“Tattoo Online” User Manual

Project Required Environment

- Java : JDK 1.8, Intellij
- Android SDK : 29 ~ 31
- OS : Windows 10
- PC CPU : Intel (For using HAXM Android Emulator)
- Smartphone : Android

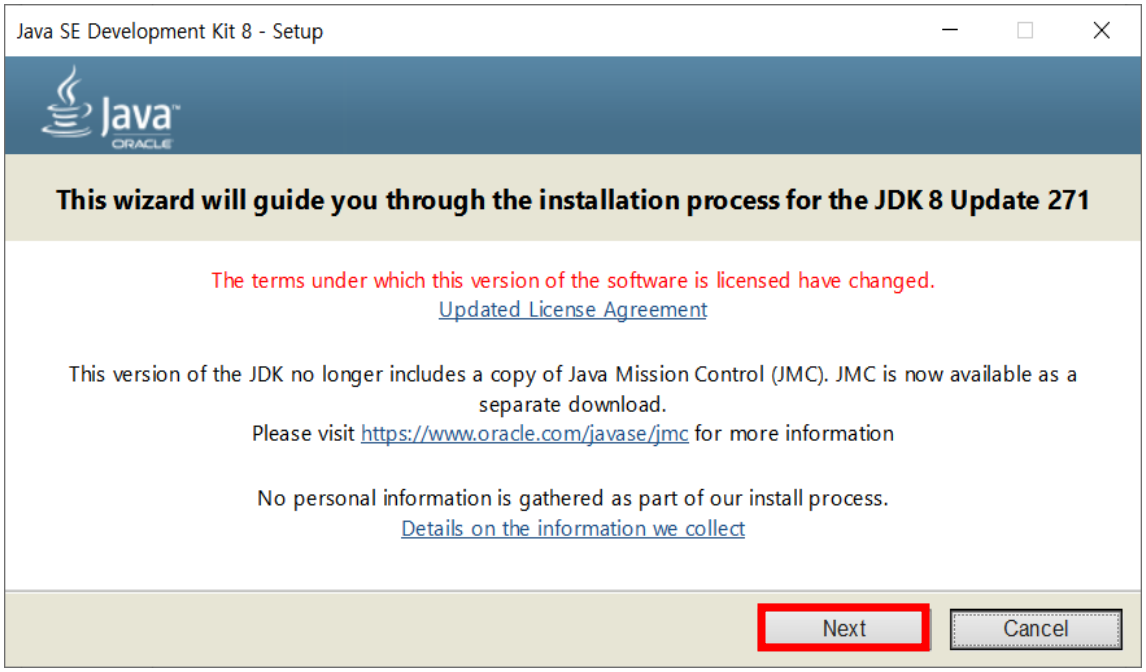
Environment Build

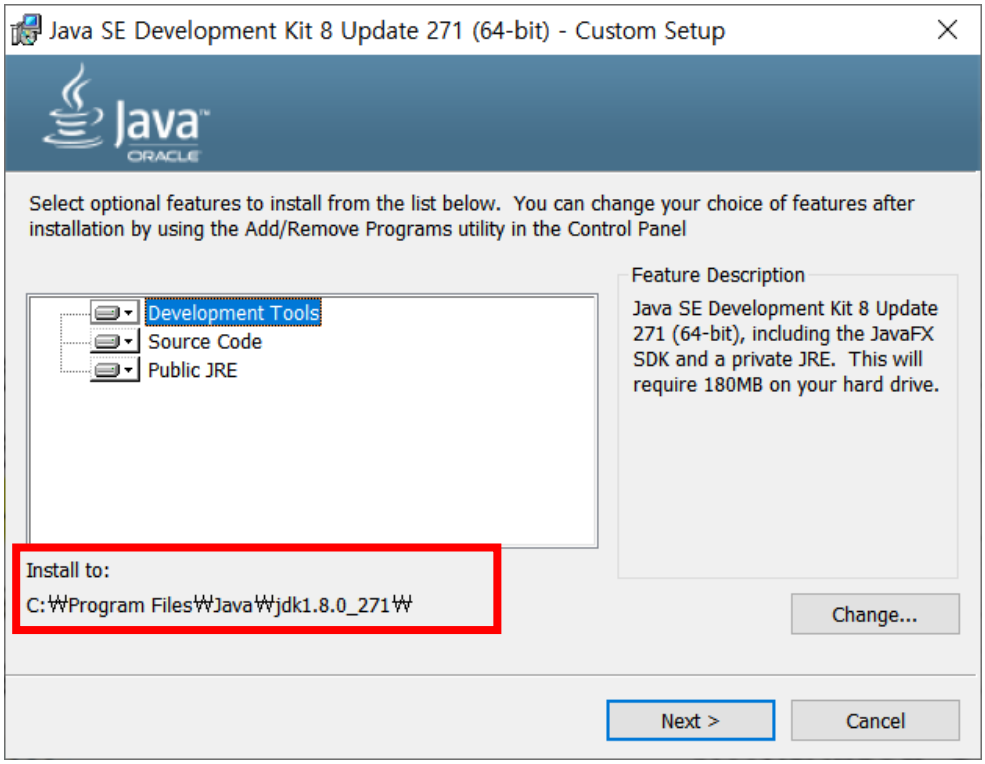
JDK installation

JDK Install : https://www.oracle.com/java/technologies/javase/javase-jdk8-downloads.html

There will be an installation file on USB.

If there is a problem with the installation file, connect to the link above and download the installation file suitable for the OS (Windows 10) environment (Oracle account required)





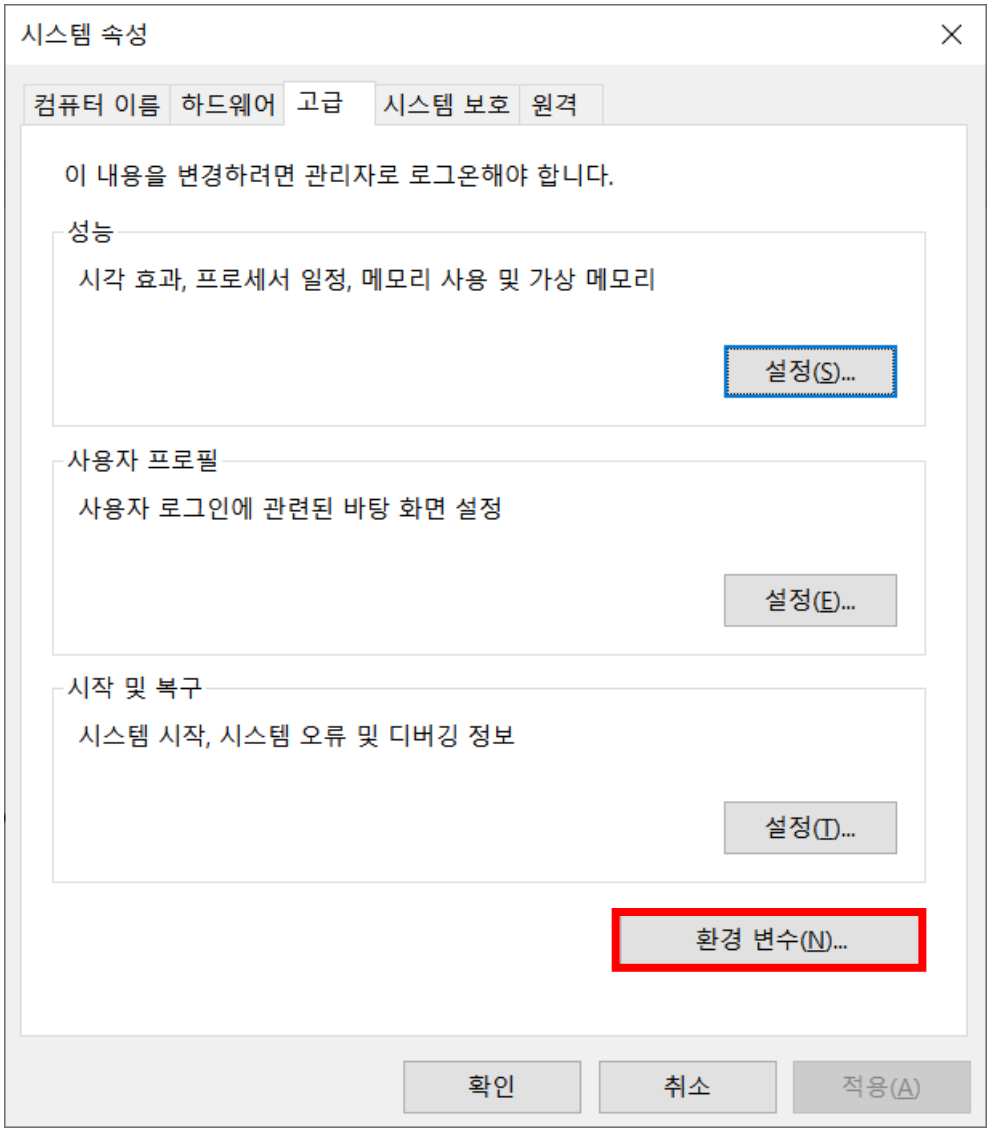
Check if the installation path. C:\Program Files\Java\jdk1.8.0_271\

The number after jdk1.8 may vary depending on the updated version of the JDK.

