

Giới thiệu về lập trình Android

Hê điều hành Android

- Là HĐH trên điện thoại di động được phát triển bởi Google và dựa trên nền tảng Linux.
- Các phiên bản đang có hiện nay
 - Android 4.0.x Platform
 - Android 3.2 Platform
 - Android 3.1 Platform
 - Android 3.0 Platform
 - Android 2.3.4 Platform
 - Android 2.3.3 Platform
 - Android 2.2 Platform
 - Android 2.1 Platform

Hệ điều hành Android (2)

- Một số thiết bị sử dụng HĐH Android đang có trên thị trường
 - SAMSUNG GALAXY TAB 7.7 Android 3.2



Hệ điều hành Android (3)

HTC SENSATION – Android 2.3



Nội

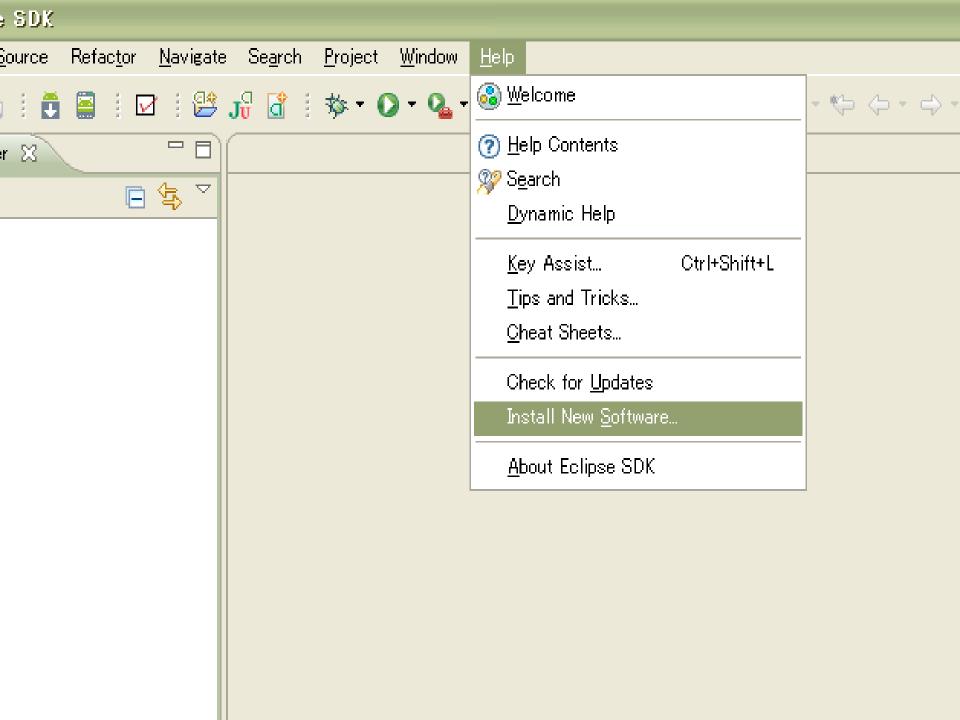
Nội dung chính

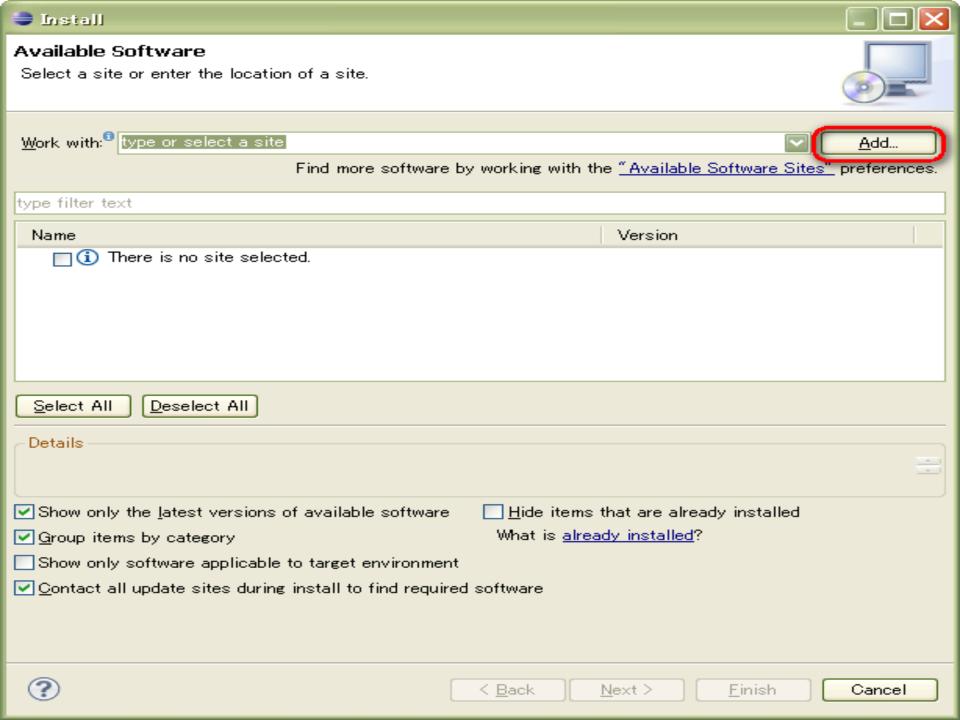
- Cách xây dựng môi trường lập trình.
- Tạo ứng dụng Hello World.
- Debug ứng dụng với Android Virtual Device.
- Debug ứng dụng với máy ảo Virtual Box.
- Debug ứng dụng với Acer ICONIA TAB A500.

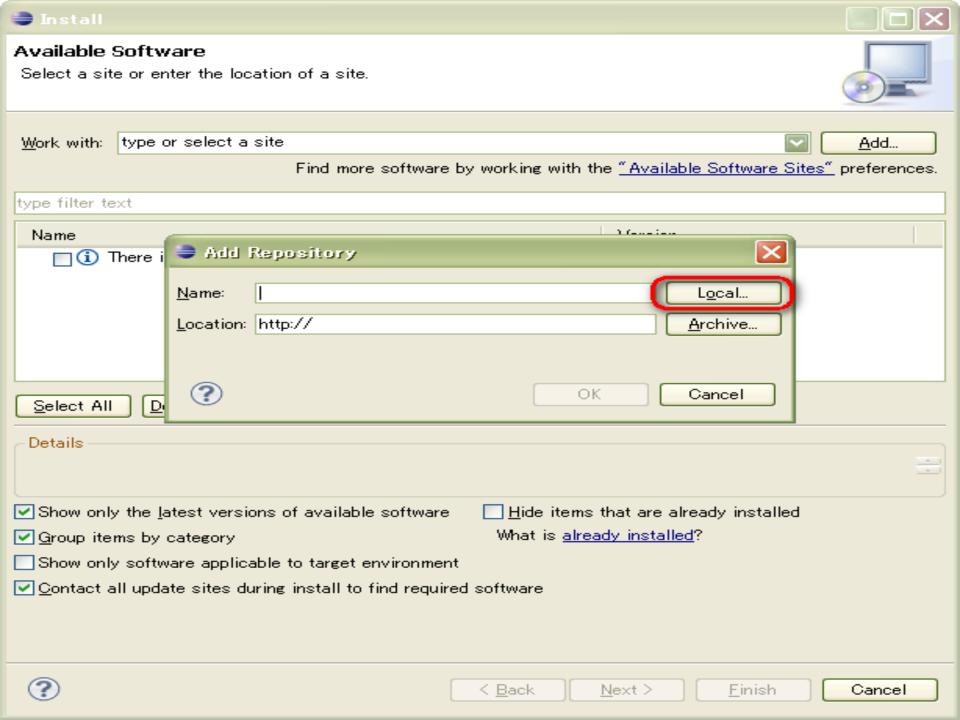
Môi trường lập trình

Môi trường lập trình

- Eclipse Classic.
- JDK 5 hoặc 6.
- Android SDK, lấy từ ổ đĩa FreeSoft (\Programming\Android\android-sdk).
- ADT Plugin, lấy từ ổ đĩa FreeSoft (\Programming\Android\ADT-16.0.1).
- Cài đặt ADT Plugin vào Eclipse.







