 即使在線上環境，也可透過 YUI 的 debug: false 把 log 關閉。

new Y.Console()

用 YUI 產生的 Console 可完全支援每一個瀏覽器
對於老舊瀏覽器或特殊情況（嵌入式系統）超好用



```
(new Y.Console()).render();
```

<http://yuilibrary.com/yui/docs/console/>

<http://yuilibrary.com/yui/docs/console-filters/>

練習：<http://f2eclasse.com/lab/debug/console.html>

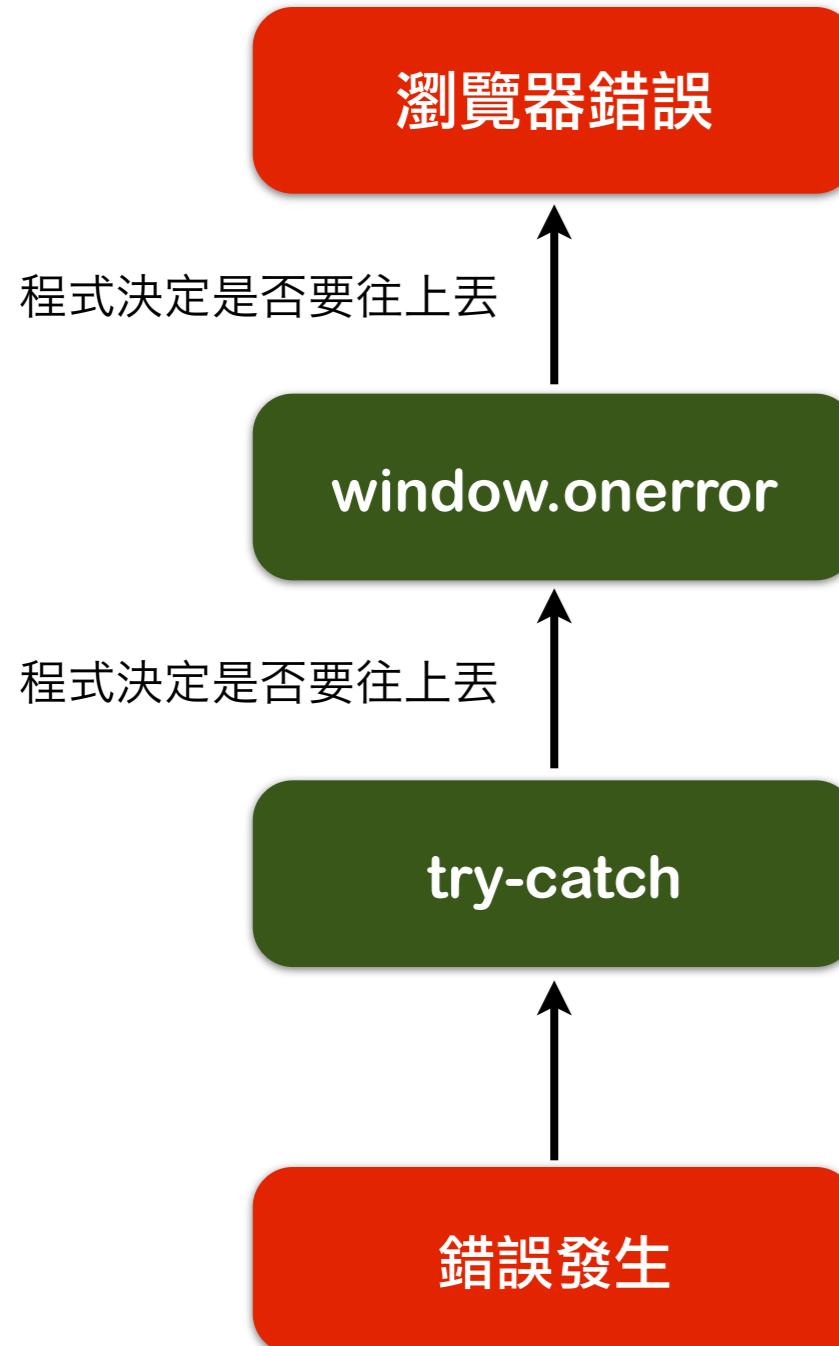
Log 心得分享

- 建議盡量將程式的每個函式第一行、重要執行點都放置 Log。類似足跡的概念、讓我們容易去追蹤問題及了解結構。
- 當程式中需要大量的 Log 時，請一定要指定 Severity 及 Group 參數，方便後續過濾。
 - ❖ YUI 的 logInclude, logExclude, debug 好用！
- loop 類的 Log (ex. 音樂播放進度事件) 請自行斟酌是否使用。

Error Handling

當程式發生了錯誤，我們該如何處理呢？

Error 生命週期



JavaScript 開發人員可利用
try-catch 與 window.onerror
補抓並處理錯誤

try-catch

包覆在可能產生錯誤的程式碼外

參考資料：<http://www.javascriptkit.com/javatutors/trycatch2.shtml>

```
try {  
    // 可能會產生錯誤的程式碼  
}  
catch (error) {  
  
    // 當有錯誤的時候才會進入  
    // error 的屬性有 message 與 name  
    alert("錯誤類別為：" + error.name +  
        ", 錯誤訊息為：" + error.message);  
}  
  
// 後續的程式碼仍然可以繼續執行 (除非在 catch 中 return)
```

練習：<http://f2eclasse.com/lab/debug/try-catch.html>

window.onerror

錯誤處理的最後一道防線

參考資料：<http://dev.opera.com/articles/view/better-error-handling-with-window-onerror/>

```
window.onerror = function (message, url, line) {  
    alert([  
        "JavaScript error: " + message,  
        " on line " + line,  
        " for " + url  
    ].join(""));  
  
    return false; // false 會繼續產生錯誤、true 則會壓抑錯誤  
};
```

練習：<http://f2e阶级.com/lab/debug/window-onerror.html>

錯誤處理心得分享

- 將錯誤往上回報，避免只是 try-catch 壓抑。
 - ❖ throw new Error("使用者自定錯誤");
- window.onerror 處理：
 - ❖ 線上：隱藏錯誤、回報到伺服器。
 - ❖ 開發：顯示錯誤、開發人員必須處理掉。
- 推薦投影片：
 - ❖ <http://www.slideshare.net/nzakas/enterprise-javascript-error-handling-presentation>

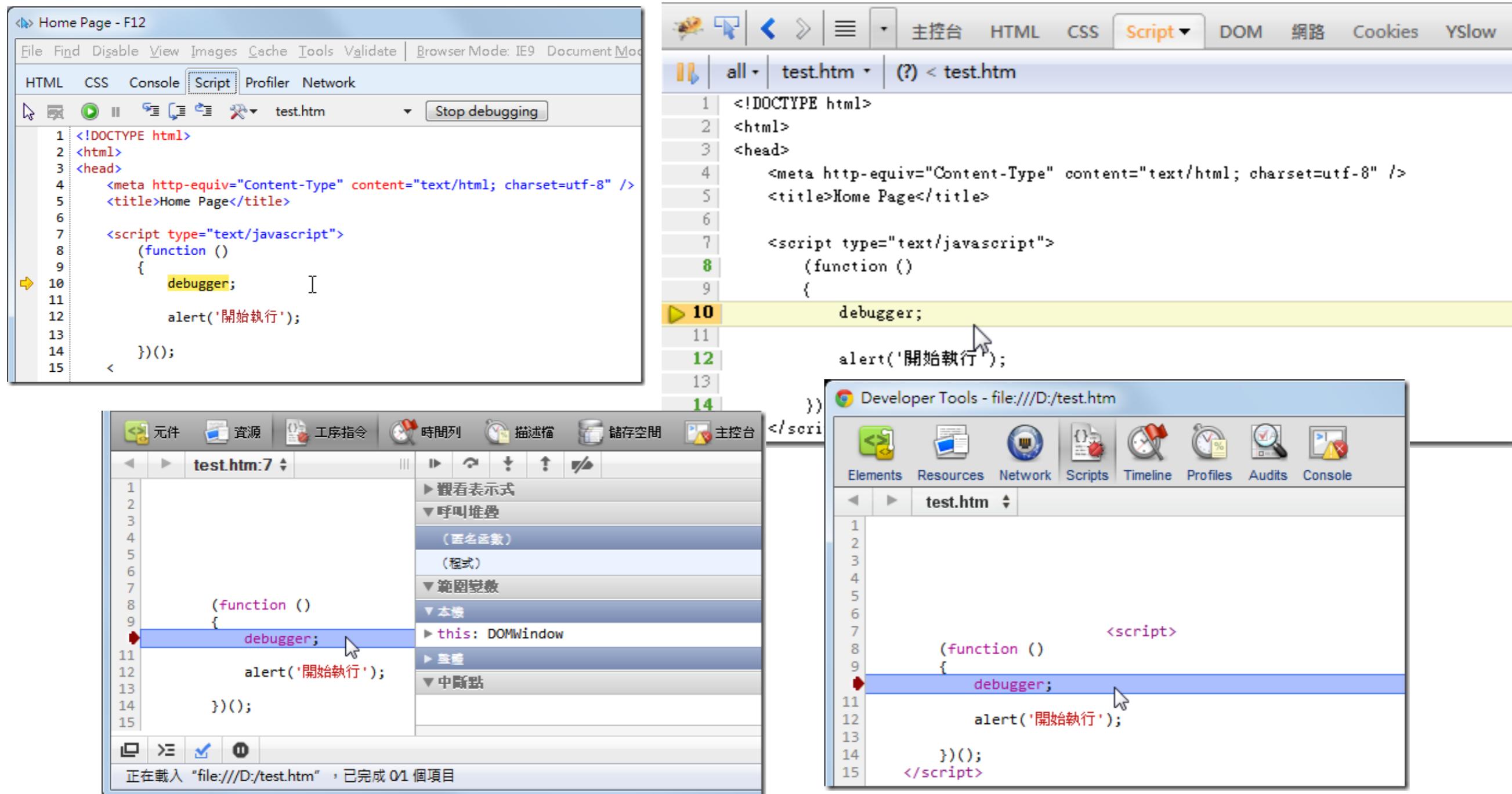
Breakpoint

現今的 Browser 都有更好的 Developer 工具了
可以用真正程式開發方式追蹤問題！

按 F12 打開 (IE 8 以上及其他標準瀏覽器)