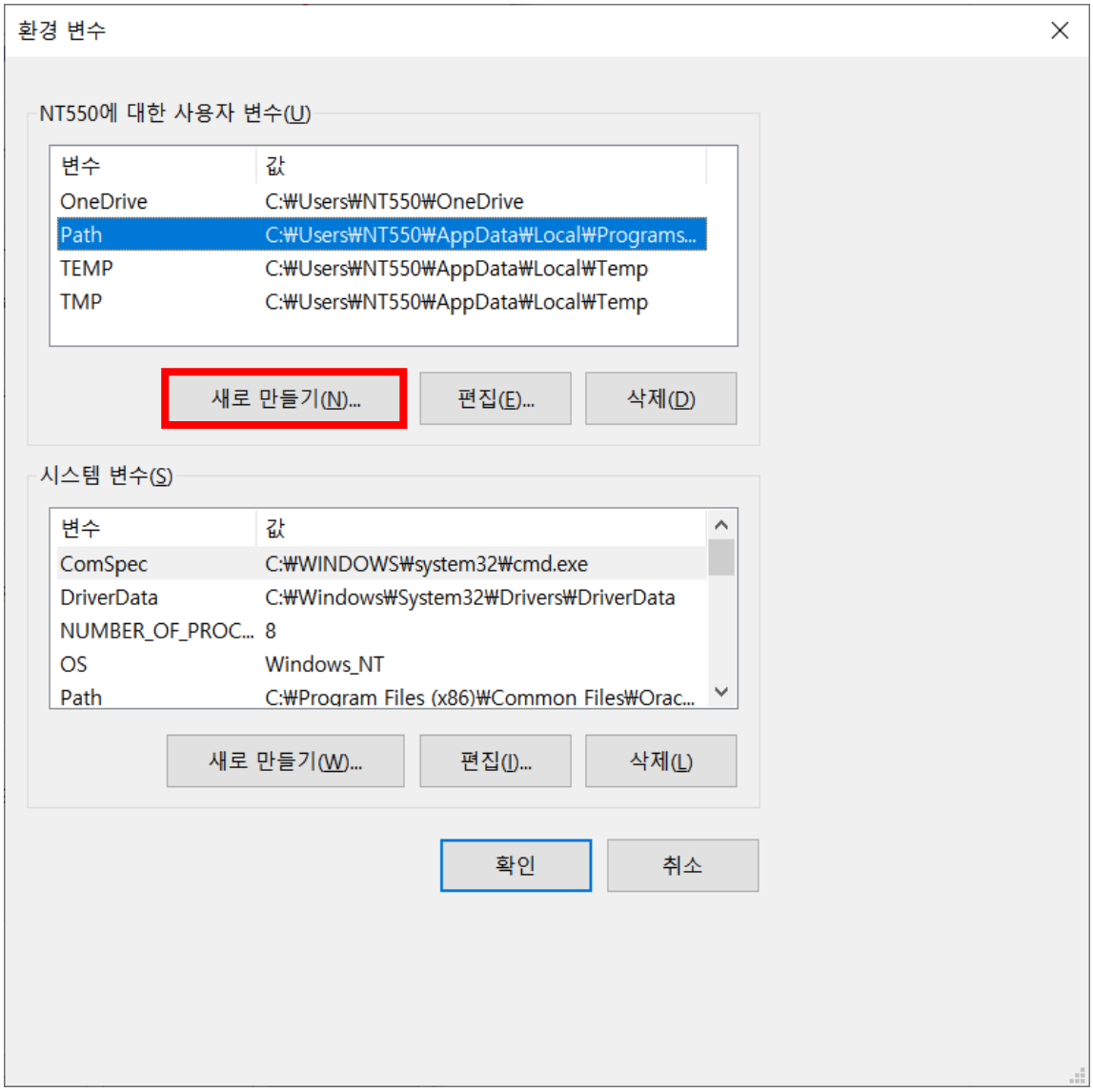
If it is different, click Change button to change to the path and click Next> button.

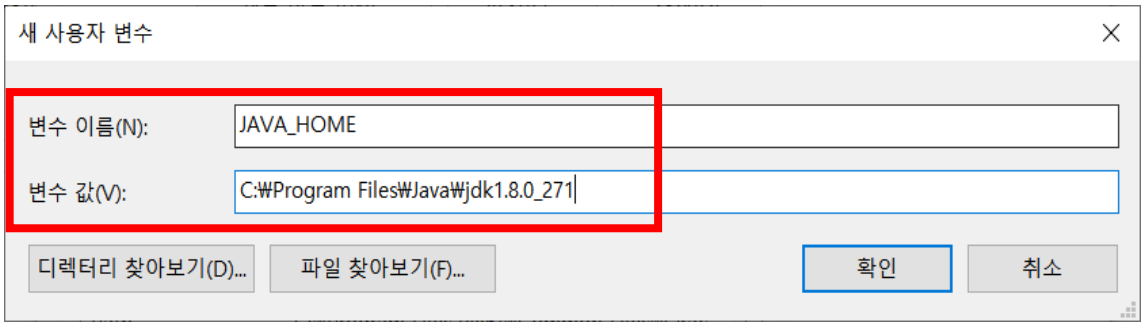
If you are done so far, JDK is well installed. Click the close button.

Add JDK System Environment Variables



System Properties> Advanced> click the Environment Variables button.

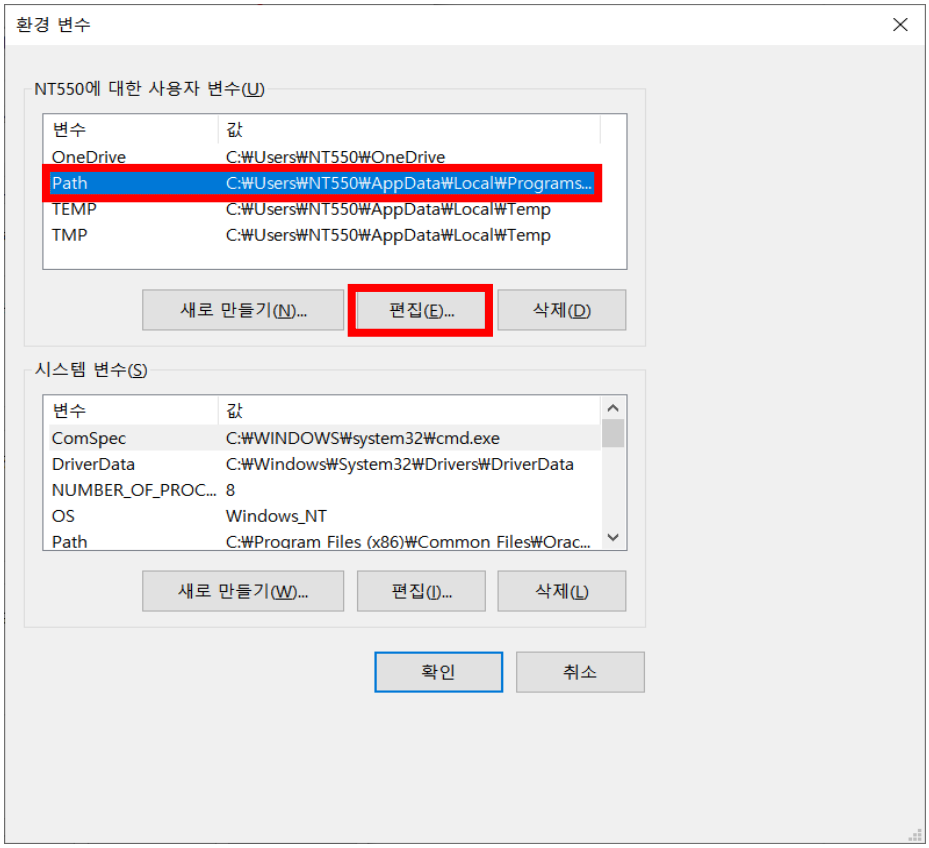




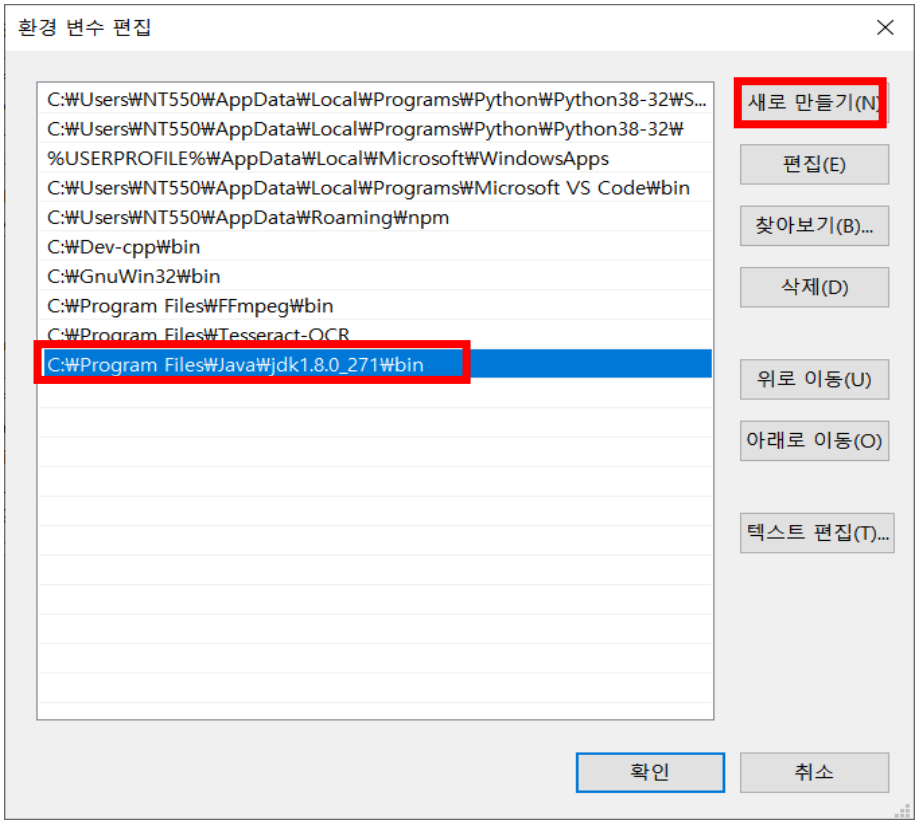
Click New to add a user variable.

Variable name: JAVA_HOME

Variable value: path of JDK installation. C:\Program Files\Java\jdk1.8.0_271



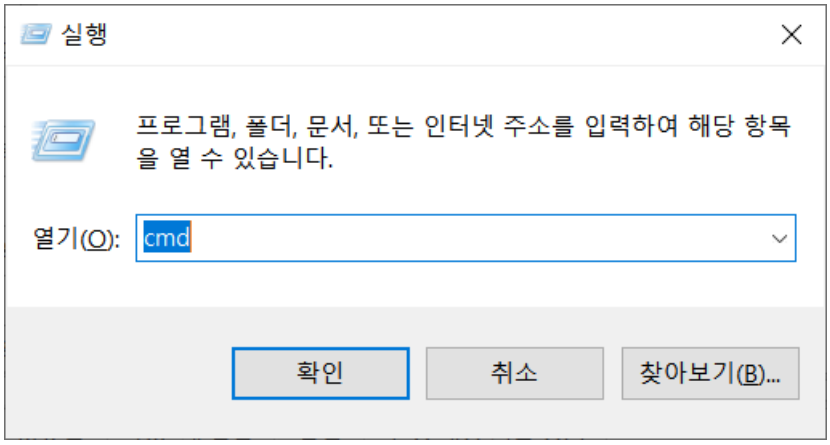
Next, Edit path of user variable.

