
로컬 환경에 코도바 설치

12주차_03

한 동 대 학 교
김군오 교수

학습목표:

Cordova 소개 및 설치하기

- 학습내용:

- Cordova 소개
- JDK 설치하기
- 안드로이드 스튜디오 설치하기
- 안드로이드 SDK 설치하기
- Cordova 설치하기

Cordova

- 오픈소스 하이브리드 앱 개발 도구

Cordova

- 오픈소스 하이브리드 앱 개발 도구
- 웹 기술을 이용해 개발

Cordova

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- 웹 기술을 이용해 개발
- 윈도우, Mac OS X, 리눅스에서 모두 사용 가능

Cordova

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- 윈도우, Mac OS X, 리눅스에서 사용 가능
- 안드로이드, iOS, Mac OS X, 윈도우 등 멀티 플랫폼 지원

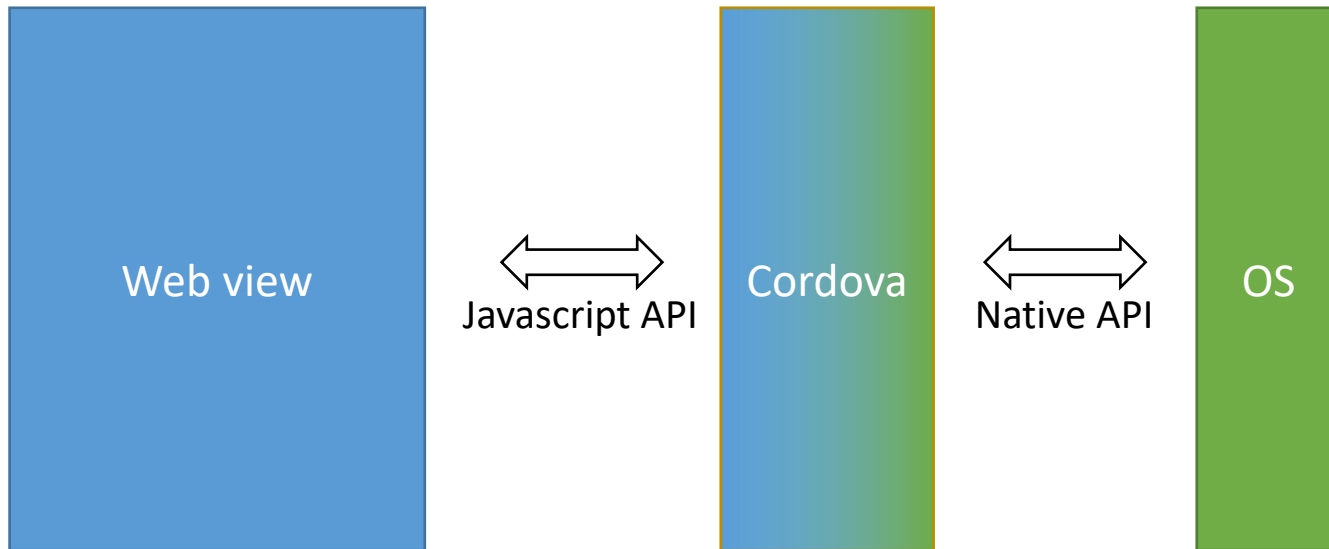
Cordova

- 오픈소스 하이브리드 앱 개발 도구
- 웹 기술을 이용해 개발
- 윈도우, OS X, 리눅스에서 사용 가능
- 안드로이드, iOS, Mac OS X, 윈도우 등 멀티 플랫폼 지원
- 플러그인을 통한 확장

Cordova 의 한계

- 네이티브 앱에 비해 성능이 떨어짐
- 플러그인 개발의 어려움

Cordova 작동 원리



Cordova 개발환경

- NodeJS / Cordova
- 플랫폼 별 요구사항
 - 안드로이드: JDK, 안드로이드 SDK

JDK(Java development kit) 설치하기 (1/4)


- 안드로이드 앱을 만드려면 Java 개발 환경이 필요
- <https://www.oracle.com/technetwork/java/javase/downloads/jdk8-downloads-2133151.html>

Java SE Development Kit 8u211		
You must accept the Oracle Technology Network License Agreement for Oracle Java SE to download this software.		
<input checked="" type="radio"/> Accept License Agreement <input type="radio"/> Decline License Agreement		
Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	72.86 MB	jdk-8u211-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	69.76 MB	jdk-8u211-linux-arm64-vfp-hflt.tar.gz
Linux x86	174.11 MB	jdk-8u211-linux-i586.rpm
Linux x86	188.92 MB	jdk-8u211-linux-i586.tar.gz
Linux x64	171.13 MB	jdk-8u211-linux-x64.rpm
Linux x64	185.96 MB	jdk-8u211-linux-x64.tar.gz
Mac OS X x64	252.23 MB	jdk-8u211-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	132.98 MB	jdk-8u211-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	94.18 MB	jdk-8u211-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	133.57 MB	jdk-8u211-solaris-x64.tar.Z
Solaris x64	91.93 MB	jdk-8u211-solaris-x64.tar.gz
Windows x86	202.62 MB	jdk-8u211-windows-i586.exe
Windows x64	215.29 MB	jdk-8u211-windows-x64.exe


JDK(Java development kit) 설치하기 (2/4)


- 회원가입 / 로그인

오라클 계정 로그인




사용자 이름





암호



로그인

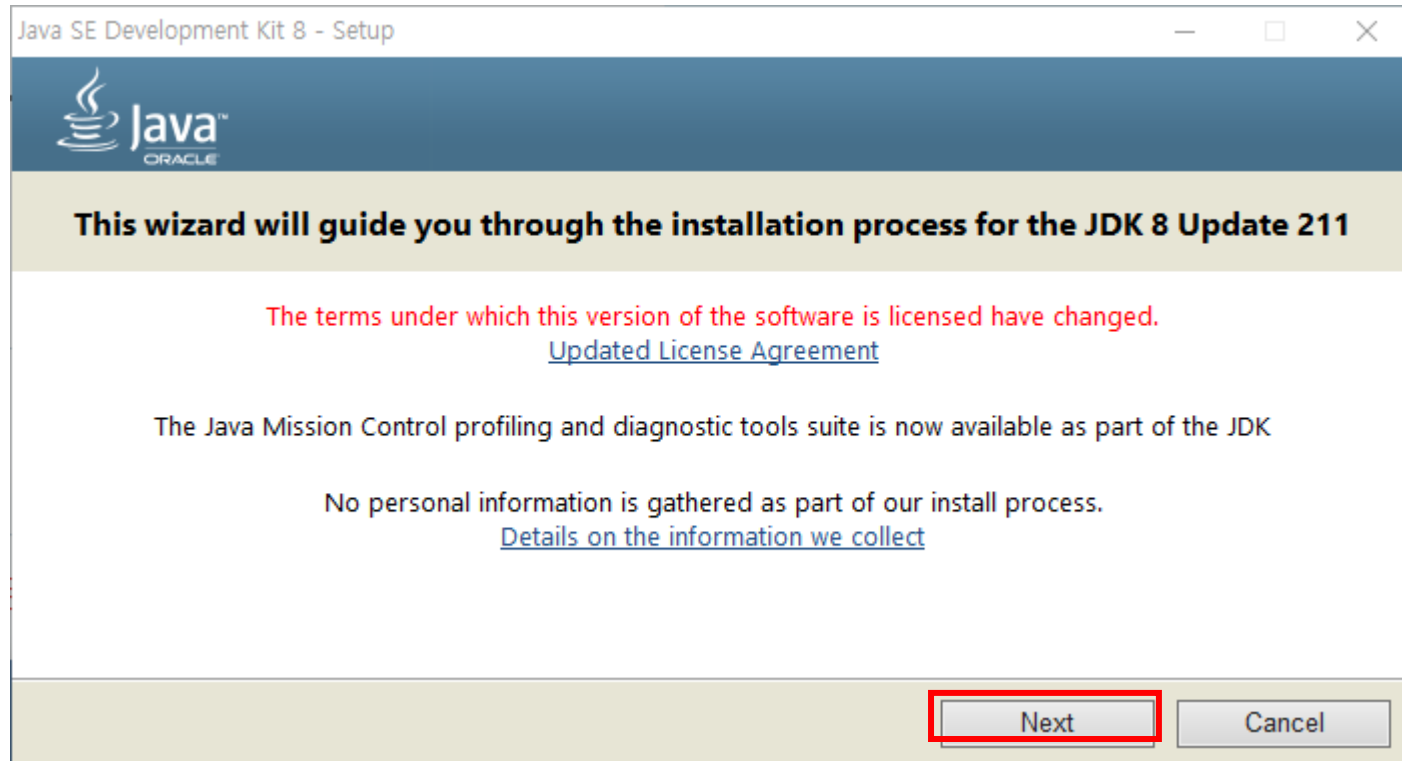
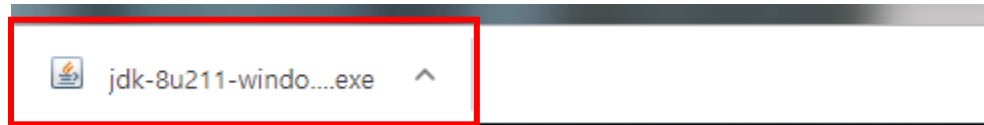
도움이 필요하십니까?

