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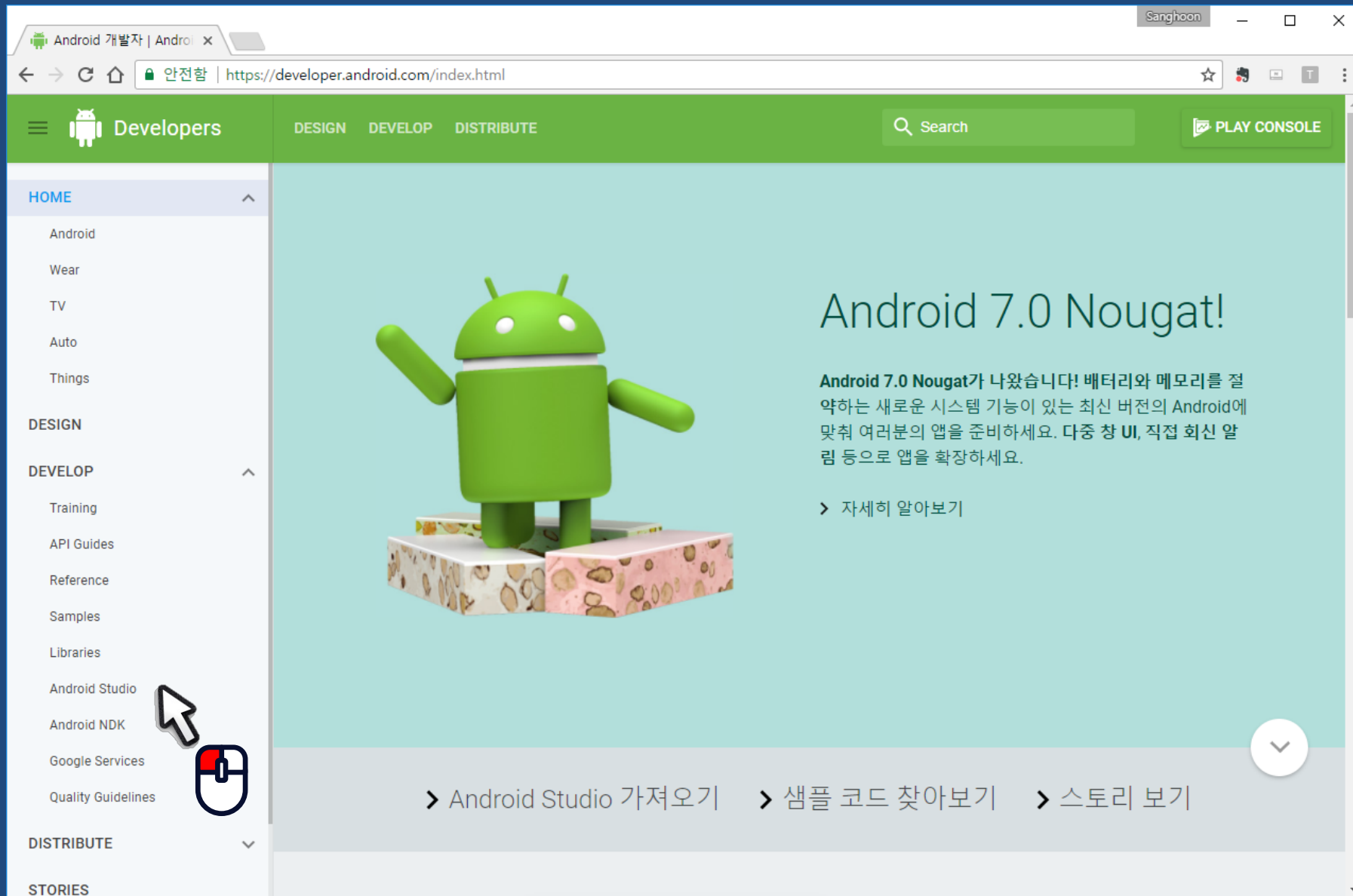
This slide is dedicated to seg group project prior to learn basic android set up and please note that some pictures may be used from other websites.



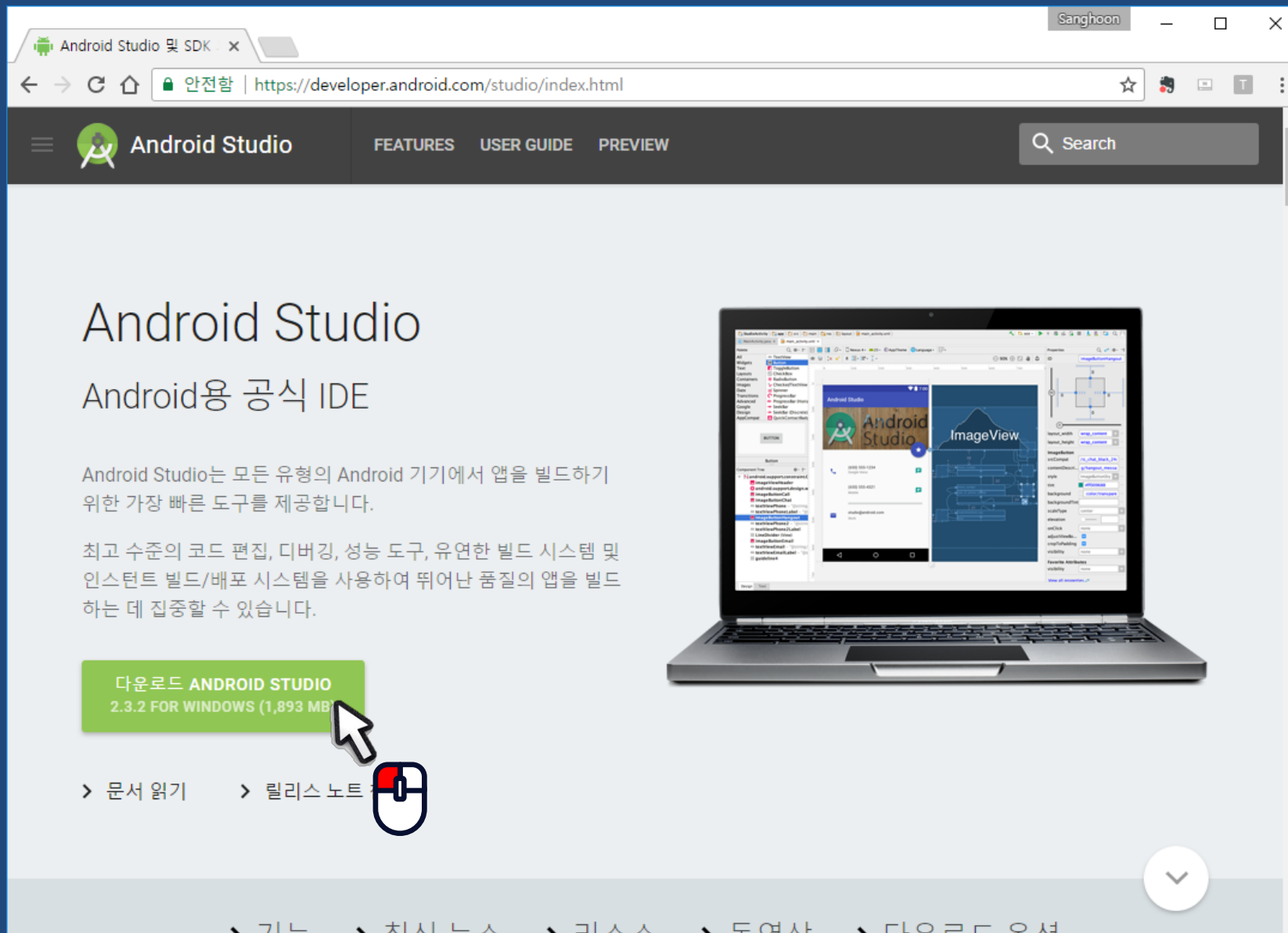
Android Studio Installation

- Android developer homepage
- developer.android.com
- Develop -> Android Studio link

Android Studio Installation



Android Studio Installation



The screenshot shows the official Android Studio website in a web browser. The browser's address bar displays the URL <https://developer.android.com/studio/index.html>. The website header includes the Android Studio logo, navigation links for FEATURES, USER GUIDE, and PREVIEW, and a search bar. The main content area features the title "Android Studio" and the subtitle "Android용 공식 IDE". Below this, a paragraph states: "Android Studio는 모든 유형의 Android 기기에서 앱을 빌드하기 위한 가장 빠른 도구를 제공합니다." Another paragraph follows: "최고 수준의 코드 편집, 디버깅, 성능 도구, 유연한 빌드 시스템 및 인스턴트 빌드/배포 시스템을 사용하여 뛰어난 품질의 앱을 빌드하는 데 집중할 수 있습니다." A prominent green button labeled "다운로드 ANDROID STUDIO 2.3.2 FOR WINDOWS (1,893 MB)" is shown with a mouse cursor clicking on it. Below the button are two links: "> 문서 읽기" and "> 릴리스 노트". To the right of the text is an image of a laptop displaying the Android Studio interface. At the bottom of the page, a navigation bar contains links: "기능", "치시 뉴스", "리소스", "도여사", and "다운로드 오서".

Android Studio
Android용 공식 IDE

Android Studio는 모든 유형의 Android 기기에서 앱을 빌드하기 위한 가장 빠른 도구를 제공합니다.

