# jQueryMobile & PhoneGap

跨平台手機開發實務

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# 認識jQueryMobile+PhoneGap

- jQueryMobile (第1章~第7章)
  - HTML5+CSS+JavaScritpt
  - 提供適合手持裝置的UI Layout
- PhoneGap (第8章~第21章)
  - 提供統一的JavaScritpt來操控不同Mobile平台中的硬體設備
  - 可發佈在多個平台
  - 只要會JavaScript即可
  - 完全免費

### 開發環境

- Android(4.0~6.0)
  - Java(JDK 7 or JDK 8)
  - Eclipse + Android SDK
  - Android手機
  - Any OS
- iOS(8.x~9.1)
  - ObjectiveC
  - Xcode 7.1
  - 模擬器
  - Mac OS 10.9.x~10.11.1

#### 建立手機版網頁

- 使用jQueryMobile快速建立手機版網頁
- PhoneGap則可建立Eclispse Android專案或Xcode iOS專案,在專案中用WebView帶出本地端的網頁,並提供硬體層的程式庫,讓網頁中的JavaScript可以呼叫GPS...





# 認識jQueryMobile+PhoneGap

- 螢幕畫面尺寸、長寬比、解析度大不同
  - jQueryMobile藉由HTML、CSS自動調整畫面比例來配合各種尺寸的 Device
- 手機硬體無法由HTML操控
  - Phone Gap提供JavaScript程式庫

# 為何jQueryMobile+PhoneGap

- 門檻低
- 成本低
- 快速開發
- 跨平台

# 開始jQuery Mobile

- jQuery: logic, interaction
- jQuery Mobile: layout, 創造符合手機的介面
- 下載課程資源檔:
  - http://goo.gl/z3imAb
  - 解壓縮後,將jQueryMobile目錄Copy到WebServer上
  - Mac環境中可複製到/Library/WebServer/Docudiants中
- 啟動Web Server
  - 若要使用Mac環境中使用內建的Apache Server,開啟「終端機」輸入指令 sudo apachectl restart
- 使用開發工具撰寫jQueryMobile的網頁: DreamWeaver, Eclipse

# 建立HelloWorld.html(一)

- 1. 連結jQueryMobile官網,點選Download
- 2. 在CH00\_Fundation新增HelloWorld.html
  - 在HelloWorld.html中加上引用CSS與JavaScript

# 建立HelloWorld.html(二)

加上page

```
<body>
    <div data-role="page">
        <div data-role="header">
           <h1>HEADER</h1>
        </div>
        <div data-role="content">
          <h1>CONTENT</h1>
          <a href="#" data-role="button">Test BUTTON</a>
        </div>
        <div data-role="footer">
           <h1>FOOTER</h1>
        </div>
    </div>
</body>
```

# 建立HelloWorld.html(三)

注意要加ViewPort

# jQuery Mobile基本頁面與對話框

Chapter 01

# 加上Style

Sample1-2.html

```
<!DOCTYPE html>
<html>
  <head>
   <style>
      div [data-role="content"] > h1 {
        text-shadow: 1px 3px 2px #999;
      div [data-role="content"] > p {
        font:1em/1.5 Georgia, "Time New Roman", Times, serif;
   </style>
</head>
```

#### 多頁結構

Sample1-3.html:注意這裡有兩個page

```
<div data-role="page" id="home">
</div>
<div data-role="page" id="detail">
    <div data-role="header">
          <h1>Detail</h1>
   </div>
   <div data-role="content">
       <h1>Easy to use: Try it now!</h1>
       >jQuery Mobile's emphasis on semantic markup and progressive
           enhancement makes it super easy to use. ...
       <a href="#">Demos & documentation</a>
       <a href="#">Resources: Books, plugins, tutorials</a><br>
       <a href="#home" data-role="button">Goback Home</a>
    </div>
</div>
```

### Title on Ajax Navigation

Sample1-4.html(加上data-title)

```
<div data-role="page" id="home" data-title="Home Page">
...
</div>
<div data-role="page" id="detail" data-title="Detail Page">
...
</div>
```

# 帶出下個Page

- Sample1- 5.html中以3種方式來帶出Sample1-5-1.html
  - 預設方式:AJAX
  - 對話窗(可設定對話窗出現的方式)
  - 非 Ajax方式

<a href=...>若為外部網站的網頁,應為:

<a href="http://maps.google.com" data-role="button" data-rel="external">Go to
Google Map</a>

#### 回到上一頁

Sample1- 5-1.html中以2種方式來回到Sample1-5.html

```
<a href = "Sample1-5.html" data-role="button">Go Back</a>
<a href = "#" data-role="button" data-rel="back">Go Back</a>
```

- 若data-transition用slide,要注意back的方向(
  - Sample1-6.html

Sample1-6-1.html

```
<a href="#" data-role="button" data-icon="back" data-rel="back"
data-transition="slide" data-direction="reverse">Go back</a>
```

## 發mail、打電話、傳簡訊

Sample1-7.html加入下列button

```
<a href="mailto:admin@uuu.com.tw" data-role='button'>
    Mail to Admin</a>
<a href="mailto:admin@uuu.com.tw?
    cc=patty_tai@uuu.com.tw&subject=Test%20Mail&body=This%20is
    %20a%20test%20from%20HTML5" data-role='button'>Mail to Patty
    with Content</a>
<a href="tel:0225149191" data-role='button'>Make Phone Call to
    UCOM</a>
<a href="sms:0987654321?body=Test%20Data" data-role='button'>
    Send MSG to Someone</a>
```

## Page Transition

- 10種Transition
  - fade(deault)
  - flip
  - pop
  - turn
  - flow

- slide
- slideup
- slidedown
- slidefade
- none
- Sample1- 8.html加入使用不同Tansition方式的button來帶出 Sample1- 8-1.html

## Page Transition

● Sample1- 8.html加入下列button

```
<a href="Sample1-8-1.html" data-role="button" >
       Go to Sample1-8-1.html with default</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="fade">
       Go to Sample1-8-1.html with fade</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="flip">
       Go to Sample1-8-1.html with flip</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="pop">
       Go to Sample1-8-1.html with pop</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="slide">
       Go to Sample1-8-1.html with slide</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="slidedown">
       Go to Sample1-8-1.html with slidedown</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="slidefade">
       Go to Sample1-8-1.html with slidefade</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="slideup">
       Go to Sample1-8-1.html with slideup</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="turn">
       Go to Sample1-8-1.html with turn</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="flow">
       Go to Sample1-8-1.html with flow</a>
<a href="Sample1-8-1.html" data-role="button" data-transition="none">
       Go to Sample1-8-1.html without transition</a>
```

## 緩存頁面

• 在Smple1-9-1.html加上緩存頁面的設定

```
<div data-role="page" data-dom-cache="true">
```

