

CS 696 Emerging Web and Mobile Technologies
Spring Semester, 2011
Doc 11 PhoneGap
Mar 3, 2011

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References

PhoneGap documentation, <http://docs.phonegap.com/index.html>

PhoneGap

Native applications on:

iOS

Android

Blackberry

webOS

Symbian

Write App using HTML, CSS, JavaScript

PhoneGap wraps "Web App"
in native web view

iOS Development

Uses Xcode

Follow directions at <http://www.phonegap.com/start#ios>

More detailed instructions at:

[http://wiki.phonegap.com/w/page/16494778/Getting-Started-with-PhoneGap-\(iOS\)](http://wiki.phonegap.com/w/page/16494778/Getting-Started-with-PhoneGap-(iOS))

Basically just works

Android Development

Uses Eclipse

Must use Android 2.2 or earlier

The hard way

Follow the standard instructions at:

<http://www.phonegap.com/start#android>

The easy way

Use the PhoneGap Eclipse plugin

<http://wiki.phonegap.com/w/page/34483744/PhoneGap-Eclipse-PlugIn-for-Android>

Android Warning

When you run PhoneGap android project you must use

AVD (Android Virtual Device) running android 2.2 or earlier

Android Installation

Install Eclipse

[http://www.eclipse.org/downloads/
Eclipse IDE for Java Developers](http://www.eclipse.org/downloads/Eclipse%20IDE%20for%20Java%20Developers)

Skip this step if Eclipse is installed

Android Installation

Install Android

Download at:

<http://developer.android.com/sdk/index.html>

Instructions at:

<http://developer.android.com/sdk/installing.html>

The download includes the Android starter package

Android Install

Install ADT Eclipse plugin

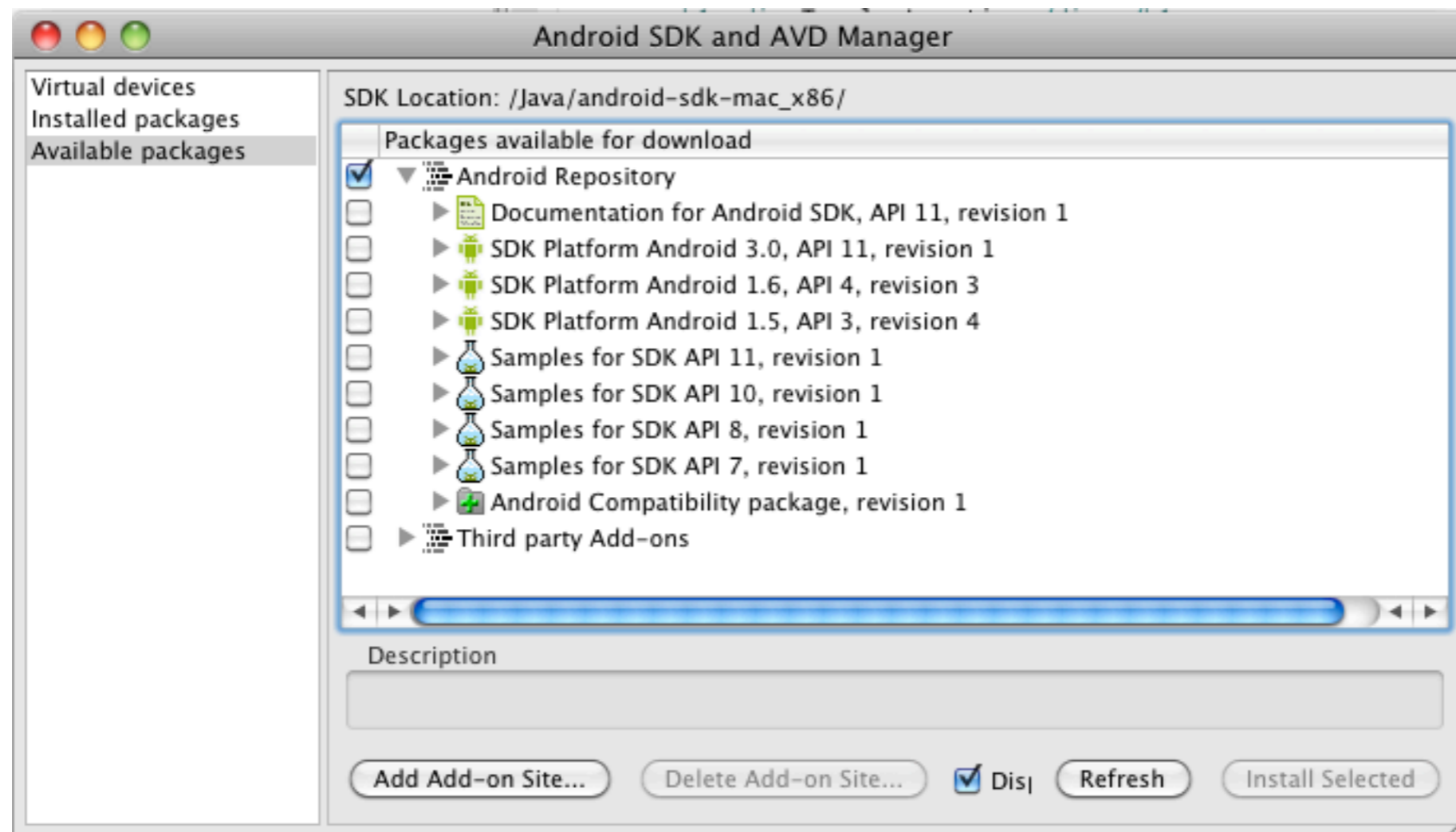
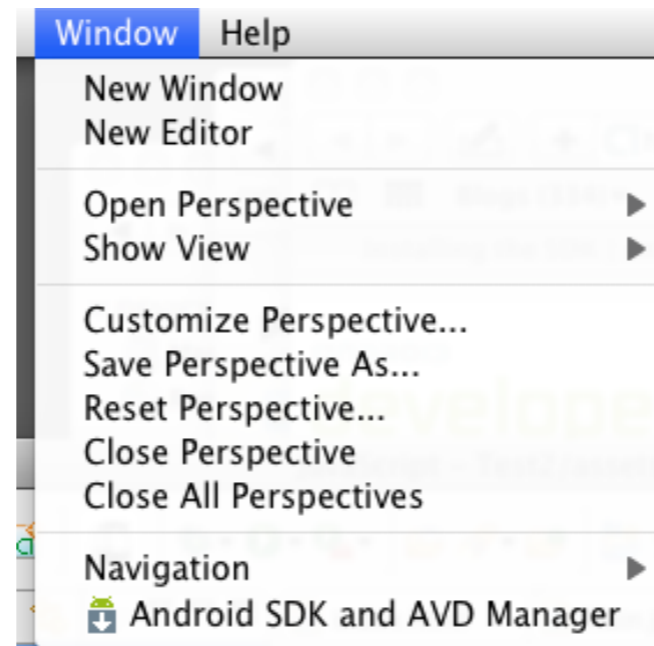
Instructions at:

<http://developer.android.com/sdk/eclipse-adt.html#installing>

Android Install

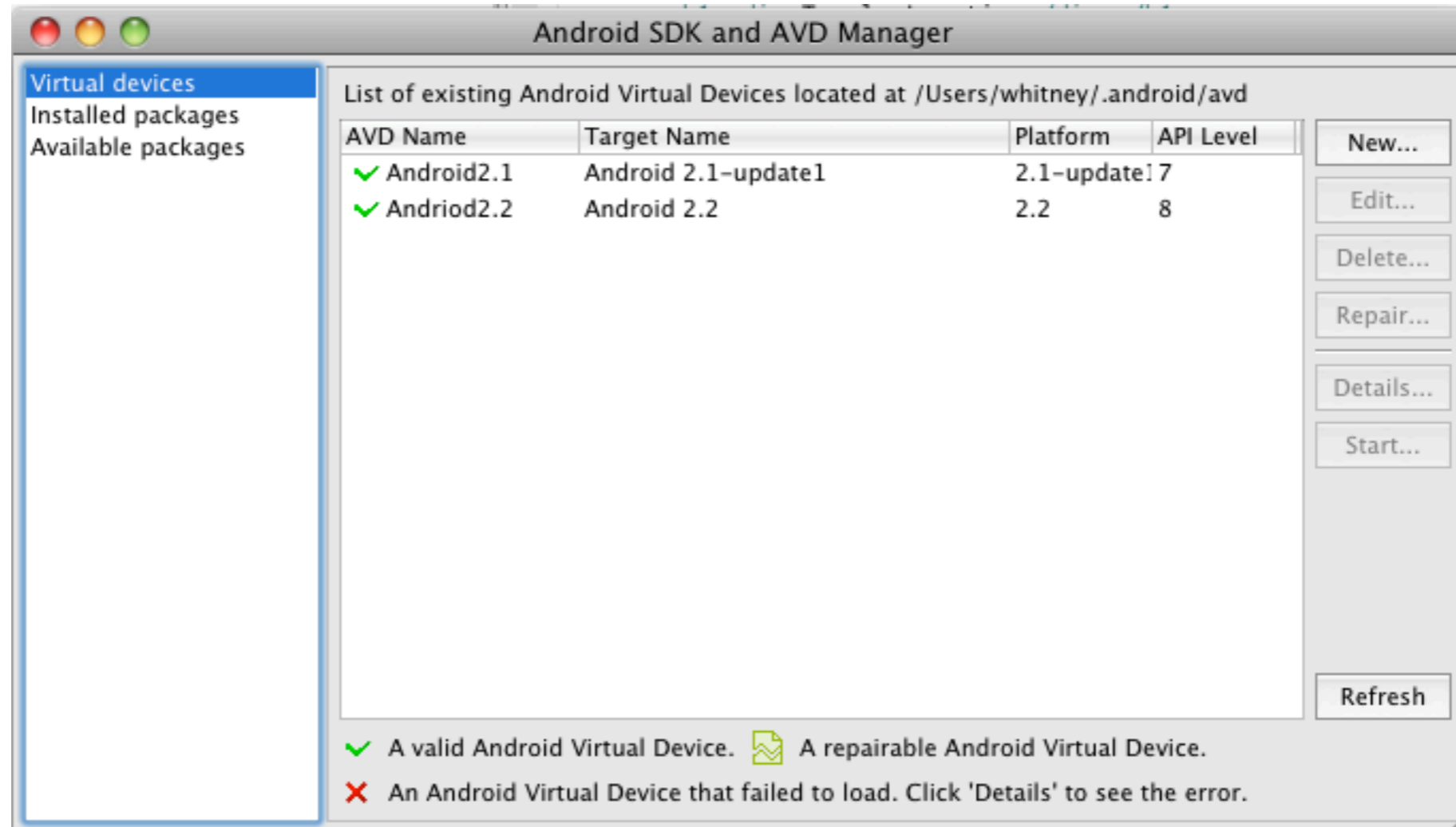
Install Android 2.2

In Eclipse



Android Install

Create AVD for Android 2.2



Hello World - Xcode



www directory

Contains HTML, CSS, JavaScript files

index.html start page

All CSS and JavaScript urls
Relative to this directory

PhoneGap JS file added automatically

Project/www
iPhone/Xcode

Project/assent/www
Android/Eclipse

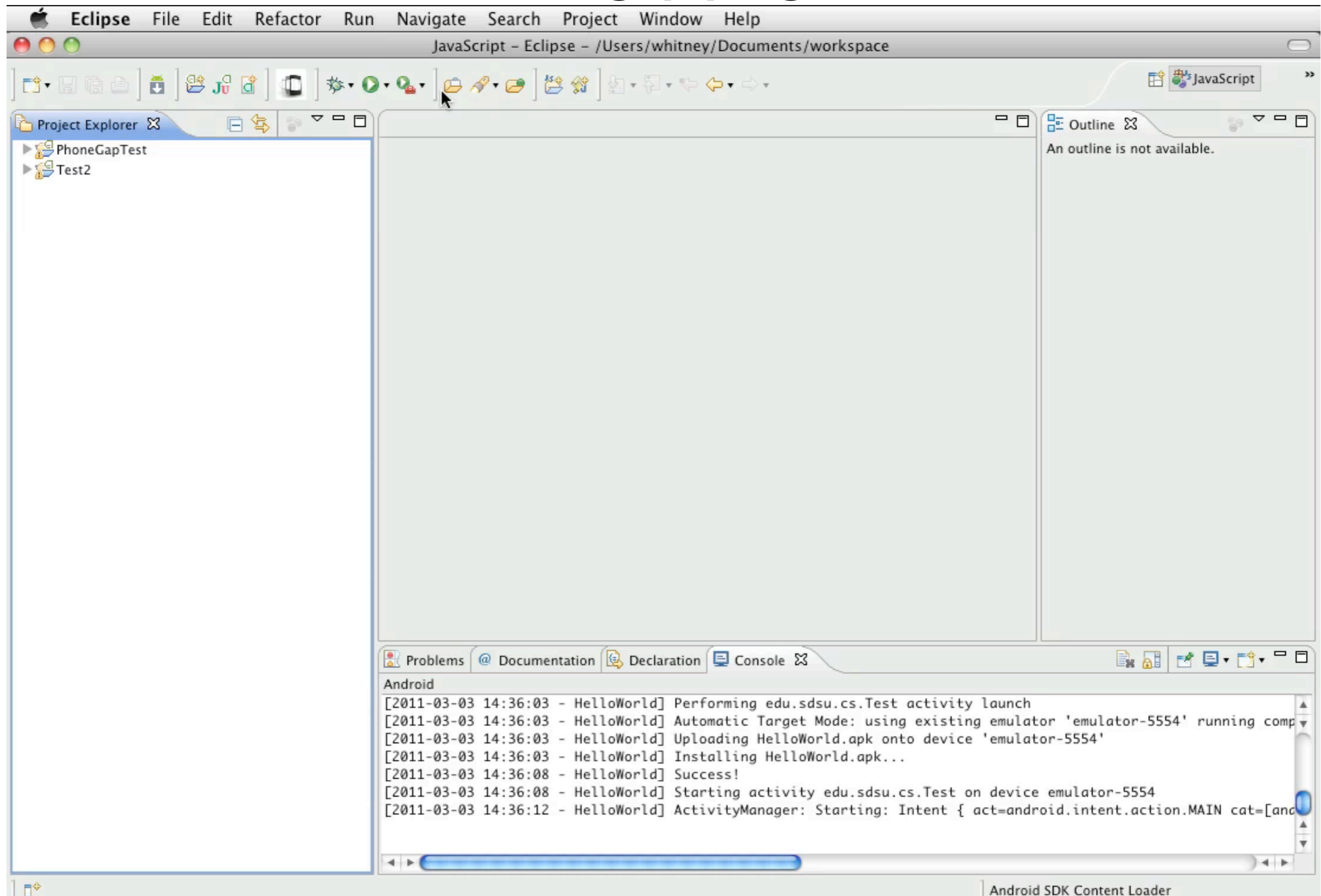
Xcode Template

```
<!DOCTYPE HTML PUBLIC "-//W3C//DTD HTML 4.01//EN" "http://www.w3.org/TR/html4/strict.dtd">
<html> <head>
  <meta name="viewport" content="width=default-width; user-scalable=no" />
  <meta http-equiv="Content-type" content="text/html; charset=utf-8">
  <title>test</title>
  <script type="text/javascript" charset="utf-8" src="phonegap.js"></script>
  <script type="text/javascript" charset="utf-8">
    // If you want to prevent dragging, uncomment this section
    /*
    function preventBehavior(e) { e.preventDefault(); };
    document.addEventListener("touchmove", preventBehavior, false);
    */

    function onBodyLoad() {
      document.addEventListener("deviceready",onDeviceReady,false);
    }

    /* When this function is called, PhoneGap has been initialized and is ready to roll */
    function onDeviceReady() {
      // do your thing!
    }
  </script>
</head>
<body onload="onBodyLoad()">