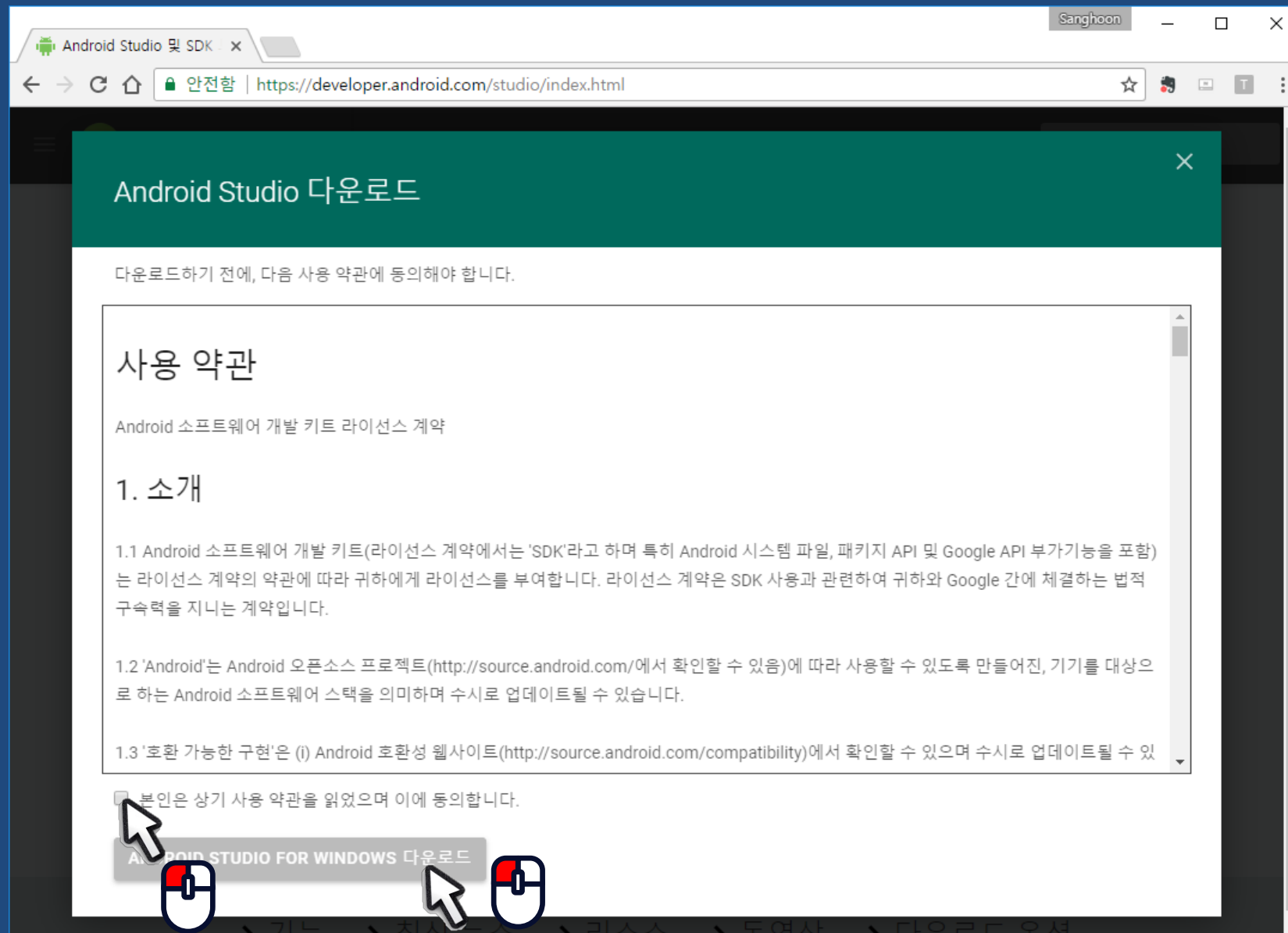
최고 수준의 코드 편집, 디버깅, 성능 도구, 유연한 빌드 시스템 및 인스턴트 빌드/배포 시스템을 사용하여 뛰어난 품질의 앱을 빌드하는 데 집중할 수 있습니다.

다운로드 ANDROID STUDIO
2.3.2 FOR WINDOWS (1,893 MB)

