

# 動態網頁技術與Ajax

# 18-1 認識動態網頁技術

## 18-1-1 瀏覽器端Scripts

- JavaScript
- VBScript

1. 啟動瀏覽器要求開啟包含瀏覽器端Scripts的HTML網頁



2. 瀏覽器根據網址連上伺服器，  
要求所要開啟的HTML網頁

Request (要求)

Response (回應)

4. 將HTML網頁傳送給瀏覽器，  
瀏覽器再將之解譯並顯示出來

3. 伺服器從磁碟上讀取包含瀏覽器端Scripts的HTML網頁



```
<HEAD>
```

```
  <TITLE>我的第一個JavaScript程式</TITLE>
```

```
  <SCRIPT LANGUAGE="javascript">
```

```
    <!--
```

```
      alert("Hello World!");
```

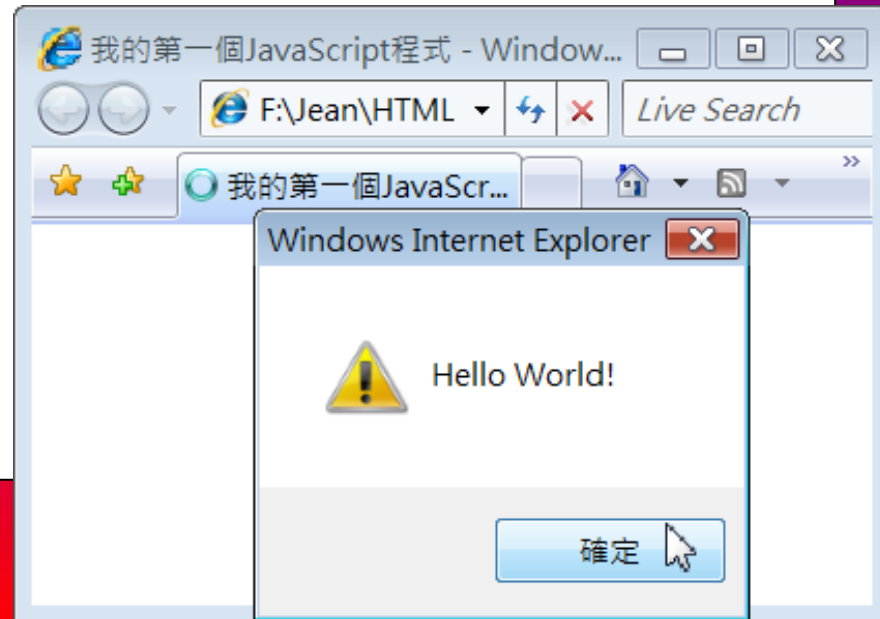
```
    //-->
```

```
  </SCRIPT>
```

```
</HEAD>
```

```
<BODY>
```

```
</BODY>
```



# 18-1-2 伺服器端Scripts

- CGI (Common Gateway Interface)
- JSP (Java Server Pages)
- PHP (PHP:Hypertext Preprocessor )
- ASP/ASP.NET

1. 啟動瀏覽器要求開啟包含  
ASP/ASP.NET程式的網頁



2. 瀏覽器根據網址連上伺服器，要求  
所要開啟的ASP/ASP.NET網頁

Request (要求)

Response (回應)

3. 伺服器會執行ASP/ASP.NET  
網頁並將結果轉換成HTML網頁



4. 將HTML網頁傳送給瀏覽器，  
瀏覽器再將之解譯並顯示出來

```
\Ch18\hello.php
```

```
<HTML>
```

```
<HEAD>
```

```
<TITLE>我的第一個PHP程式</TITLE>
```

```
</HEAD>
```

```
<BODY>
```

