

# PL2303HXD Android SOP



# Agenda

- Introduction
- JDK
  - JDK Path Setting
  - JDK Class Path Setting
- Eclipse – PL2303 Lib Setup
- Setup Android Virtual machines (ADK)
- Run PL2303 Demo App

# Introduction

- Please follow the training to learn that is useful.

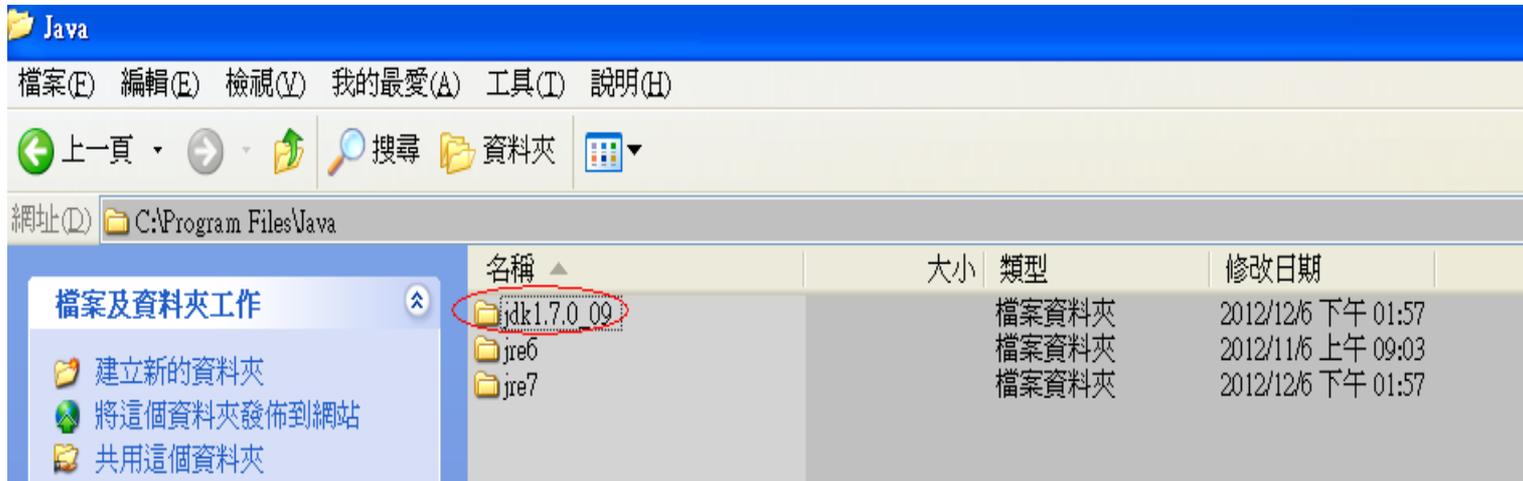
<http://code.google.com/p/androidbmi/wiki/IntroAndroid>

1. **JDK**
2. **Eclipse**
3. **ADT**
4. **Android SDK**

- Java: install the JDK set path with classpath path

<http://blog.wu-boy.com/2008/02/java-%e5%ae%89%e8%a3%9d%e5%a5%bd-jdk-%e8%a8%ad%e5%ae%9a-path-%e8%b7%af%e5%be%91/>

# JDK



Java

檔案(E) 編輯(E) 檢視(V) 我的最愛(A) 工具(T) 說明(H)

← 上一頁 · → 資料夾 搜尋 資料夾

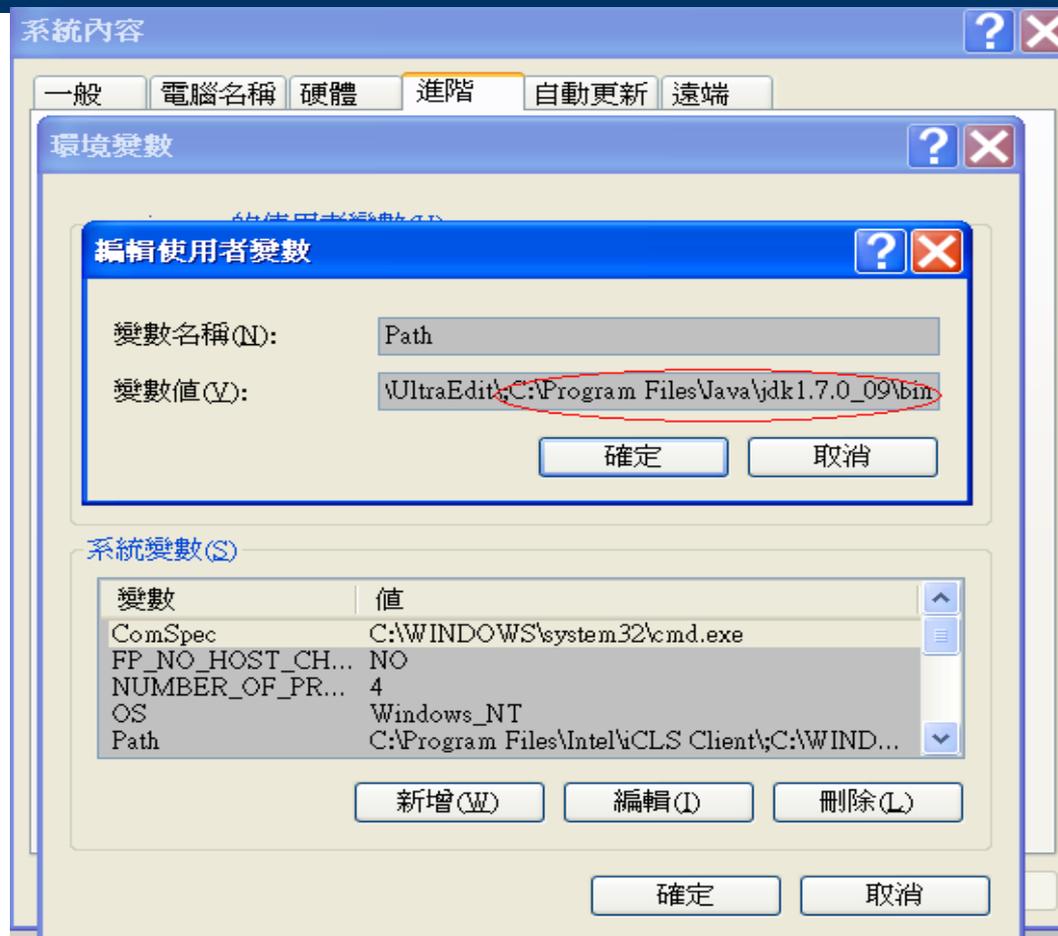
網址(D) C:\Program Files\Java

名稱	大小	類型	修改日期
jdk1.7.0_09		檔案資料夾	2012/12/6 下午 01:57
jre6		檔案資料夾	2012/11/6 上午 09:03
jre7		檔案資料夾	2012/12/6 下午 01:57