> 문서 읽기 > 릴리스 노트

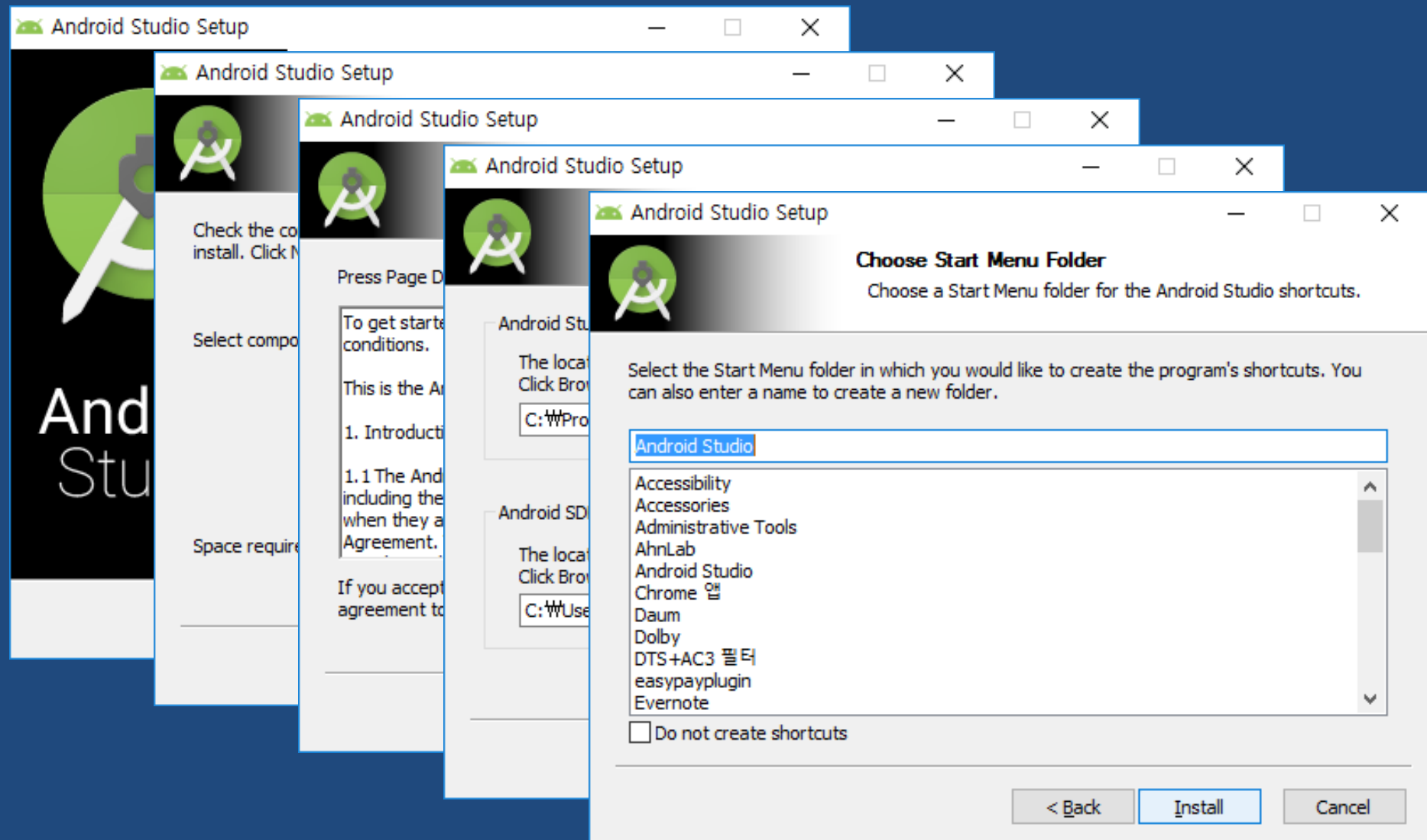
기능 치시 뉴스 리소스 도여사 다운로드 오서

Android Studio Installation

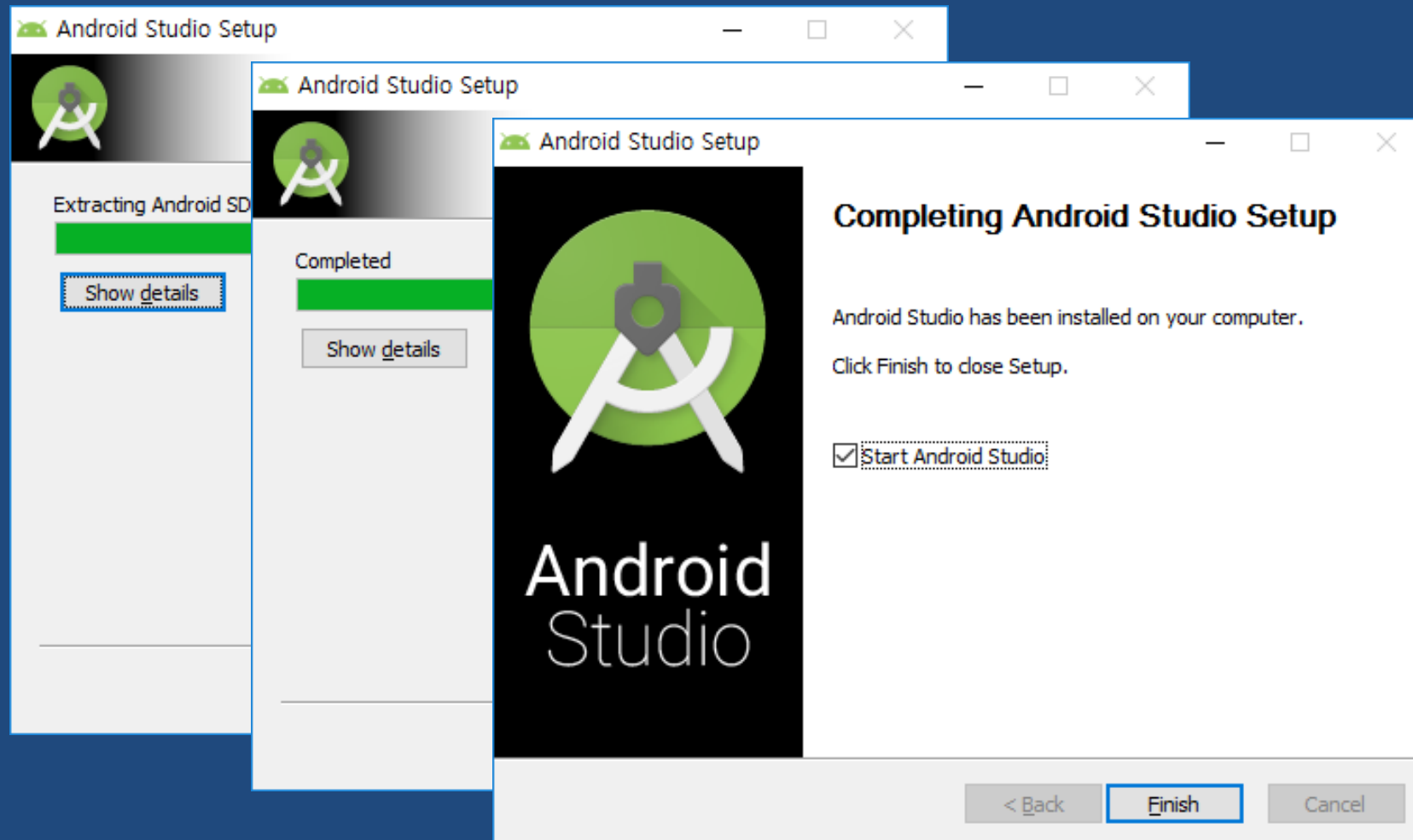


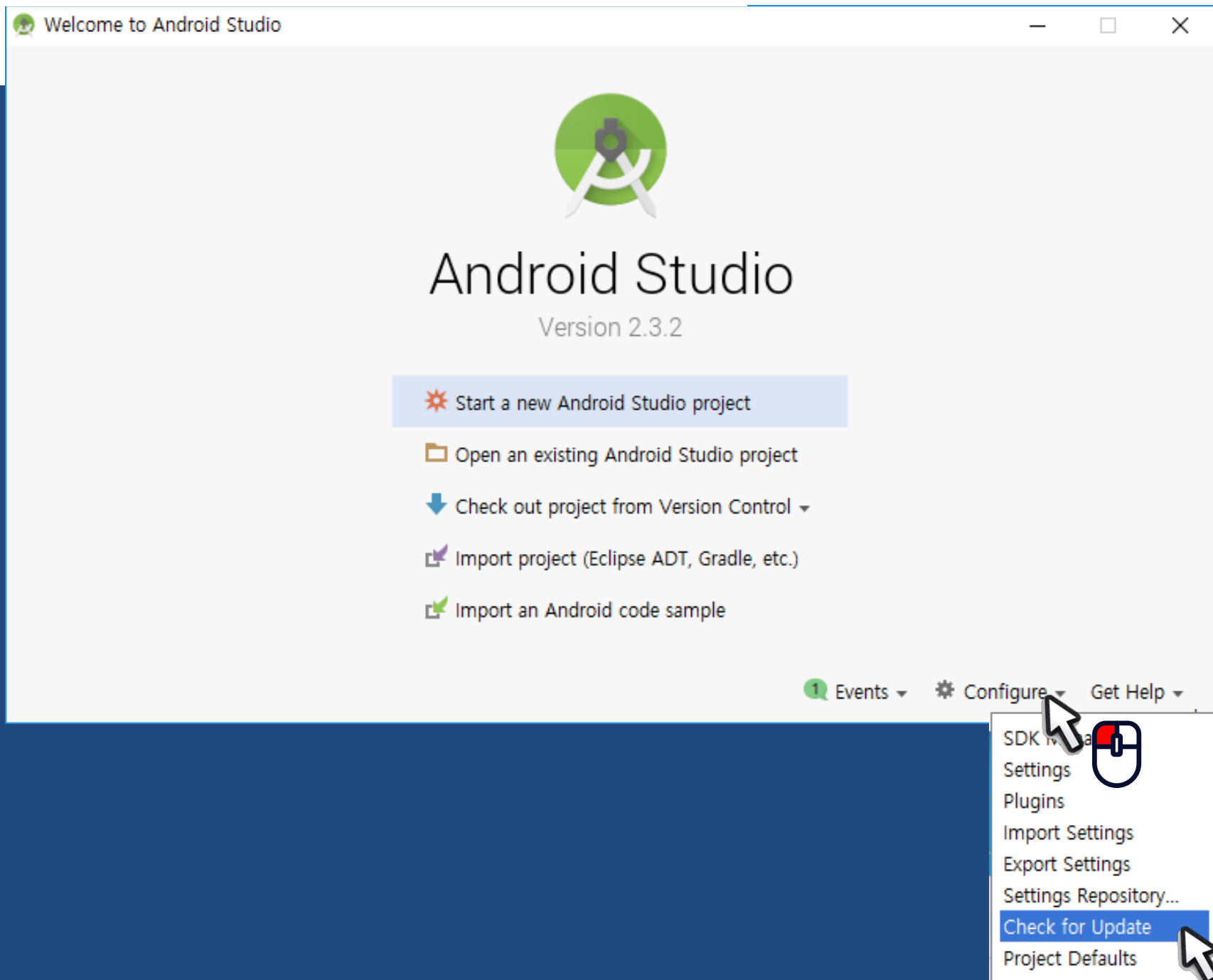
Android Studio Installation

- android-studio-bundle-162.3934792-windows.exe 파일 실행



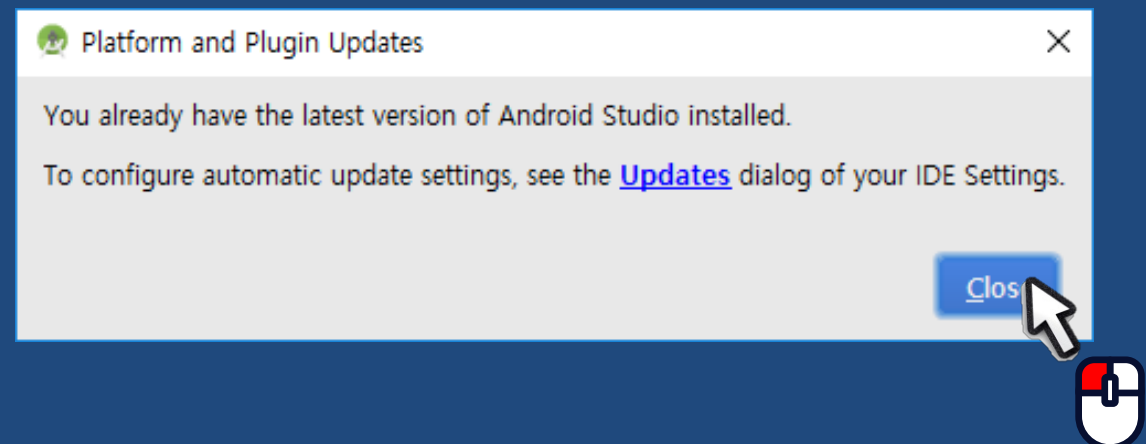
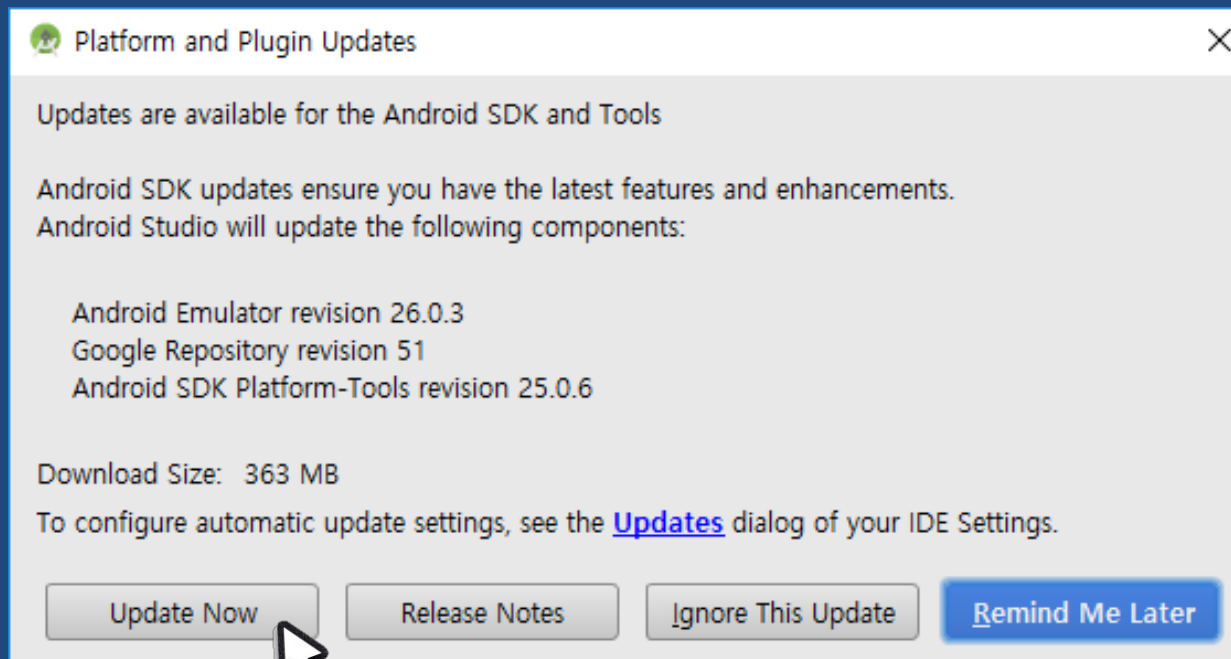
Android Studio Installation





Android Studio Installation

- Configure -> Check for Update





License Agreement

Android Studio

Licenses

▼ android-sdk-license

- Google Repository
- Android Emulator
- Android SDK Platform-Tools

Terms and Conditions

This is the Android Software Development Kit License Agreement

1. Introduction

1.1 The Android Software Development Kit (referred to in the 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 the License Agreement. The License Agreement forms a legally binding contract between you and Google in relation to your use of the SDK.

1.2 "Android" means the Android software stack for devices, as made available under the Android Open Source Project, which is located at the following URL: <http://source.android.com/>, as updated from time to time.

1.3 A "compatible implementation" means any Android device that (i) complies with the Android Compatibility Definition document, which can be found at the Android compatibility website (<http://source.android.com/compatibility>) and which may be updated from time to time; and (ii) successfully passes the Android Compatibility Test Suite (CTS).

