



Android 프로그램개발 환경





학습 목표

교육 목표

- ❖ JDK 설치
- ❖ JDK 환경 설정
- ❖ Eclipse 설치
- ❖ Android SDK 설치
- ❖ ADT Plug-in 설치
- ❖ Android Virtual Device(AVD) 설치
- ❖ Android 예제 프로그램





Android 프로그램 개발 도구

■ Android 프로그램 개발 도구

❖ JDK (Java Development Kit)

❖ 통합개발환경

◆ Eclipse IDE

❖ Android SDK

❖ Download

도구	File	Download URL
JDK	jdk-6u17-windows-i586-p.exe	http://java.sun.com
Eclipse	eclipse-jee-galileo-SR1-win32.zip	http://www.eclipse.org/downloads/
Android SDK	android-sdk_r04-windows.zip	http://developer.android.com/sdk/index.html





JDK 설치 (1)

JDK 다운로드

Developer Resources for Java Technology - Windows Internet Explorer

http://java.sun.com/

1. http://java.sun.com/

Developers Home > Products & Technologies >

Java.sun.com
The Source for Java Developers

Featured Content

February 26, 2009
Using MySQL With Java Technology
Learn the essential steps to install and configure the Connector/J JDBC driver for a MySQL database, with a focus on connectivity from the Java programming language.

February 24, 2009
A Java Developer's Quiz
This quiz reflects the intellectual curiosity and the spirit of fun to be found among leading Java developers and in the Java community as a whole.

February 19, 2009
15 Minutes or Less - JavaFX
Join Sun Microsystems' Robert Eckstein as he teaches you the fundamentals of the new JavaFX programming language, all in fifteen minutes or less!

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Developer Spotlight

Sun GlassFish Portfolio Released
Sun GlassFish Portfolio is a feature-rich Web application development platform. Learn more about its features in this [podcast](#) with Sun's Paul Hinz and Tom Kincaid.

GlassFish Podcast
Alexis Moussine-Pouchkine and Eduardo Pelegrin-Llopert discuss Project GlassFish, community adoption, and Sun's role in contributing to the GlassFish community.

Introduction to Sun GlassFish Enterprise Service Bus
This video demonstrates key aspects of Sun GlassFish Enterprise Service Bus (ESB), a lightweight and agile ESB platform. For more on OpenESB with a focus on Java Business Integration (JBI), watch the screencast

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Java SE
Java EE
Java ME
JavaFX
Web Services
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Resources:

Code Samples & Apps

2. 클릭

[+] FEEDBACK

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JDK 설치 (2)

Java SE Downloads - Sun Developer Network (SDN) - Windows Internet Explorer

http://java.sun.com/javase/downloads/index.jsp

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» JDK » JRE

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Download
JDK + Java EE Bundle

Download
JDK + NetBeans

3. 클릭

Here are the Java SE downloads in detail.

Java SE Development Kit (JDK)

JDK 6 Update 17

The JDK (which includes the JRE) is required to develop Java and JavaFX applications and applets. This special release provides a few key fixes. » Learn more

The Firefox 3.6 browser requires Java SE 6 Update 10 or later. Otherwise, Java-based web applications will not work.

Download

Java SE Runtime Environment (JRE)

JRE 6 Update 17

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JDK 설치 (3)

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http://java.sun.com/javase/downloads/widget/jdk6.jsp

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Language: Multi-language

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Est. Download Time: 7 min

1.5 Mbps

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» Sun License
» Third Party Licenses
» Supported System Configurations

4. Windows 선택

5. 클릭

6. 클릭

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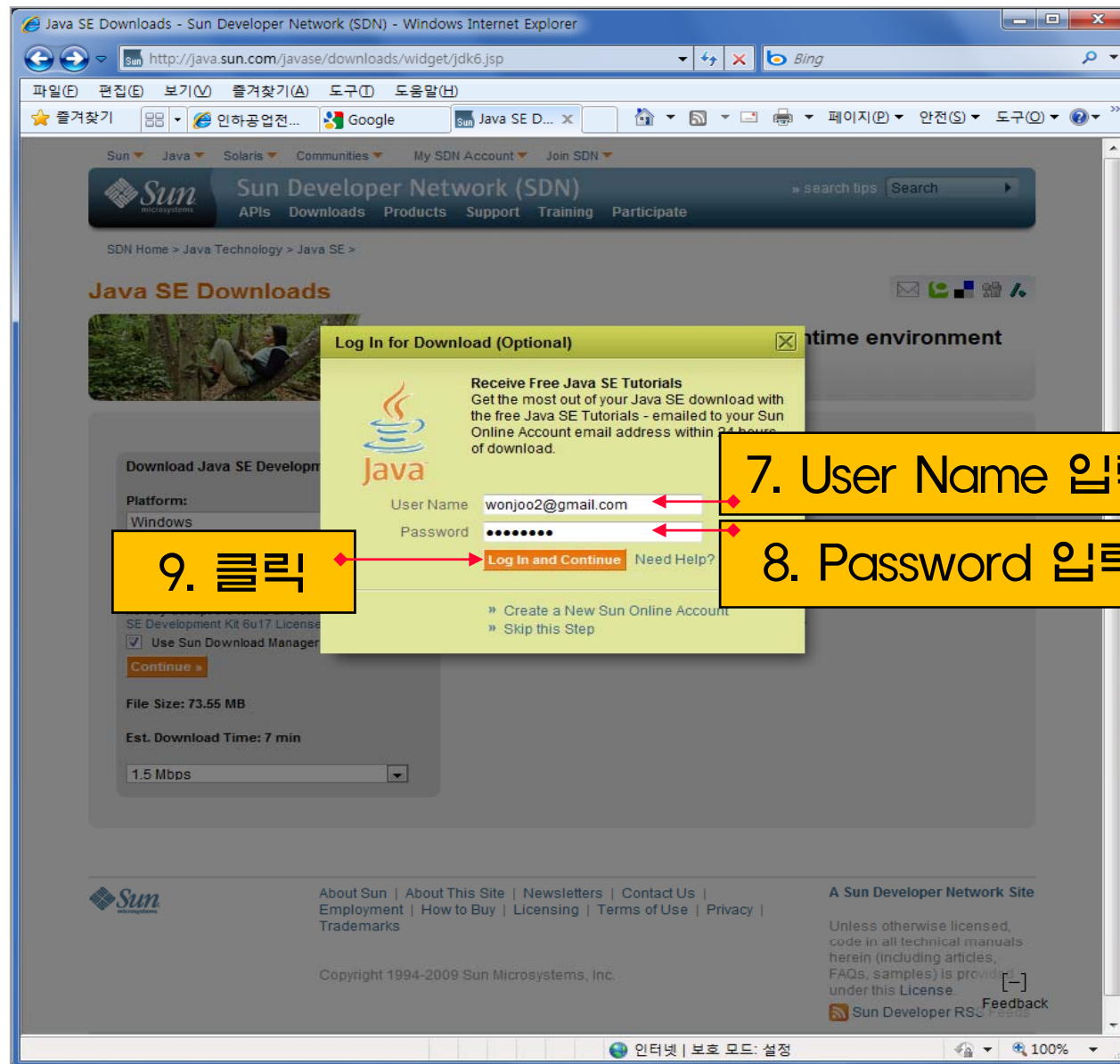
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100%



JDK 설치 (4)



7. User Name 입력

8. Password 입력

9. 클릭



JDK 설치 (5)

Download Java SE Development Kit 6u17 for Windows, Multi-language - Windows Internet Explorer

https://cds.sun.com/is-bin/INTERSHOP.enfinity/WFS/CDS-CDS_Developer-Site/

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Downloads

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Download Java SE Development Kit 6u17 for Windows, Multi-language

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We were unable to detect a recent version of Java Runtime Environment (JRE) on your system. With the latest JRE, you can automatically download, install, and run Sun Download Manager (SDM) directly from this page. We highly recommend SDM to easily manage your downloads (pause, resume, restart, verify, and more). Visit java.com for the latest JRE.

There is more information on the available files for download on the [Supported System Configurations](#) page.

Instructions: Select the files you want, then click the "Download Selected with Sun Download Manager" (SDM) button below to automatically install and download the files. (If you click directly on file names to download with your browser, a Java plug-in is required.)

Your download should start automatically.
If not, click the file link below.

File Description and Name	Size
Java SE Development Kit 6u17 jdk-6u17-windows-i586.exe	73.55 MB

Optional Files

File Description and Name	Size
Software License Agreement jdk-6u17-sla.pdf	53.90 KB

Download Selected with Sun Download Manager »

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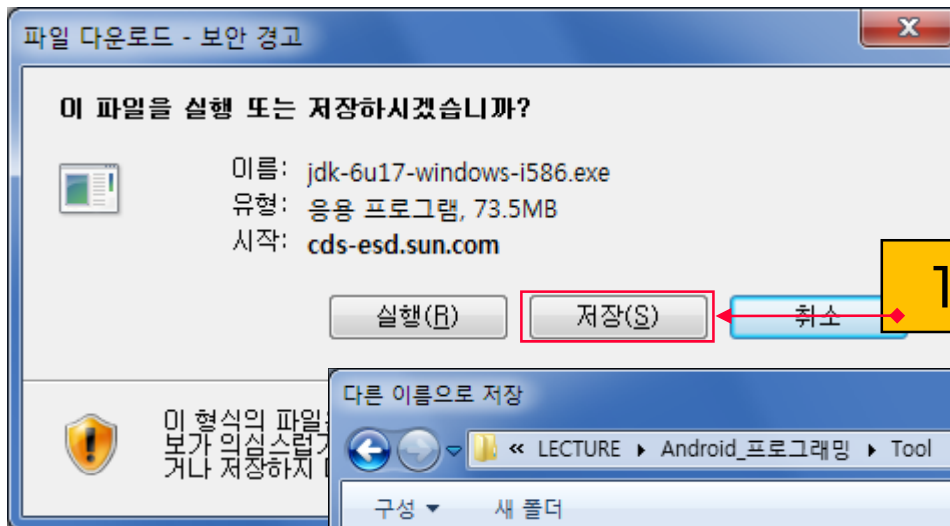
Related Resources

- » [Java.sun.com](http://java.sun.com)
- » [Solaris Developer Center](#)
- » [JavaFX](#)
- » [Web Developer Resource Center](#)
- » [Developer Services](#)
- » [JavaOne Online](#)

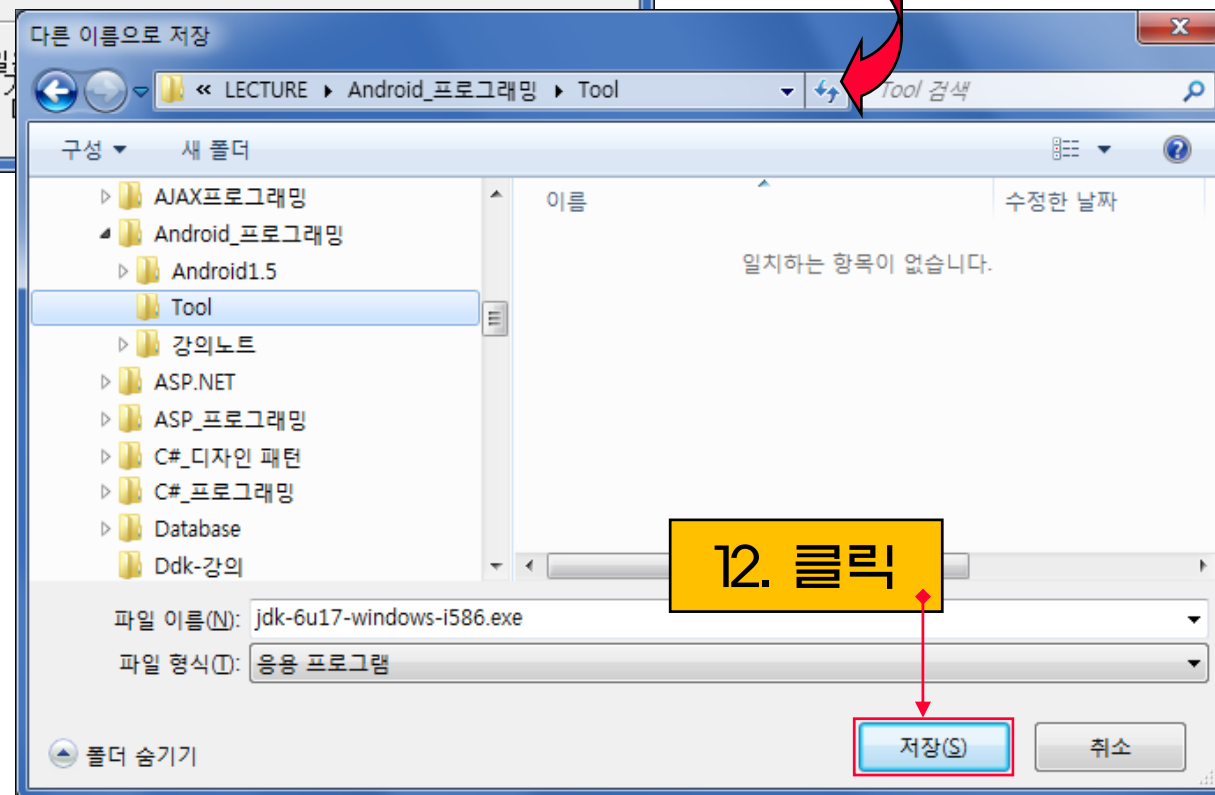
https://cds.sun.com/is-bin/INTERSHOP.enfinity/WFS/CDS-CDS-CD 인터넷 | 보호 모드: 설정 100%



JDK 설치 (6)



11. 클릭

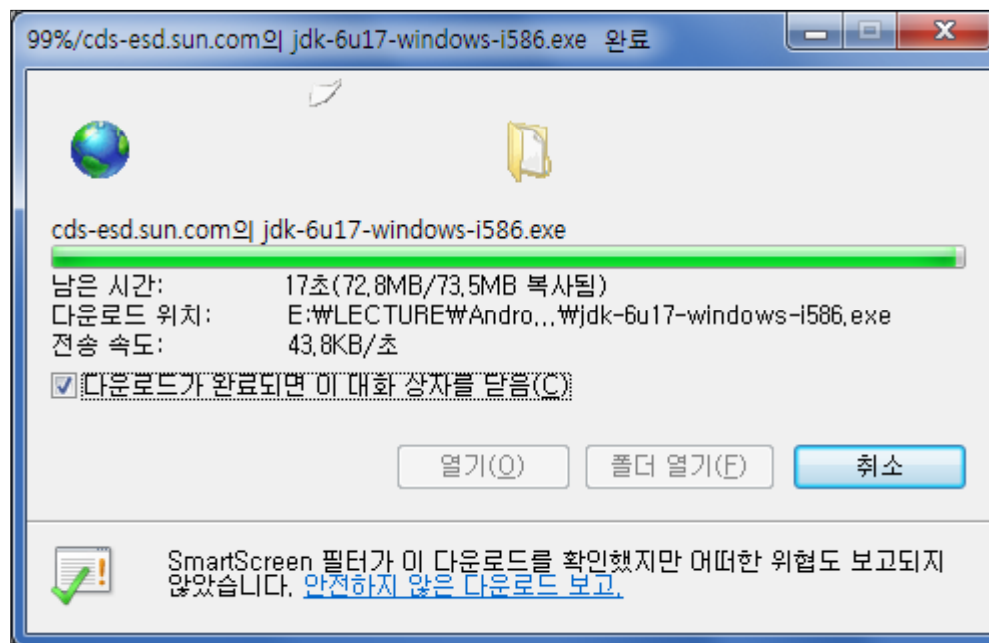


12. 클릭



JDK 설치 (7)

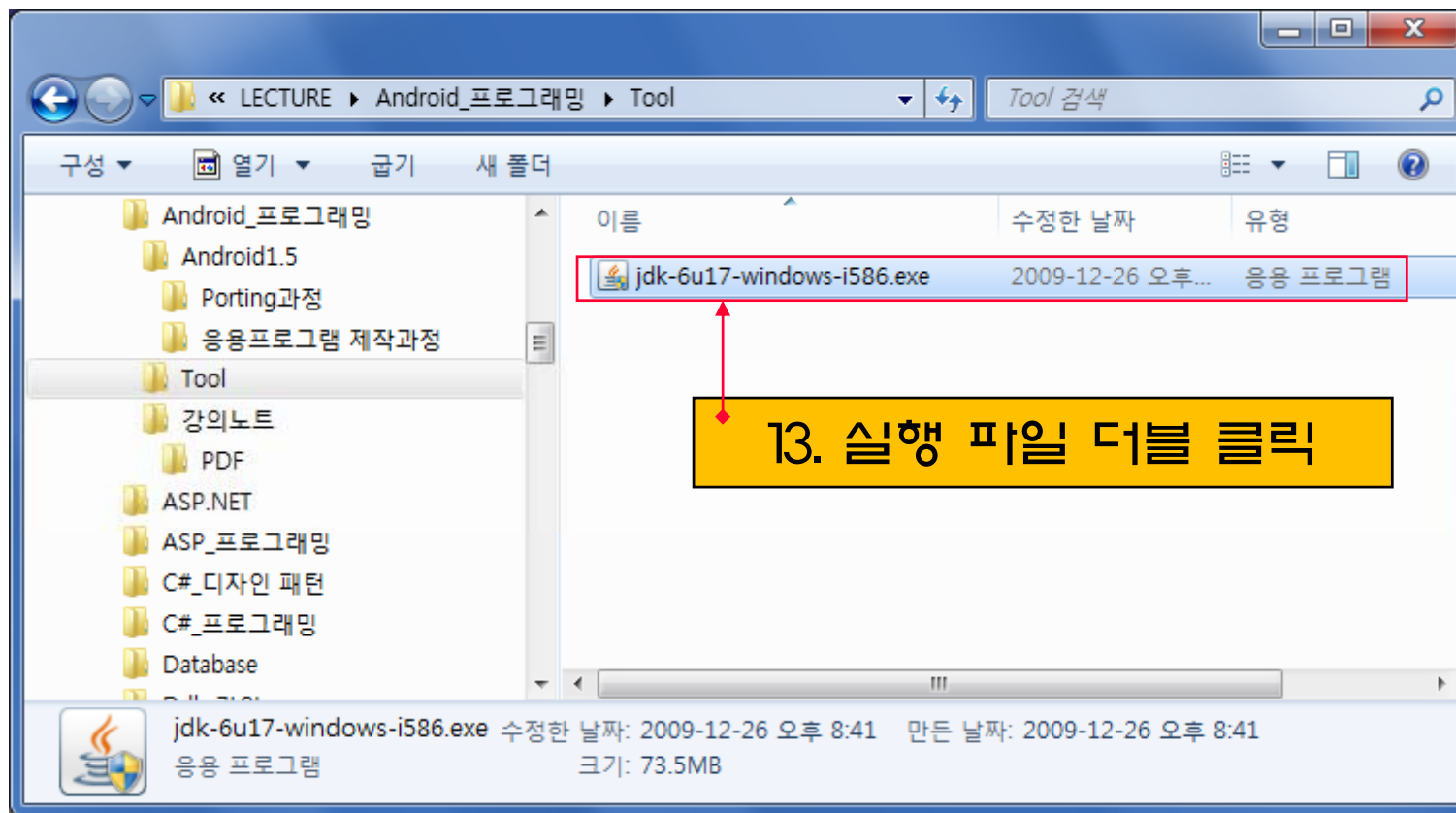
파일 전송





JDK 설치 (8)

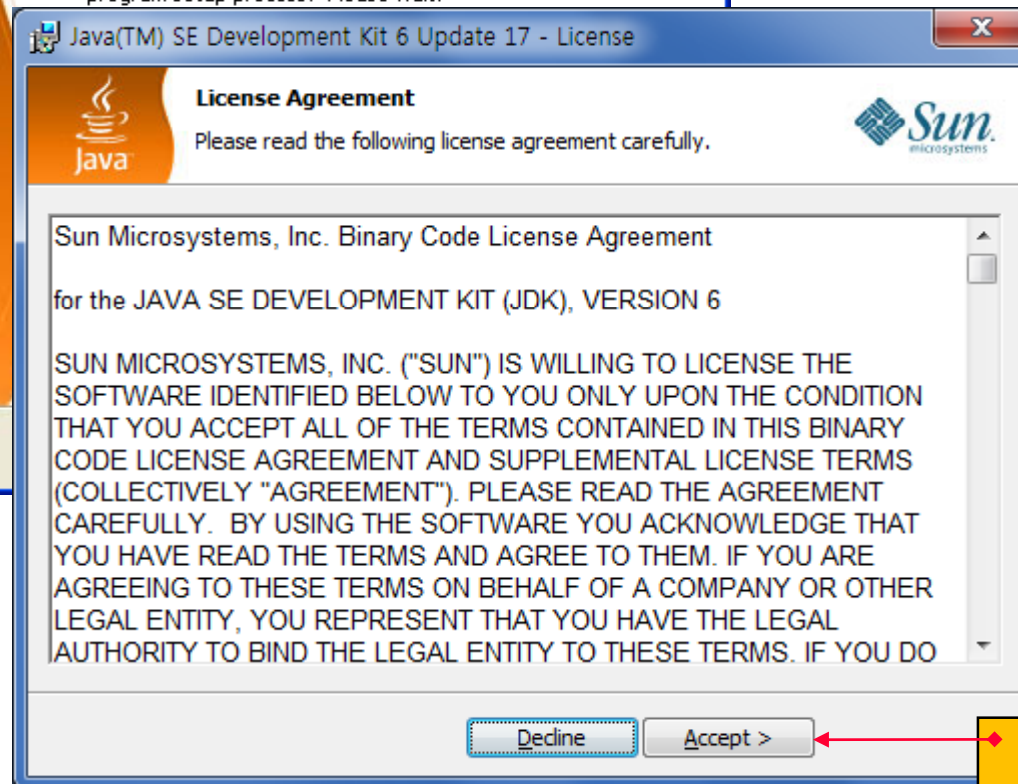
JDK 실행





JDK 설치 (9)

