ePOS-Print SDK for Android
Application Development Setup Guide

M00048501

Rev. B

Cautions

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Overview

This document describes the procedures to establish the development environment for the application used for printing from Android device using Eclipse. Set up the environment to run the sample application supplied with EPSON ePOS-Print SDK for Android.

Environment for This Document

This document applies to the environment as described below. Information such as the Web page URLs and the download file versions are as of April 2012. If your environment is different from the following, interpret the descriptions accordingly.

- ❏ OS : Windows 7 (32 bit)
- ❏ Java SE Development Kit 6 Update 31
- ❏ Eclipse Classic 3.7.2
- ❏ Android SDK Tools, Revision 17
- ❏ ADT Plugin 17.0.0
- ❏ Sample program supplied with ePOS-Print SDK for Android

Relevant Manual

ePOS-Print SDK for Android User's Manual

Operation Workflow

1. "Installing Java SE Development Kit" on page 4

   Download and install JDK.

2. "Setting Up Eclipse" on page 6

   Download Eclipse and configure the initial settings.

3. "Setting Up Android SDK Manager" on page 9

   Download and install Android SDK Manager. Configure the settings required for development.

4. "Downloading and Installing ADT Plugin" on page 14

   Install ADT Plugin to Eclipse.

5. "Executing Sample Application (Eclipse)" on page 18

   Execute the sample application.

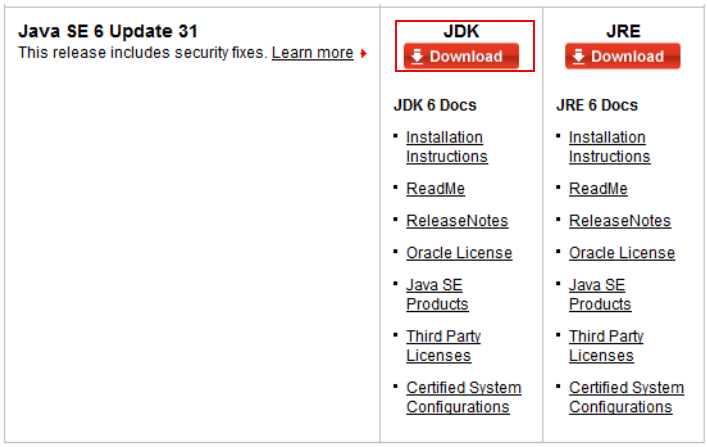
Installing Java SE Development Kit

Download and install JDK (Java Development Kit).

Downloading JDK

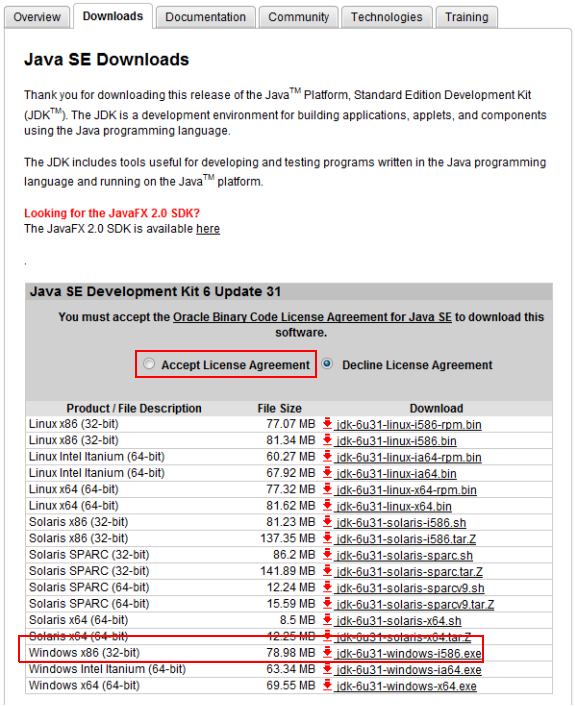
1 Access the following URL and download Java SE 6 JDK.

http://www.oracle.com/technetwork/java/javase/downloads/index.html



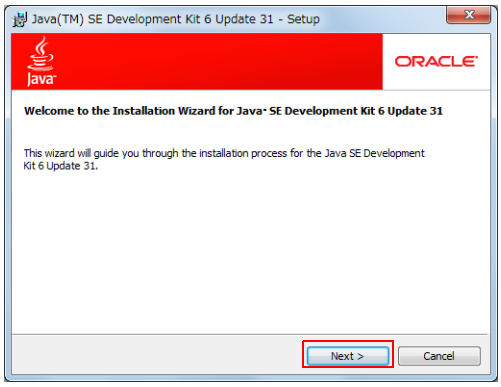
2 The Java SE Downloads window appears. Select [Accept License Agreement] and select the file to be installed. Save the file to a desired location.

(In this manual, download Windows x86 to construct the environment.)

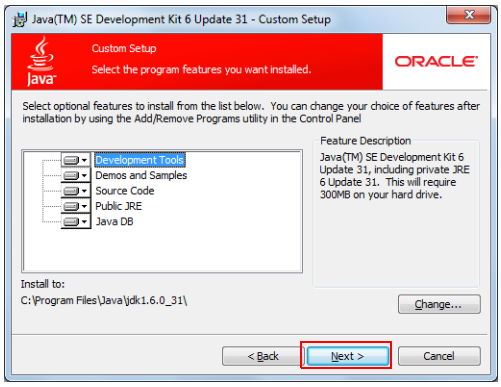


Installing JDK

1 Start the downloaded file. The following window appears. Click the [Next] button.

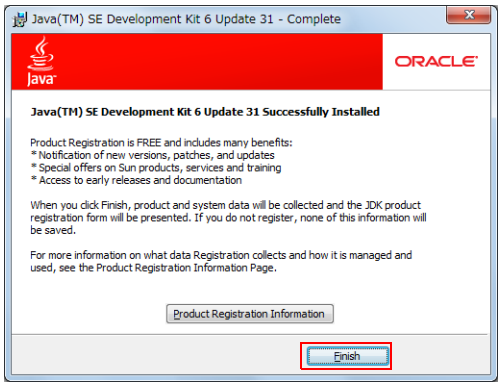


2 Select the function to install and click the [Next] button. To change the installation destination, click the [Change] button and change the destination.
(In this manual, the default destination is used.)



3 Installation starts.

4 When installation completes, the following window appears. Click the [Finish] button.



Setting Up Eclipse

Download, install and set up Eclipse.

Downloading Eclipse

Access the following URL and download Eclipse. Save the file to a desired location.

(In this manual, download and set up Eclipse Classic 3.7.2)

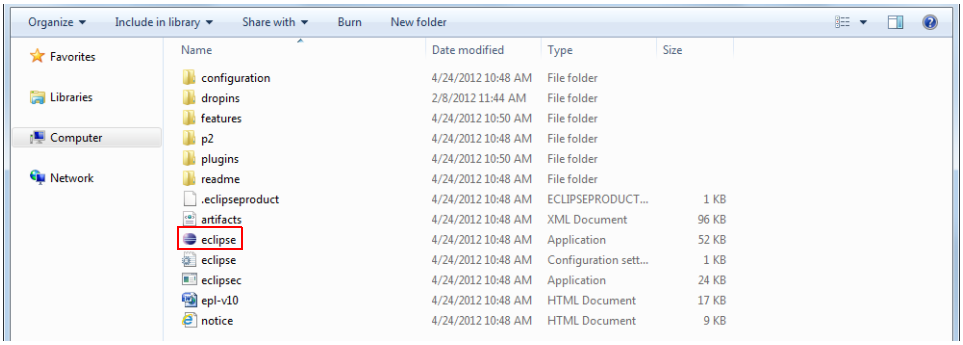
http://www.eclipse.org/downloads/

Installing Eclipse and Configuring Initial Settings

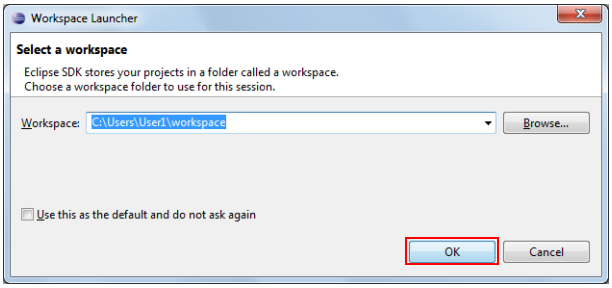
1 Extract the downloaded file to a desired location.