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

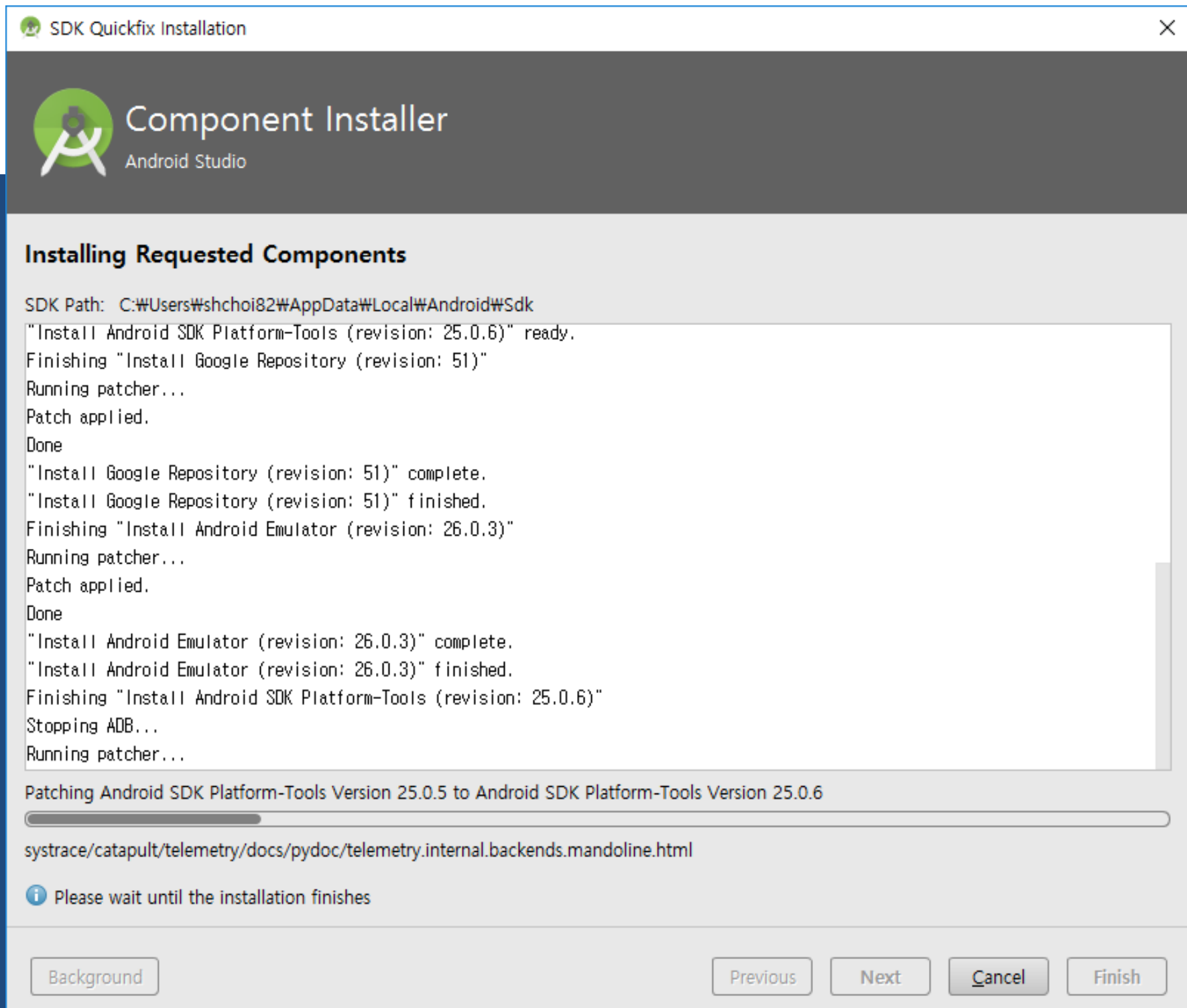
☐ Decline ☒ Accept

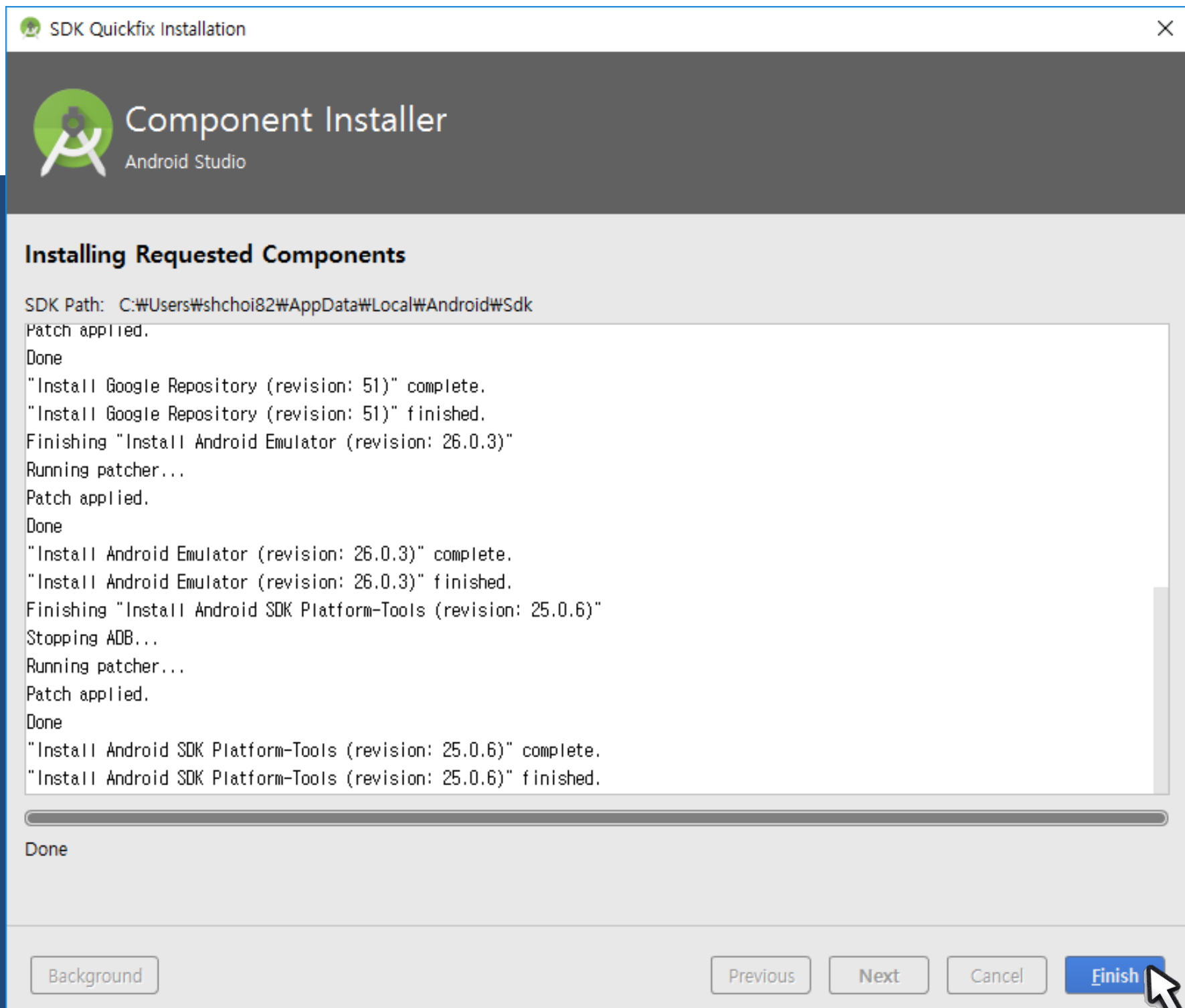
Previous

Next

Cancel

Finish





Default Settings



▼ Appearance & Behavior

Appearance

Menus and Toolbars

▼ System Settings

Passwords

HTTP Proxy

Updates

Usage Statistics

Android SDK

Notifications

Quick Lists

Path Variables

Keymap

► Editor

Plugins

► Build, Execution, Deployment

► Tools

Appearance & Behavior > System Settings > Android SDK

Manager for the Android SDK and Tools used by Android Studio

Android SDK Location: C:\Users\shchoi82\AppData\Local\Android\Sdk

[Edit](#)

SDK Platforms

SDK Tools

SDK Update Sites

Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by default. Once installed, Android Studio will automatically check for updates. Check "show package details" to display individual SDK components.

	Name	API Level	Revision	Status
<input checked="" type="checkbox"/>	Android 7.1.1 (Nougat)	25	3	Installed
<input type="checkbox"/>	Android 7.0 (Nougat)	24	2	Not installed
<input type="checkbox"/>	Android 6.0 (Marshmallow)	23	3	Not installed
<input type="checkbox"/>	Android 5.1 (Lollipop)	22	2	Not installed
<input type="checkbox"/>	Android 5.0 (Lollipop)	21	2	Not installed
<input type="checkbox"/>	Android 4.4W (KitKat Wear)	20	2	Not installed
<input type="checkbox"/>	Android 4.4 (KitKat)	19	4	Not installed
<input type="checkbox"/>	Android 4.3 (Jelly Bean)	18	3	Not installed
<input type="checkbox"/>	Android 4.2 (Jelly Bean)	17	3	Not installed
<input type="checkbox"/>	Android 4.1 (Jelly Bean)	16	5	Not installed
<input type="checkbox"/>	Android 4.0.3 (IceCreamSandwich)	15	5	Not installed
<input type="checkbox"/>	Android 4.0 (IceCreamSandwich)	14	4	Not installed
<input type="checkbox"/>	Android 3.2 (Honeycomb)	13	1	Not installed
<input type="checkbox"/>	Android 3.1 (Honeycomb)	12	3	Not installed
<input type="checkbox"/>	Android 3.0 (Honeycomb)	11	2	Not installed
<input type="checkbox"/>	Android 2.3.3 (Gingerbread)	10	2	Not installed
<input type="checkbox"/>	Android 2.3 (Gingerbread)	9	2	Not installed
<input type="checkbox"/>	Android 2.2 (Froyo)	8	3	Not installed
<input type="checkbox"/>	Android 2.1 (Eclair)	7	3	Not installed

Looking for updates...

☐ Show Package Details

OK

Cancel

Apply

Help



▼ Appearance & Behavior

Appearance

Menus and Toolbars

▼ System Settings

Passwords

HTTP Proxy

Updates

Usage Statistics

Android SDK

Notifications

Quick Lists

Path Variables

Keymap

► Editor

Plugins

► Build, Execution, Deployment

► Tools

Appearance & Behavior > System Settings > Android SDK

Reset

Manager for the Android SDK and Tools used by Android Studio

Android SDK Location: C:\Users\shchoi82\AppData\Local\Android\Sdk

[Edit](#)

SDK Platforms

SDK Tools

SDK Update Sites

Below are the available SDK developer tools. Once installed, Android Studio will automatically check for updates. Check "show package details" to display available versions of an SDK Tool.

	Name	Version	Status
<input checked="" type="checkbox"/>	Android SDK Build-Tools		Installed
<input type="checkbox"/>	GPU Debugging tools		Not Installed
<input type="checkbox"/>	CMake		Not Installed
<input type="checkbox"/>	LLDB		Not Installed
<input type="checkbox"/>	Android Auto API Simulators	1	Not installed
<input type="checkbox"/>	Android Auto Desktop Head Unit emulator	1.1	Not installed
<input checked="" type="checkbox"/>	Android Emulator	26.0.3	Installed
<input checked="" type="checkbox"/>	Android SDK Platform-Tools	25.0.6	Installed
<input checked="" type="checkbox"/>	Android SDK Tools	26.0.2	Installed
<input checked="" type="checkbox"/>	Documentation for Android SDK	1	Installed
<input type="checkbox"/>	Google Play APK Expansion library	1	Not installed
<input type="checkbox"/>	Google Play Billing Library	5	Not installed
<input type="checkbox"/>	Google Play Licensing Library	1	Not installed
<input type="checkbox"/>	Google Play services	40	Not installed
<input type="checkbox"/>	Google USB Driver	11	Not installed
<input type="checkbox"/>	Google Web Driver	2	Not installed
<input type="checkbox"/>	Instant Apps Development SDK	1.0.0	Not installed
<input checked="" type="checkbox"/>	Intel x86 Emulator Accelerator (HAXM installer)	6.0.6	Installed
<input type="checkbox"/>	NDK	14.1.3816874	Not installed
▼ <input type="checkbox"/>	Support Repository		
<input type="checkbox"/>	ConstraintLayout for Android		Not Installed
<input type="checkbox"/>	Solver for ConstraintLayout		Not Installed
<input checked="" type="checkbox"/>	Android Support Repository	47.0.0	Installed
<input checked="" type="checkbox"/>	Google Repository	51	Installed