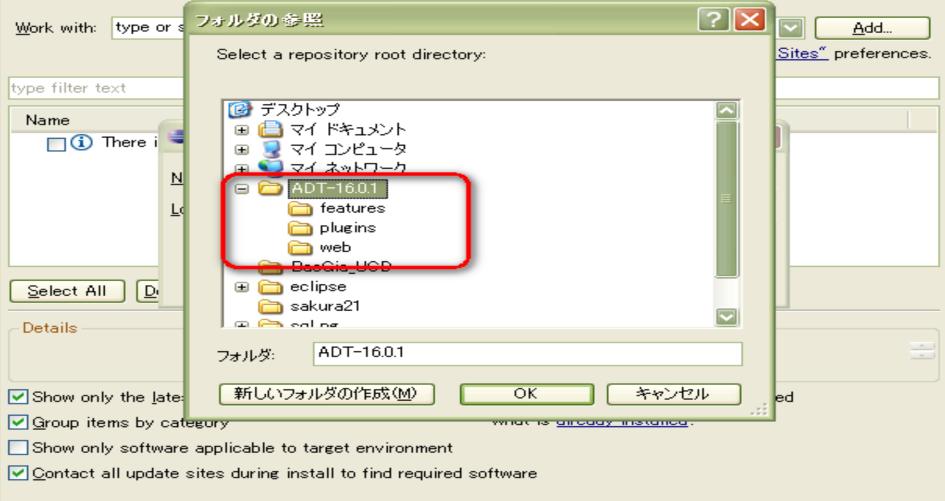


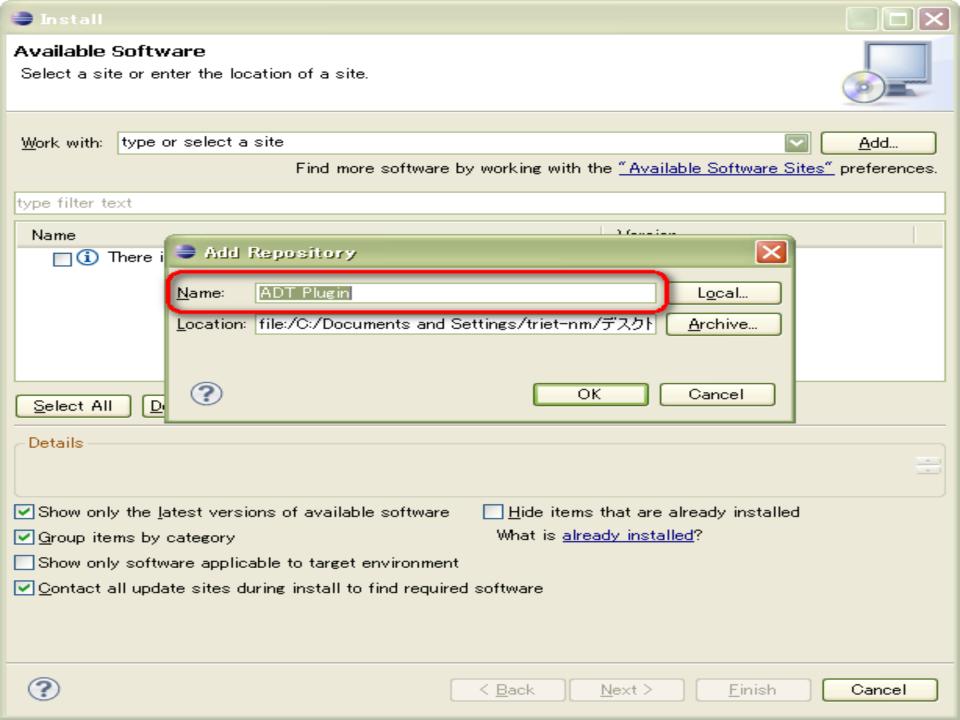


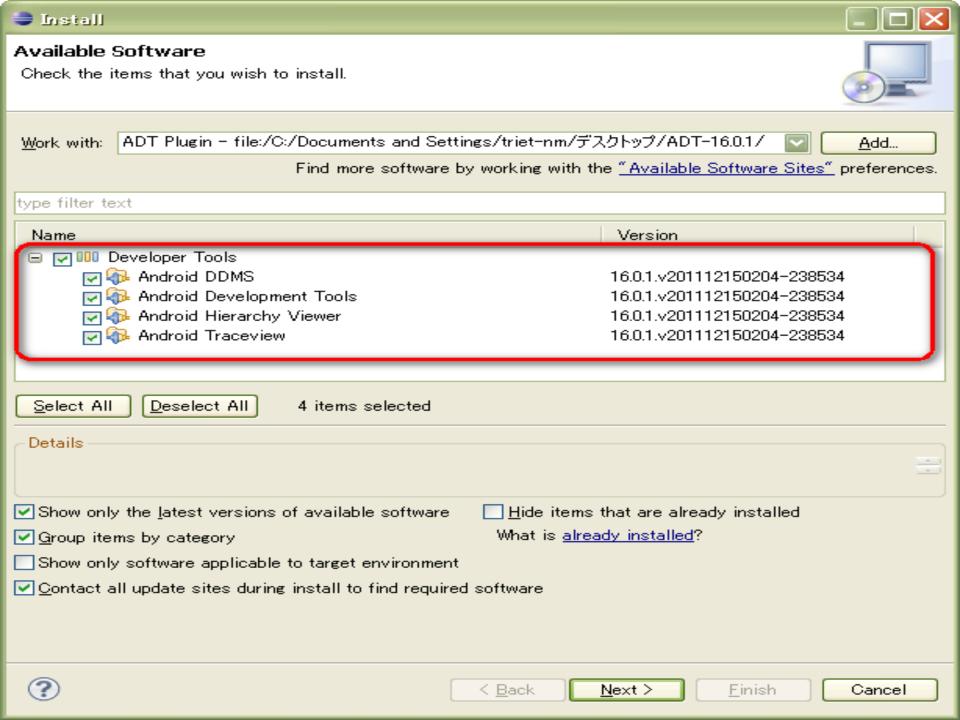
Available Software

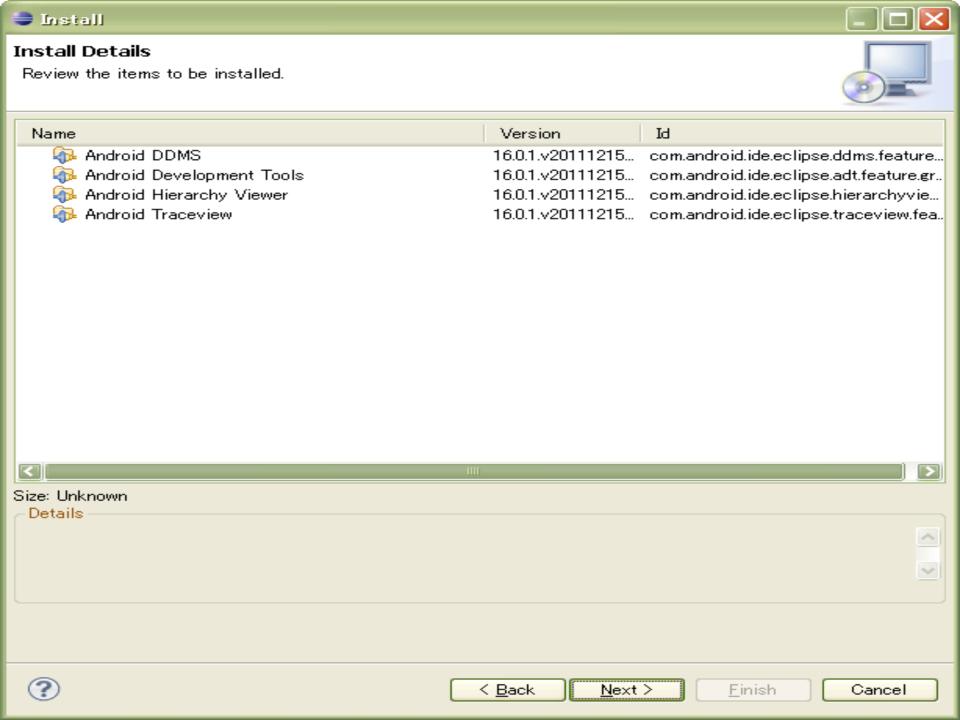
Select a site or enter the location of a site.