오라클 계정이 없습니까?

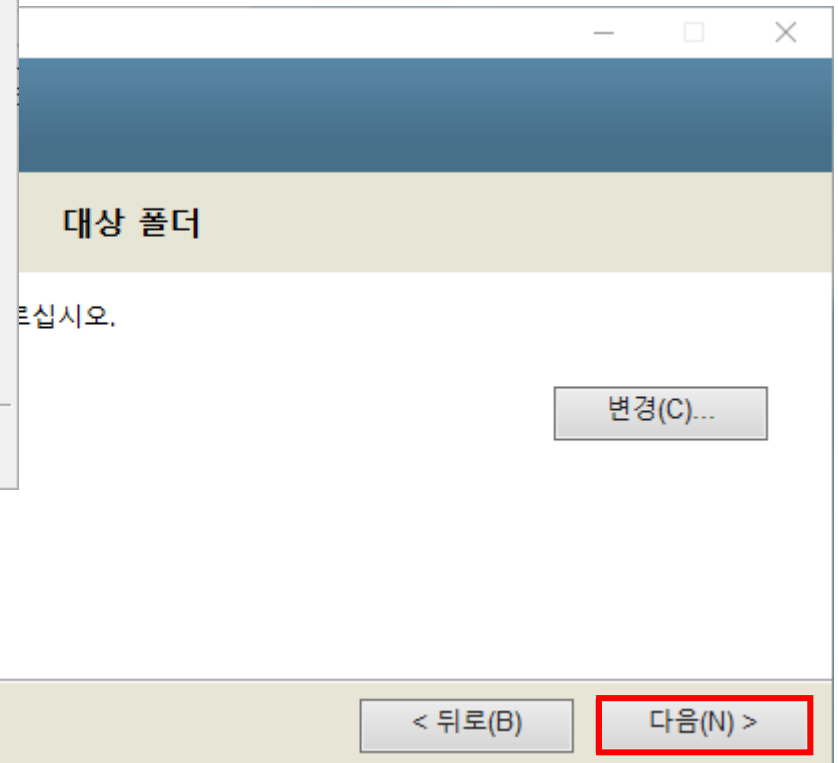
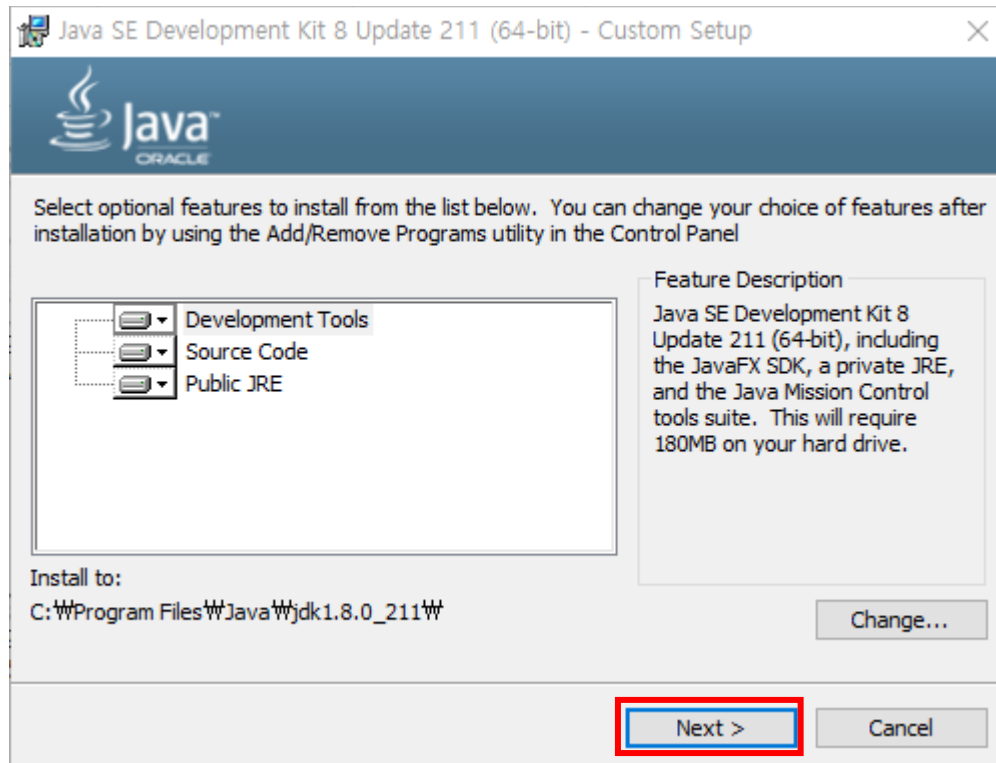
계정 만들기

© Oracle | 이용 약관 | 개인정보 보호정책

JDK(Java development kit) 설치하기 (3/4)



JDK(Java development kit) 설치하기 (4/4)



안드로이드 스튜디오 설치 (1/4)

- Cordova 를 사용하기 위해서는 Android SDK 만 있어도 무방하지만 안드로이드 스튜디오 설치를 추천
- <https://developer.android.com/studio>

androidstudio

Android Studio provides the fastest tools for building apps on every type of Android device.