JDK 설치

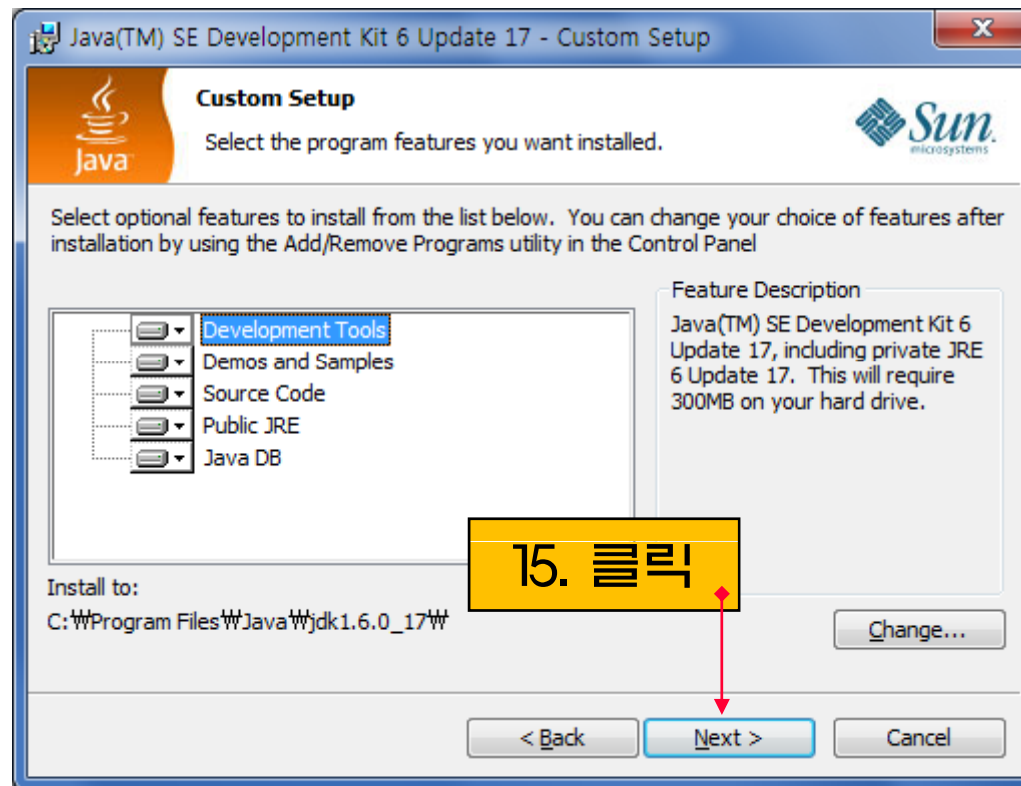


14. 클릭



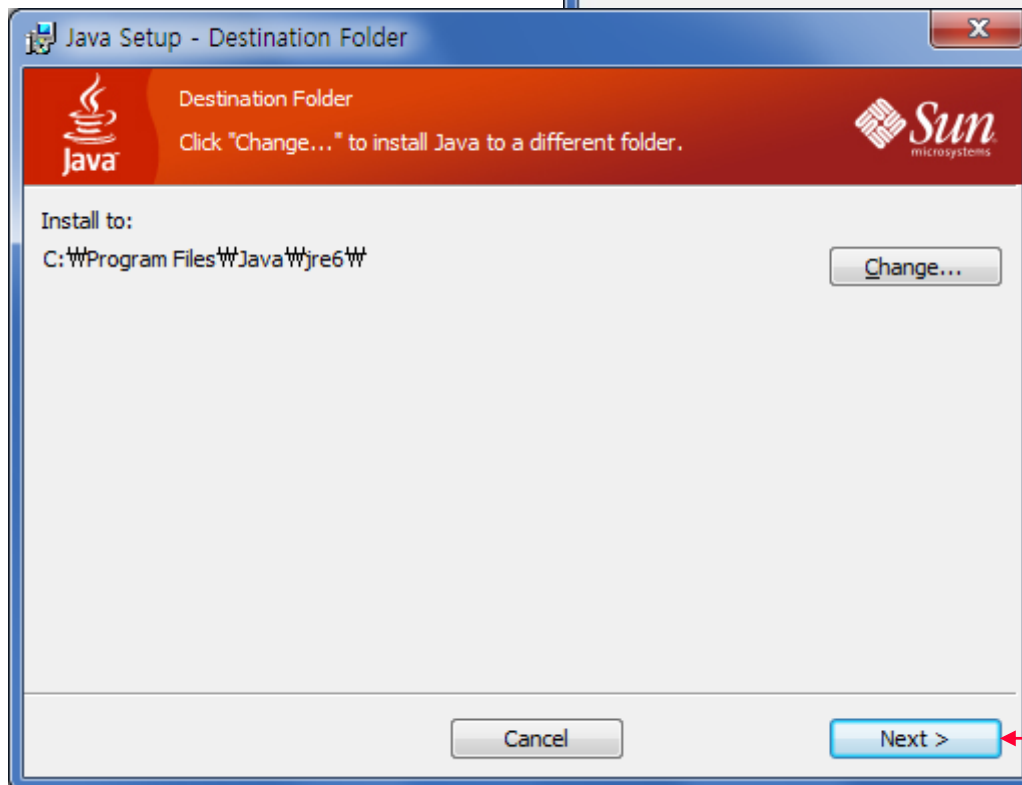
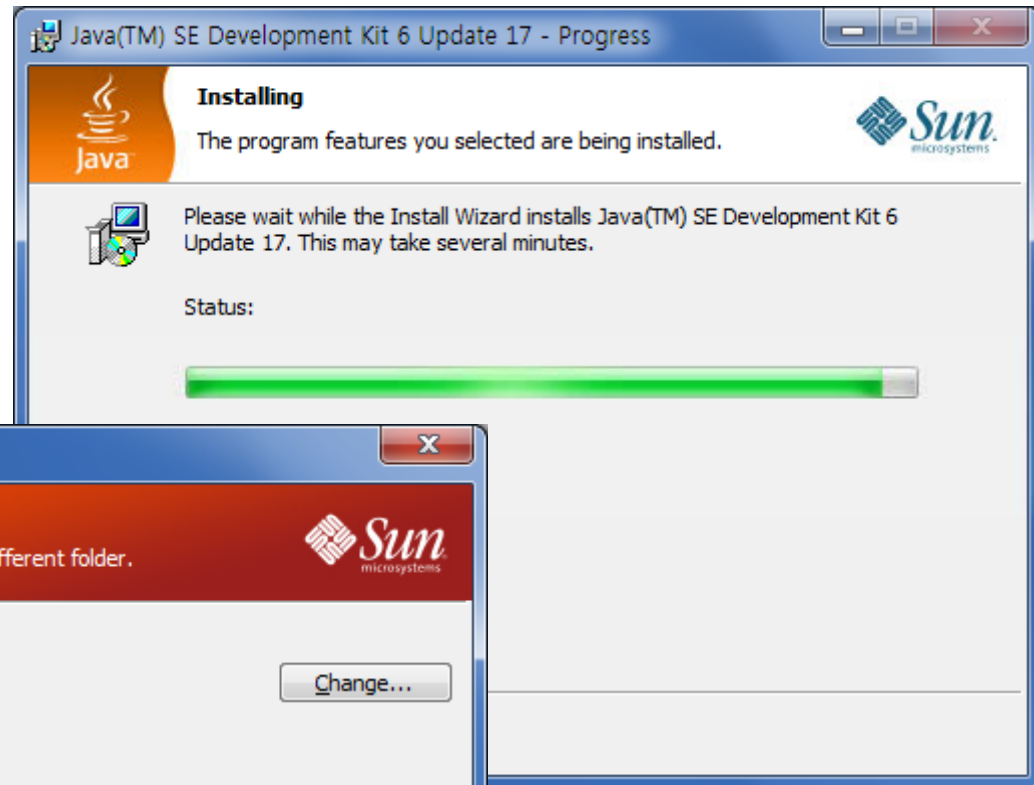
JDK 설치 (10)

■ 설치 폴더 지정





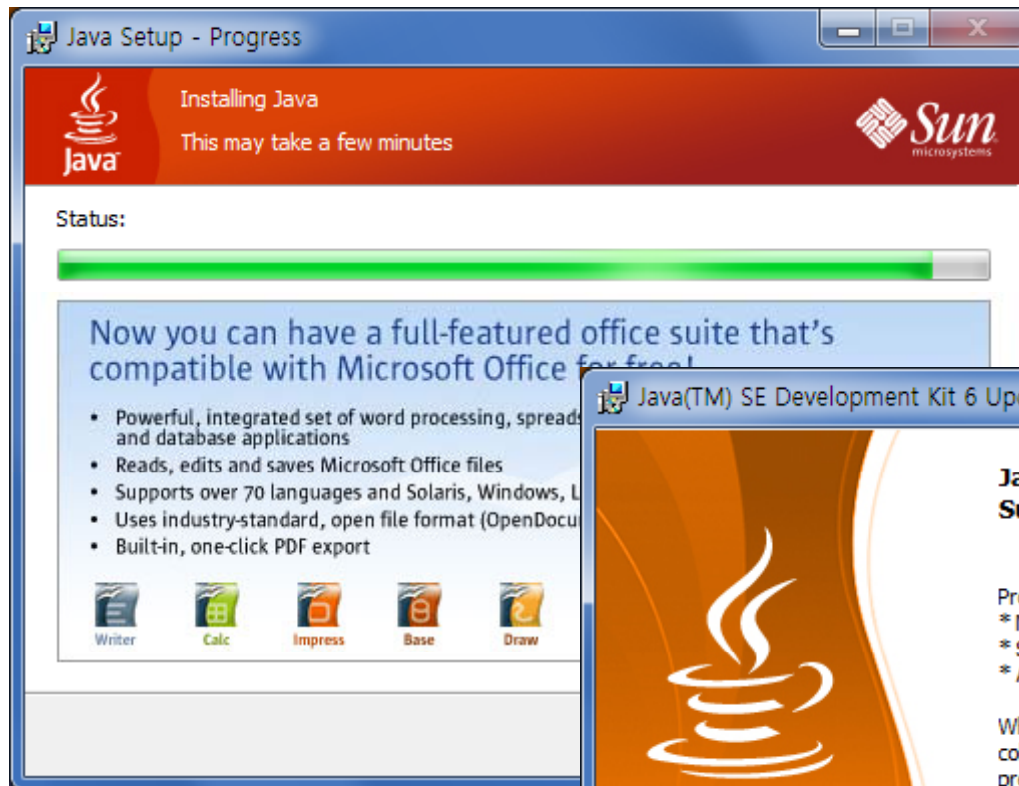
JDK 설치 (11)



16. 클릭



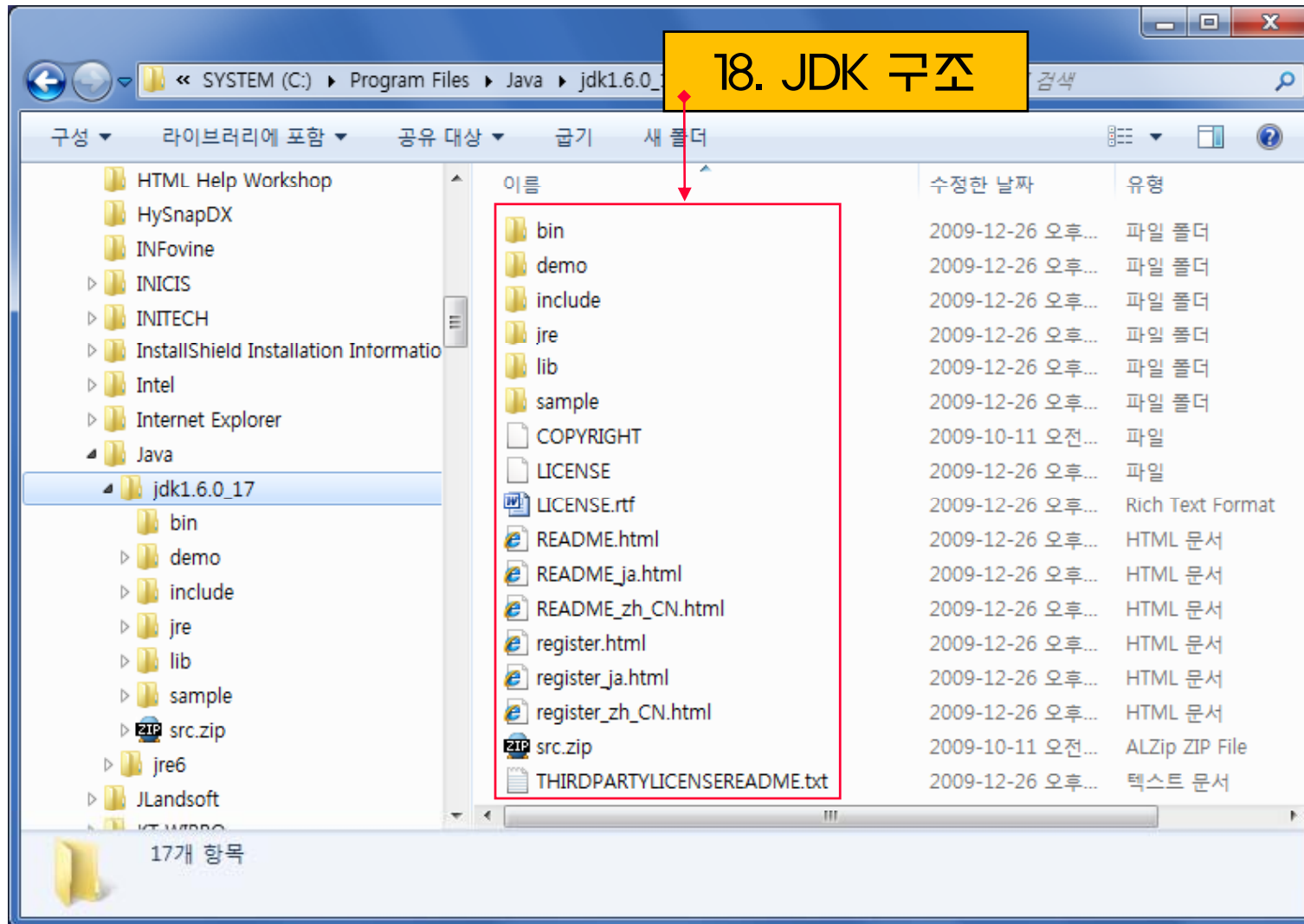
JDK 설치 (12)





JDK 설치 (13)

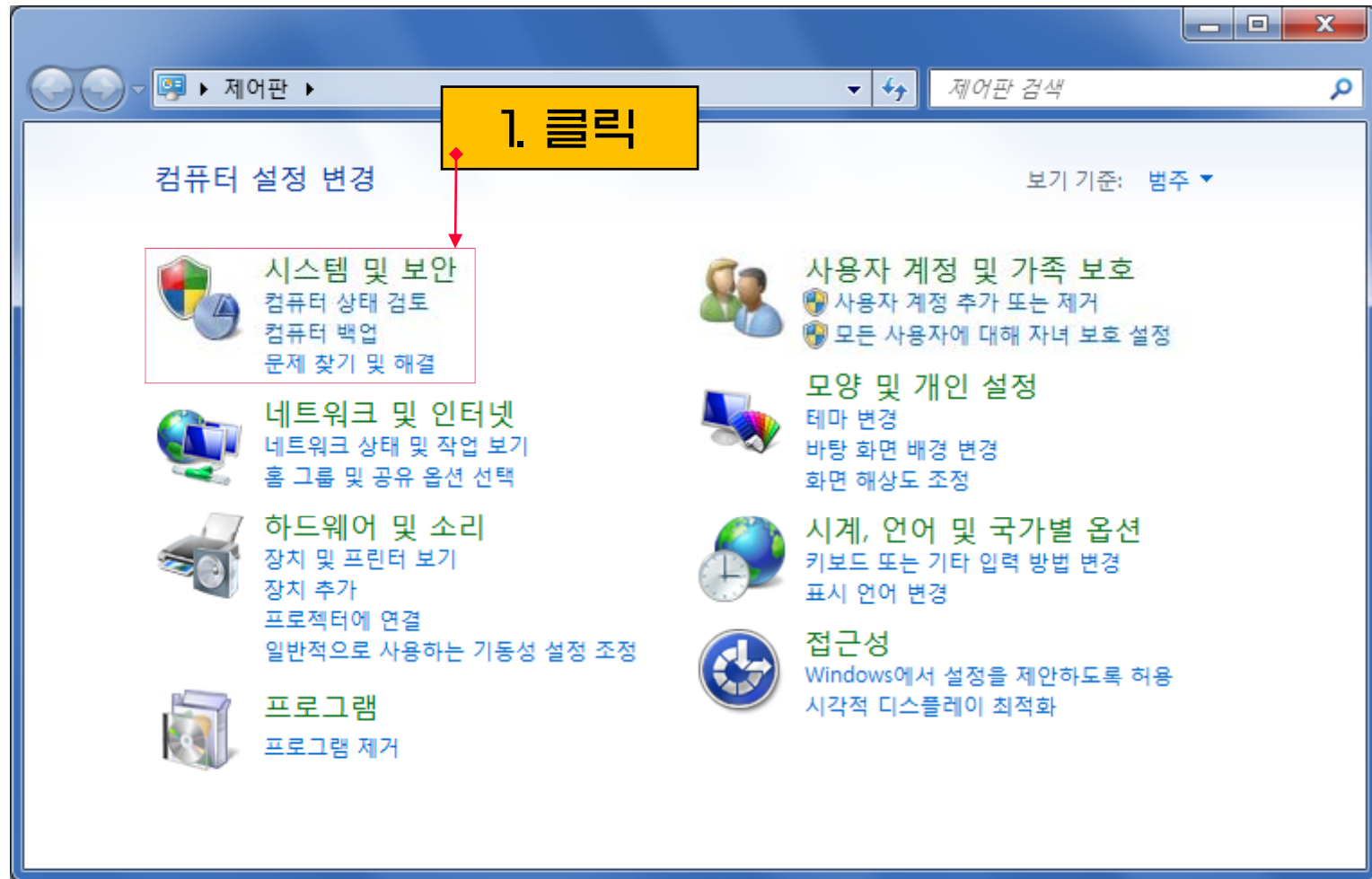
JDK 구조





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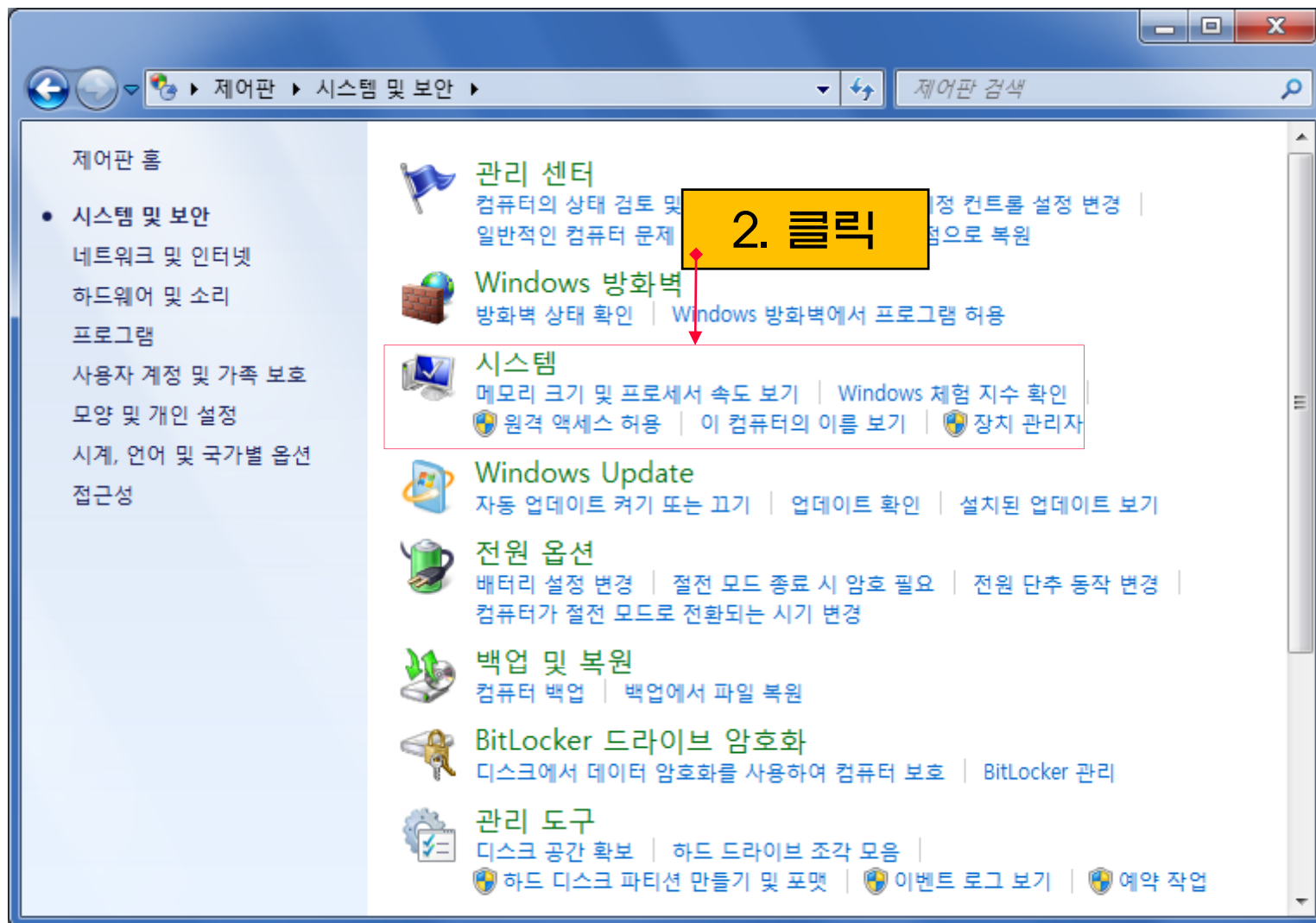
시스템





JDK 환경 설정 (2)

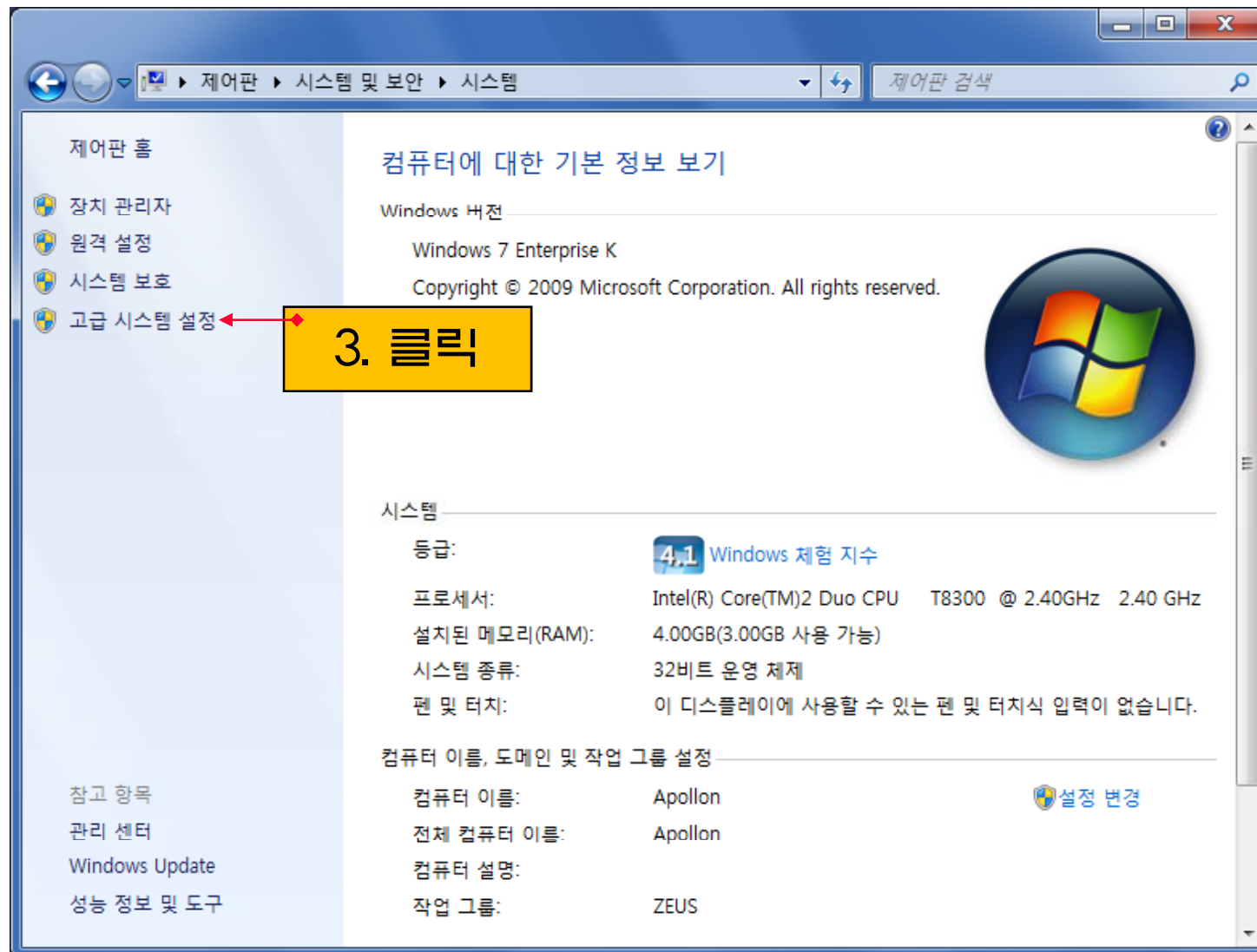
시스템





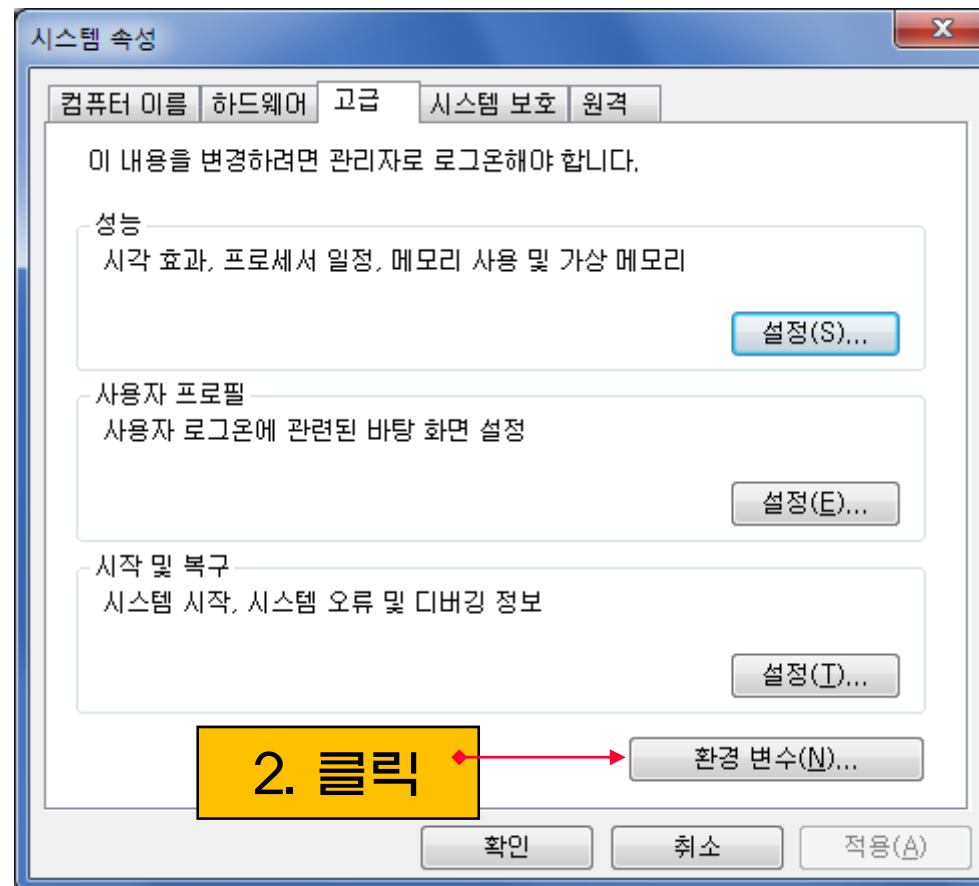
JDK 환경 설정 (3)

