Social Media Apps Programming

Create Hybrid Apps with Phonegap

Min-Yuh Day, Ph.D.
Assistant Professor

Department of Information Management
Tamkang University

http://mail.tku.edu.tw/myday

2014-10-29
## Course Schedule (1/3)

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Subject/Topics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2014/09/17</td>
<td>Course Orientation and Introduction to Social Media and Mobile Apps Programming</td>
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<tr>
<td>2</td>
<td>2014/09/24</td>
<td>Introduction to Android / iOS Apps Programming</td>
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<tr>
<td>3</td>
<td>2014/10/01</td>
<td>Developing Android Native Apps with Java (Eclipse) (MIT App Inventor)</td>
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<td>4</td>
<td>2014/10/08</td>
<td>Developing iPhone / iPad Native Apps with Swift / Objective-C (XCode)</td>
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<tr>
<td>5</td>
<td>2014/10/15</td>
<td>Mobile Apps Using HTML5/CSS3/JavaScript</td>
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<td>6</td>
<td>2014/10/22</td>
<td>jQuery Mobile</td>
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## Course Schedule (2/3)

<table>
<thead>
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<th>Week</th>
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<tbody>
<tr>
<td>7</td>
<td>2014/10/29</td>
<td>Create Hybrid Apps with Phonegap</td>
</tr>
<tr>
<td>8</td>
<td>2014/11/05</td>
<td>jQuery Mobile/Phonegap</td>
</tr>
<tr>
<td>9</td>
<td>2014/11/12</td>
<td>jQuery Mobile/Phonegap</td>
</tr>
<tr>
<td>10</td>
<td>2014/11/19</td>
<td>Midterm Exam Week (Midterm Project Report)</td>
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<tr>
<td>11</td>
<td>2014/11/26</td>
<td>Case Study on Social Media Apps Programming and Marketing in Google Play and App Store</td>
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<tr>
<td>12</td>
<td>2014/12/03</td>
<td>Google Cloud Platform</td>
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<td>Date</td>
<td>Subject/Topics</td>
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<td>-----------------------------------------------------</td>
</tr>
<tr>
<td>13</td>
<td>2014/12/10</td>
<td>Google App Engine</td>
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<tr>
<td>14</td>
<td>2014/12/17</td>
<td>Google Map API</td>
</tr>
<tr>
<td>15</td>
<td>2014/12/24</td>
<td>Facebook API (Facebook JavaScript SDK)</td>
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<tr>
<td></td>
<td></td>
<td>(Integrate Facebook with iOS/Android Apps)</td>
</tr>
<tr>
<td>16</td>
<td>2014/01/31</td>
<td>Twitter API</td>
</tr>
<tr>
<td>17</td>
<td>2015/01/07</td>
<td>Final Project Presentation</td>
</tr>
<tr>
<td>18</td>
<td>2015/01/14</td>
<td>Final Exam Week (Final Project Report)</td>
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Outline

• PhoneGap
  – PhoneGap
  – PhoneGap Build
    • index.html, css, js
    • config.xml
  – PhoneGap, jQuery Mobile

• Demo
  – Create Hybrid Apps with PhoneGap
Android / iOS Apps Programming

Native Apps

Hybrid Apps

Mobile Web Apps

Mobile Web App

- HTML
- CSS
- JavaScript
- Templates
- Phone Data
- External Data
- Mobile frameworks and Libraries

Source: Scott Preston, Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Apress, 2012
PhoneGap

- PhoneGap is a free and open source framework that allows you to create mobile apps using standardized web APIs for the platforms you care about.

Source: [http://phonegap.com/](http://phonegap.com/)
PhoneGap Build

• Package mobile apps in the cloud
  – **PhoneGap Build** takes the pain out of compiling PhoneGap apps.
  – Get app-store ready apps without the headache of maintaining **native SDKs**.
  – **PhoneGap Build** service does the work for you by compiling in the cloud.

Source: [http://phonegap.com/](http://phonegap.com/)
PhoneGap Build

Source: https://build.phonegap.com/
Apps Created with PhoneGap

Source: http://phonegap.com/
Apps Created with PhoneGap
BBC Olympics

Source: http://phonegap.com/app/bbc-olympics/
Adobe® PhoneGap™

• Write a PhoneGap app once with HTML and JavaScript and deploy it to any mobile device without losing features of a native app.