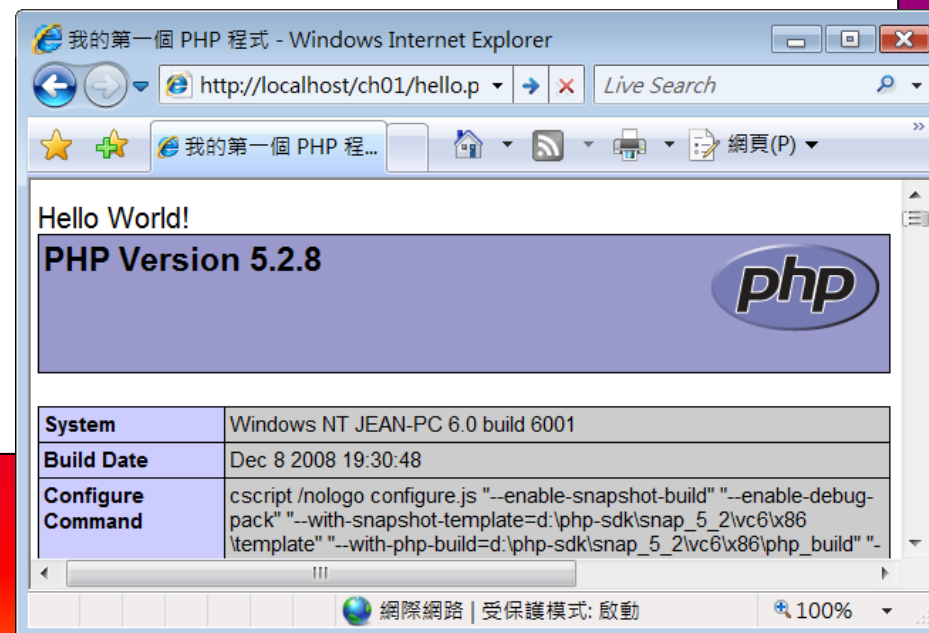
```
<?php
```

```
echo("Hello World!");
```

```
?>
```

```
</BODY>
```

```
</HTML>
```



\Ch18\hello.aspx

01:<%@ Page Language="VB" %>

02:<script runat="server">

03: Sub Page\_Load(ByVal sender As Object, ByVal e As  
System.EventArgs)

04: label1.Text = "Hello World!"