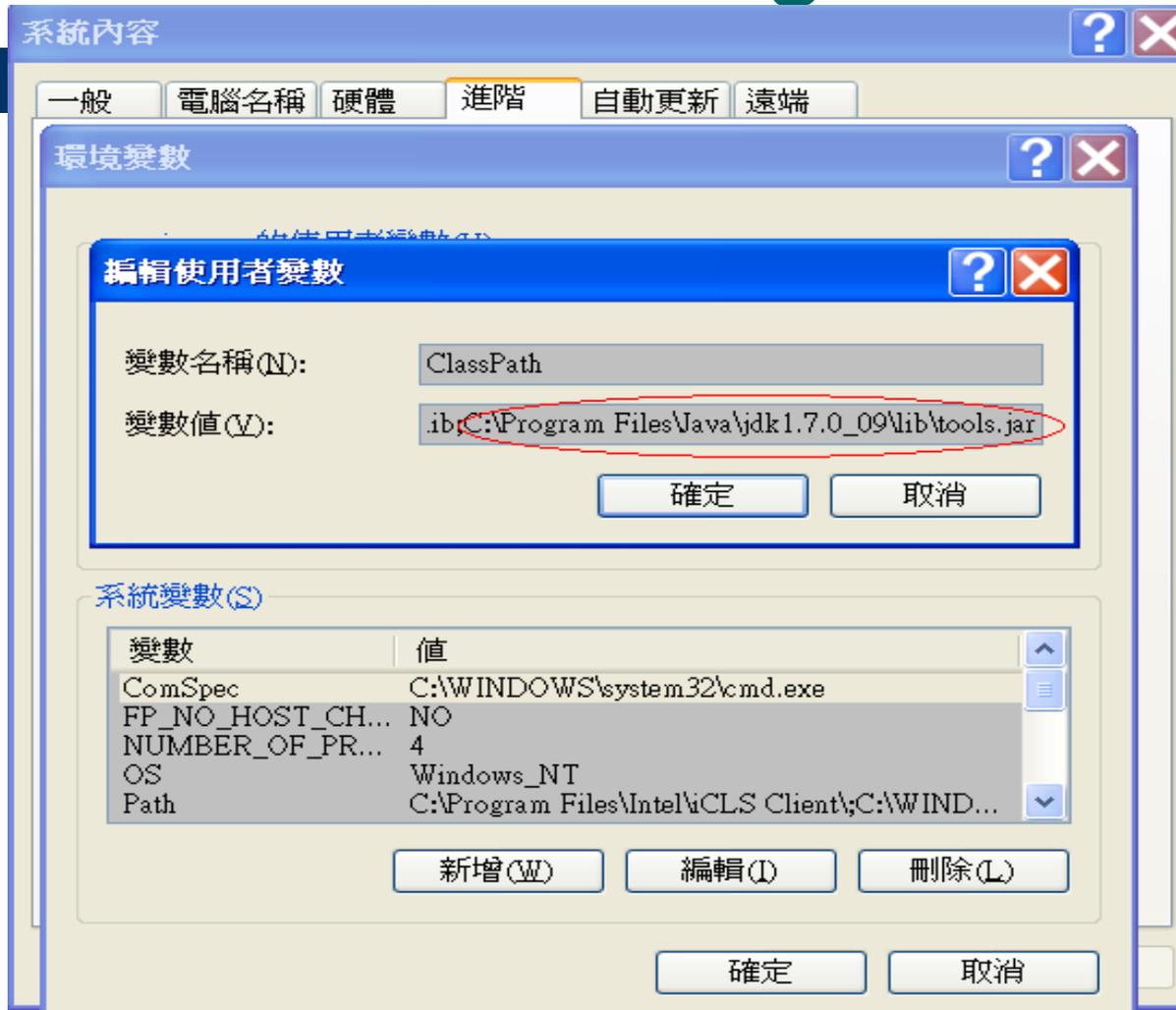
檔案及資料夾工作

- 建立新的資料夾
- 將這個資料夾發佈到網站
- 共用這個資料夾

# JDK Path Setting



# JDK Class Path Setting



The screenshot shows the Windows System Properties dialog box, Environment tab. The Environment Variables dialog is open, showing the 'ClassPath' user variable being edited. The value is 'lib;C:\Program Files\Java\jdk1.7.0\_09\lib\tools.jar', with the path part circled in red. Below the dialog, the System Variables list is visible, showing variables like ComSpec, FP\_NO\_HOST\_CH..., NUMBER\_OF\_PR..., OS, and Path.

系統內容

一般 電腦名稱 硬體 進階 自動更新 遠端

環境變數

編輯使用者變數

變數名稱(N): ClassPath

變數值(V): lib;C:\Program Files\Java\jdk1.7.0\_09\lib\tools.jar

確定 取消

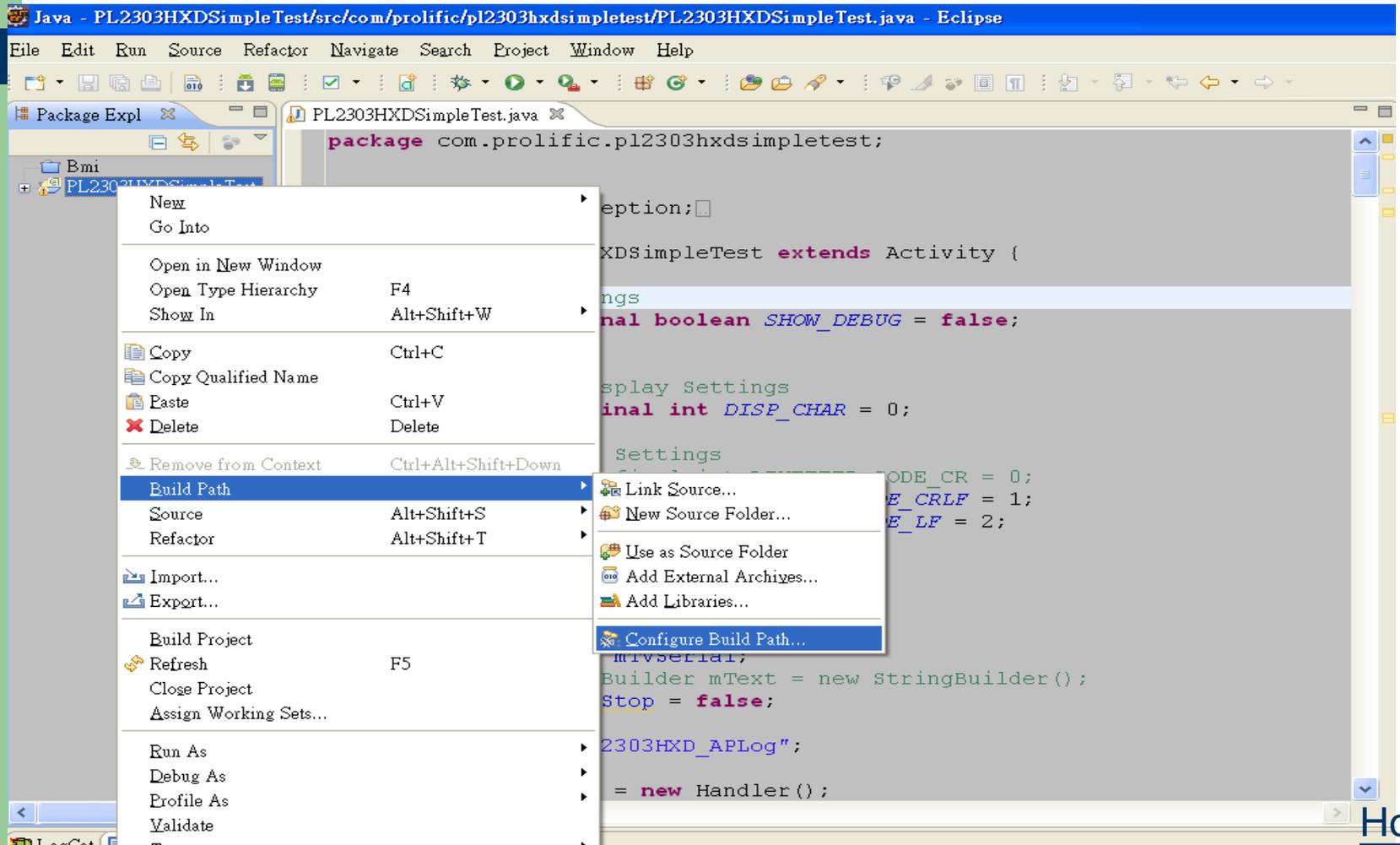
系統變數(S)

變數	值
ComSpec	C:\WINDOWS\system32\cmd.exe
FP_NO_HOST_CH...	NO
NUMBER_OF_PR...	4
OS	Windows_NT
Path	C:\Program Files\Intel\CLS Client\;C:\WIND...