시스템





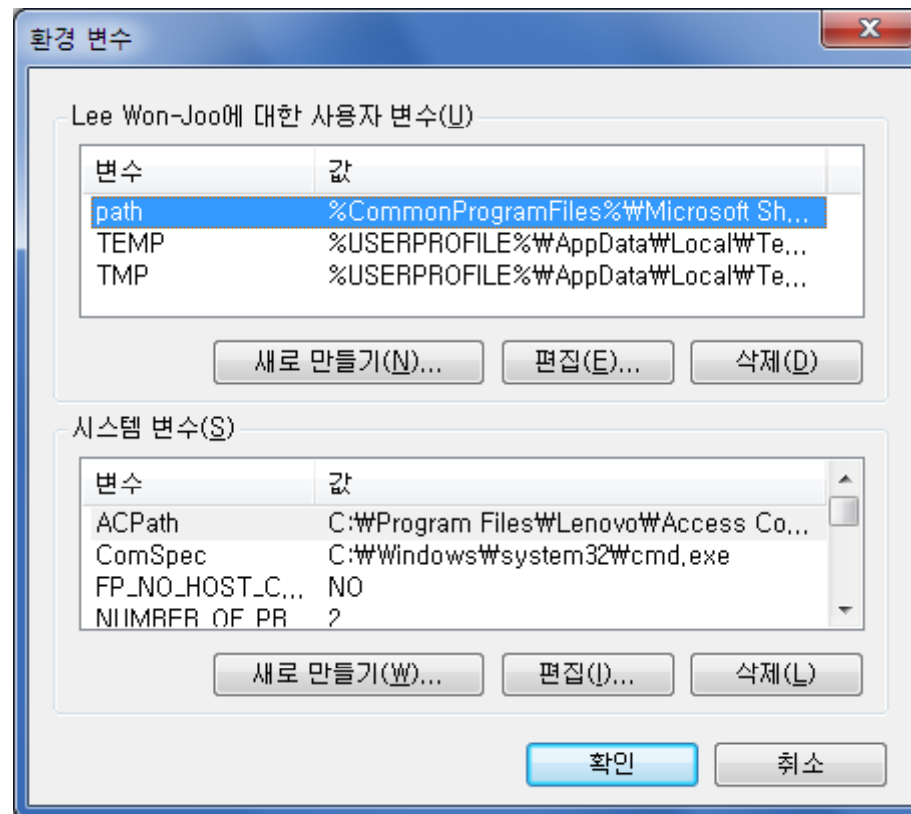
JDK 환경 설정 (4)





JDK 환경 설정 (5)

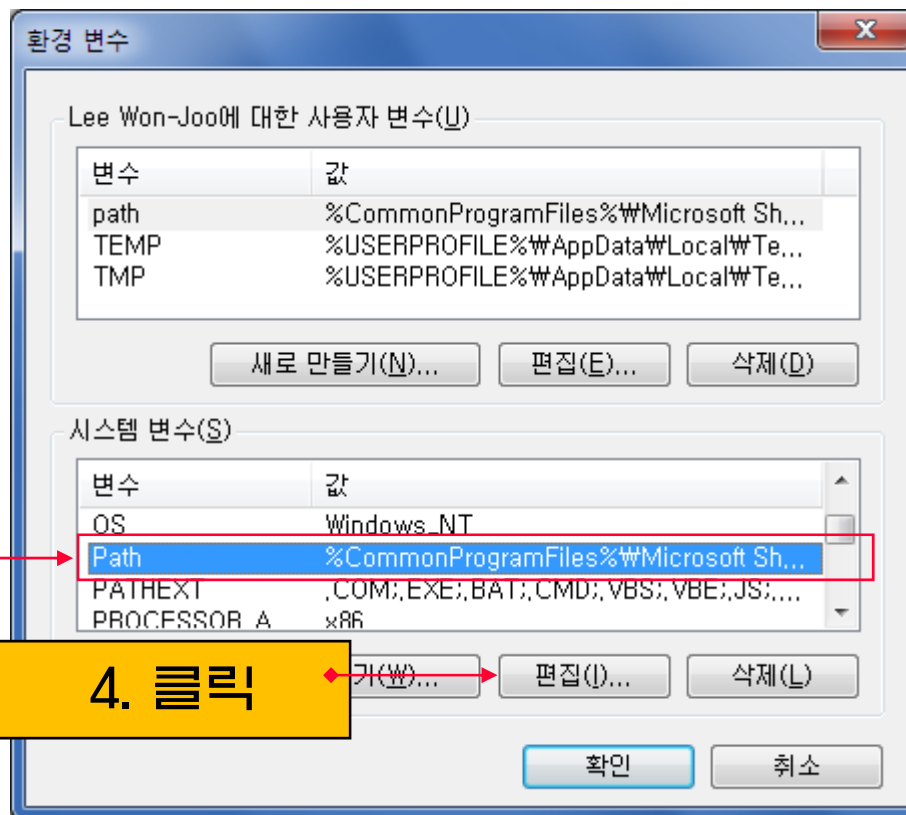
■ 환경 변수





JDK 환경 설정 (6)

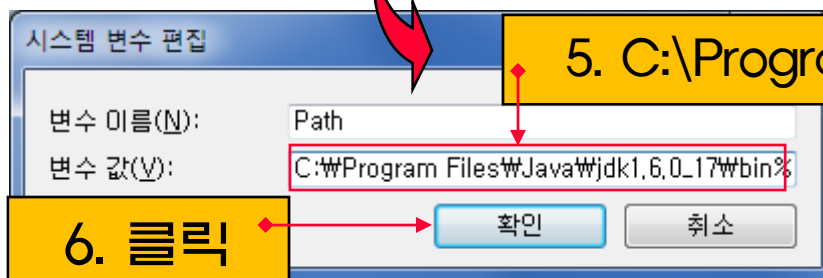
■ Path 지정



3. 클릭

4. 클릭

5. C:\Program Files\Java\jdk1.6.0_17\bin 입력



6. 클릭



JDK 환경 설정 (7)

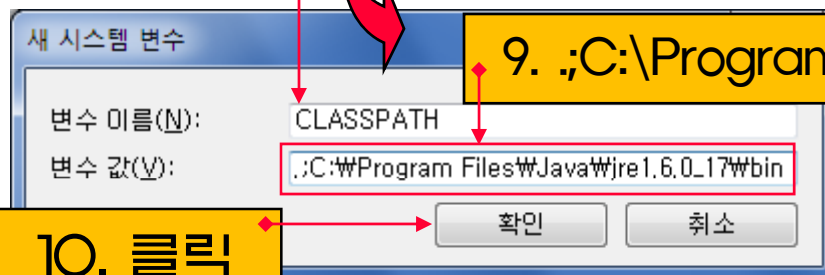
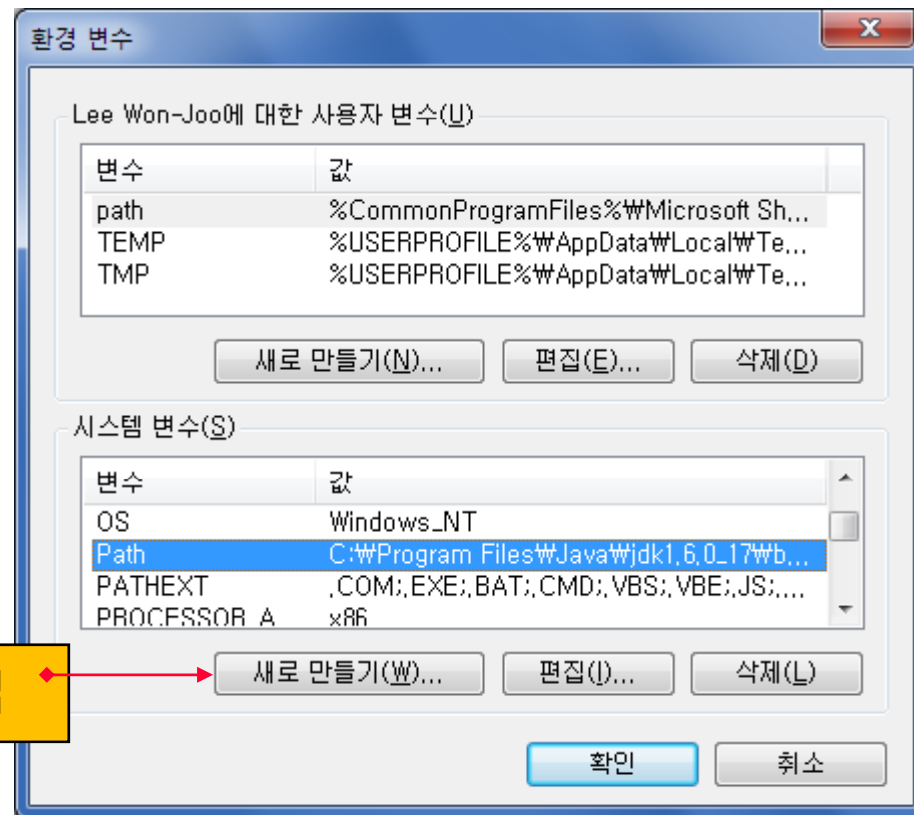
CLASSPATH 지정

8. CLASSPATH 입력

7. 클릭

9. ;C:\Program Files\Java\jre1.6.0_17\bin 입력

10. 클릭





Eclipse 설치 (1)

Eclipse 다운로드

1. <http://www.eclipse.org/downloads/>

2. 클릭



Eclipse 설치 (2)

Eclipse downloads - mirror selection - Windows Internet Explorer

http://www.eclipse.org/downloads/download.php?file=/technology/epp/downloads/release/galileo/SI

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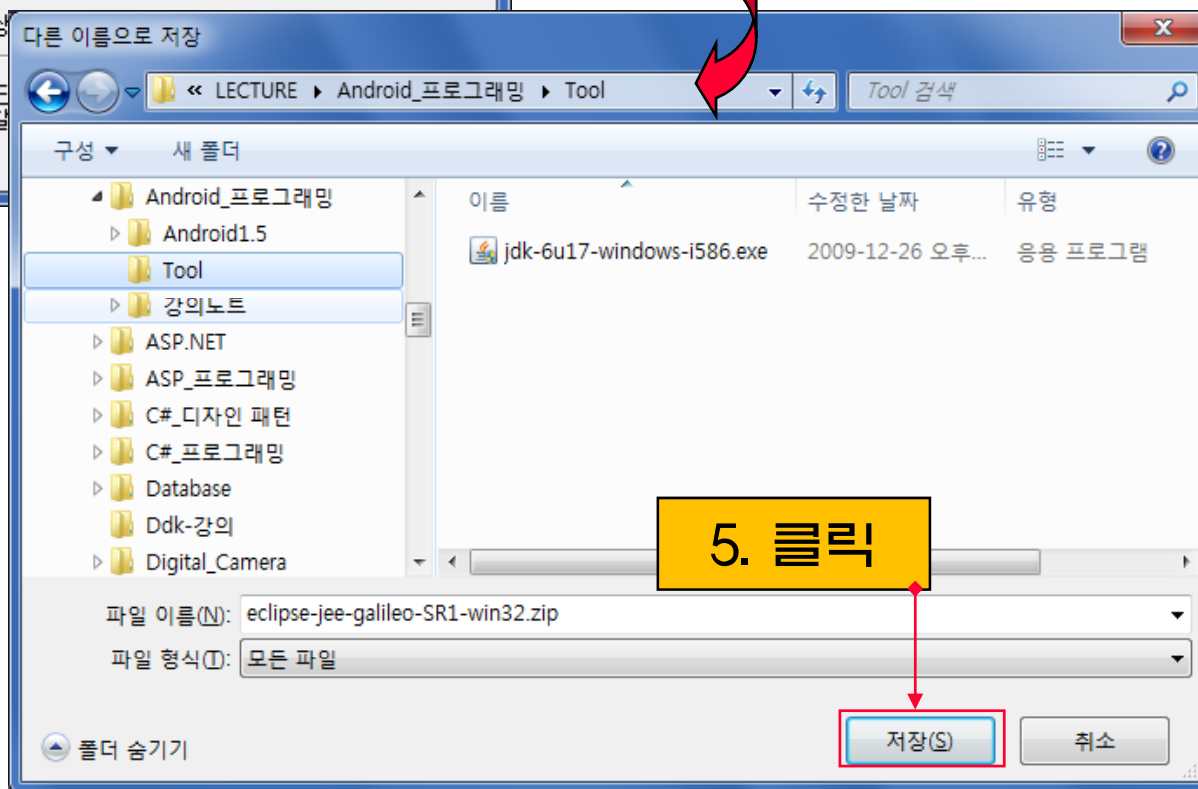
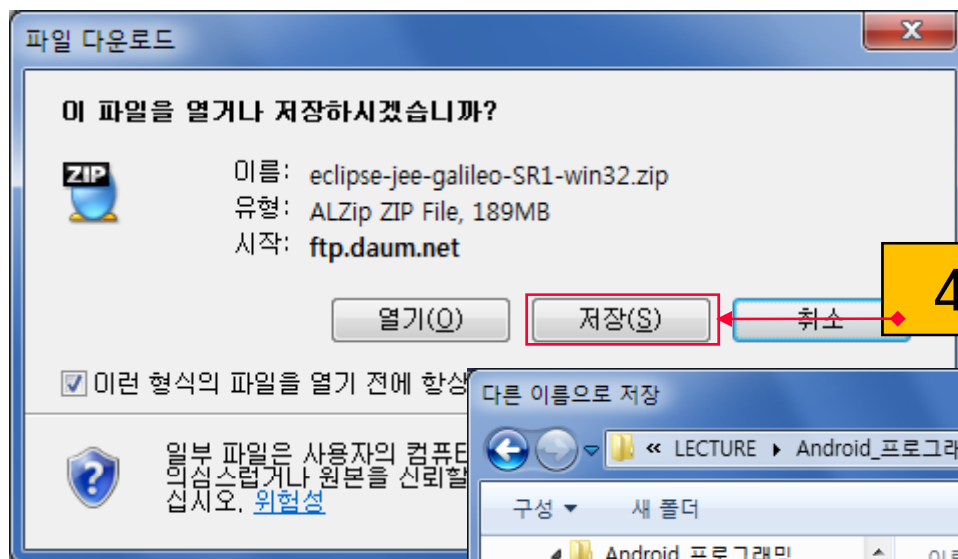
■ Updating and installing Eclipse components

■ Eclipse newsgroups

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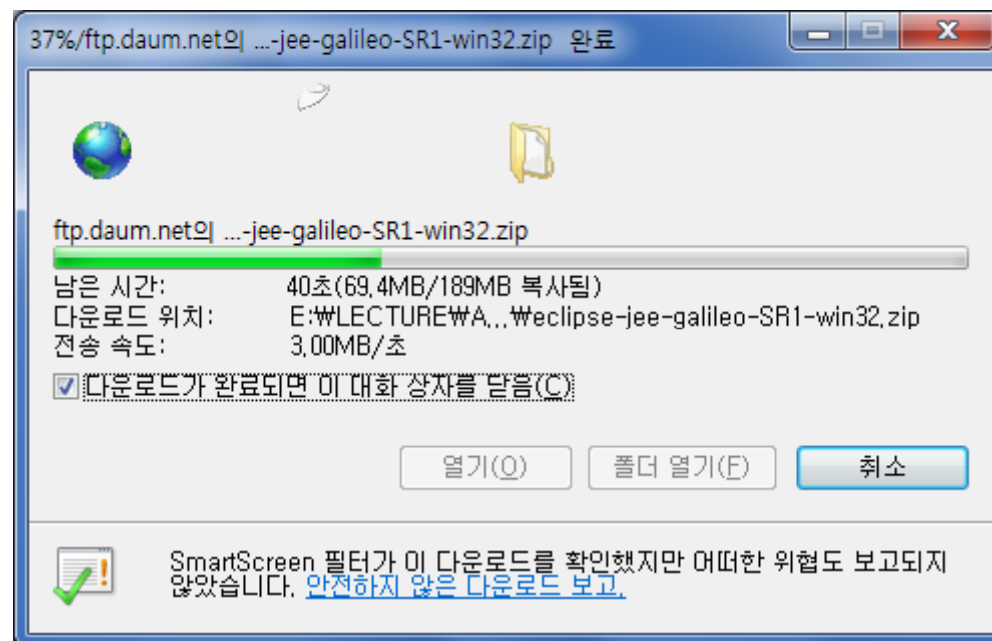
Eclipse 설치 (3)





Eclipse 설치 (4)

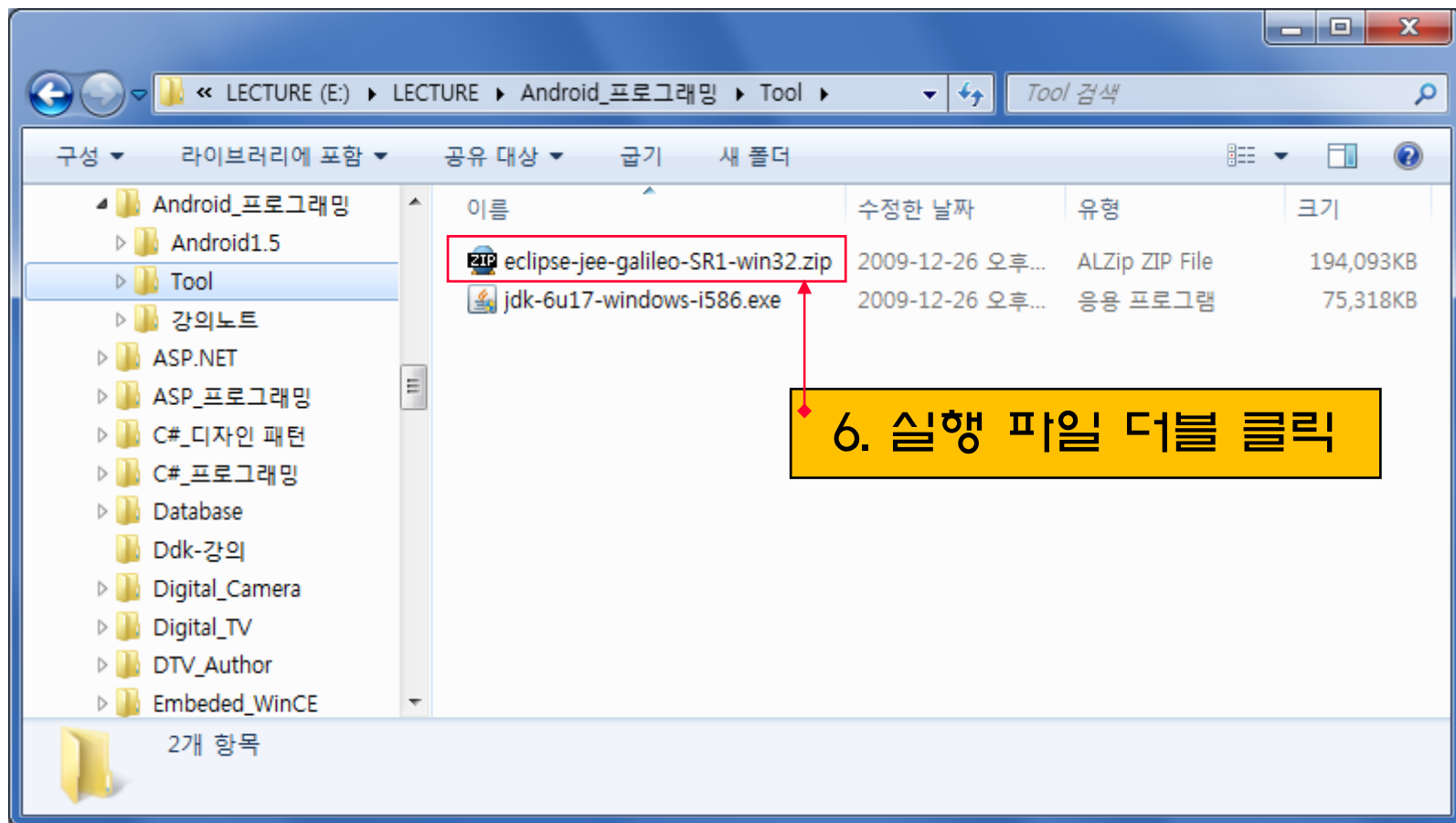
파일 전송





Eclipse 설치 (5)

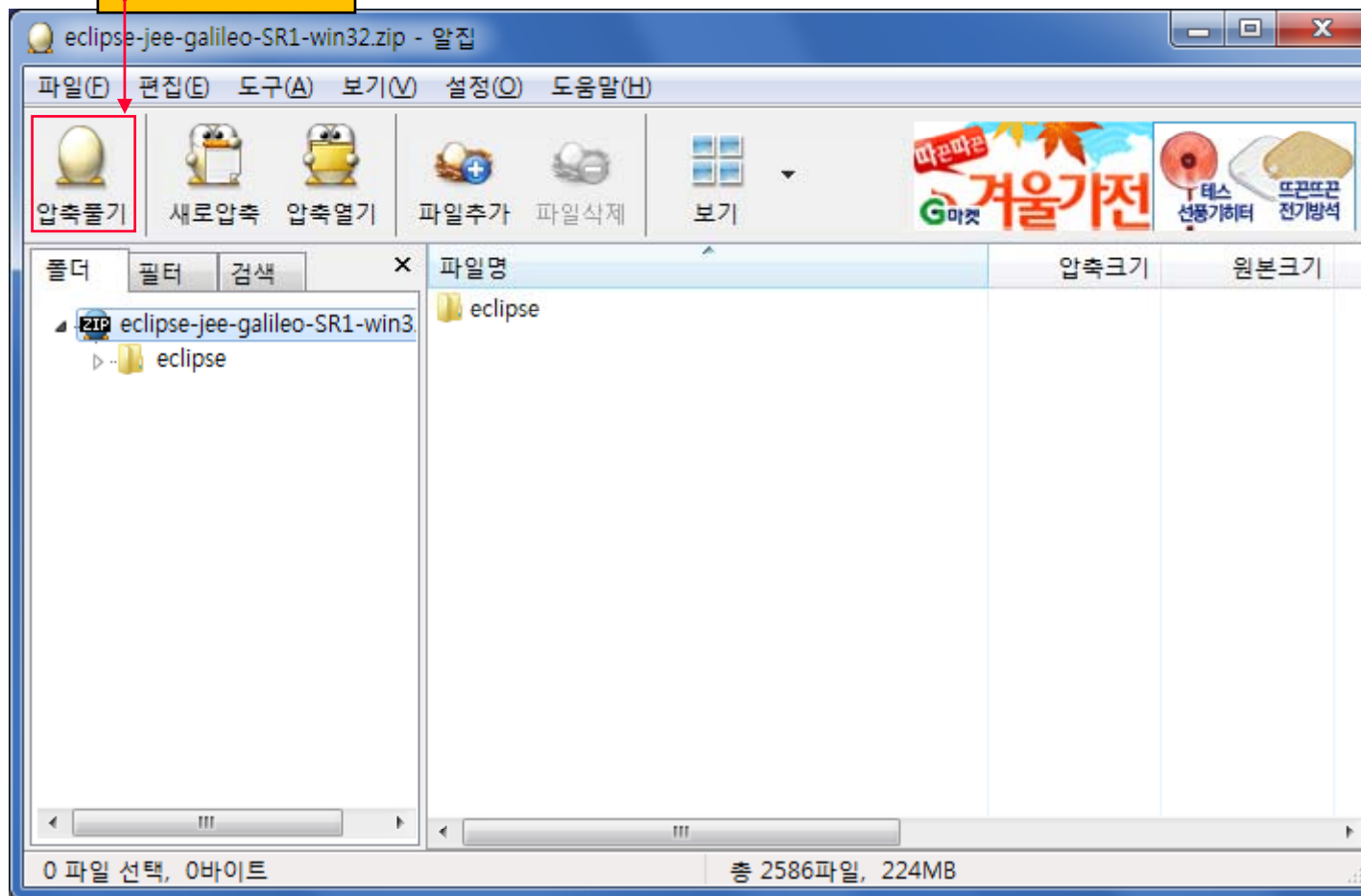
■ 압축 파일 해제





Eclipse 설치 (6)