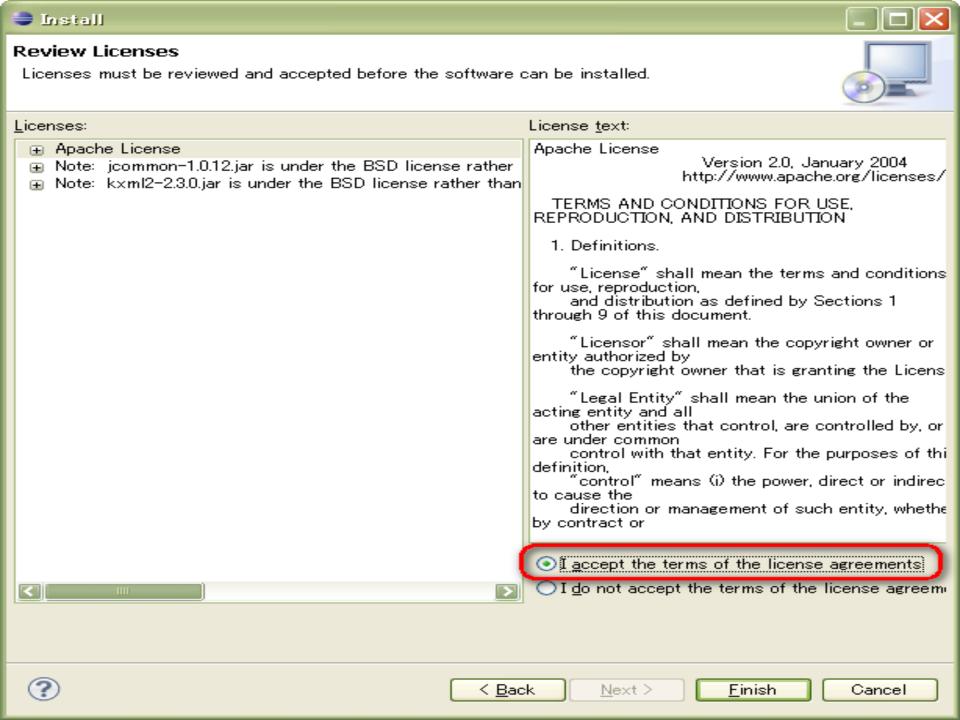


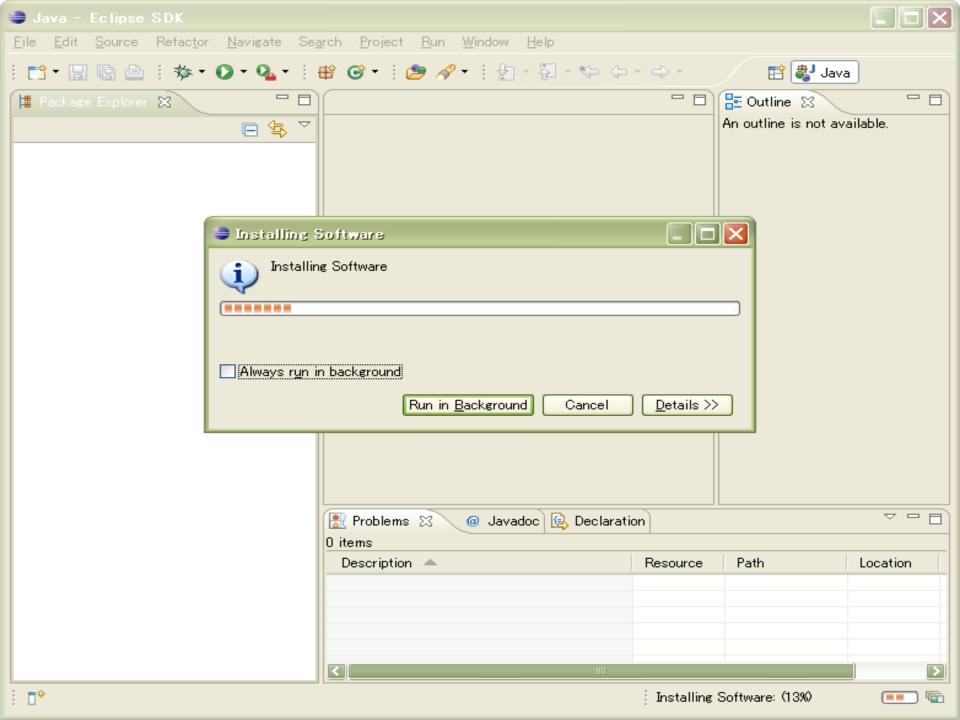


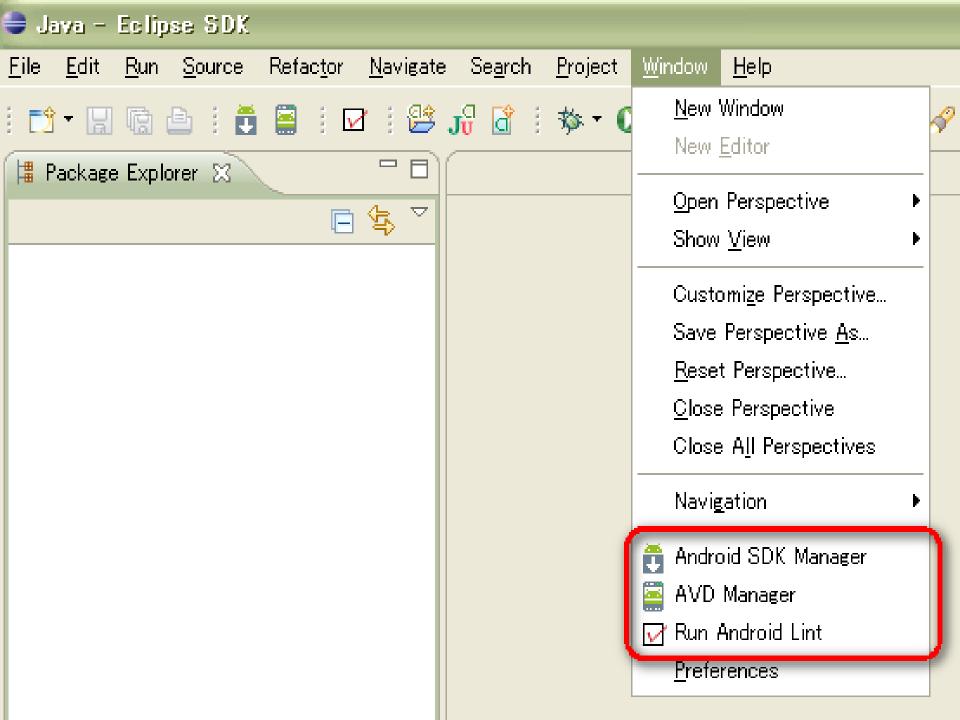


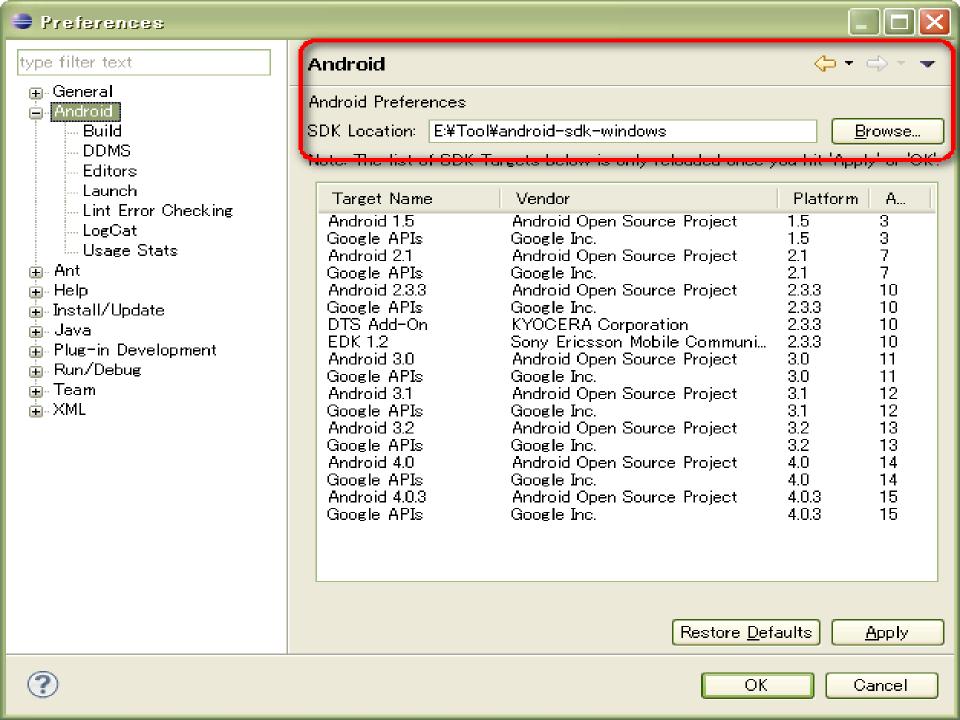












Tạo ứng dụng HelloWorld



Select a wizard



Wizards:

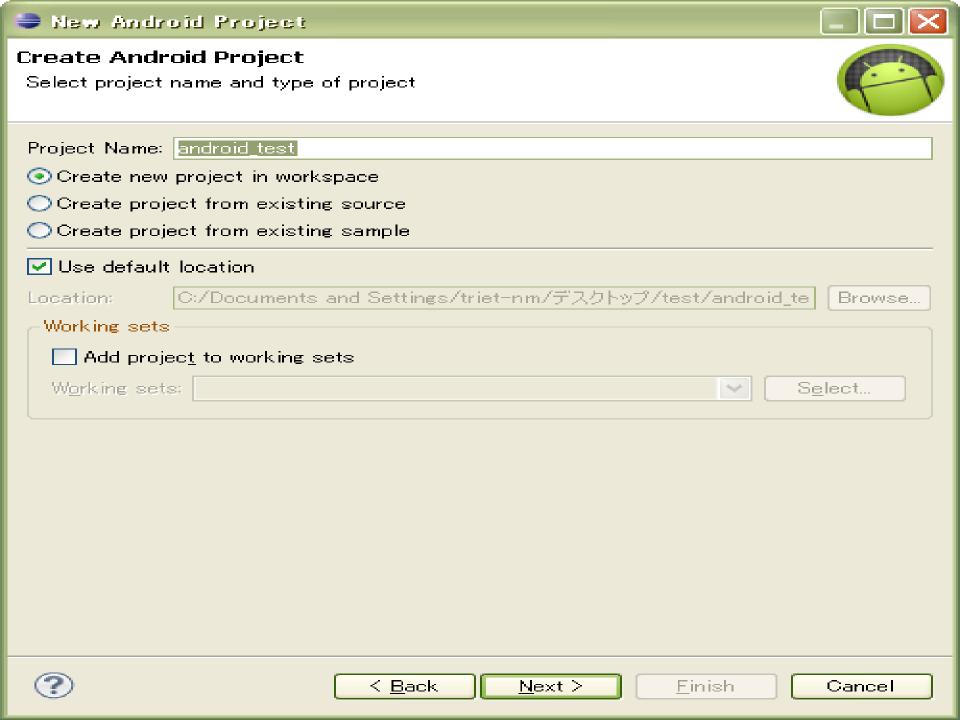
type filter text

🖮 🧀 Java

⊕ Examples

🖮 🧁 Plug-in Development











Select Build Target

Choose an SDK to target



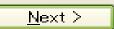
Build	d Target
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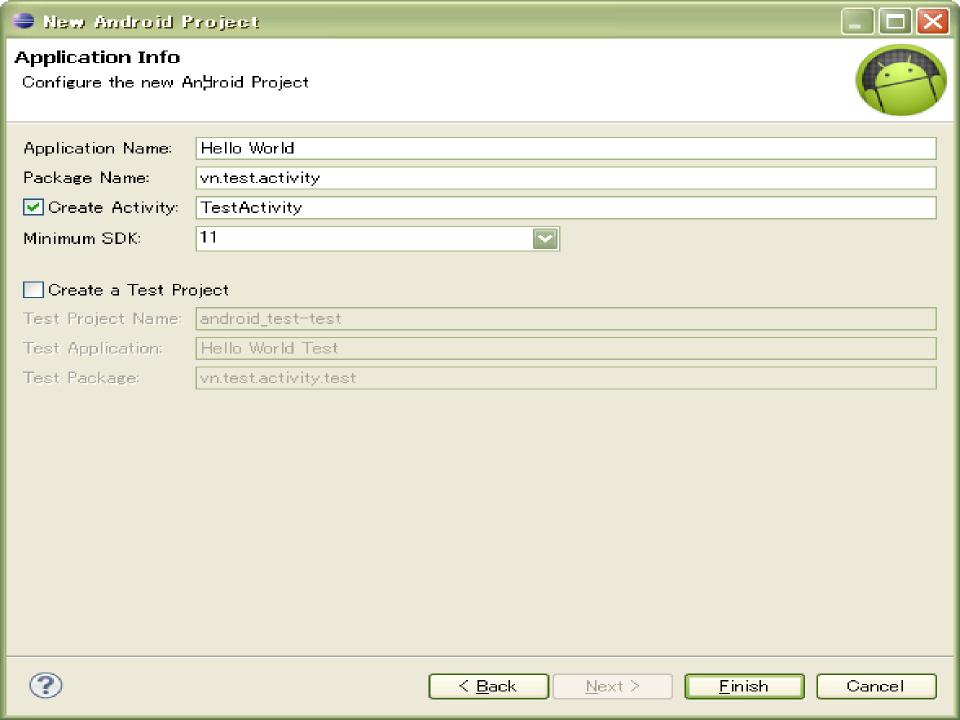
Target Name	Vendor	Platform	API Level
Android 1.5	Android Open Source Project	1.5	3
🔲 Google APIs	Google Inc.	1.5	3
🔲 Android 2.1	Android Open Source Project	2.1	7
🔲 Google APIs	Google Inc.	2.1	7
🔲 Android 2.3.3	Android Open Source Project	2.3.3	10
🔲 Google APIs	Google Inc.	2.3.3	10
🔲 DTS Add-On	KYOCERA Corporation	2.3.3	10
EDK 1.2	Sony Ericsson Mobile Communications AB	2.3.3	10
Android 3.0	Android Open Source Project	3.0	11
Google APIs	Google Inc.	3.0	11
🔲 Android 3.1	Android Open Source Project	3.1	12
🔣 Google APIs	Google Inc.	3.1	12
🔲 Android 3.2	Android Open Source Project	3.2	13
📗 Google APIs	Google Inc.	3.2	13
Android 4.0	Android Open Source Project	4.0	14
Google APIs	Google Inc.	4.0	14
Android 4.0.3	Android Open Source Project	4.0.3	15
Google APIs	Google Inc.	4.0.3	15