• Adobe PhoneGap
  – standards-based, open-source development framework for building cross-platform mobile apps with HTML, CSS and JavaScript for iOS, Android™, Windows® Phone, webOS, BlackBerry® and more.

https://build.phonegap.com/
PhoneGap

Easily create apps using the web technologies you know and love:
HTML, CSS, and JavaScript

PhoneGap is a free and open source framework that allows you to create mobile apps using standardized web APIs for the platforms you care about.

http://phonegap.com/
PhoneGap Build

Package mobile apps in the cloud

PhoneGap Build takes the pain out of compiling PhoneGap apps. Get app-store ready apps without the headache of maintaining native SDKs. Our PhoneGap Build service does the work for you by compiling in the cloud.

http://phonegap.com/
## PhoneGap Build

### Choose your plan

<table>
<thead>
<tr>
<th></th>
<th>Free Plan</th>
<th>Paid Plan</th>
<th>Adobe Creative Cloud Membership</th>
</tr>
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<tbody>
<tr>
<td>open source apps</td>
<td></td>
<td>∞ unlimited</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>must be pulled from a public Github repo</td>
<td></td>
</tr>
<tr>
<td>collaborators</td>
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<td>∞ unlimited</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>invite people to your app as either developers or testers</td>
<td></td>
</tr>
<tr>
<td>private apps</td>
<td>1</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td></td>
<td>completely free</td>
<td>starting at $9.99/mo</td>
<td>sign in with your Adobe ID</td>
</tr>
</tbody>
</table>

[http://phonegap.com/](http://phonegap.com/)
PhoneGap Build

Adobe® PhoneGap™ Build
Package mobile apps in the cloud.

Get started!

Take the pain out of developing mobile apps.
Simply upload your HTML5, CSS, and JavaScript assets to the Adobe® PhoneGap™ Build cloud service and we do the work of compiling for you.

https://build.phonegap.com/
Get started with PhoneGap Build

• Simply upload your web assets - a ZIP file of HTML, CSS and JavaScript, or a single index.html file - to PhoneGap Build
  – Git or SVN repository.

• PhoneGap Build undertake the compilation and packaging

• In minutes, you’ll receive the download URLs for all mobile platforms.

Source: https://build.phonegap.com/faq
PhoneGap Build vs. PhoneGap

• PhoneGap
  – a mobile application development framework, based upon the open source Apache Cordova project.
  – write an app once with HTML, CSS and JavaScript, and then deploy it to a wide range of mobile devices without losing the features of a native app.

• PhoneGap Build
  – a cloud-based service built on top of the PhoneGap framework.
  – easily build those same mobile apps in the cloud.

Source: https://build.phonegap.com/faq
Public Apps vs. Private Apps

• Public apps
  – source code hosted in a publicly accessible GitHub repository.

• Private apps
  – source code hosted in a private (non-publicly accessible) GitHub repository
  – uploads a ZIP file containing the source code and assets to the PhoneGap Build service.

Source: https://build.phonegap.com/faq
PhoneGap, jQuery Mobile, jQuery

jQuery Mobile
(User Interface)

jQuery
(Logic and Computing)

PhoneGap
(Hardware Interface)
PhoneGap App Architecture

HTML5/CSS3 Application

UI Framework (jQueryMobile)  PhoneGap API

Phone Gap Bridge

Camera  Microphone  GPS  SQLite

File System  Accelerometer  Compass  etc

Install PhoneGap

**Install**

To install, ensure that you have Node.js installed, then open your command line and run the following:

```
$ sudo npm install -g phonegap
```

Once installation completes, you can invoke `phonegap` on command line for further help.

**Usage**

```
$ phonegap create my-app
$ cd my-app
$ phonegap run android
```

Learn more at docs.phonegap.com

---

**PhoneGap 2.9.1**

Released 05 Nov 2013

**PhoneGap 2.9.0**

Released 26 Jun 2013

**PhoneGap 2.8.1**

Released 12 Jun 2013

[http://phonegap.com/install/](http://phonegap.com/install/)
Node.js® is a platform built on Chrome's JavaScript runtime for easily building fast, scalable network applications. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.

Current Version: v0.10.33

INSTALL

DOWNLOADS API DOCS

AN EXAMPLE: WEBSERVER

This simple web server written in Node responds with "Hello World" for every request.

http://nodejs.org/
Install NodeJS

node-v0.10.33.pkg

10.2 MB

Welcome to the Node Installer

This package will install node and npm into /usr/local/bin

The installation was completed successfully.