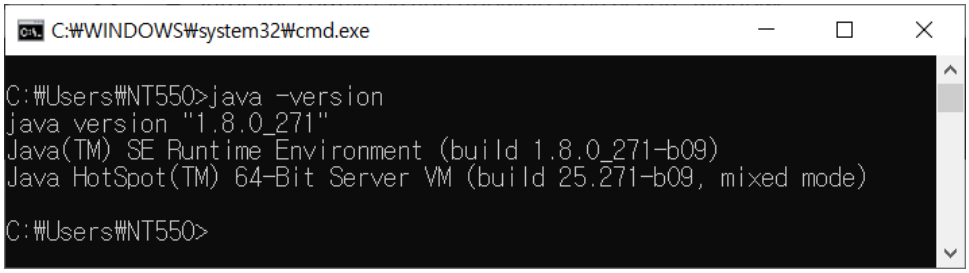


Click New and add path of JDK installation\bin. C:\Program Files\Java\jdk1.8.0_271\bin

If you are done so far, JDK environment variables were added well.

You can confirm that the java environment is well established by entering java -version in cmd.



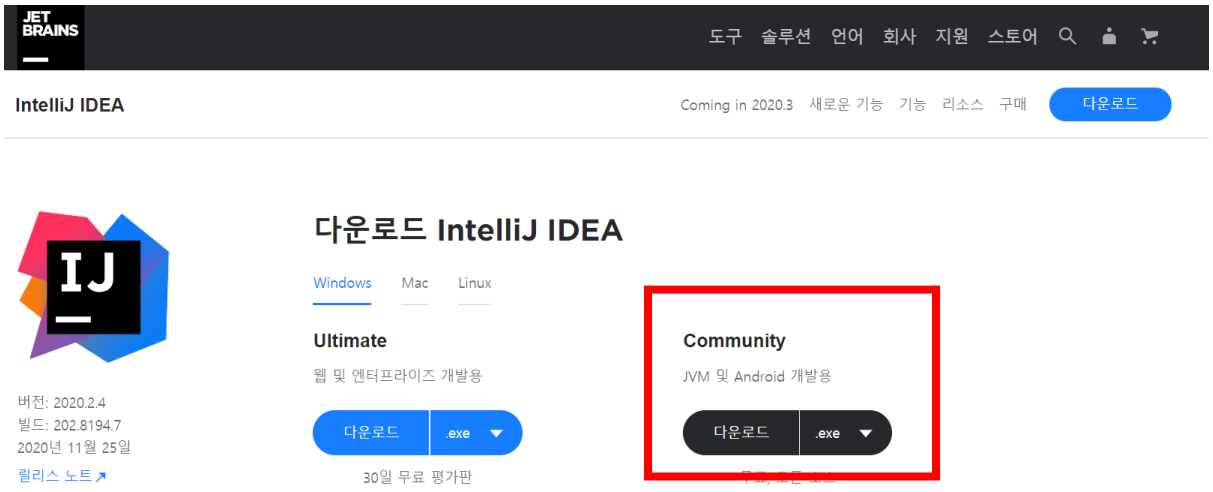


Intellij Installation

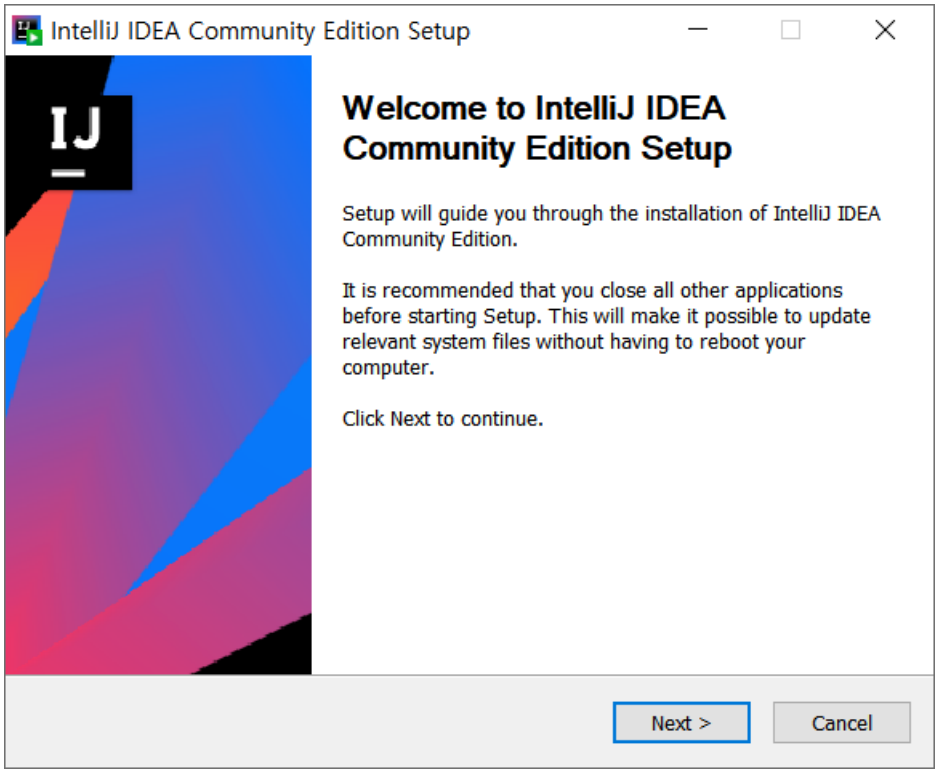
download: https://www.jetbrains.com/ko-kr/idea/download/#section=windows

There will be an installation file on USB.

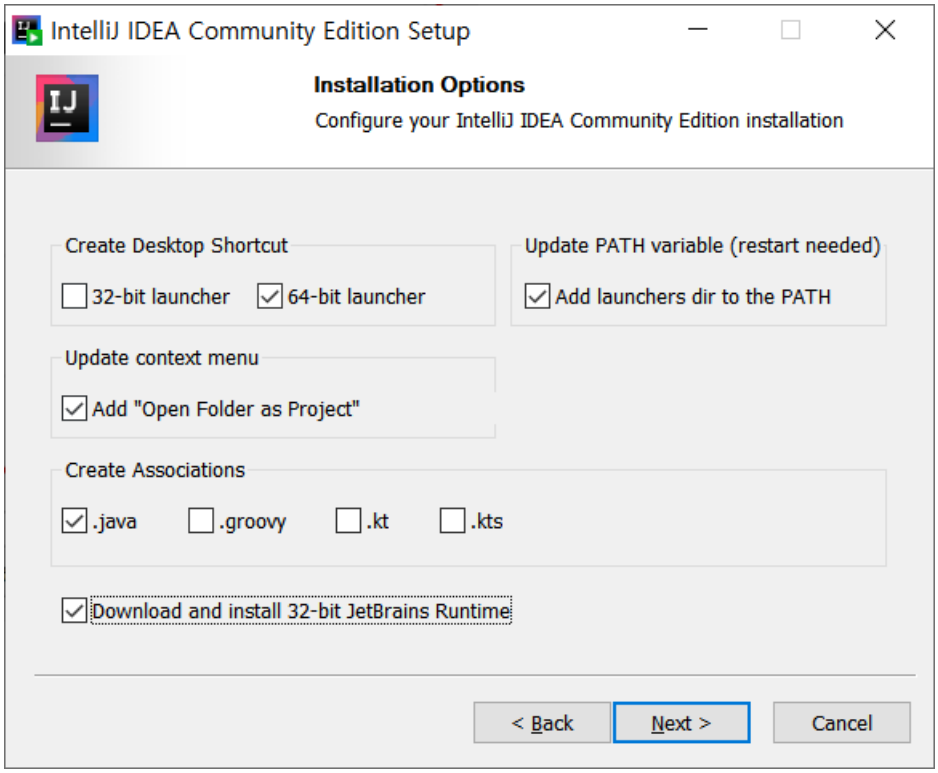
If there is a problem with the installation file, connect to the link above and download the Community version.