(In this manual, extract the file under "C:\Program Files".)

2 Double-click "eclipse.exe" to start Eclipse.



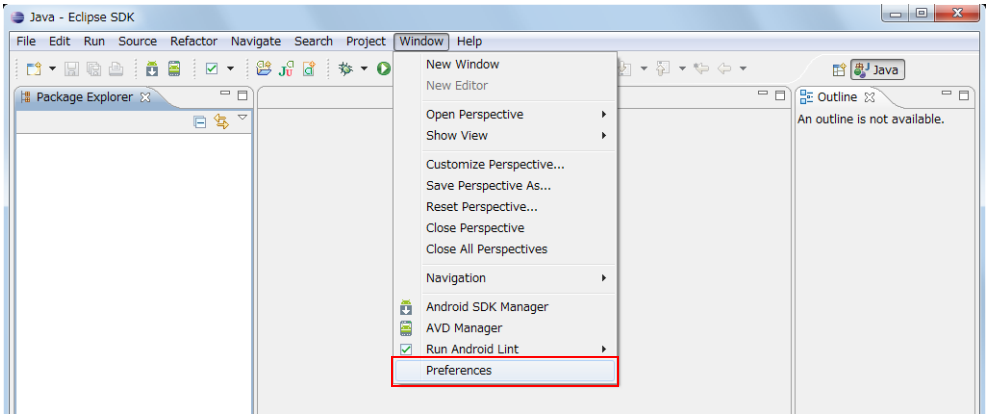
3 Set up the work folder during Eclipse startup process. Click the [OK] button.
(In this manual, the default settings are used.)



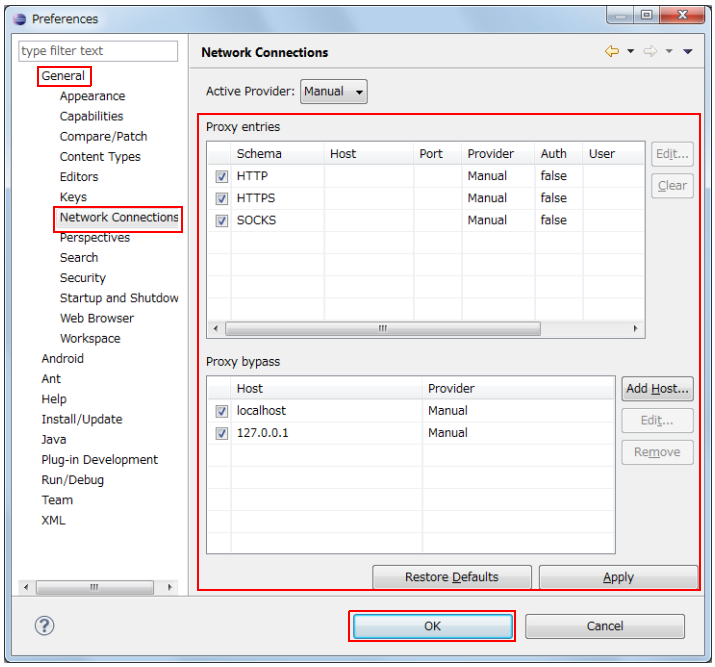
Setting Proxy for Eclipse

Use this operation when proxy setting is required for Internet connection. If not required, this operation is unnecessary.

1 Select [Window] - [Preferences].



2 Select [General]-[Network Connections] from the left column. Set the proxy and click the [OK] button.



Setting Up Android SDK Manager

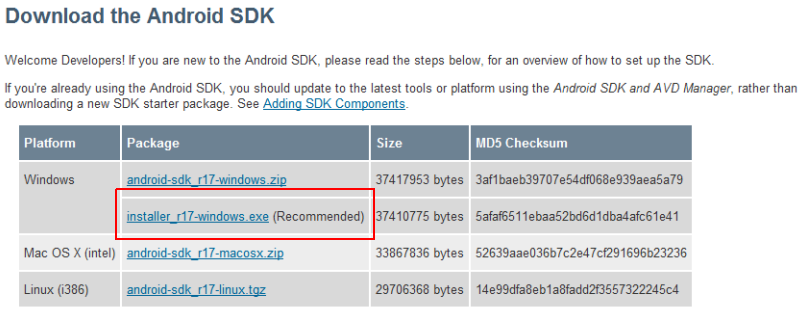
Download and install Android SDK Manager. Create Android Virtual Device.

Downloading Android SDK Manager

Access the following URL and download Android SDK Manager.

(In this manual, download the installer for Windows.)

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



Download the Android SDK

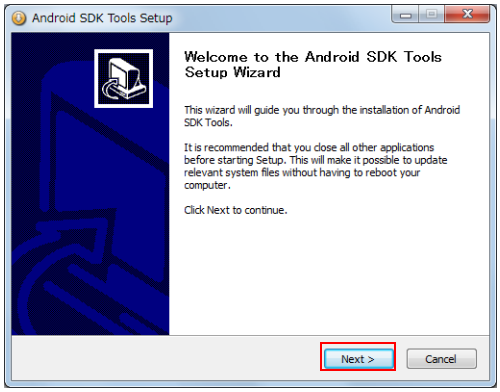
Welcome Developers! If you are new to the Android SDK, please read the steps below, for an overview of how to set up the SDK.

If you're already using the Android SDK, you should update to the latest tools or platform using the *Android SDK and AVD Manager*, rather than downloading a new SDK starter package. See Adding SDK Components.

Platform	Package	Size	MD5 Checksum
Windows	android-sdk_r17-windows.zip	37417953 bytes	3af1baeb39707e54df068e939aea5a79
	installer_r17-windows.exe (Recommended)	37410775 bytes	5afaf6511ebaa52bd6d1dba4afc61e41
Mac OS X (intel)	android-sdk_r17-macosx.zip	33867836 bytes	52639aae036b7c2e47cf291696b23236
Linux (i386)	android-sdk_r17-linux.tgz	29706368 bytes	14e99dfa8eb1a8fadd2f3557322245c4

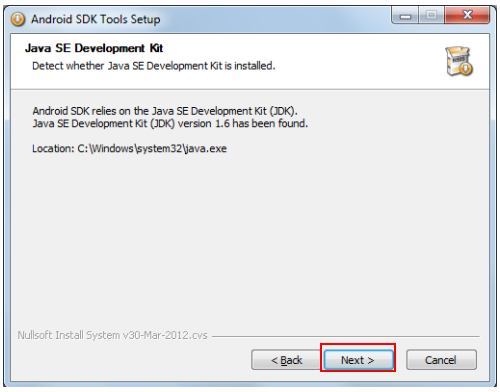
Installing Android SDK Manager

1 Start the downloaded file. The following window appears. Click the [Next] button.

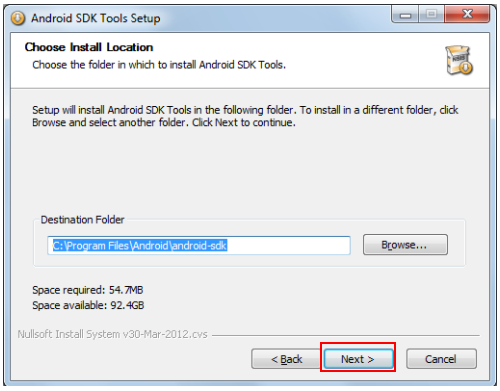


2 Click the [Next] button.

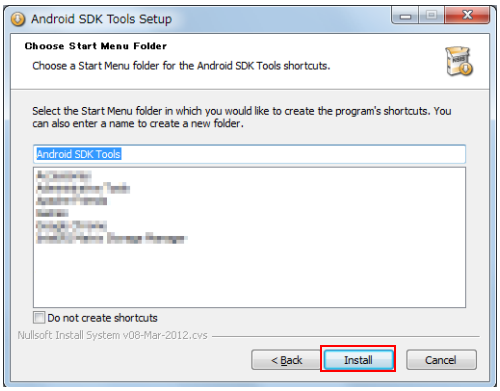
> If JDK is not installed, it is notified at this point.