• 小心效能問題

# jQuery Mobile的ToolBar

Chapter 02

## Toolbar

- jQuery Mobile有兩種標準Toolbar
  - Header
  - Footer

#### 可以調整Toolbar的位置

#### Sample2-1.html

### full-screen效果

#### Sample2-2.html

```
<div data-role="header" data-position="fixed"</pre>
  data-fullscreen="true">
    <h1>iPhone</h1>
</div>
<div data-role="content">
  <h1>iTunes in the Cloud</h1>
  <h2>Your music, movies, and TV shows. Wherever you want
      them.</h2>
  ...
  <img src="images/itunes.png">
  <a href="#">Learn more about the iTunes app</a>
</div>
<div data-role="footer" data-position="fixed"</pre>
  data-fullscreen="true">
    <h1>Fixed mode footer</h1>
</div>
```

# Header結構- 導覽按鍵 (1)

Sample2-3.html的header加入下列button

```
<div data-role="page">
    <div data-role="header">
        <a href="#help">HELP</a>
        <h1>Setting</h1>
        <a href="#" data-theme="b">DONE</a>
    </div>
</div>
<div id="help" data-role="page">
    <div data-role="header">
        <a data-rel="back">Back</a>
        <h1>HELP</h1>
    </div>
</div>
```

# Header結構- 導覽按鍵 (2)

Sample2-4.html的header加入下列button

```
<div data-role="page">
   <div data-role="header" data-theme='a'>
       <h1>Setting</h1>
       <a href="#help" data-icon="plus" data-transition="slide"</pre>
         class="ui-btn-left" >HELP</a>
       <a id="doneButton" href="#" data-icon="check"</pre>
         class="ui-btn-right">DONE</a>
   </div>
                                                            1.3.2
</div>
<div id="help" data-role="page" data-add-back-btn="true">
     <div data-role="header" data-theme="e" data-add-back-btn="true">
         -<a data-rel-"back">Back</a>-
          <h1>HELP</h1>
          </div>
                                                          1.4.x
    </div>
</div>
```

#### Footer結構-工具列按鍵

● Sample2-5.html的footer加入下列button

加上controlgroup建立按鈕集

#### Footer結構-加上navbar

Sample2-6.html的footer加入下列navbar

#### Footer結構-加上navbar

● Sample2-7.html的footer加入下列navbar

# jQueryMobile按鈕

Chapter03

#### 各種表單按鈕

#### Sample3-1.html

```
<div data-role="content">
      <a href="#" data-role="button">Default Button</a>
      <a href="#" data-role="button" data-mini="true">Default
Button</a>
      <a href="#" class="ui-btn ui-mini">Mini Button</a>
      <a href="#" class="ui-btn ui-btn-inline">Inline 1</a>
      <a href="#" data-role="button" data-inline="true">
           Inline 2 < /a >
      <a href="#" data-role="button" data-inline="true">
           Inline 3</a>
      <button>Button
      <button data-role="none">None
      <input type="button" value='Input Button'>
      <input type="submit" value='Submit'>
      <input type="reset" value='Reset'>
</div>
```

#### 各種按鈕圖示

- 50種圖示
- Sample3-2

```
<div data-role="content">
     <a data-role="button" data-icon="action">action</a>
     <a data-role="button" data-icon="arrow-d-l">arrow-d-l</a>
    <a data-role="button" data-icon="arrow-d-r">arrow-d-r</a>
     <a data-role="button" data-icon="arrow-d">arrow-d</a>
     <a data-role="button" data-icon="arrow-l">arrow-l</a>
     <a data-role="button" data-icon="arrow-r">arrow-r</a>
     <a data-role="button" data-icon="arrow-u-1">arrow-u-1</a>
     <a data-role="button" data-icon="arrow-u-r">arrow-u-r</a>
    <a data-role="button" data-icon="arrow-u">arrow-u</a>
    <a data-role="button" data-icon="audio">audio</a>
     <a data-role="button" data-icon="calendar">calendar</a>
     <a data-role="button" data-icon="camera">camera</a>
     <a data-role="button" data-icon="carat-d">carat-d</a>
     <a data-role="button" data-icon="carat-l">carat-l</a>
    <a data-role="button" data-icon="carat-r">carat-r</a>
     <a data-role="button" data-icon="carat-u">carat-u</a>
     <a data-role="button" data-icon="check">check</a>
     <a data-role="button" data-icon="clock">clock</a>
    <a data-role="button" data-icon="cloud">cloud</a>
     <a data-role="button" data-icon="grid">grid</a>
     <a data-role="button" data-icon="mail">mail</a>
     <a data-role="button" data-icon="eye">eye</a>
     <a data-role="button" data-icon="gear">gear</a>
     <a data-role="button" data-icon="heart">heart</a>
     <a data-role="button" data-icon="home">home</a>
```

# 各種按鈕圖示(續)

• 續Sample3-2

```
<a data-role="button" data-icon="info">info</a>
     <a data-role="button" data-icon="bullets">bullets</a>
     <a data-role="button" data-icon="bars">bars</a>
     <a data-role="button" data-icon="navigation">navigation</a>
     <a data-role="button" data-icon="lock">lock</a>
     <a data-role="button" data-icon="search">search</a>
     <a data-role="button" data-icon="location">location</a>
     <a data-role="button" data-icon="minus">minus</a>
     <a data-role="button" data-icon="forbidden">forbidden</a>
     <a data-role="button" data-icon="edit">edit</a>
     <a data-role="button" data-icon="user">user</a>
     <a data-role="button" data-icon="phone">phone</a>
     <a data-role="button" data-icon="plus">plus</a>
     <a data-role="button" data-icon="power">power</a>
     <a data-role="button" data-icon="recycle">recycle</a>
     <a data-role="button" data-icon="forward">forward</a>
     <a data-role="button" data-icon="refresh">refresh</a>
     <a data-role="button" data-icon="shop">shop</a>
     <a data-role="button" data-icon="comment">comment</a>
     <a data-role="button" data-icon="star">star</a>
     <a data-role="button" data-icon="tag">tag</a>
     <a data-role="button" data-icon="back">back</a>
     <a data-role="button" data-icon="video">video</a>
     <a data-role="button" data-icon="alert">alert</a>
     <a data-role="button" data-icon="delete">delete</a>
</div>
```

### 文字、圖案位置

#### Sample3-3.html

```
<a href="#" data-role="button" data-icon="alert">Button</a>
<a href="#" data-role="button" data-icon="alert"</pre>
        data-iconpos='left' >Button</a>
<a href="#" data-role="button" data-icon="alert"</pre>
        data-iconpos='right'>Button</a>
<a href="#" data-role="button" data-icon="alert"</pre>
        data-iconpos='top'>Button</a>
<a href="#" data-role="button" data-icon="alert"</pre>
        data-iconpos='bottom'>Button</a>
<a href="#" data-role="button" data-icon="alert"</pre>
       data-iconpos='notext'>Button</a>
<a href="#" data-role="button" data-icon="alert"
       data-iconpos='notext' data-inline="true">Button</a>
<a href="#" data-role="button" data-icon="alert"</pre>
        data-iconpos='left' data-inline="true">Button</a>
```

### 自訂圖示

- 白色36x36圖示
- Sample3-4.html

```
<style>
  .ui-icon-fb:after{ background: url(images/fb.png);
     background-size: 20px 20px;}
  .ui-icon-tw:after{ background: url(images/tw.png);
     background-size: contain; }
  .ui-icon-rss:after{ background: url(images/rss.png); }
</style>
   <div data-role="content">
      <a href="#" data-role="button" data-icon="fb">Facebook</a>
      <a href="#" data-role="button" data-icon="tw">Twitter</a>
      <a href="#" data-role="button" data-icon="rss">RSS</a>
   </div>
```