Node was installed at
/usr/local/bin/node

npm was installed at
/usr/local/bin/npm

Make sure that /usr/local/bin is in your SPATH.
PhoneGap API Documentation

Guides

Overview
Start here if you are new to Cordova. Includes installation and next steps.

Platform Support
Compatibility table for all major features.

The Command-Line Interface
Create, build, and deploy from the command-line.

Platform Guides
Set up each platform SDK and update projects.

Using Plugman to Manage Plugins
Manage plugins without the CLI when using the platform-centered workflow.

The config.xml File
Customize your app’s features.

Icons and Splash Screens
Customize your app’s displaying images.

Embedding WebViews
Implement the Cordova WebView in your native project.

Plugin Development Guide
Develop your own plugin.

Privacy Guide
Learn about important mobile privacy issues.

Security Guide
Information and tips for building a secure application.

Whitelist Guide
Grant an application access to external resources.

Storage
An overview of native storage options.

Next Steps
A look at topics that new Cordova developers will encounter.

Keyword Index
Full index of the documentation.

http://docs.phonegap.com/en/3.5.0/index.html
PhoneGap Install

```bash
$ sudo npm install -g phonegap
```
PhoneGap Usage

$ phonegap create myapp
  [phonegap] missing library phonegap/www/3.1.0
  [phonegap] downloading https://github.com/phonegap/phonegap-app-hello-world/archive/3.1.0.tar.gz...
  [phonegap] created project at /Users/imyday/Development/myapp

$ cd myapp

$ phonegap run android
  [phonegap] detecting Android SDK environment...
  [phonegap] using the remote environment
  [phonegap] compressing the app...
  [phonegap] uploading the app...
myapp/www/
PhoneGap config.xml
Hello World sample application that responds to the deviceready event.

PhoneGap Team

<feature name="http://api.phonegap.com/1.0/device"/>
<preference name="permissions" value="none"/>
<preference name="orientation" value="default"/>
<preference name="target-device" value="universal"/>
<preference name="fullscreen" value="true"/>
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<preference name="prerendered-icon" value="true"/>
<preference name="stay-in-webview" value="false"/>
<preference name="ios-statusbarstyle" value="black-opaque"/>
<preference name="detect-data-types" value="true"/>
<preference name="auto-hide-data-types" value="false"/>
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<preference name="auto-hide-splash-screen" value="true"/>
<preference name="disable-cursor" value="false"/>
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<icon gap:density="mdpi" gap:platform="android" src="res/icon/android/icon-48-mdpi.png"/>
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<gap splash gap:platform="blackberry" src="res/screen/blackberry/screen-225.png"/>
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<gap splash gap:platform="ios" height="768" src="res/screen/ios/screen-ipad-landscape.png" width="1024"/>
<gap splash gap:platform="winphone" src="res/screen/windows-phone/screen-portrait.jpg"/>
<access origin="http://127.0.0.1"/>
</widget>
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<widget
    id="com.phonegap.helloworld"
    version="1.0.0"
    xmlns="http://www.w3.org/ns/widgets"
    xmlns:gap="http://phonegap.com/ns/1.0">
    <name>HelloWorld</name>
    <description>Hello World sample application</description>
    <author email="support@phonegap.com" href="http://phonegap.com">
        PhoneGap Team
    </author>
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<preference name="disable-cursor" value="false" />
<preference name="android-minSdkVersion" value="7" />
<preference name="android-installLocation" value="auto" />
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<gap:splash gap:platform="blackberry" src="res/screen/blackberry/screen-225.png" />
<gap:splash gap:platform="ios" height="480" src="res/screen/ios/screen-iphone-portrait.png" width="320" />
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<gap:splash gap:platform="ios" height="768" src="res/screen/ios/screen-ipad-landscape.png" width="1024" />
<access origin="http://127.0.0.1*" />
</widget>
`icon.png
(128x128)`
logo.png
(172x200)
<gap:splash gap:platform="ios" height="480" src="res/screen/ios/screen-iphone-portrait.png" width="320" />
<gap:splash gap:density="mdpi" gap:platform="android" src="res/screen/android/screen-mdpi-portrait.png" />
Generate icon online