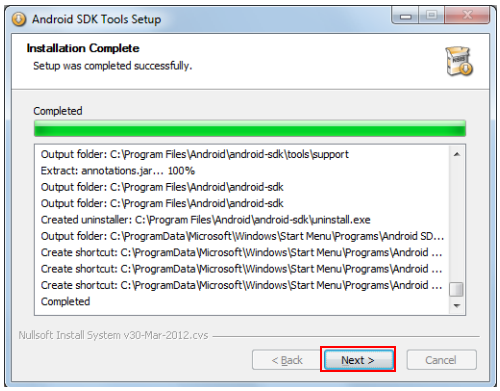
3 Specify the installation destination. Click the [Next] button.
(In this manual, the default settings are used.)



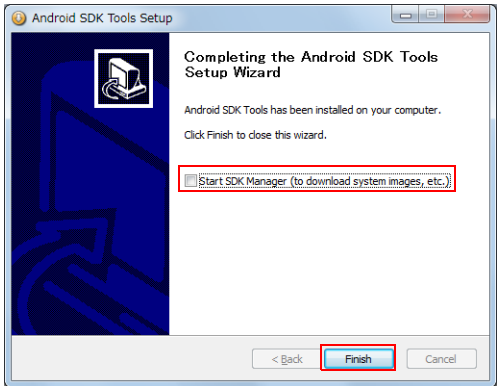
4 Specify the name to be registered to Start Menu. Click the [Install] button.



5 When installation completes, click the [Next] button.



6 Clear the [Start SDK Manager] checkbox. Click the [Finish] button.



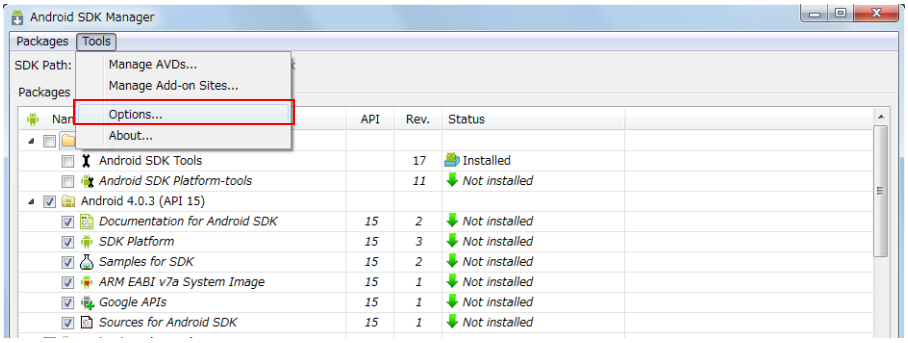
Setting Android SDK Manager

1 Start Android SDK Manager.

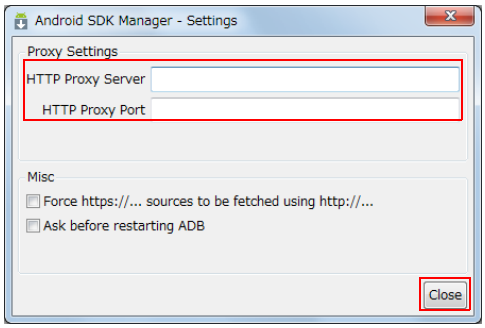
[Start]-[All Programs]-[Android SDK Tools]-[SDK Manager]

> On Windows Vista or later, it is required to run Android SDK Manager as the administrator.
> To run as the administrator, right-click Android SDK Manager and select [Run as administrator].
> If Android SDK Manager is not run as the administrator, package download will fail.

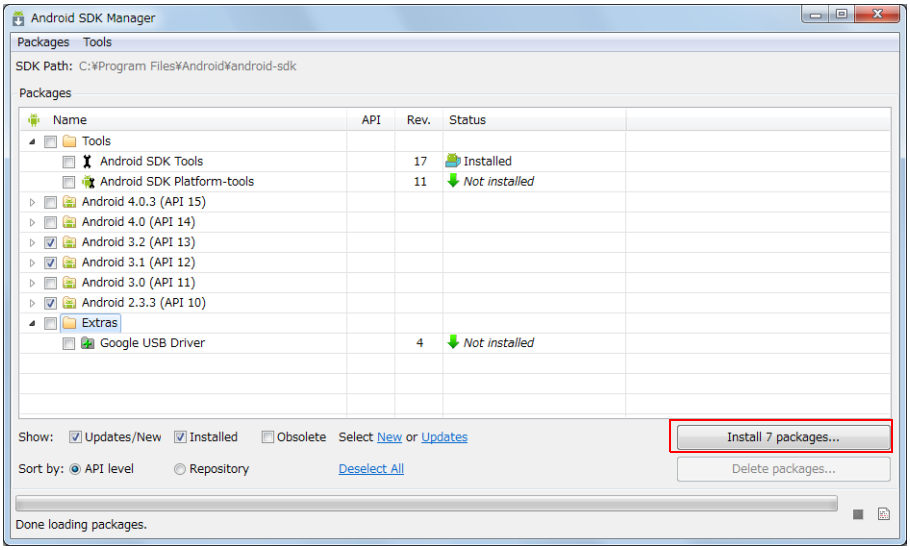
2 When the proxy setting is required, select [Tools]-[Options].



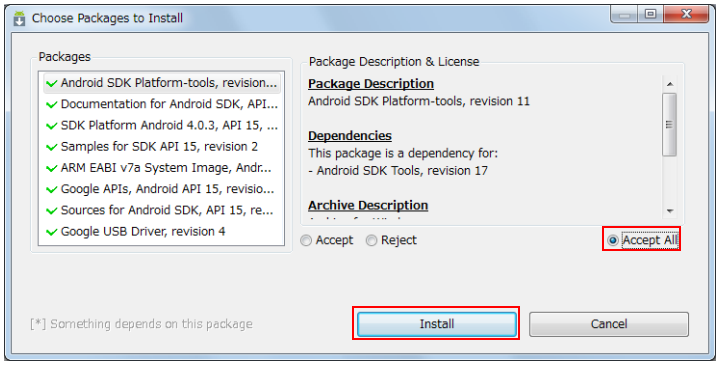
3 The proxy setting window appears. Set the proxy and click the [Close] button.



4 Among the Android versions supported by ePOS-Print SDK for Android, select the version of the device to be developed, and click the [Install XX packages...] button.



5 Select [Accept All] and click the [Install] button. Installation of Virtual Device starts.

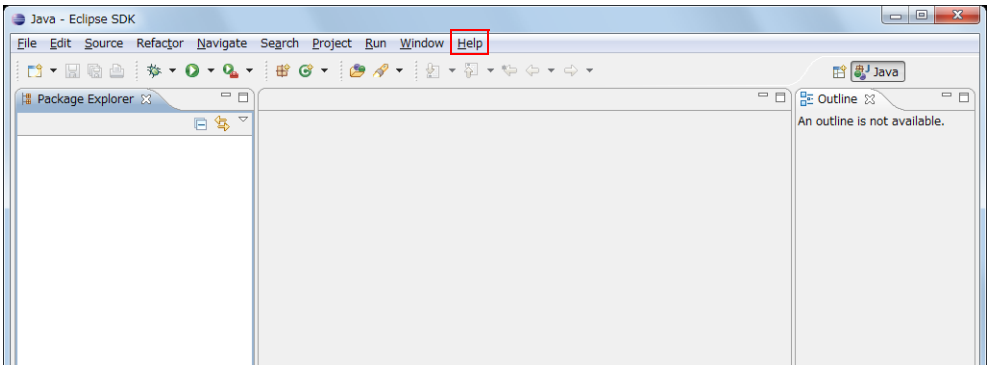


Downloading and Installing ADT Plugin

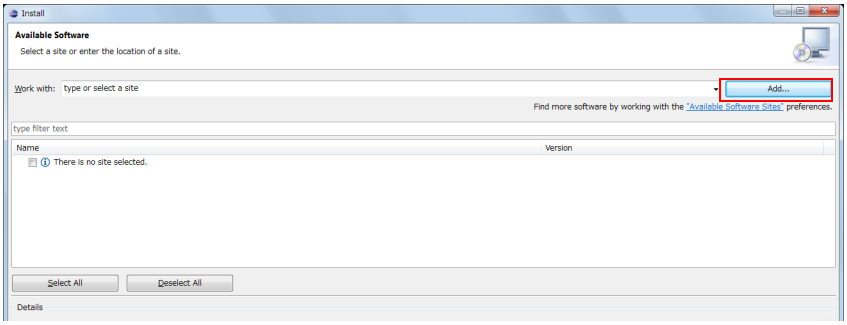
Download and install ADT (Android Development Tools) Plugin.