### 按鍵集

• 直向排列: Sample3-5.html

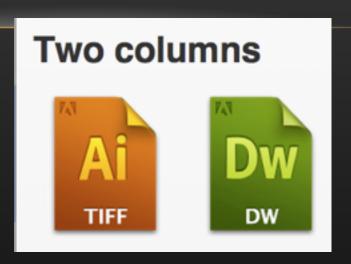
● 水平排列:Sample3-6.html

# jQuery Mobile格式化排版

第4章

## Grid樣式

- 網格效果
- 4種佈局:
  - 二列(使用ui-grid-a)
  - 三列(使用ui-grid-b)
  - 四列(使用ui-grid-c)
  - 五列(使用ui-grid-d)



### 基本Grid

#### Sample4-1.html

## Collapse(收合折疊)

#### Sample4-2.html

```
<div data-role="collapsible-set">
  <div data-role="collapsible" data-collapsed="false"</pre>
    data-theme="a" data-content-theme="b" >
   <h1>Photoshop</h1>
   <img src="images/ps.png">
      The Adobe® Photoshop® family of products is the ultimate playground for
      bringing out the best in your digital images, transforming them into
      anything you can imagine, and showcasing them in extraordinary ways.
   </div>
  <div data-role="collapsible" data-theme="b"</pre>
    data-content-theme="a">
   <h1>Acrobat</h1>
   <imq src="images/pdf.png">
      Adobe® Acrobat® X software lets you communicate easier, faster, and
      better with PDF. Increase your productivity by editing and reusing
      content, streamlining reviews, and quickly creating fillable PDF forms.
   </div>
</div>
```

# jQuery Mobile表單元件

第5章

### 基本輸入項

```
<div data-role="fieldcontain">
  <label for="name">姓名:</label>
  <input id="name" name="name">
</div>
<div data-role="fieldcontain">
  <label for="password">密碼:</label>
  <input type="password" id="password" name="password">
</div>
<div data-role="fieldcontain" class="ui-disabled">
  <label for="search">查詢產品:</label>
  <input type="search" id="search" name="search">
</div>
<div data-role="fieldcontain">
  <label for="email">Email: </label>
  <input type="email" id="email" name="email">
</div>
```

## 基本輸入項

# Range輸入項

#### 選擇輸入項:Checkbox

#### 選擇輸入項:Radio

```
<div data-role="fieldcontain">
  <fieldset data-role="controlgroup" data-type="horizontal">
      <legend>選擇你的衣服尺寸:</legend>
      <input type="radio" id="size1" name="size">
      <label for="size1">XS</label>
      <input type="radio" id="size2" name="size">
      <label for="size2">S</label>
      <input type="radio" id="size3" name="size">
      <label for="size3">M</label>
      <input type="radio" id="size4" name="size">
      <label for="size4">L</label>
      <input type="radio" id="size5" name="size">
      <label for="size5">XL</label>
   </fieldset>
</div>
```

#### 選擇輸入項:Select

```
<div data-role="fieldcontain">
    <label for="gender">性別:</label>
    <select data-role="slider" id="gender" name="gender">
        <option value="0">女</option>
        <option value="1">男</option>
    </select>
 </div>
 <div data-role="fieldcontain">
  <label for="shipping">運送方式:</label>
  <select id="shipping" name="shipping"</pre>
    data-native-menu="false">
     <option value="standard">標準(7日)</option>
     <option value="rush">急件(3日)</option>
    <option value="express">快捷(1日)</option>
  </select>
</div>
```

# jQuery Mobile列表

第6章

#### 基本列表

Sample6-1.html

```
<div data-role="content">
  <a href="#">item 1</a>
   <a href="#">item 2</a>
   <a href="#">item 3</a>
   <a href="#">item 4</a>
   <a href="#">item 5</a>
   <a href="#">item 6</a>
   <a href="#">item 7</a>
   <a href="#">item 8</a>
   <a href="#">item 9</a>
   <a href="#">item 10</a>
  </div>
```

#### 數字排序清單

Sample6-2.html

## 唯讀列表

Sample6-3.html

```
<div data-role="content">
 item 1
  item 2
  item 3
  >item 4
  item 5
  item 6
  item 7
  item 8
  item 9
  item 10
 </div>
```

### 搜尋過濾

#### Sample6-4.html

```
<div data-role="content">
 data-filter="true" data-filter-placeholder="Keyword">
   <a href="#">jQuery</a>
   <a href="#">HTML5</a>
   <a href="#">JAVA</a>
li>
   <a href="#"><</pre>
        JavaScript</a>
   <a href="#">PHP</a>
   <a href="#">SOL</a>
   <a href="#">ColdFusion</a>
   <a href="#">Ruby</a>
   <a href="#"><</pre>
        Objective-C</a>
   <a href="#">CSS</a>
 </div>
```

## 搜尋過濾(續)

#### Sample6-5.html

```
<div data-role="content">
 data-filter="true" data-filter-placeholder="Keyword">
   Client
      <a href="#">iOuerv</a>
      <a href="#">HTML5</a>
      <a href="#">JAVA</a>
      <a href="#">JavaScript</a>
      <a href="#">CSS</a>
   Server
      <a href="#">JAVA</a>
      <a href="#">PHP</a>
      <a href="#">SOL</a>
      <a href="#">ColdFusion</a>
      <a href="#">Ruby</a>
      <a href="#">Objective-C</a>
  </div>
```

#### **Nested lists**

- 在jQueryMobile 1.4.x 停用
- Sample6-6.html

## Text Formatting & counts

Sample6-7.html

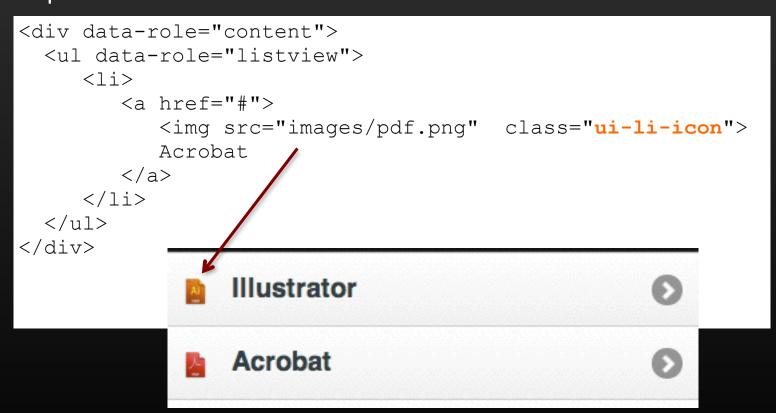
```
<div data-role="content">
  <a href="#">Inbox</a>
         <span class="ui-li-count">5</span></a>
     <a href="#">Outbox</a>
         <span class="ui-li-count">99</span></a>
     <a href="#">Drafts</a>
         <span class="ui-li-count">0</span></a>
     <a href="#">Sent.</a>
         <span class="ui-li-count">123</span></a>
     <a href="#">Trash</a>
         <span class="ui-li-count">35</span></a>
   </div>
```