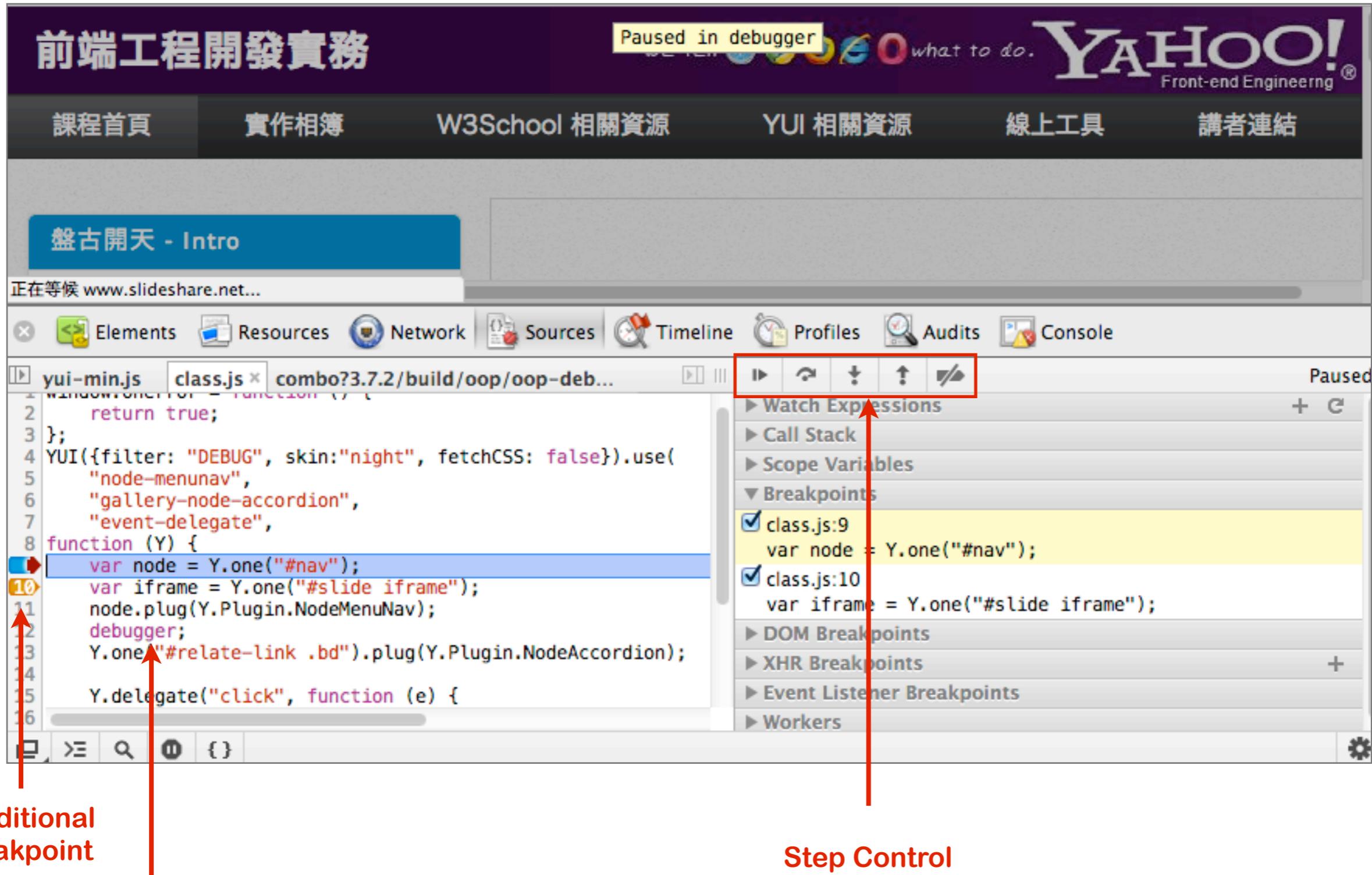
debugger;

用程式設定 Breakpoint



<http://blog.miniasp.com/post/2011/03/17/Using-JavaScript-debugger-statement-enter-breakpoints.aspx>