> To execute this operation, the computer must be connected to the Internet. If the proxy setting is required for Internet connection, refer to "Setting Proxy for Eclipse" on page 7.

1 Start Eclipse. Select [Help]-[Install New Software].

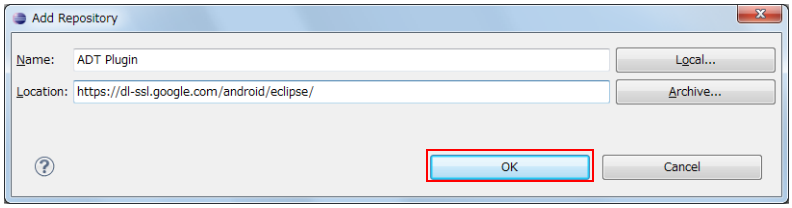


2 Click the [Add] button.

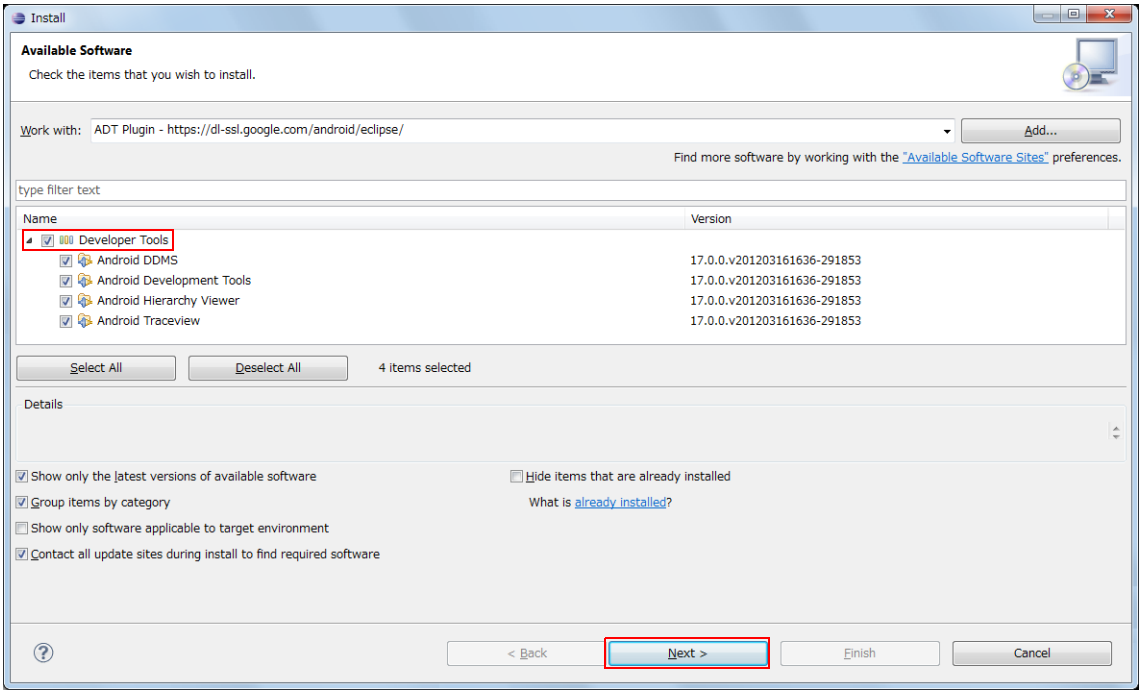


3 Enter [Name] and [Location], and click the [OK] button.

Item	Description
Name	ADT Plugin
Location	https://dl-ssl.google.com/android/eclipse/

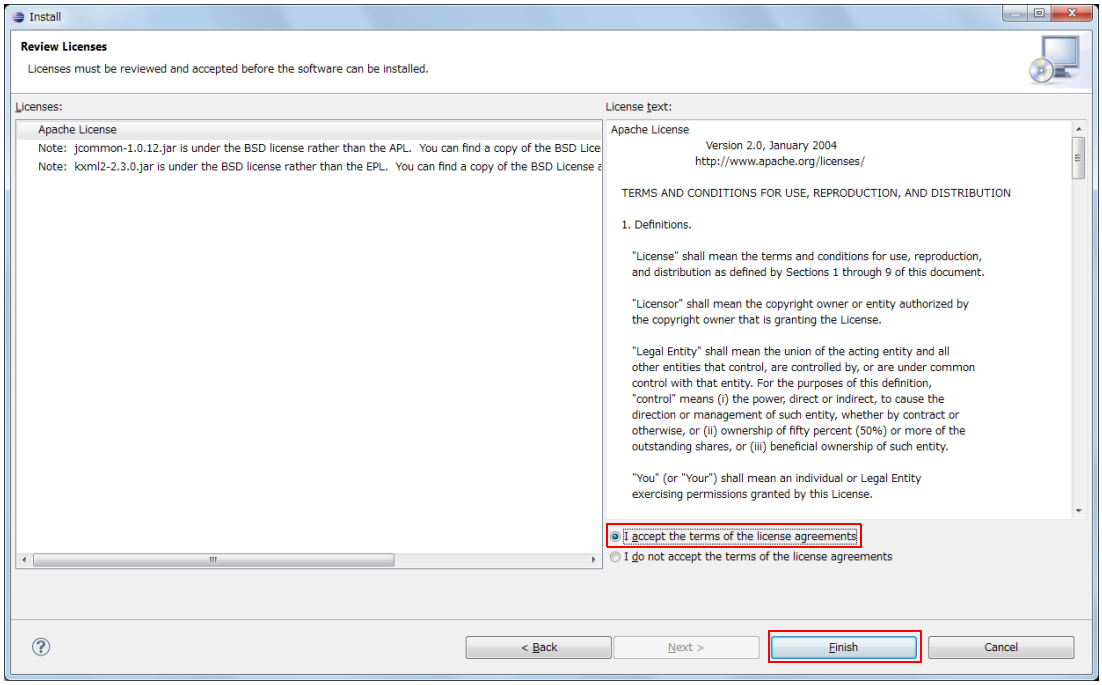


4 Select the [Developer Tools] checkbox and click the [Next] button.

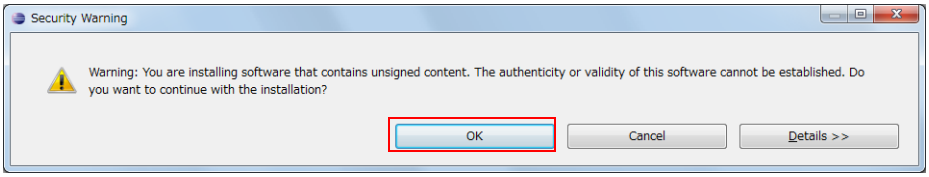


5 Confirm the plugin to be installed, and click the [Next] button.

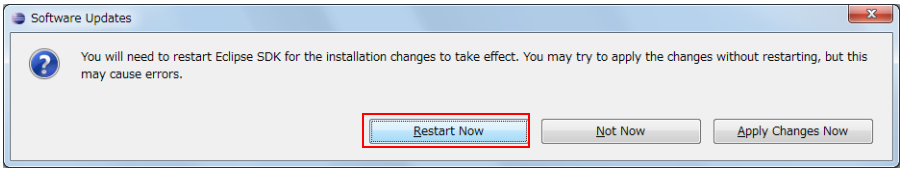
6 After confirming the terms of the license agreement, select the [I accept...] checkbox and click the [Finish] button.