## 清單中的圖示

```
Illustrator 4
Sample6-8.html
                                        Adobe design tool
  <div data-role="content">
       data-role="l/stview">
           <
               <a href="#">
                   <img src="images/ai.png">_
                   <h1>Illustrator</h1>_
                   Adobe design tool
               </a>
           </div>
```

## 清單中的縮圖

Sample6-9.html



## Split button lists

Sample6-10.html



# jQuery API與事件

第七章

# 撰寫jQueryMobile的事件

- 可以override jQueryMobile的事件
  - 注意要撰寫jQueryMobile的mobileinit事件時, <script>的位置:

```
<script src="jquery.js"></script>
<script scr="自己的Javascript.js"></script>
<script src="jquery.mobile.js"></script>
```

# jQueryMobile自動初始化(續)

- mobileinit事件
- Sample7-1.html

## loadingMessage

#### Sample7-2.html

```
<script>
     $ (document) . on ("mobileinit", mobileinitHandler);
   function mobileinitHandler () {
     $.mobile.pageLoadErrorMessage="找不到網頁!";
     $.mobile.pageLoadErrorMessageTheme = 'a';
  function showHandler() {
     //$.mobile.showPageLoadingMsg(); //1.4已不支援此method
       $.mobile.loading("show",
         {textVisible: true, text: "載入中..., 請稍候...",
            html: "<b>載入中..., 請稍候...</b>"}
       );
  function hideHandler() {
     //$.mobile.hidePageLoadingMsg(); //1.4已不支援此method
       $.mobile.loading("hide");
</script>
```

## 註冊事件

#### Sample7-3.html

```
<script>
    $ (document) .on ("mobileinit", mobileinitHandler);
    $ (document) .on ("click", "#backButton", backButtonHandler);
    function mobileinitHandler () {
        //alert("mobile init");
    function backButtonHandler () {
      $.mobile.changePage("#home");
</script>
```

## ignoreContentEnabled

Sample7-4.html

```
<script>
  $(document).on("mobileinit", mobileinitHandler);
  function mobileinitHandler () {
    $.mobile.ignoreContentEnabled=true; //需搭配data-enhance來使用...
</script>
<!-- 省略程式碼-->
 <div data-role="content" data-enhance="false" style="margin: 0px 0</pre>
0 15px">
        <div data-role="fieldcontain">
            <label for="name">Name:</label>
<!-- 省略程式碼-->
```

#### ns

#### Sample7-6.html

```
<script>
  $(document).on("mobileinit", mobileinitHandler);
  function mobileinitHandler () {
    $.mobile.ns = "ucom-";
</script>
<!-- 省略程式碼-->
<a href="NoPage.html" data-ucom-role="button"</pre>
    data-ucom-icon="arrow-r" data-ucom-iconpos="right">
       External Next</a>
<!-- 省略程式碼-->
```

#### autoInitializePage

#### Sample7-7.html

```
<script>
  $(document).on("mobileinit", mobileinitHandler);
 function mobileinitHandler () {
    $.mobile.autoInitializePage = false;
  $ (document) .ready (readyHandler);
 function readyHandler() {
     $("body").html(
          "<div data-role='page'>"
            "<div data-role='header'><h1>Test Title</h1></div>"
        + "<div data-role='content'>"
               + "Page content goes here.</div>"
            "<div data-role='footer'><h4>Page Footer</h4></div>"
        + "</div>");
       $.mobile.initializePage();
</script>
```

# Swipe事件

- swipeleft
- swiperight
- 類比滑鼠事件
  - vmouseover
  - vmousedown
  - vmousemove
  - vmouseup
  - vclick
  - vmousecancel

#### swipe

#### Sample7-8.html

```
<script>
$ (document) . on ("mobileinit", mobileinitHandler);
function mobileinitHandler () {
    $.mobile.defaultPageTransition = "slide";
    $ (document).on("swipeleft" , ".swipe", swipeleftHandler);
    $ (document) .on ("swiperight", ".swipe", swiperightHandler);
function swipeleftHandler() {
    //alert("SWIPE LEFT");
    $.mobile.changePage("#right");
function swiperightHandler() {
    //alert("SWIPE RIGHT");
    $.mobile.changePage("#left", {reverse:true});
</script>
```

### orientationChangeEnabled

#### Sample7-9.html

```
<script>
$ (document).on("mobileinit", mobileinitHandler);
function mobileinitHandler () {
    $ (window) .on ("orientationchange", changeHandler);
function changeHandler() {
    //alert(window.orientation);
    if (window.orientation==0) {
        $("#orientation").text("Portrait");
    }else{
        $("#orientation").text("Landscape");
</script>
```

## \$.mobile.loadPage

Sample7-10.html

```
<script>
$(document).on("mobileinit", mobileinitHandler);

function mobileinitHandler(){
    $.getScript("Detail.js");
}
</script>
```

Detail.js

```
<script>
  $(document).on("pageshow", "#detail", pageshowHandler);

function pageshowHandler(){
    alert("Detail Page");
  }
</script>
```

## jqmData(), jqmRemoveData()

Sample7-11.html

```
<script>
  $(document).on("mobileinit", mobileinitHandler);
  function mobileinitHandler (){
    $.mobile.ns = "jmp-";

    $(document).on("pageshow",":jqmData(role='page')",pageHandler);
}

function pageHandler(){
    var whichPageId = $.mobile.activePage.attr( "id" );
    alert("This is " + whichPageId + " page!");
}
</script>
```

#### \$.mobile.silentScroll

#### Sample7-12.html

```
<script>
  $(document).on("mobileinit", mobileinitHandler);
 function mobileinitHandler () {
      $ (document) .on ("pageinit", "#home", pageInitHandler);
 function pageInitHandler() {
    $("#scrollButton").bind("click", function(){
       $.mobile.silentScroll(150);
    });
</script>
```

#### mobile.path.makeUrlAbsolute

#### Sample7-13.html

```
<script>
  $ (document) . on ("mobileinit", mobileinitHandler);
 function mobileinitHandler () {
   var url1 = "../result.png";
   var url2 = "http://somewhere/img/a/pic.png";
   var resultURL = $.mobile.path.makeUrlAbsolute(url1, url2);
    alert(resultURL);
   var p1 = "../result.png";
   var p2 = "/somewhere/img/a/pic.png";
    var resultPath = $.mobile.path.makePathAbsolute(p1, p2);
    alert(resultPath);
</script>
```

#### mobile.path.isRelativeUrl

Sample7-14.html

```
<script>
  $(document).on("mobileinit", mobileinitHandler);
  function mobileinitHandler () {
    $ (document) .on ("pageinit", "#home", homeInitHandler);
  function homeInitHandler() {
      $("#checkRelativeButton").bind("click",
checkRelativeHandler);
    function checkRelativeHandler() {
//
         var url = "../result.png";
         var url = http://somewhere/img/a/pic.png;
//
    var url = "#anchor";
    var resultURL = $.mobile.path.isRelativeUrl(url);
    alert(resultURL);
</script>
```