http://www.quirco.com/iPhoneIcon
phonegap-2.9.1/lib/ios/bin/templates/project/www/index.html
<html>
<head>
  <meta charset="utf-8" />
  <meta name="format-detection" content="telephone=no" />
  <meta name="viewport" content="user-scalable=no, initial-scale=1, maximum-scale=1, minimum-scale=1, width=device-width, height=device-height, target-densitydpi=device-dpi" />
  <link rel="stylesheet" type="text/css" href="css/index.css" />
  <title>Hello World</title>
</head>
<body>
  <div class="app">
    <h1>PhoneGap</h1>
    <div id="deviceready" class="blink">
      <p class="event listening">Connecting to Device</p>
      <p class="event received">Device is Ready</p>
    </div>
  </div>
  <script type="text/javascript" src="phonegap.js"></script>
  <script type="text/javascript" src="js/index.js"></script>
  <script type="text/javascript">
    app.initialize();
  </script>
</body>
</html>
Download Zip File: jquery.mobile-1.3.2.zip (JavaScript, CSS, and images)

Download

CDN-Hosted JavaScript:
- Uncompressed: `jquery.mobile-1.3.2.js` (useful for debugging)
- Minified: `jquery.mobile-1.3.2.min.js` (full library, ready to deploy)

CDN-Hosted CSS:
- Uncompressed with Default theme: `jquery.mobile-1.3.2.css` (useful for debugging)
- Minified with Default theme: `jquery.mobile-1.3.2.min.css` (full library, ready to deploy)
- Uncompressed structure without a theme: `jquery.mobile-1.3.2.css` (useful for theme development)
- Minified structure without a theme: `jquery.mobile-1.3.2.min.css` (full library, ready to deploy)

Copy-and-Paste Snippet for CDN-hosted files (recommended):

```
<link rel="stylesheet" href="http://code.jquery.com/mobile/1.3.2/jquery.mobile-1.3.2.min.css" />
<script src="http://code.jquery.com/jquery-1.9.1.min.js"></script>
<script src="http://code.jquery.com/mobile/1.3.2/jquery.mobile-1.3.2.min.js"></script>
```

ZIP File:
If you want to host the files yourself you can download a zip of all the files:
- Zip File: `jquery.mobile-1.3.2.zip` (JavaScript, CSS, and images)

Microsoft CDN hosted jQuery Mobile files:
- [http://www.asp.net/ajaxLibrary/CDN.ashx](http://www.asp.net/ajaxLibrary/CDN.ashx)

Fork jQuery Mobile on GitHub
[https://github.com/jquery/jquery-mobile](https://github.com/jquery/jquery-mobile)

Change log

Popups
- Customize popup position data through `jquery.popupOption.popxy`
Demo

Create Hybrid Apps with PhoneGap

https://build.phonegap.com/
Myday Mobile App -> Hybrid App

http://mail.tku.edu.tw/myday/m  ➔  http://mail.tku.edu.tw/myday/app/
PhoneGap Build

Source: https://build.phonegap.com/
app.zip

HTML 5  CSS 3

jQuery mobile

- config.xml
- css
  - index.css
  - jquery.mobile-1.3.2.css
  - jquery.mobile-1.3.2.min.css
  - jquery.mobile.structure-1.3.2.css
  - jquery.mobile.structure-1.3.2.min.css
  - jquery.mobile.theme-1.3.2.css
  - jquery.mobile.theme-1.3.2.min.css
- icon.png
- img
  - IPhoneIcon_Big.png
  - IPhoneIcon_Medium.png
  - IPhoneIcon_Small.png
  - logo.png
  - Myday_Photo_220.jpg
  - Myday_Photo.jpg
  - pg_logo.png
  - PhotoDavid.jpg
  - PhotoKevin.jpg
  - PhotoLucy.jpg
  - PhotoMyday.jpg
  - PhotoTeresa.jpg
- index.html
- js
  - index.js
  - jquery.js
  - jquery.mobile-1.3.2.js
  - jquery.mobile-1.3.2.min.js
  - jquery.mobile-1.3.2.min.map
  - pg_icon.png
  - pg_index.html
- res
  - icon
  - screen
- spec
  - spec.html
<?xml version='1.0' encoding='utf-8'?>
<widget id="com.imtku.smap.mydaymobileapp" version="1.0.0" xmlns="http://www.w3.org/ns/widgets" xmlns:gap="http://phonegap.com/ns/1.0">
  <name>Myday Mobile App</name>
  <description>
    Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University
  </description>
  <author email="myday@mail.tku.edu.tw" href="http://mail.tku.edu.tw/myday">
    Min-Yuh Day
  </author>
</widget>
Install PhoneGap

To install, ensure that you have NodeJS installed, then open your command line and run the following:

```
sudo npm install -g phonegap
```

Once installation completes, you can invoke `phonegap` on command line for further help.