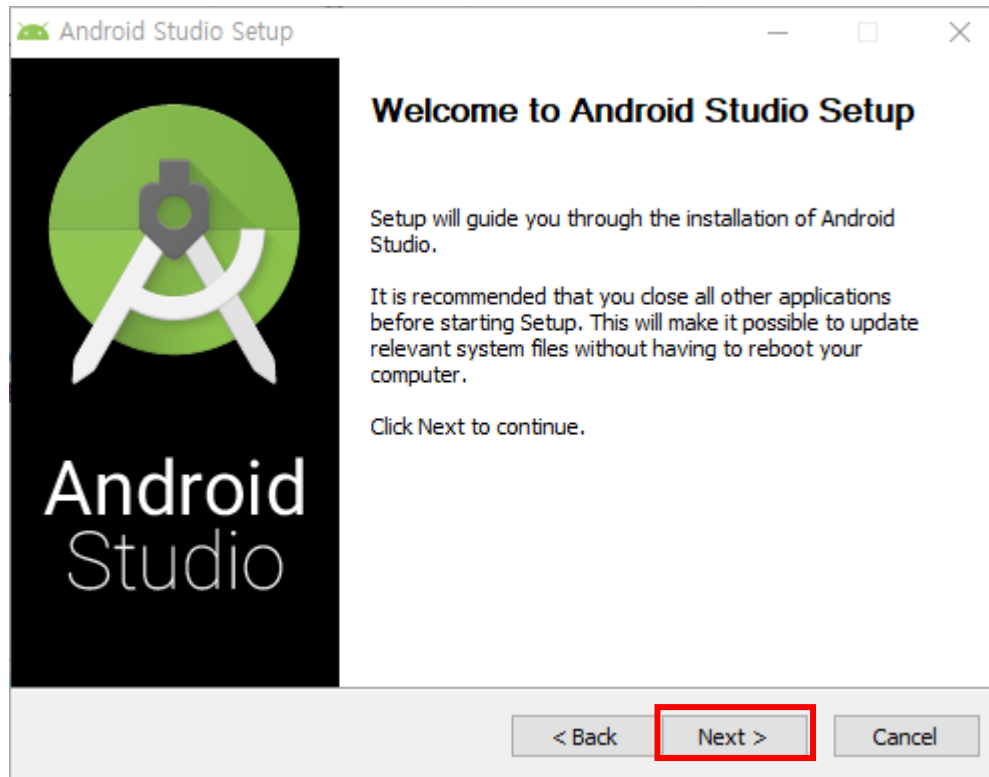
DOWNLOAD ANDROID STUDIO

3.4 for Windows 64-bit (971 MB)

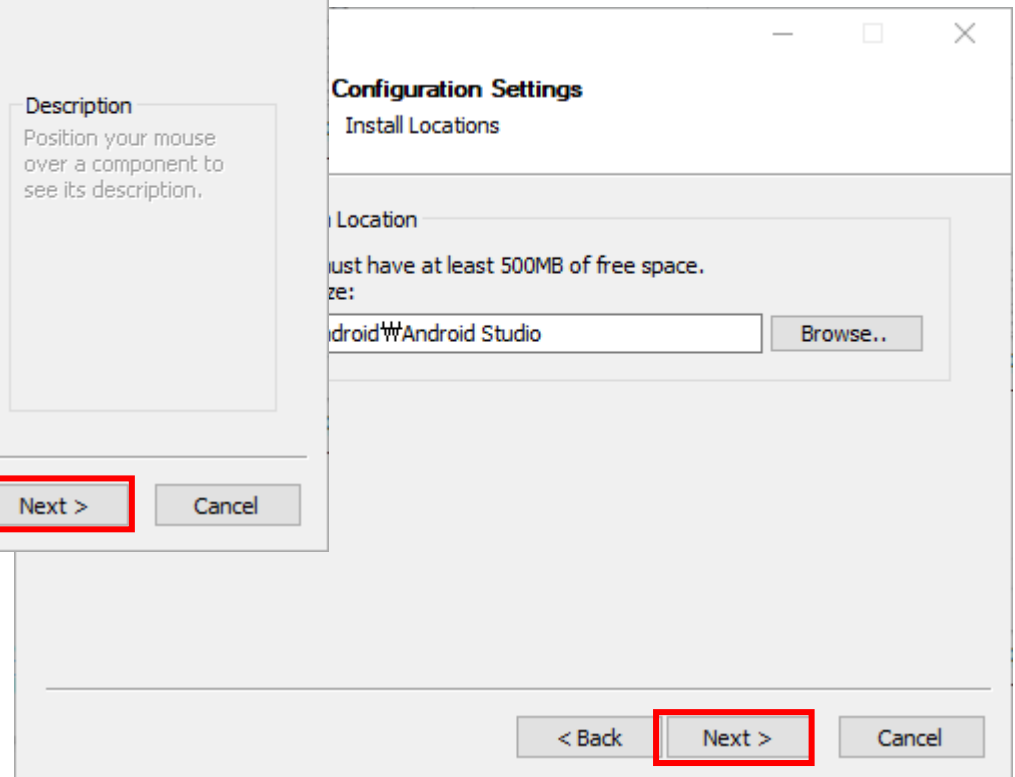
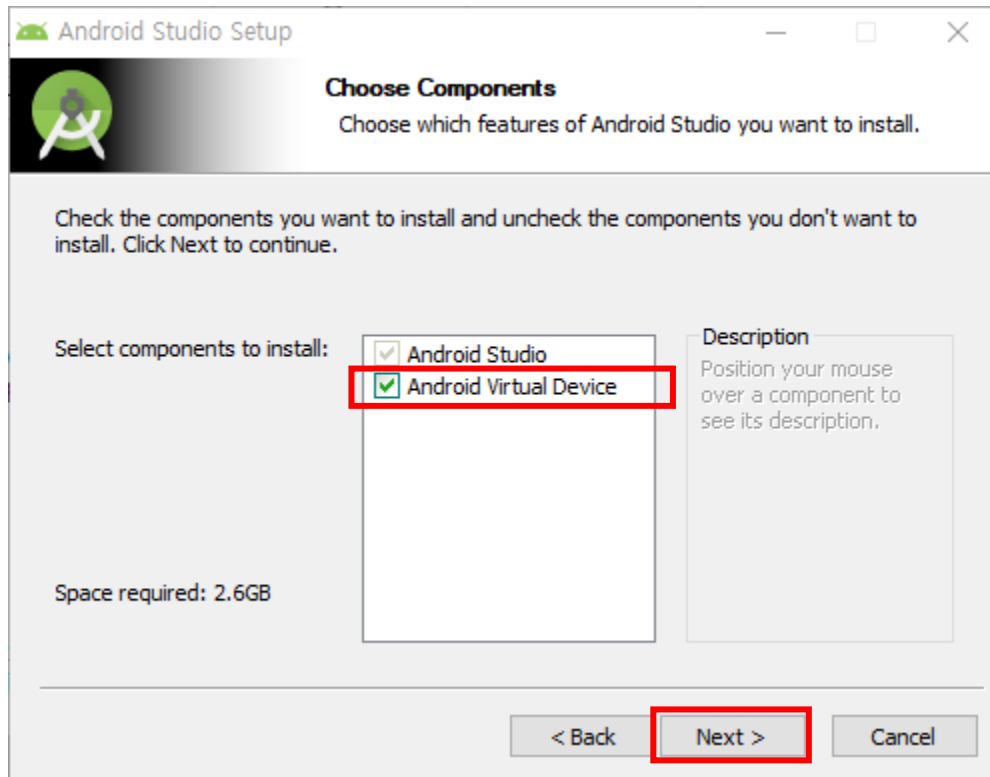
DOWNLOAD OPTIONS