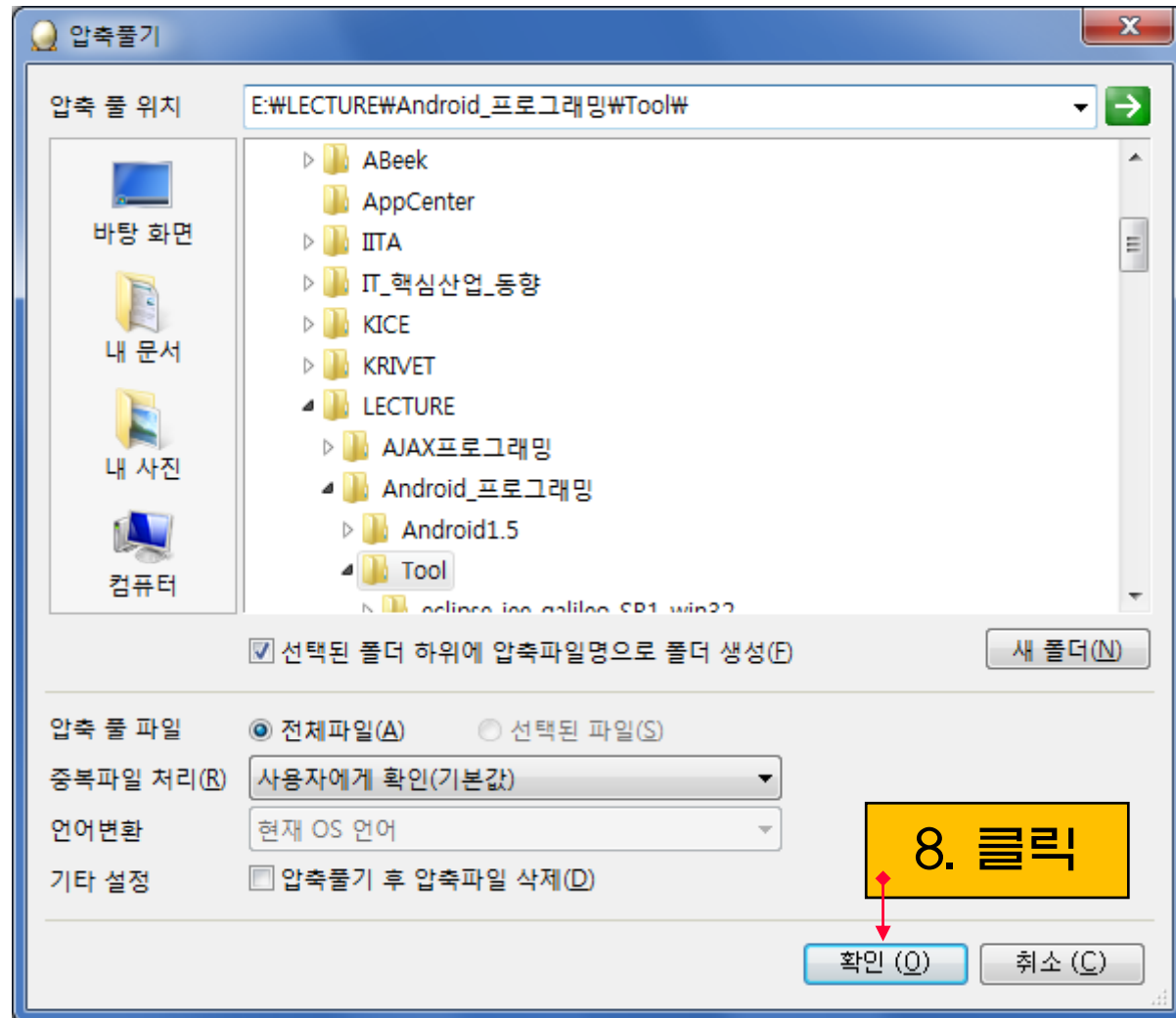
7. 클릭





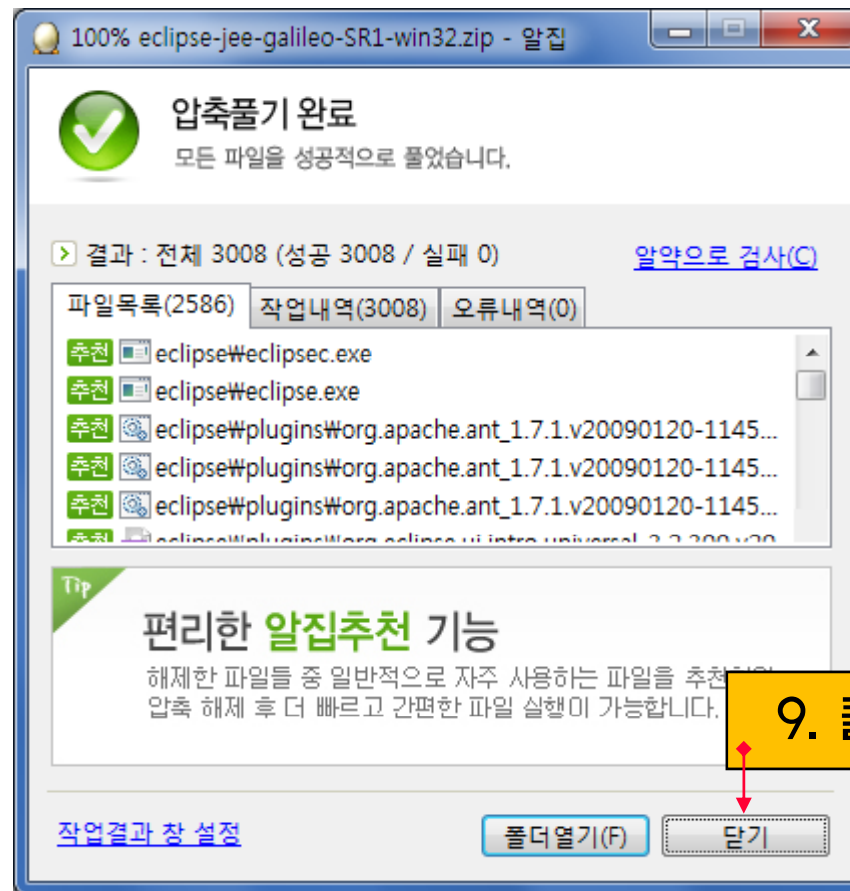
Eclipse 설치 (7)

Eclipse 폴더 생성





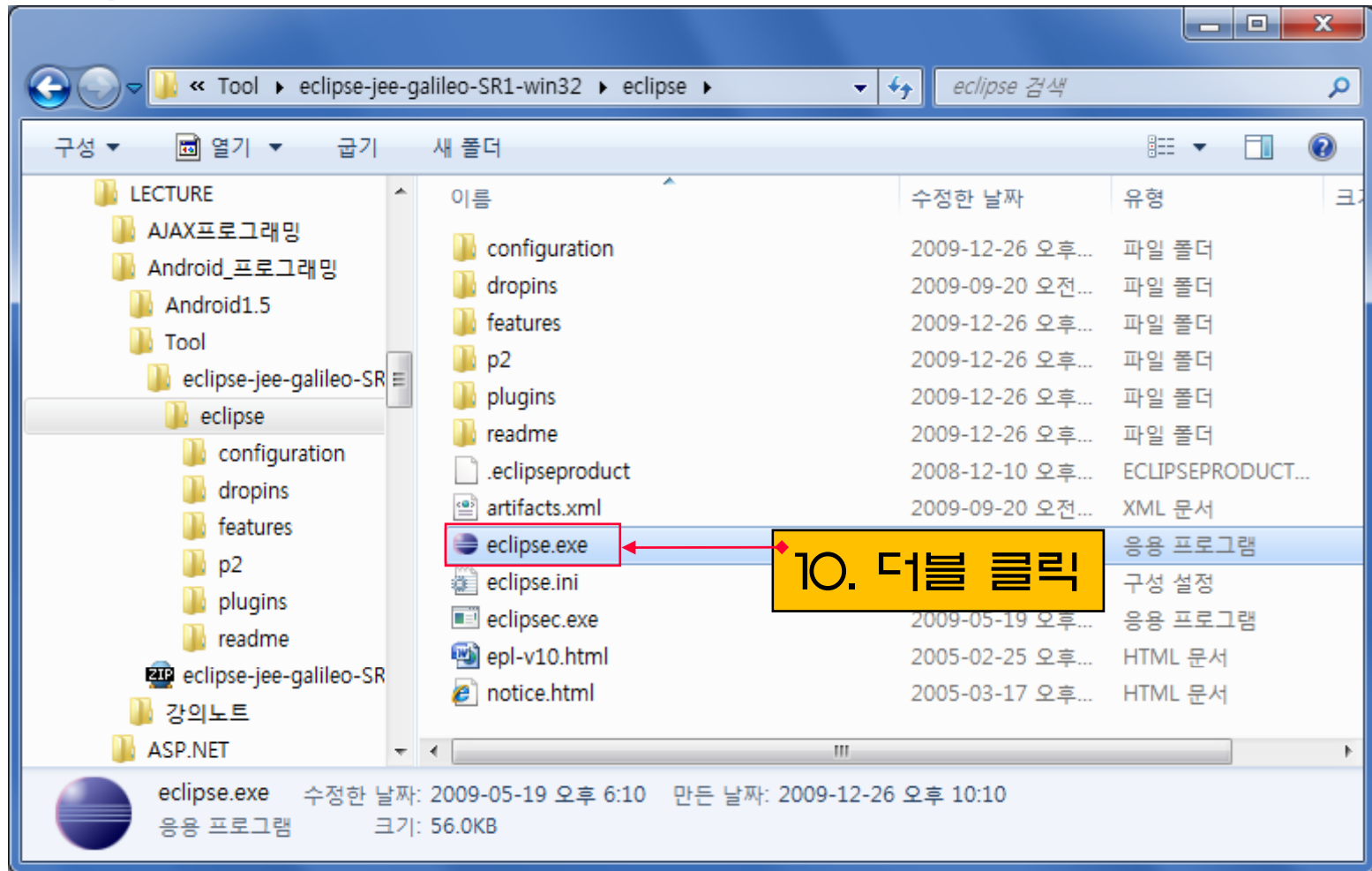
Eclipse 설치 (8)





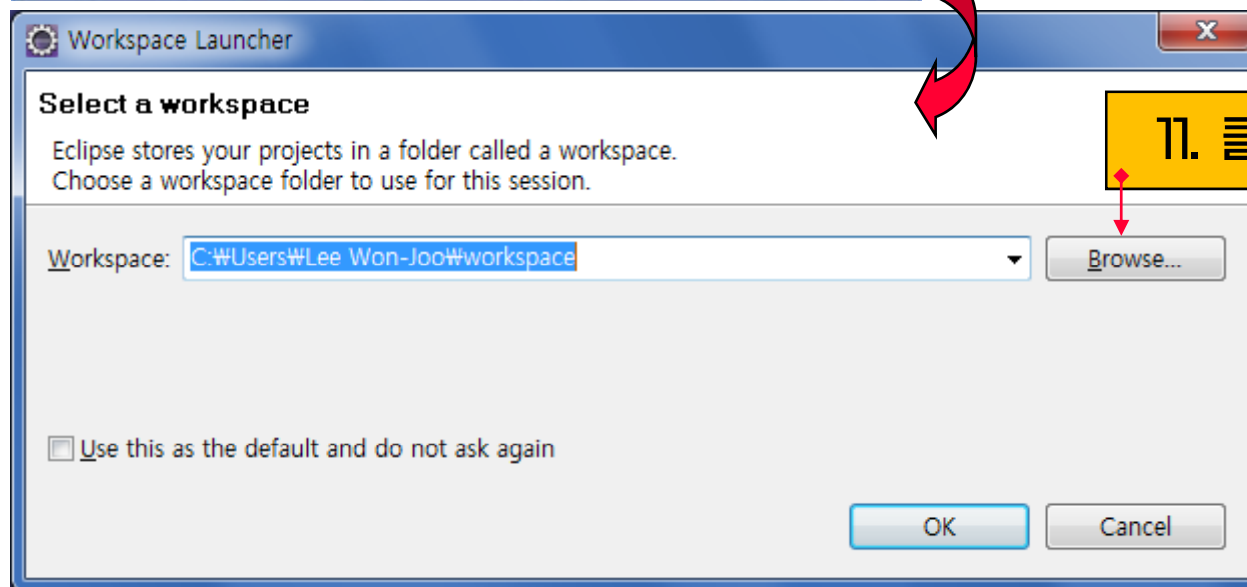
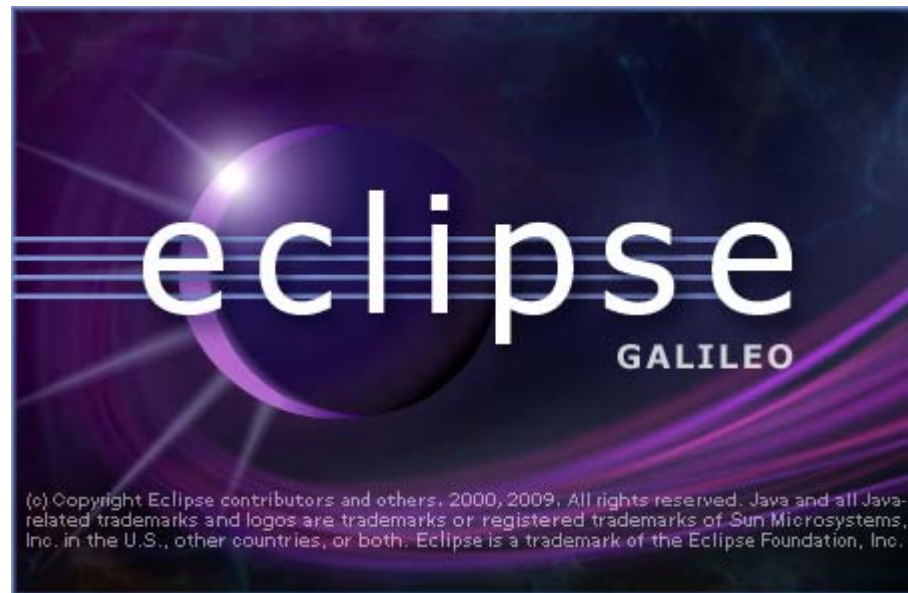
Eclipse 설치 (9)

Eclipse 실행





Eclipse 설치 (10)

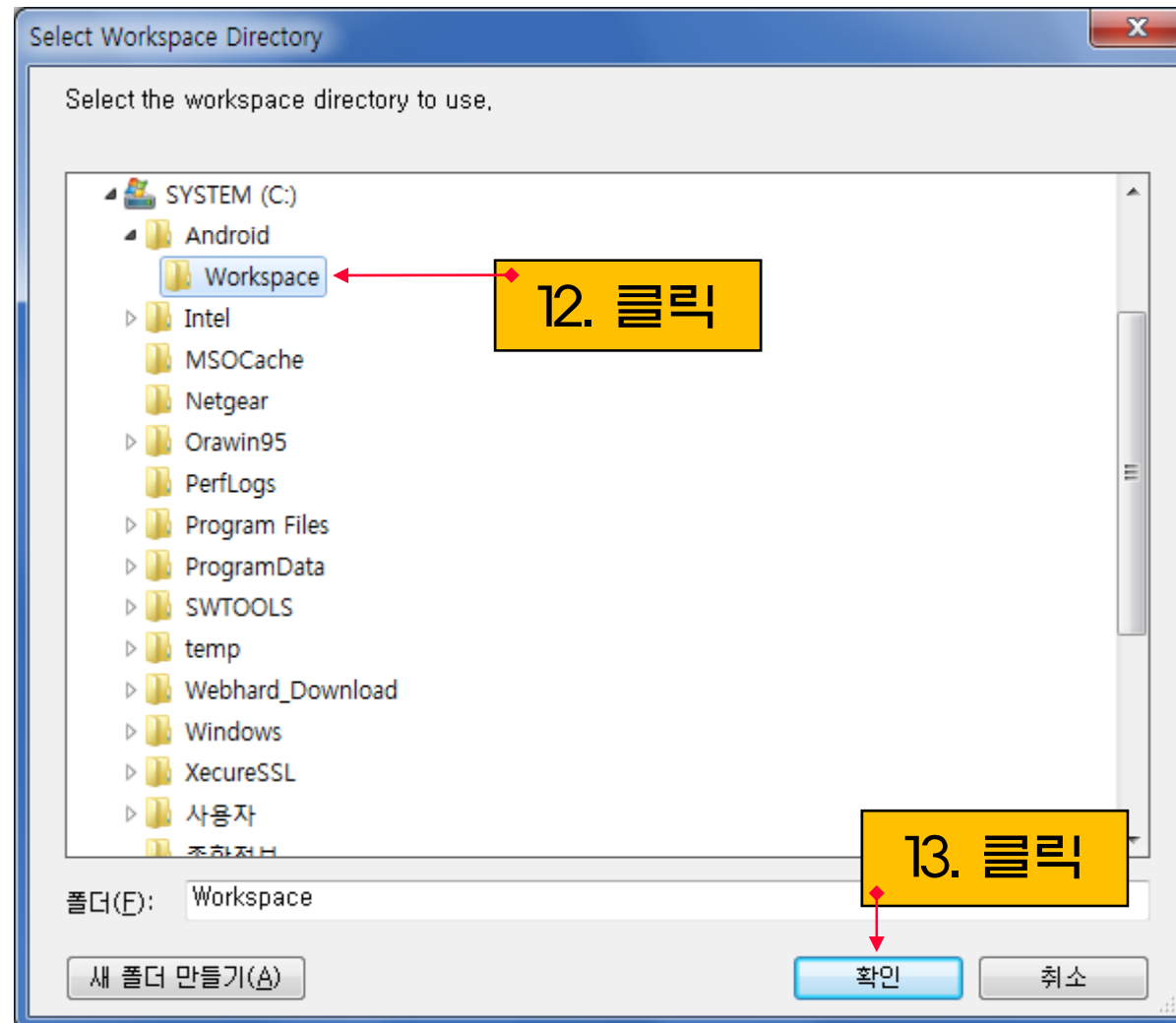


㉒. 클릭



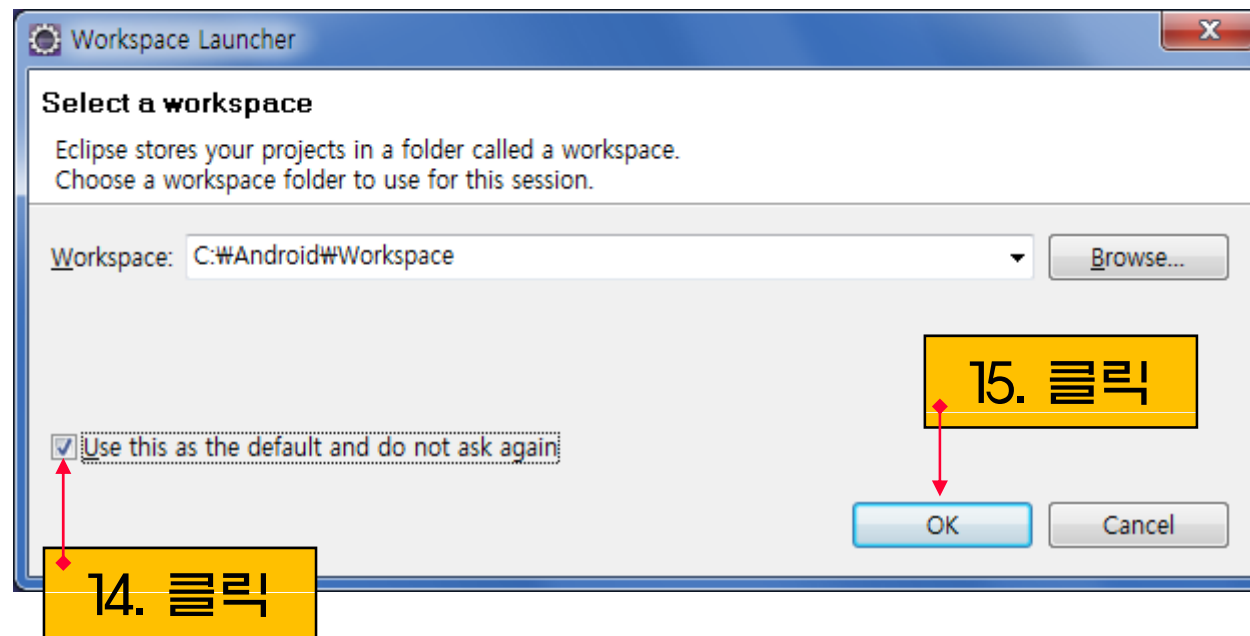


Eclipse 설치 (11)





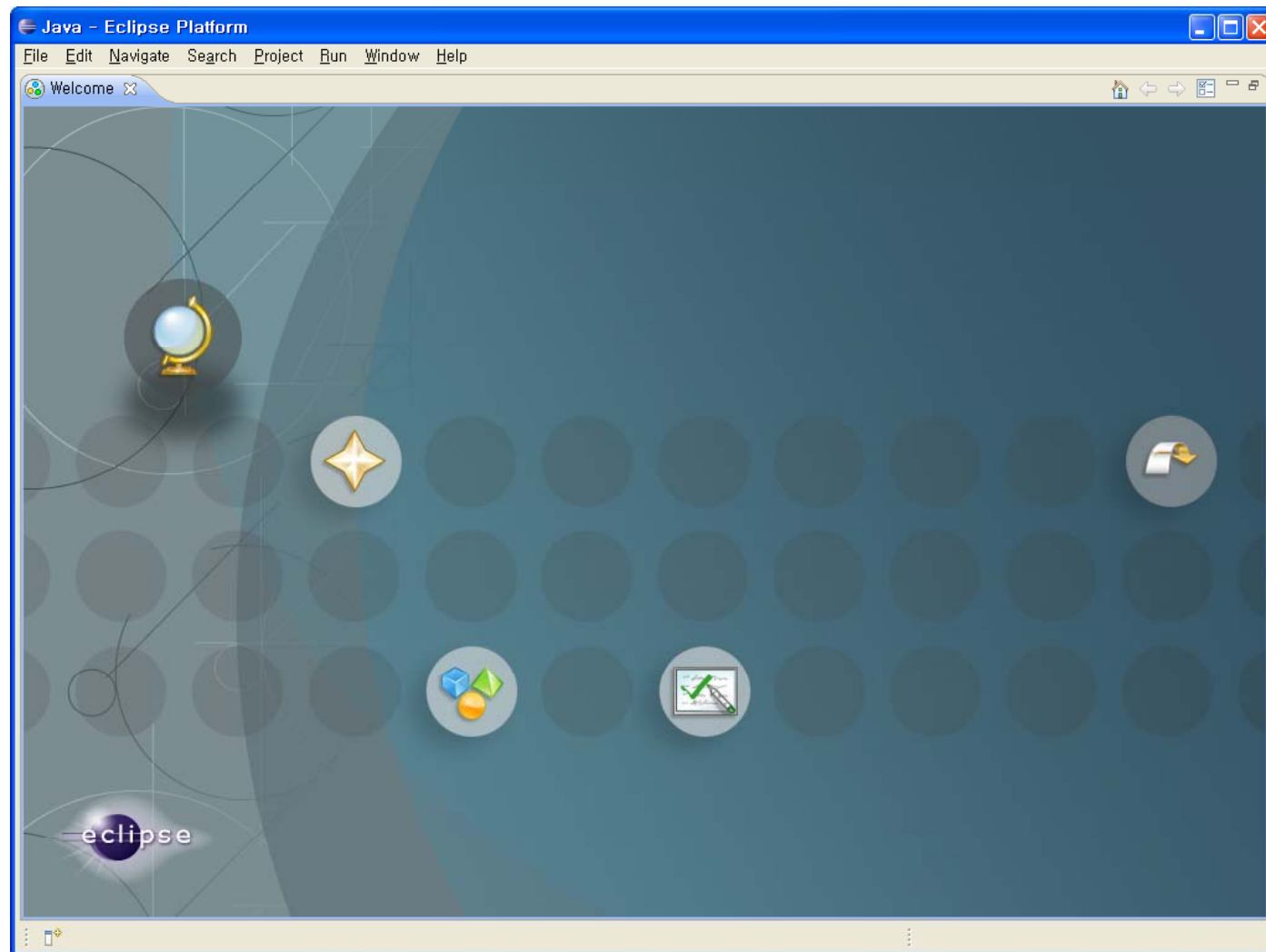
Eclipse 설치 (12)





Eclipse 설치 (13)

Eclipse 초기 화면





Android SDK 설치 (1)

■ Android SDK 다운로드

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

2. 클릭

Download the Android SDK

December 2009

The Android SDK has changed. Before, you will notice several important differences:
[show more](#)

If you are new to the Android SDK, please read the [Quick Start](#), below, for an overview of how to install and set up the SDK.