Usage:
```
phonegap create my-app
cd my-app
phonegap run android
```

Learn more at docs.phonegap.com

PhoneGap 2.9.1
Released 05 Nov 2013

PhoneGap 2.9.0
Released 26 Jun 2013

PhoneGap 2.8.1
Released 12 Jun 2013

http://phonegap.com/install/
Node.js® is a platform built on Chrome's JavaScript runtime for easily building fast, scalable network applications. Node.js uses an event-driven, non-blocking I/O model that makes it lightweight and efficient, perfect for data-intensive real-time applications that run across distributed devices.

Current Version: v0.10.33

[INSTALL]

DOWNLOADS | API DOCS

NODE.JS ON THE ROAD

PRODUCTION NODE HITS THE PAVEMENT
GET INSPIRED & INVOLVED LEARN MORE

AN EXAMPLE: WEBSERVER

This simple web server written in Node responds with "Hello World" for every request.

http://nodejs.org/
Install NodeJS

node-v0.10.33.pkg

10.2 MB

Welcome to the Node Installer

This package will install node and npm into /usr/local/bin

The installation was completed successfully.

Node was installed at
/usr/local/bin/node

npm was installed at
/usr/local/bin/npm

Make sure that /usr/local/bin is in your $PATH.
PhoneGap Install

$ sudo npm install -g phonegap
PhoneGape Install

```bash
$ sudo npm install -g phonegap
```
PhoneGap Usage

$ phonegap create myapp
[phonegap] missing library phonegap/www/3.1.0
[phonegap] downloading https://github.com/phonegap/phonegap-app-hello-world/archive/3.1.0.tar.gz...
[phonegap] created project at /Users/imyday/Development/myapp

$ cd myapp

$ phonegap run android
[phonegap] detecting Android SDK environment...
[phonegap] using the remote environment
[phonegap] compressing the app...
[phonegap] uploading the app...
PhoneGap Usage

```bash
pc248:desktop imyday$ phonegap create myapp
[phonegap] missing library com.phonegap.phonegap.helloworld/www/3.6.0
[phonegap] downloading https://github.com/phonegap/phonegap-app-hello-world/archive/3.6.0.tar.gz...
[phonegap] create called with the options /Users/imyday/Desktop/myapp com.phonegap.helloworld HelloWorld

[phonegap] Customizing default config.xml file
[phonegap] created project at /Users/imyday/Desktop/myapp
pc248:desktop imyday$ cd myapp
pc248:myapp imyday$ phonegap run android
[phonegap] detecting Android SDK environment...
[phonegap] using the local environment
[phonegap] adding the Android platform...

npm http GET https://registry.npmjs.org/cordova-android/3.6.3
npm http 200 https://registry.npmjs.org/cordova-android/3.6.3

/Users/imyday/.cordova/lib/npm_cache/cordova-android/3.6.3/package/bin/node_modules/q/q.js:126
    throw e;

Error: ANDROID_HOME is not set and "android" command not in your PATH. You must fulfill at least one of these conditions.
  at _fulfilled (/Users/imyday/.cordova/lib/npm_cache/cordova-android/3.6.3/package/bin/node_modules/q/q.js:798:54)
  at self.promiseDispatch.done (/Users/imyday/.cordova/lib/npm_cache/cordova-android/3.6.3/package/bin/node_modules/q/q.js:827:30)
  at Promise.promise.promiseDispatch (/Users/imyday/.cordova/lib/npm_cache/cordova-android/3.6.3/package/bin/node_modules/q/q.js:760:13)
  at /Users/imyday/.cordova/lib/npm_cache/cordova-android/3.6.3/package/bin/node_modules/q/q.js:82
1:14
```
myapp/