# 下載安裝PhoneGap

第八章

#### 安裝PhoneGap

- 下載PhoneGap 2.9.1
  - http://phonegap.com/
  - Mac OS請解壓縮至~/Desktop/app/ 路徑中(解壓縮前請先清空~/ Desktop/app/ 的內容)
  - Windows請解壓縮至C:\app\
- 安裝新版PhoneGap
  - http://docs.phonegap.com/en/edge/guide\_cli\_index.md.html#The %20Command-Line%20Interface
  - 請先安裝Node.js

#### 課程練習資源

- 下載課程練習資源Template
  - <a href="http://goo.gl/IPbrNa">http://goo.gl/IPbrNa</a>
  - Mac OS請解壓縮至 ~/Desktop/app/ 路徑中
  - Windows請解壓縮至C:\app\

#### 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap 2.9.1/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/app/HelloWorld\_iOS com.test.HelloWorld HelloWorld

- 檢視~/Desktop/app/HelloWorld\_iOS中會有xcode專案檔
- 用Xcode開啟專案並執行之

#### 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「Eclipse」確定已安裝Android SDK,並找出其安裝路徑
- 下載ANT zip檔案,解壓縮
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 建立並開啟 .bash profile 檔案

```
export ANT_HOME=[ANT安裝路徑]
export PATH=$PATH:/Applications/eclipse/android-sdk-macosx/platform-tools:
/Applications/eclipse/android-sdk-macosx/tools:$ANT_HOME/bin
```

• 重新開啟終端機,執行建立專案的指令:

./create ~/Desktop/app/HelloWorld\_android com.test.HelloWorld HelloWorld

● 從「Eclipse」<mark>import</mark> 剛才建立之Android專案並測試執行

#### 用PhoneGap 2.9.1在Windows上建立Android專案

- 找到/PhoneGap 2.9.1/lib/android
- 開啟「Eclipse」確定其中已安裝Android SDK,並找出安裝路徑
- 下載並解壓縮ANT.zip至c:\, 加入新的環境變數ANT\_HOME

ANT.zip的解壓縮路徑

在PATH環境變數後加入:

%PATH%;/Android SDK/platform-tools;/Android SDK/tools;%ANT\_HOME%\bin;

- 執行「cmd」,並切換路徑至/PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/HelloWorld\_android com.test.HelloWorld HelloWorld

◆ 從「Eclipse」import 剛才建立之Android專案並測試執行

# PhoneGap API

	Phone / Phone 36	Phone 3GS and newer	Android	Blackberry OS S.x	Bladiberry OS 6.0+	WebOS	Windows Phone 7 + 8	Symbian	Bada
Accelerometer	√	√	√	√	<b>√</b>	√	√	✓	✓
Camera	√	√	√	√	√	√	√	√	√
Compass	×	√	√	X	×	√	√	×	√
Contacts	√	√	√	√	√	×	√	√	√
File	4	√	√	√	4	×	√	X	X
Geolocation	√	√	√	√	√	√	√	√	√
Media	4	√	4	×	×	×	4	×	×
Network	√	√	√	√	√	√	√	√	√
Notification (Alert)	√	√	√	√	√	√	√	√	√
Notification (Sound)	√	√	√	√	√	√	√	√	√
Notification (Vibration)	√	√	√	√	√	√	√	√	√
Storage	√	√	√	√	√	√	√	Х	×

# PhoneGap Notification

第九章

#### Notification

- notification.alert
- notification.confirm
- notification.beep
- notification.vibrate

# 初始化事件

- mobileinit
- pageinit
- deviceready

#### 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/app/Notification\_iOS com.test.Notification Notification

- 將~/Desktop/app/PhoneGap\_template/Notification/\*.\*複製到iOS 專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

#### 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Notification\_android com.test.Notification Notification

- 將~/Desktop/app/PhoneGap\_template/Notification/\*.\*複製到此專案的assets/www路徑中
- 將iOS改好的index.html複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

#### 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Notification\_android com.test.Notification Notification

- 將c:/app/PhoneGap\_template/Notification/\*.\*複製到此專案的 assets/www路徑中
- 將iOS改好的index.html複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

# 加上程式(1)

● 開啟專案(/assets)/www/index.html

```
function devicereadyHandler() {
      $(document).on("click", "#alertButton", function() {
         //alert("Hello");
          navigator.notification.alert("歡迎來到PhoneGap的世界!",
                alertCallBack, "Question", "確定");
      });
      $ (document) .on ("click", "#confirmButton", confirmHandler);
      $(document).on("click", "#beepButton", function(){
          navigator.notification.beep(5); //iOS中次數設定無作用
      });
      $(document).on("click", "#vibrateButton", function(){
          navigator.notification.vibrate(5000);
      });
```

### 加上程式(2)

```
function alertCallBack() {
      alert("alertDismissHandler");
function confirmHandler() {
      navigator.notification.confirm("你喜歡PhoneGap嗎?",
             confirmCallBack, "Question", ["YES", "NO"]);
function confirmCallBack(buttonIndex) {
      if (buttonIndex==1) { //YES
          alert("很好!:)");
      }else if(buttonIndex==2) { //NO
          alert("真可惜!:(");
```

# PhoneGap Device API

第十章

#### Device

- device.model
- device.cordova
- device.platform
- device.version
- device.uuid

#### 在Notification專案加上device測試程式

● 開啟專案(/assets)/www/index.html

```
function deviceReadyHandler() {
    //省略原程式...

    var info = "Name: " + device.model + "<br>";
    info += "Cordova: " + device.cordova + "<br>";
    info += "Platform: " + device.platform + "<br>";
    info += "Version: " + device.version + "<br>";
    info += "UUID: " + device.uuid;
    $("#status").html(info);
}
```

# PhoneGap Event API

第十一章

# 事件類型

- deviceready
- pause
- resume
- online
- offline
- batterycritical
- batterylow
- batterystatus

#### 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/app/Event\_iOS com.test.Event Event

- 將~/Desktop/app/PhoneGap\_template/Event/\*.\*複製到iOS專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

#### 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Event\_android com.test.Event Event

- 將~/Desktop/app/PhoneGap\_template/Event/\*.\*複製到此專案的 assets/www路徑中
- 將iOS改好的index.html複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

#### 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Event\_android com.test.Event Event

- 將c:/app/PhoneGap\_template/Event/\*.\*複製到此專案的assets/ www路徑中
- 將iOS改好的index.html複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

### 加上程式(1)

開啟專案(/assets)/www/index.html

```
function deviceReadyHandler() {
    logData("device Ready");
    $ (document).on("pause", function() {logData("Pause! ");});
    $ (document).on("resume", logData("Resume! ");});
    $ (document).on("online", function() {
        logData("On Line: " + navigator.connection.type);
    });
    $ (document).on("offline", function() {
        logData("Off Line: " + navigator.connection.type);
    });
    //後面還有...
});
```