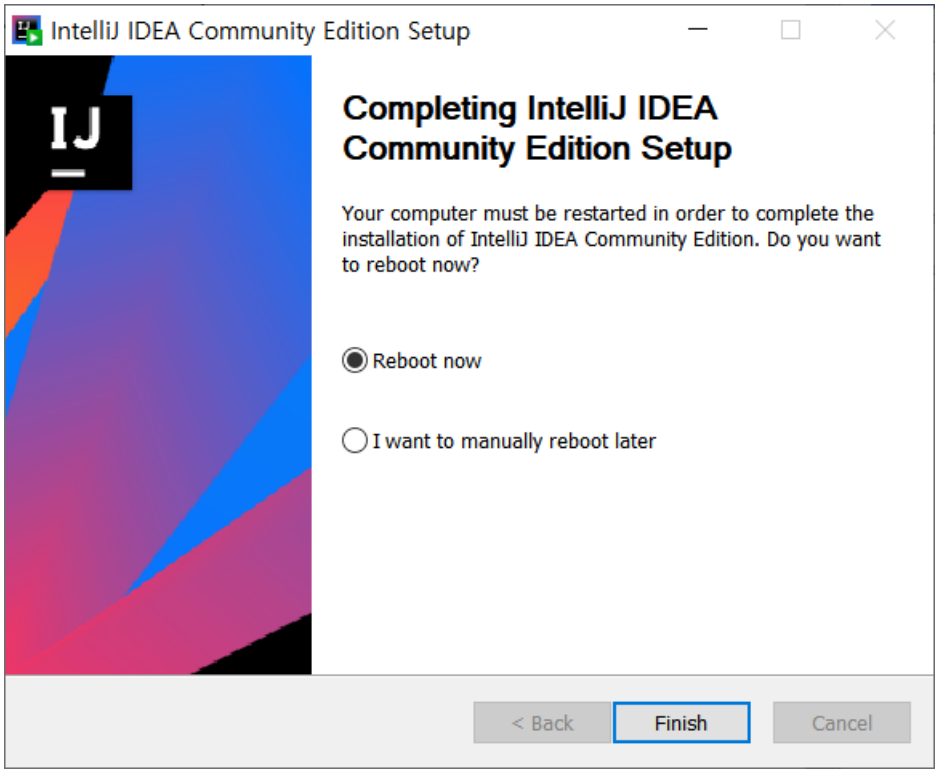
Run the installation file



Next>

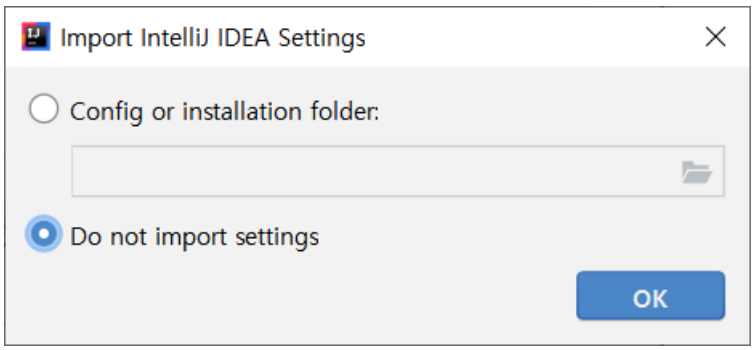


After checking as in the picture above, Click Next>

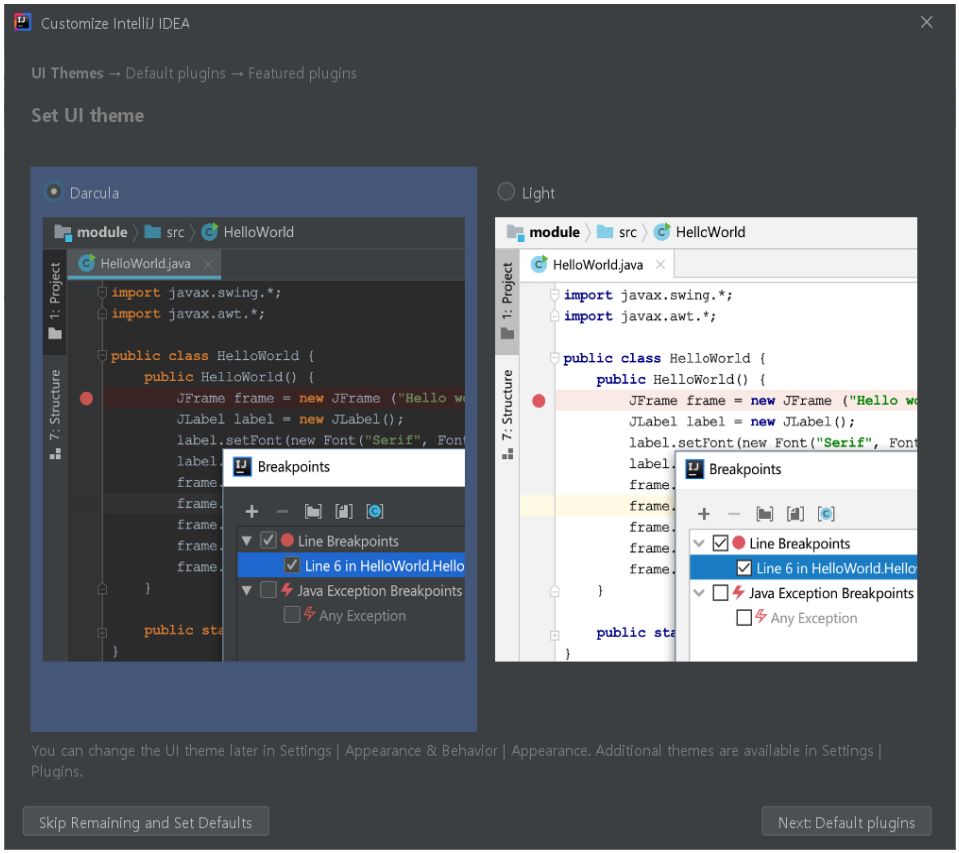


Reboot after installation is complete. Check Reboot now and click Finish.

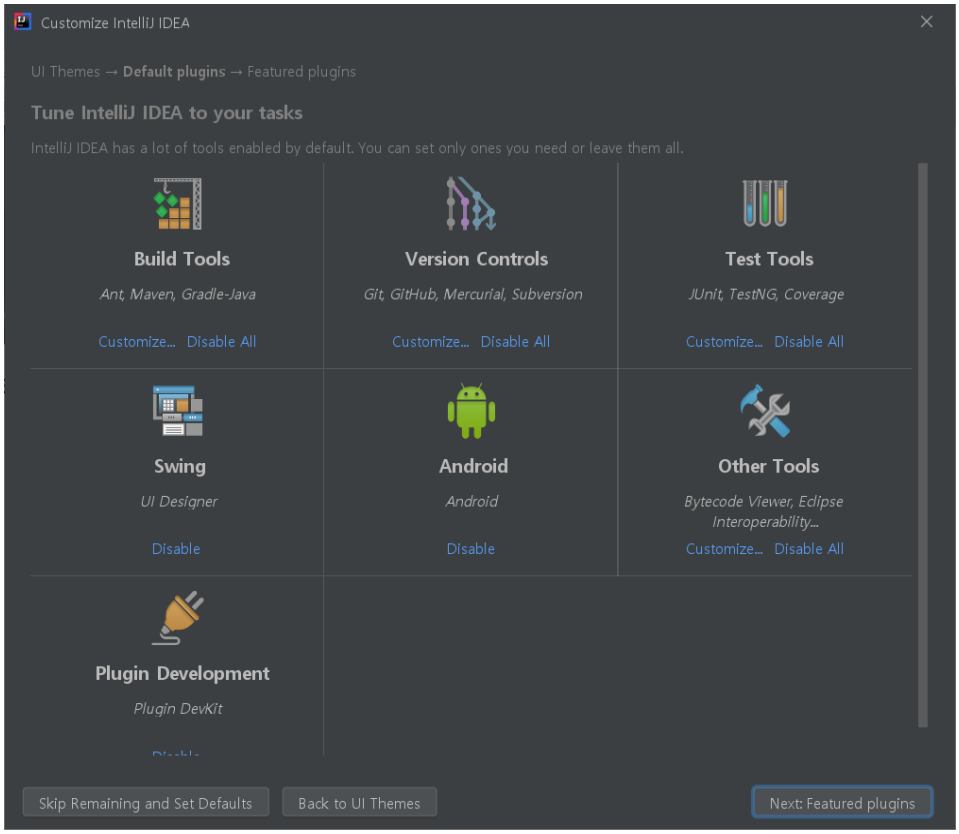
Run Intellij



Click OK



Select the theme you want and click Next.

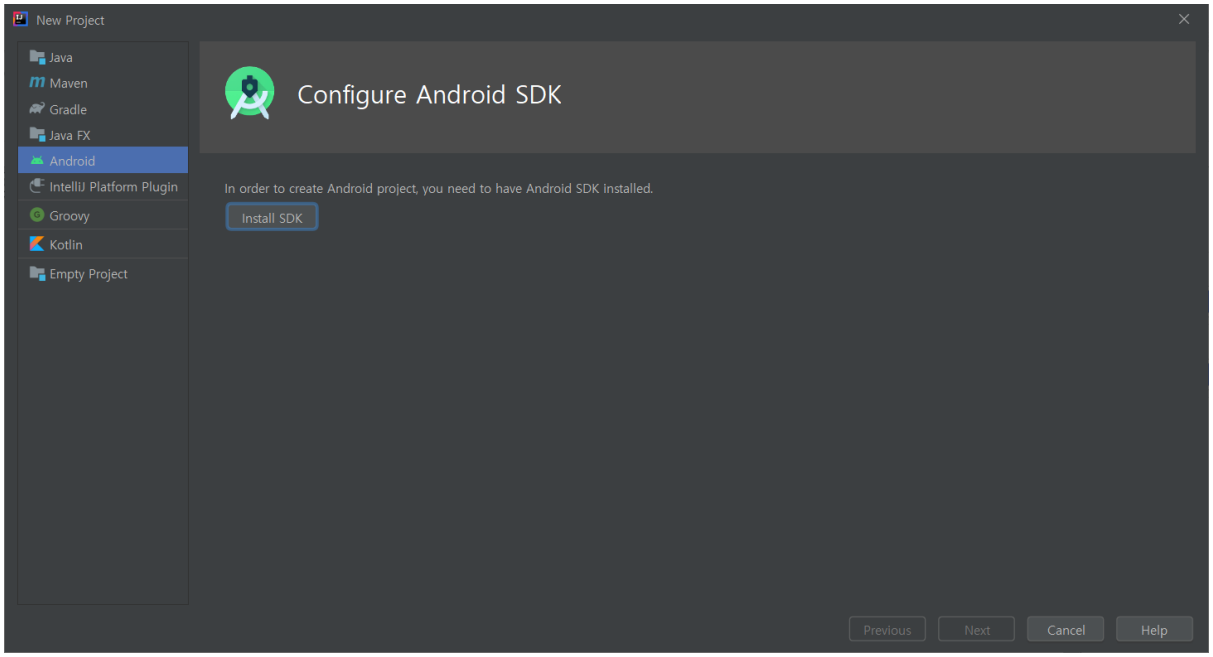


Click the Next or Start button until the screen changes to the screen below.