```

Android - With Phonegap plugin



Android - With Phonegap plugin

Installs in assets/www

phonegap JS

jQuery mobile, or Sencha Touch files (on none if selected)

index.html with example

main.js for example

pgandjqm-style-override.css

Increases width of headers and footers in jQuery mobile

PhoneGap API

Accelerometer

Camera

Compass

Contacts

Device

Events

File

Geolocation

Media

Network

Notification

Storage

Provides JavaScript access

Not all platforms have access to all API

Geolocation

Geolocation API

Methods

geolocation.getCurrentPosition
geolocation.watchPosition
geolocation.clearWatch

Arguments

geolocationSuccess (function)
geolocationError (function)
geolocationOptions (Hash)

Example

```
<script type="text/javascript" charset="utf-8">
  function onBodyLoad() { document.addEventListener("deviceready",onDeviceReady,false);}

  function onDeviceReady() {
    navigator.geolocation.getCurrentPosition(onSuccess, onError); }

  function onSuccess(position) {
    var element = document.getElementById('geolocation');
    element.innerHTML = 'Latitude: ' + position.coords.latitude + '<br />' +
      'Longitude: ' + position.coords.longitude + '<br />';
  }

  function onError(error) {
    alert('code: ' + error.code + '\n' + 'message: ' + error.message + '\n');
  }
</script>
</head>
<body onload="onBodyLoad()"> <p id="geolocation">Finding geolocation...</p>
</body>
</html>
```