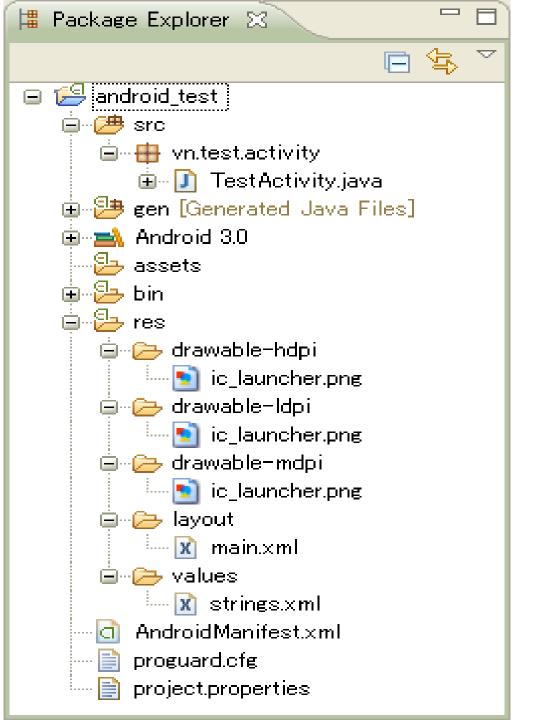
Standard Android platform 3.0

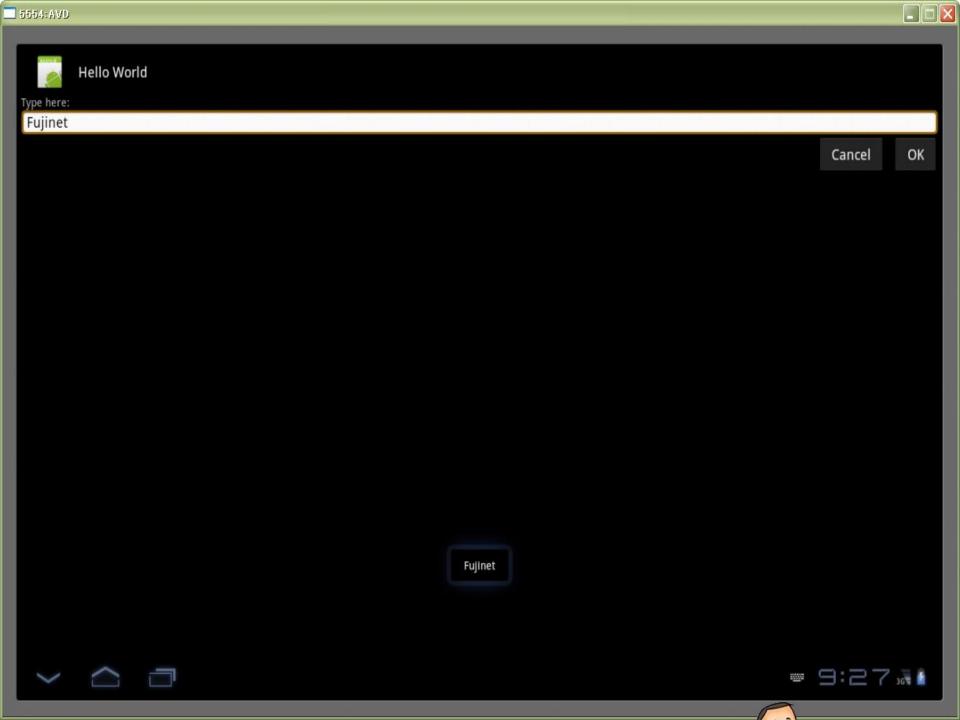








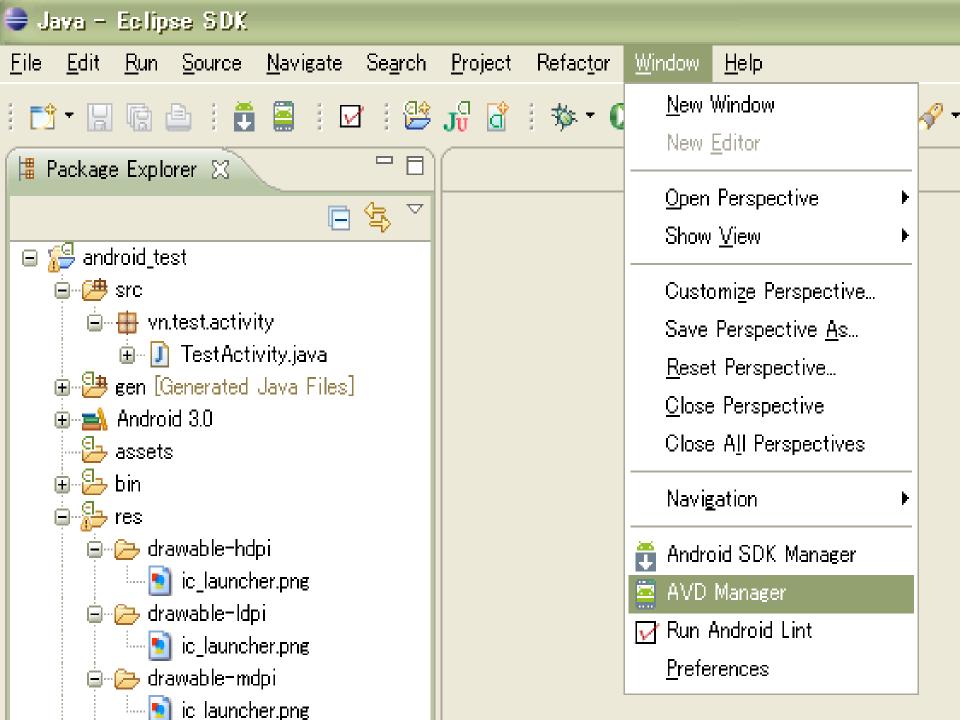


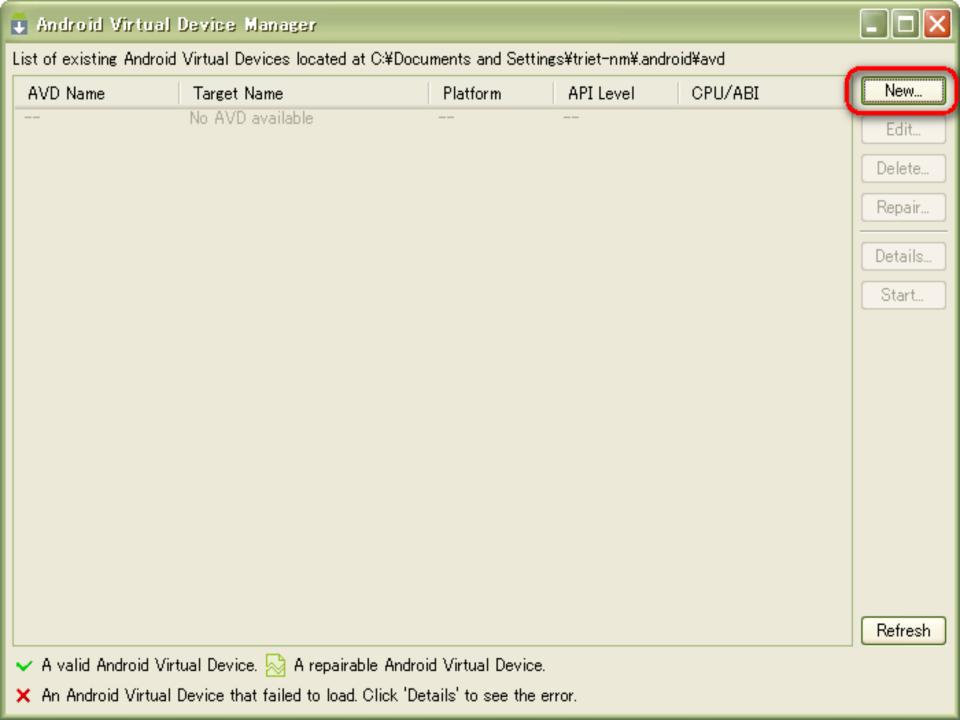


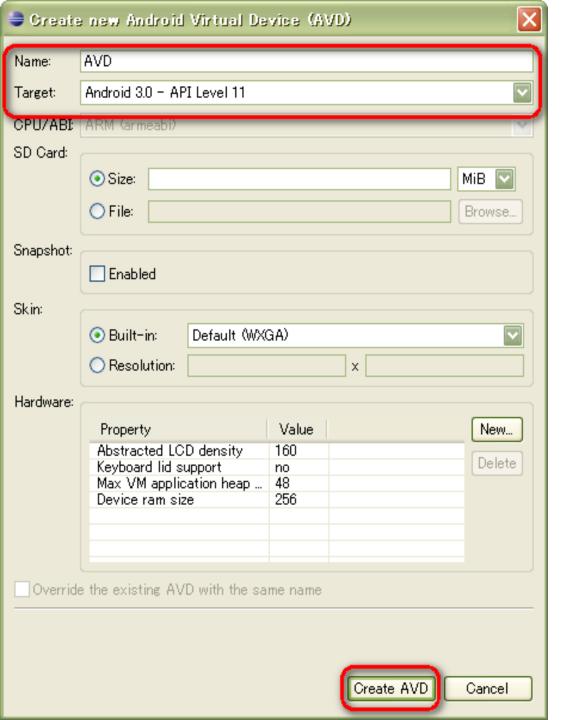
```
☐ main.xml 🖾
   <?xml version="1.0" encoding="utf-8"?>
  <RelativeLayout xmlns:android="http://schemas.android.com/apk/res/android"</p>
        android: layout width="fill parent"
        android: layout height="fill parent" >
        <TextView
            android:id="@+id/label"
            android: layout width="fill parent"
            android: layout height="wrap content"
            android:text="Type here:" />
        <EditText
            android:id="@+id/entry"
            android: layout width="fill parent"
            android: layout height="wrap content"
            android: layout below="@id/label"
            android:background="@android:drawable/editbox background"
            android:inputType="text"
            android:textColor="#000000" />
        <Button
            android:id="@+id/ok"
            android: layout width="wrap content"
            android: layout height="wrap content"
            android: layout alignParentRight="true"
            android: layout below="@id/entry"
            android: layout marginLeft="10dip"
            android:text="OK"
            android:onClick="btn0k Onclick" />
        <Button
            android: layout width="wrap content"
            android: layout height="wrap content"
            android: layout alignTop="@id/ok"
            android: layout toLeftOf="@id/ok"
            android:text="Cancel" />
   </RelativeLavout>
```

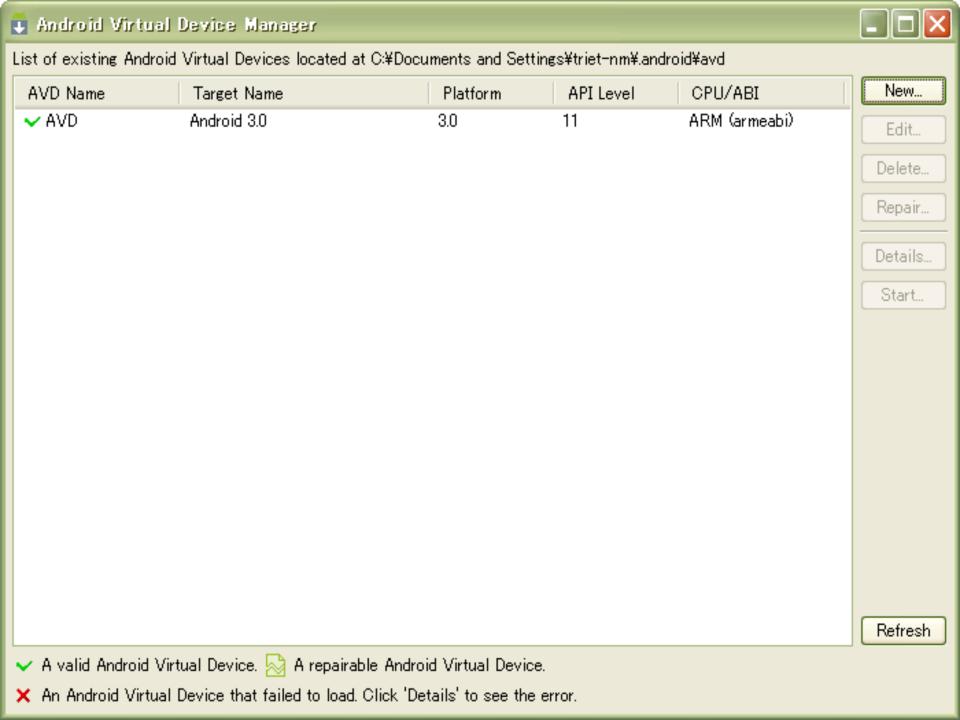
```
package vn.test.activity;
import android.app.Activity;[]
public class TestActivity extends Activity {
    /** Called when the activity is first created. */
    MOverride
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    public void btnOk Onclick(View v) {
        EditText txtEntry = (EditText) findViewById(R.id.entry);
        Toast.makeText(this, txtEntry.getText(), Toast.LENGTH SHORT).show();
```