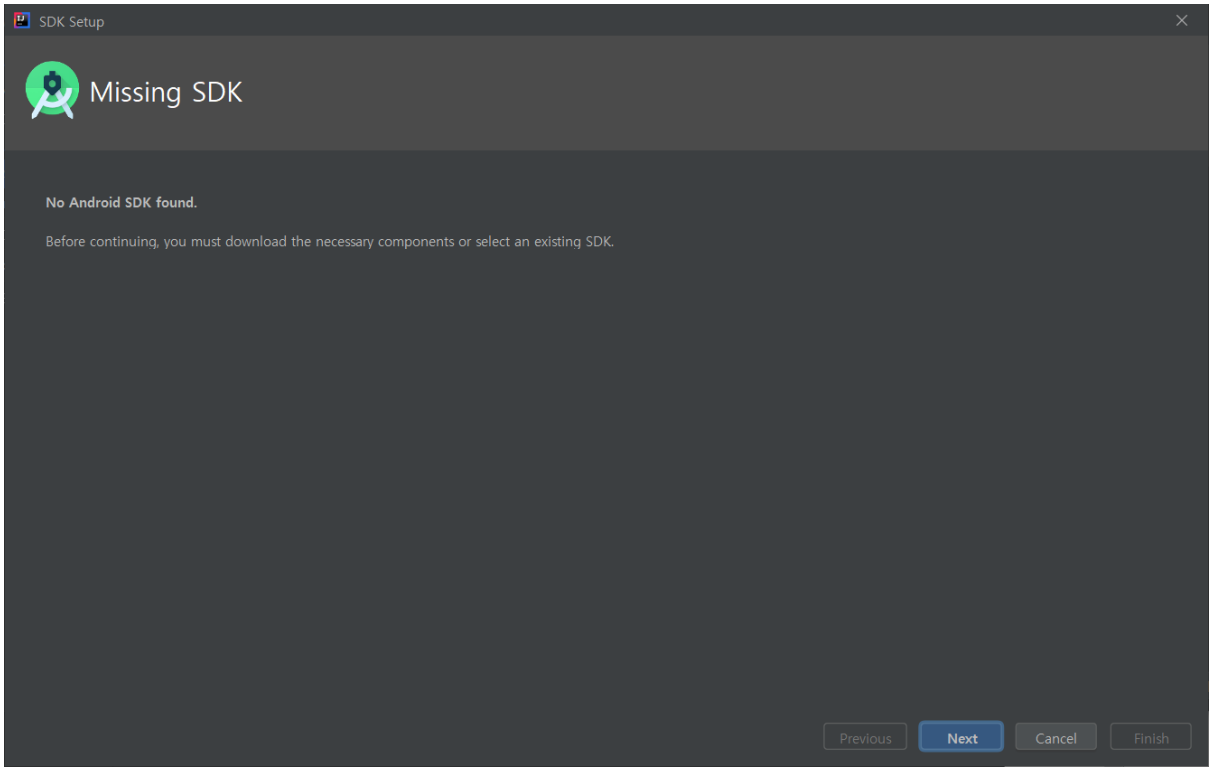
If you get to this screen, Intellij has been installed successfully.

Android Environment Build

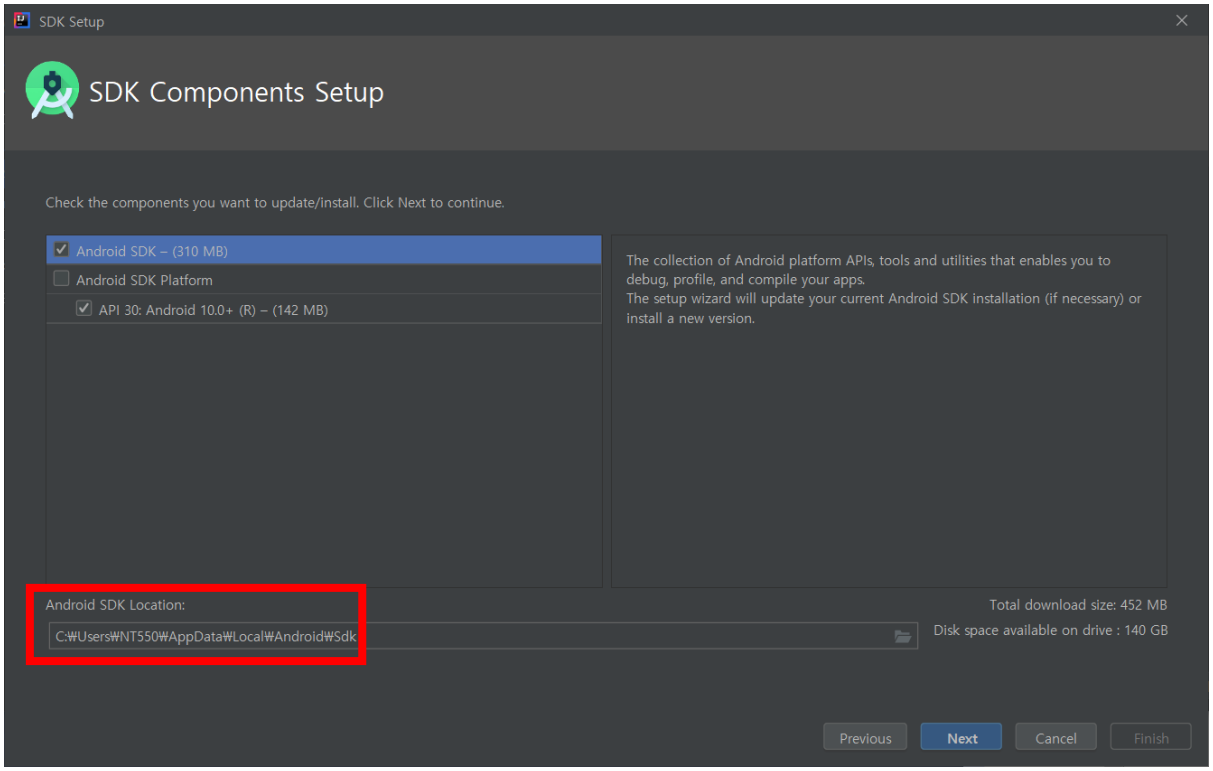
Click New Project on the screen above.



Click Install SDK on Android tab.

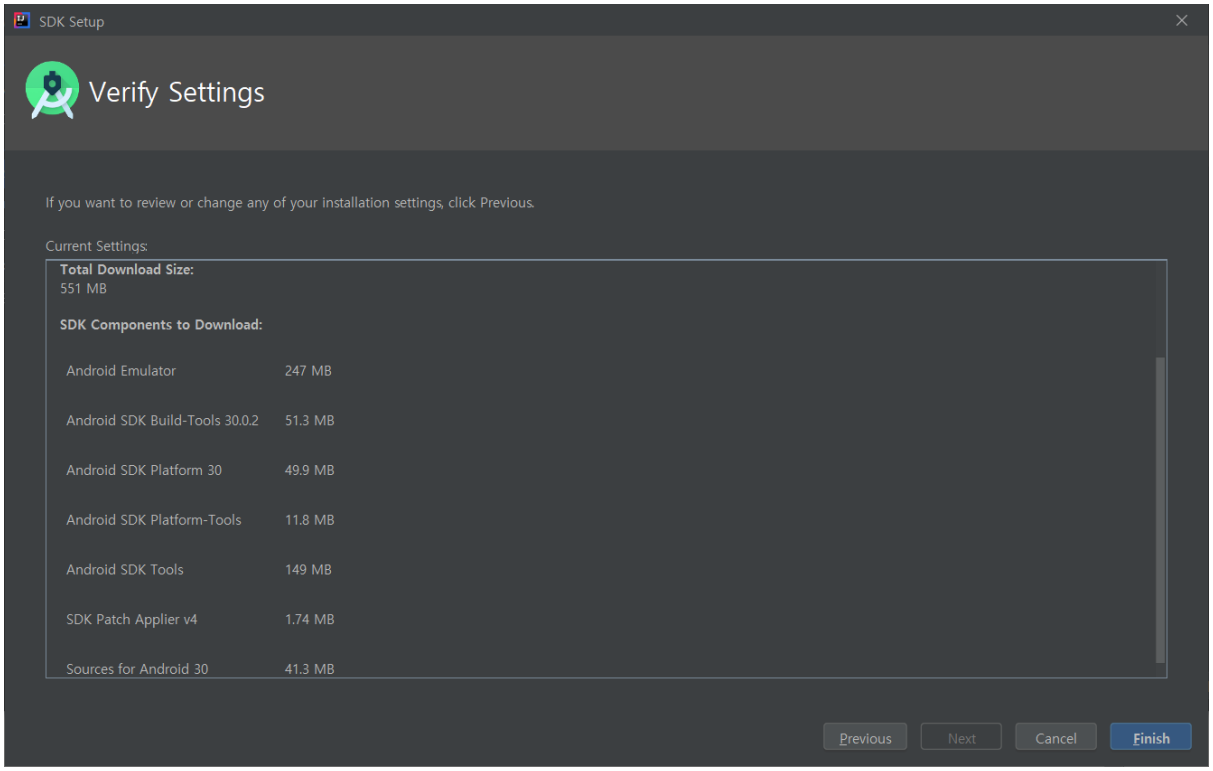


Click Next

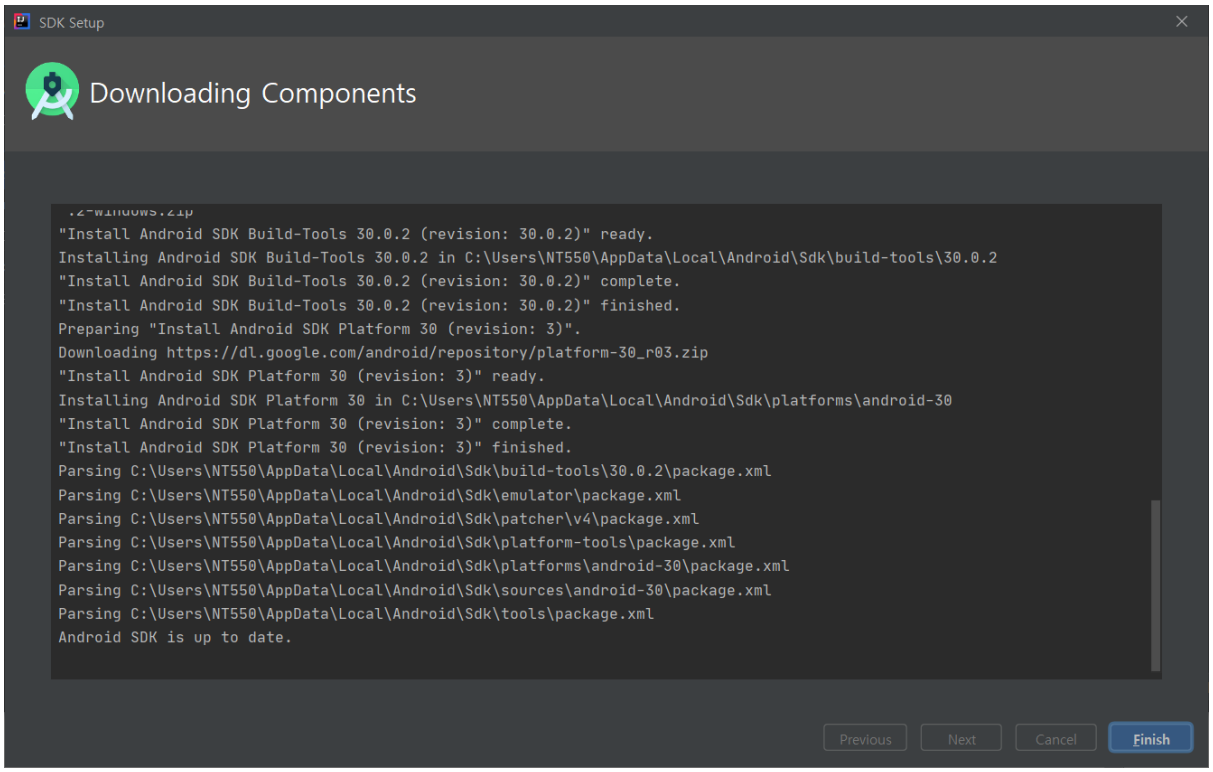


Note on Location: There must not be Korean in the path. Usually the problem is caused by Username, so the OS username must be configured in English.

