Cordova

Lab Book

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Document Revision History

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Getting Started

## Overview

This lab book is a guided tour for learning jQuery. It comprises solved examples and ‘To Do’ assignments. Follow the steps provided in the solved examples and work out the ‘To Do’ assignments given.

## Setup Checklist for jQuery

Here is what is expected on your machine in order for the lab to work.

Minimum System Requirements

* Intel Pentium 90 or higher (P166 recommended)
* Microsoft Windows XP or above.
* Memory: 256MB of RAM (512MB or more recommended)
* Internet Explorer 6.0 or higher

Please ensure that the following is done:

* A text editor like Notepad, Editplus

## Instructions

* For all coding standards refer Appendix A. All lab assignments should refer coding standards.
* Create a directory by your name in drive <drive>. In this directory, create a subdirectory jQuery\_assign. For each lab exercise create a directory as lab <lab number>.
* You may also look up the on-line help provided in the <http://www.jquery.com>.
* The faculty will introduce you to the editor to be used.

## Learning More (Bibliography if applicable)

* Visual QuickStart Guide jQuery by Steven Holzner
* jQuery in Action by Bear Bibeault and Yehuda Katz
* Learning jQuery 1.3 by Jonathan Chaffer and Karl Swedberg

1. Phonegap Basics

|  |  |
| --- | --- |
| **Goals** | * Understand the process of setting up of Phonegap project * Understanding creating Phonegap Application |
| **Time** | 20 minutes |

## 1. Create a New Android Project in ADT

**Configure the project to use PhoneGap**

At this point, Eclipse has created an empty Android project. However, it has not yet been configured to use PhoneGap. You'll do that next.

1. Create an assets/www directory and a libs directory inside of the new Android project. All of the HTML and JavaScript for your PhoneGap application interface will reside within the assets/www folder (see Figure ).

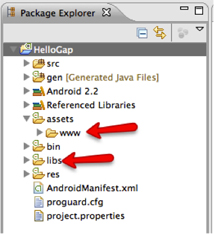
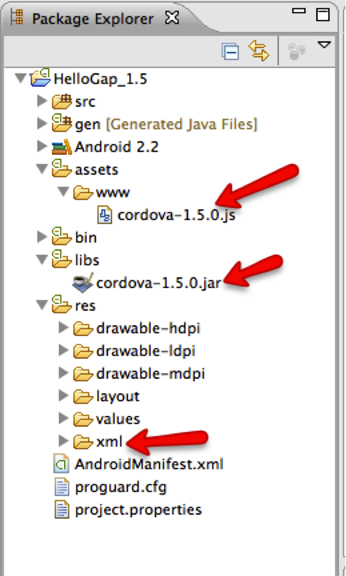


Figure : New project directories.

1. To copy the required files for PhoneGap into the project, first locate the directory where you downloaded PhoneGap, and navigate to the lib/android subdirectory
2. Copy cordova-1.5.0.js to the **assets/www** directory within your Android project.
3. Copy cordova-1.5.0.jar to the **libs** directory within your Android project.
4. Copy the xml directory into the **res** directory within your Android project
5. 
6. For AngularJS inclusion:
7. Next, create a file named index.html in the assets/www folder. This file will be used as the main entry point for your PhoneGap application's interface.
8. In index.html, add the following HTML code to act as a starting point for your user interface development:

<!DOCTYPE HTML>

<html>

<head>

<title>PhoneGap</title>

<script type="text/javascript" charset="utf-8" src="cordova-1.5.0 js"></script>

</head>

<body>

<h1>Hello PhoneGap</h1>

</body>

</html>

1. You will need to add the cordova-1.5.0.jar library to the build path for the Android project. Right-click cordova-1.5.0.jar and select Build Path > Add To Build Path (see Figure).

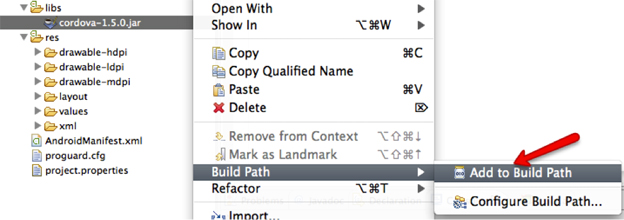


Figure : Adding cordova-1.5.0.jar to the build path.

**Update the Activity class**

Now you are ready to update the Android project to start using PhoneGap.

1. Open your main application Activity file. This file will have the same name as your project, followed by the word "Activity". It will be located under the src folder in the project package that you specified earlier in this process.

MainActivity class

1. In the main Activity class, add an import statement for org.apache.cordova.DroidGap:

import org.apache.cordova.DroidGap;

1. Change the base class from **Activity** to **DroidGap** ; this is in the class definition following the word extends :

public class HelloGapActivity extends DroidGap {

1. Replace the call to **setContentView**() with a reference to load the PhoneGap interface from the local assets/www/index.html file, which you created earlier (see Figure).

super.loadUrl("file:///android\_asset/www/index.html");

Note: In PhoneGap projects, you can reference files located in the assets directory with a URL reference file:///android\_asset, followed by the path name to the file. The file:///android\_asset URI maps to the assets directory.