<table>
<thead>
<tr>
<th>Name</th>
<th>Size</th>
<th>Kind</th>
</tr>
</thead>
<tbody>
<tr>
<td>config.xml</td>
<td>5 KB</td>
<td>XML text</td>
</tr>
<tr>
<td>hooks</td>
<td>--</td>
<td>Folder</td>
</tr>
<tr>
<td>platforms</td>
<td>--</td>
<td>Folder</td>
</tr>
<tr>
<td>plugins</td>
<td>--</td>
<td>Folder</td>
</tr>
<tr>
<td>www</td>
<td>--</td>
<td>Folder</td>
</tr>
</tbody>
</table>

Macintosh HD ➔ Users ➔ ~ ➔ Desktop ➔ myapp
### www/ directory

<table>
<thead>
<tr>
<th>Name</th>
<th>Size</th>
<th>Kind</th>
</tr>
</thead>
<tbody>
<tr>
<td>css</td>
<td></td>
<td>Folder</td>
</tr>
<tr>
<td>index.css</td>
<td>4 KB</td>
<td>CSS</td>
</tr>
<tr>
<td>icon.png</td>
<td>11 KB</td>
<td>PNG image</td>
</tr>
<tr>
<td>img</td>
<td></td>
<td>Folder</td>
</tr>
<tr>
<td>logo.png</td>
<td>30 KB</td>
<td>PNG image</td>
</tr>
<tr>
<td>index.html</td>
<td>2 KB</td>
<td>HTML text</td>
</tr>
<tr>
<td>js</td>
<td></td>
<td>Folder</td>
</tr>
<tr>
<td>index.js</td>
<td>2 KB</td>
<td>JavaScript</td>
</tr>
<tr>
<td>res</td>
<td></td>
<td>Folder</td>
</tr>
<tr>
<td>spec</td>
<td></td>
<td>Folder</td>
</tr>
<tr>
<td>spec.html</td>
<td>3 KB</td>
<td>HTML text</td>
</tr>
</tbody>
</table>

**Path:**

```
Macintosh HD → Users → imyday → Desktop → myapp → www
```
myapp/www/
phonegap-2.9.1/lib/ios/bin/templates/project/www/index.html
<html>
<head>
  <meta charset="utf-8"/>
  <meta name="format-detection" content="telephone=no"/>
  <meta name="viewport" content="user-scalable=no, initial-scale=1, maximum-scale=1, minmum-scale=1, width=device-width, height=device-height, target-densitydpi=device-dpi"/>
  <link rel="stylesheet" type="text/css" href="css/index.css"/>
  <title>Hello World</title>
</head>
<body>
  <div class="app">
    <h1>PhoneGap</h1>
    <div id="deviceready" class="blink">
      <p class="event listening">Connecting to Device</p>
      <p class="event received">Device is Ready</p>
    </div>
  </div>
  <script type="text/javascript" src="phonegap.js"></script>
  <script type="text/javascript" src="js/index.js"></script>
  <script type="text/javascript">
    app.initialize();
  </script>
</body>
</html>
<!DOCTYPE html>
<html>
  <head>
    <title>Min-Yuh Day Mobile App</title>
    <meta charset=utf-8 />
    <meta name="viewport" content="width=device-width, initial-scale=1" /> 
    <script src="http://code.jquery.com/jquery-1.9.1.min.js"></script>
    <link type="text/css" href="http://code.jquery.com/mobile/latest/jquery.mobile.min.css" rel="stylesheet" />
    <script type="text/javascript" src="http://code.jquery.com/mobile/latest/jquery.mobile.min.js"></script>
    <!--PhoneGap-->
    <link rel="stylesheet" type="text/css" href="css/index.css" />
    <script type="text/javascript" src="phonegap.js"></script>
    <script type="text/javascript" src="js/index.js"></script>
    <!--PhoneGap-->
    <script type="text/javascript">
      app.initialize();
    </script>
  </head>
  <body>
    <div data-role="page" id="MyHome" data-theme="b">
      <div data-role="header" data-theme="b">
        <h1>Min-Yuh Day</h1>
      </div><!-- /header -->