新增(W) 編輯(E) 刪除(D)

確定 取消

# Eclipse – PL2303 Lib Setup



The screenshot shows the Eclipse IDE interface. The title bar reads "Java - PL2303HXDSimpleTest/src/com/prolific/pl2303hxdsimpletest/PL2303HXDSimpleTest.java - Eclipse". The menu bar includes "File", "Edit", "Run", "Source", "Refactor", "Navigate", "Search", "Project", "Window", and "Help". The Package Explorer on the left shows a project named "PL2303HXDSimpleTest" under a "Bmi" folder. The main editor window displays the source code for "PL2303HXDSimpleTest.java". A context menu is open over the code, with the "Build Path" option selected. A sub-menu is also open, showing "Configure Build Path..." as the highlighted option. The code in the background includes package declarations, class inheritance, and method definitions.

```
package com.prolific.pl2303hxdsimpletest;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.Toast;

public class PL2303HXDSimpleTest extends Activity {

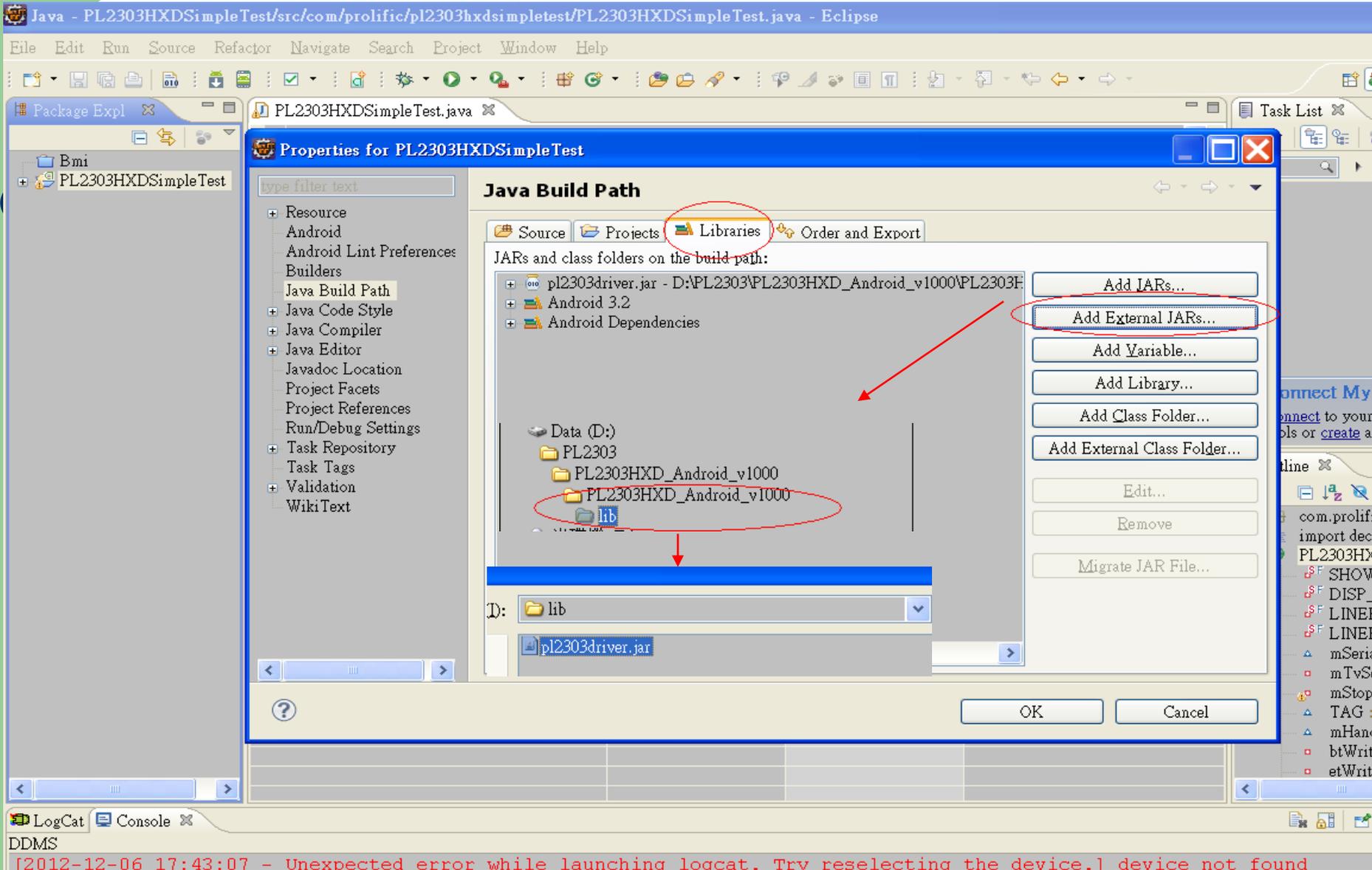
    private boolean SHOW_DEBUG = false;

    @Override
    protected void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button mButton = (Button) findViewById(R.id.button);
        mButton.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                Settings settings = new Settings(this);
                settings.save();
                Toast.makeText(this, "Settings Saved", Toast.LENGTH_SHORT).show();
            }
        });
    }

    private class Settings {
        private static final String CODE_CR = "CODE_CR";
        private static final String E_CRLF = "E_CRLF";
        private static final String E_LF = "E_LF";

        Settings(Activity a) {
            mCodeCr = a.getSharedPreferences("PL2303HXD_APLog").getBoolean(CODE_CR, false);
            mE_CRLF = a.getSharedPreferences("PL2303HXD_APLog").getBoolean(E_CRLF, false);
            mE_LF = a.getSharedPreferences("PL2303HXD_APLog").getBoolean(E_LF, false);
        }

        void save() {
            mCodeCr = true;
            mE_CRLF = true;
            mE_LF = true;
        }
    }
}
```



Java - PL2303HXDSimpleTest/src/com/prolific/pl2303hxdsimpletest/PL2303HXDSimpleTest.java - Eclipse

File Edit Run Source Refactor Navigate Search Project Window Help

Package Expl PL2303HXDSimpleTest.java Task List

### Properties for PL2303HXDSimpleTest

type filter text

- Resource
  - Android
  - Android Lint Preferences
  - Builders
  - Java Build Path
  - Java Code Style
  - Java Compiler
  - Java Editor
  - Javadoc Location
  - Project Facets
  - Project References
  - Run/Debug Settings
- Task Repository
- Task Tags
- Validation
- Wiki Text

#### Java Build Path

Source Projects Libraries Order and Export

JARs and class folders on the build path:

- pl2303driver.jar - D:\PL2303\PL2303HXD\_Android\_v1000\PL2303F
- Android 3.2
- Android Dependencies

Data (D:)

- PL2303
  - PL2303HXD\_Android\_v1000
    - PL2303HXD\_Android\_v1000
      - lib

D: lib

pl2303driver.jar

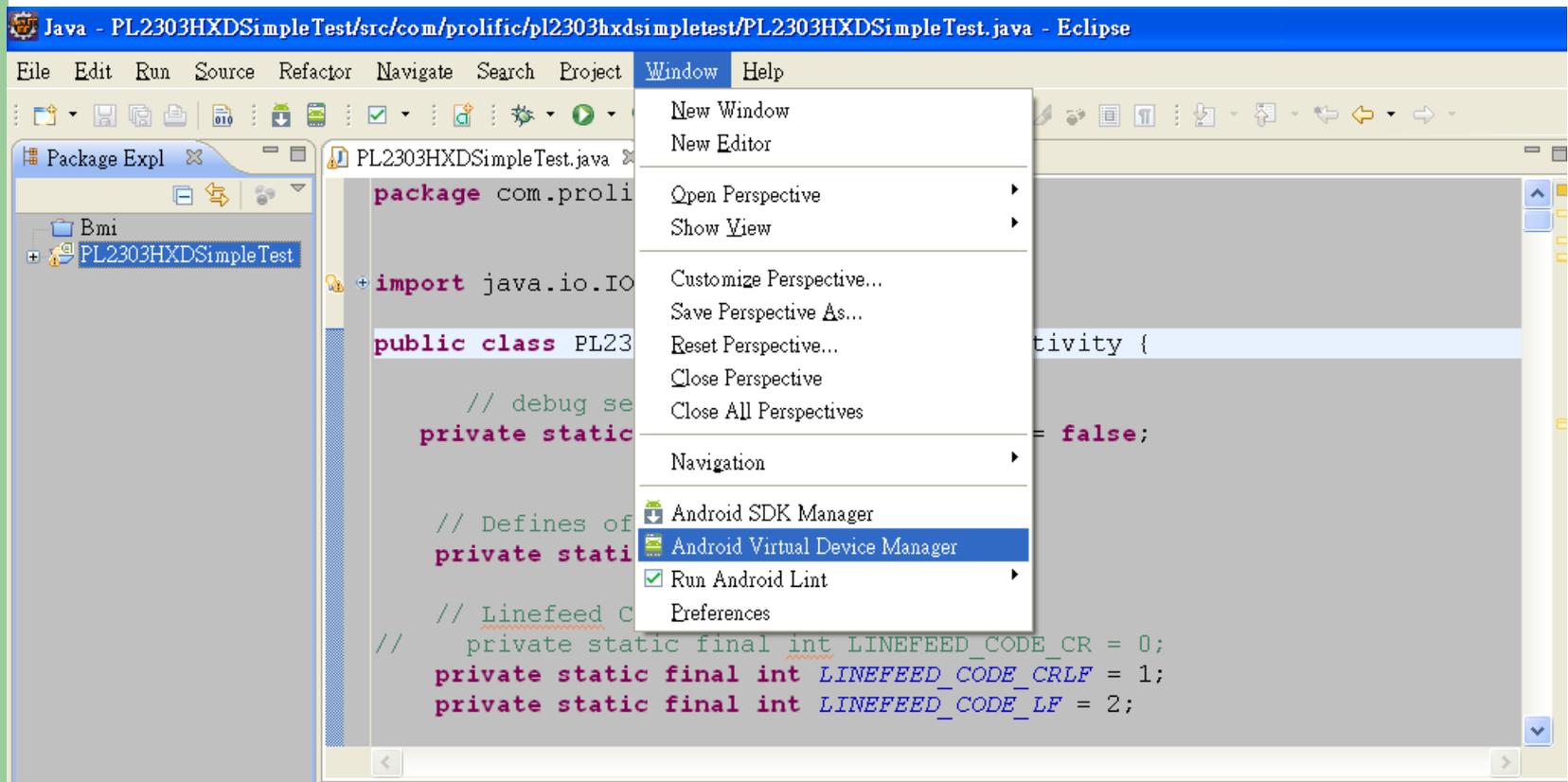
Buttons: Add IARs..., Add External JARs..., Add Variable..., Add Library..., Add Class Folder..., Add External Class Folder..., Edit..., Remove, Migrate JAR File...