RELEASE NOTES

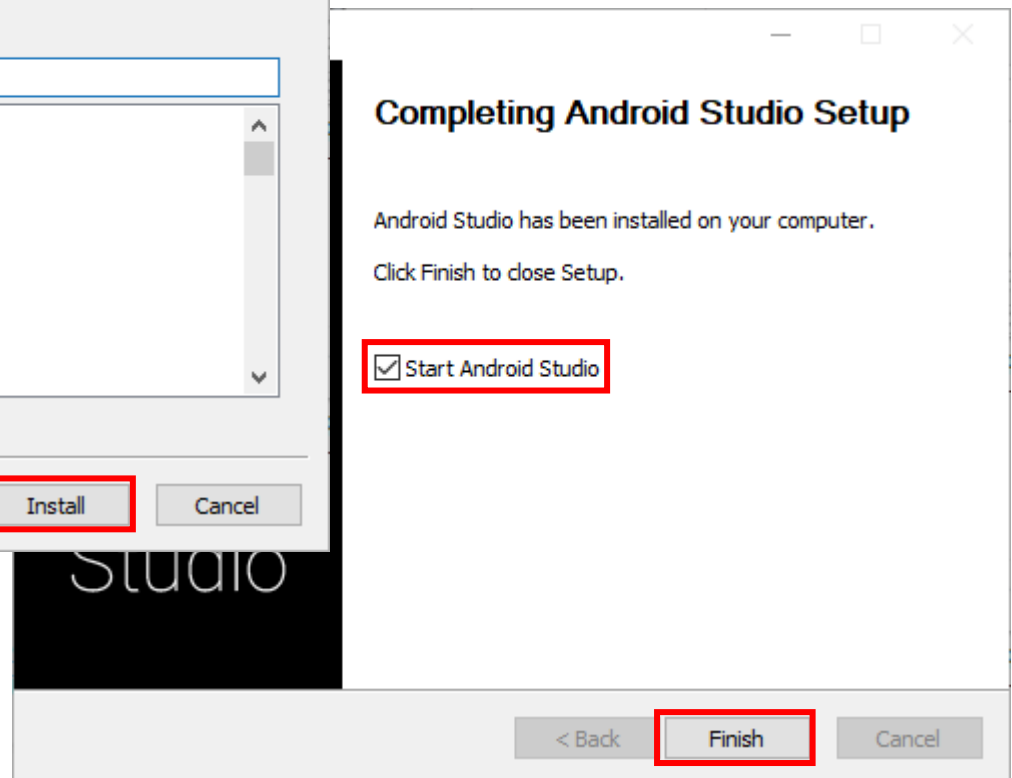
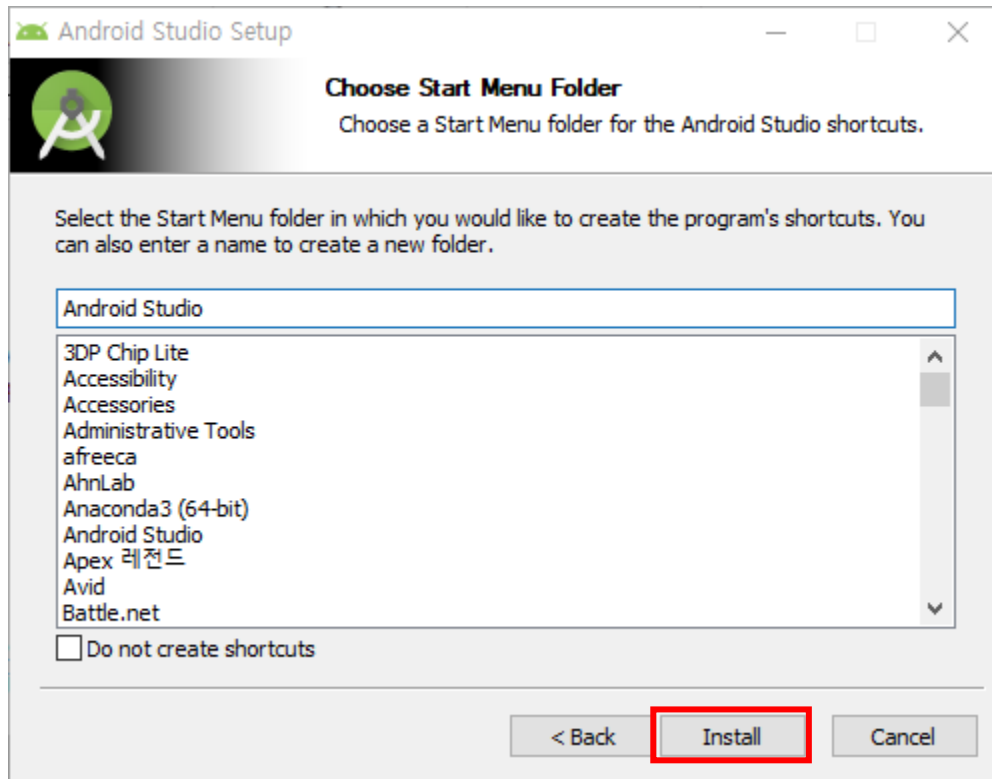
안드로이드 스튜디오 설치 (2/4)



안드로이드 스튜디오 설치 (3/4)

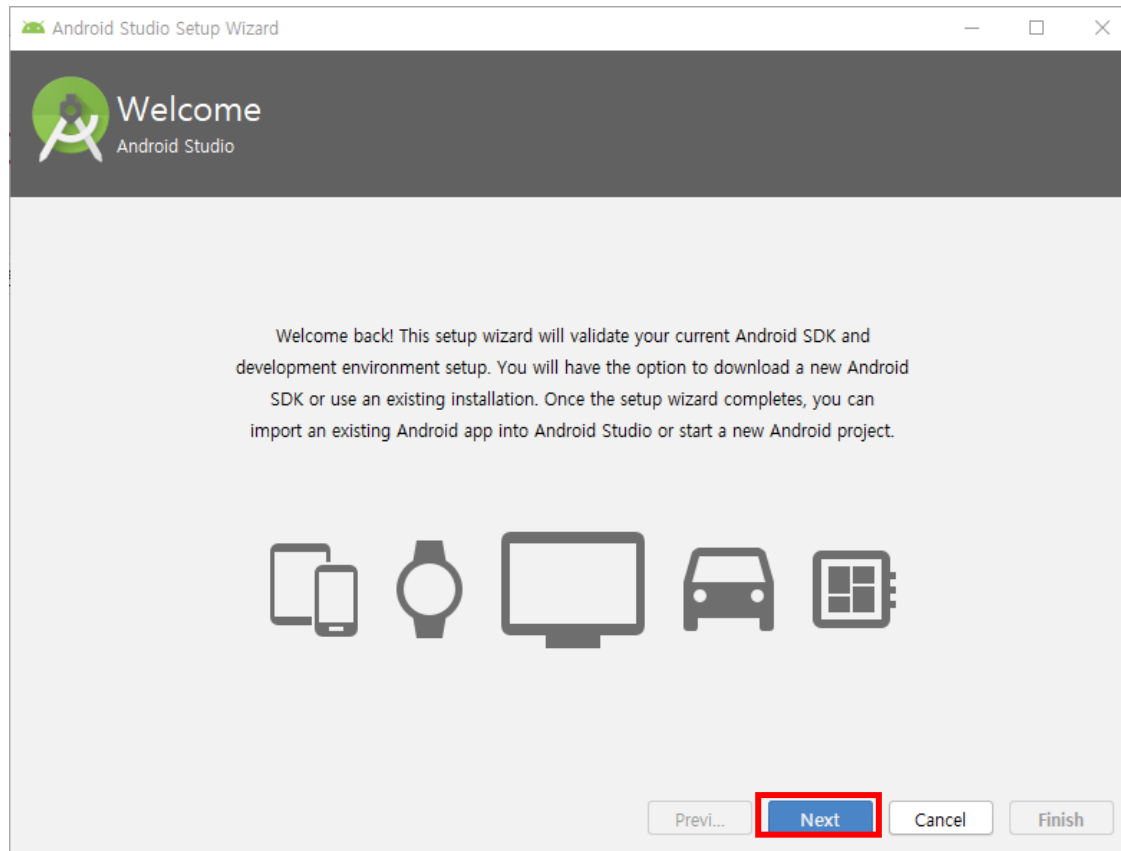


안드로이드 스튜디오 설치 (4/4)