Click Next.



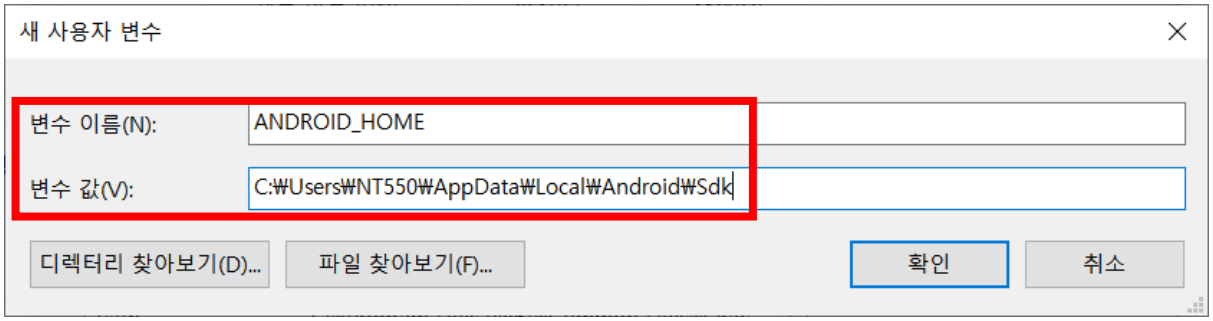
Click Finish to install Android SDK.

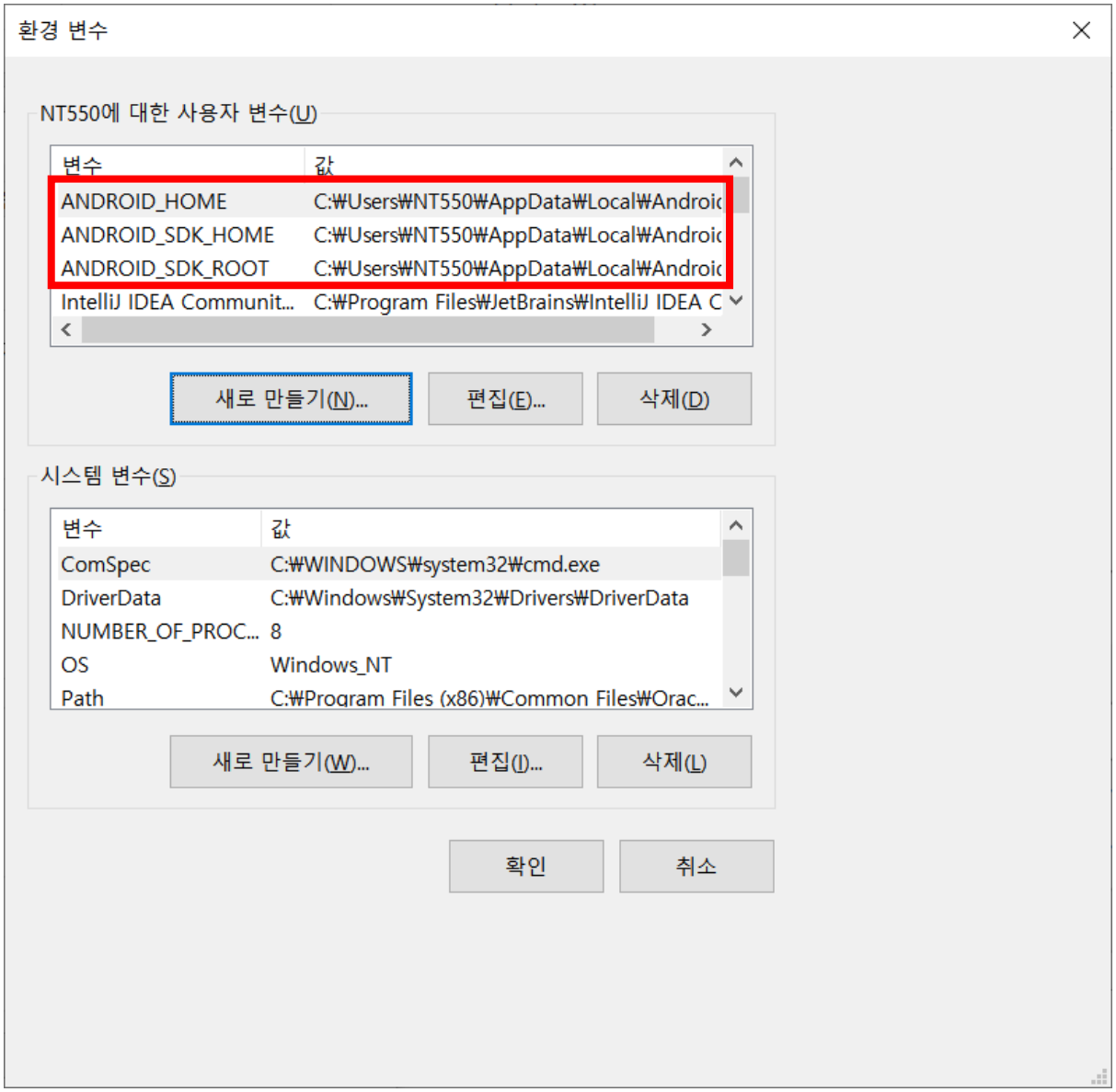


Installation is complete. Click Finish.

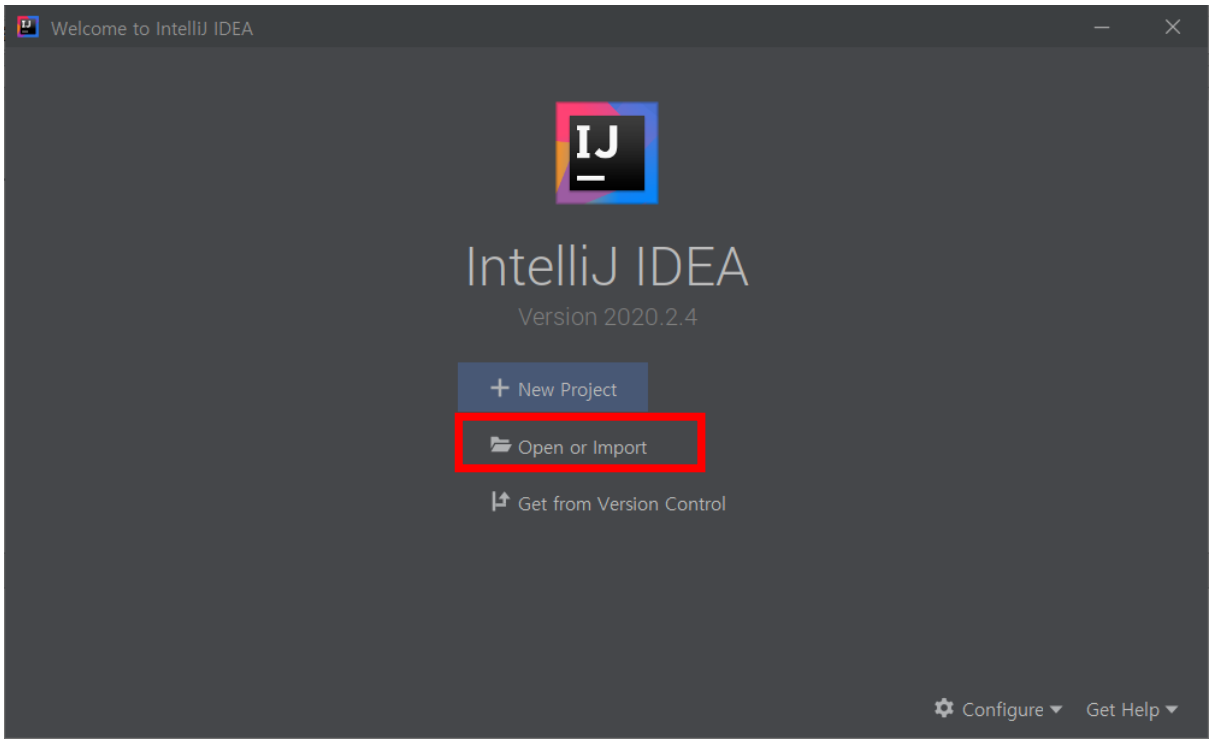
Add Android Environment Variables

Add ANDROID_HOME, ANDROID_SDK_HOME, ANDROID_SDK_ROOT with Android SDK Location (C:\Users\Username\AppData\Local\Android\Sdk) as variable value.