Platform	Package	Size	MD5 Checksum
Windows	android-sdk_r04-windows.zip	23069119 bytes	c48b407de852ba483869f17337e90997
Mac OS X (intel)	android-sdk_r04-mac_86.zip	19657927 bytes	b08512765aa9b0369bb9b8fecdf763e3
Linux (i386)	android-sdk_r04-linux_86.tgz	15984887 bytes	ef84b08fd9da84f4c4ae77564fe4eae

Quick Start

The steps below provide an overview of how to get started with the Android SDK. For detailed instructions, start with the [Installing](#) guide.

0. Prepare your development computer



Android SDK 설치 (2)

Download the Android SDK | Android Developers - Windows Internet Explorer

http://developer.android.com/sdk/download.html?v=android-sdk_r04-windows.zip

Android developers

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Android SDK Starter Package

- Download
- Installing

Downloadable SDK Components

- Adding SDK Components
- Android 2.0.1 Platform *new!*
- Android 1.6 Platform *new!*
- Android 1.5 Platform
- Older Platforms
- SDK Tools, r4 *new!*
- USB Driver for Windows, r2

ADT Plugin for Eclipse

- Installing and Updating
- ADT 0.9.5 *new!*

Native Development Tools

- Android 1.6 NDK, r1

More Information

- SDK System Requirements
- SDK Terms and Conditions
- SDK Release Notes
- SDK Archives

Download the Android SDK

Please carefully review the Android SDK License Agreement before downloading the SDK. The License Agreement constitutes a contract between you and Google with respect to your use of the SDK.

This is the Android Software Development Kit License Agreement.

1. Introduction

1.1 The Android Software Development Kit (referred to in this License Agreement as the "SDK" and specifically including the Android system files, packaged APIs, and Google APIs add-ons) is licensed to you subject to the terms of this License Agreement. This License Agreement forms a legally binding contract between you and Google in relation to your use of the SDK.

1.2 "Google" means Google Inc., a Delaware corporation with principal place of business at 1600 Amphitheatre Parkway, Mountain View, CA 94043, United States.

2. Accepting this License Agreement

2.1 In order to use the SDK, you must first agree to this License Agreement. You may not use the SDK if you do not accept this License Agreement.

2.2 You can accept this License Agreement by:

☒ I agree to the terms of the Android SDK License Agreement.

Download

File: android-sdk_r04-windows.zip

완료

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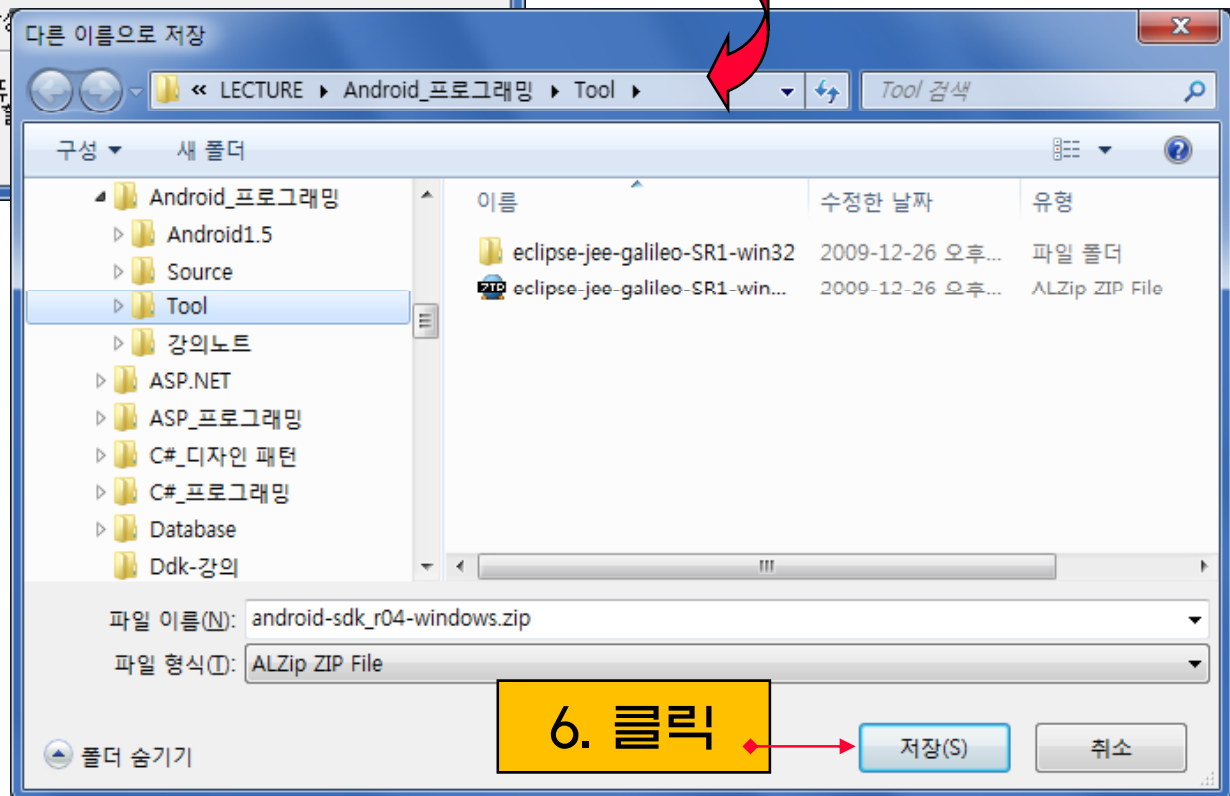
100%

3. 클릭

4. 클릭



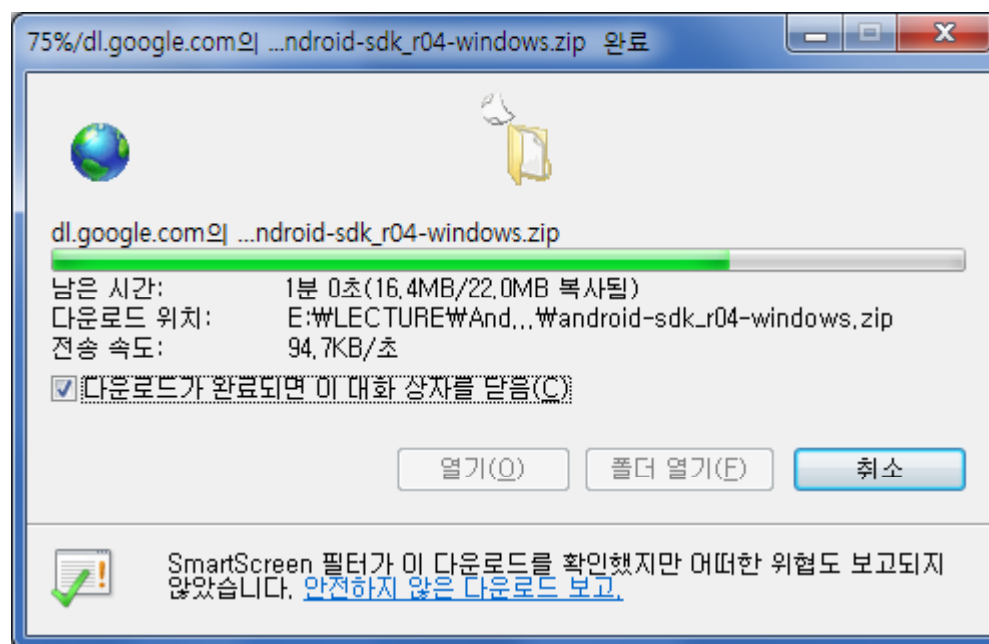
Android SDK 설치 (3)





Android SDK 설치 (4)

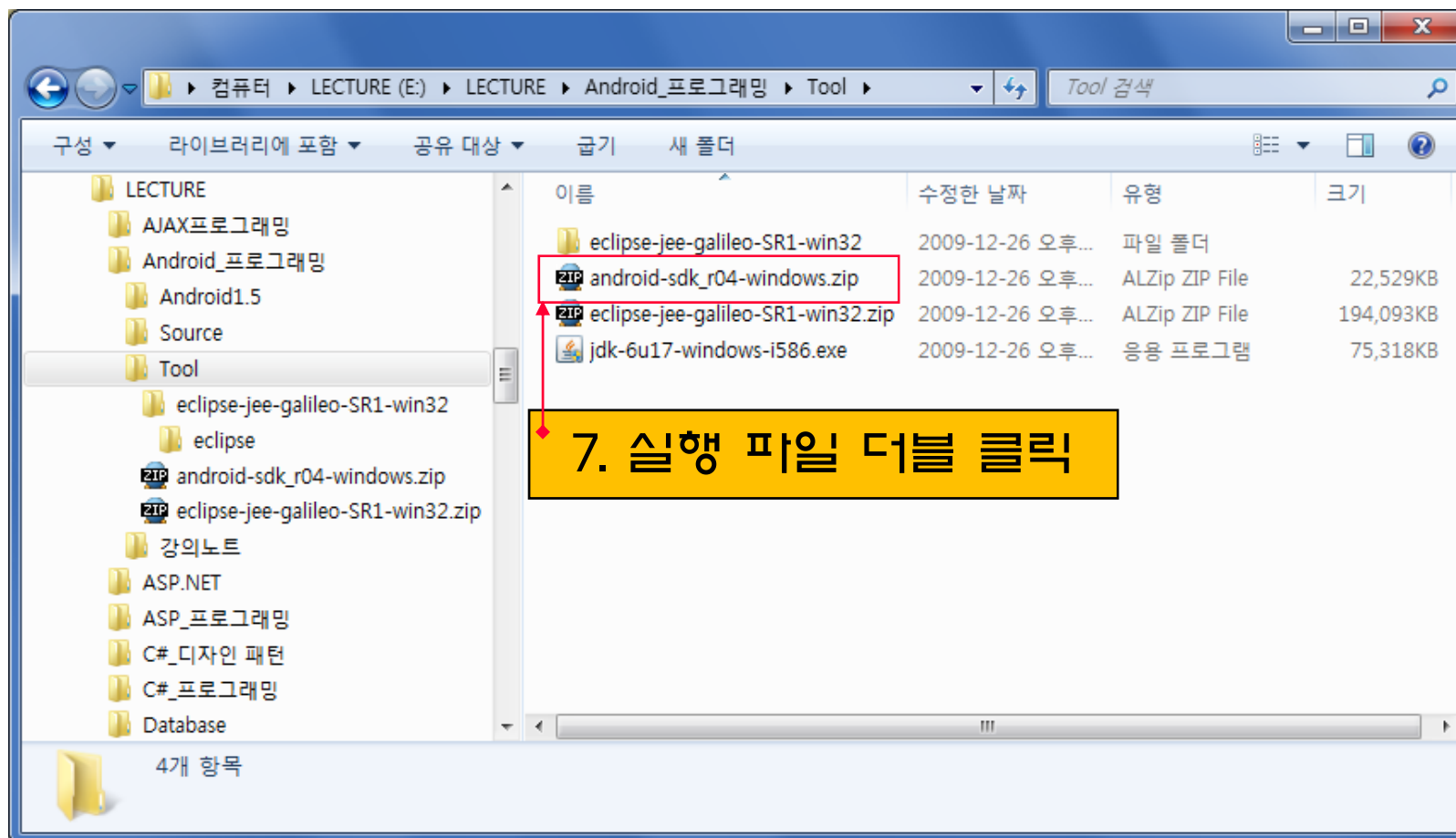
파일 전송





Android SDK 설치 (5)

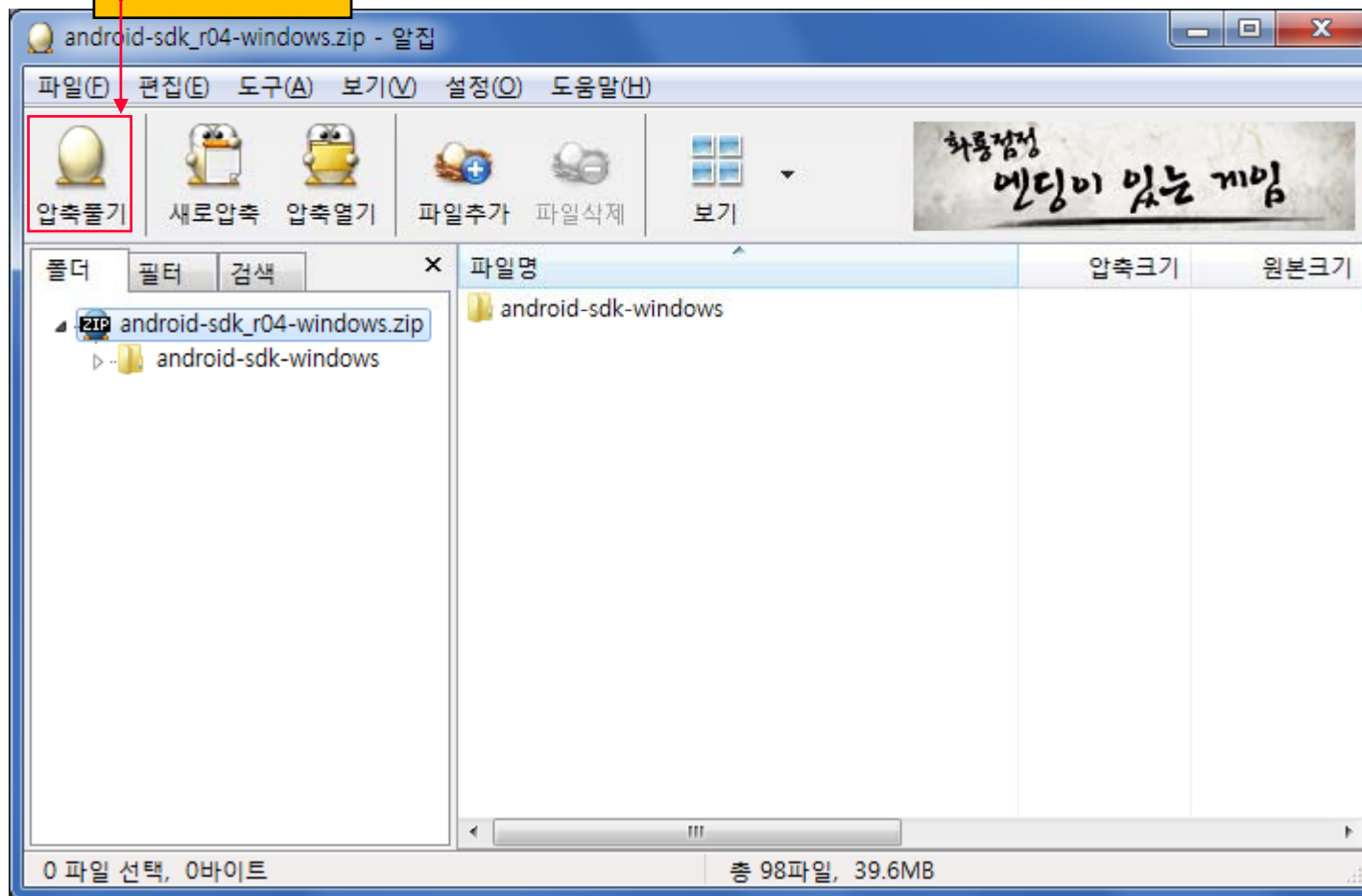
■ 압축 파일 해제





Android SDK 설치 (6)

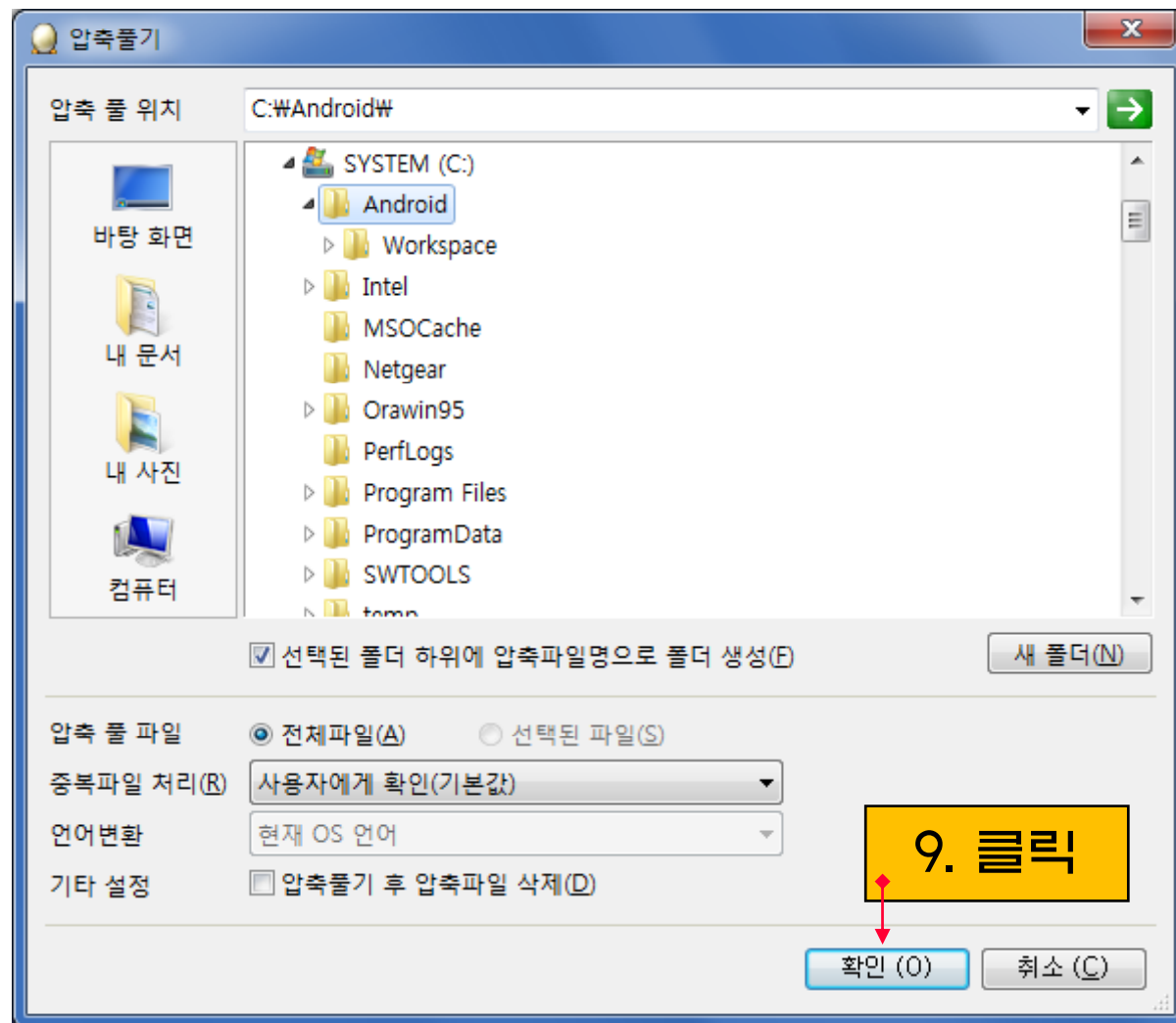
8. 클릭





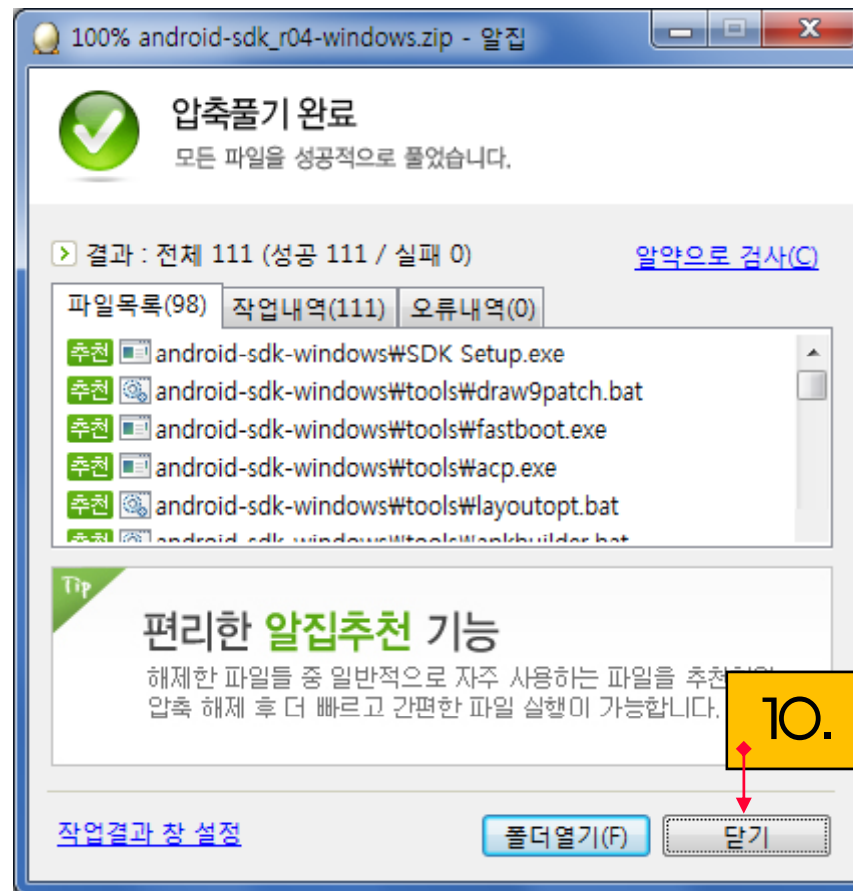
Android SDK 설치 (7)

■ android-sdk_r04-windows 폴더 생성





Android SDK 설치 (8)