Figure : Updates to the main Activity class.

**Configure the project metadata**

You have now configured the files within your Android project to use PhoneGap. The last step is to configure the project metadata to enable PhoneGap to run.

1. Begin by opening the AndroidManifest.xml file in your project root. Use the Eclipse text editor by right-clicking the AndroidManifest.xml file and selecting Open With > Text Editor (see Figure).

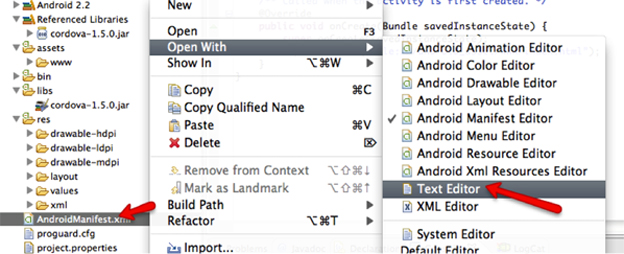


Figure : Opening AndroidManifest.xml.

1. In AndroidManifest.xml, add the following **supports-screen** XML node as a child of the root **manifest** node:

<supports-screens android:largeScreens="true" android:normalScreens="true" android:smallScreens="true" android:resizeable="true" android:anyDensity="true" />

The supports-screen XML node identifies the screen sizes that are supported by your application. You can change screen and form factor support by altering the contents of this entry. To read more about <supports-screens>

Next, you need to configure permissions for the PhoneGap application.

1. Copy the following <uses-permission> XML nodes and paste them as children of the root <manifest> node in the AndroidManifest.xml file:

<uses-permission android:name="android.permission.CAMERA" /> <uses-permission android:name="android.permission.VIBRATE" /> <uses-permission android:name="android.permission.ACCESS\_COARSE\_LOCATION" /> <uses-permission android:name="android.permission.ACCESS\_FINE\_LOCATION" /> <uses-permission android:name="android.permission.ACCESS\_LOCATION\_EXTRA\_COMMANDS" /> <uses-permission android:name="android.permission.READ\_PHONE\_STATE" /> <uses-permission android:name="android.permission.INTERNET" /> <uses-permission android:name="android.permission.RECEIVE\_SMS" /> <uses-permission android:name="android.permission.RECORD\_AUDIO" /> <uses-permission android:name="android.permission.MODIFY\_AUDIO\_SETTINGS" /> <uses-permission android:name="android.permission.READ\_CONTACTS" /> <uses-permission android:name="android.permission.WRITE\_CONTACTS" /> <uses-permission android:name="android.permission.WRITE\_EXTERNAL\_STORAGE" /> <uses-permission android:name="android.permission.ACCESS\_NETWORK\_STATE" /> <uses-permission android:name="android.permission.GET\_ACCOUNTS" /> <uses-permission android:name="android.permission.BROADCAST\_STICKY" />

The <uses-permission> XML values identify the features that you want to be enabled for your application. The lines above enable all permissions required for all features of PhoneGap to function. After you have built your application, you may want to remove any permissions that you are not actually using; this will remove security warnings during application installation. To read more about Android permissions and the <uses-permission> element,

After you have configured application permissions, you need to modify the existing <activity> node.

1. Locate the <activity> node, which is a child of the <application> XML node. Add the following attribute to the <activity> node:

android:configChanges="orientation|keyboardHidden"

1. Next, you need to create a second <activity> node for the org.apache.cordova.DroidGap class. Add the following <activity> node as a sibling of the existing <activity> XML node:

<activity android:name="org.apache.cordova.DroidGap" android:label="@string/app\_name" android:configChanges="orientation|keyboardHidden"> <intent-filter></intent-filter> </activity>

1. **Running the application**

To launch your PhoneGap application in the Android emulator, right-click the project root, and select Run As > Android Application (see Figure).

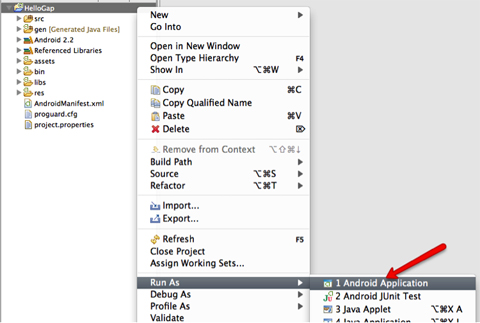
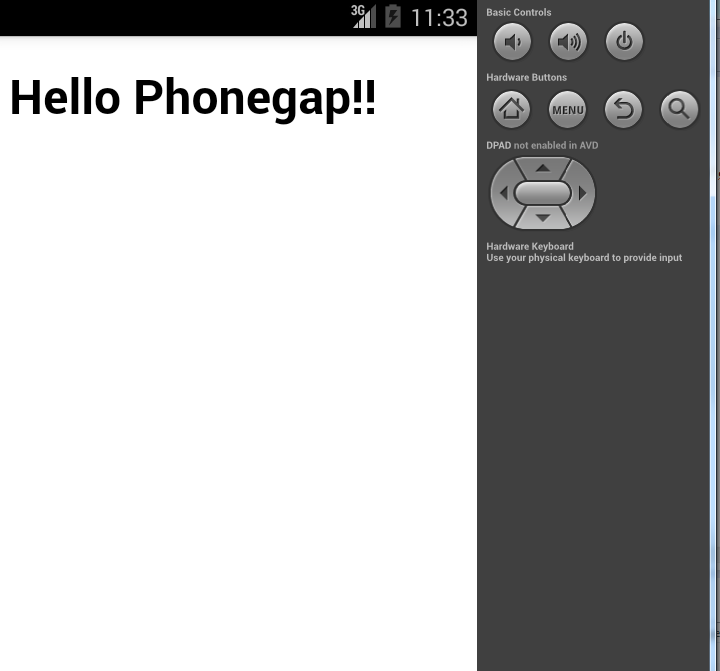