Breakpoint 中斷點



conditional
breakpoint

programming
breakpoint

Step Control

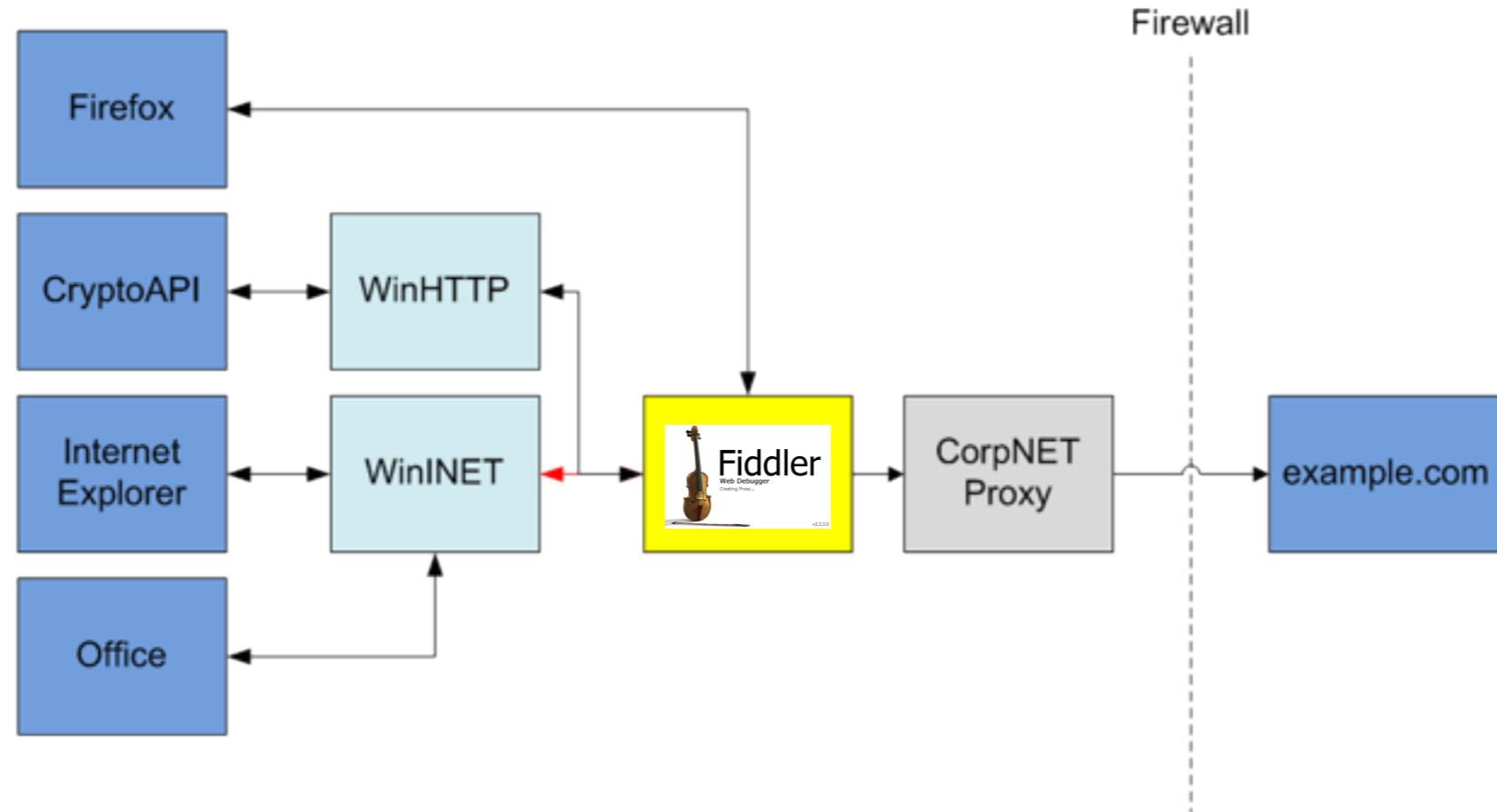
Fiddler



v2.3.3.0

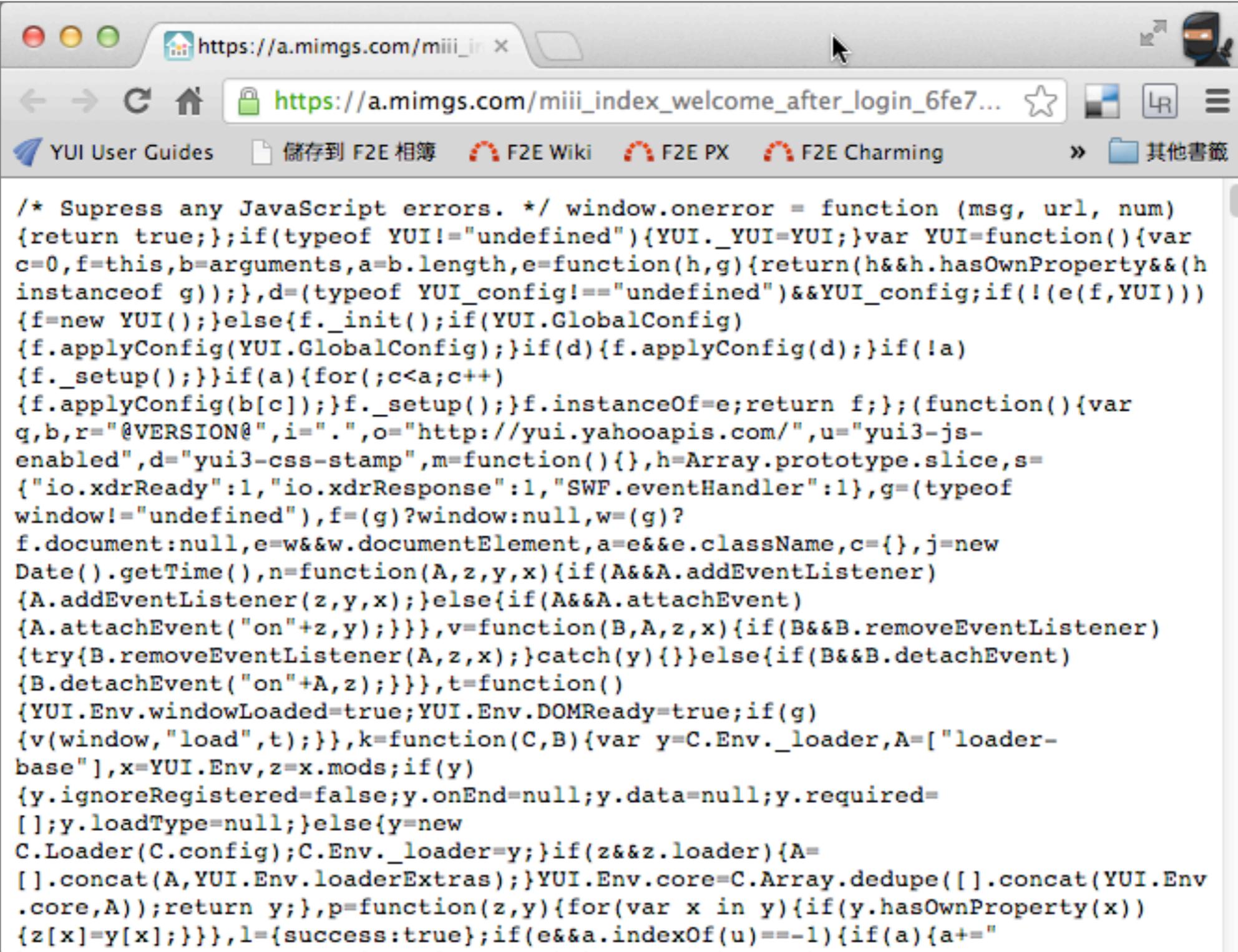
每個 F2E 都應該活用 Fiddler

Fiddler 是什麼？



Fiddler 在你電腦上，相當於建立了虛擬的 Proxy、一但執行，所有的網路封包都會經由此 Proxy 進出 => 只要會寫 JavaScript、你可以對你所瀏覽的網頁做任何事！

JavaScript 程式碼被最小化怎麼辦？



The screenshot shows a web browser window with the URL https://a.mimgs.com/miii_index>Welcome_after_login_6fe7.... The browser interface includes standard navigation buttons, a search bar, and a toolbar with links to YUI User Guides, F2E Wiki, F2E PX, F2E Charming, and other bookmarks. The main content area displays a massive, single-line block of minified JavaScript code. The code is highly compressed, using various techniques like whitespace removal, character substitution (e.g., `&` for `and`, `!=` for `not equal`), and function inlining to reduce the file size while maintaining functionality.

```

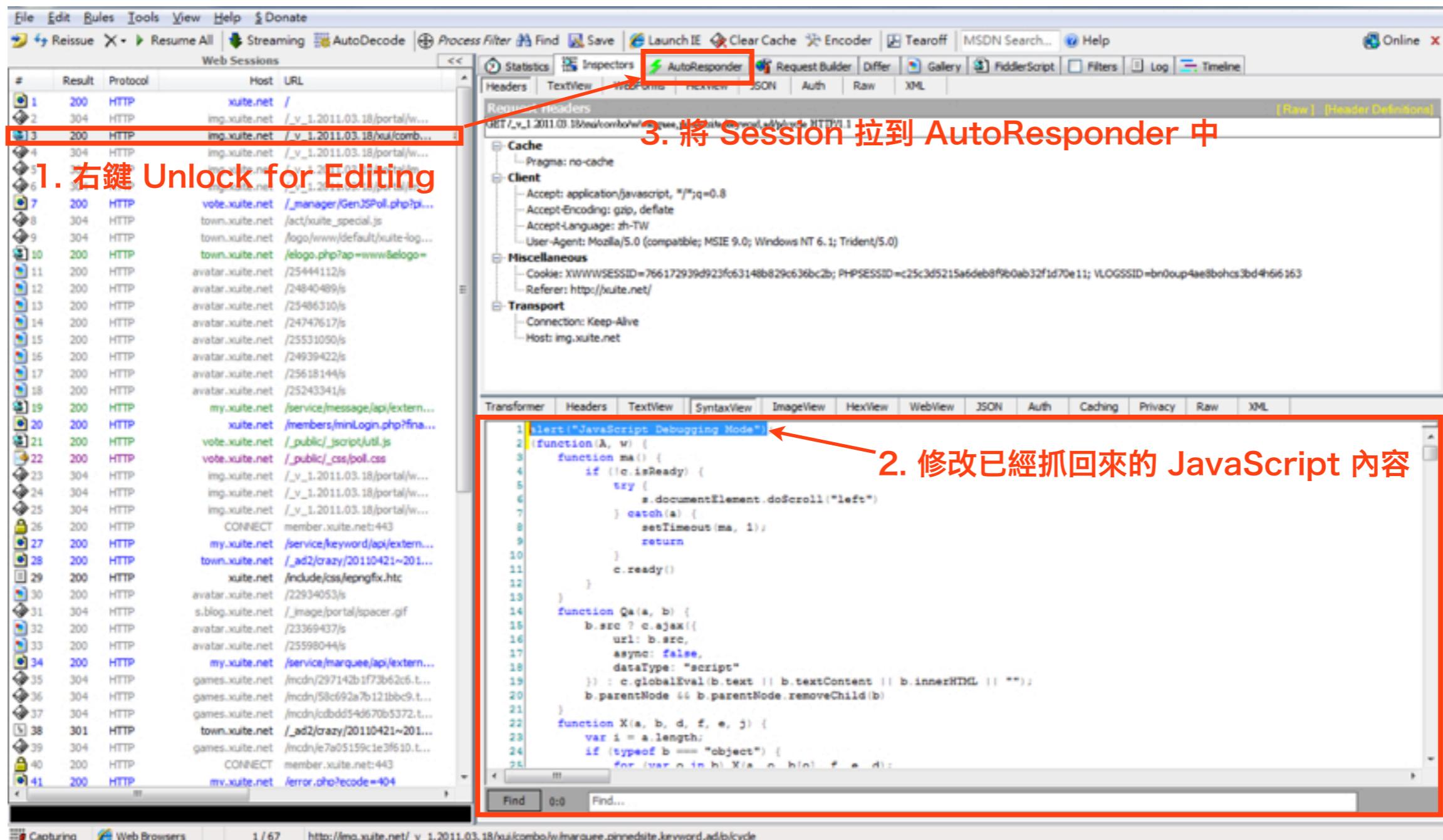
/* Suppress any JavaScript errors. */ window.onerror = function (msg, url, num)
{return true;};if(typeof YUI!="undefined"){YUI._YUI=YUI;}var YUI=function(){var
c=0,f=this,b=arguments,a=b.length,e=function(h,g){return(h&&h.hasOwnProperty&&(h
instanceof g))},d=(typeof YUI_config!="undefined")&&YUI_config;if(!(e(f,YUI)))
{f=new YUI();}else{f._init();}if(YUI.GlobalConfig)
{f.applyConfig(YUI.GlobalConfig);}if(d){f.applyConfig(d);}if(!a)
{f._setup();}if(a){for(;c<a;c++)
{f.applyConfig(b[c]);}f._setup();}f.instanceOf=e;return f;};(function(){var
q,b,r="@VERSION@",i=". ",o="http://yui.yahooapis.com/",u="yui3-js-
enabled",d="yui3-css-stamp",m=function(){},h=Array.prototype.slice,s=
{"io.xdrReady":1,"io.xdrResponse":1,"SWF.eventHandler":1},g=(typeof
window!="undefined"),f=(g)?window:null,w=(g)?
f.documentElement:e=w&&w.documentElement,a=e&&e.className,c={},j=new
Date().getTime(),n=function(A,z,y,x){if(A&&A.addEventListener)
{A.addEventListener(z,y,x);}else{if(A&&A.attachEvent)
{A.attachEvent("on"+z,y);}}},v=function(B,A,z,x){if(B&&B.removeEventListener)
{try{B.removeEventListener(A,z,x);}catch(y){}}else{if(B&&B.detachEvent)
{B.detachEvent("on"+A,z);}}},t=function()
{YUI.Env.windowLoaded=true;YUI.Env.DOMReady=true;if(g)
{v(window,"load",t);}},k=function(C,B){var y=C.Env._loader,A=[ "loader-
base"],x=YUI.Env,z=x.mods;if(y)
{y.ignoreRegistered=false;y.onEnd=null;y.data=null;y.required=
[];y.loadType=null;}else{y=new
C.Loader(C.config);C.Env._loader=y;}if(z&&z.loader){A=
[]}.concat(A,YUI.Env.loaderExtras);}YUI.Env.core=C.Array.dedupe([]).concat(YUI.Env
.core,A));return y;},p=function(z,y){for(var x in y){if(y.hasOwnProperty(x))
{z[x]=y[x];}}},l={success:true};if(e&&a.indexOf(u)==-1){if(a){a+="
"
}
}