### 加上程式(2)

```
function deviceReadyHandler() {
    //前面省略....
    $(document).on("batterycritical", function(info) {
        logData("Battery Critical: " + info.level +"%");
    });

    $(document).on("batterylow", function(info) {
        logData("Battery Low: " + info.level + "%");
    });

    $(document).on("batterystatus", function(info) {
        logData("Battery Status: " + info.level + "%");
    });
}
```

第十二章

# **PhoneGap Connection API**

#### connection

• connection.type(直接用11章的練習)

```
$(document).on("deviceready", function (){
       alert('Connection type: ' + checkConnection());
});
function checkConnection() {
    var networkState = navigator.connection.type;
    var states = {};
    states [Connection.UNKNOWN]
                                 = 'Unknown connection';
    states[Connection.ETHERNET]
                                 = 'Ethernet connection';
    states [Connection.WIFI]
                                 = 'WiFi connection';
                                 = 'Cell 2G connection';
    states[Connection.CELL 2G]
    states[Connection.CELL 3G]
                                 = 'Cell 3G connection';
    states[Connection.CELL 4G]
                                 = 'Cell 4G connection';
    states[Connection.NONE]
                                 = 'No network connection';
    return states[networkState];
```

第十三章

# PhoneGap Geolocation API

#### Geolocation

- geolocation.getCurrentPosition
- geolocation.watchPosition
- geolocation.clearWatch

#### 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:
   ./create ~/Desktop/app/Geolocation\_android com.test.Geolocation Geolocation
- 將~/Desktop/app/PhoneGap\_template/Geolocation/\*.\*複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改此專案assets/www路徑中的index.html

#### 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Geolocation\_android com.test.Geolocation Geolocation

- 將c:/app/PhoneGap\_template/Geologation/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改此專案assets/www路徑中的index.html

### geolocation程式(1)

# geolocation程式(2)

```
function successHandler(e) {
    var location = e.coords.latitude + ", " + e.coords.longitude;
    $("#location").val(location);
    $("#info").text("第" + ++times + "次偵測, " + new Date());
    try{
        latlng = new google.maps.LatLng(
          e.coords.latitude, e.coords.longitude);
    }catch(err) {
        alert("There was an error: " + err.message + "!\n");
function errorHandler() {
    alert("GPS Service is not avaiable!");
```

## geolocation程式(3)

```
function stopButtonHandler() {
    if(watchID) {
        navigator.geolocation.clearWatch(watchID);
        watchID=undefined;
    }
    $("#info").html("停止定位服務");
    times=0;
}
```

## 用PhoneGap 新版建立iOS專案

• 開啟「終端機」,執行建立專案的指令:

cordova create ~/Desktop/app/Geo com.test.Geo Geo

- 將~/Desktop/app/PhoneGap\_template/Geolocation/\*.\*複製到新專案的www路徑中
- 將Android專案完成的assets/www/index.html複製到新專案的 www路徑中
- 開啟「終端機」,執行下列指令:

cd ~/Desktop/app/Geo cordova plugin add cordova-plugin-geolocation cordova platform add ios

 用Xcode開啟~/Desktop/app/Geo/platforms/ios/的Xcode專案並 測試

第14章

## PhoneGap Compass API

## Compass

- compass.getCurrentHeading
- compass.watchHeading
- compass.clearWatch

## 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Compass\_android com.test.Compass Compass

- 將~/Desktop/app/PhoneGap\_template/Compass/\*.\*複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

## 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1∖lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Compass\_android com.test.Compass Compass

- 將c:/app/PhoneGap\_template/Compass/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

## 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/app/Compass\_iOS com.test.Compass Compass

- 將~/Desktop/app/PhoneGap\_template/Compass/\*.\*複製到iOS 專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

#### Compass

```
function devicereadyHandler()
    try{
        navigator.compass.watchHeading(
          successHandler, errorHandler, {frequency:100});
    }catch(err){
        alert("無法啟動Compass服務: " + err.message);
function successHandler(e) {
    var headingInfo = parseInt(e.magneticHeading);
    $ ("#degree") .text (headingInfo);
function errorHandler() {
    alert("Compass service is not avaiable);
```

第15章

## PhoneGap Acceleration API

#### Acceleration

- accelerometer.getCurrentAcceleration()
- accelerometer.watchAcceleration()
- accelerometer.clearWatch ()

## 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Accelerometer\_android com.test.Accelerometer Accelerometer

- 將~/Desktop/app/PhoneGap\_template/Accelerometer/\*.\*複製到 此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

## 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Accelerometer\_android com.test.Accelerometer Accelerometer

- 將c:/app/PhoneGap\_template/Accelerometer/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

## 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/app/Accelerometer\_iOS com.test.Accelerometer Accelerometer

- 將~/Desktop/app/PhoneGap\_template/Accelerometer/\*.\*複製到iOS專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

## accelerometer程式(1)

```
function devicereadyHandler() {
    try{
        navigator.accelerometer.watchAcceleration(
            successHandler, errorHandler, {"frequency":100});
    }catch(err) {
        alert("無法啟動Acceleration: "+err.message);
function successHandler(e) {
    var xinfo = "x: " + e.x + "<br>";
    var yinfo = "y: " + e.y + "<br>";
    var zinfo = "z: " + e.z + "<br>";
    $("#status").html(xinfo+yinfo+zinfo);
    var posX = $("#robot").position().left;
    var posY = $("#robot").position().top;
    //變更robot的位置,程式在下一頁
```

## accelerometer程式(2)

```
function successHandler(e) {
    //前面程式省略,請見上頁
    //變更robot的位置:
    posX-=e.x;
    posY+=e.y;
    var range = [-20.0, 40.0]
           $(window).width()-110.0, $(window).height()-160.0];
    if (posX \le range[0]) \{
        posX = range[0];
    } else if(posX >= range[2]){
        posX = range[2];
    if (posY<=range[1]) {
        posY = range[1];
    }else if(posY >= range[3]){
        posY = range[3];
    $("#robot").css({"left":posX+"px", "top":posY+"px"});
```

第16章

## PhoneGap Camera API

#### Camera

- camera.getPicture(successHandler, errorHandler,
- {options,...})
- options:
  - sourceType
  - destinationType
  - allowEdit
  - quality
  - encodingType

## 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Camera\_android com.test.Camera Camera

- 將~/Desktop/app/PhoneGap\_template/Camera/\*.\*複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

## 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Camera\_android com.test.Camera Camera

- 將c:/app/PhoneGap\_template/Camera/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

## 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/app/Camera\_ios com.test.Camera Camera

- 將~/Desktop/app/PhoneGap\_template/Camera/\*.\*複製到iOS專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

### Camera(1)

```
function photoButtonHandler() {
    try{
     navigator.camera.getPicture(successHandler, errorHandler,
      { "sourceType": Camera. PictureSourceType. PHOTOLIBRARY,
       "destinationType": Camera. DestinationType. DATA URL });
    }catch(err){
       alert("無法啟動相簿服務:" + err.message);
function shootButtonHandler() {
    try{
      navigator.camera.getPicture(shootSuccessHandler, errorHandler,
       { "sourceType": Camera. PictureSourceType. CAMERA,
        "destinationType": Camera. DestinationType. FILE URI,
        "allowEdit":false, "quality":50, "saveToPhotoAlbum": true,
        "encodingType":Camera.EncodingType.JPEG});
    }catch(err){
       alert("無法啟動Camera服務:" + err.message);
```