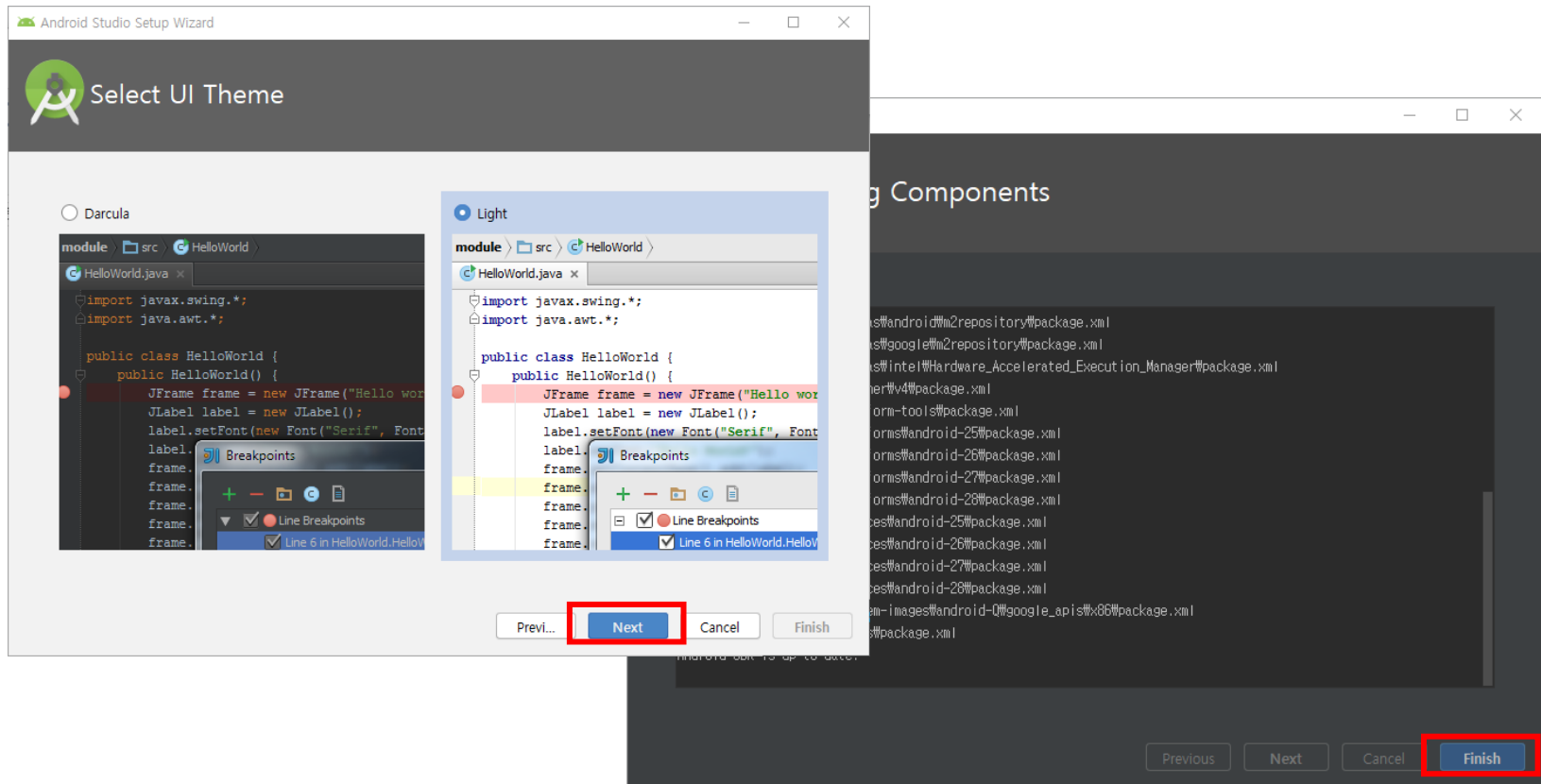


안드로이드 SDK 설치 (1/2)

- 안드로이드 스튜디오 실행

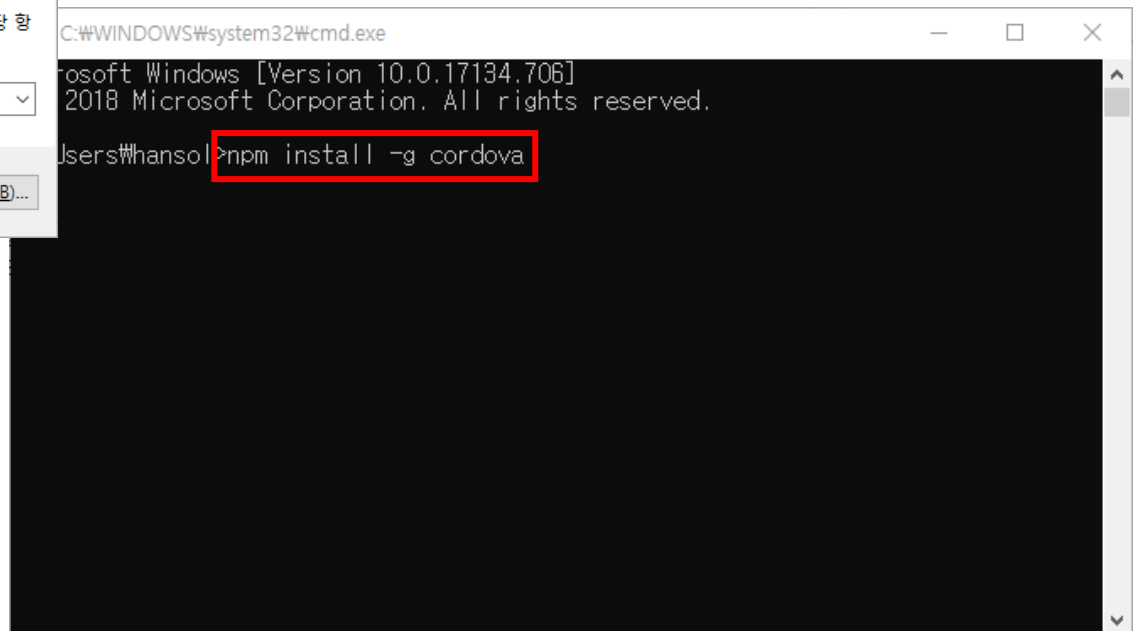
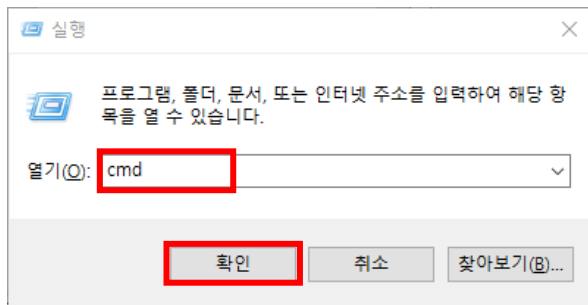


안드로이드 SDK 설치 (2/2)