```

線上環境都會壓縮程式碼、沒 Log，怎麼 Debug？

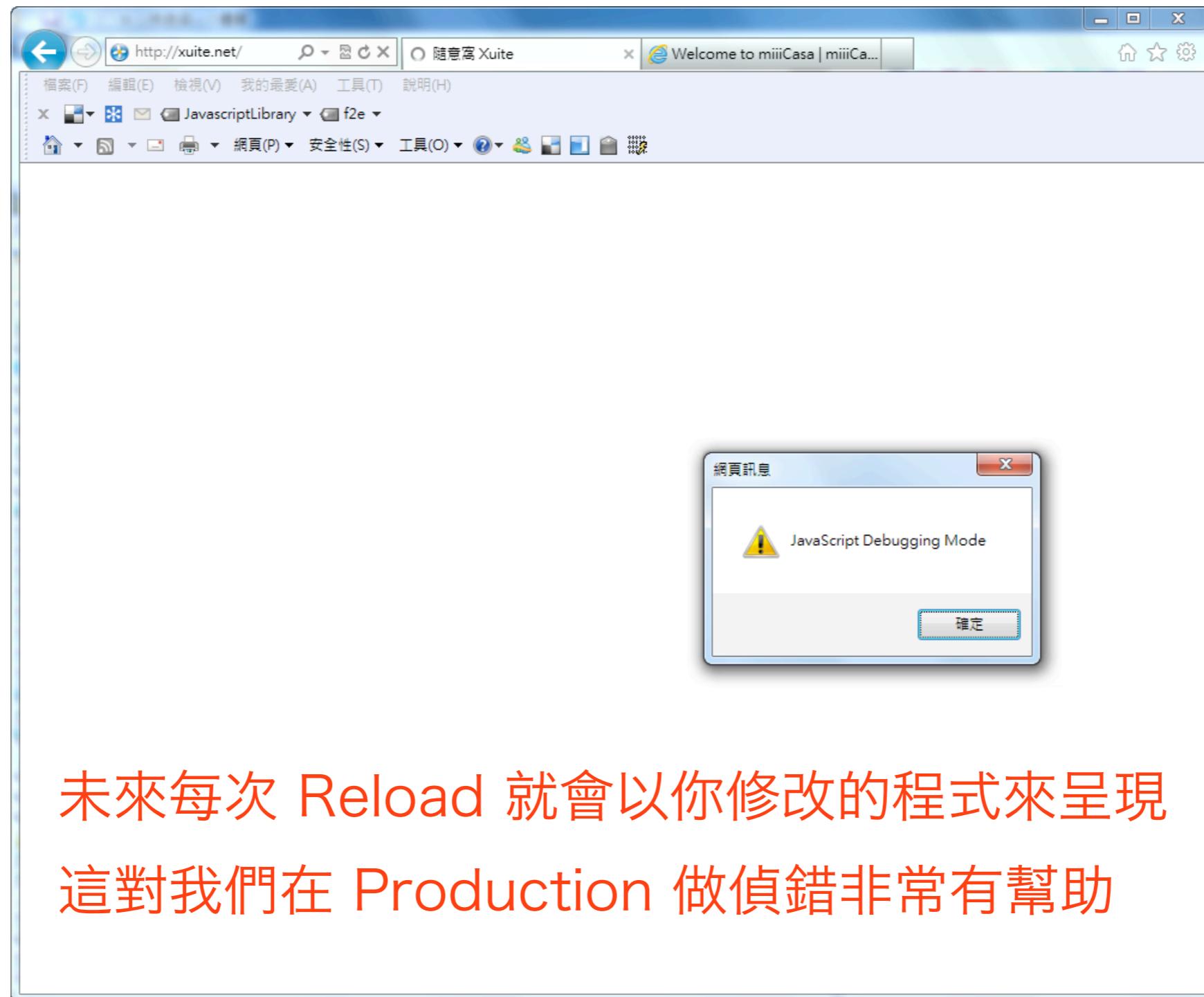
AutoResponder

竊改網站回傳的 Response



AutoResponder

顯示結果



未來每次 Reload 就會以你修改的程式來呈現
這對我們在 Production 做偵錯非常有幫助

AutoResponder

常用網站的樣式讓你不舒服？調整一下吧

練習：在 Y! 新聞加入
alert("被 Fiddler 改寫了！")

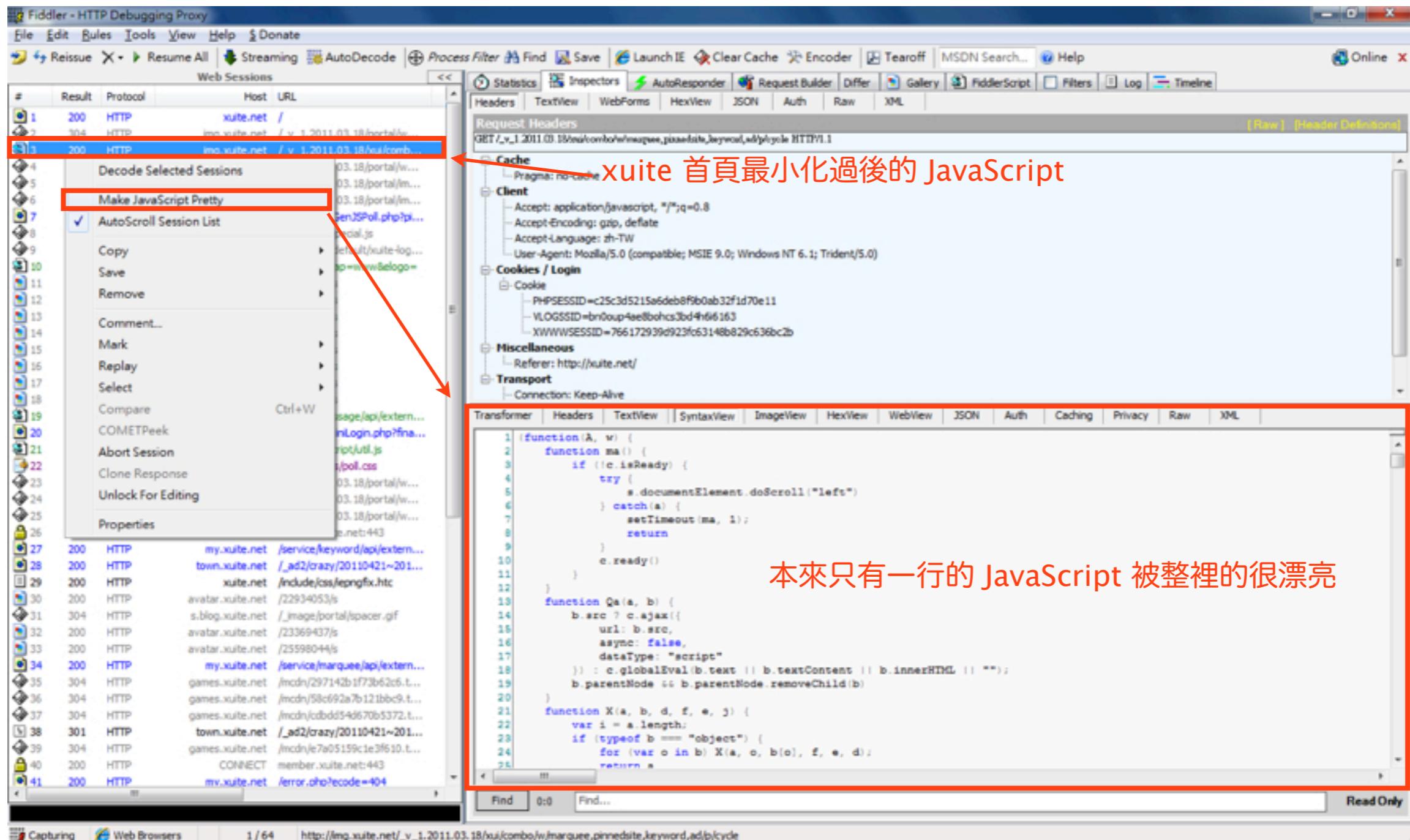
Fiddler 的必備 Plugins

- JavaScript Formatter
- JSON Viewer
- Gallery

<http://www.fiddler2.com/fiddler2/extensions.asp>

JavaScript Formatter

整理壓縮過後的程式碼



JSON Viewer

用樹狀圖觀看 Response 資料

The screenshot shows the JSON Viewer interface. At the top, there is a navigation bar with tabs: Transformer, Headers, TextView, SyntaxView, ImageView, HexView, WebView, JSON (which is selected), Auth, Caching, Privacy, and Raw. Below the navigation bar, there is a toolbar with icons for XML, Viewer (selected), and Text.