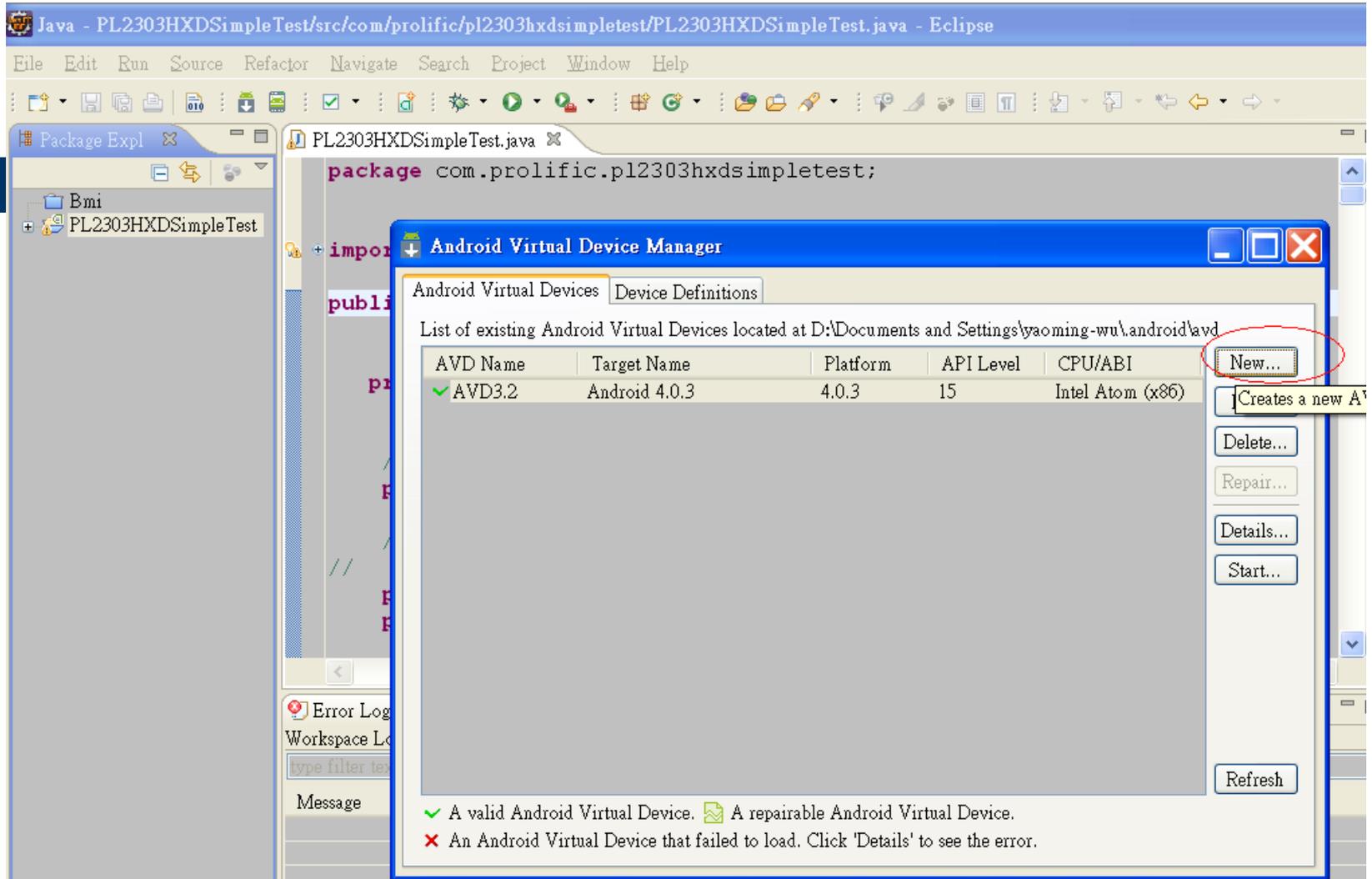
OK Cancel

LogCat Console DDMS

[2012-12-06 17:43:07 - Unexpected error while launching logcat. Try reselecting the device.] device not found

# Setup Android Virtual machines (ADK)





Java - PL2303HXDSimpleTest/src/com/prolific/pl2303hxdsimpletest/PL2303HXDSimpleTest.java - Eclipse

File Edit Run Source Refactor Navigate Search Project Window Help

Package Expl PL2303HXDSimpleTest.java

Android Virtual Device Manager

Android Virtual Devices Device Definitions

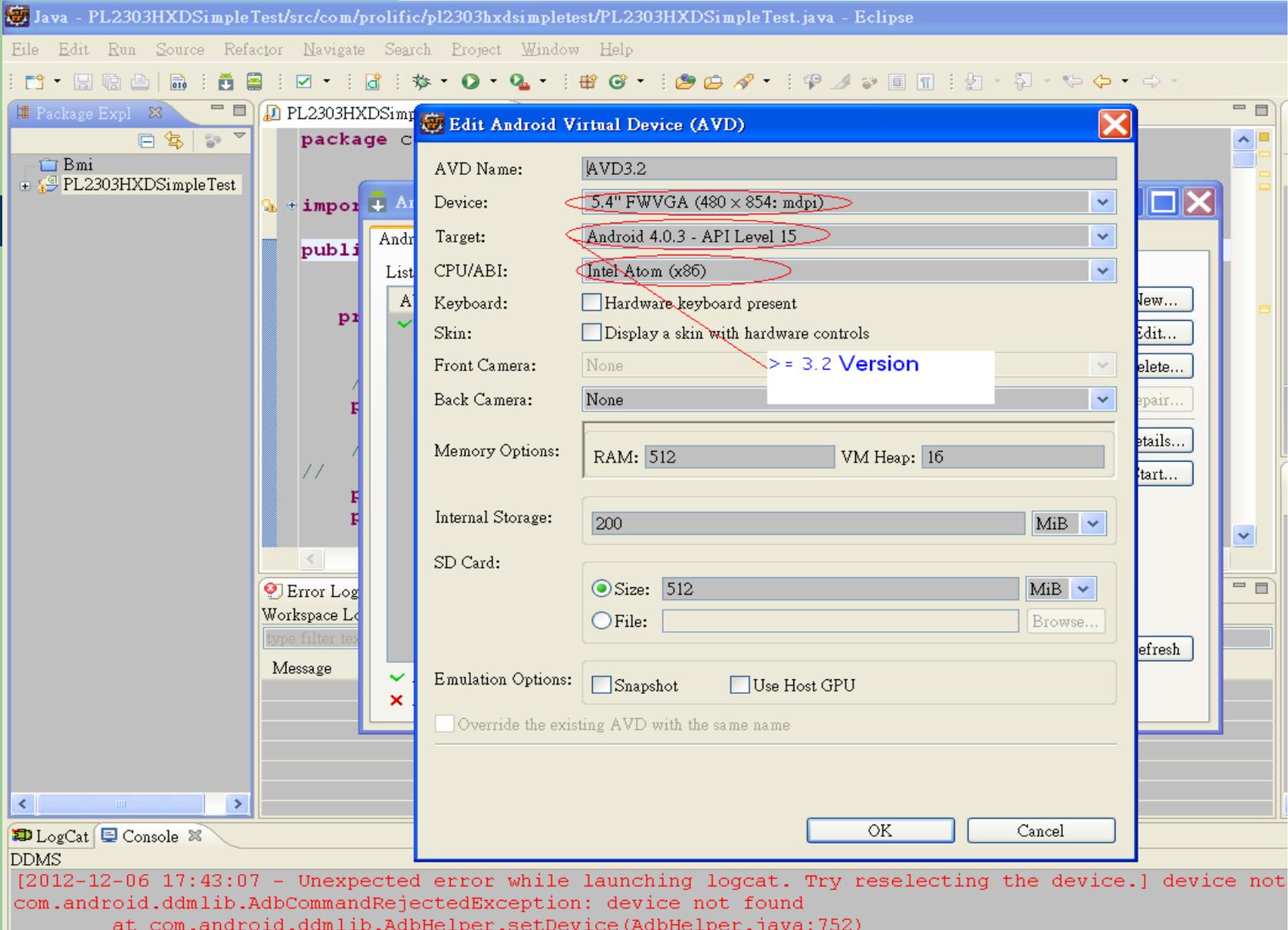
List of existing Android Virtual Devices located at D:\Documents and Settings\yaoming-wu\android\avd