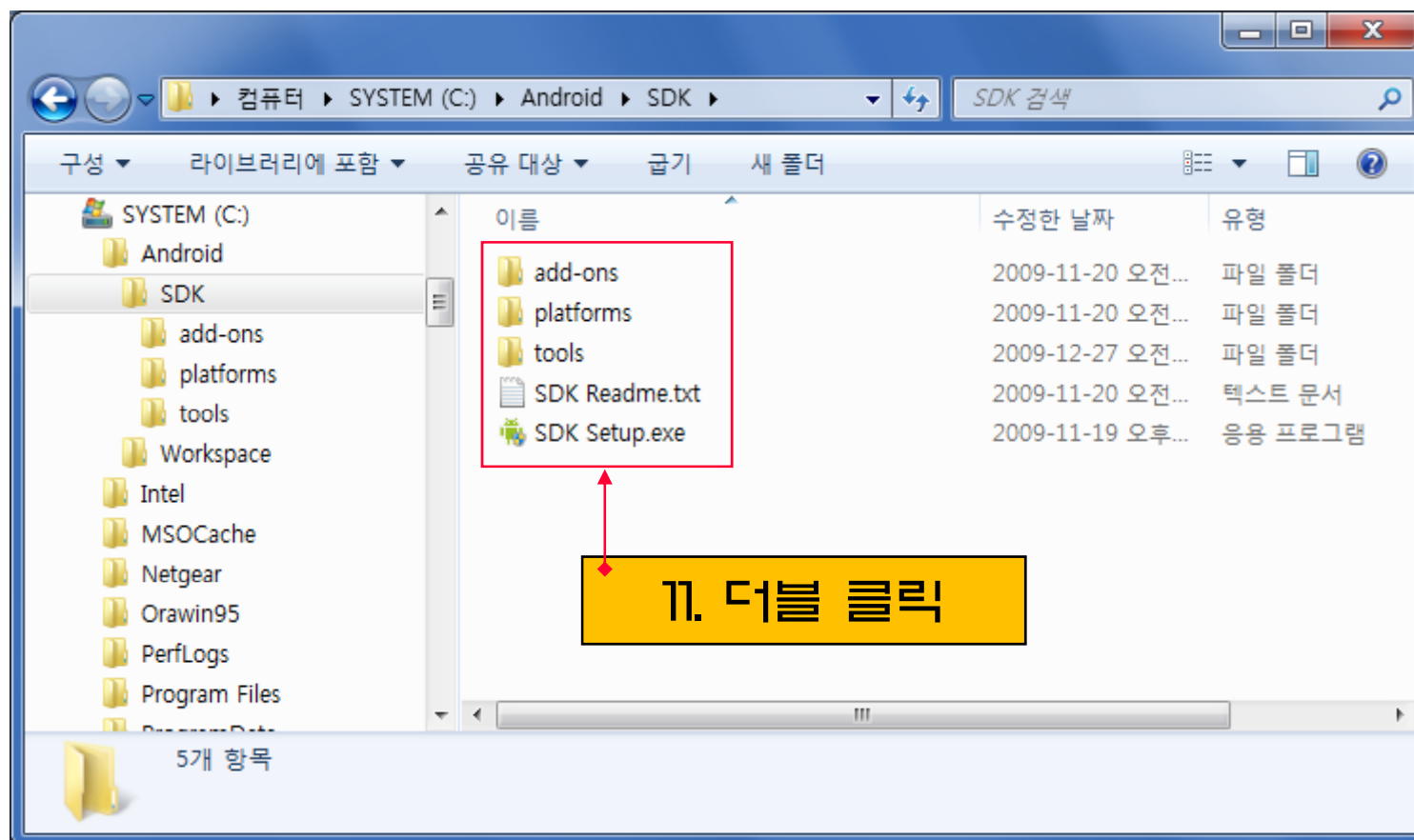




Android SDK 설치 (9)

■ Android-SDK 설치 확인

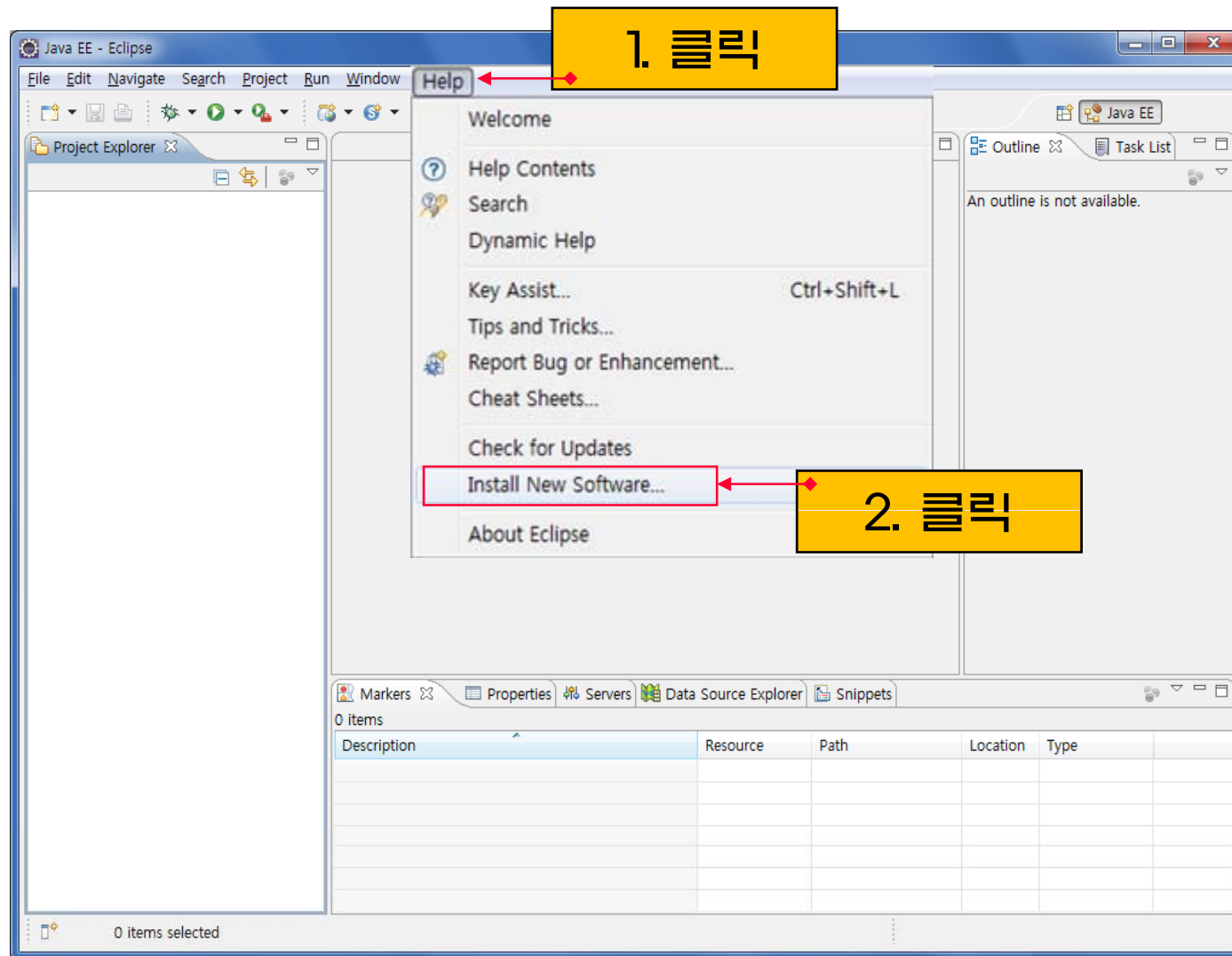
❖ Android-SDK-Windows → SDK 폴더명 변경





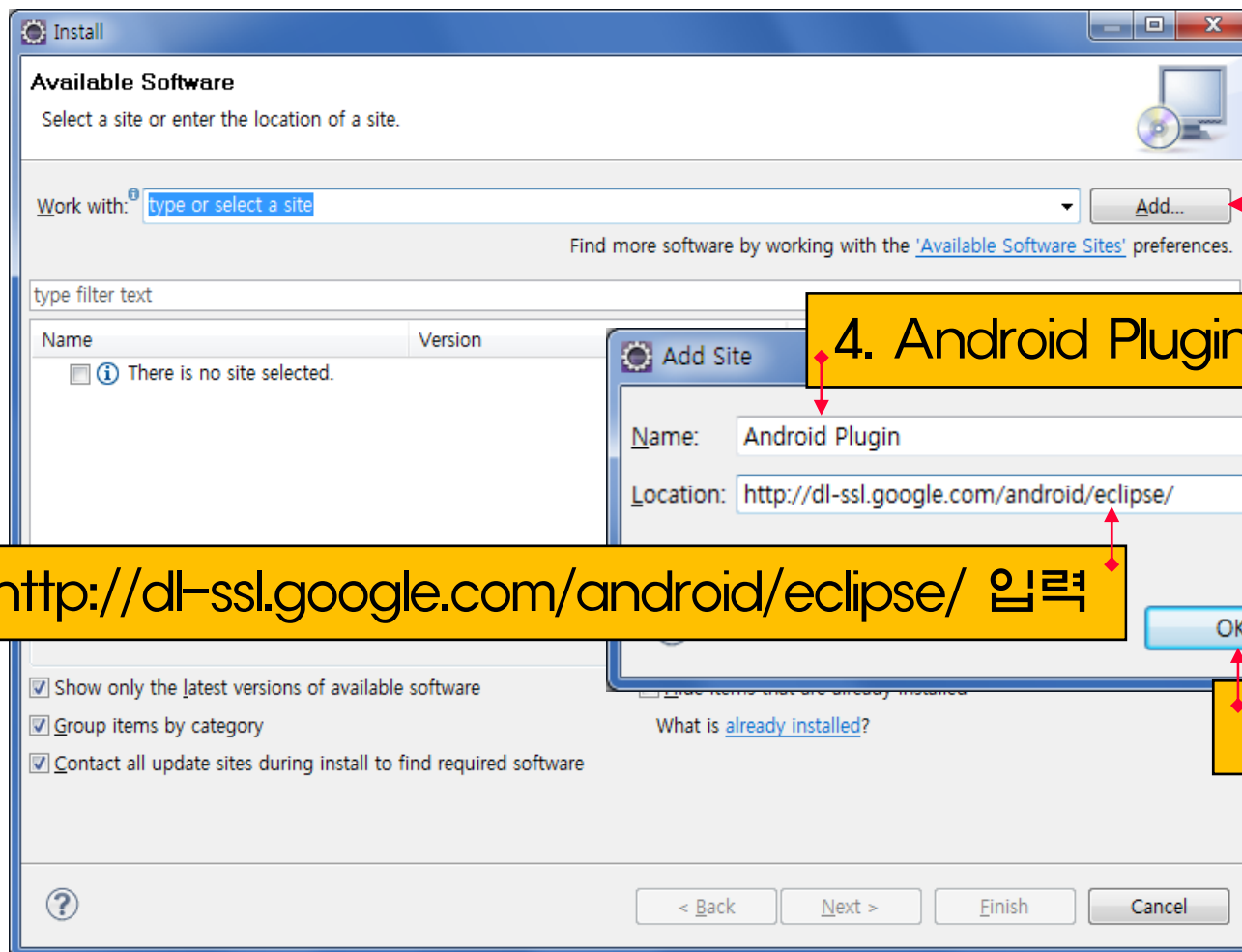
ADT Plug-in 설치 (1)

■ ADT Plug-in for Eclipse





ADT Plug-in 설치 (2)



3. 클릭

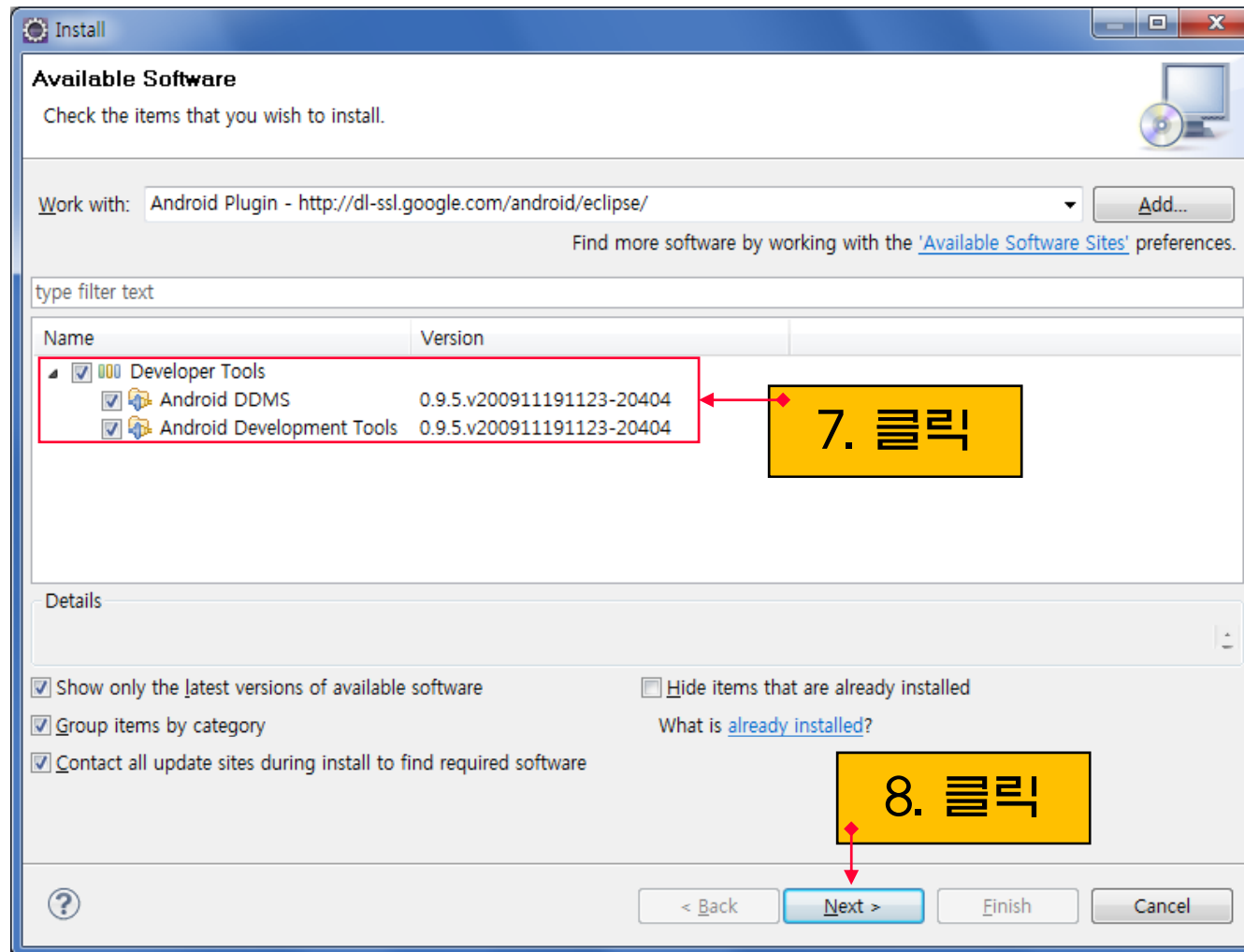
4. Android Plugin 입력

5. <http://dl-ssl.google.com/android/eclipse/> 입력

6. 클릭

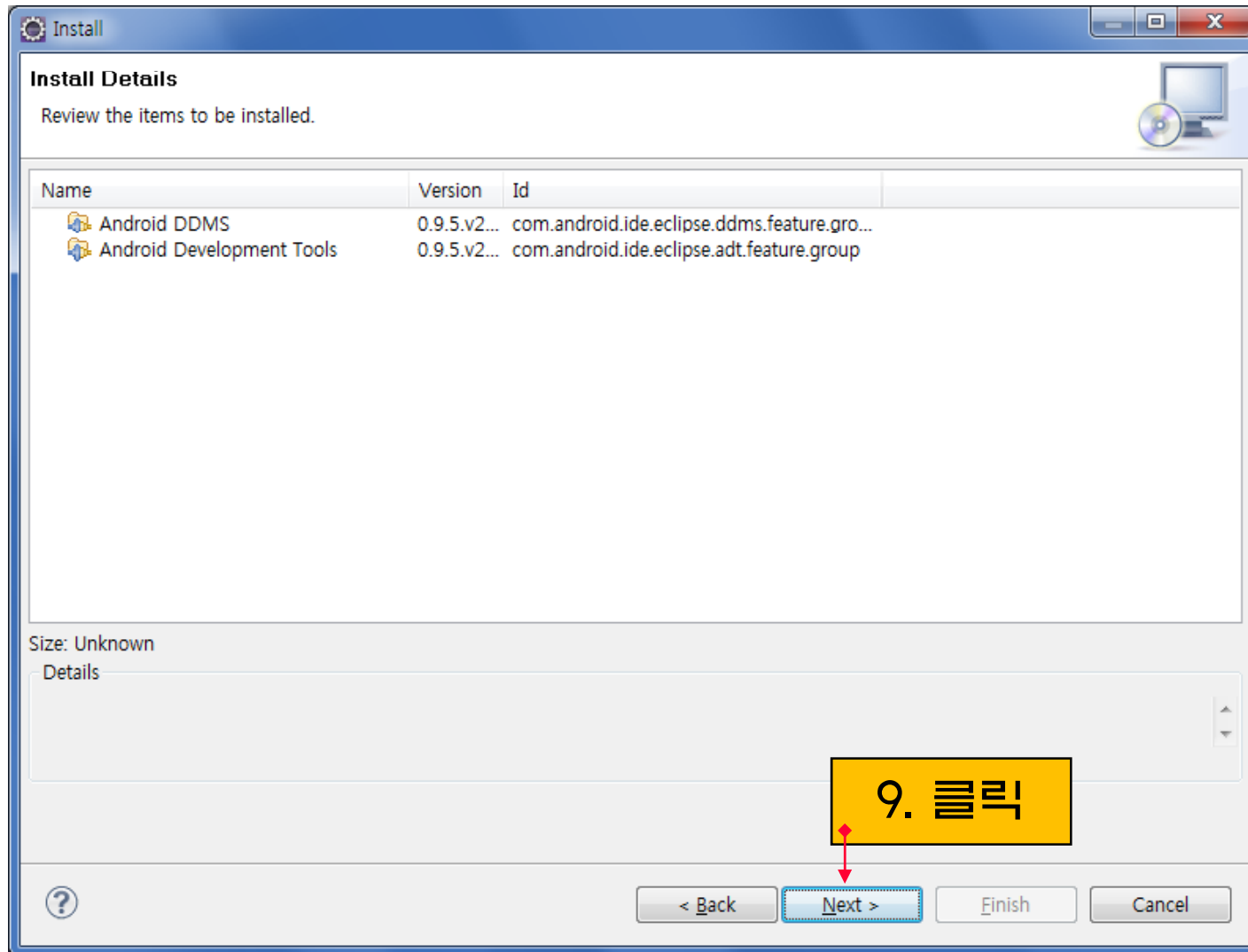


ADT Plug-in 설치 (3)



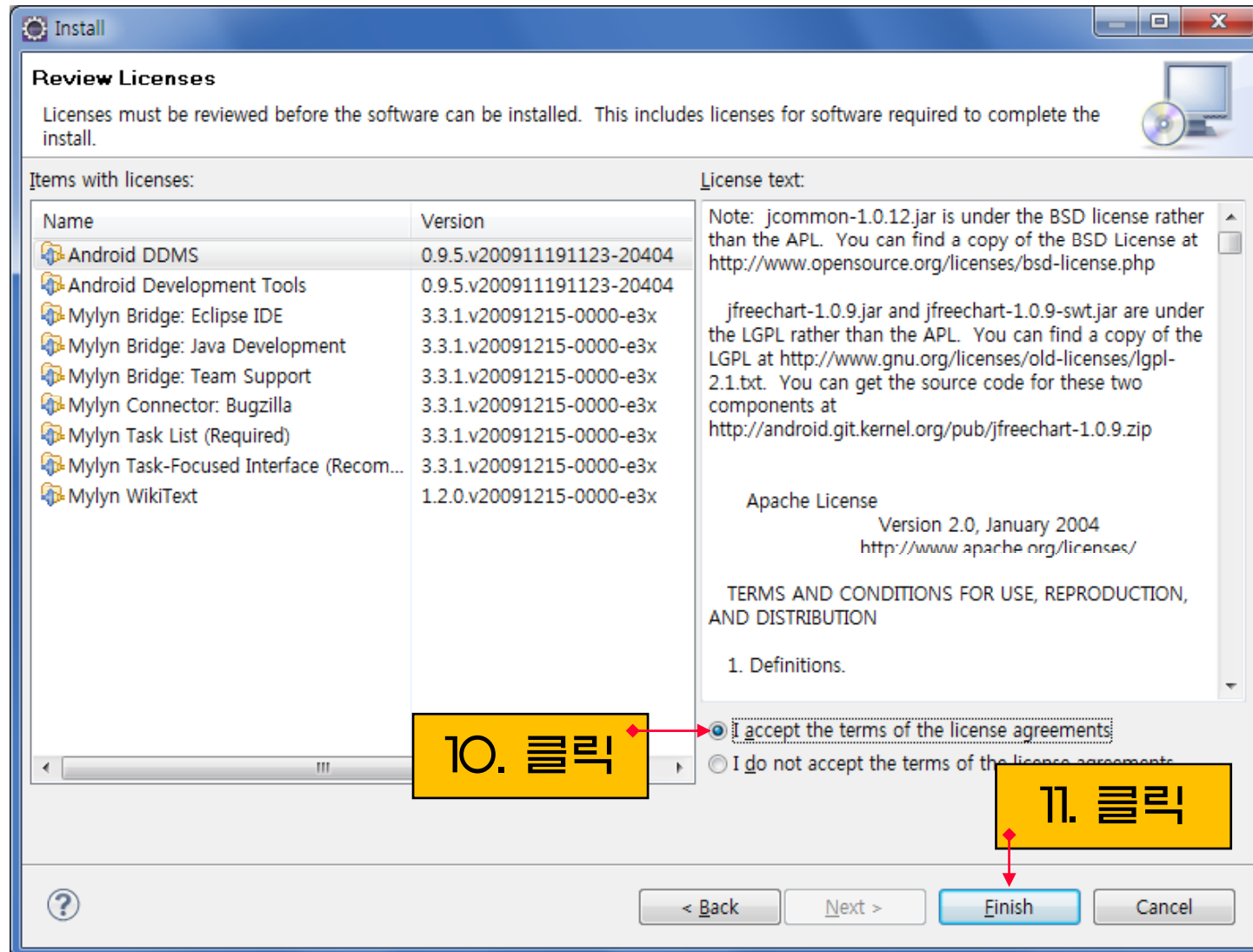


ADT Plug-in 설치 (4)



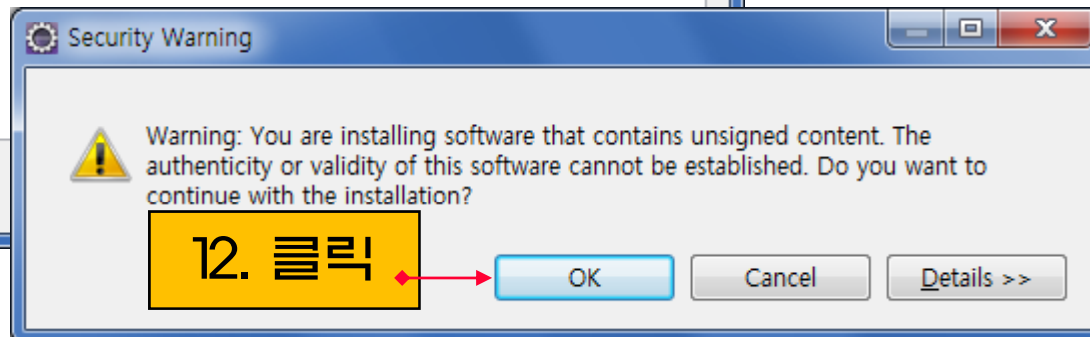
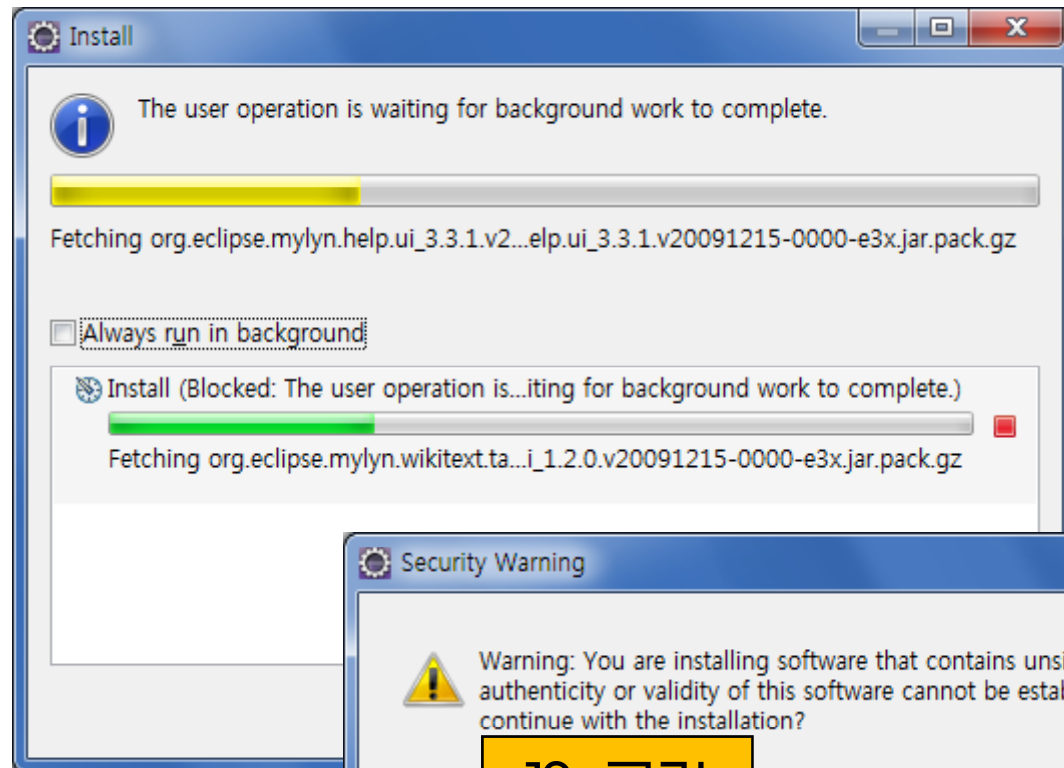