The main area displays a JSON tree structure. A specific node under the 'contacts' array is highlighted with a red box. This node has the ID '15c5e6335efd8c20b6641250a502caff'. The properties for this node are listed below:

- email : "josephj6802@gmail.com"
- pass_word : ""
- first_name : "Joseph"
- last_name : "Chiang"
- nickname : "0"
- birthday : "0000-00-00"
- country_id : "US"
- city_id : "12469"
- language : "ja-JP"
- edm_status : "0"
- is_box_enable : "1"
- is_email_verify : "0"
- status : "0"
- mac_address : ""

At the bottom of the JSON tree view, there is a 'Find' input field and a clear button.

To the right of the JSON tree, there is a 'Property Grid' window containing the following data:

	Type
contacts	JsonObject
emo	
groups	JsonArray
status	ok

At the bottom of the application, there are status indicators for 'Capturing' and 'Web Browsers', and a footer with the URL 'http://api.miiicasa.com/service/getUserContacts'.

Gallery

直接看 Session 中的圖片

The screenshot shows the Fiddler application interface. On the left, there is a list of network sessions (Web Sessions) with details like Result, Protocol, Host, and URL. A red box highlights this list. On the right, there is a large grid of thumbnail images. The top row includes a girl with orange hair, a girl with long dark hair, a blue circular logo with a white circle, a dog, SpongeBob SquarePants, and a girl with pink hair. The second row includes a girl with black hair, a girl with blonde hair, two small cats, a doll in a green dress, and a group of three people. The third row includes a baby sitting on a couch. At the bottom center of the image, the text "有圖有真相、顯示目前選取的圖檔" is displayed in red.

#	Result	Protocol	Host	URL
1	200	HTTP	xuite.net	/
2	304	HTTP	img.xuite.net	/_v_1.2011.03.18/portal/w...
3	200	HTTP	img.xuite.net	/_v_1.2011.03.18/xu/comb...
4	304	HTTP	img.xuite.net	/_v_1.2011.03.18/portal/w...
5	304	HTTP	img.xuite.net	/_v_1.2011.03.18/portal/m...
6	304	HTTP	img.xuite.net	/_v_1.2011.03.18/portal/m...
7	200	HTTP	vote.xuite.net	/_manager/GenJSPoll.php?pi...
8	304	HTTP	town.xuite.net	/act/xuite_special.js
9	304	HTTP	town.xuite.net	/logo/www/default/xuite-log...
10	200	HTTP	town.xuite.net	/logo.php?ap=www&elogo=
11	200	HTTP	avatar.xuite.net	/25444112/s
12	200	HTTP	avatar.xuite.net	/24840489/s
13	200	HTTP	avatar.xuite.net	/25496310/s
14	200	HTTP	avatar.xuite.net	/24747617/s
15	200	HTTP	avatar.xuite.net	/25531050/s
16	200	HTTP	avatar.xuite.net	/24939422/s
17	200	HTTP	avatar.xuite.net	/25618144/s
18	200	HTTP	avatar.xuite.net	/25243341/s
19	200	HTTP	my.xuite.net	/service/message/api/extern...
20	200	HTTP	xuite.net	/members/minLogin.php?fin...
21	200	HTTP	vote.xuite.net	/_public/_script/util.js
22	200	HTTP	vote.xuite.net	/_public/_css/poll.css
23	304	HTTP	img.xuite.net	/_v_1.2011.03.18/portal/w...
24	304	HTTP	img.xuite.net	/_v_1.2011.03.18/portal/w...
25	304	HTTP	img.xuite.net	/_v_1.2011.03.18/portal/w...
26	200	HTTP		CONNECT member.xuite.net:443
27	200	HTTP	my.xuite.net	/service/keyword/api/extern...
28	200	HTTP	town.xuite.net	/_ad2/crazy/20110421~201...
29	200	HTTP	xuite.net	/include/css/lepngfix.htm
30	200	HTTP	avatar.xuite.net	/22934053/s
31	304	HTTP	s.blog.xuite.net	/_image/portal/spacer.gif
32	200	HTTP	avatar.xuite.net	/23369437/s
33	200	HTTP	avatar.xuite.net	/25598044/s
34	200	HTTP	my.xuite.net	/service/marquee/api/extern...
35	304	HTTP	games.xuite.net	/mcdn/297142bf77bb62e6.t...
36	304	HTTP	games.xuite.net	/mcdn/58c692a7b121bbc9.t...
37	304	HTTP	games.xuite.net	/mcdn/cbdd54d670b5372.t...
38	301	HTTP	town.xuite.net	/_ad2/crazy/20110421~201...
39	304	HTTP	games.xuite.net	/mcdn/e7a05159c1e3f610.t...
40	200	HTTP		CONNECT member.xuite.net:443
41	200	HTTP	my.xuite.net	/error.php?ecode=404

FiddlerScript

是 Fiddler 最強大的功能：可以**自訂選單與功能**
以下的功能是我為 miiiCasa 所製作，可節省許多開發時間

- 塞入 miiiCasa Bar
- 不同開發人員環境的切換
- 插入 Firebug Lite 或 YUI Console 等好用工具
- 列出已翻譯、未翻譯的字串
- 檢視模組資訊
- JavaScript/CSS 壓縮與否的切換