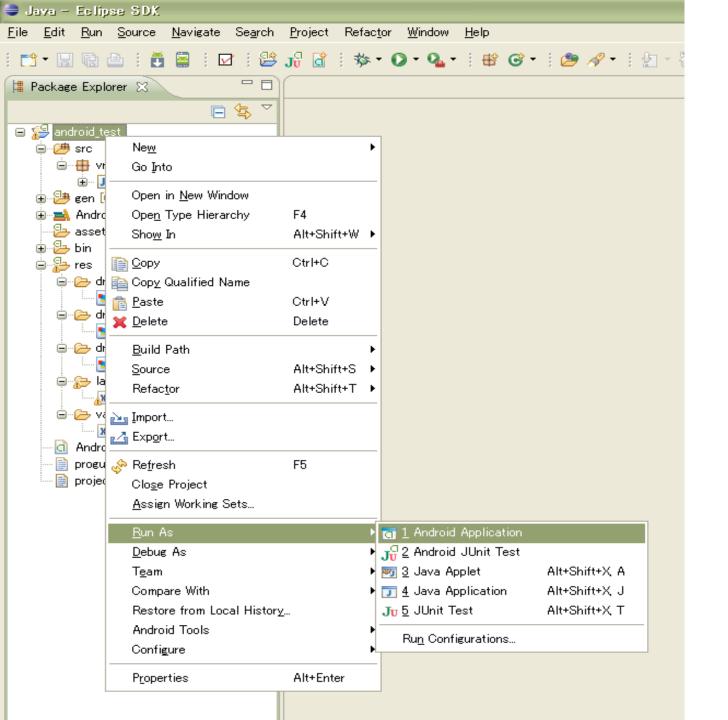
Debug ứng dụng với Android Virtual Device

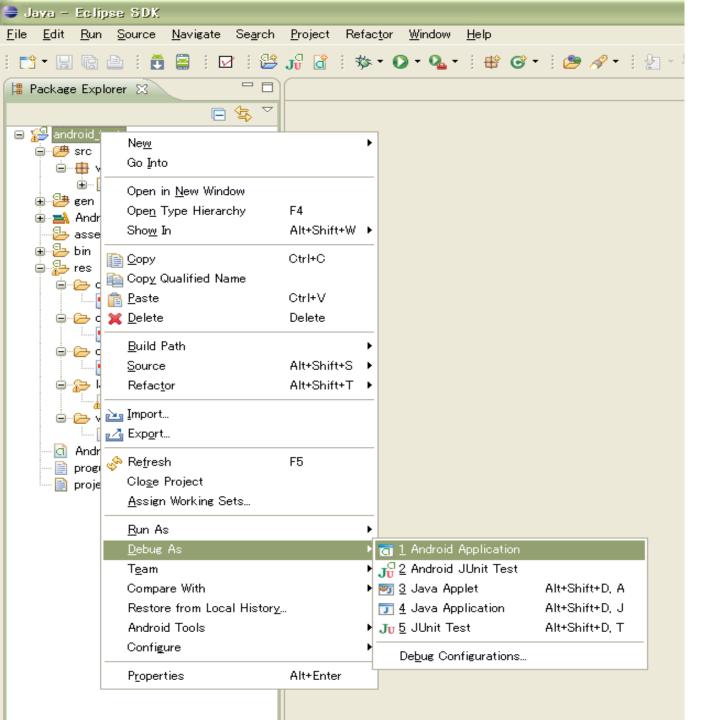








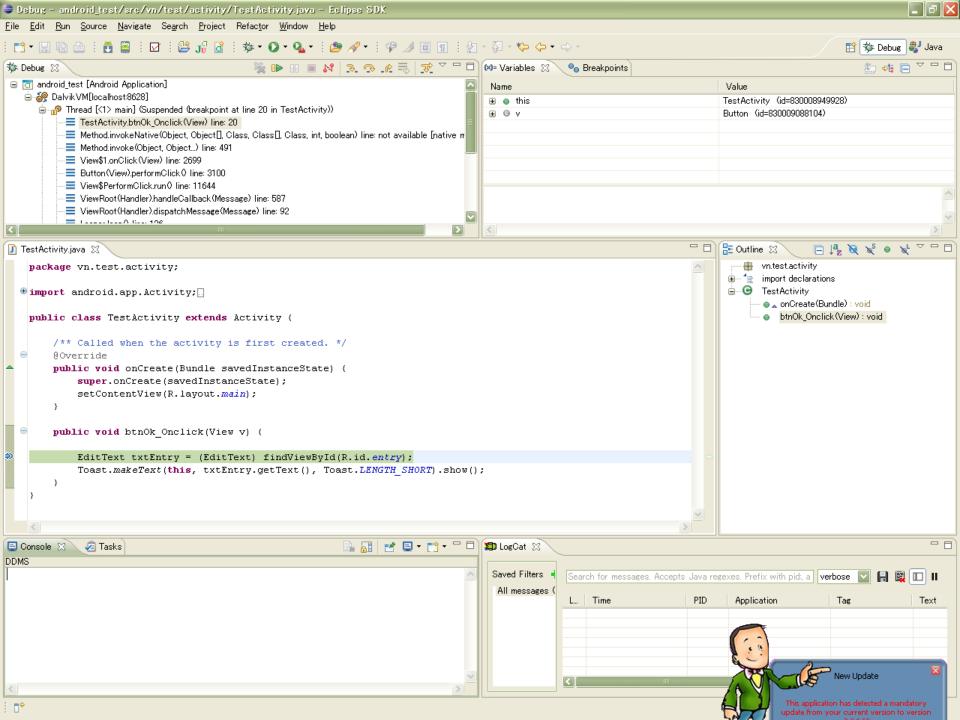




```
🚺 TestActivity.java 🕱
   package vn.test.activity;

⊕ import android.app.Activity;
□

   public class TestActivity extends Activity {
       /** Called when the activity is first created. */
       @Override
       public void onCreate(Bundle savedInstanceState) {
            super.onCreate(savedInstanceState);
            setContentView(R.layout.main);
       public void btnOk Onclick(View v) {
            EditText txtEntry = (EditText) findViewById(R.id.entry);
```



Debug ứng dụng với Virtual Box





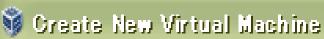
Welcome to the New Virtual Machine Wizard!

This wizard will guide you through the steps that are necessary to create a new virtual machine for VirtualBox.

Use the **Next** button to go to the next page of the wizard and the **Back** button to return to the previous page. You can also press **Cancel** if you want to cancel the execution of this wizard.



∠N<u>a</u>me







VM Name and OS Type

Enter a name for the new virtual machine and select the type of the guest operating system you plan to install onto the virtual machine.

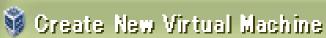
The name of the virtual machine usually indicates its software and hardware configuration. It will be used by all VirtualBox components to identify your virtual machine.

Test		
OS <u>T</u> ype ———		
Operating <u>S</u> ystem:	Linux	▼ 🕟
<u>V</u> ersion:	Other Linux	V

K <u>B</u>ack



Cancel



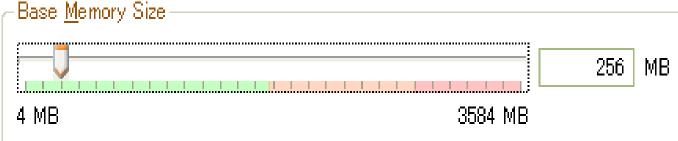




Memory

Select the amount of base memory (RAM) in megabytes to be allocated to the virtual machine.

The recommended base memory size is 256 MB.









Virtual Hard Disk

If you wish you can now add a start-up disk to the new machine. You can either create a new virtual disk or select one from the list or from another location using the folder icon.

If you need a more complex virtual disk setup you can skip this step and make the changes to the machine settings once the machine is created.

The recommended size of the start-up disk is f 8.00~GB.

- ✓ Start-up Disk
- 💽 <u>G</u>reate new hard disk
- Use existing hard disk

STS-Android.vdi (Normal, 8.00 GB)





Welcome to the virtual disk creation wizard

This wizard will help you to create a new virtual disk for your virtual machine.

Use the **Next** button to go to the next page of the wizard and the **Back** button to return to the previous page. You can also press **Cancel** if you want to cancel the execution of this wizard.

Please choose the type of file that you would like to use for the new virtual disk. If you do not need to use it with other virtualization software you can leave this setting unchanged.

File type

- <u>VDI (VirtualBox Disk Image)</u>
- VMDK (Virtual Machine Disk)
- NHD (Virtual Hard Disk)
- O HDD (Parallels Hard Disk)







Virtual disk storage details

Please choose whether the new virtual disk file should be allocated as it is used or if it should be created fully allocated.

A dynamically allocated virtual disk file will only use space on your physical hard disk. as it fills up, although it will not shrink again automatically when space on it is freed.

A fixed size virtual disk file may take longer to create on some systems but is often faster to use

Storage details

- Dynamically allocated
- Fixed size

K Back

Next >

Cancel

Location -

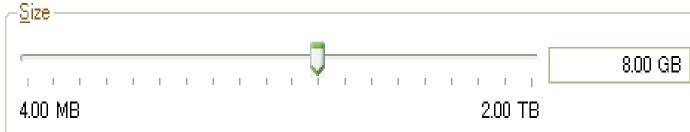


Virtual disk file location and size

Please type the name of the new virtual disk file into the box below or click on the folder icon to select a different folder to create the file in.

Test

Select the size of the virtual disk in megabytes. This size will be reported to the Guest OS as the maximum size of this virtual disk.





Summary

You are going to create a new virtual disk with the following parameters:

File type: VDI (VirtualBox Disk Image)
Details: Dynamically allocated storage
Location: E:\(\fomage\)Virtual Machine\(\fomage\)Test\(\fomage\)Test.vdi

Size: 8.00 GB (8589934592 B)

If the above settings are correct, press the **Create** button. Once you press it the new virtual disk file will be created.