ADT Plug-in 설치 (5)



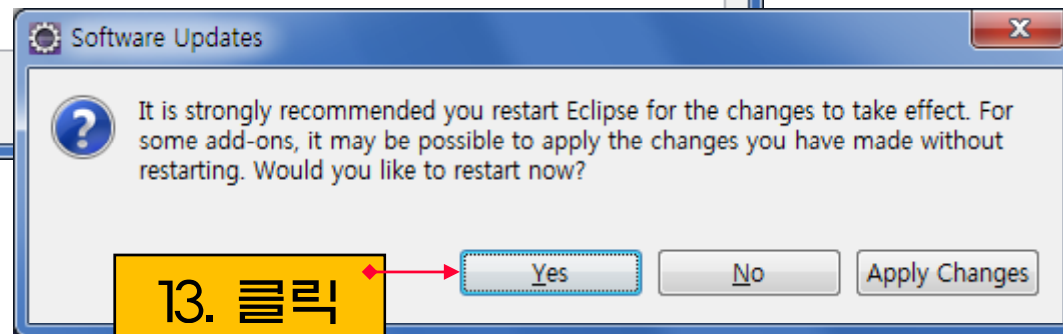
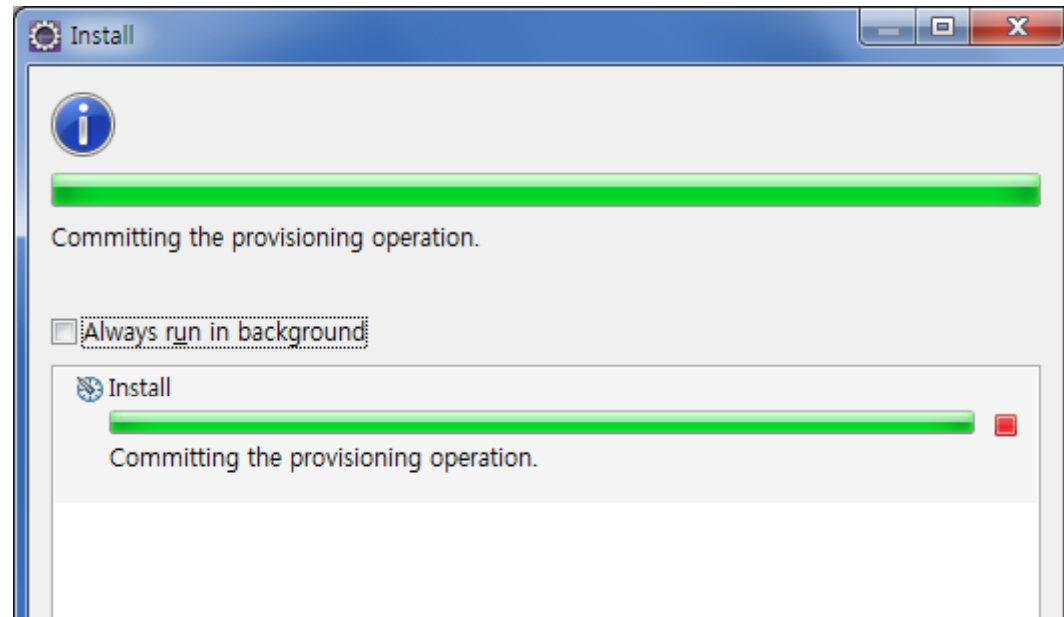


ADT Plug-in 설치 (6)





ADT Plug-in 설치 (7)

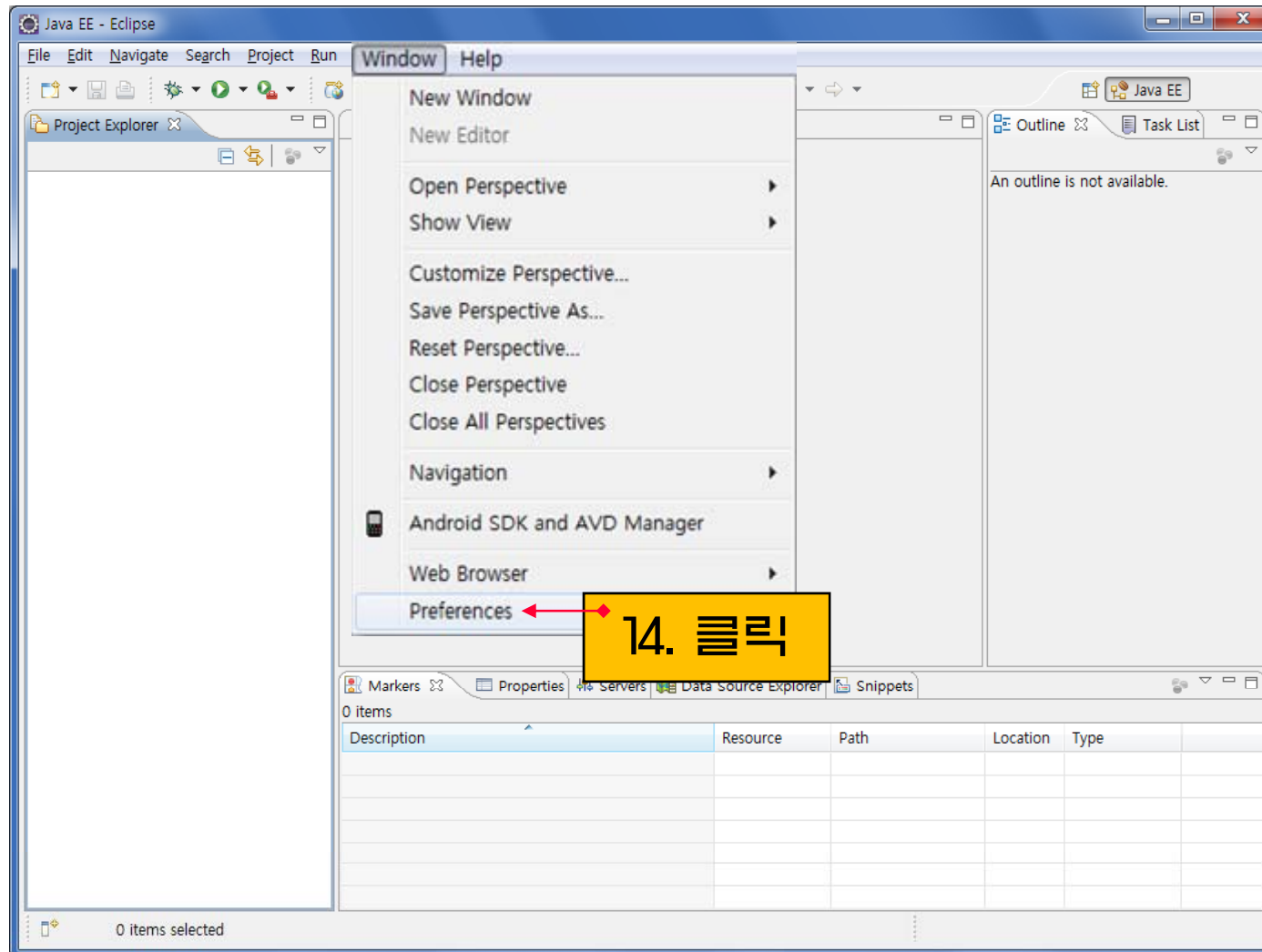


13. 클릭



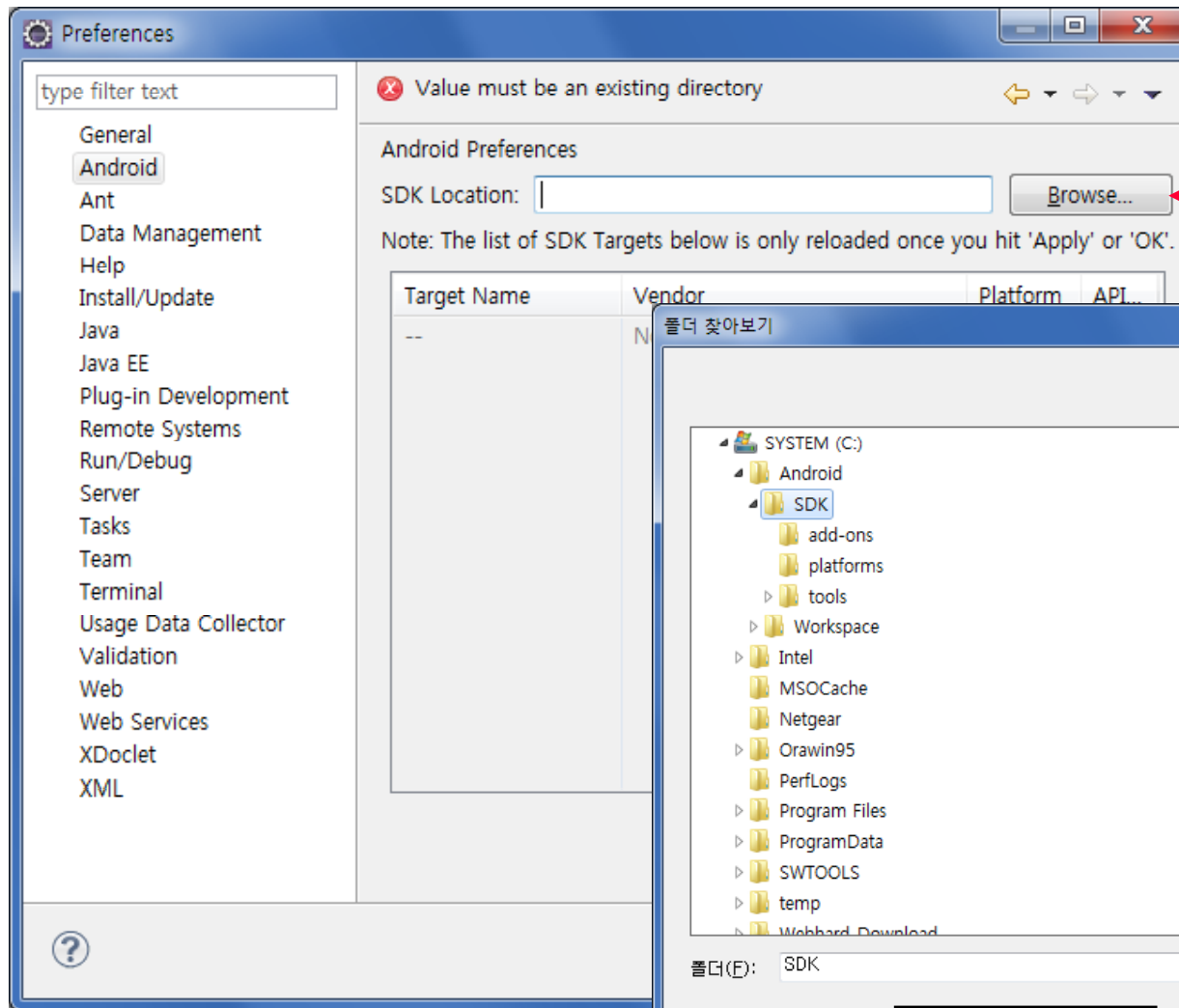


■ Android SDK 폴더 목록





ADT Plug-in 설치 | (9)

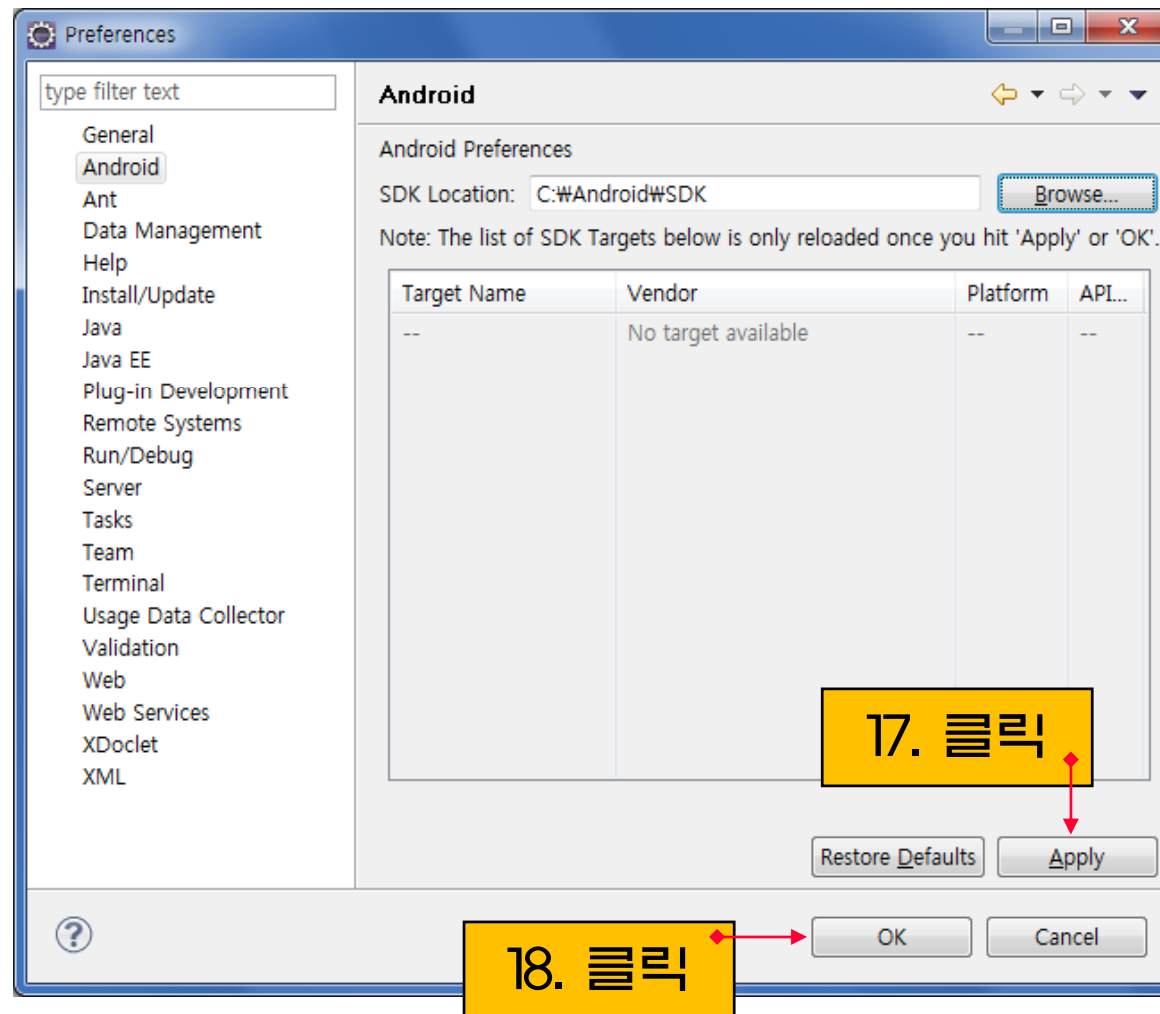


15. 클릭

16. 클릭



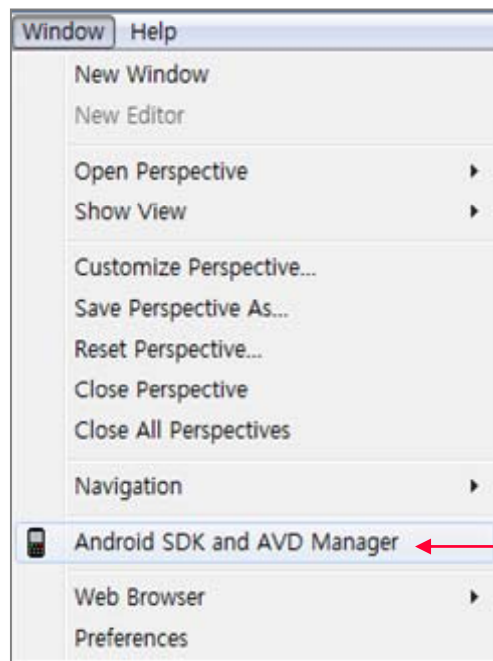
ADT Plug-in 설치 (10)





ADT Plug-in 설치 (11)

■ Android SDK 설치 완료 확인

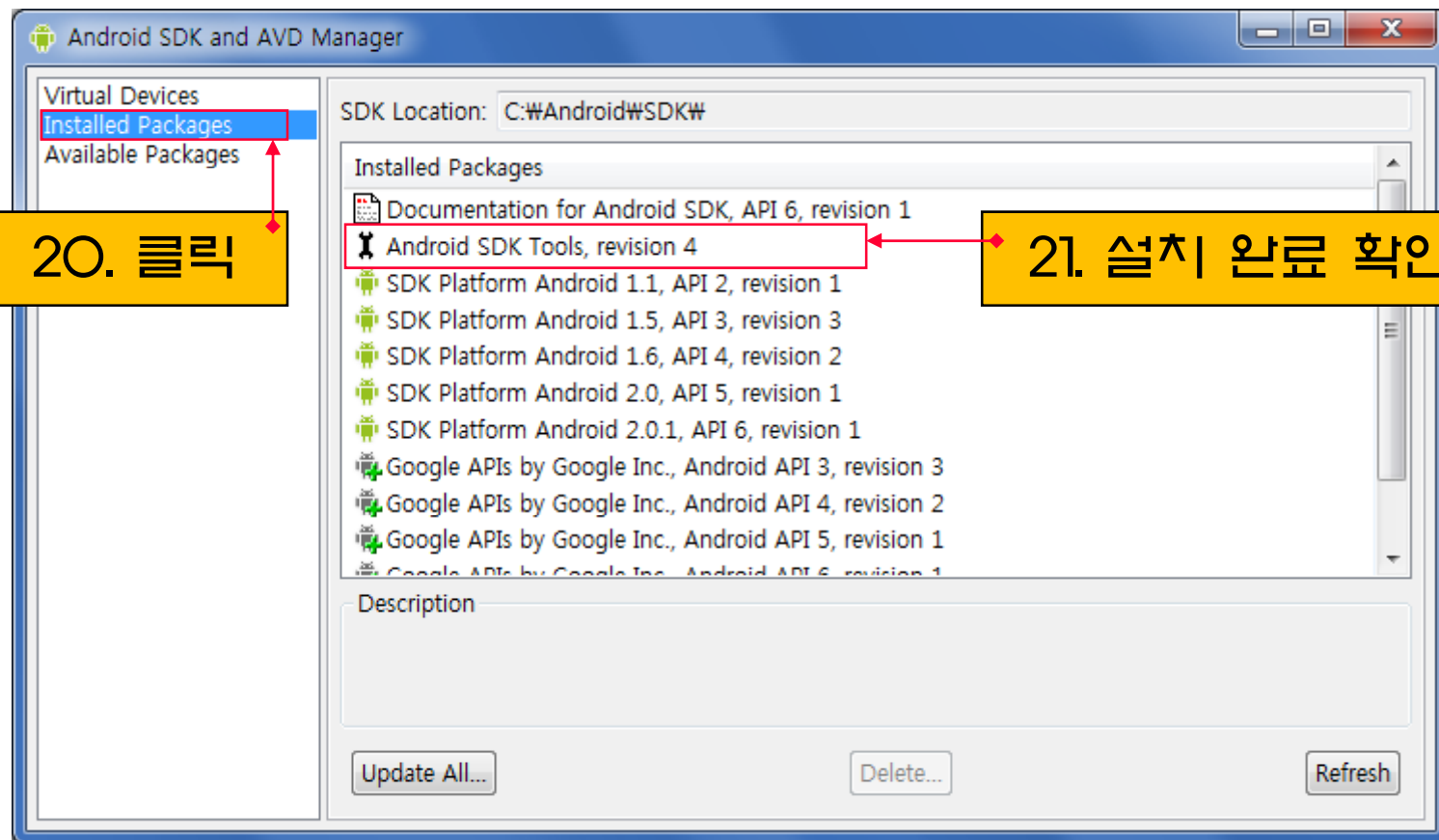


19. 클릭





ADT Plug-in 설치 (12)



20. 클릭

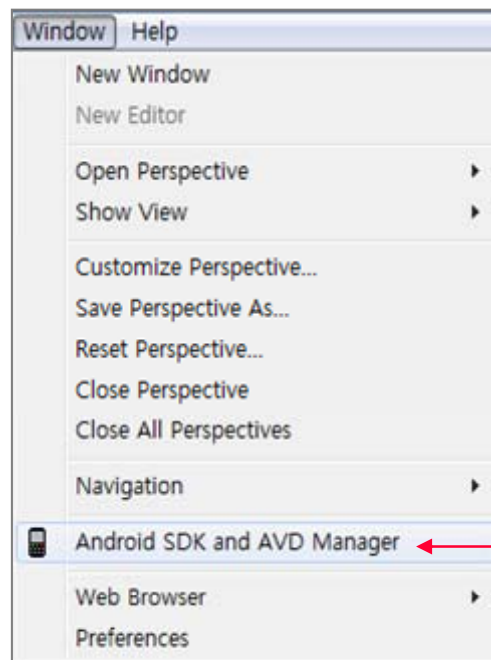
21. 설치 완료 확인



Android Virtual Device 설치 (1)

■ Android Virtual Device(AVD)

❖ 안드로이드폰 에뮬레이터

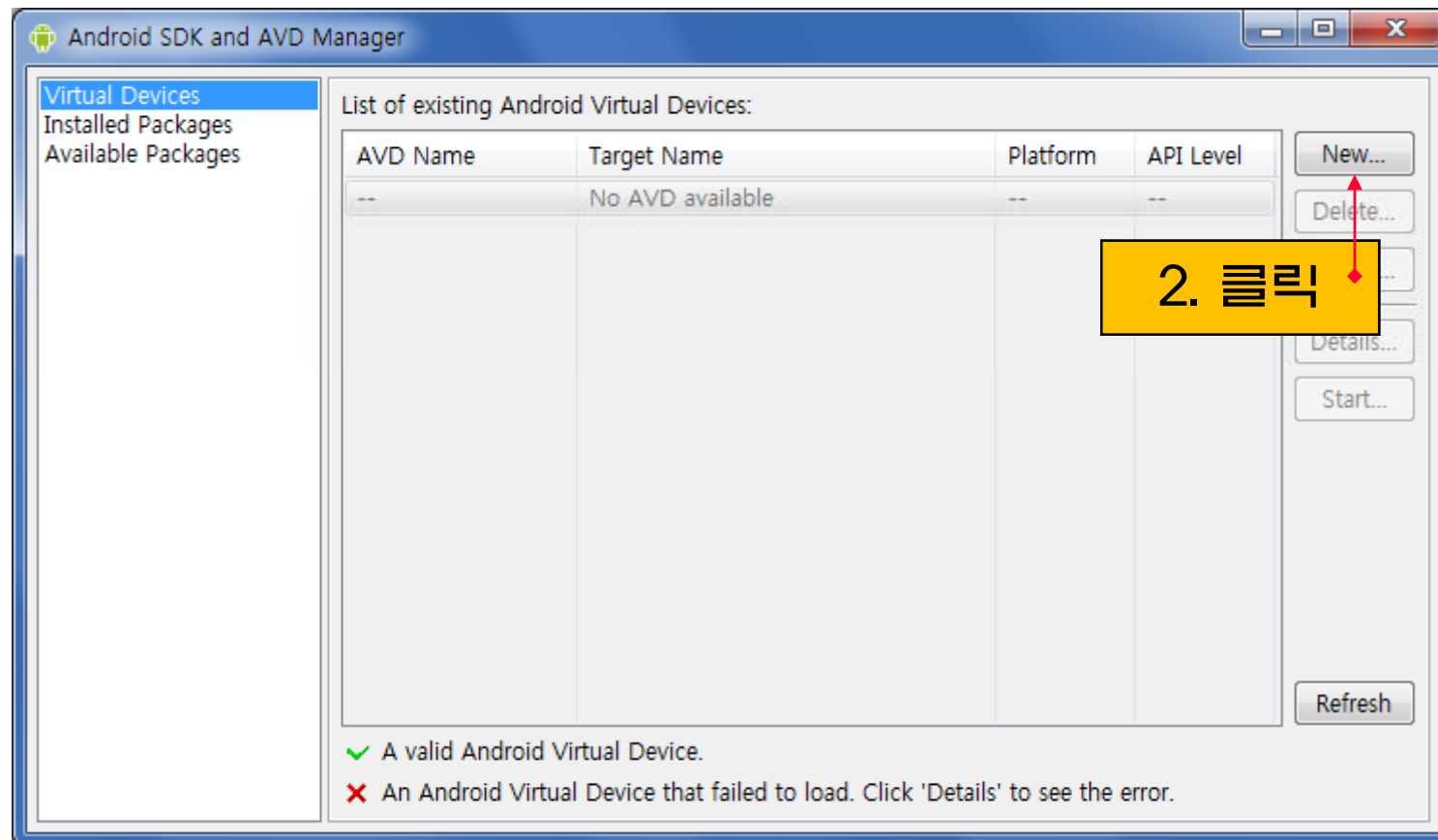


1. 클릭





Android Virtual Device 설치 (2)





Android Virtual Device 설치 (3)

Create new AVD

Name: MyAndroid_2.0.1

Target: Android 2.0.1 - API Level 6

SD Card:

☒ Size: MiB

☐ File: Browse...