## Camera(2)

```
function successHandler(imageData) {
    $("#photo").get(0).src =
        "data:image/jpeg;base64," + imageData; //DATA_URL
}

function shootSuccessHandler(imageData) {
    $("#photo").get(0).src=imageData; //FILE_URI
}

function errorHandler(err) {
    alert("無法取得相簿或相機:" + err);
}
```

第17章

# PhoneGap Capture API

## Capture

- capture.captureAudio
- capture.captureImage
- capture.captureVideo

## 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Capture\_android com.test.Capture Capture

- 將~/Desktop/app/PhoneGap\_template/Capture/\*.\*複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

## 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1∖lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Capture\_android com.test.Capture Capture

- 將c:/app/PhoneGap\_template/Capture/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

## 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/app/Capture\_ios com.test.Capture Capture

- 將~/Desktop/app/PhoneGap\_template/Capture/\*.\*複製到iOS專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

### Capture

```
function devicereadyHandler () {
   $("#audioButton").on("click", function(){
       navigator.device.capture.captureAudio(
           successHandler, errorHandler, {"limit":2}); });
   $("#imageButton").on("click", function(){
       navigator.device.capture.captureImage(
           successHandler, errorHandler, {"limit":2}); });
   $("#videoButton").on("click", function(){
       navigator.device.capture.captureVideo(
           successHandler, errorHandler, {"limit":2}); });
function successHandler(mediaFiles) {
  var info = "You have recorded " + mediaFiles.length
       + " Media files <br>";
   for(var i=0;i<mediaFiles.length;i++) {</pre>
       info += mediaFiles[i].fullPath + "<br>";
   $("#status").html(info);
function errorHandler(error) {
   alert("Capture Error:" + error.code);
```

第18章

## PhoneGap Media API

#### Media

- media.getCurrentPosition
- media.getDuration
- media.play
- media.pause
- media.release
- media.seekTo
- media.startRecord
- media.stopRecord
- media.stop

## 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Media\_android com.test.Media Media

- 將~/Desktop/app/PhoneGap\_template/Media/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

## 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Media\_android com.test.Media Media

- 將c:/app/PhoneGap\_template/Media/\*.\*複製到此專案的assets/ www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

## 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/Desktop/app/Media\_ios com.test.Media Media

- 將~/Desktop/app/PhoneGap\_template/Media/\*.\*複製到iOS專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

## Media範例(1)

```
function playButtonHandler() {
    //alert(device.platform);
    if(!media){
        if (device.platform=="Android") {
            media = new Media("file:///android asset/www/song.mp3",
                successHandler, errorHandler);
        }else{
            media = new Media(
                "song.mp3", successHandler, errorHandler);
    media.play();
function successHandler() {
    console.log("Play Success!");
}
function errorHandler(error) {
    alert("Play Failed:" + error.code);
```

## Media範例(2)

```
function pauseButtonHandler() {
    if (media) {
        media.pause();
    }
}

function stopButtonHandler() {
    if (media) {
        media.stop();
        media.release();
        media = undefined;
    }
}
```

第19章

# WebService in Phonegap

## 使用jQuery來傳送ajax請求

- \$.ajax({...})
  - url: urlStr,
  - type:"POST",
  - dataType: "xml",
  - contentType: "text/xml; charset=utf-8",
  - data: soapMessage,
  - beforeSend: function(xhr){...}
    - xhr.setRequestHeader("header", "value");
  - success: processSuccessHandler,
  - error: processErrorHandler,
  - complete: processCompleteHandler

#### 處理xml

- window.XMLSerializer
  - 或用xhr.xml來取得xml
- \$.parseXML(xml)

## 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/CurrencyConverter\_android com.test.CurrencyConverter CurrencyConverter

- 將~/Desktop/app/PhoneGap\_template/CurrencyConverter/\*.\*複製 到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

## 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1∖lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/CurrencyConverter\_android com.test.CurrencyConverter CurrencyConverter

- 將c:/app/PhoneGap\_template/CurrencyConverter/\*.\*複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

#### 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/Desktop/app/CurrencyConverter\_ios com.test.CurrencyConverter CurrencyConverter

- 將~/Desktop/app/PhoneGap\_template/CurrencyConverter/\*.\*複製到iOS專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

## 程式示範(1)

## 程式示範(2)

```
function convertHandler () {
   //前面省略...請看上一頁
   //這裡要呼叫ajax...
   try{
      $.ajax({
          url: "http://www.webserviceX.NET/CurrencyConvertor.asmx",
          type: "POST",
          dataType: "xml",
          contentType: "text/xml; charset=utf-8",
          data: soapMessage,
          beforeSend: function(xhr) {
              xhr.setRequestHeader("SOAPAction",
                   "http://www.webserviceX.NET/ConversionRate");
          },
          success: processSuccessHandler,
          error: processErrorHandler,
          complete: processCompleteHandler
      });
     $.mobile.loading("show");
   }catch(err){
      alert("error:" + err);
```

## 程式示範(3)

```
function processSuccessHandler(xmlHttpRequest, status) {
 var xml;
  if (window.XMLSerializer) {
     xml =
       new window.XMLSerializer().serializeToString(xmlHttpRequest);
  }else if(xmlHttpRequest.xml!=undefined) {
     xml =xmlHttpRequest.xml
  var xmlDoc = $.parseXML(xml),
  $xml = $(xmlDoc),
  $element = $xml.find( "ConversionRateResult" );
  $("#result").val($element.text());
```

# 程式示範(4)

```
function processErrorHandler(xhr, status, error) {
  var errMsg;
  if(status=="error") {
     errMsg = "WebService發生錯誤,請更正或稍候再試!";
  }else{
      errMsg = "無法取得WebService,請稍候再試!";
  alert(errMsg);
function processCompleteHandler(xhr, status) {
  $.mobile.loading("hide");
```

#### Xcode 7.1注意

- 修改專案.plist檔案,加入下列屬性:
  - Key "NSAppTransportSecurity", Dictionary.
  - Subkey "NSAllowsArbitraryLoads", Boolean : YES

NSAllowsArbitraryLoads Boolean YES	▼ NSAppTransportSecurity	÷	Dictionary	(1 item)	
•	NSAllowsArbitraryLoads		Boolean	YES	<b>‡</b>

第20章

# PhoneGap File API

## File

- File Entry
- Directory Entry

#### 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/File\_android com.test.File File

- 將~/Desktop/app/PhoneGap\_template/File/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

## 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/File\_android com.test.File File

- 將c:/app/PhoneGap\_template/<mark>File</mark>/\*.\*複製到此專案的assets/ www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

#### 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/Desktop/app/File\_ios com.test.File File

- 將~/Desktop/app/PhoneGap\_template/File/\*.\*複製到iOS專案的 www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