      <div data-role="content">
        <div style="text-align:center">
          <img style="width: 50%; height: 50%" src="http://mail.tku.edu.tw/myday/images/Myday_Photo.jpg">
        </div>
    </div>
  </body>
</html>
<!DOCTYPE html>
<html>
  <head>
    <title>Min-Yuh Day Mobile App</title>
    <meta charset=utf-8 />
    <meta name="viewport" content="width=device-width, initial-scale=1" />
    <script src="http://code.jquery.com/jquery-1.9.1.min.js"></script>
    <link type="text/css" href="http://code.jquery.com/mobile/latest/jquery.mobile.min.css" rel="stylesheet" />
    <script type="text/javascript" src="http://code.jquery.com/mobile/latest/jquery.mobile.min.js"></script>
    <!--PhoneGap-->
    <link rel="stylesheet" type="text/css" href="css/index.css" />
    <script type="text/javascript" src="phonegap.js"></script>
    <script type="text/javascript" src="js/index.js"></script>
    <!--PhoneGap-->
    <script type="text/javascript">
      app.initialize();
    </script>
  </head>
</html>
js/index.js

```javascript
var app = {
  // Application Constructor
  initialize: function() {
    this.bindEvents();
  },
  // Bind Event Listeners
  //
  // Bind any events that are required on startup. Common events are:
  // 'load', 'deviceready', 'offline', and 'online'.
  bindEvents: function() {
    document.addEventListener('deviceready', this.onDeviceReady, false);
  },
  // deviceready Event Handler
  //
  // The scope of 'this' is the event. In order to call the 'receivedEvent'
  // function, we must explicitly call 'app.receivedEvent(...)';
  onDeviceReady: function() {
    app.receivedEvent('deviceready');
  },
  // Update DOM on a Received Event
  receivedEvent: function(id) {
    var parentElement = document.getElementById(id);
    var listeningElement = parentElement.querySelector('.listening');
    var receivedElement = parentElement.querySelector('.received');

    listeningElement.setAttribute('style', 'display:none;');
    receivedElement.setAttribute('style', 'display:block;');

    console.log('Received Event: ' + id);
  }
};
```
Download Zip File: jquery.mobile-1.3.2.zip
(JavaScript, CSS, and images)

Download
CDN-Hosted JavaScript:
- Uncompressed: jquery.mobile-1.3.2.js (useful for debugging)
- Minified: jquery.mobile-1.3.2.min.js (full library, ready to deploy)

CDN-Hosted CSS:
- Uncompressed with Default theme: jquery.mobile-1.3.2.css (useful for debugging)
- Minified with Default theme: jquery.mobile-1.3.2.min.css (full library, ready to deploy)
- Uncompressed structure without a theme: jquery.mobile-1.3.2.css (useful for theme development)
- Minified structure without a theme: jquery.mobile-1.3.2.min.css (full library, ready to deploy)

Copy-and-Paste Snippet for CDN-hosted files (recommended):

```html
<link rel="stylesheet" href="http://code.jquery.com/mobile/1.3.2/jquery-mobile-1.3.2.min.css" />
<script src="http://code.jquery.com/jquery-1.9.1.min.js"></script>
<script src="http://code.jquery.com/mobile/1.3.2/jquery.mobile-1.3.2.min.js"></script>
```

ZIP File:
If you want to host the files yourself you can download a zip of all the files:
- Zip File: jquery.mobile-1.3.2.zip (JavaScript, CSS, and images)

Microsoft CDN hosted jQuery Mobile files:
- http://www.asp.net/ajaxLibrary/CDN.ashx

Fork jQuery Mobile on GitHub
https://github.com/jquery/jquery-mobile

Change log

Popups
Propose: Convert popups position data through to accept disposition header
jquery.mobile-1.3.2
<!DOCTYPE html>
<html>
<head>
    <title>Min-Yuh Day Mobile App</title>
    <meta charset=utf-8 />
    <meta name="viewport" content="width=device-width, initial-scale=1" />
    <script src="js/jquery.js"></script>
    <link type="text/css" href="css/jquery.mobile-1.3.2.min.css" rel="stylesheet" />
    <script type="text/javascript" src="js/jquery.mobile-1.3.2.min.js"></script>
    <!--PhoneGap-->
    <link rel="stylesheet" type="text/css" href="css/index.css" />
    <!--
    <script type="text/javascript" src="phonegap.js"></script>
    -->
    <script type="text/javascript" src="js/index.js"></script>
    <!--PhoneGap-->
    <script type="text/javascript">
        app.initialize();
    </script>
</head>
PhoneGap Build

Adobe® PhoneGap™ Build
Package mobile apps in the cloud.

Get started!