Summary

You are going to create a new virtual machine with the following parameters:

Name: Test

OS Type: Other Linux Base Memory: 256 MB

Start-up Disk: Test.vdi (Normal, 8.00 GB)

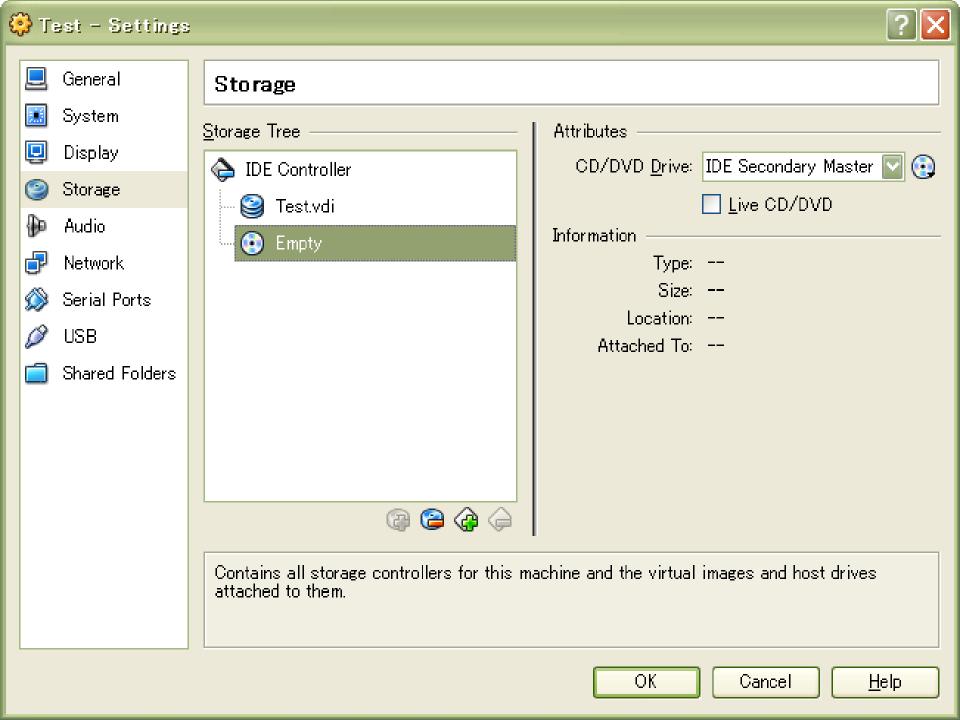
If the above is correct press the **Create** button. Once you press it, a new virtual machine will be created.

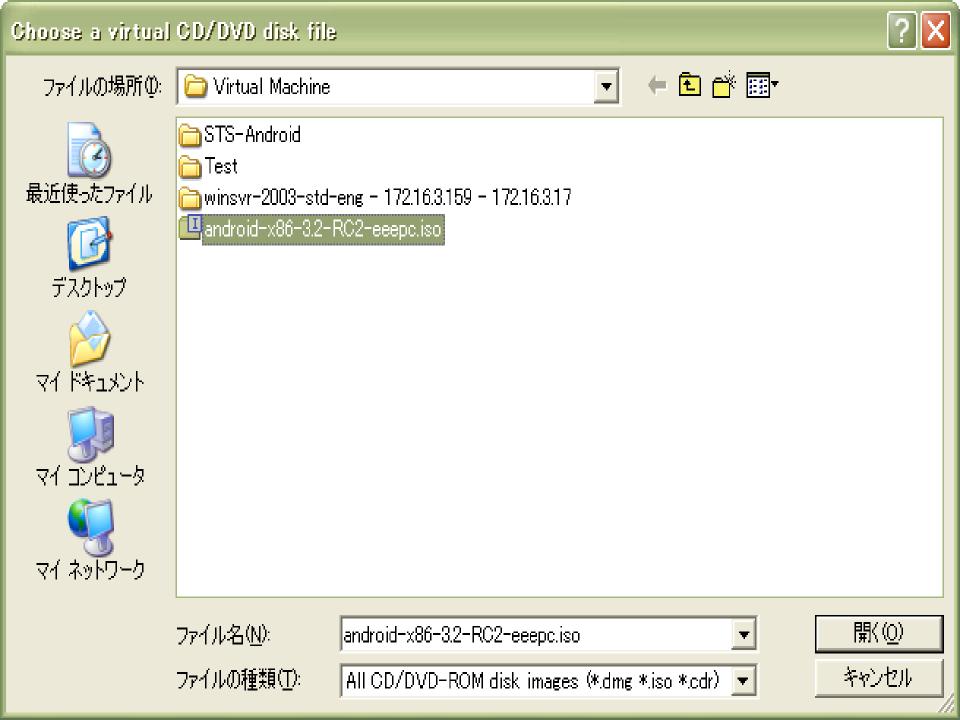
Note that you can alter these and all other setting of the created virtual machine at any time using the **Settings** dialog accessible through the menu of the main window.