AVD Name	Target Name	Platform	API Level	CPU/ABI
✓ AVD3.2	Android 4.0.3	4.0.3	15	Intel Atom (x86)

New...  
Creates a new AVD

Delete...  
Repair...  
Details...  
Start...  
Refresh

✓ A valid Android Virtual Device. 🗑️ A repairable Android Virtual Device.  
✗ An Android Virtual Device that failed to load. Click 'Details' to see the error.



Java - PL2303HXDSimpleTest/src/com/prolific/pl2303hxdsimpletest/PL2303HXDSimpleTest.java - Eclipse

File Edit Run Source Refactor Navigate Search Project Window Help

Package Expl PL2303HXDSimp

**Edit Android Virtual Device (AVD)**

AVD Name: AVD3.2

Device: 5.4" FWVGA (480 x 854: mdpi)

Target: Android 4.0.3 - API Level 15

CPU/ABI: Intel Atom (x86)

Keyboard:  Hardware keyboard present

Skin:  Display a skin with hardware controls

Front Camera: None

Back Camera: None

Memory Options: RAM: 512 VM Heap: 16

Internal Storage: 200 MiB

SD Card:  Size: 512 MiB  File: Browse...

Emulation Options:  Snapshot  Use Host GPU

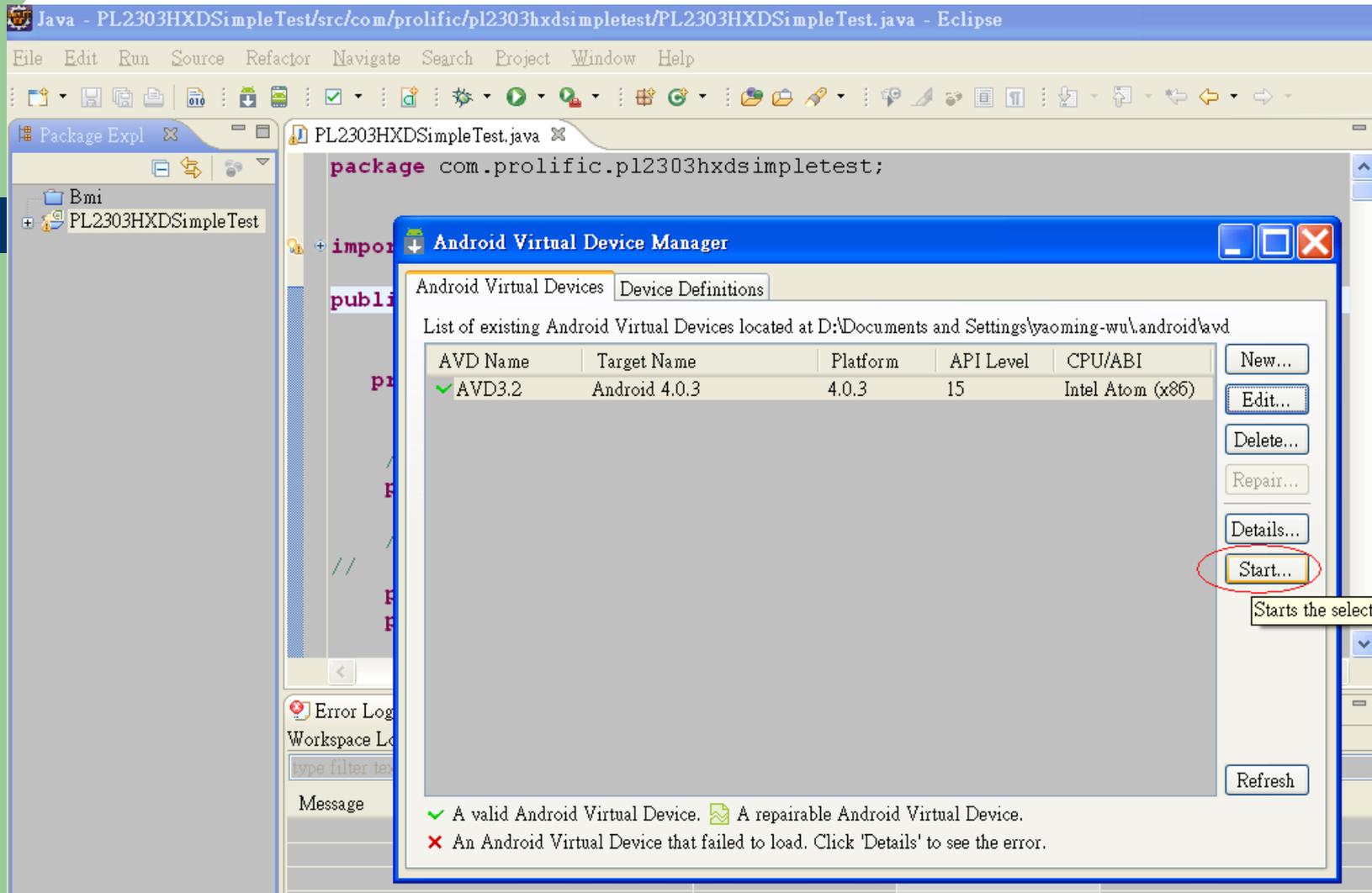
Override the existing AVD with the same name

OK Cancel

LogCat Console

DDMS

```
[2012-12-06 17:43:07 - Unexpected error while launching logcat. Try reselecting the device.] device not
com.android.ddmlib.AdbCommandRejectedException: device not found
at com.android.ddmlib.AdbHelper.setDevice(AdbHelper.java:752)
```



Java - PL2303HXDSimpleTest/src/com/prolific/pl2303hxdsimpletest/PL2303HXDSimpleTest.java - Eclipse