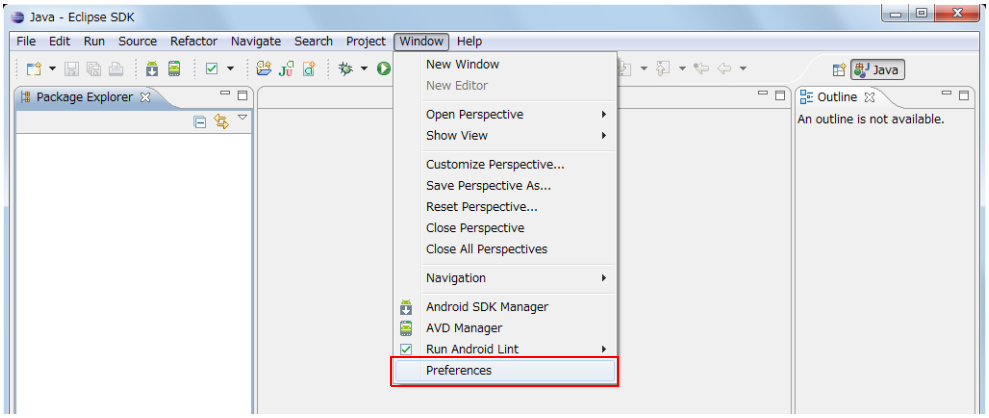
7 Installation starts. If the following window appears, click the [OK] button.



8 Click the [Restart Now] button to restart Eclipse.

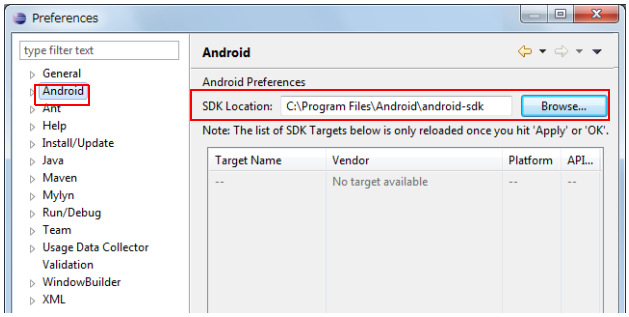


9 Select [Window] - [Preferences].

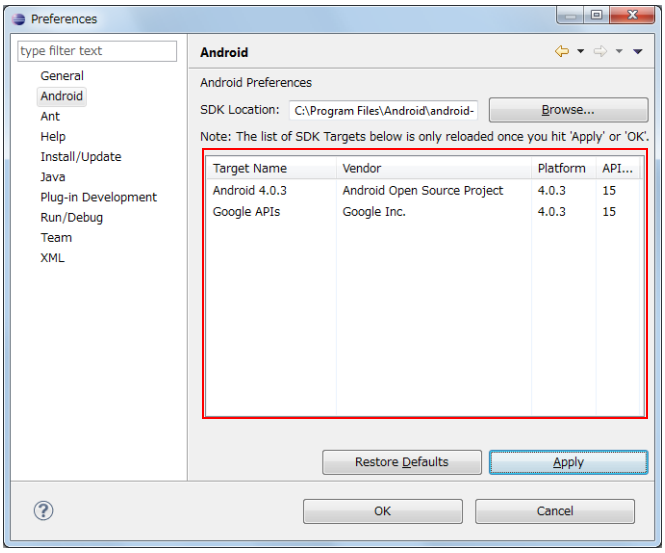


10 Select [Android] from the left column. Click the [Browse...] button to display the Android folder where SDK Manager is installed.

(In this manual, display "C:\Program Files\Android\android-sdk".)



11 Click the [Apply] button. Confirm that the installed package is displayed.



Executing Sample Application (Eclipse)

Import the sample application supplied with ePOS-Print SDK for Android into Eclipse, create a virtual device, and check operation using the emulator.

Import the sample application included with ePOS-Print SDK for Android into Eclipse, and check operation.

1.Import the application

Import the sample application into Eclipse.(page 19)

2. Run the application.

Use the following procedures to run the sample application.

- Run the emulator(page 24)
- Install and run on an Android device.(page 27)

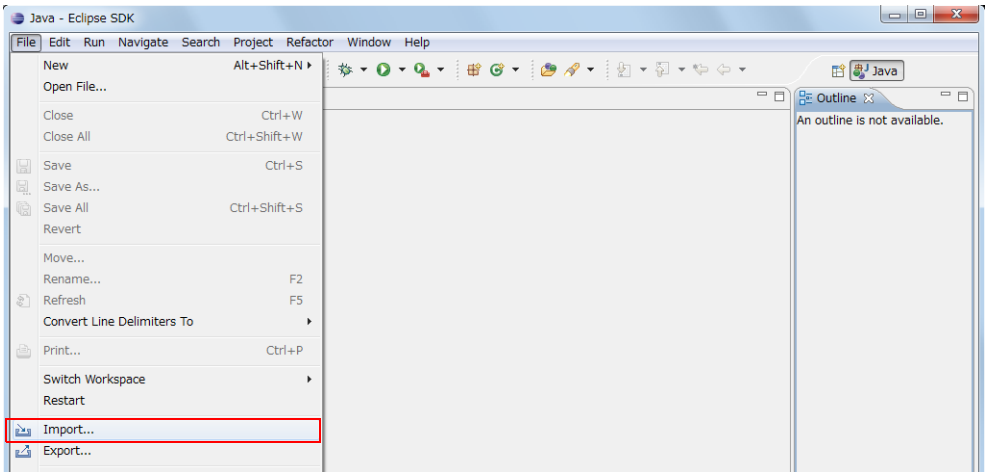
- The emulator does not support Bluetooth.
  The Bluetooth functions in the sample application cannot be used.
- For more information about the versions of Android devices that can run the sample application, see the ePOS-Print SDK for Android User's Manual.

Importing Application

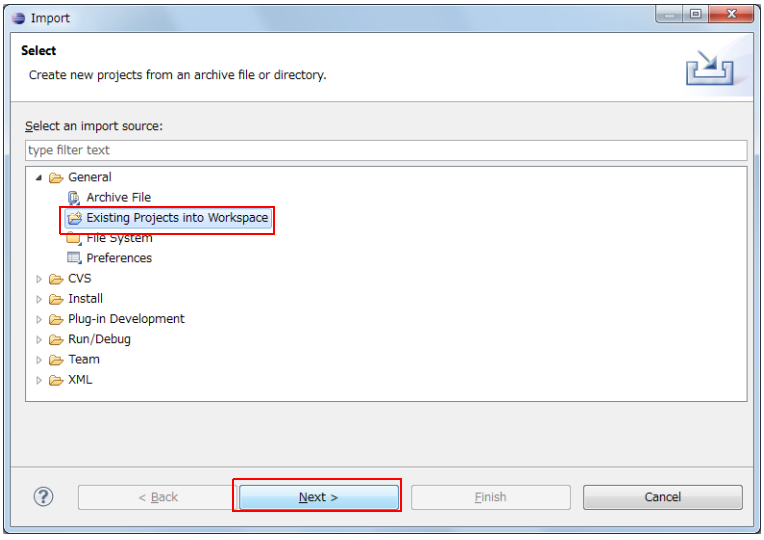
Import the sample application to Eclipse.

1 Extract ePOS-Print SDK for Android and save it to a desired location.

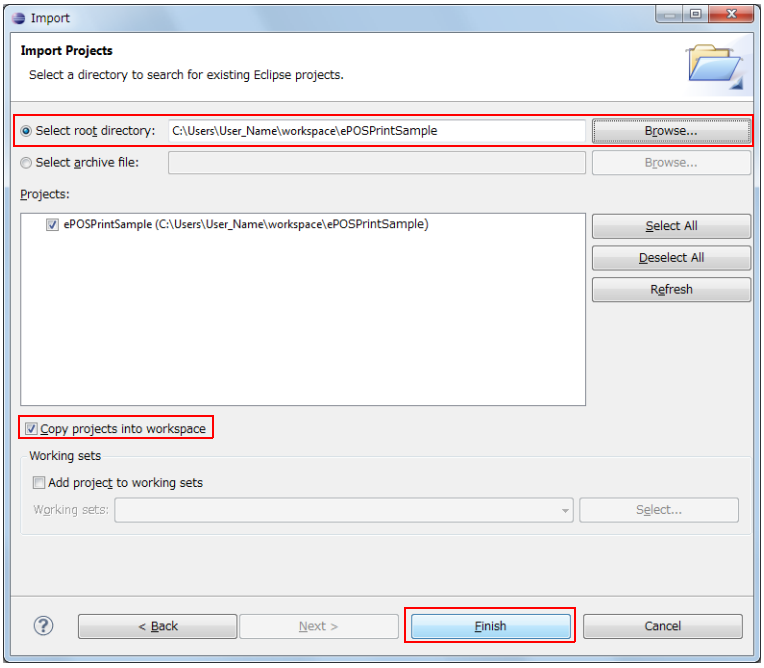
2 Start Eclipse. Select [File]-[Import].