< Back

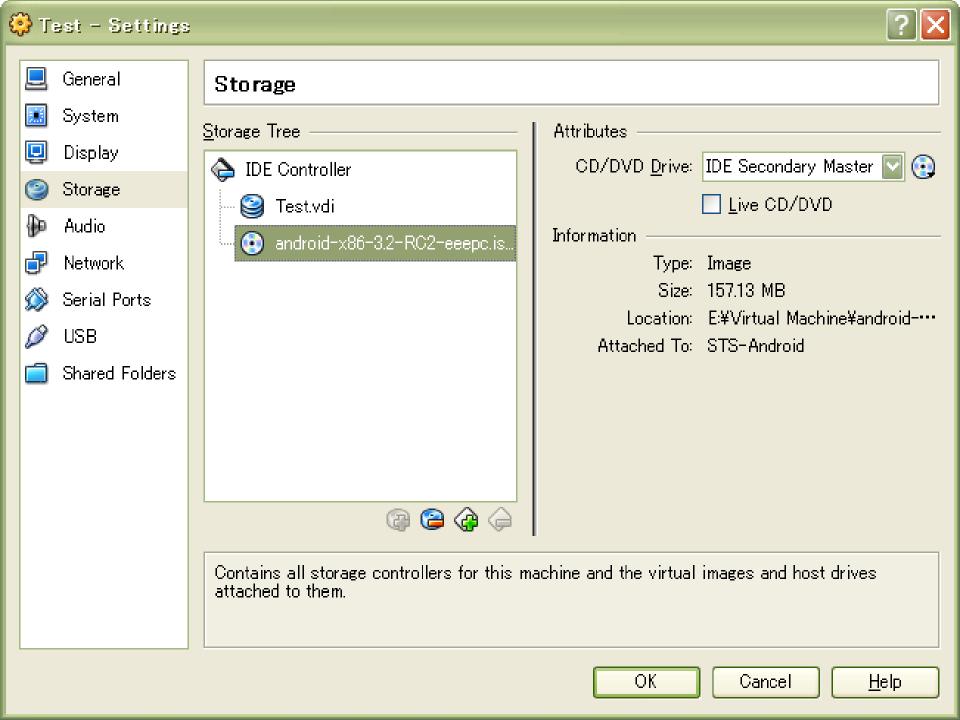
Create

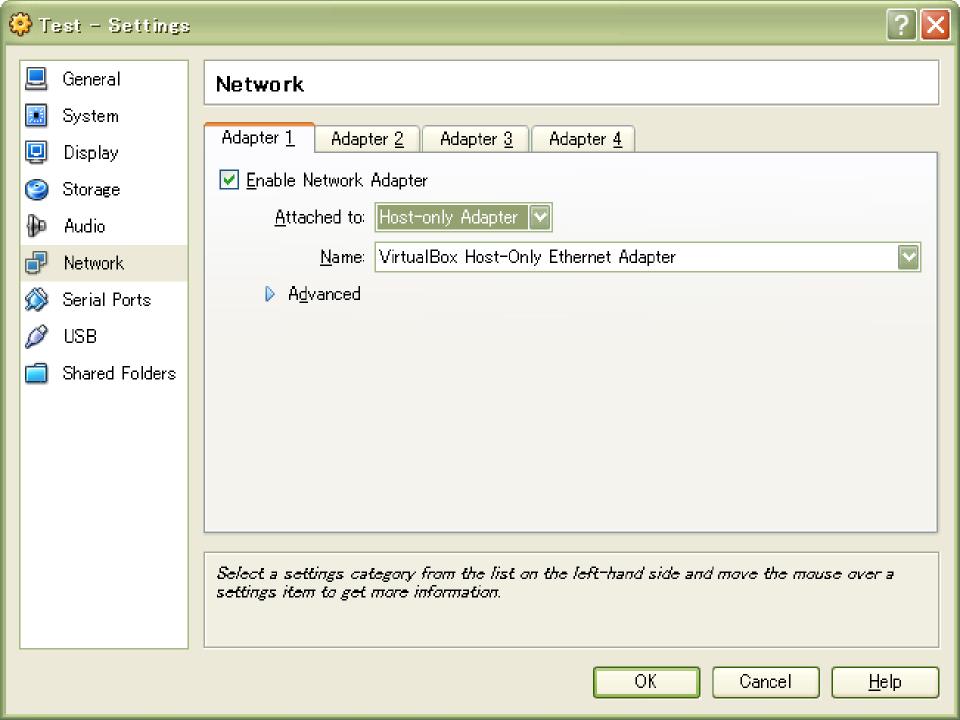
Cancel

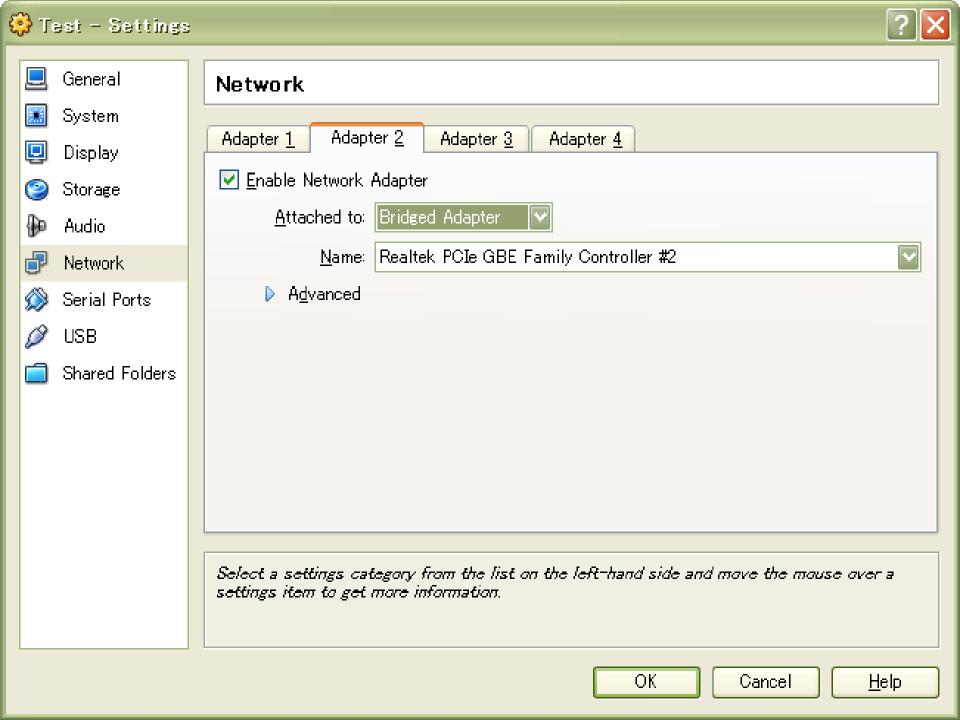


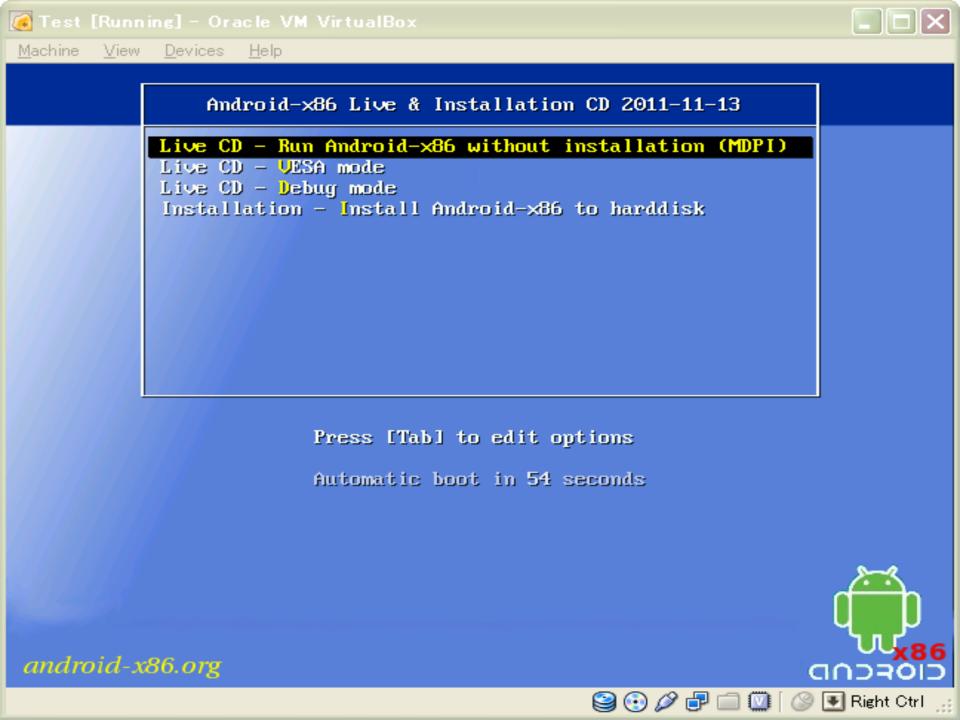


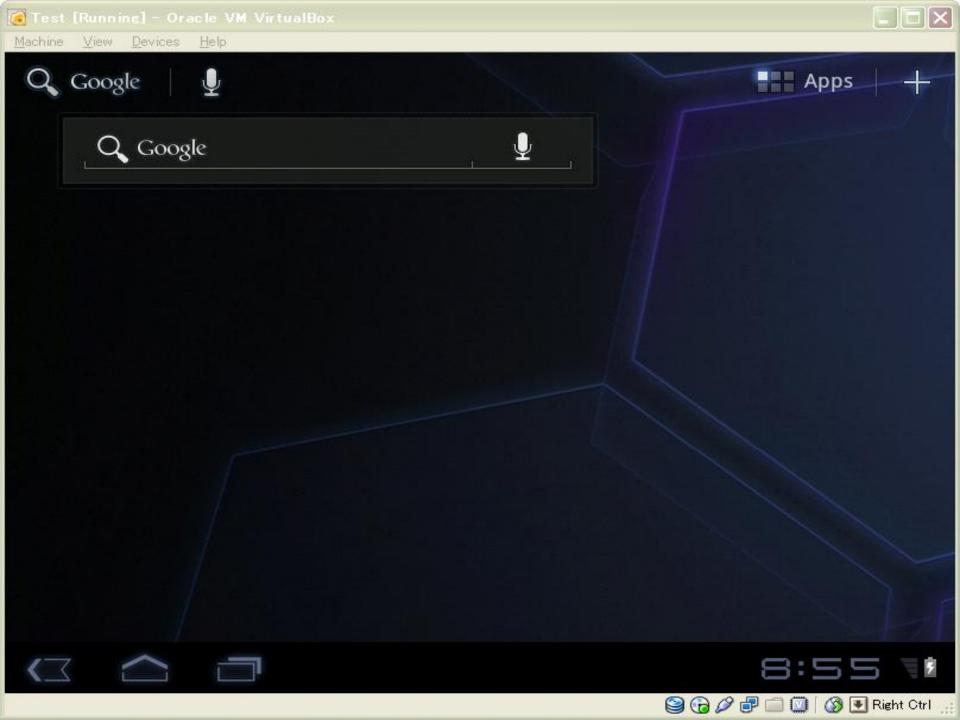
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eclair-x86	Andre	oid-x86-2.2-r	2														
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problems with yo	our	android-x86 <u>View</u>	-2.2-r2-eeep	c.iso			.2-r2 live & insta ASUS Eee PC	allation iso fo	or		Nov 2	3, 2011 4:41	AM	Chih-W	/ei Huang		
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Contact Us Resources		android-x86 <u>View</u>	-2.3-RC1-te	gav2.iso		Android-x86 2 atom tablets I	.3-RC1 live & in ike Tegav2.	nstallation iso	o for		Nov 2	3, 2011 4:42	AM	Chih-W	/ei Huang		
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Blog android-x86 Twitter android_x86		android-x86 <u>View</u>	-3.2-RC2-ee	epc.iso		Android-x86 3 for ASUS Eee	.2-RC2 live and PC family	l installation	iso		Nov 2	3, 2011 4:40	AM	Chih-W	/ei Huang		
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Google apps Google sites	Android-x86-4.0-devel																
Google mails Google docs Google calendar		android-x86 <u>View</u>	-4.0-amd_br	razos-2012		Android-x86 4 iso	.0-devel live an	d installation			Jan 1	, 2012 11:11	AM	Chih-W	/ei Huang		
Google analytics		android-x86 View	-4.0-asus_la	aptop-2012		Android-x86 4	.0-devel live an	d installation			Jan 1	, 2012 11:11	AM	Chih-W	Vei Huang		









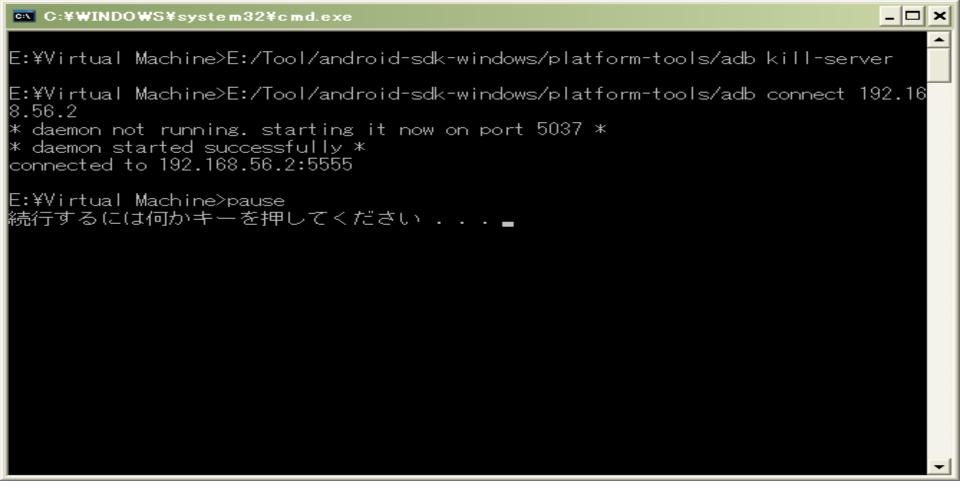


```
A N D R O I D root@eeepc:/ # netcfg
lo
      UP
                                           0x00000049 00:00:00:00:00:00
                                 127.0.0.1/8
eth0
      DOWN
                                           0x00001002 08:00:27:c3:f7:1f
                                  0.0.0.0 / 0
eth1
      DOWN
                                  0.0.0.0 / 0
                                           0x00001002 08:00:27:1f:6e:64
root@eeepc:/ # netcfg
      UP
lo
                                 127.0.0.1/8
                                           0x00000049 00:00:00:00:00:00
eth0
      UP
                               192.168.56.2/24 0x00001043 08:00:27:c3:f7:1f
eth1
      UP
                               172.16.3.202/20 0x00001043 08:00:27:1f:6e:64
root@eeepc:/#
#netcfq
#ifconfig eth0 192.168.56.2 netmask 255.255.255.0
```

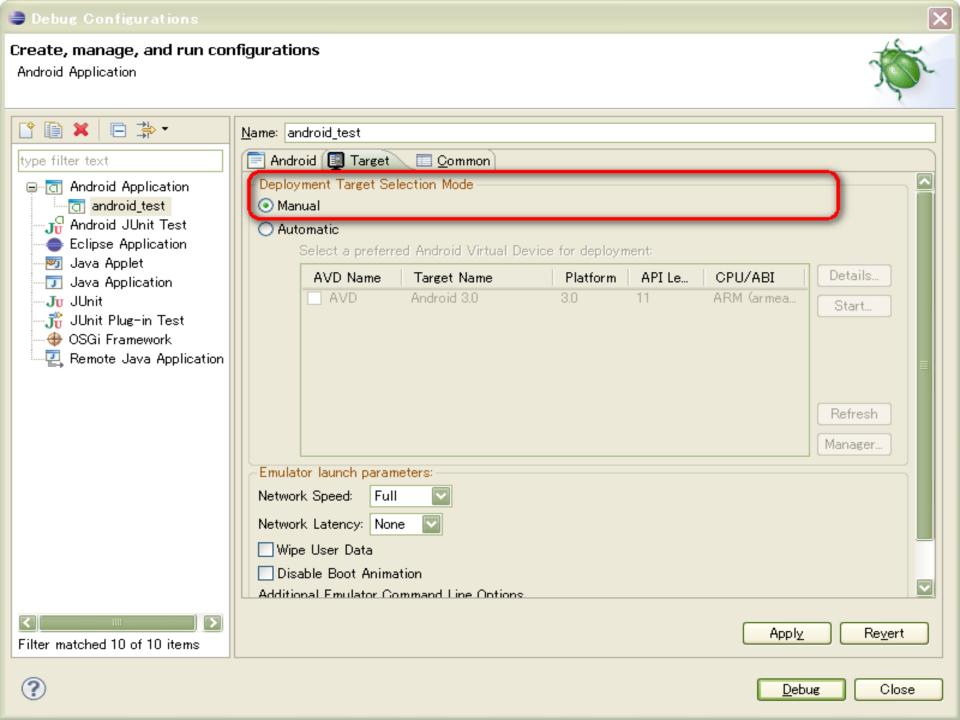
#ifconfig eth1 172.16.3.202 netmask 255.255.240.0