塞入 miiiCasa Bar

本來必須透過 Router, 用 Fiddler 模擬

2. 重新整理後，就會看到 miiiCasa Bar 出現在網頁左下方（此為點選後的狀況）

1. 選取顯示哪種環境的 miiiCasa Bar

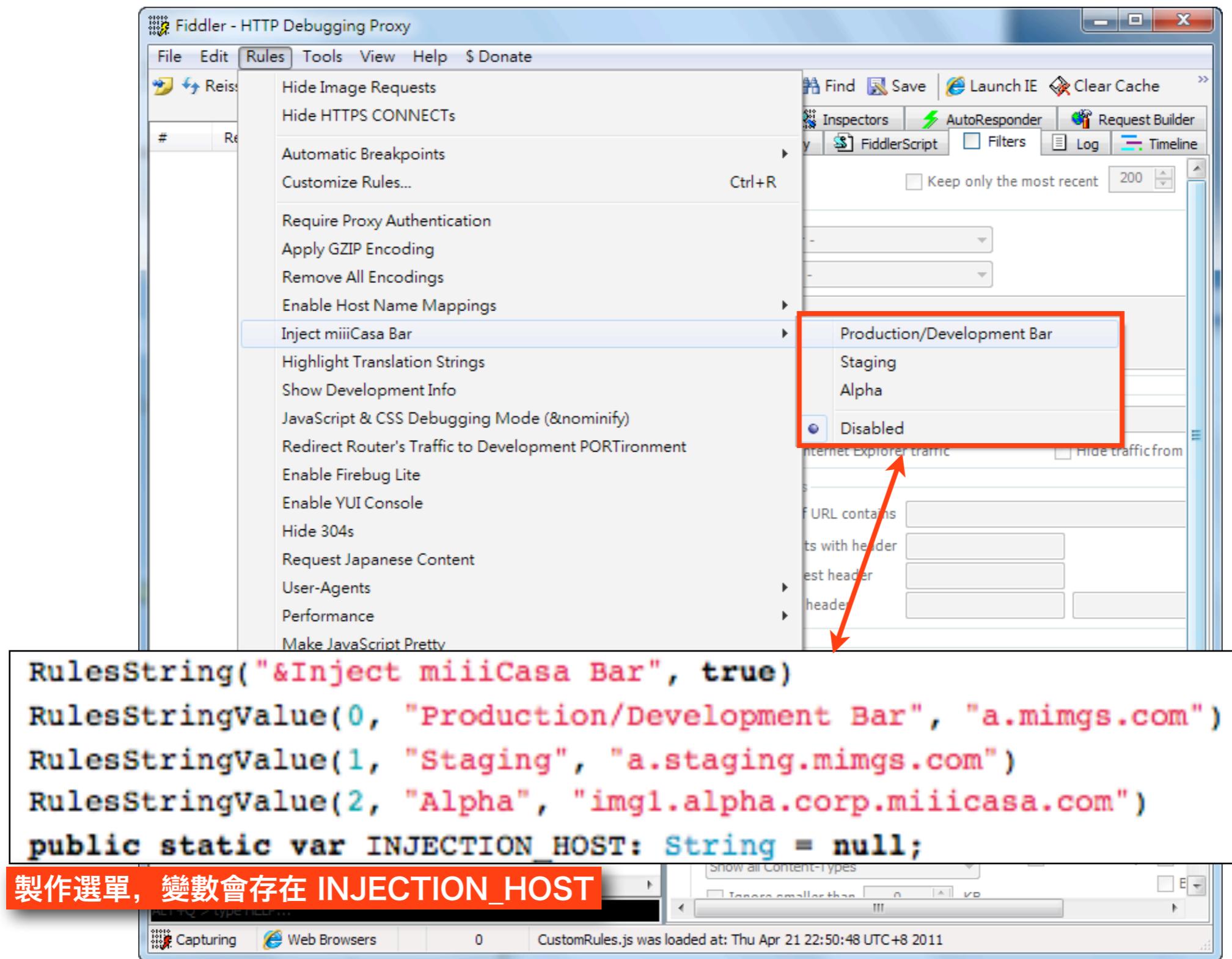
3. 此時檢視原始碼就會看到我們剛塞入的內容

Fiddler - HTTP Debugging Proxy

- File Edit Rules Tools View Help \$ Donate
- Hide Image Requests
- Hide HTTPS CONNECTs
- Automatic Breakpoints
- Customize Rules...
- Require Proxy Authentication
- Apply GZIP Encoding
- Remove All Proxies
- Enable Host Name Mappings
- Inject miiiCasa Bar
- Highlight Translation Strings
- Show Development Info
- JavaScript & CSS Debugging Mode (&nominify)
- Redirect Router's Traffic to Development PORTironment
- Enable Firebug Lite
- Enable YUI Console
- Hide 304s
- Request Japanese Content
- User-Agents
- Performance
- Make JavaScript Pretty

Capturing Web Browsers 271 Bolding cleared

新增 Fiddler 選單



依據變數塞入 JS

依據 INJECTION_HOST 的不同，會塞入不同環境的 miiiCasa Bar

```

328     if (INJECTION_HOST) {
329         if (INJECTION_HOST === "a.mimgs.com")
330         {
331             var path = (null != PORT) ? "bar/seed/seed.js" : "i/toolbar.js";
332         } else {
333             var path = "i/toolbar.js";
334         }
335         aHtml.push([
336             '<div id="miii-root"></div>',
337             '<script>',
338             '(function () {',
339             '    if (typeof window.miii_url !== "undefined") {',
340             '        return;',
341             '    }',
342             '    window.miii_url = "http://" + INJECTION_HOST + '/' + path + '?frameset=0&m=6%2FlP8h2';
343             '    if (self !== top) {',
344             '        return;',
345             '    }',
346             '    var e, APP_URL, APP_MODE, counter, win;',
347             '    e      = document.createElement("script");',
348             '    e.id   = "miii-seed";',
349             '    e.src  = miii_url;',
350             '    e.async = true;',
351             '    document.getElementById("miii-root").appendChild(e)',
352             '})();',
353             '</script>'
354         ].join("\n"));
355     }

```

在 onBeforeResponse (輸出之前) 處理函式中

開發環境切換

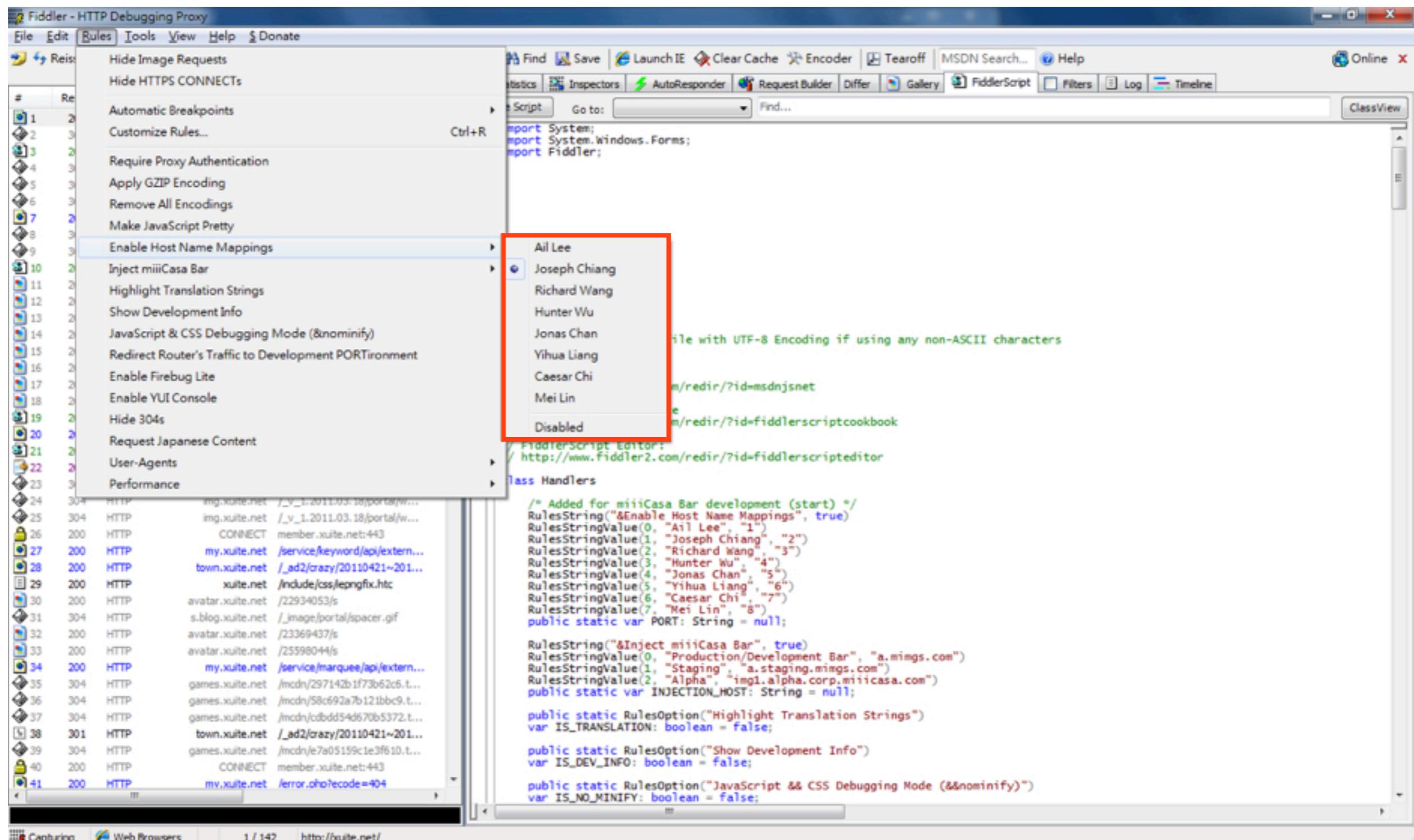
快速切換團隊中不同工程師的開發環境

The screenshot shows a web browser window titled "Engineering/NewhireEnvSetup - miiCasa". The address bar displays the URL <http://muchillla.corp.miiicasa.com/projects/miiicasa/wiki/Engineering/NewhireEnvSetup>. The page content lists port mappings for several engineers:

- 1. Engineering & Port Mapping List
 - o Ail Lee
 - www.miiicasa.com => http://devml.corp.miiicasa.com:50010
 - apps.miiicasa.com => http://devml.corp.miiicasa.com:50011
 - api.miiicasa.com => http://devml.corp.miiicasa.com:50013
 - developer.miiicasa.com => http://devml.corp.miiicasa.com:50014
 - f.mimgs.com => http://devml.corp.miiicasa.com:50016
 - comet.miiicasa.com => http://devml.corp.miiicasa.com:50017
 - a.mimgs.com => http://devml.corp.miiicasa.com:50019
 - o Joseph Chiang
 - www.miiicasa.com => http://devml.corp.miiicasa.com:50020
 - apps.miiicasa.com => http://devml.corp.miiicasa.com:50021
 - api.miiicasa.com => http://devml.corp.miiicasa.com:50023
 - developer.miiicasa.com => http://devml.corp.miiicasa.com:50024
 - f.mimgs.com => http://devml.corp.miiicasa.com:50026
 - comet.miiicasa.com => http://devml.corp.miiicasa.com:50027
 - a.mimgs.com => http://devml.corp.miiicasa.com:50029
 - o Richard Wang
 - www.miiicasa.com => http://devml.corp.miiicasa.com:50030
 - apps.miiicasa.com => http://devml.corp.miiicasa.com:50031
 - api.miiicasa.com => http://devml.corp.miiicasa.com:50033
 - developer.miiicasa.com => http://devml.corp.miiicasa.com:50034
 - f.mimgs.com => http://devml.corp.miiicasa.com:50036
 - comet.miiicasa.com => http://devml.corp.miiicasa.com:50037
 - a.mimgs.com => http://devml.corp.miiicasa.com:50039
 - o Hunter Wu

A red box highlights the port mapping list for Joseph Chiang. To the right of this box, a red annotation in Chinese reads: "每個工程師都有自己的環境以 Port 做區隔, 像我是 5002*" (Each engineer has their own environment separated by port, like I am 5002*).