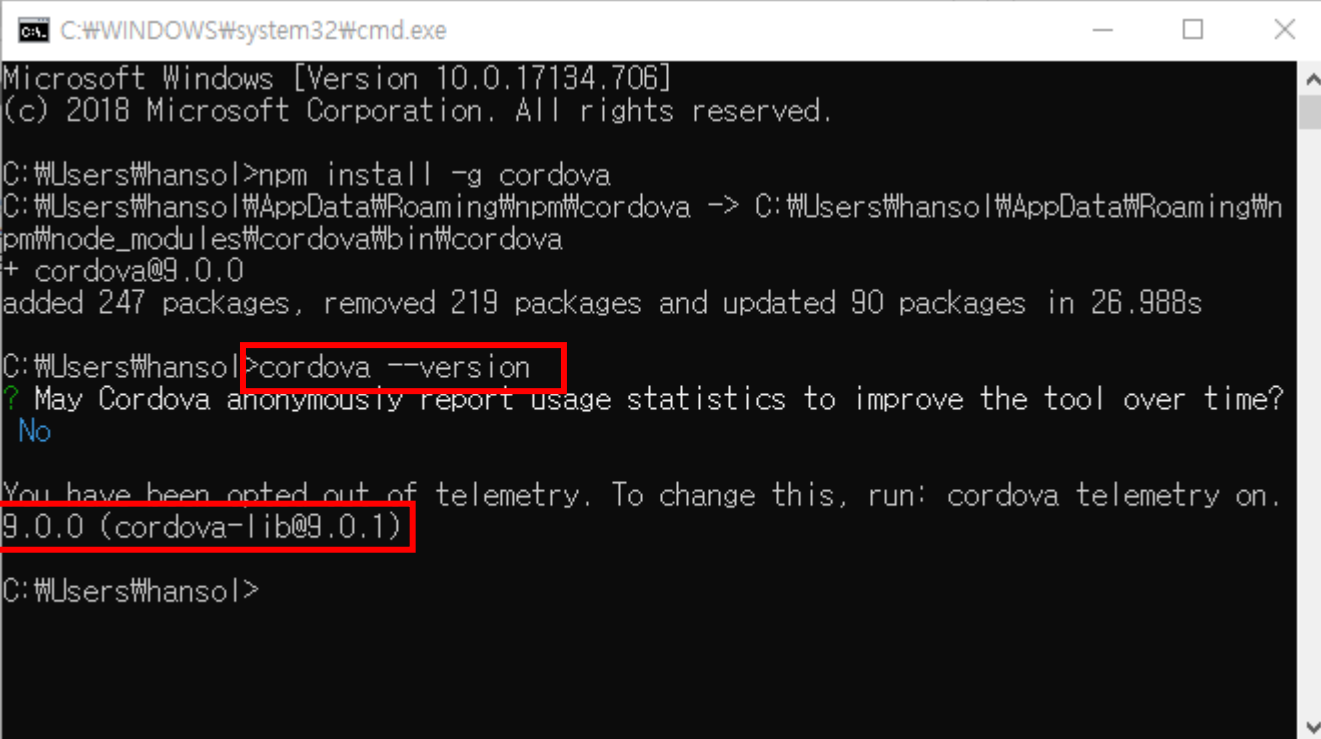
Cordova 설치

- 윈도우 실행창 열기
 - Window key + r -> cmd 입력 후 실행
- **npm install -g cordova 실행**



Cordova 설치 확인

- **cordova --version -> [Enter]**



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.17134.706]
(c) 2018 Microsoft Corporation. All rights reserved.

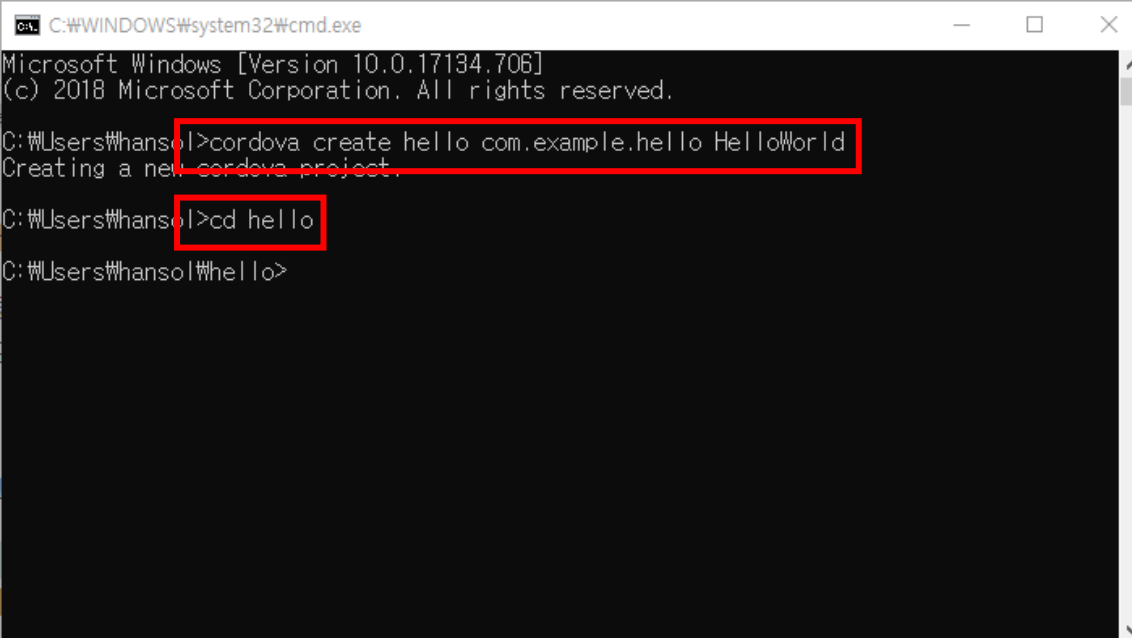
C:\Users\hansol>npm install -g cordova
C:\Users\hansol\AppData\Roaming\npm\cordova -> C:\Users\hansol\AppData\Roaming\npm\node_modules\cordova\bin\cordova
+ cordova@9.0.0
added 247 packages, removed 219 packages and updated 90 packages in 26.988s

C:\Users\hansol>cordova --version
? May Cordova anonymously report usage statistics to improve the tool over time?
No
You have been opted out of telemetry. To change this, run: cordova telemetry on.
9.0.0 (cordova-lib@9.0.1)

C:\Users\hansol>
```

새 cordova 프로젝트 생성

- **cordova create hello com.example.hello HelloWorld**
 -> [Enter]
- **cd hello -> [Enter]**



```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.17134.706]
(c) 2018 Microsoft Corporation. All rights reserved.

C:\Users\hansol>cordova create hello com.example.hello HelloWorld
Creating a new cordova project.