05: End Sub

06:</script>

07:<html>

08: <head>

09: <title>我的第一個ASP.NET程式</title>

10: </head>

11: <body>

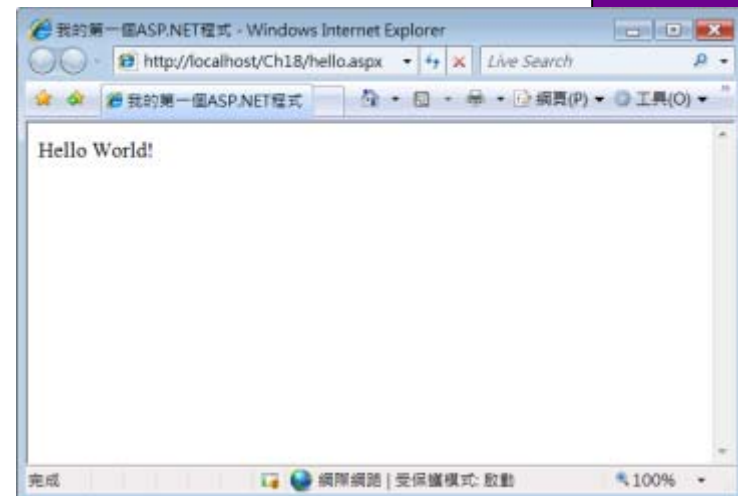
12: <form runat="server" id="form1" >

13: <asp:Label runat="server" id="label1" />

14: </form>

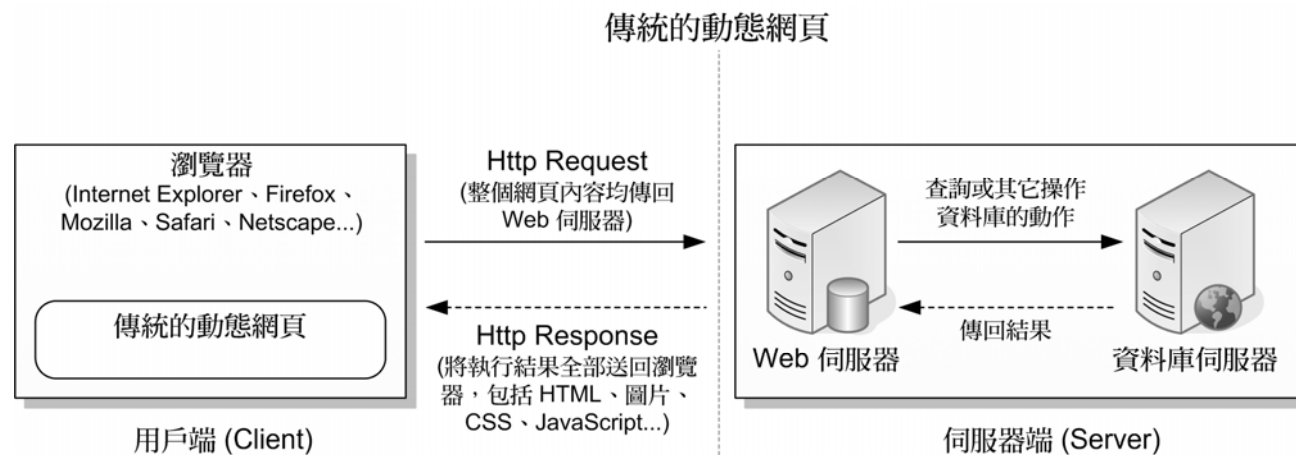
15: </body>

16:</html>



## 18-2 認識Ajax

- Ajax的含意是Asynchronous JavaScript + XML，代表Ajax具有非同步、使用JavaScript及XML等技術的特性。



## Ajax 概念的動態網頁

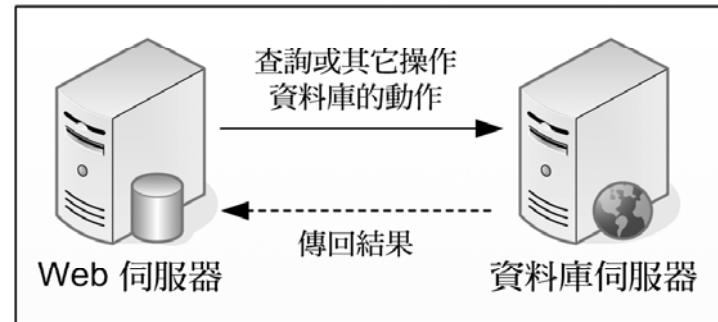
瀏覽器  
(Internet Explorer、Firefox、  
Mozilla、Safari、Netscape...)

Ajax 概念的動態網頁  
(XMLHttp、XML、JavsScript...)

用戶端 (Client)

非同步 Http Request  
(只將需要進行處理的資料  
傳回 Web 伺服器)

Http Response  
(將執行結果送回瀏覽器，  
傳回的資料明顯變少)



伺服器端 (Server)