☐ Show Package Details

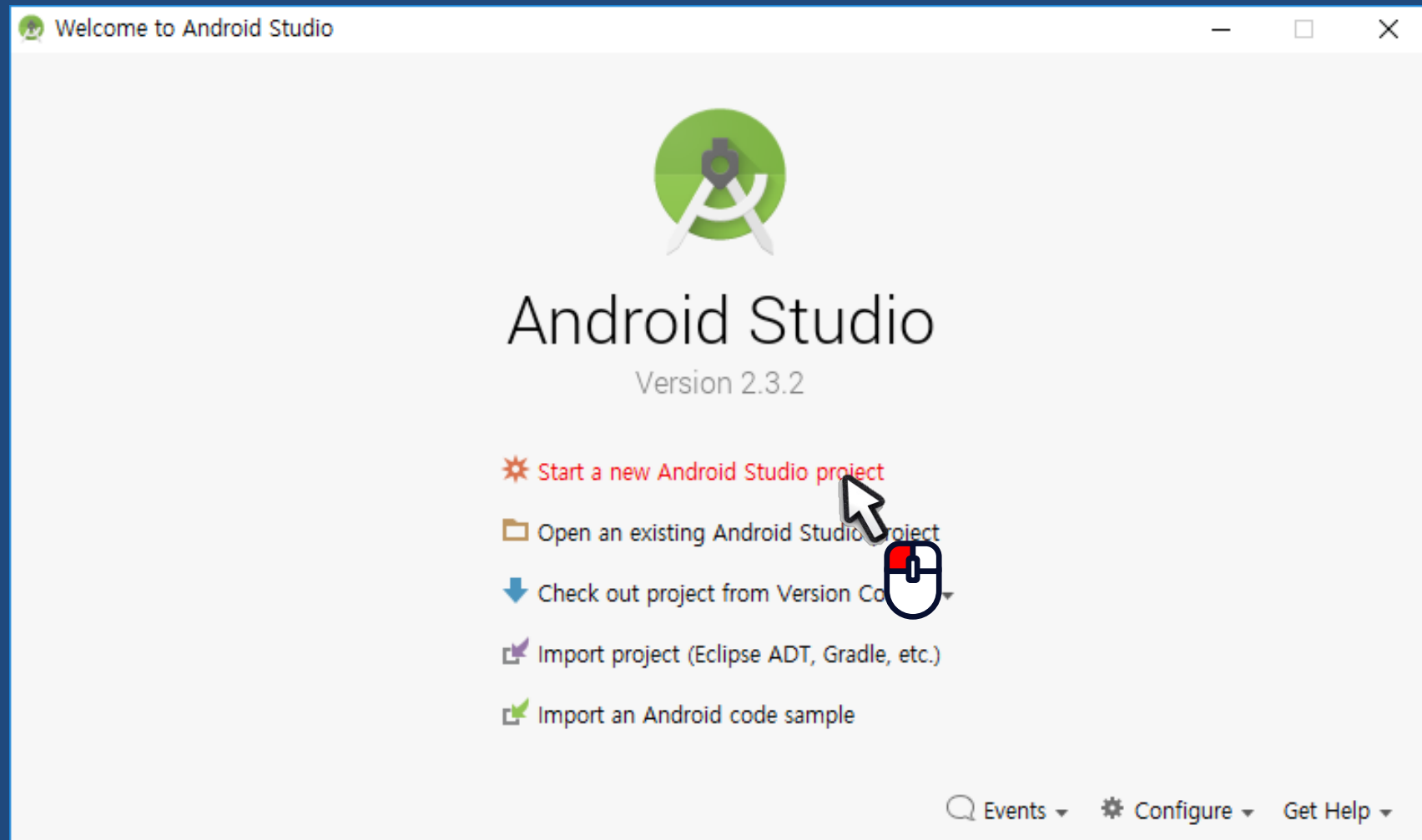
OK

Cancel

Apply

Help

Android Studio Installation





Configure your new project

Application name: My Application

Company domain: shchoi82.example.com

Package name: com.example.shchoi82.myapplication

[Edit](#)

☐ Include C++ support

Project location: C:\Users\shchoi82\AndroidStudioProjects\MyApplication



Previous

Next

Cancel

Finish



Target Android Devices

Select the form factors your app will run on

Different platforms may require separate SDKs

☒ Phone and Tablet

Minimum SDK API 15: Android 4.0.3 (IceCreamSandwich)

Lower API levels target more devices, but have fewer features available.

By targeting API 15 and later, your app will run on approximately **97.4%** of the devices that are active on the Google Play Store.

[Help me choose](#)

☐ Wear

Minimum SDK API 21: Android 5.0 (Lollipop)

☐ TV

Minimum SDK API 21: Android 5.0 (Lollipop)

☐ Android Auto

Previous

Next

Cancel

Finish



Installing Requested Components

SDK Path: C:\Users\shchoi82\AppData\Local\Android\Sdk

```
Downloading https://dl.google.com/android/repository/com.android.support.constraint-constraint-layout-1.0.2.zip
"Install ConstraintLayout for Android 1.0.2 (revision: 1)" ready.
Finishing "Install ConstraintLayout for Android 1.0.2 (revision: 1)"
Installing ConstraintLayout for Android 1.0.2 in C:\Users\shchoi82\AppData\Local\Android\Sdk\extras\m2repository\com\android\support\constraint\constraint-layout\1.0.2
"Install ConstraintLayout for Android 1.0.2 (revision: 1)" complete.
"Install ConstraintLayout for Android 1.0.2 (revision: 1)" finished.
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\add-ons\addon-google_apis-google-24\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\build-tools\25.0.2\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\build-tools\25.0.3\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\docs\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\emulator\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\extras\android\m2repository\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\extras\google\m2repository\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\extras\intel\Hardware_Accelerated_Execution_Manager\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\extras\m2repository\com\android\support\constraint\constraint-layout-solver\1.0.2\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\extras\m2repository\com\android\support\constraint\constraint-layout\1.0.2\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\patcher\v4\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\platform-tools\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\platforms\android-25\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\sources\android-25\package.xml
Parsing C:\Users\shchoi82\AppData\Local\Android\Sdk\system-images\android-25\google_apis\x86\package.xml
```

Done

Previous

Next

Cancel

Finish

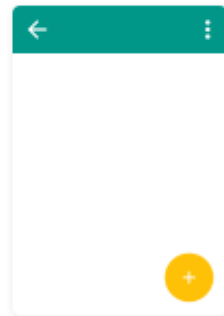
Create New Project



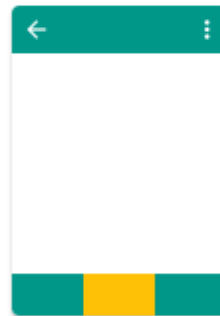
Add an Activity to Mobile



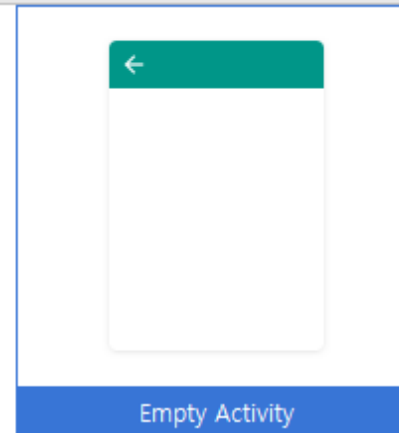
Add No Activity



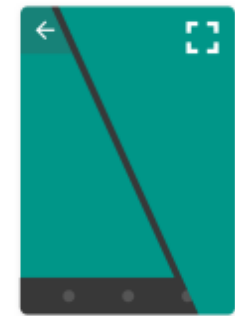
Basic Activity



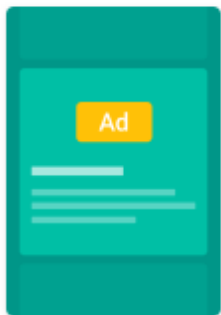
Bottom Navigation Activity



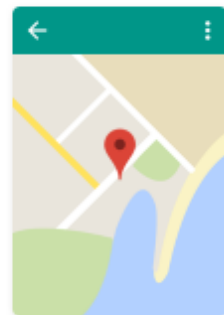
Empty Activity



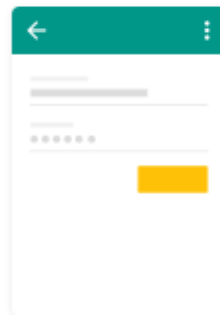
Fullscreen Activity



Google AdMob Ads Activity



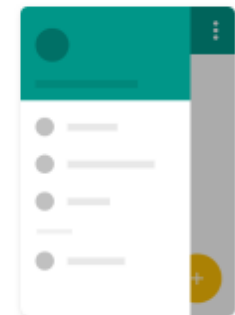
Google Maps Activity



Login Activity



Master/Detail Flow



Navigation Drawer Activity

Previous

Next

Cancel

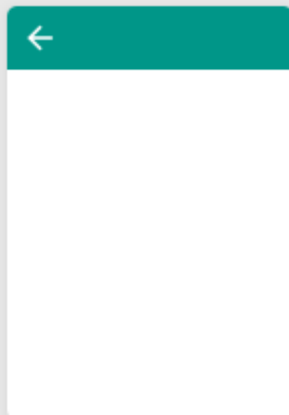
Finish



Customize the Activity



Creates a new empty activity



Empty Activity

Activity Name:

MainActivity

☒ Generate Layout File

Layout Name:

activity_main

☒ Backwards Compatibility (AppCompat)