Figure :Launching the Android application.



1. Phonegap Application with jQuery Mobile

|  |  |
| --- | --- |
| **Goals** | * Building Phonegap Application using jQuery Mobile |
| **Time** | 60 minutes |

## 2.1: Create Phonegap Application as given in Lab1

<!DOCTYPE HTML>

<html>

<head>

<title>PhoneGap</title>

<meta name="viewport" content="width=device-width,initial-scale=1"></meta>

<link rel="stylesheet" href="css/jquery.mobile-1.2.0.css" />

<script src="js/jquery-1.11.1.min.js"></script>

<script src="js/jquery.mobile-1.2.0.js"></script>

<script type="text/javascript" charset="utf-8" src="cordova.js"></script>

</head>

<body>

<div data-role="header">

<h1>Page Title</h1>

</div>

<div data-role="content">

<p>Page content goes here...</p>

</div>

<div data-role="footer">

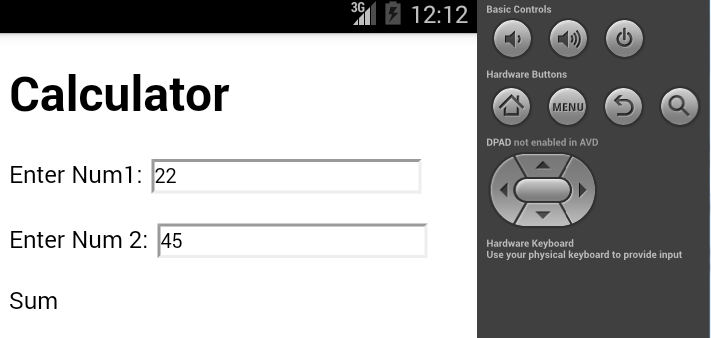
<h4>Page Footer</h4>

</div>

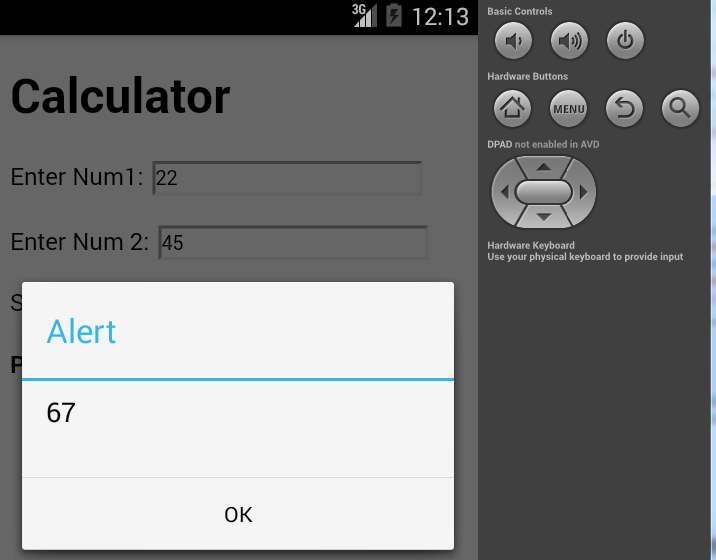
</body>

</html>

Create a jQuery Mobile App to Add two numbers as shown below:



On clicking on Sum it should display Result as shown below:



1. Cordova Installation

|  |  |
| --- | --- |
| **Goals** | * Installing Cordova |
| **Time** | 20 minutes |

Step 1: Install NodeJS

Step 2: Do Following proxy settings at nodejs command prompt

C:/>npm config set registry <http://registry.npmjs.org/>

C:/> <http://myusername:mypassword@proxy.somecompany:8080>

C:/>npm config set https-proxy <http://myusername:mypassword@proxy.somecompany:8080>

C:\>npm config set strict-ssl false

C:\>set HTTPS\_PROXY=http://myusername:mypassword@proxy.us.somecompany:8080

C:\>set HTTP\_PROXY=http://myusername:mypassword@proxy.us.somecompany:8080

To Create android project in Cordova

1. C:\>cordova create **MyApp** com.example.MyApp MyDemoApp
2. C:\>cd **MyApp**
3. C:\> cordova platform add android
4. C:\> cordova build
5. C:\> cordova emulate android