Fiddler 若是有個選單可隨時切換就太方便了！



Welcome to miiiCasa-Stay Connected with your Family | miiiCasa

<http://www.miicasa.com/>

實際上是被 Fiddler 自動對應到 devm1.corp.miicasa.com:50020

miiiCasa ID: josephj6802@gmail.com Password: *****

Remember me for 2 weeks [Forgot password?](#) [Sign in](#)

HOME GATEWAY INNOVATION

miiiCasa expands home gateway into home data management center

[Take the tour](#)

Don't have a miiiCasa account?
Join now! It's free and easy.

[Create New Account](#)

Welcome to miiiCasa
A new, fun and private way to store & share content with family and friends!
[Learn more](#)

What's new on miiiCasa
miiiCasa enabled router won 2011 CES innovation award.
[Learn more](#)

miiiCasa devices are available now!
Check out the devices in store and get one for you and your family.
[Learn more](#)

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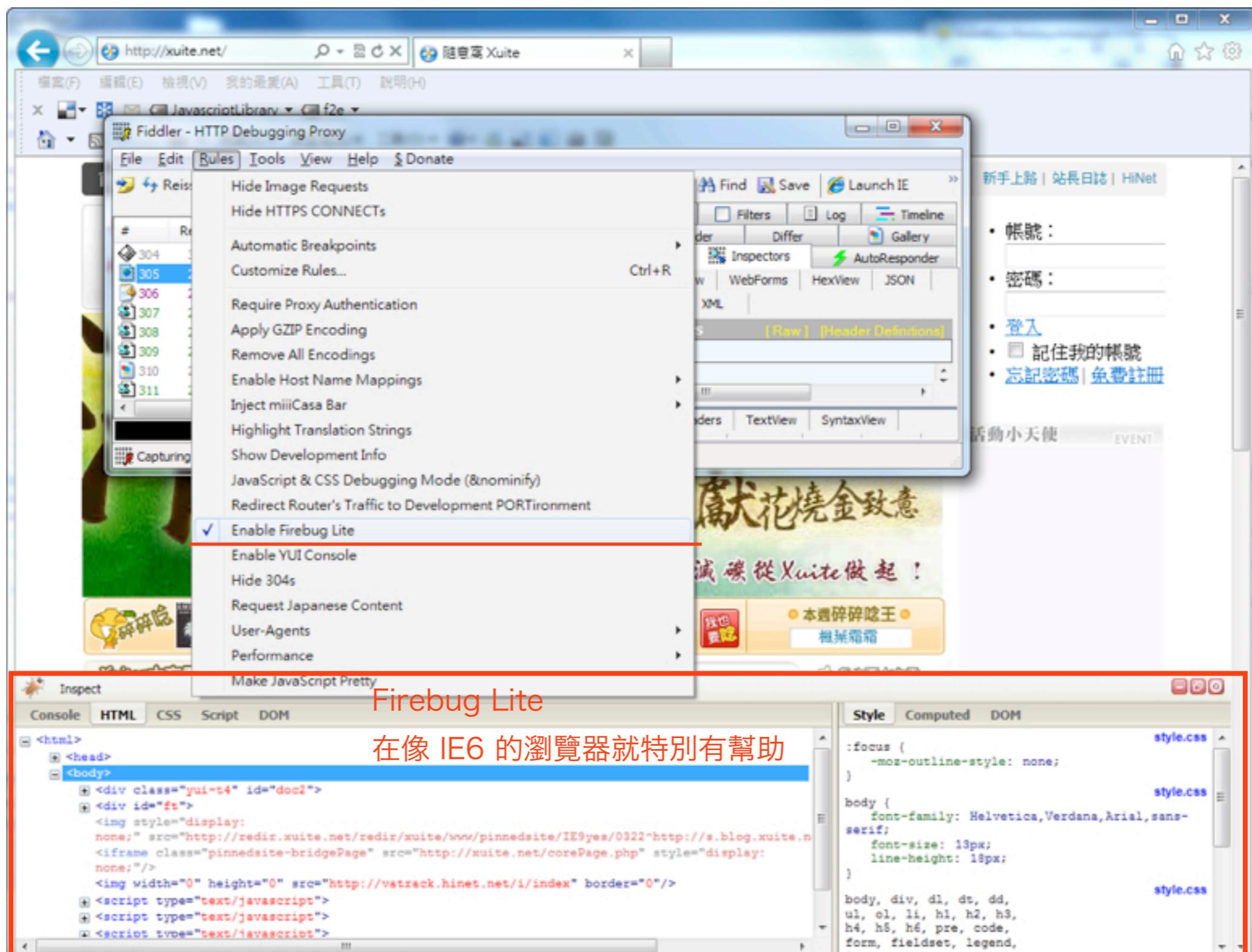
[About miiiCasa](#) | [Terms of Service](#) | [Privacy Policy](#) | [Copyright](#) | [Blog](#) | [Press](#) | [Contact us](#) | [Help](#)

Language: [English](#) | [日本語](#)

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塞入 Debug Console

插入 Firebug Lite 或 YUI Console



列出翻譯字串

設計多國語系時有特殊的 Class Name (.intl-translated, .intl-translatable)

Space > D-Link DIR-685 > Photos > 2010-12-21 My Sweet ...

Album のインフォ

共有管理

シェア

あなたのシェアリストを管理する

Xをクリックすることで、このアルバムのシェアリストからコンタクトを削除することができます。またリストから Or すべてのコンタクトを削除するにはここをクリックしてください をクリックしてもできます。

これらはあなたの共有アルバムを見ることができる人たちです:

WWW 吳先生
夯哥哥aaaaaa

ビュー / ダウンロード

もっどシェア

保存する
or you may cancel it

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檢視模組資訊

列出有 id 屬性的 <div>/<div> 區塊，點兩下會出現 alert 視窗

#doc-web-readcrumbs
#folder-manage-menu
#share-manage
#mastfoot

Hi, 一二三四五六七八九十 | Sign Out | Help

Space > D-Link DIR-685 > Photos > 2010-12-21 My Sweet

Album のインフォ 共有管理 シェア もっとシェア

網頁訊息

codeigniter o space/_share_manage

在開發環境打入此指令就會自動把相關檔案開好

確定

保存する or you may cancel it

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Language: English | 日本語

切換壓縮與否

開發環境的 JS/CSS 預設都是動態合併多個小檔案並最小化過的。



The screenshot shows a browser window with the URL <http://a.mimsgs.com/fuse?module=space&type=js>. The page content is a single, extremely long line of unminified JavaScript code. The code is highly nested and contains numerous variable declarations, function definitions, and conditional statements, illustrating the state of the code before minification.