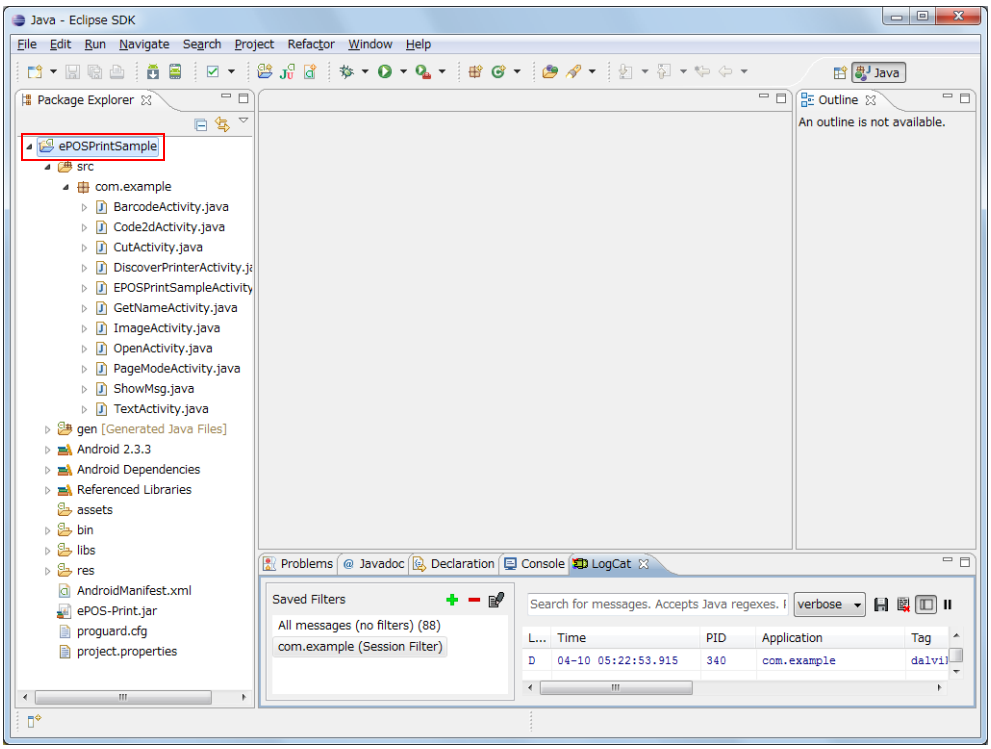
3 Select [General]-[Existing Projects into Workspace]. Click the [Next] button.



4 Click the [Browse...] button to display the saved ePOS-Print SDK for Android. Select the [Copy projects into workspace] checkbox and click the [Finish] button.



5 Confirm that the application has been properly imported.



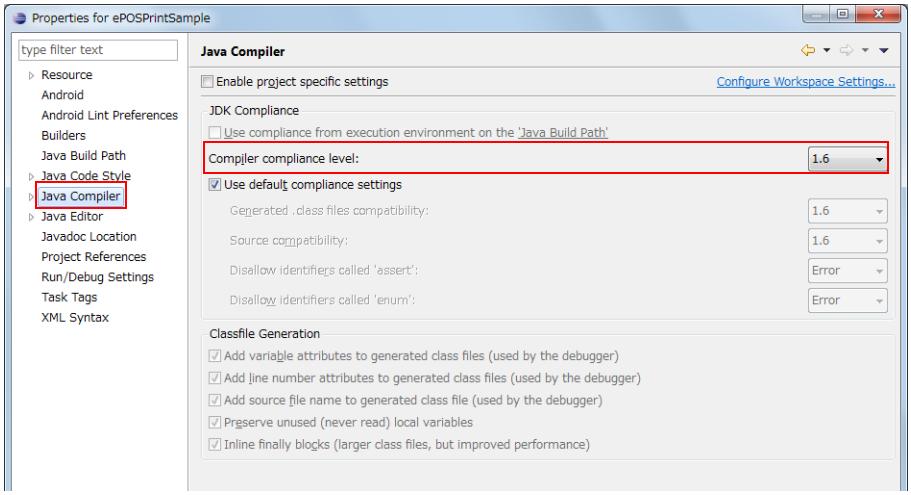
Settings for Newly Created Project

Compiler compliance level settings

When a new project is created, the Compiler compliance level of the created project must be changed to "1.6". To change the Compiler compliance level, follow the procedures below.

1 Select the created project and select [Project]-[Properties].

2 Select [Java Compiler] from the left column. Change [Compiler compliance level:] to [1.6].



Settings for Using the Wi-Fi / Bluetooth function

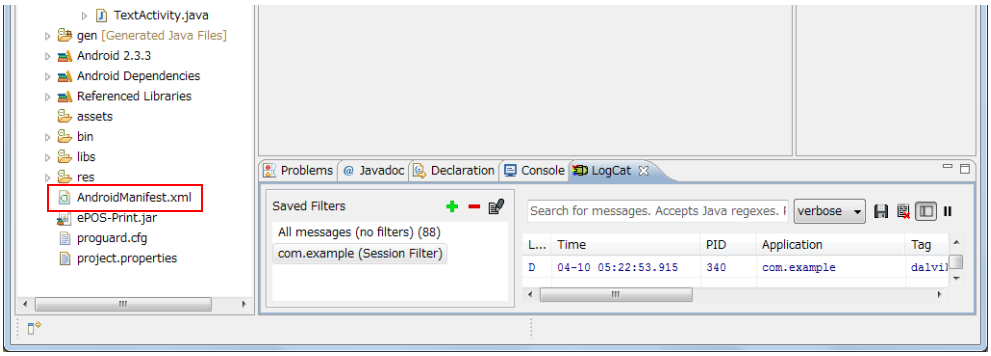
To use the Wi-Fi / Bluetooth function, it is required to specify "Permission" in AndroidManifest.xml.

❏ For using the Wi-Fi function
android.permission.INTERNET

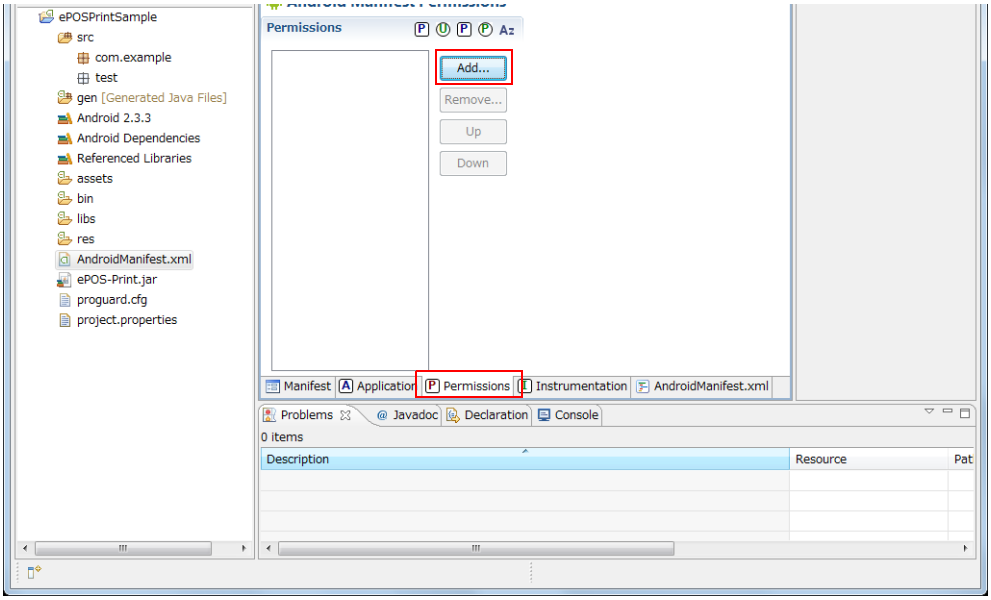
❏ For using the Bluetooth function
android.permission.BLUETOOTH
android.permission.BLUETOOTH_ADMIN