The name of the activity class to create

Previous

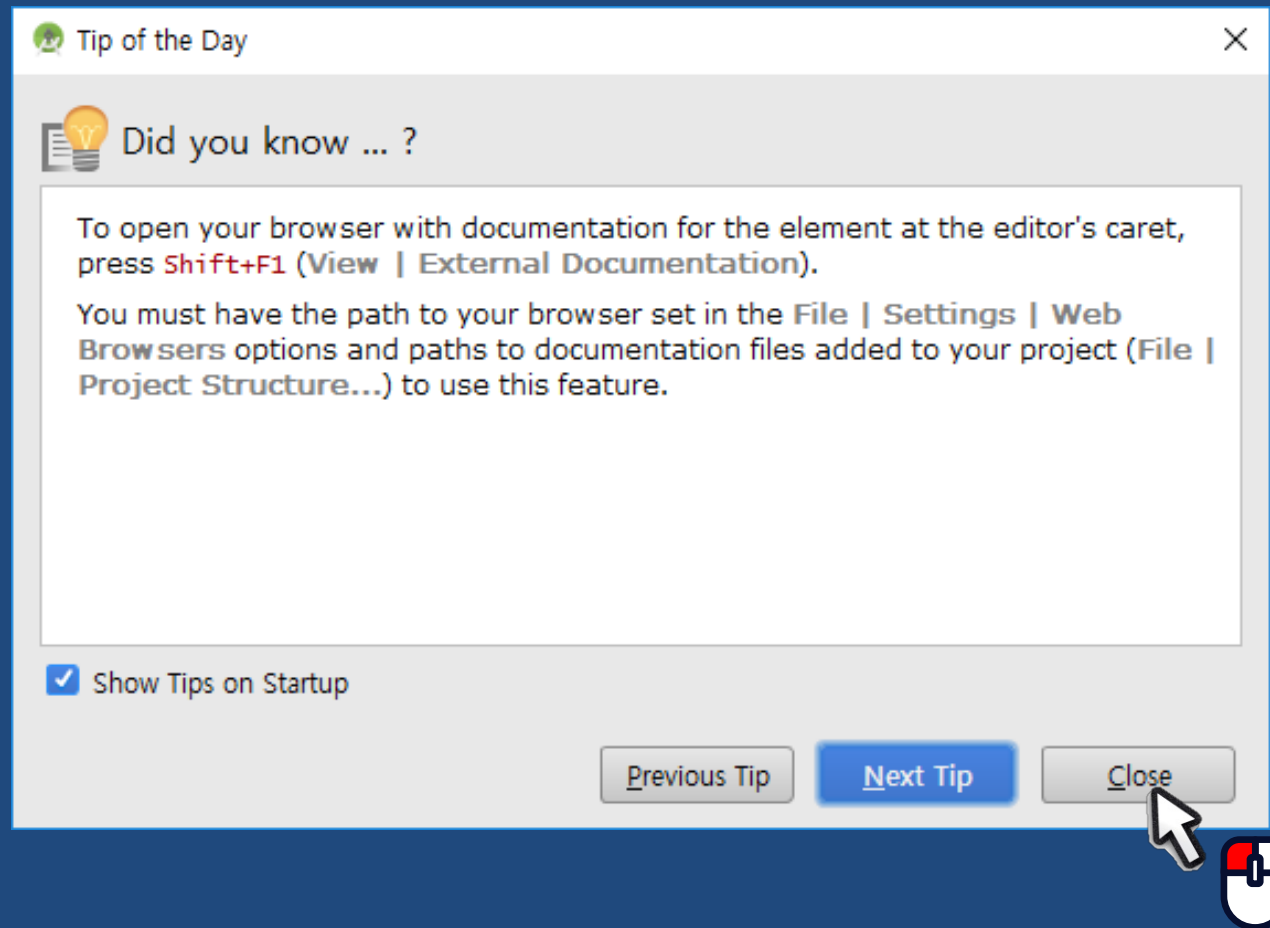
Next

Cancel

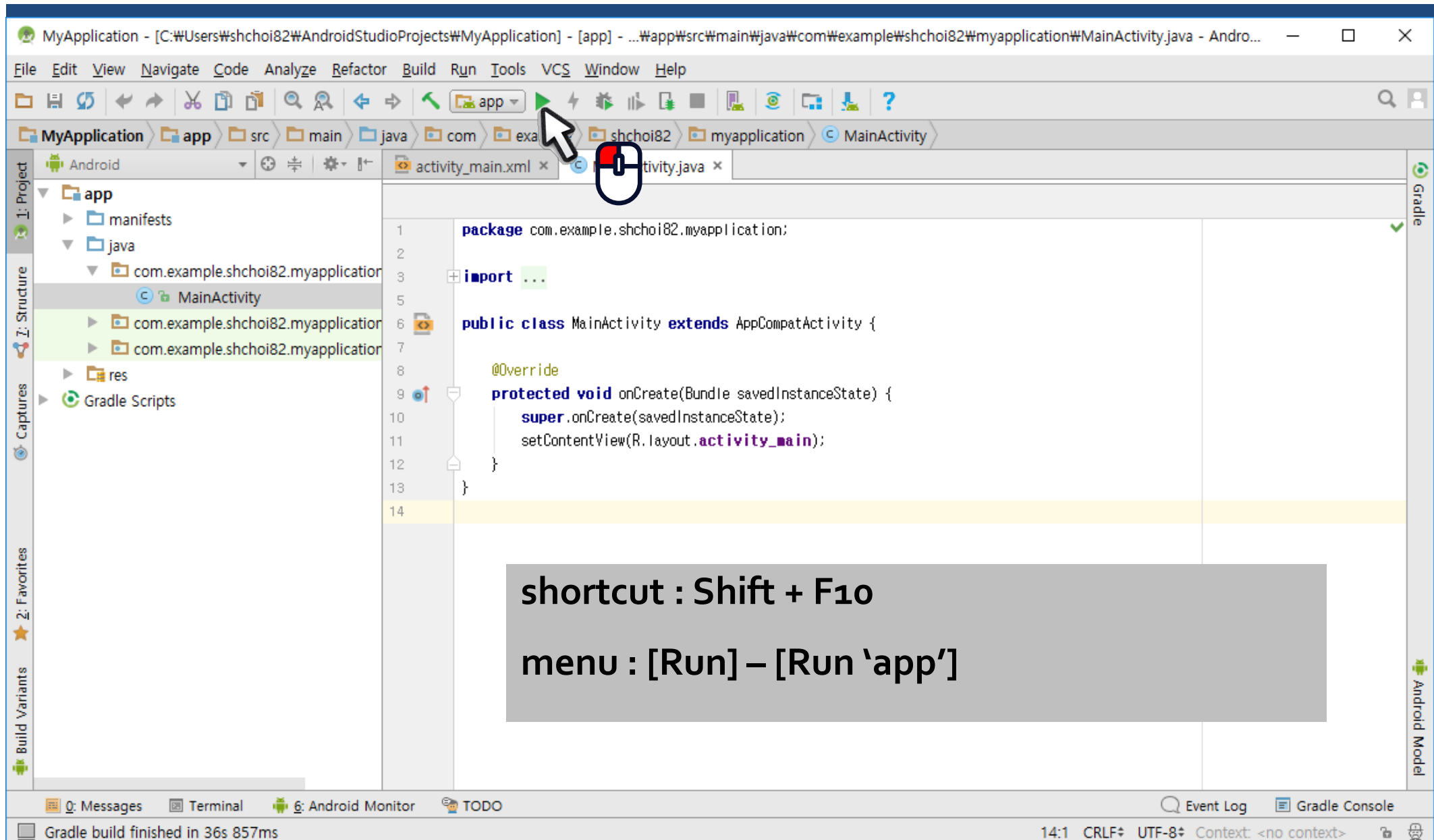
Finish



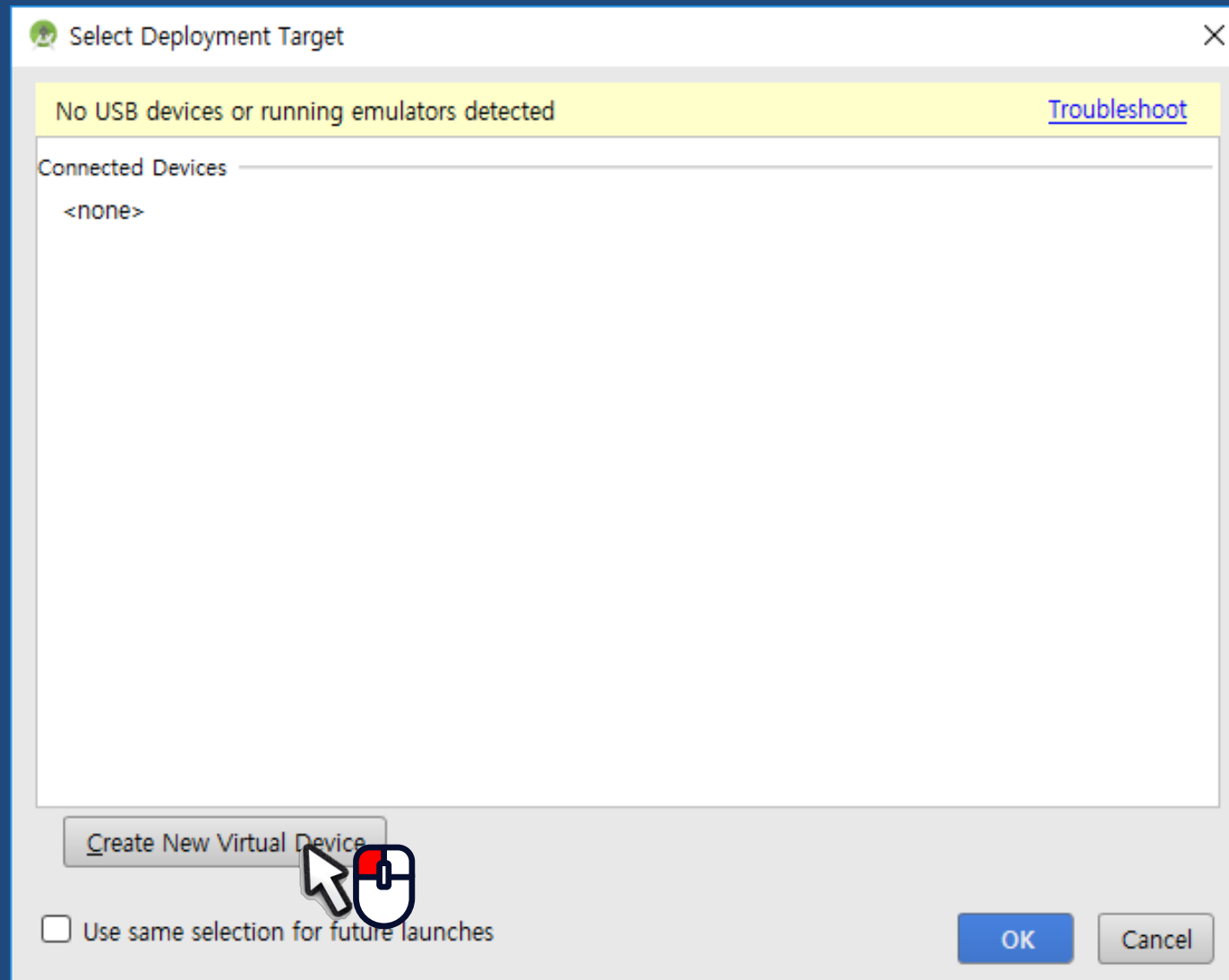
Android Studio Installation



Android Studio Installation



Android Studio Installation





Select Hardware

Android Studio

Choose a device definition



Category	Name ▾	Play Store	Size	Resolution	Density
TV	Pixel XL		5.5"	1440x2560	560dpi
Wear	Pixel		5.0"	1080x1920	xxhdpi
Phone	Nexus S		4.0"	480x800	hdpi
Tablet	Nexus One		3.7"	480x800	hdpi
	Nexus 6P		5.7"	1440x2560	560dpi
	Nexus 6		5.96"	1440x2560	560dpi
	Nexus 5X		5.2"	1080x1920	420dpi
	Nexus 5		4.95"	1080x1920	xxhdpi
	Nexus 4		4.7"	768x1280	xhdpi
	Galaxy Nexus		4.65"	720x1280	xhdpi
	5.4" FWVGA		5.4"	480x854	mdpi

New Hardware Profile

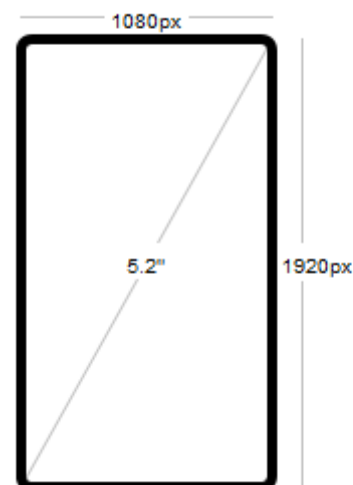
Import Hardware Profiles



Clone Device...



Nexus 5X



Size: large
Ratio: long
Density: 420dpi

Previous

Next

Cancel

Finish

Help



System Image

Android Studio

Select a system image

Recommended

x86 Images

Other Images

Release Name	API Level ▾	ABI	Target
Nougat Download	24	x86	Android 7.0 (Google Play)



Nougat



API Level

24

Android

7.0**Google Inc.**

System Image

x86

We recommend these Google Play images because this device is compatible with Google Play.

Questions on API level?

See the [API level distribution chart](#)

! A system image must be selected to continue.

Previous

Next

Cancel

Finish

Help



Component Installer

Android Studio

Installing Requested Components

SDK Path: C:\Users\shchoi82\AppData\Local\Android\Sdk

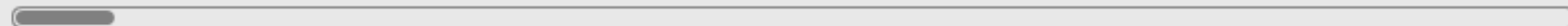
To install:

- Google Play Intel x86 Atom System Image (system-images;android-24;google_apis_playstore;x86)

Preparing "Install Google Play Intel x86 Atom System Image (revision: 12)".

Downloading https://dl.google.com/android/repository/sys-img/google_apis_playstore/x86-24_r12.zip

Downloading...



https://dl.google.com/android/repository/sys-img/google_apis_playstore/x86-24_r12.zip

Please wait until the installation finishes

Previous

Next

Cancel

Finish



Component Installer

Android Studio

Installing Requested Components

SDK Path: C:\Users\shchoi82\AppData\Local\Android\Sdk

To install:

- Google Play Intel x86 Atom System Image (system-images;android-24;google_apis_playstore;x86)

Preparing "Install Google Play Intel x86 Atom System Image (revision: 12)".

Downloading https://dl.google.com/android/repository/sys-img/google_apis_playstore/x86-24_r12.zip

"Install Google Play Intel x86 Atom System Image (revision: 12)" ready.

Finishing "Install Google Play Intel x86 Atom System Image (revision: 12)"

Installing Google Play Intel x86 Atom System Image in

C:\Users\shchoi82\AppData\Local\Android\Sdk\system-images\android-24\google_apis_playstore\x86

"Install Google Play Intel x86 Atom System Image (revision: 12)" complete.

"Install Google Play Intel x86 Atom System Image (revision: 12)" finished.