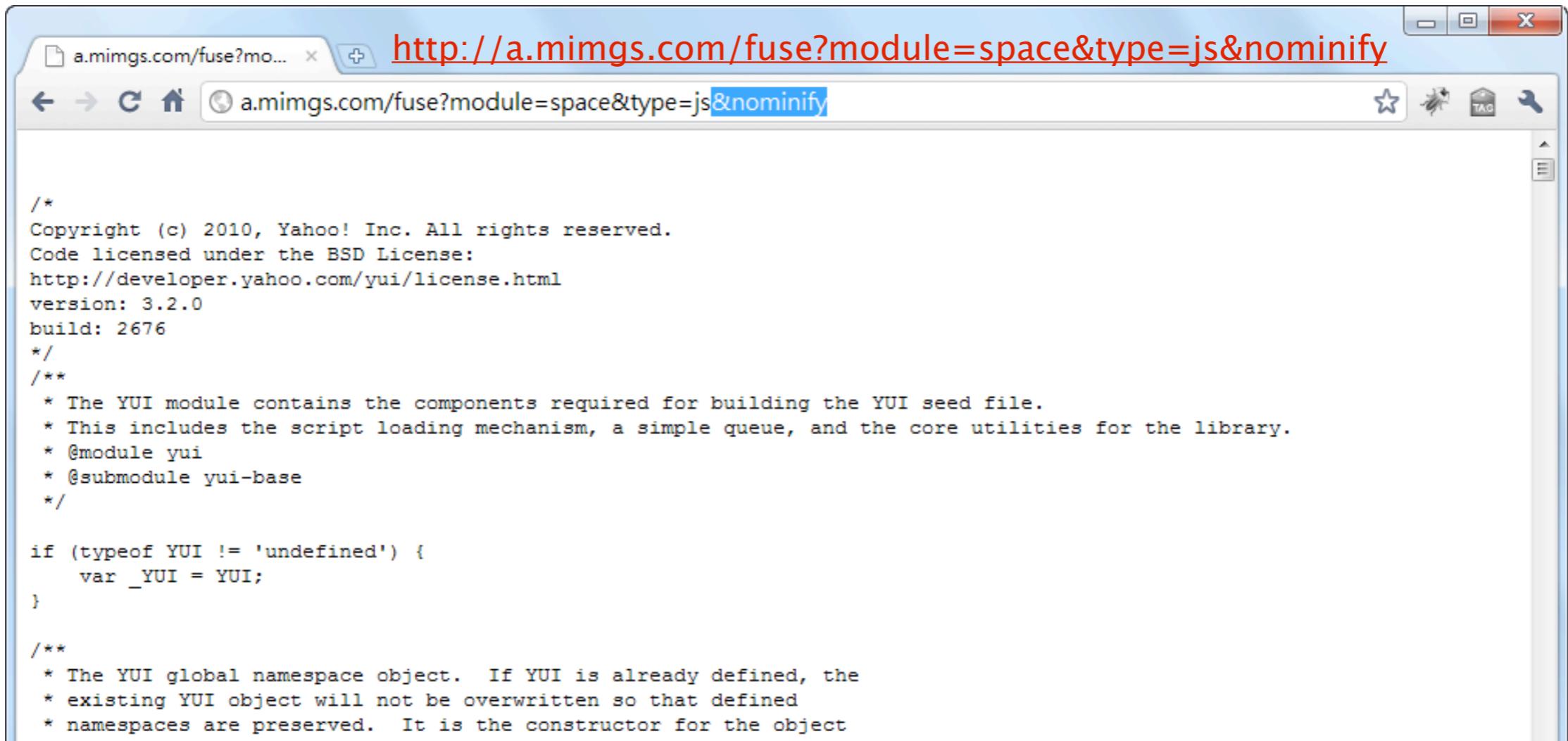
```

if(typeof YUI!="undefined"){var _YUI=YUI;}var YUI=function(){var c=0,e=this,b=arguments,a=b.length,d=(typeof YUI_config!="undefined")&&YUI_config;if(!(e instanceof YUI)){e=new YUI();}else{e._init();}if(d){e.applyConfig(d);}if(!a){e._setup();}if(a){for(;c<a;c++){e.applyConfig(b[c]);}e._setup();}return e;};(function(){var n,b,o="3.2.0",l="http://yui.yahooapis.com/",r="yui3-js-enabled",j=function(){},g=Array.prototype.slice,p={"io.xdrReady":1,"io.xdrResponse":1,"SWF.eventHandler":1},f=(typeof window!="undefined"),e=(f)?window:null,t=(f)?e.document:null,d=t&&t.documentElement,a=d&&d.className,c={},h=new Date().getTime(),k=function(x,w,v,u){if(x&&x.addEventListener){x.addEventListener(w,v,u);}else{if(x&&x.attachEvent){x.attachEvent("on"+w,v);}}},s=function(y,x,w,u){if(y&&y.removeEventListener){try{y.removeEventListener(x,w,u);}catch(v){}}else{if(y&&y.detachEvent){y.detachEvent("on"+x,w);}}}},q=function(){YUI.Env.windowLoaded=true;YUI.Env.DOMReady=true;if(f){s(window,"load",q);}},i=function(w,v){var u=w.Env._loader;if(u){u.ignoreRegistered=false;u.onEnd=null;u.data=null;u.required=[];u.loadType=null;}else{u=new w.Loader(w.config);w.Env._loader=u;}return u;},m=function(w,v){for(var u in v){if(v.hasOwnProperty(u)){w[u]=v[u];}}};;if(d&&a.indexOf(r)==-1){if(a){a+=r;d.className=a;}if(o.indexOf("@")>-1){o="3.2.0pr1";}n=applyConfig:function(B){B=B||j;var w,y,x=this.config,z=x.modules,v=x.groups,A=x.rls,u=this.Env._loader;for(y in B){if(B.hasOwnProperty(y)){w=B[y];if(z&&y=="modules"){m(z,w);}else{if(v&&y=="groups"){m(v,w);}else{if(A&&y=="rls"){m(A,w);}else{if(y=="win"){x[y]=w.contentWindow||w;x.doc=x[y].document;}else{if(y=="_yuid"){;}else{x[y]=w;}}}}}}}};if(u){u._config(B)},_config:function(u){this.applyConfig(u)},_init:function(){var x,y=this,u=YUI.Env,v=y.Env,z,w;y.version=o;if(!v){y.Env={mods:{},versions:{},base:1,cdn:1+o+"/build/"};_idx:0,_used:{};_attached:{};_yidx:0,_uidx:0,_guidp:"y";_loaded:{};getBase:u&&u.getBase||function(F,E){var A,B,D,G,C;B=t&&t.getElementsByTagName("script")||[];for(D=0;D<B.length;D=D+1){G=B[D].src;if(G){C=G.match(F);A=C&&C[1];if(A){x=C[2];if(x){C=x.indexOf("js");if(C>-1){x=x.substr(0,C);}C=G.match(E);if(C&&C[3]){A=C[1]+C[3];}break;}}}};return A||v.cdn;};v=y.Env;v._loaded[o]={};if(u&&y!=YUI){v._yidx++;u._yidx++;v._guidp=("yui_"+o+"_"+v._yidx+"_"+h).replace(/\./g,"_");}else{if(typeof _YUI!="undefined"){u=_YUI.Env;v._yidx+=u._yidx;v._uidx+=u._uidx;for(z in u){if(!(z in v)){v[z]=u[z];}}}}}};
```

但是最小化會造成 Debugging 很困難

切換壓縮與否

其實只要多一個 `&nominify` 的參數即可回復正常



The screenshot shows a web browser window with the URL `http://a.mimgs.com/fuse?module=space&type=js&nominify` in the address bar. The page content displays the source code of a YUI module. The code includes a copyright notice, license information, and various comments explaining the module's purpose and structure. The `nominify` parameter is highlighted in blue in the address bar.

```
/*
Copyright (c) 2010, Yahoo! Inc. All rights reserved.
Code licensed under the BSD License:
http://developer.yahoo.com/yui/license.html
version: 3.2.0
build: 2676
*/
/**
 * The YUI module contains the components required for building the YUI seed file.
 * This includes the script loading mechanism, a simple queue, and the core utilities for the library.
 * @module yui
 * @submodule yui-base
 */

if (typeof YUI != 'undefined') {
    var _YUI = YUI;
}

/**
 * The YUI global namespace object. If YUI is already defined, the
 * existing YUI object will not be overwritten so that defined
 * namespaces are preserved. It is the constructor for the object
*/
```

但是每次都要手動改或動程式實在很麻煩！

切換壓縮與否

有 Fiddler 真好！點選一下不用改程式碼就可以看到沒最小化的

The screenshot shows the Fiddler application interface. In the top navigation bar, the URL <http://a.mimds.com/fuse?module=space&type=js> is entered twice. The main pane displays a large amount of JavaScript code for the YUI library. On the right side, the 'Rules' menu is open, and the 'JavaScript & CSS Debugging Mode (&nominify)' option is highlighted with a red border. A callout box at the bottom right of the slide contains the text 'FiddlerScript 也超簡單！'.

```

/*
Copyright (c) 2010, Yahoo! Inc. All rights reserved.
Code licensed under the BSD License:
http://developer.yahoo.com/yui/license.html
version: 3.2.0
build: 2676
*/
/**
 * The YUI module contains the components required
 * This includes the script loading mechanism,
 * @module yui
 * @submodule yui-base
 */

if (typeof YUI != 'undefined') {
    var _YUI = YUI;
}

/**
 * The YUI global namespace object. If YUI is already defined
 * existing YUI object will not be overwritten so that different
 * namespaces are preserved. It is the constructor for
 * the end user interacts with. As indicated below, each
 * function is wrapped in its own closure so that the
 * ...
if (IS_NO_MINIFY) {
    if (oSession.PathAndQuery.indexOf("fuse") !== -1 && oSession.PathAndQuery.indexOf("&nominify") === -1) {
        oSession.PathAndQuery += "&nominify";
    }
}

```

FiddlerScript 也超簡單！

練習：塞入 Firebug Lite

- 打開 CustomRule.js

(點選 Rules > Custom Rules...)

- 增加選單：

在 class Handler 的開頭加入以下程式碼、存檔，即可增加選項：

```
public static RulesOption("Enable Firebug Lite")
var IS_INCLUDE_FIREBUG: boolean = false;
```

- 在 HTML 中塞入 JavaScript：

找到 OnBeforeResponse 事件處理函式，在結束前加入連結中程式碼：<http://f2e阶级.com/lab/debug/fiddler-firebug.txt>

- FiddlerScript 官方文件：

<http://www.fiddler2.com/Fiddler/Dev/ScriptSamples.asp>

開發你的工具！

每個人的需求都不太一樣，這邊只是給你一些實作例子
你可以想想什麼東西可以為你自己與團隊帶來產值
然後利用 FiddlerScript 來實作！

類似的工具：

Charles Debugging Proxy, mitmproxy

偵錯 - Review

- Log - 各種訊息顯示機制與 YUI Console
- Error Handling - try-catch 與
window.onerror 如何使用
- Breakpoint - 開發工具如何設定
breakpoint. (debugger;)
- Fiddler - 線上偵錯與自行開發工具

偵錯 - Review

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Q & A