# File範例(1) 取得FileSystem

```
function devicereadyHandler()
    //window.requestFileSystem(LocalFileSystem.TEMPORARY, 0, fileSystemSuccessHandler,
errorHandler);
    window.requestFileSystem(LocalFileSystem.PERSISTENT, 0, fileSystemSuccessHandler,
errorHandler);
  function fileSystemSuccessHandler(fileSystem){
      alert(fileSystem.root.fullPath);
    fs = fileSystem;
     logData("File System ready");
     console.log(fileSystem.root.fullPath);
  function errorHandler(e){
     navigator.notification.alert("File process has got some trouble:"
            + e.code, null, "ERROR", "OK");
```

# File範例(2) List

```
function listHandler(){
  var docReader = fs.root.createReader();
  docReader.readEntries(listDirSuccessHandler, errorHandler);
}

function listDirSuccessHandler(entries){
  logData("You found " + entries.length + " entries:");
  for(var i=0;i<entries.length;i++){
    logData(entries[i].name);
  }
}</pre>
```

## File範例(3) Create File

```
function deviceHandler(){
   $(document).on("click", "#createDirButton", createHandler);
   $(document).on("click", "#listDirButton", listHandler);
   $(document).on("click", "#removeDirButton", removeHandler);
   $(document).on("click", "#readFileButton", readFileHandler);
   $(document).on("click", "#writeFileButton", writeFileHandler);
   $(document).on("click", "#removeFileButton", removeFileHandler);
function createHandler(){
   fs.root.getDirectory("newDir", {create:true}, createDirSuccessHandler, errorHandler);
function createDirSuccessHandler(dirEntry){
   newDir = dirEntry;
   logData("getDirectory Success!");
```

# File範例(4) remove Dir

```
function removeHandler(){
   if(newDir){
      newDir.remove(removeDirSuccessHandler, errorHandler);
   }else{
      errorHandler();
   }
}

function removeDirSuccessHandler(){
   logData("Remove dir success.");
}
```

## File範例(5) Read File

```
function readFileHandler(){//取得或建立Sample.txt
 fs.root.getFile("Sample.txt", {create:true}, readFileSuccessHandler, errorHandler);
function readFileSuccessHandler(fileEntry){
 sampleFile = fileEntry;
 logData("Get file success!");
 sampleFile.file(fileReaderHandler, errorHandler); //取得檔案的fileRef
function fileReaderHandler(fileRef){ //讀取fileRef中的內容
 var reader = new FileReader();
 reader.onloadend = fileLoadCompleteHandler:
 reader.readAsText(fileRef); //開始讀取該文字檔案的內容
function fileLoadCompleteHandler(e){
//在讀取文字檔案內容完成時的事件將結果顯示在文字欄位中
 var result = e.target.result;
 $("#editor").val(result);
```

# File範例(6) Write File

```
function writeFileHandler(){
 if(sampleFile){
  sampleFile.createWriter(fileWriterHandler, errorHandler); //取得檔案的fileWriter
 }else{
  errorHandler("");
function fileWriterHandler(writer){
 //writer.onload = fileWriterCompleteHandler;
 writer.onwriteend = fileWriterCompleteHandler;
 writer.write($("#editor").val());
function fileWriterCompleteHandler(){
 alert("write File!");
 logData("Write Complete!");
```

# File範例(7) remove File

```
function removeHandler(){
   if(sampleFile){
      sampleFile.remove(removeFileSuccessHandler, errorHandler);
   }else{
      errorHandler();
   }
}

function removeFileSuccessHandler (){
   logData("Remove File Success.");
}
```

第21章

# PhoneGap Storage API

#### Storage

- window.openDatabase
- Database
  - transaction
  - changeVersion
- SQLTransaction
  - executeSql
- SQLResultSet

#### 用PhoneGap 2.9.1在Mac OS建立Android專案

- 找到PhoneGap 2.9.1/lib/android
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/android/ bin
- 執行建立專案的指令:

./create ~/Desktop/app/Storage\_android com.test.Storage Storage

- 將~/Desktop/app/PhoneGap\_template/Storage/\*.\*複製到此專案的assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行

#### 用PhoneGap 2.9.1在Win 7建立Android專案

- 找到PhoneGap 2.9.1\lib\android
- 開啟「cmd」,並切換路徑至PhoneGap 2.9.1/lib/android/bin
- 執行建立專案的指令:

create c:/app/Storage\_android com.test.Storage Storage

- 將c:/app/PhoneGap\_template/Storage/\*.\*複製到此專案的 assets/www路徑中
- 從「Eclipse」import剛才建立之專案並測試執行
- 開啟並修改assets/www/index.html

#### 用PhoneGap 2.9.1建立iOS專案

- 找到PhoneGap/lib/ios
- 開啟「終端機」,並切換路徑至PhoneGap 2.9.1/lib/ios/bin
- 執行建立專案的指令:

./create ~/Desktop/Desktop/app/Storage\_ios com.test.Storage Storage

- 將~/Desktop/app/PhoneGap\_template/Storage/\*.\*複製到iOS專案的www路徑中
- 用Xcode打開專案,開啟並修改www/index.html

# Storage範例

```
var db;
function deviceReadyHandler(){
  db = window.openDatabase("test", "1.0", "test database", 1000);
  $("#createButton").on("click", function(){
   if(db){
     db.transaction(createDBTransactionSuccessHandler, errorHandler, createDbSQLSuccessHandler);
  });
  $("#insetButton").bind("click", function(){
   if(db){
     db.transaction(insertDBTransactionSuccessHandler, errorHandler, insertDBSQLSuccessHandler);
  });
  $("#selectButton").bind("click", function(){
   if(db){
     db.transaction(selectDBTransactionSuccessHandler, errorHandler, selectDBSQLSuccessHandler);
```

## Storage範例- CreateTable

```
function createDBTransactionSuccessHandler(sqlTransaction){//取得Transaction成功
//alert("sqlTransaction");
 sqlTransaction.executeSql("DROP TABLE IF EXISTS demo")
 var sqlValue = "CREATE TABLE demo (id INTEGER PRIMARY KEY AUTOINCREMENT, name TEXT)";
 sqlTransaction.executeSql(sqlValue);
function createDbSQLSuccessHandler(){//執行SQL成功
 $("#log").append("Create DB Table Success.
function errorHandler(){//取得Transaction或執行SQL失敗
 navigator.notification.alert("SQLite has some problem!", null, "Error", "OK");
```

## Storage範例- insert

# Storage範例-select

```
function selectDBTransactionSuccessHandler(sqlTransaction){//取得Transaction成功
 var sqlValue = "SELECT * FROM demo";
 sqlTransaction.executeSql(sqlValue, [], successSelectResultSetHandler, errorHandler);
function successSelectResultSetHandler(sqlTransaction, sqlResultSet){//執行SQL成功
 //alert(sqlResultSet.rows.length);
 var sqlResultSetList = sqlResultSet.rows; //取得資料集
 $("#log").append("You got "+sqlResultSetList.length+"records.");
 for(var i=0; i<sqlResultSetList.length;i++){//取得record
  var info = "ID: " + sqlResultSetList.item(i).id + ", Name: " +
        sqlResultSetList.item(i).name;
  $("#log").append("" + info + "");
function selectDBSQLSuccessHandler(){ //執行SQL成功
 $("#log").append("SELECT DB Table Success.);
```