Done

Previous

Next

Cancel

Finish





System Image

Android Studio

Select a system image

Recommended

x86 Images

Other Images

Release Name	API Level ▾	ABI	Target
Nougat	24	x86	Android 7.0 (Google Play)

Nougat



API Level

24

Android

7.0**Google Inc.**

System Image

x86

We recommend these Google Play images because this device is compatible with Google Play.

Questions on API level?

See the [API level distribution chart](#)

Previous

Next

Cancel

Finish

Help



Android Virtual Device (AVD)

Android Studio

Verify Configuration

AVD Name Nexus 5X API 24



Nexus 5X

5.2 1080x1920 xxhdpi

Change...



Nougat

Android 7.0 x86

Change...

Startup orientation



Portrait



Landscape

Emulated
Performance

Graphics: Automatic

Device Frame ☒ Enable Device Frame

Show Advanced Settings

AVD Name

The name of this AVD.

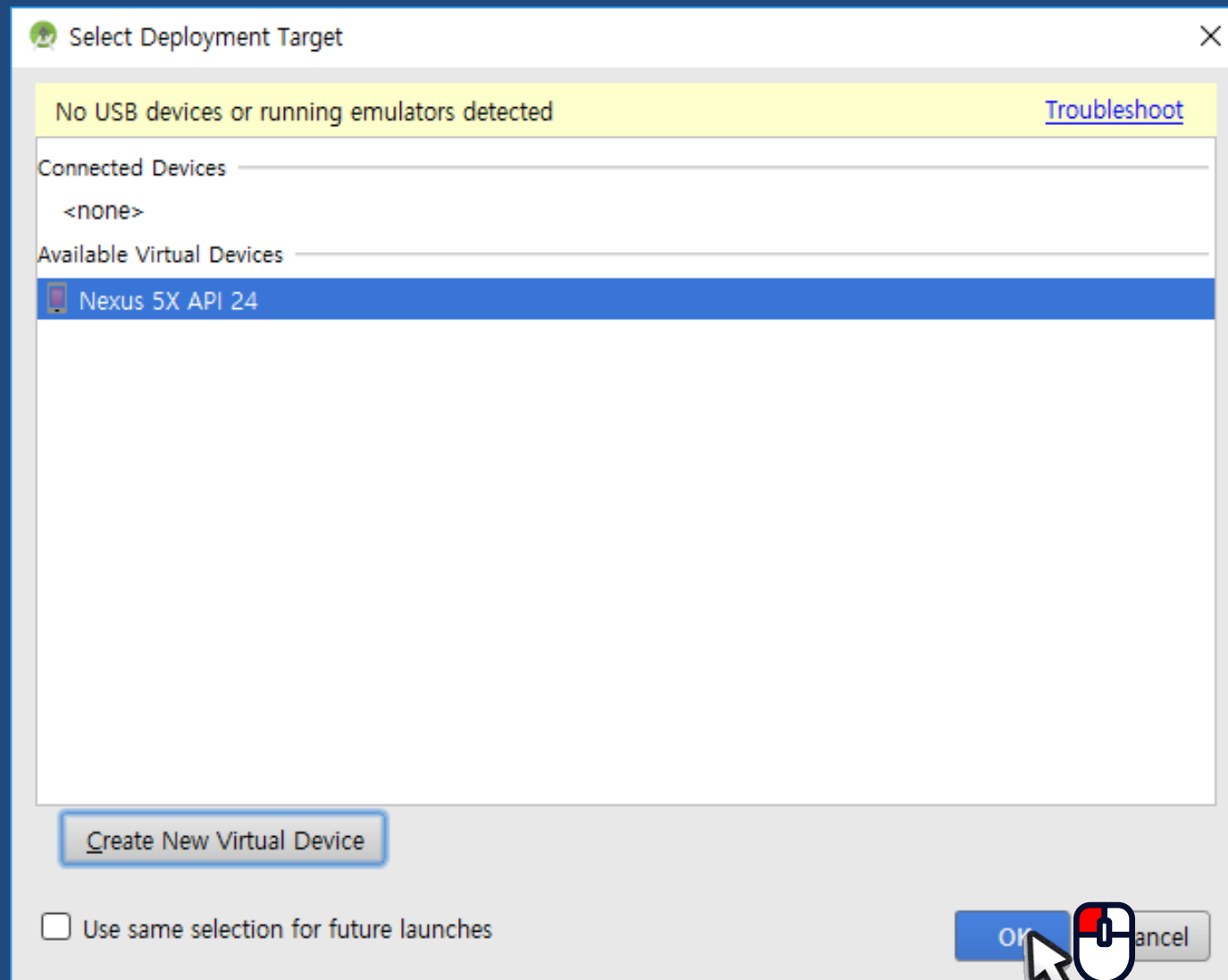
Previous

Next

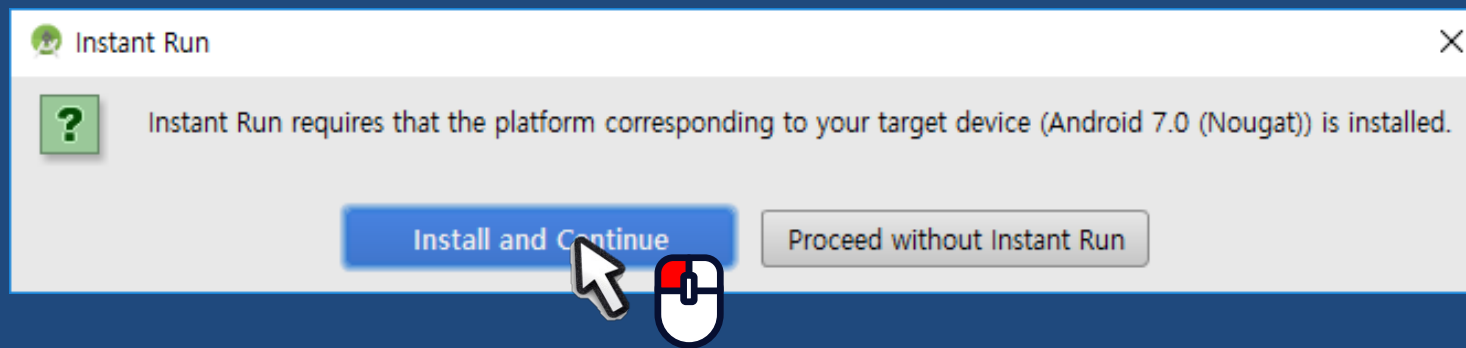
Cancel

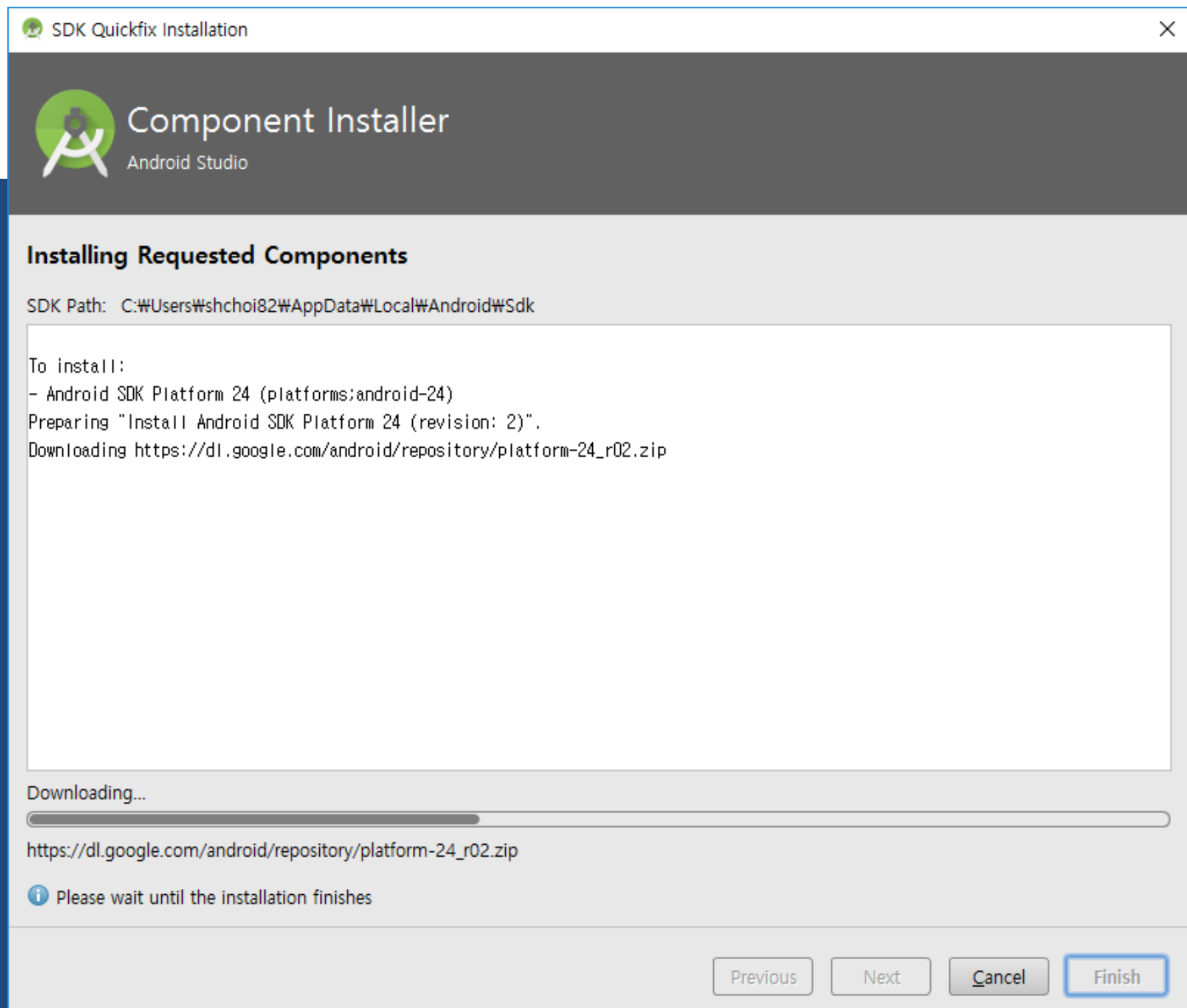
Finish

Help



Android Studio Installation







Component Installer

Android Studio

Installing Requested Components

SDK Path: C:\Users\shchoi82\AppData\Local\Android\Sdk

To install:

- Android SDK Platform 24 (platforms:android-24)

Preparing "Install Android SDK Platform 24 (revision: 2)".

Downloading https://dl.google.com/android/repository/platform-24_r02.zip

"Install Android SDK Platform 24 (revision: 2)" ready.

Finishing "Install Android SDK Platform 24 (revision: 2)"

Installing Android SDK Platform 24 in C:\Users\shchoi82\AppData\Local\Android\Sdk\platforms\android-24

"Install Android SDK Platform 24 (revision: 2)" complete.

"Install Android SDK Platform 24 (revision: 2)" finished.