C:\Users\hansol>cd hello

C:\Users\hansol\hello>
```

The screenshot shows a Windows command prompt window with the title bar "C:\WINDOWS\system32\cmd.exe". The window displays the output of the "cordova create" command, which includes the Windows version and copyright information. The command "cordova create hello com.example.hello HelloWorld" is entered, and the output "Creating a new cordova project." is shown. The prompt then changes to "C:\Users\hansol\hello>" after the "cd hello" command is entered. Red boxes highlight the command and the directory change in the original image.

Cordova 프로젝트 구조



hooks



platforms



plugins



www



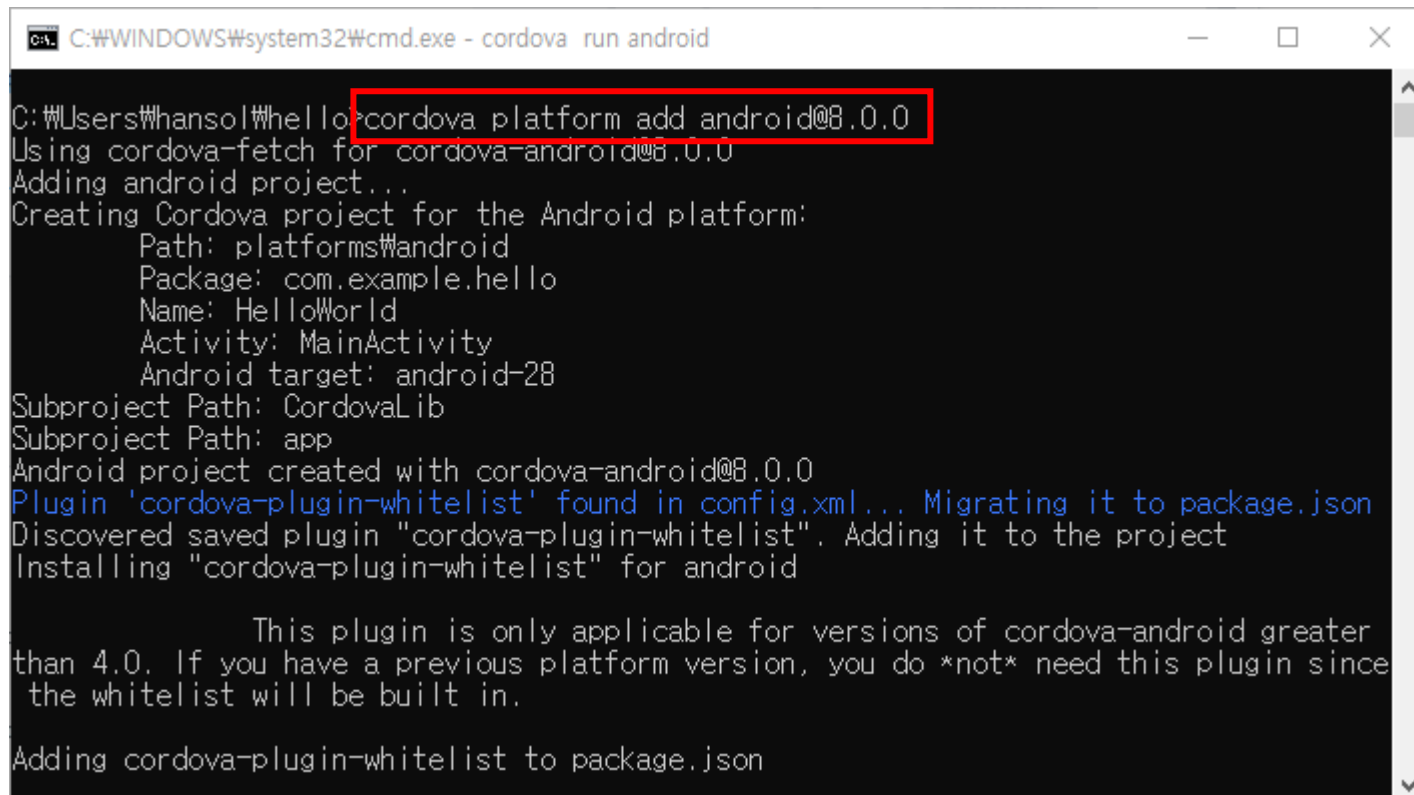
config.xml



package.js
on

안드로이드 플랫폼 추가

- **cordova platform add android@8.0.0**



```
C:\WINDOWS\system32\cmd.exe - cordova run android

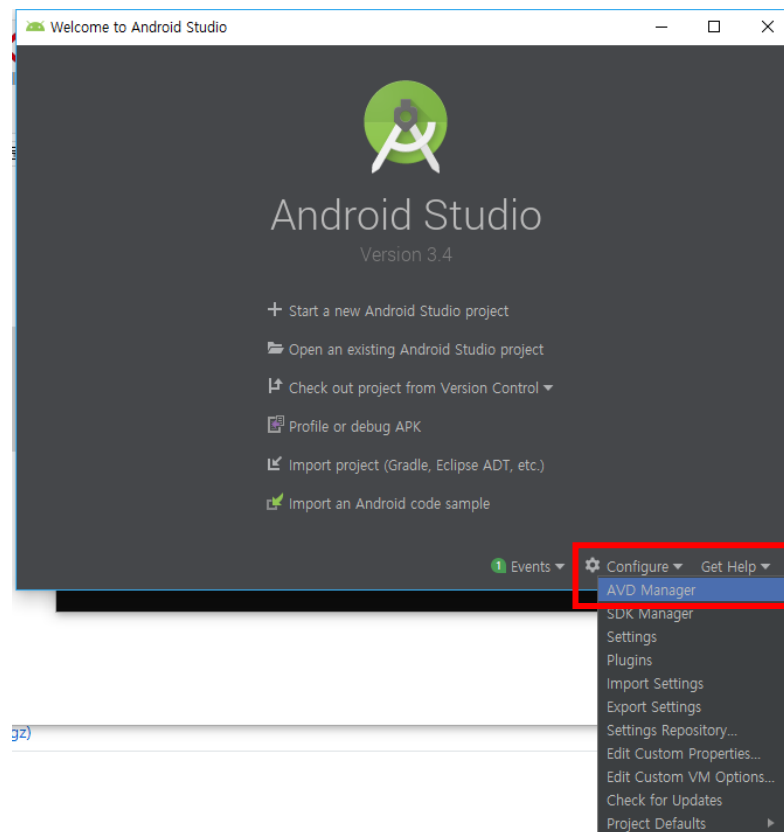
C:\Users\hansol\hello>cordova platform add android@8.0.0
Using cordova-fetch for cordova-android@8.0.0
Adding android project...
Creating Cordova project for the Android platform:
  Path: platforms\android
  Package: com.example.hello
  Name: HelloWorld
  Activity: MainActivity
  Android target: android-28
Subproject Path: CordovaLib
Subproject Path: app
Android project created with cordova-android@8.0.0
Plugin 'cordova-plugin-whitelist' found in config.xml... Migrating it to package.json
Discovered saved plugin "cordova-plugin-whitelist". Adding it to the project
Installing "cordova-plugin-whitelist" for android

    This plugin is only applicable for versions of cordova-android greater
    than 4.0. If you have a previous platform version, you do *not* need this plugin since
    the whitelist will be built in.