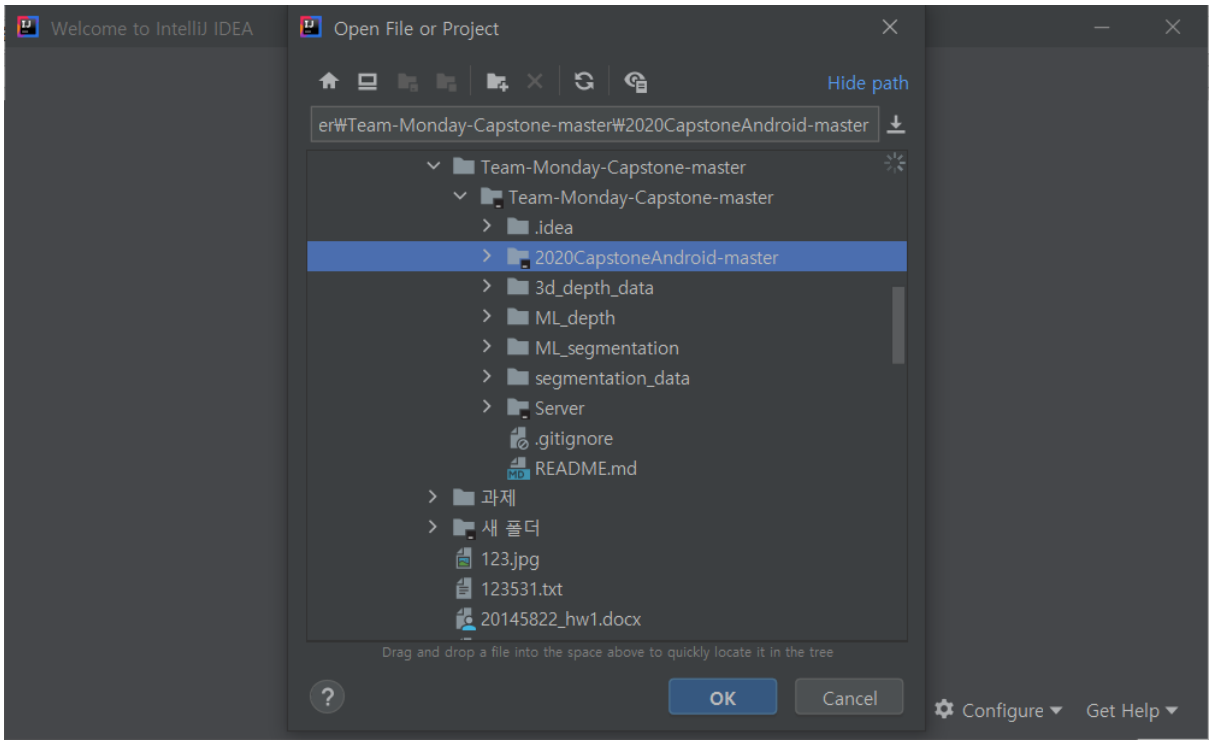




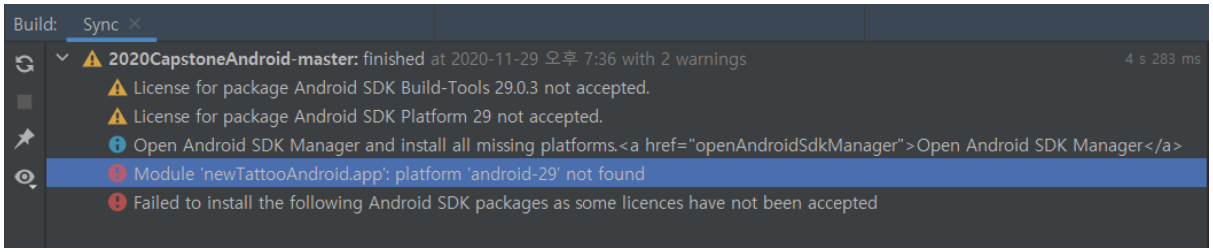
Android Project Import



Click Open or Import.

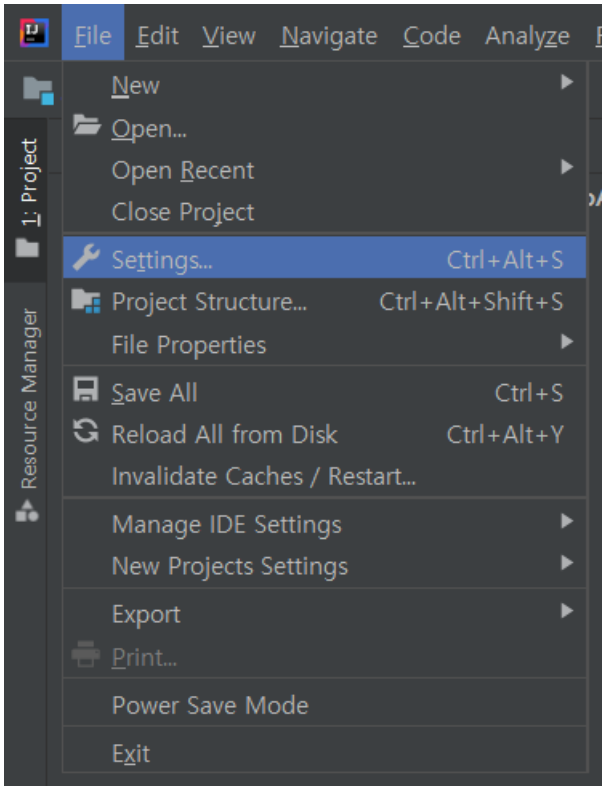


Select 2020CapstoneAndroid-master from the source code files and wait while Intellij performs the import.



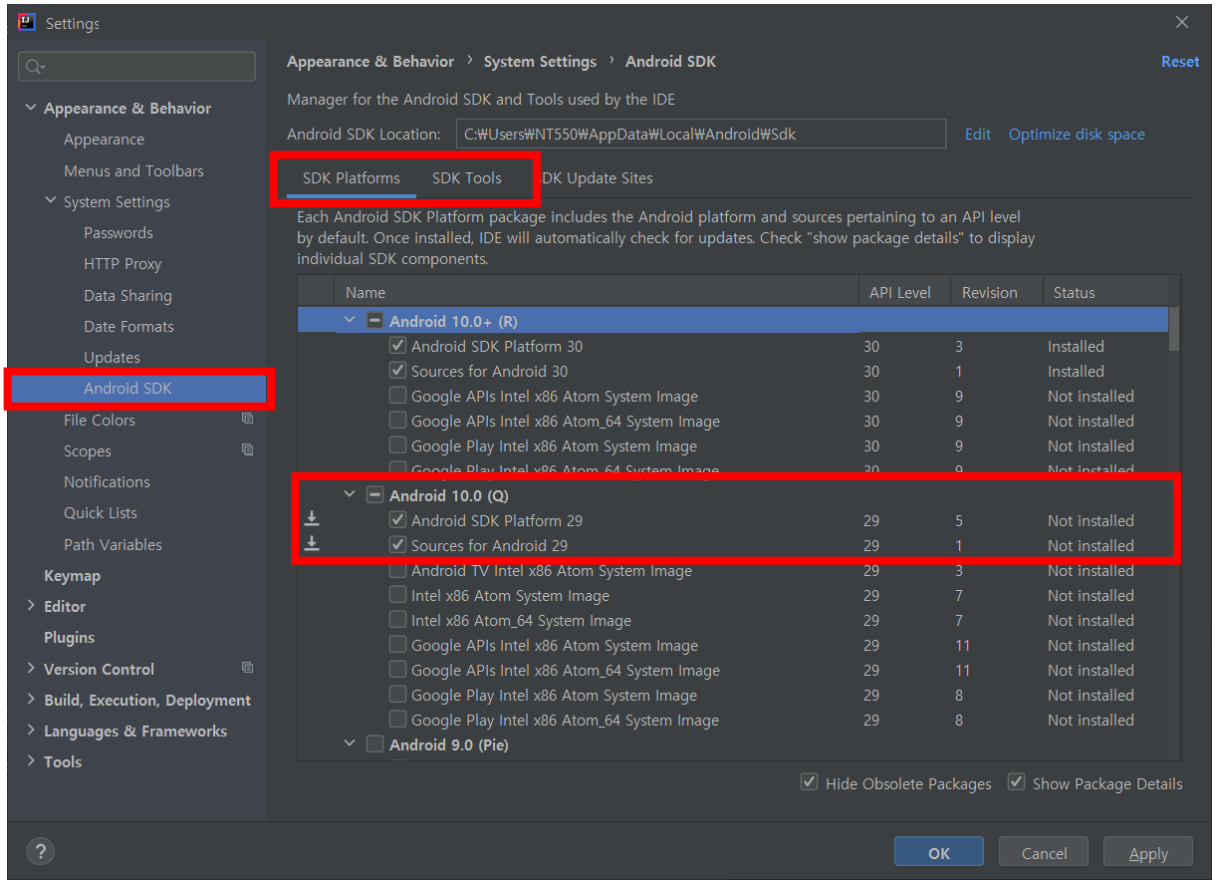
If the import fails as follows, you need to additionally install version 29 of Android SDK.

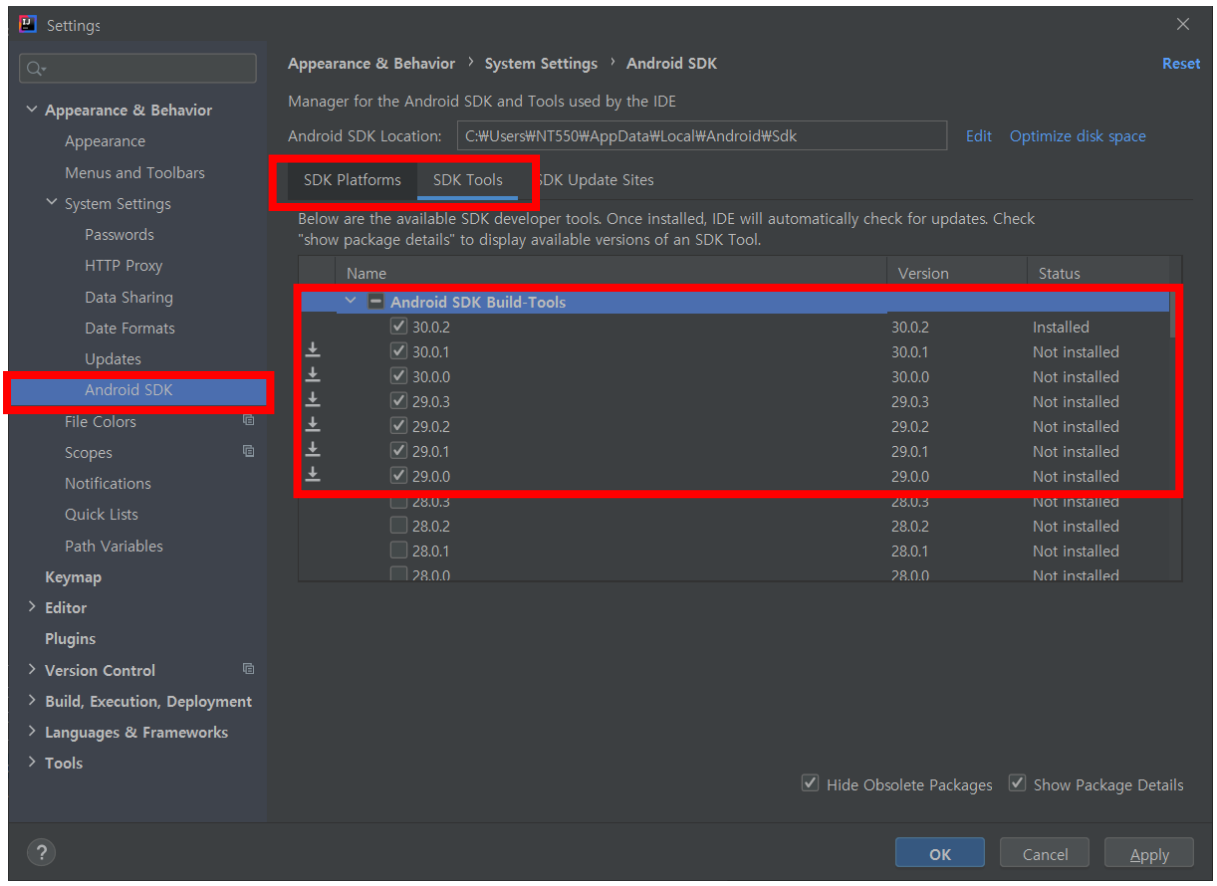
Click File> Settings...