Done

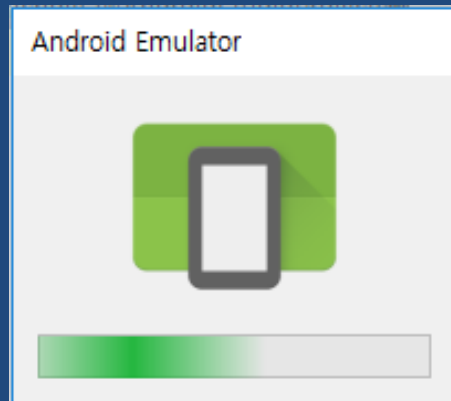
Previous

Next

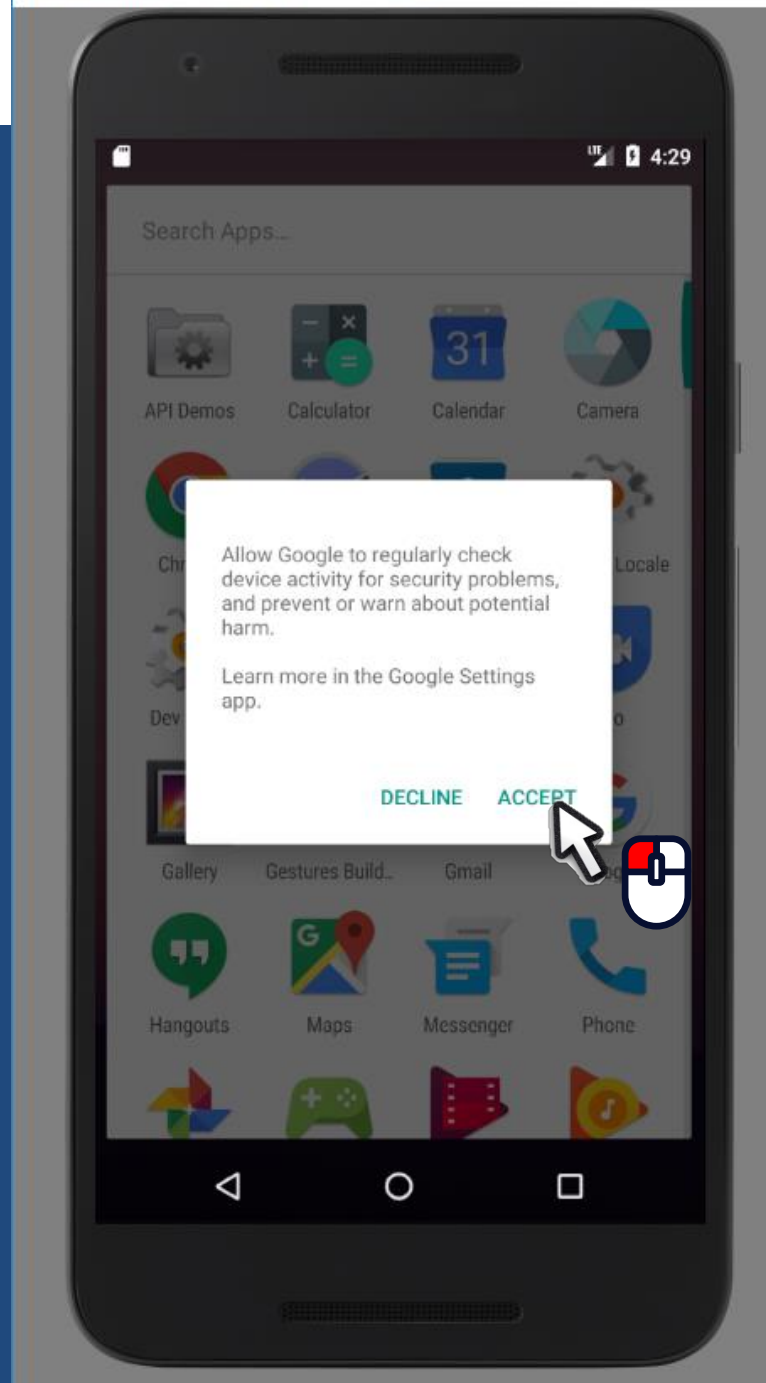
Cancel

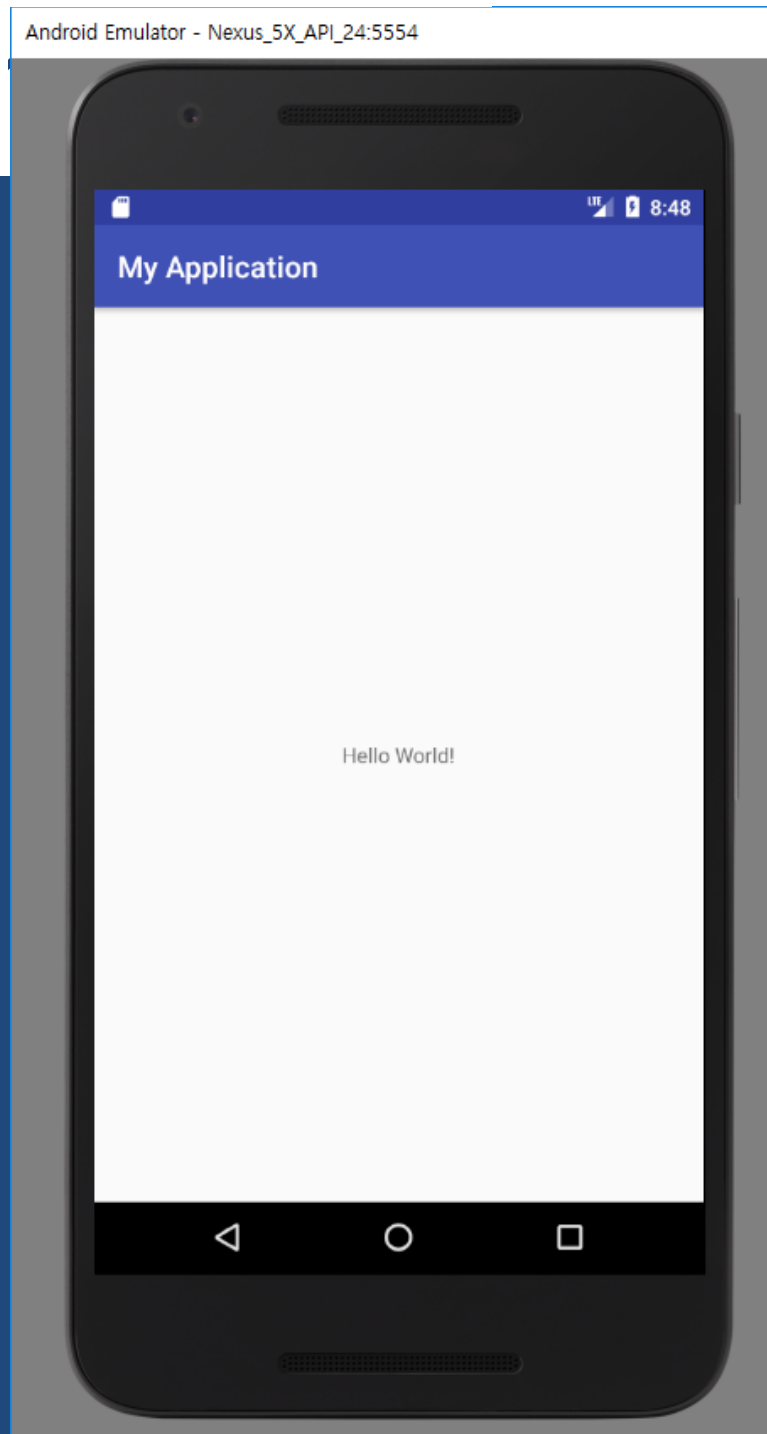
Finish



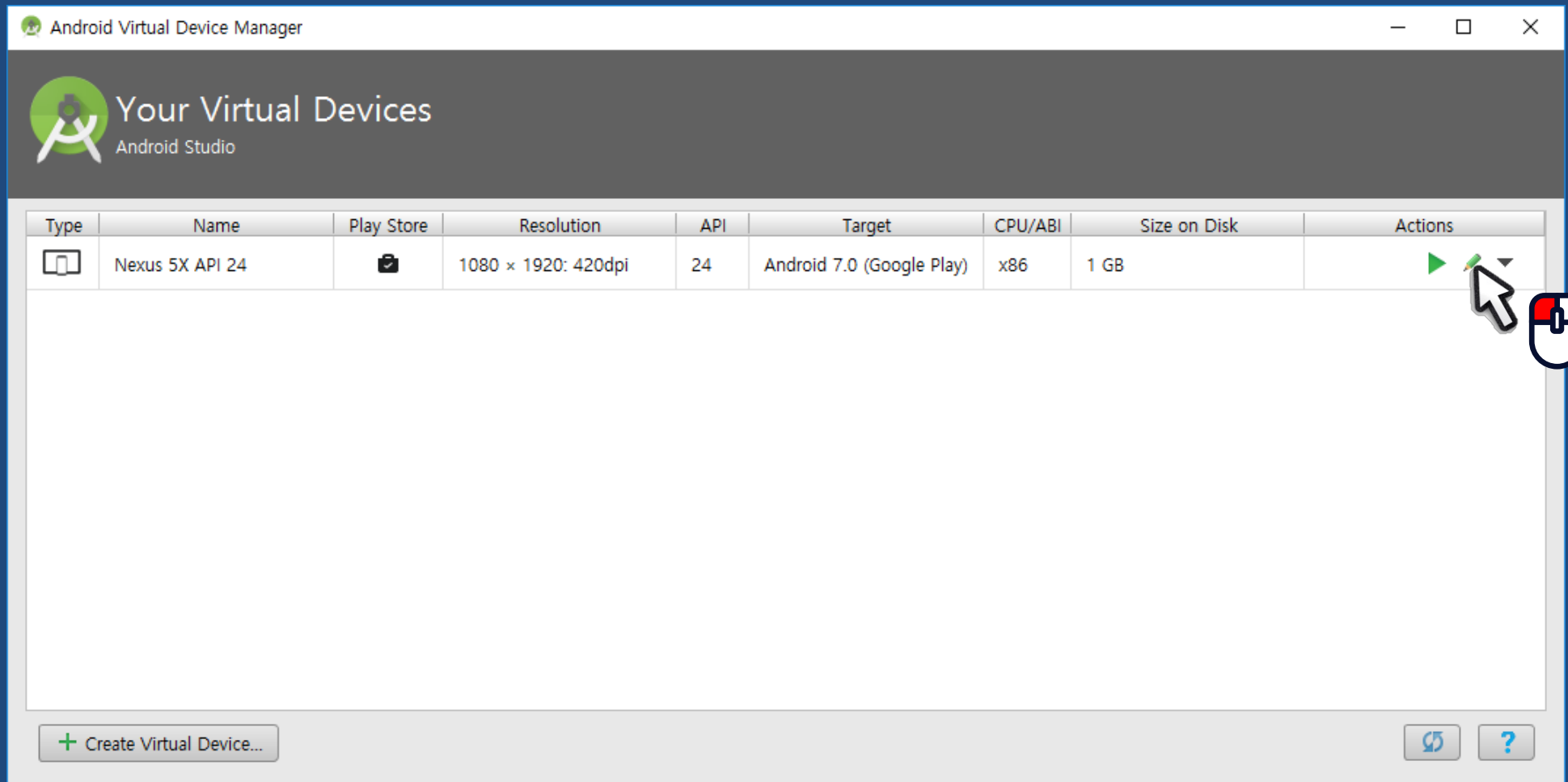


Android Emulator - Nexus_5X_API_24:5554





Android Studio Installation



If the emulator is not working as expected

- [Graphics] change to SW