File Edit Run Source Refactor Navigate Search Project Window Help

Package Expl PL2303HXDSimpleTest.java

Android Virtual Device Manager

Android Virtual Devices Device Definitions

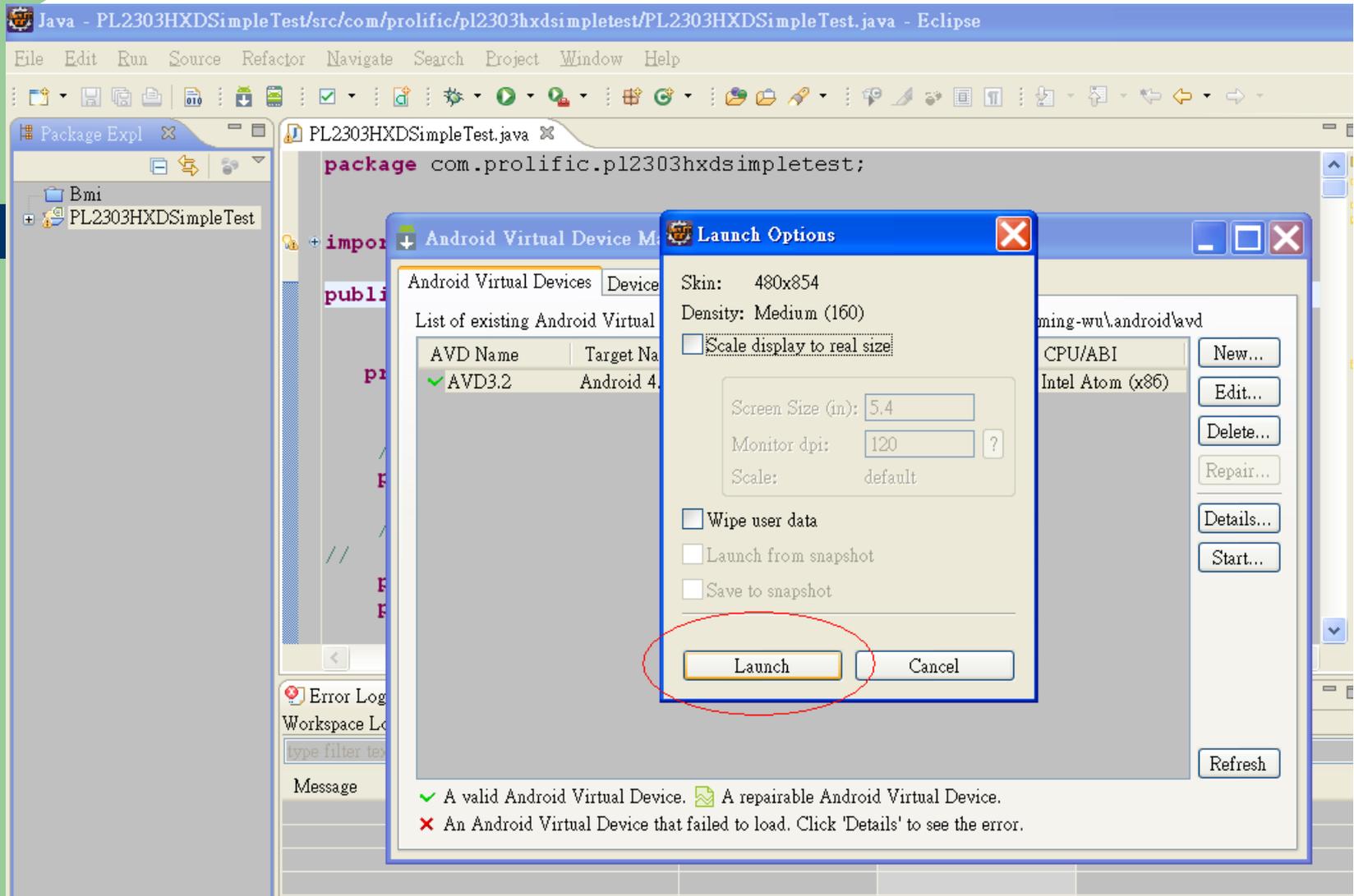
List of existing Android Virtual Devices located at D:\Documents and Settings\yaoming-wu\android\avd

AVD Name	Target Name	Platform	API Level	CPU/ABI
✓ AVD3.2	Android 4.0.3	4.0.3	15	Intel Atom (x86)

New... Edit... Delete... Repair... Details... Start... Refresh

Starts the select

✓ A valid Android Virtual Device. 📁 A repairable Android Virtual Device.  
✗ An Android Virtual Device that failed to load. Click 'Details' to see the error.



The screenshot shows the Eclipse IDE interface. The main window displays the source code for `PL2303HXDSimpleTest.java` in the `com.prolific.pl2303hxdsimpletest` package. A dialog box titled "Launch Options" is open, showing the configuration for an Android Virtual Device (AVD). The dialog includes a table of existing AVDs, a list of configuration options, and a "Launch" button circled in red.

Android Virtual Devices | Device

List of existing Android Virtual Devices

AVD Name	Target Name
✓ AVD3.2	Android 4.0

Launch Options

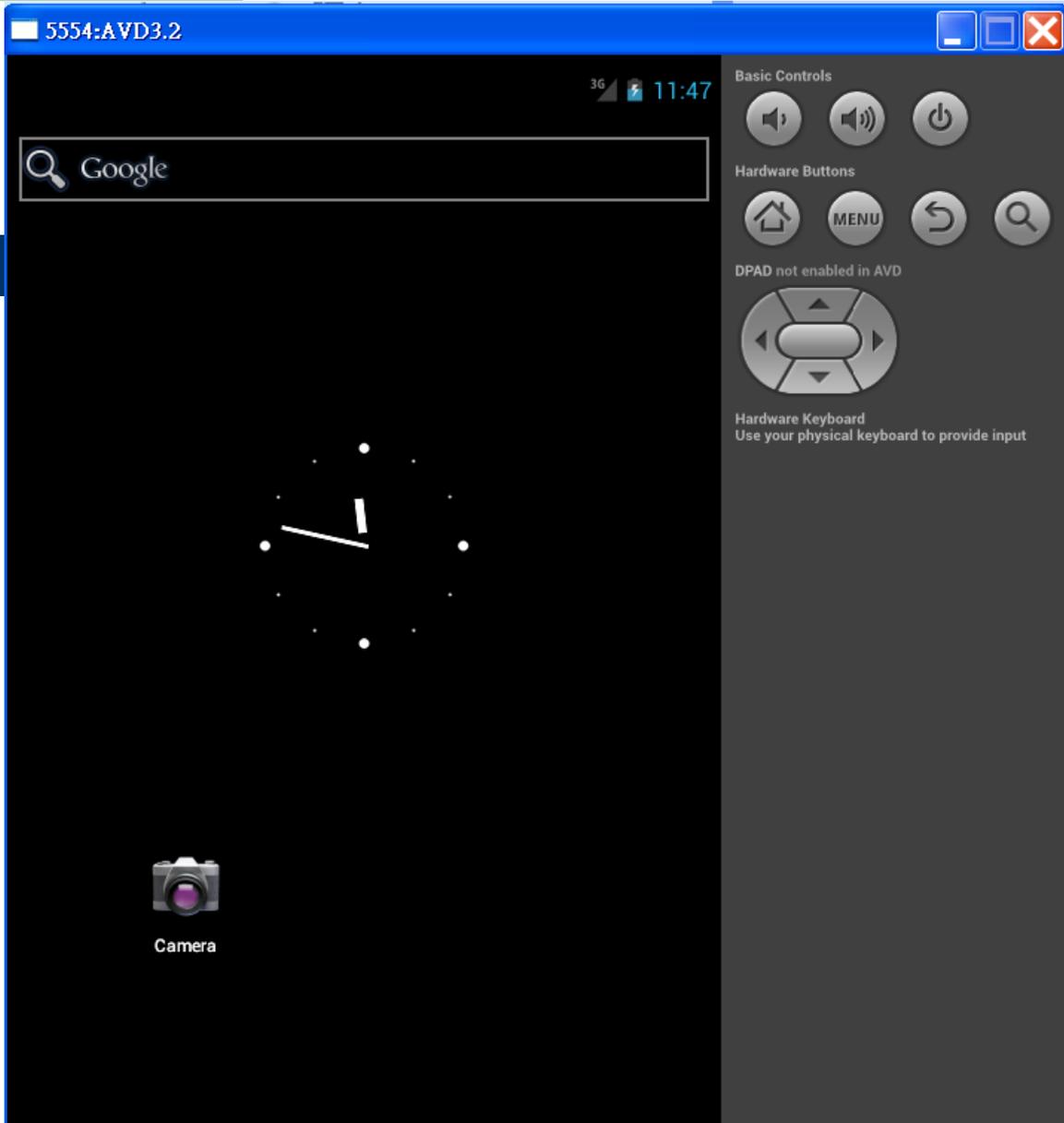
Skin: 480x854  
Density: Medium (160)  
 Scale display to real size