Specify "Permission" with the following procedures:

1 Double-click [AndroidManifest.xml].

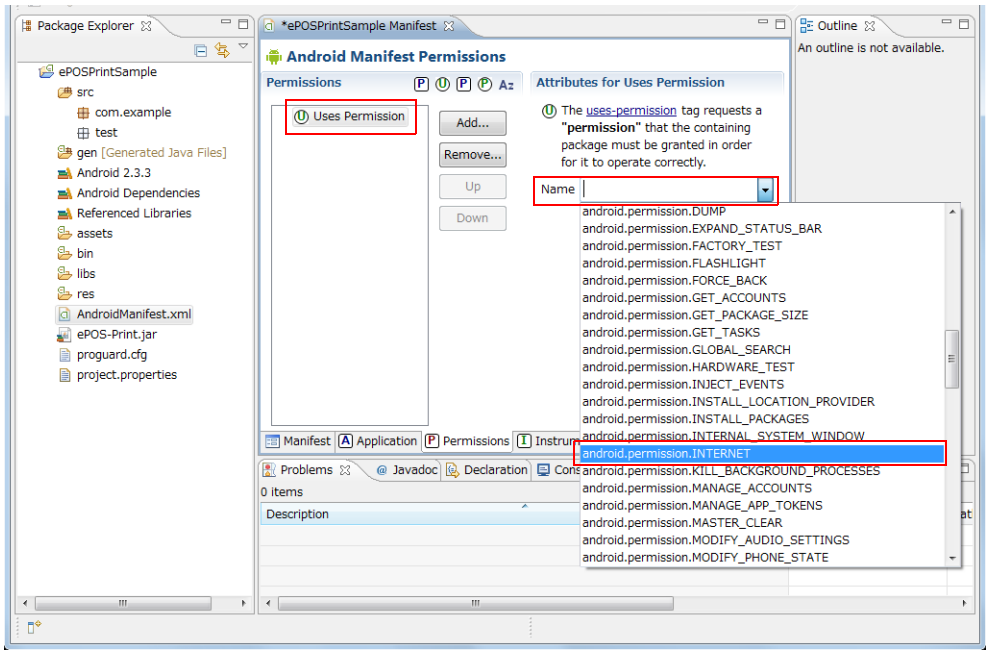


2 Select the [Permissions] tag. Click the [Add] button.

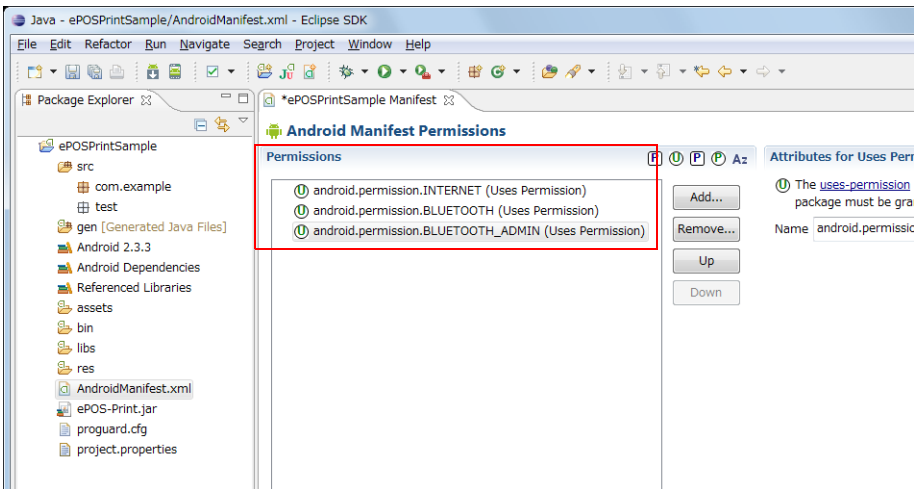


3 Select [Uses Permission] and click the [OK] button.

4 [Uses Permission] is added. Click the "▼" mark next to [Name] and select the necessary Permissions from the list.



5 Repeat Step 2 to 4 to specify the required Permissions.

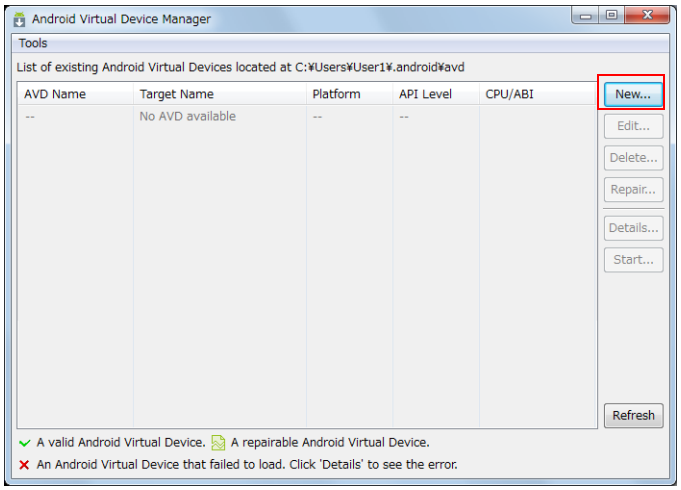


Executing Application (Emulator)

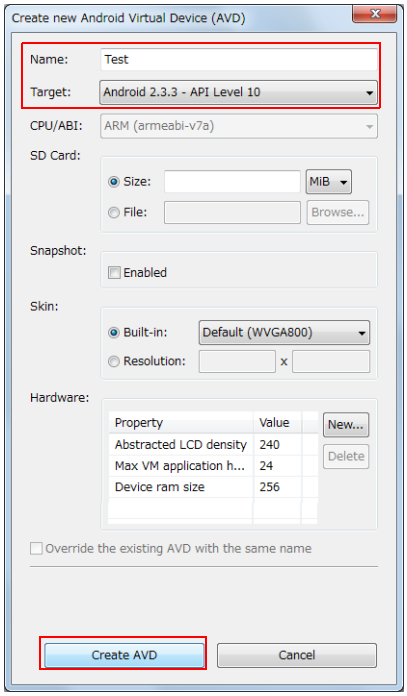
For more information about running the application on an Android device, see"Executing Application (Android Device)" on page 27.

1 Start Android Virtual Device Manager. After it starts, click the [New...] button.

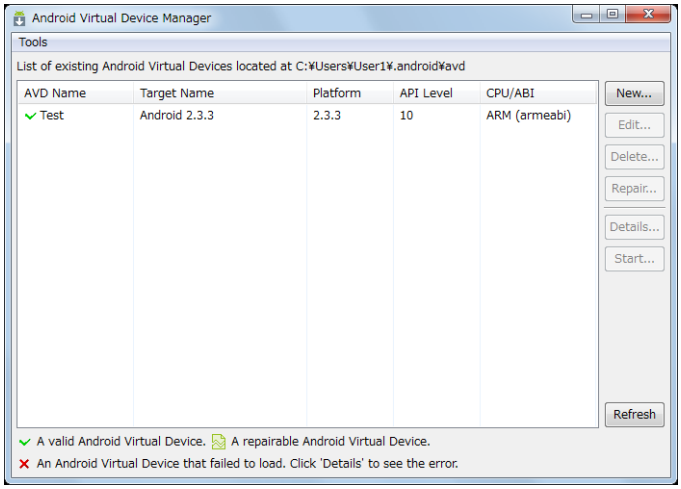
[Start]-[All Programs]-[Android SDK Tools]-[AVD Manager]