Adding cordova-plugin-whitelist to package.json
```

안드로이드 에뮬레이터 생성 (1/4)

- 안드로이드 스튜디오 -> Configure -> AVD Manager



안드로이드 에뮬레이터 생성 (2/4)

Android Virtual Device Manager

Your Virtual Devices
Android Studio

Virtual devices allow you to test your application without having to own the physical devices.

[+ Create Virtual Device...](#)

To prioritize which devices to test your application on, visit the [Android Dashboards](#), where you can get up-to-date information on which devices are active in the Android and Google Play ecosystem.

Play Store	Size	Resolution	Density
	5.5"	1440x2560	560dpi
	6.3"	1440x2960	560dpi
	5.46"	1080x2160	440dpi
	5.99"	1440x2880	560dpi
Pixel 2	5.0"	1080x1920	420dpi
Pixel	5.0"	1080x1920	420dpi
Nexus S	4.0"	480x800	hdpi
Nexus One	3.7"	480x800	hdpi
Nexus 6P	5.7"	1440x2560	560dpi

Pixel 2

1080px
5.0"
1920px

Size: large
Ratio: long
Density: 420dpi

New Hardware Profile Import Hardware Profiles Clone Device...

Previous **Next** Cancel Finish

안드로이드 에뮬레이터 생성 (3/4)

- 안드로이드 OS 이미지 다운로드 후 Next 버튼 클릭

Virtual Device Configuration

System Image
Android Studio

Select a system image

Recommended x86 Images Other Images

Release Name	API Level	ABI	Target
Q Download	28	x86	Android 9.0 (Google Play)
Pie Download	27	x86	Android 8.1 (Google Play)
Oreo Download	26	x86	Android 8.0 (Google Play)
Nougat Download	25	x86	Android 7.1.1 (Google Play)
Nougat Download	24	x86	Android 7.0 (Google Play)

A system image must be selected to continue.

Virtual Device Configuration

System Image
Android Studio

Select a system image

Recommended x86 Images Other Images

Release Name	API Level	ABI	Target
Q Download	28	x86	Android 9.0 (Google Play)
Pie	27	x86	Android 8.1 (Google Play)
Oreo Download	26	x86	Android 8.0 (Google Play)
Oreo Download	25	x86	Android 7.1.1 (Google Play)
Nougat Download	24	x86	Android 7.0 (Google Play)

Pie

API Level
28

Android
9.0

Google Inc.

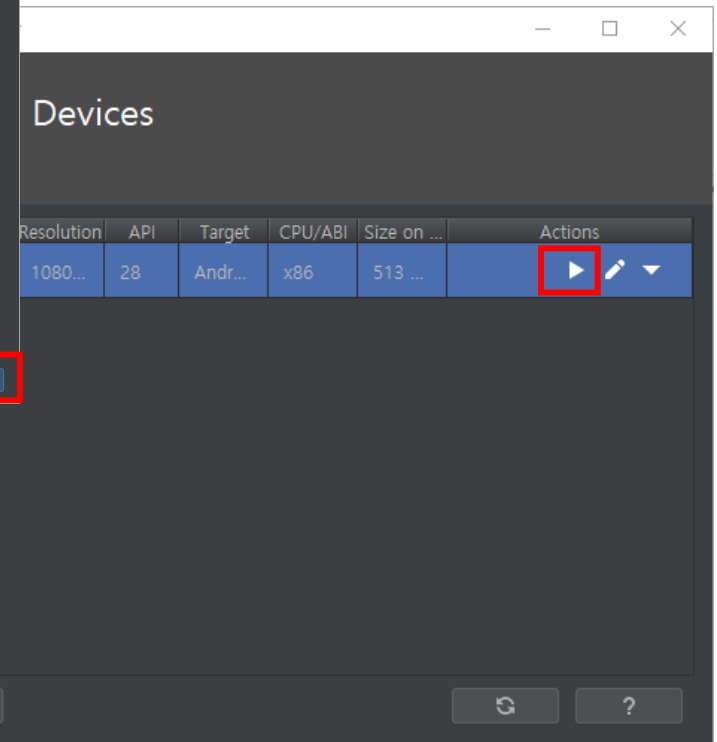
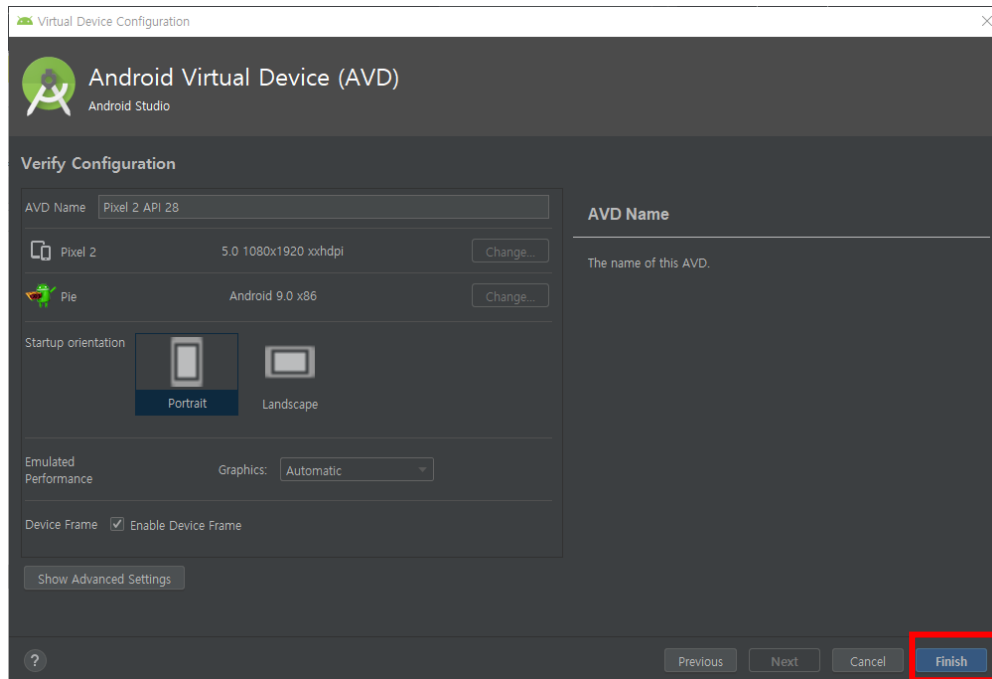
System Image
x86

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

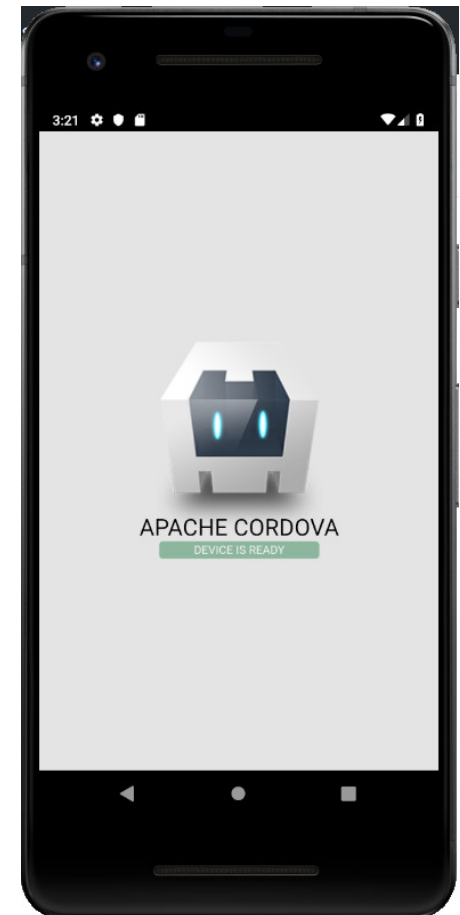
안드로이드 에뮬레이터 생성 (4/4)



안드로이드 앱 빌드 및 실행

- cordova run android

```
C:\WINDOWS\system32\cmd.exe
C:\Users\hansol\hello>cordova run android
Checking Java JDK and Android SDK versions
ANDROID_SDK_ROOT=undefined (recommended setting)
ANDROID_HOME=C:\Android\sdk (DEPRECATED)
Subproject Path: CordovaLib
Subproject Path: app
> Task :app:preBuild UP-TO-DATE
> Task :CordovaLib:preBuild UP-TO-DATE
> Task :CordovaLib:preDebugBuild UP-TO-DATE
> Task :CordovaLib:checkDebugManifest UP-TO-DATE
> Task :CordovaLib:processDebugManifest UP-TO-DATE
> Task :app:preDebugBuild UP-TO-DATE
> Task :CordovaLib:compileDebugAidl NO-SOURCE
> Task :app:compileDebugAidl NO-SOURCE
> Task :CordovaLib:packageDebugRenderscript NO-SOURCE
> Task :app:compileDebugRenderscript UP-TO-DATE
> Task :app:checkDebugManifest UP-TO-DATE
> Task :app:generateDebugBuildConfig UP-TO-DATE
> Task :app:prepareLintJar UP-TO-DATE
> Task :app:generateDebugSources UP-TO-DATE
> Task :CordovaLib:compileDebugRenderscript UP-TO-DATE
> Task :CordovaLib:generateDebugBuildConfig UP-TO-DATE
```



요약

- Cordova 소개
- JDK 8 설치
- 안드로이드 스튜디오 및 SDK 설치
- Cordova 설치 및 프로젝트 생성
- 안드로이드 에뮬레이터 생성
- 안드로이드 앱 빌드 및 실행

차시 예고

- **13-1 : Cordova 플러그인 설치 및 사용하기**
 - 플러그인 설치
 - 플러그인 작동 원리
 - 배터리 플러그인 실습
 - 카메라 플러그인 실습

감사합니다

12주차_03 Cordova 소개 및 설치하기