Screen Size (in): 5.4  
Monitor dpi: 120 ?  
Scale: default

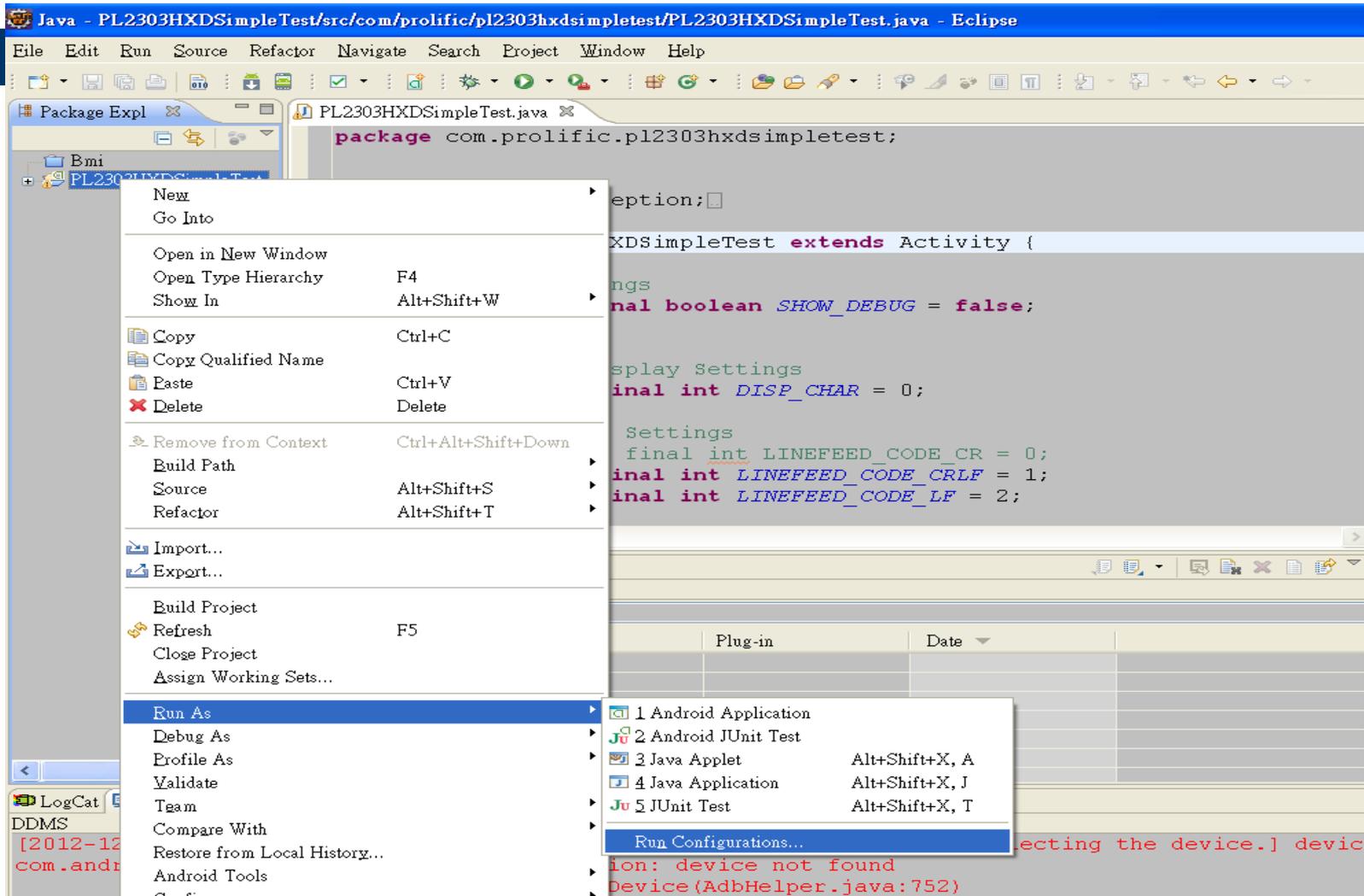
Wipe user data  
 Launch from snapshot  
 Save to snapshot

Launch Cancel

✓ A valid Android Virtual Device. 📁 A repairable Android Virtual Device.  
✗ An Android Virtual Device that failed to load. Click 'Details' to see the error.



# Run PL2303 Demo App



The screenshot shows the Eclipse IDE interface. The main editor displays the following Java code:

```

package com.prolific.pl2303hxdsimpletest;

import android.app.Activity;
import android.os.Bundle;
import android.view.View;
import android.view.View.OnClickListener;
import android.widget.Button;
import android.widget.Toast;

public class PL2303HXDSimpleTest extends Activity {

    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.activity_main);
        Button btn = (Button) findViewById(R.id.button);
        btn.setOnClickListener(new OnClickListener() {
            @Override
            public void onClick(View v) {
                Toast.makeText(PL2303HXDSimpleTest.this, "Hello World",
                    Toast.LENGTH_SHORT).show();
            }
        });
    }
}

```

A context menu is open over the `Run As` option. The menu items are:

- New
- Go Into
- Open in New Window
- Open Type Hierarchy F4
- Show In Alt+Shift+W
- Copy Ctrl+C
- Copy Qualified Name
- Paste Ctrl+V
- Delete Delete
- Remove from Context Ctrl+Alt+Shift+Down
- Build Path
- Source Alt+Shift+S
- Refactor Alt+Shift+T
- Import...
- Export...
- Build Project
- Refresh F5
- Close Project
- Assign Working Sets...
- Run As**
  - 1 Android Application
  - 2 Android JUnit Test
  - 3 Java Applet Alt+Shift+X, A
  - 4 Java Application Alt+Shift+X, J
  - 5 JUnit Test Alt+Shift+X, T
  - Run Configurations...
- Debug As
- Profile As
- Validate
- Team
- Compare With
- Restore from Local History...
- Android Tools

The LogCat window at the bottom shows the following error:

```

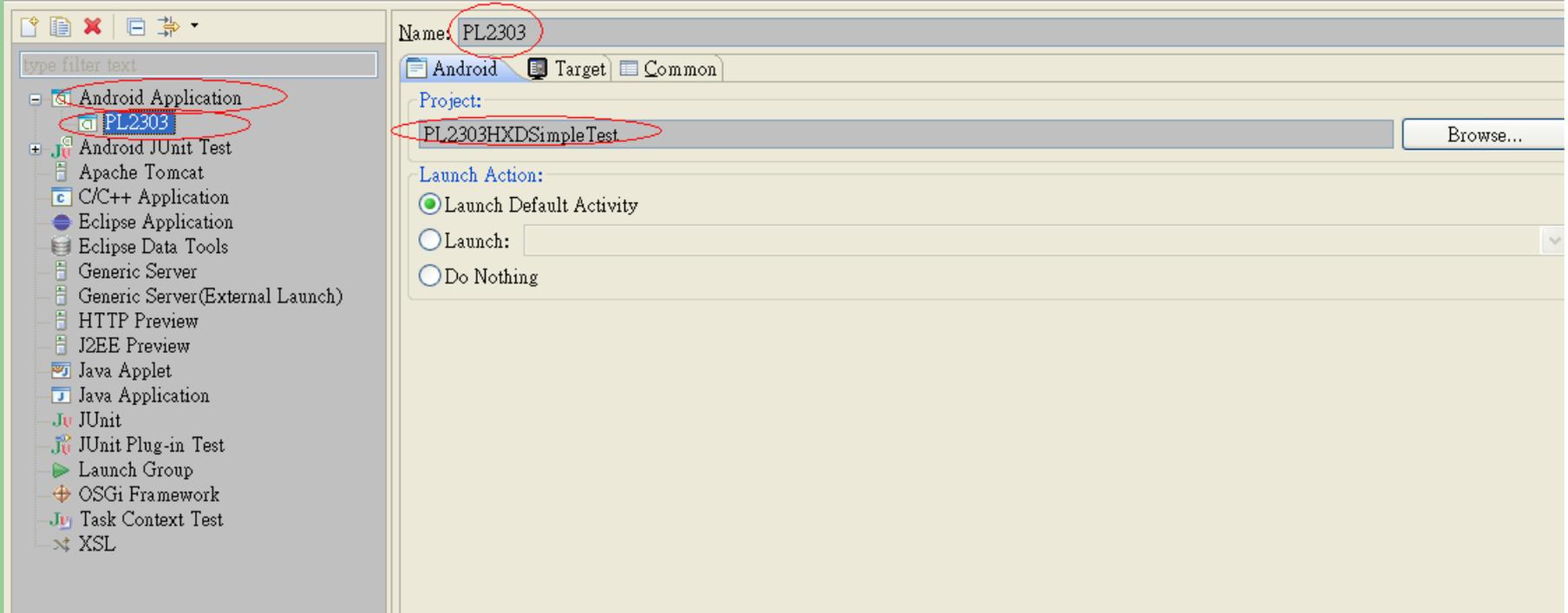
[2012-12-12 10:00:00] com.android...
E: [2012-12-12 10:00:00] [com.prolific.pl2303hxdsimpletest:main] java.lang.RuntimeException: Unable to instantiate activity class: java.lang.ClassNotFoundException: Device (AdbHelper.java:752)

```

## Run Configurations

### Create, manage, and run configurations

Android Application



The screenshot shows the 'Run Configurations' dialog in Eclipse IDE. The left pane shows a tree view of configuration types, with 'Android Application' and 'PL2303' selected. The right pane shows the configuration details for 'PL2303', including the project name 'PL2303HXDSimpleTest' and the launch action 'Launch Default Activity'.