Skin:

☒ Built-in: Default (HVGA)

☐ Resolution: x

Hardware:

Property	Value	
Abstracted LCD density	160	

New... Delete

☐ Force create

Create AVD Cancel

3. MyAndroid_2.0.1 입력

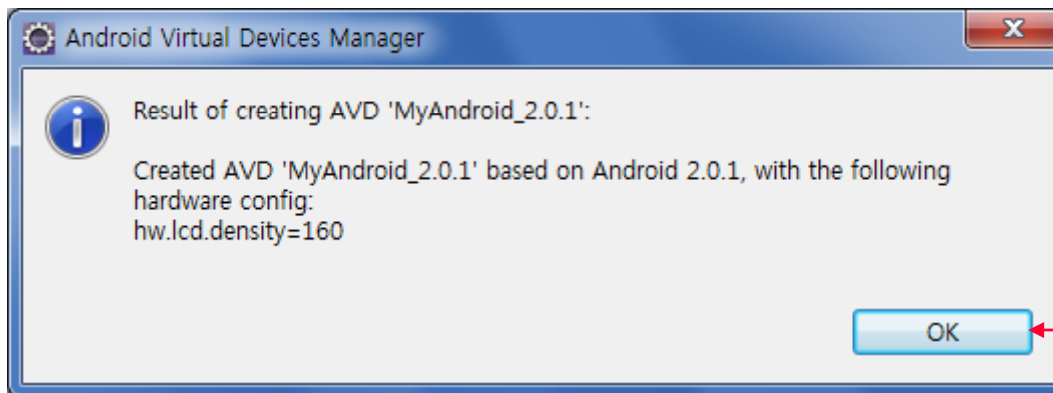
4. 선택

5. 클릭

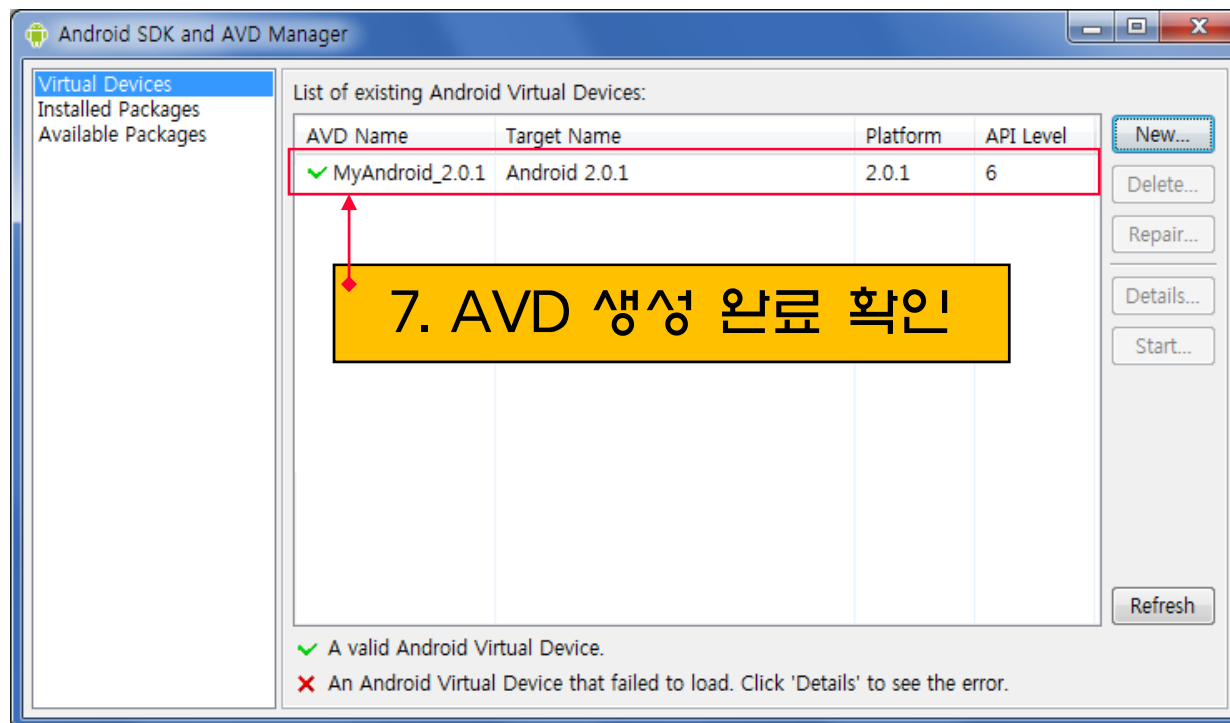




Android Virtual Device 설치 (4)



6. 클릭

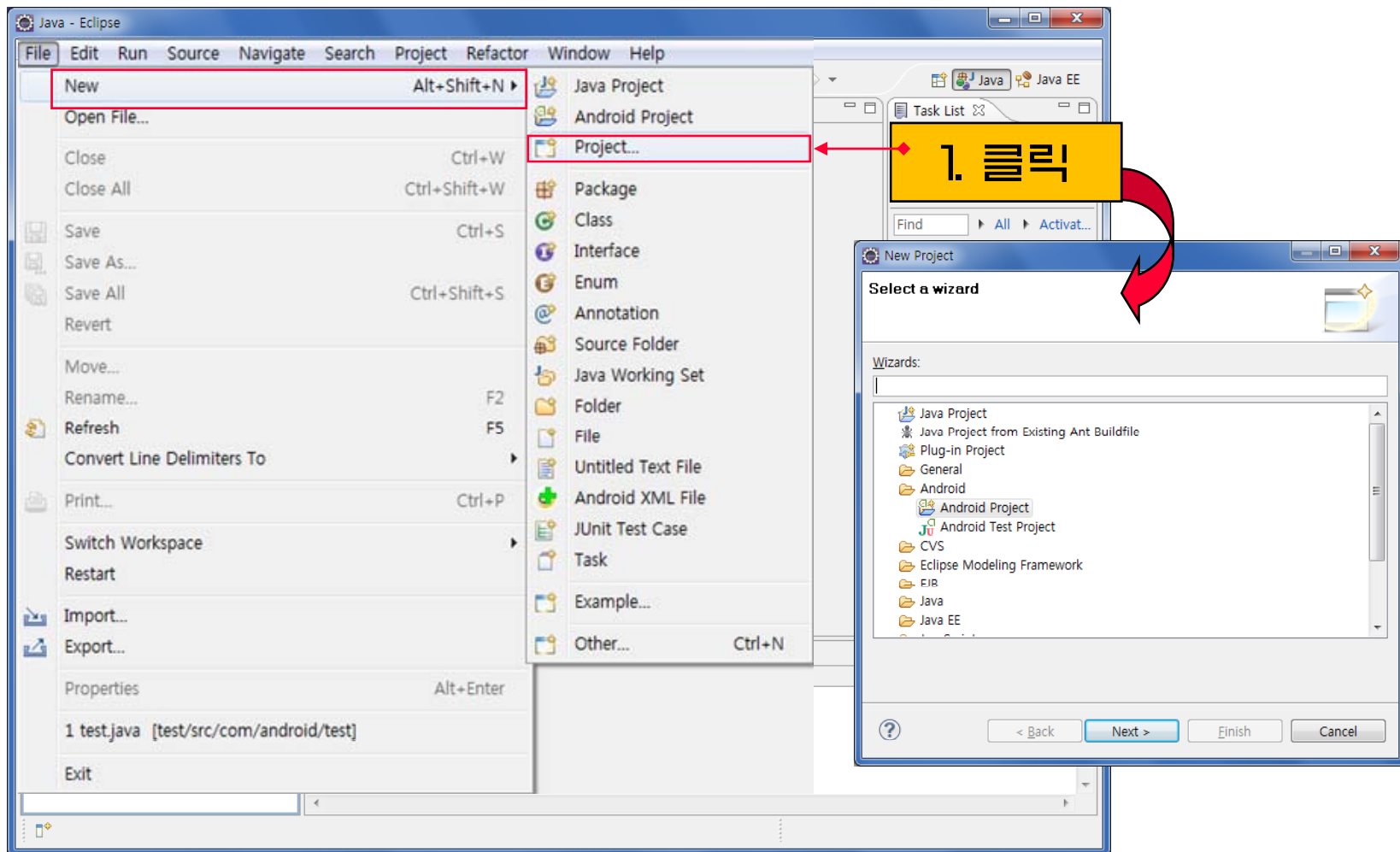




Android 예제 프로그램 (1)

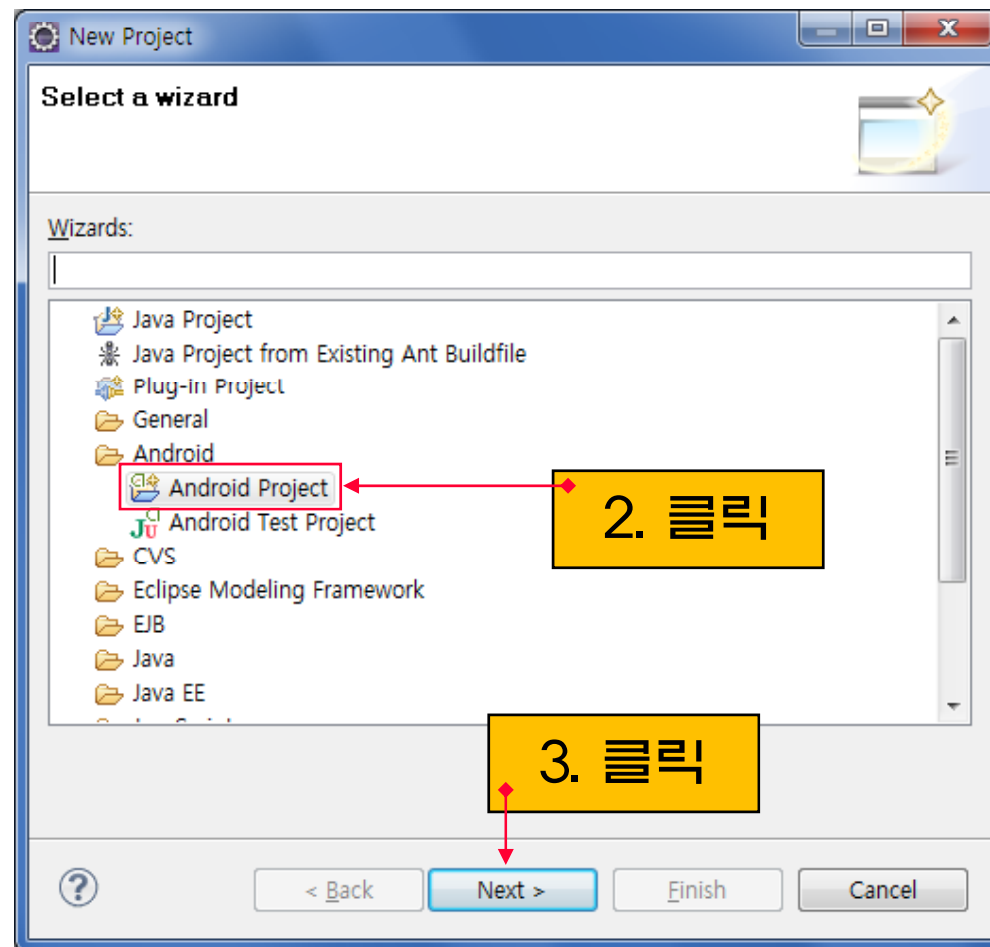
■ Android 프로젝트 생성

❖ SDK Platform Android 2.0.1





Android 예제 프로그램 (2)





Android 예제 프로그램 (3)

New Android Project

Creates a new Android Project resource.

Project name: Test

Contents

- ☒ Create new project in workspace
- ☐ Create project from existing source
- ☒ Use default location

Location: C:/Android/Workspace/Test

Samples: ApiDemos

Build Target

Target Name	Vendor	Platform	API ...
<input type="checkbox"/> Android 1.1	Android Open Source Project	1.1	2
<input type="checkbox"/> Android 1.5	Android Open Source Project	1.5	3
<input type="checkbox"/> Android 1.6	Android Open Source Project	1.6	4
<input type="checkbox"/> Android 2.0	Android Open Source Project	2.0	5
<input checked="" type="checkbox"/> Android 2.0.1	Android Open Source Project	2.0.1	6
<input type="checkbox"/> Google APIs	Google Inc.	1.5	3
<input type="checkbox"/> Google APIs	Google Inc.	1.6	4
<input type="checkbox"/> Google APIs			5
<input type="checkbox"/> Google APIs			6

Android + Google APIs

Properties

Application name: Test

Package name: com.inhatec.test

☒ Create Activity: Test

Min SDK Version: 6

< Back Next > Finish Cancel

4. Test 입력

5. 클릭

6. Test 입력

7. com.inhatec.test 입력

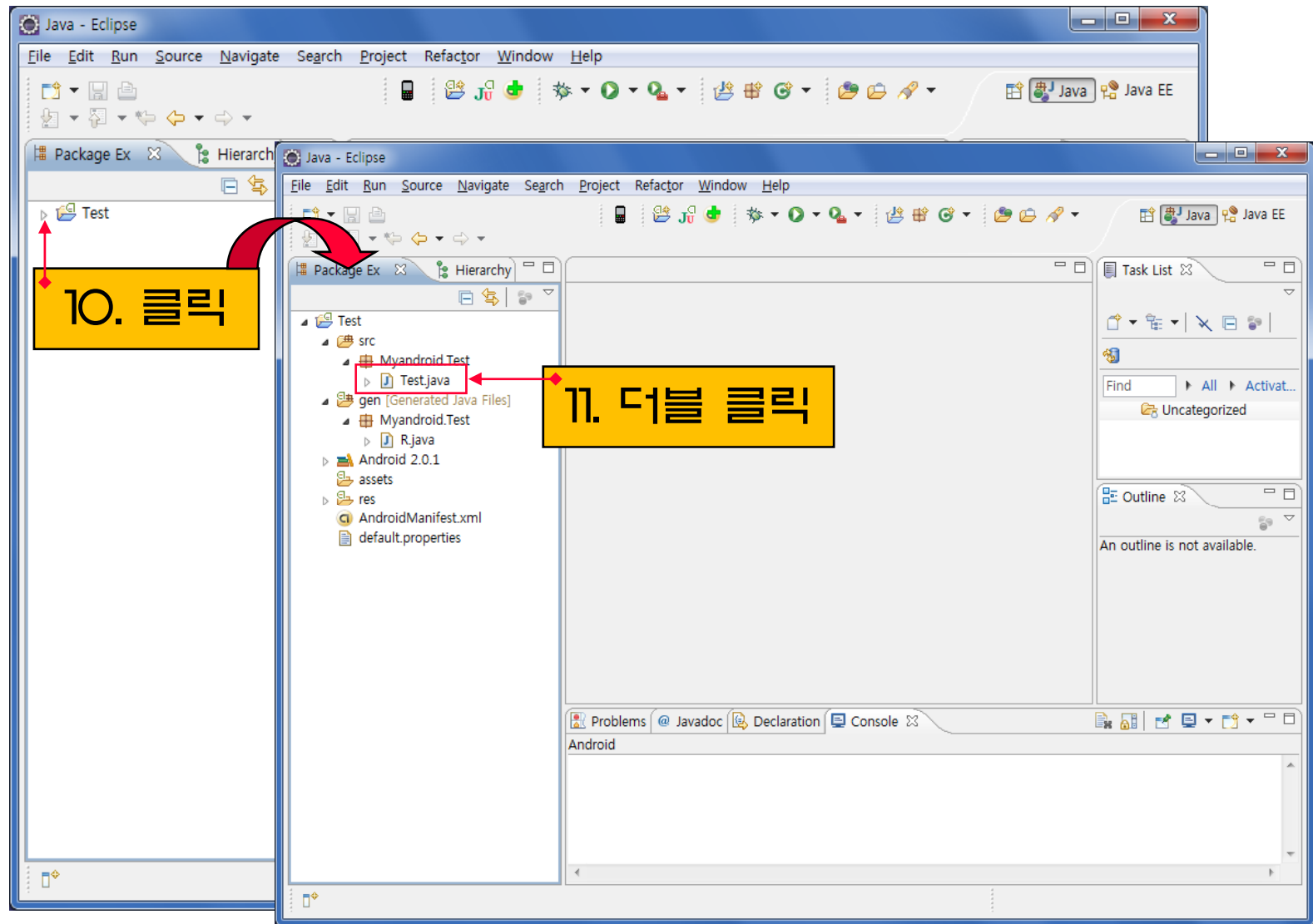
8. Test 입력

9. 클릭





Android 예제 프로그램 (4)





Android 예제 프로그램 (5)

```
package com.inhac.test;

import android.app.Activity;

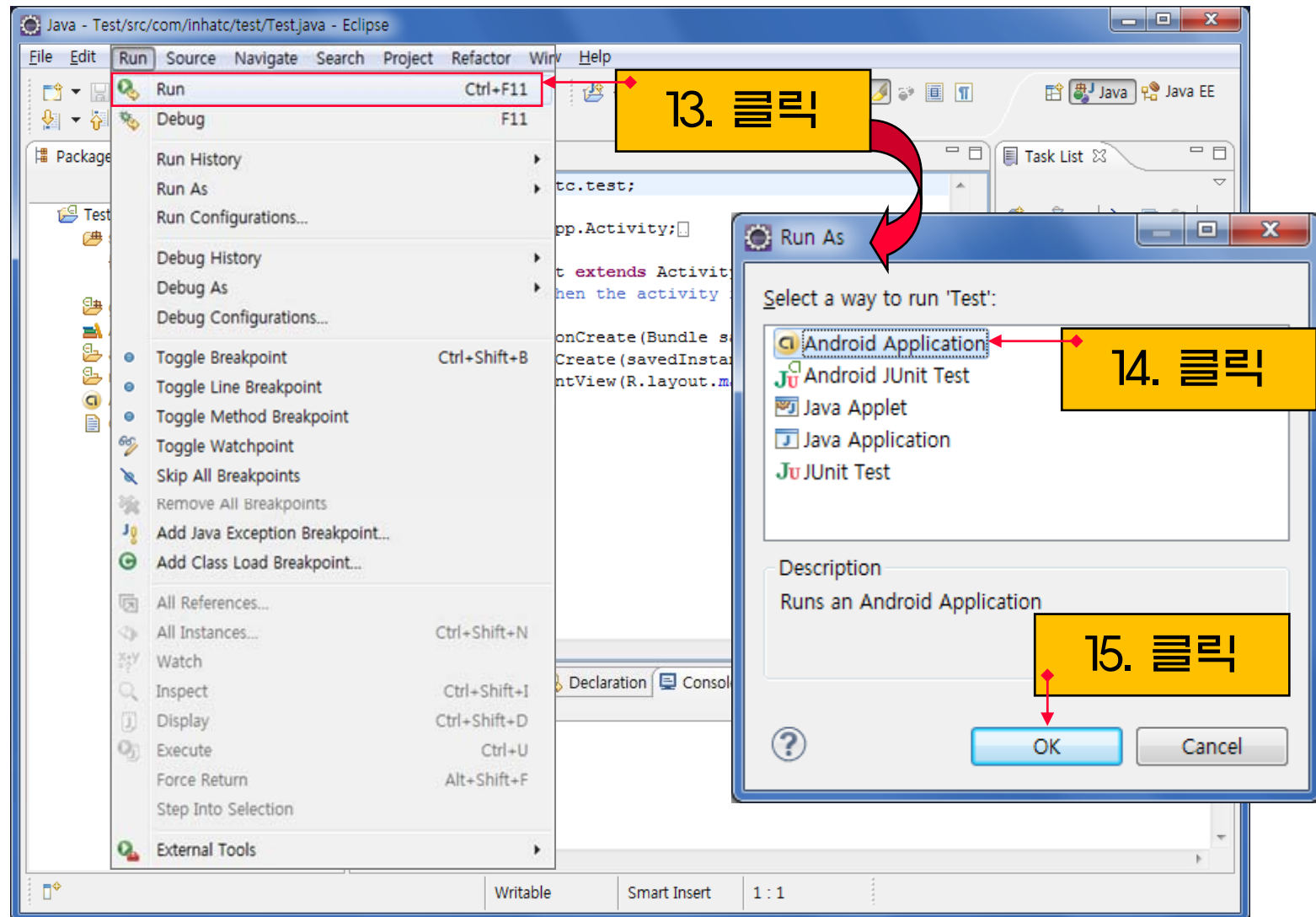
public class Test extends Activity {
    /** Called when the activity is first created. */
    @Override
    public void onCreate(Bundle savedInstanceState) {
        super.onCreate(savedInstanceState);
        setContentView(R.layout.main);
    }
}
```

12. Test.java 소스 코드



Android 예제 프로그램 (6)

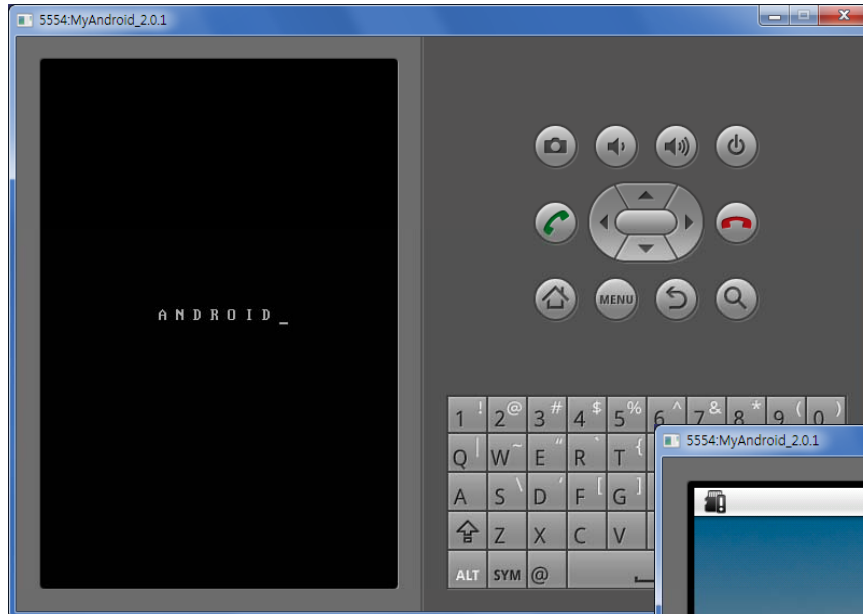
❖ Android 프로젝트 실행





Android 예제 프로그램 (7)

❖ 실행 결과





Android 예제 프로그램 (8)





실습: Android 예제 프로그램 작성

■ SDK Platform Android 1.5 기반 예제 프로그램 작성

❖ Project Name: Test15

◆ 아래 그림과 같이 SDK Platform Android 1.5 기반의 예제 프로그램을 작성하여 테스트해 보시오.





Homework #3

■ Android 프로그램 개발 환경 구축

- ❖ 개인용 PC에 android 프로그램 개발환경을 구축하시오.
- ❖ SDK Platform Android 2.0.1 기반의 예제 프로그램을 작성하여 제출하시오.





학습 요약

■ JDK

- ❖ JDK 설치
- ❖ JDK 환경 설정

■ Eclipse 설치

- ❖ Eclipse 설치
- ❖ ADT Plug-in 설치
- ❖ Android Virtual Device(AVD) 설치

■ Android SDK 설치

■ Android 예제 프로그램

- ❖ SDK Platform Android 1.5 기반의 예제 프로그램
- ❖ SDK Platform Android 2.0.1 기반의 예제 프로그램



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