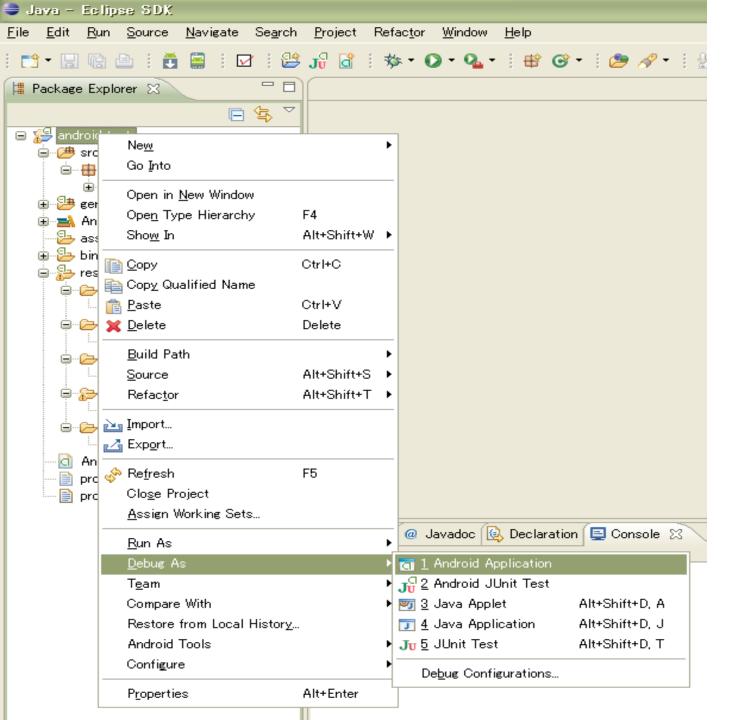
Alt + F1

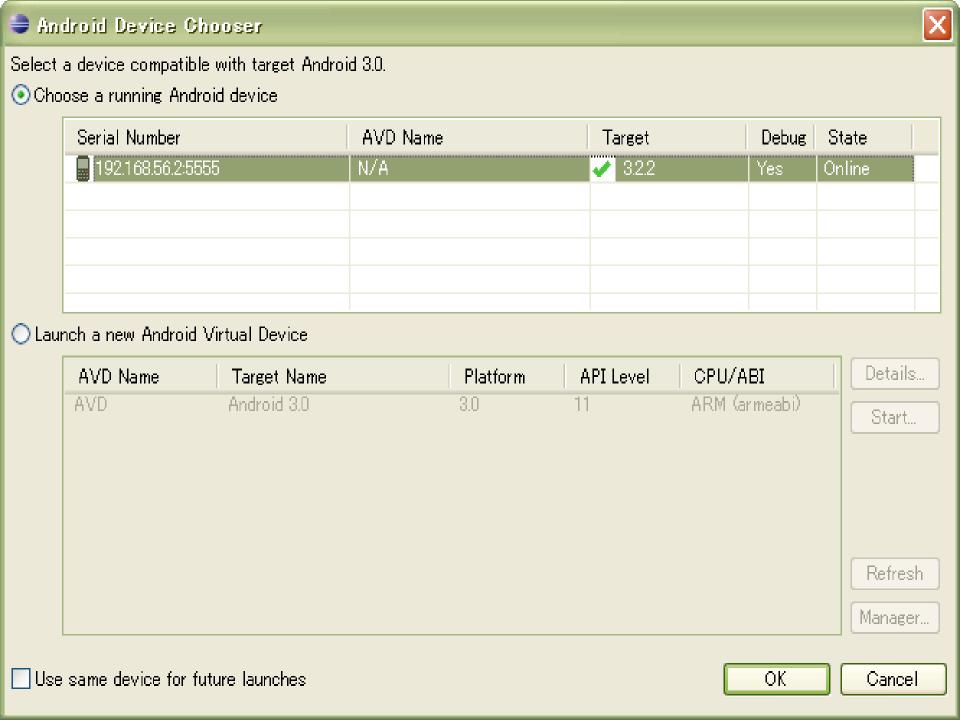
Alt + F7

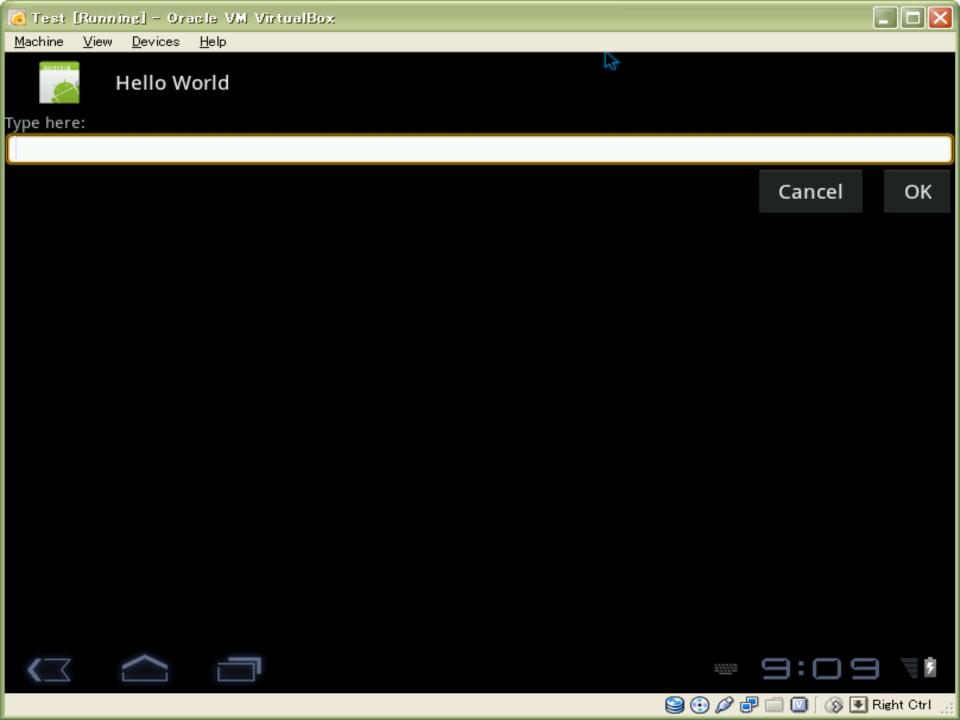


android-sdk-windows/platform-tools/adb kill-server android-sdk-windows/platform-tools/adb connect 192.168.56.2







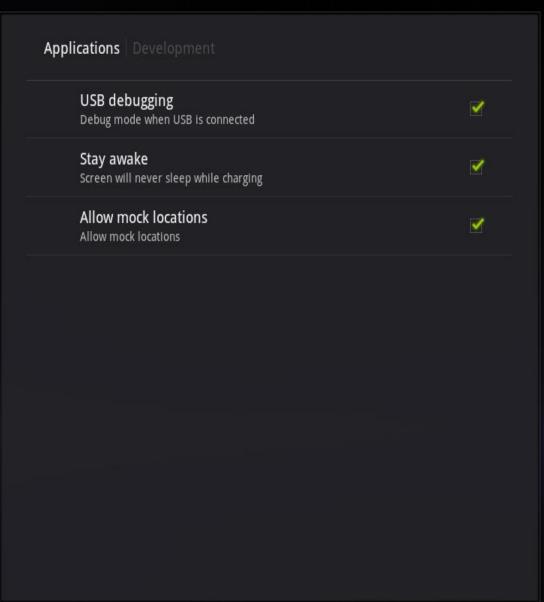


Debug ứng dụng với Acer ICONIA TAB A500

Chuẩn bị môi trường

- Cài đặt Windows Media Player 11.
- Cài đặt driver của tablet.

₹	Wireless & networks
(1-1)	Sound
M	Dolby Mobile
0	Screen
iii	Location & security
	Applications
S	Accounts & sync
Ш	Privacy
inter	Storage
A.	Language & input
*	Accessibility
0	Date & time
(i)	About tablet

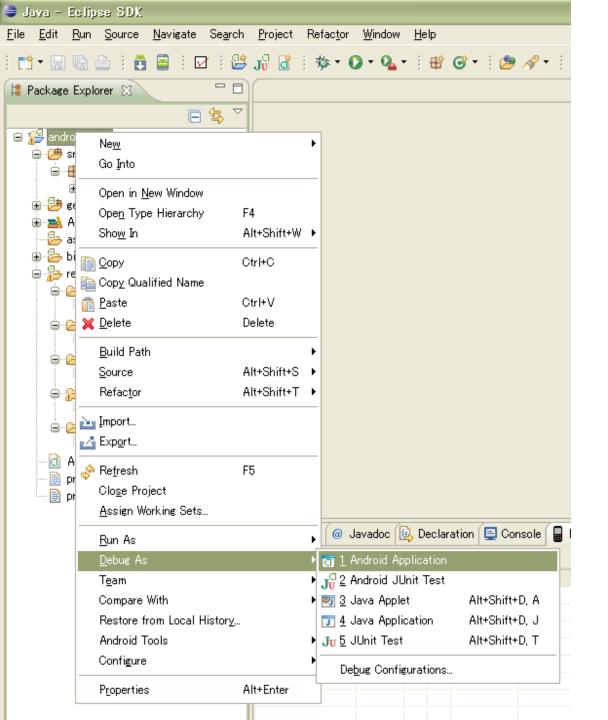


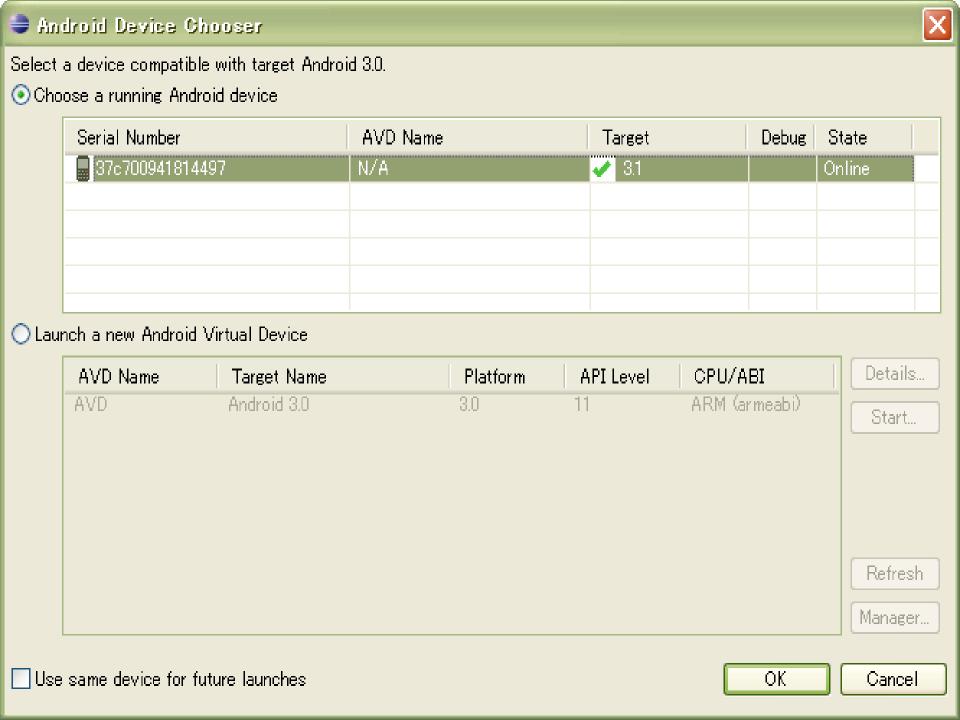












Fujinet

Cancel

OK

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