Take the pain out of developing mobile apps.
Simply upload your HTML5, CSS, and JavaScript assets to the Adobe® PhoneGap™ Build cloud service and we do the work of compiling for you.

https://build.phonegap.com/
PhoneGap Build

Complete your registration

1. Create your account

Sign In

Adobe ID (Email Address)
imyday@gmail.com

Password

Stay signed in

Create an Adobe ID

Sign In

Paid Plan

25 private apps
unlimited open-source apps
unlimited collaborators

change
PhoneGap Build

Create your account

Choose how you would like to sign in to PhoneGap Build.

Adobe ID

Github

Free Plan

1. private apps
unlimited open-source apps
unlimited collaborators
PhoneGap Build
New source

Choose File

Please note this is a destructive action. We won't keep a copy of your old code.

Cancel  Upload
Myday Mobile App
Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University

<table>
<thead>
<tr>
<th>App ID</th>
<th>Version</th>
<th>PhoneGap</th>
<th>Owned by</th>
<th>Last built</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>573842</td>
<td>1.6.0</td>
<td>2.9.0</td>
<td><a href="mailto:myday@gmail.com">myday@gmail.com</a></td>
<td>1 minute</td>
<td>zip package</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Platform</th>
<th>Key/Package</th>
<th>Rebuild</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>iOS</td>
<td>No key selected</td>
<td>Rebuild</td>
<td>Error</td>
</tr>
<tr>
<td>Windows</td>
<td>No key selected</td>
<td>Rebuild</td>
<td>xap</td>
</tr>
<tr>
<td>HP</td>
<td>No key selected</td>
<td>Rebuild</td>
<td>ipk</td>
</tr>
</tbody>
</table>
Install Myday Mobile App 1.0.0

- **Android**
  - apk
- **BlackBerry**
  - OTA install
- **Symbian**
  - wgz
- **webOS**
  - ipk
- **Windows Phone**
  - xap

https://build.phonegap.com/apps/573842/install
Myday Mobile App
Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University

Source code
Choose File: No file chosen

Settings
- Enable debugging
- Enable Hydration
- Only approved collaborators (listed below) can download this app

https://build.phonegap.com/apps/573842/settings
Configuration

Your application's details are bound to the config.xml file in your application package. To edit these details, change that file and push it back up to us.

**icon file (png)**

![Icon](https://build.phonegap.com/apps/573842/se)

**Choose File**

No file chosen

**app.title**

Myday Mobile App

**package**

com.imtk.usmap.mydaymobileapp

**version**

1.0.0

**Configuration**

2.9.0

**description**

Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University

[https://build.phonegap.com/apps/573842/settings](https://build.phonegap.com/apps/573842/settings)
app title
Myday Mobile App

package
com.imtku.smap.mydaymobileapp

version
1.0.0

Configuration
2.9.0

description
Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University

Danger Zone

https://build.phonegap.com/apps/573842/settings
Myday Mobile App
Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University

Options:
- No key selected
- Add a key...

Builds:
- iOS:
  - No key selected
  - Add a key...
- Android:
  - No key selected
Myday Mobile App
Myday Mobile App for Prof. Min-Yuh Day, Department of Information Management, Tamkang University

<table>
<thead>
<tr>
<th>iOS</th>
<th>No key selected</th>
<th>Rebuild</th>
<th>Error</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**title**

- [Choose File] No file chosen

**certificate (.p12) file**

- [Choose File] No file chosen

**provisioning profile**

- [Choose File] No file chosen
Myday Mobile App -> Hybrid App

http://mail.tku.edu.tw/myday/m  ➔  http://mail.tku.edu.tw/myday/app/
Create Hybrid Apps with PhoneGap

HTML5

jQuery mobile

PhoneGap Build

Myday Research Lab

Faculty

Min-Yuh Day, Ph.D.
Assistant Professor

MBA Students

Kevin Tu
Chun Tu
MBA, IM, TKU (2011-)
Summary

• PhoneGap
  – PhoneGap
  – PhoneGap Build
    • index.html, css, js
    • config.xml
  – PhoneGap, jQuery Mobile

• Demo
  – Create Hybrid Apps with PhoneGap
References

• Learn HTML5 and JavaScript for iOS: Web Standards-based Apps for iPhone, iPad, and iPod touch, Scott Preston, Apress, 2012
• PhoneGap
  – http://phonegap.com/
• PhoneGap Build
  – https://build.phonegap.com/
• jQuery Mobile
  – http://jquerymobile.com/
• Introduction to PhoneGap Build