Name: PL2303

Android Target Common

Project:  
PL2303HXDSimpleTest

Launch Action:  
 Launch Default Activity  
 Launch:  
 Do Nothing

### Run Configurations

Create, manage, and run configurations

Android Application

Name: PL2303

Android Target Common

Deployment Target Selection Mode

- Always prompt to pick device
- Launch on all compatible devices/AVD's
- Automatically pick compatible device: Always uses preferred AVD if set below, launches on compatible device/AVD otherwise.

Active devices and AVD's

Select a preferred Android Virtual Device for deployment:

AVD Name	Target Name	Platform	API Level	CPU/ABI	Details...
<input checked="" type="checkbox"/> AVD3.2	Android 4.0.3	4.0.3	15	Intel Atom (x86)	Start...

Emulator launch parameters:

If no compatible and active devices or AVD's are found, then an AVD might be launched. Provide options for the AVD launch below.

Network Speed: Full

Network Latency: None

Wipe User Data

Disable Boot Animation

Apply Revert

Run Close

Java - PL2303HXDSimpleTest/src/com/prolific/pl2303hxdsimpletest/PL2303HXDSimpleTest.java - Eclipse

File Edit Run Source Refactor Navigate Search Project Window Help

Package Expl PL2303HXDSimpleTest.java

```

package com.prolific.pl2303hxdsimpletest;

...
HXDSimpleTest extends Activity {
...
final boolean SHOW_DEBUG = false;
...
display Settings
final int DISP_CHAR = 0;
...
Settings
final int LINEFEED_CODE_CR = 0;
final int LINEFEED_CODE_CRLF = 1;
final int LINEFEED_CODE_LF = 2;
...

```

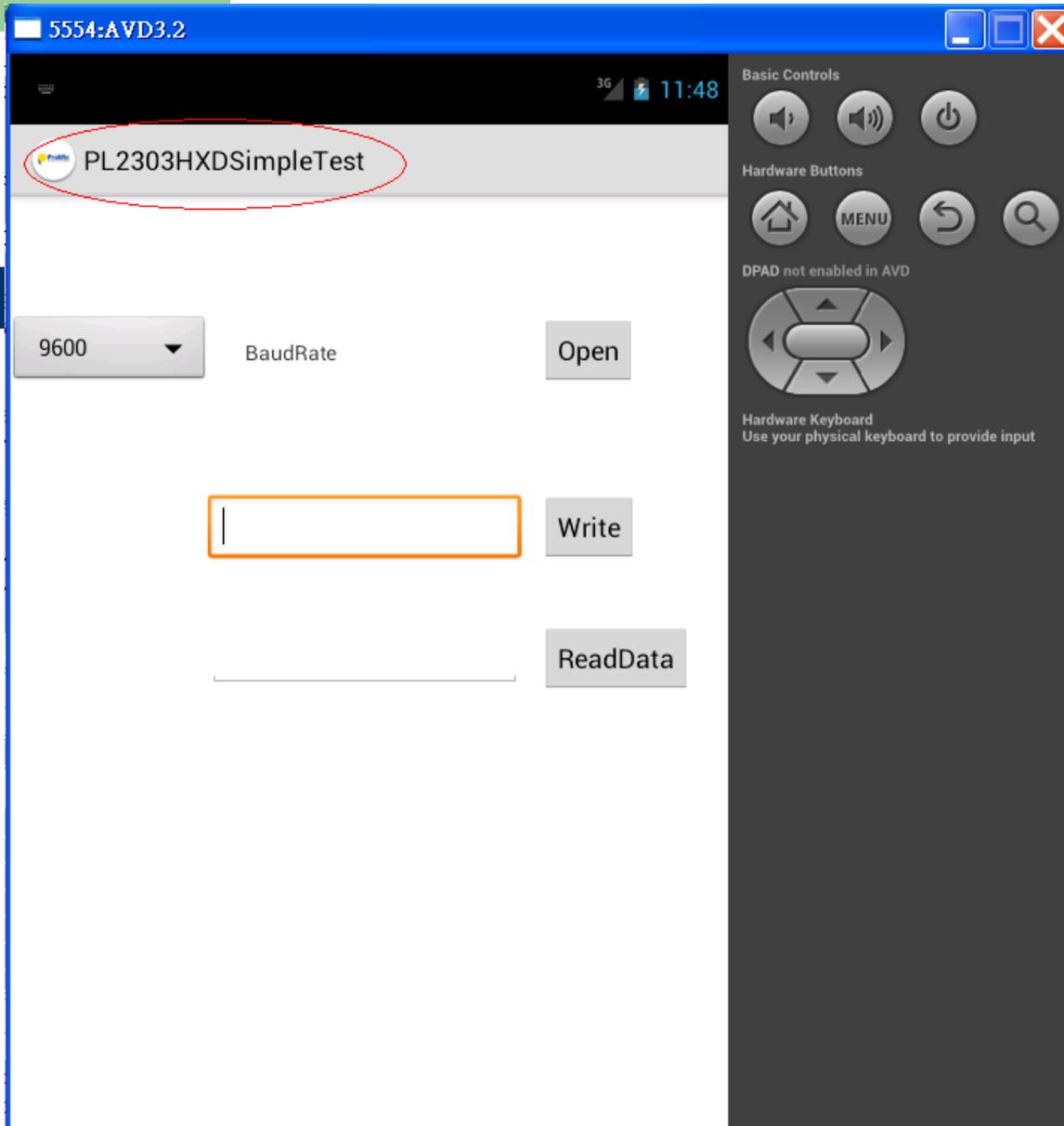
Context Menu:

- New
- Go Into
- Open in New Window
- Open Type Hierarchy F4
- Show In Alt+Shift+W
- Copy Ctrl+C
- Copy Qualified Name
- Paste Ctrl+V
- Delete Delete
- Remove from Context Ctrl+Alt+Shift+Down
- Build Path
- Source Alt+Shift+S
- Refactor Alt+Shift+T
- Import...
- Export...
- Build Project
- Refresh F5
- Close Project
- Assign Working Sets...
- Run As**
  - 1 Android Application**
  - 2 Android JUnit Test
  - 3 Java Applet Alt+Shift+X, A
  - 4 Java Application Alt+Shift+X, J
  - 5 JUnit Test Alt+Shift+X, T
  - Run Configurations...
- Debug As
- Profile As
- Validate
- Team
- Compare With
- Restore from Local History...
- Android Tools

LogCat DDMS [2012-1 com.and

Plug-in Date

lecting the dev  
ion: device not found



The screenshot shows an Android application window titled "5554:AVD3.2". The application's title bar is blue and contains the text "5554:AVD3.2" and standard window control icons. The main content area has a dark grey header with the Prolific logo and the text "PL2303HXDSimpleTest", which is circled in red. Below the header, there is a control panel with a dropdown menu set to "9600" and a "BaudRate" label, followed by an "Open" button. Below this is an empty text input field with an orange border, followed by a "Write" button. At the bottom of the control panel is a "ReadData" button. On the right side of the screen, there is a vertical sidebar with a dark grey background containing various control icons: "Basic Controls" (mute, volume, power), "Hardware Buttons" (home, MENU, back, search), and a "DPAD" (directional pad) control. Below the DPAD, it says "DPAD not enabled in AVD" and "Hardware Keyboard Use your physical keyboard to provide input".