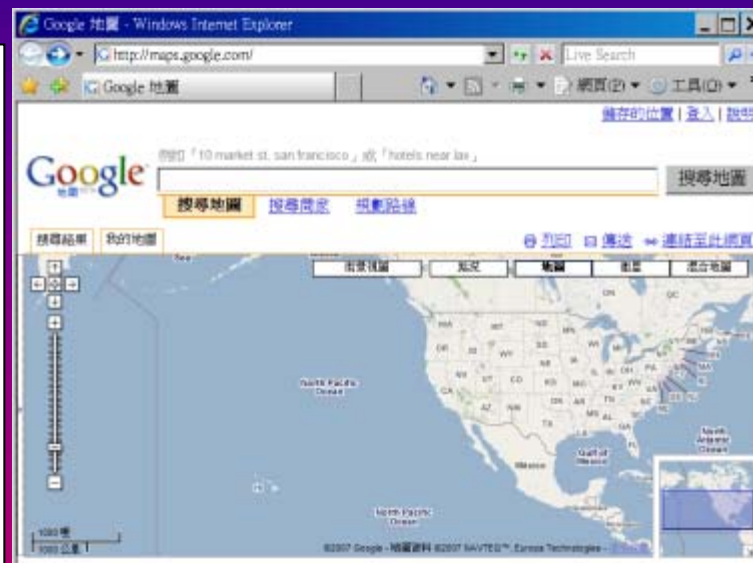


# 18-2-1 Ajax的應用

- 拖曳操作
- 網路遊戲



- 改善使用者介面及使用者經驗
- 自動完成拼字清單

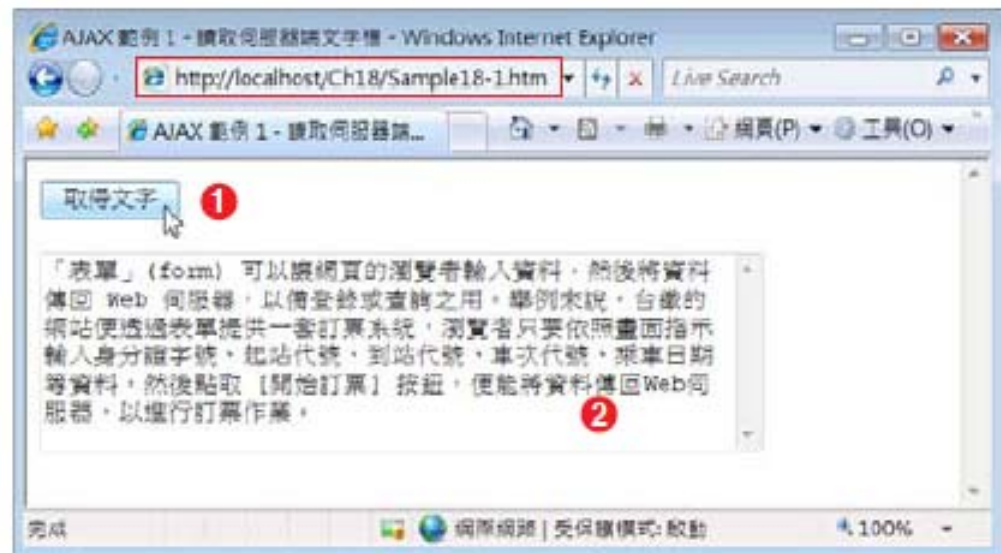
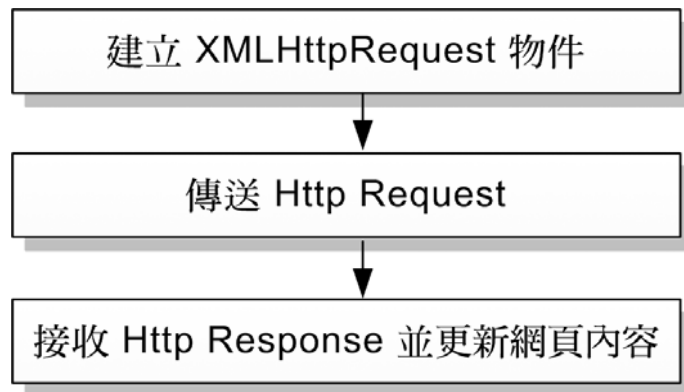


## 18-2-2 Ajax的相關技術

- JavaScript
- XML
- DHTML (Dynamic HTML)
- DOM (Document Object Model，文件物件模式)
- XMLHttpRequest

## 18-2-3 Ajax範例

- Ajax網頁運作過程



① 點取此鈕 ② 將檔案內容顯示在五行文字方塊

\Ch18\Sample18-1.htm

01:<html xmlns="http://www.w3.org/1999/xhtml">

02: <head>

03: <title>AJAX範例1 - 讀取伺服器端文字檔</title>

04: <script src="myJS.js" type="text/javascript"></script>

05: <script type="text/javascript">

06: var XmlHttp = null;

07:

08: function startRequest()

09: {

10: XmlHttp = createXMLHttpRequest();

11: XmlHttp.open("GET", "info.txt", true);

12: XmlHttp.onreadystatechange = handleStateChange;

13: XmlHttp.send(null);

14: }

15:

16: function handleStateChange()

17: {

18: if (XmlHttp.readyState == 4)

```
19:    {
20:      if (XmlHttp.status == 200)
21:        document.getElementById("Info").value = XmlHttp.responseText;
22:      else
23:        window.alert("檔案開啟錯誤，錯誤原因【 "+ XmlHttp.statusText +
24:          "】");
25:    }
26:  </script>
27: </head>
28: <body>
29:   <form id="form1">
30:     <input id="btnGetInfo" type="button" value="取得文字"
31:       onclick="startRequest();" />
32:     <br /><br /><textarea id="Info" rows="7" cols="50"></textarea>
33:   </form>
34: </body>
35: </html>
```

```
\Ch18\myJS.js
```

```
function createXMLHttpRequest()
```

```
{
```

```
  if (window.XMLHttpRequest)
```

```
    return new XMLHttpRequest();
```

```
  else if (window.ActiveXObject)
```

```
  {
```

```
    var XMLVersions = ["MSXML2.XMLHttp.5.0",
```

```
      "MSXML2.XMLHttp.4.0",
```

```
      "MSXML2.XMLHttp.3.0", "MSXML2.XMLHttp", "Microsoft.XMLHttp"];
```

```
    for (var i = 0; i < XMLVersions.length; i++)
```

```
    {
```

```
      try
```

```
{
    return new ActiveXObject(XMLVersions[i]);
}
catch (error)
{
    //不用做任何處理，只是為了預防程式出錯終止
}
}
}
throw new Error("您的瀏覽器不支援 XMLHttpRequest 物件");
}
```