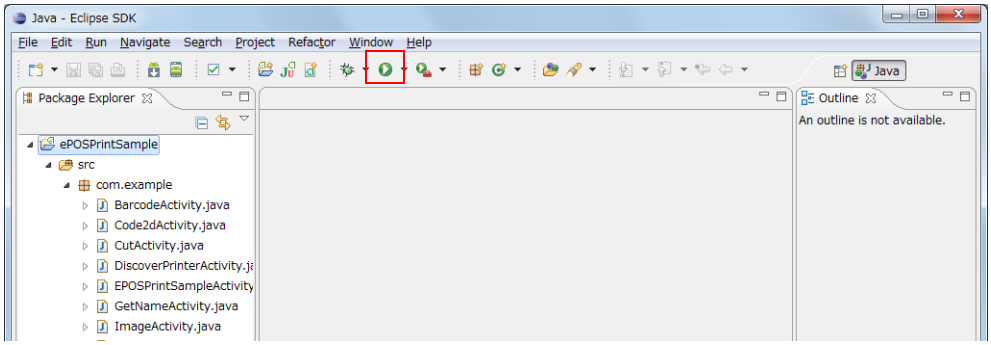
2 Select the virtual device name to be created and the OS version. Specify [Name] (any name) and select [Target]. Click the [Create AVD] button.



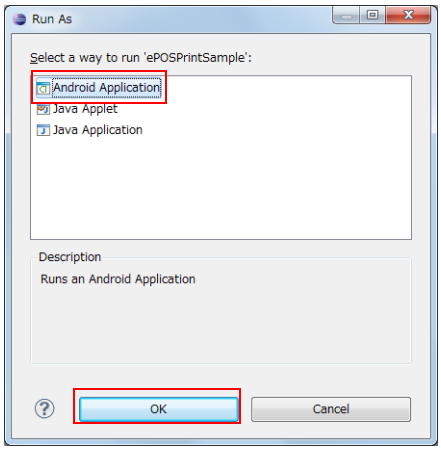
3 The created virtual device is displayed.



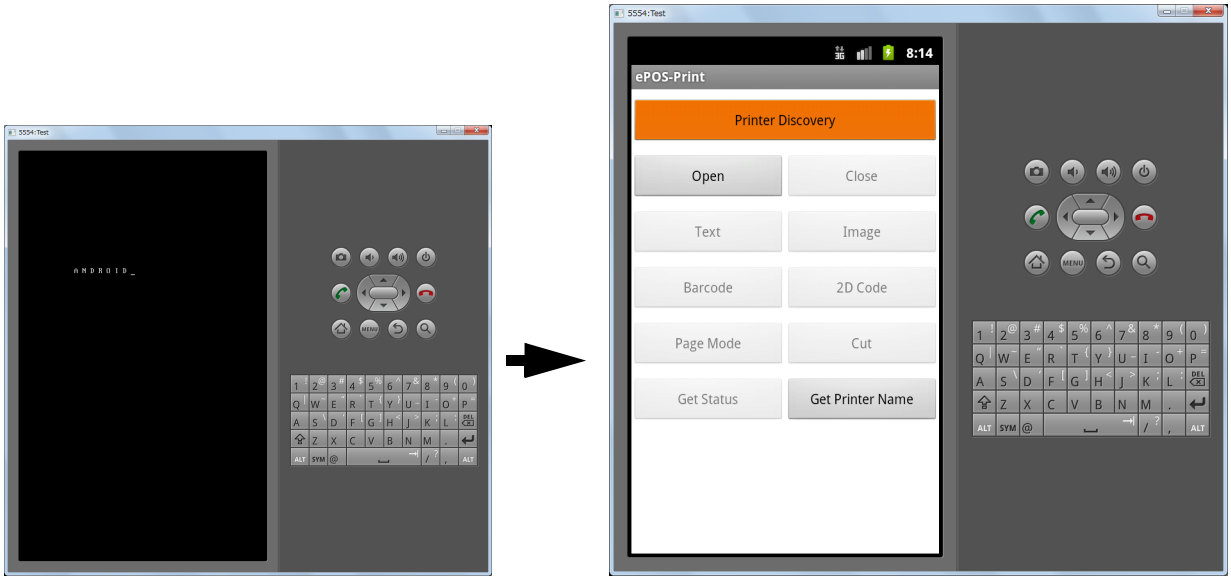
4 Click the button to run Eclipse.



5 For the initial startup, the window to confirm the execution type appears. Select [Android Application] and click the [OK] button.



6 The emulator starts and the application is executed.



Executing Application (Android Device)

1 Install the USB driver for the Android Debug Bridge (ADB) for the Android device you are using.

For more information about USB drivers for Android devices and their installation, see the site at the following URL.

http://developer.android.com/tools/extras/oem-usb.html

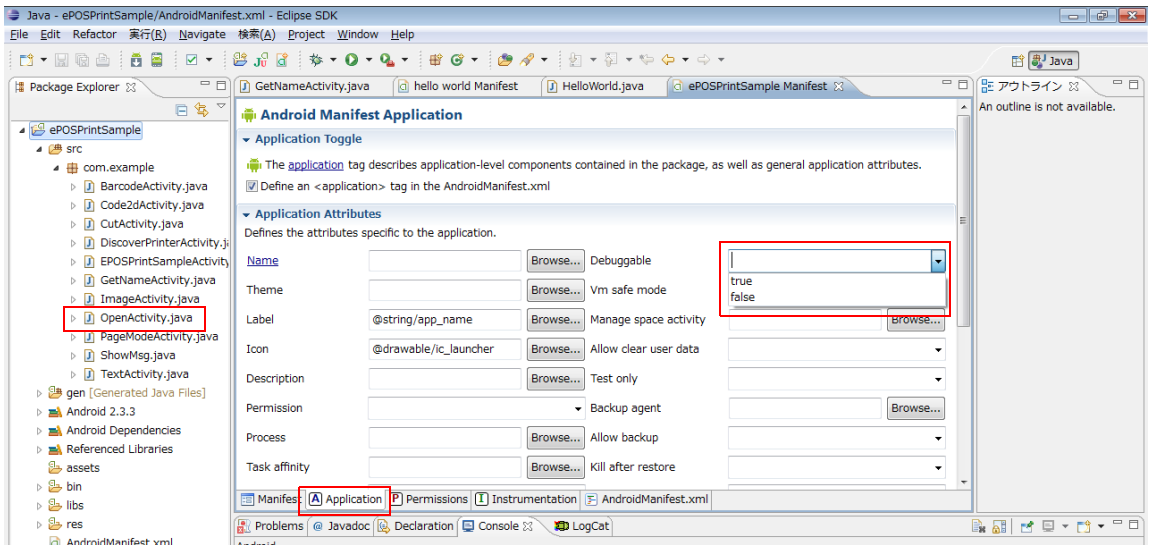
> If you are unable to find an ADB USB driver for the device you are using at the site linked to above, search the website of the manufacturer of your device.

2 Make the following settings on your Android device:

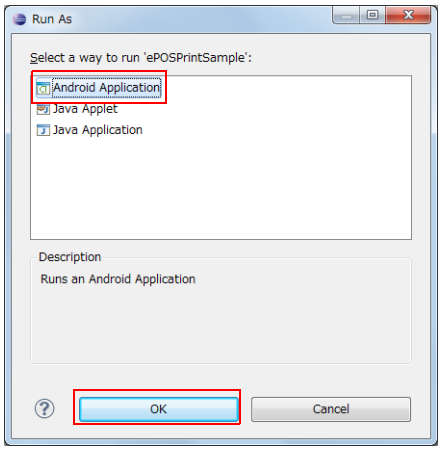
- Go to [Settings] - [Applications] , and enable [Unknown sources].
- Select [Settings] - [Applications] - [Development] , and enable [USB debugging].

3 Connect the Android device to your computer via USB.

4 Enable the AndroidManifest.xml debugging file in the sample application. Double-click [AndroidManifest.xml]. On the [Application] tab, set [Debuggable] to "true", and save the settings.



5 Click the Run button in Eclipse.
If it is being run for the first time, the following window will appear. Select [Android Application], and click the [OK] button.



6 The sample application is installed and run on the Android device.