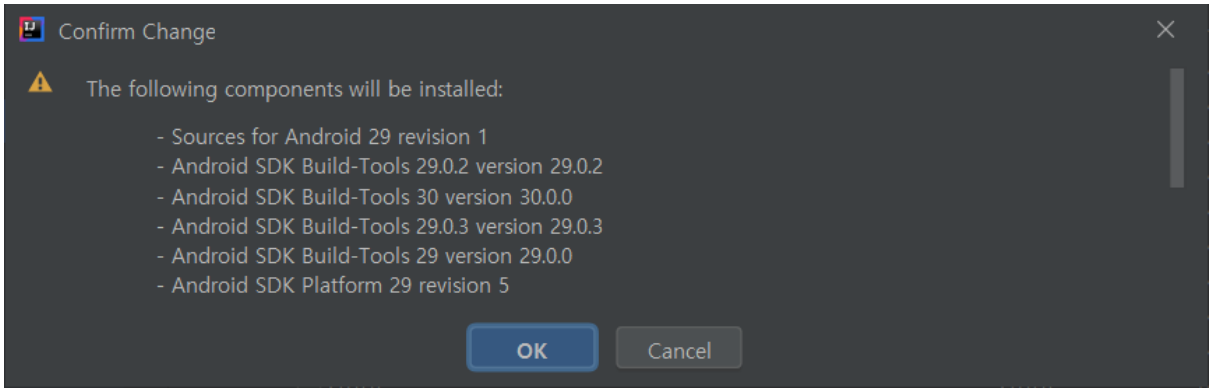


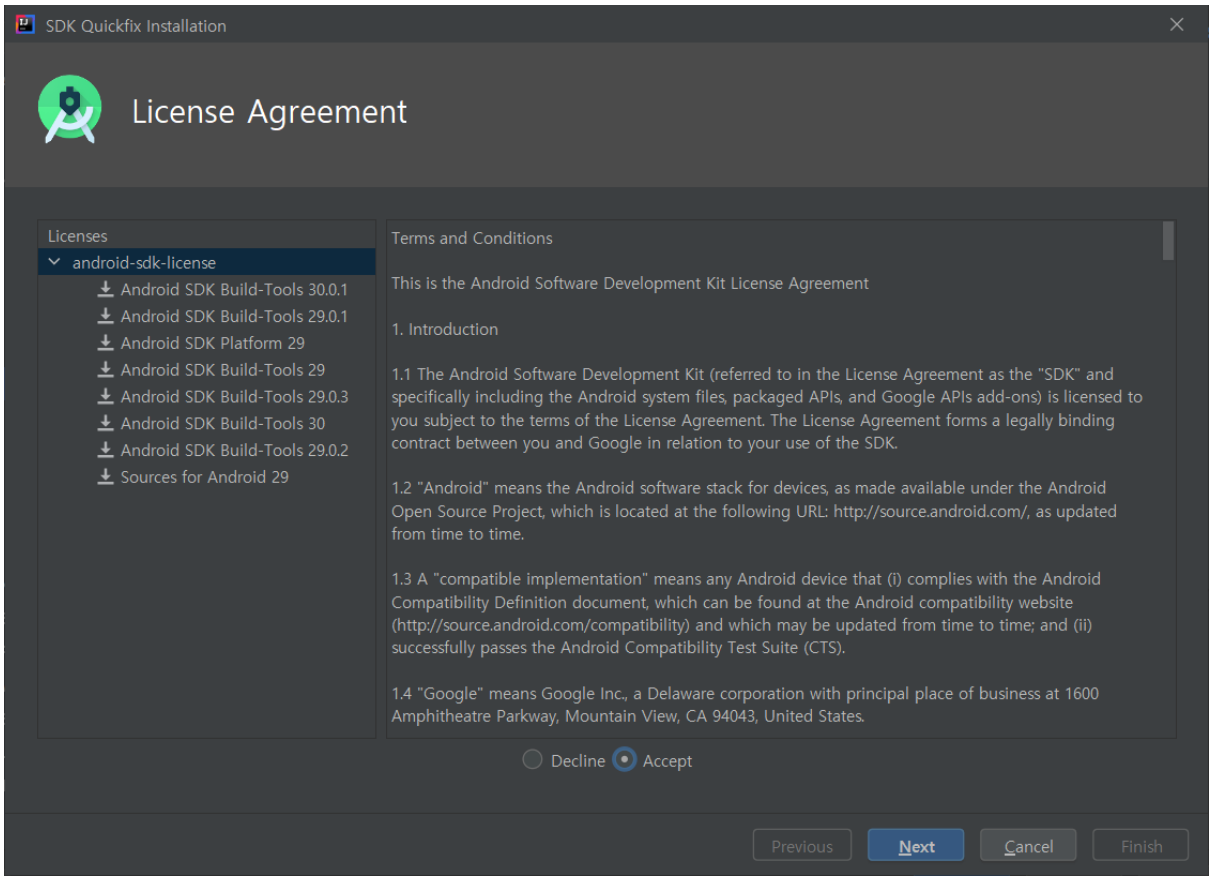
Check Show Package Details in Android SDK.

Check all versions 29 ~ 30, Not installed in SDK Platforms tab and SDK Tools tab, and click Apply and OK.

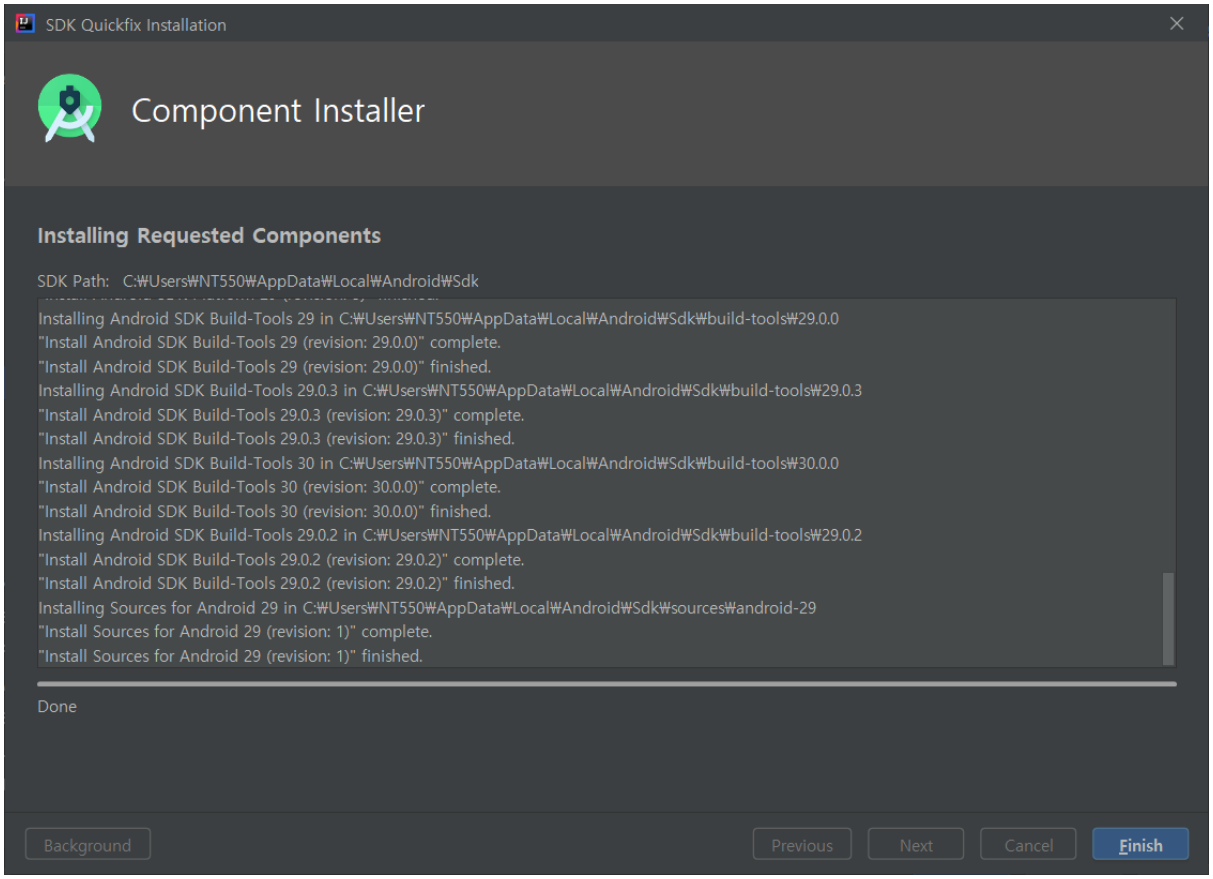

Settings
Appearance & Behavior
Appearance
Menus and Toolbars
System Settings
Passwords
HTTP Proxy
Data Sharing
Date Formats
Updates
Android SDK
File Colors
Scopes
Notifications
Quick Lists
Path Variables
Keymap
Editor
Plugins
Version Control
Build, Execution, Deployment
Languages & Frameworks
Tools
Appearance & Behavior › System Settings › Android SDK
Reset
Manager for the Android SDK and Tools used by the IDE
Android SDK Location: C:₩Users₩NT550₩AppData₩Local₩Android₩Sdk
Edit
Optimize disk space
SDK Platforms
SDK Tools
DK Update Sites
Each Android SDK Platform package includes the Android platform and sources pertaining to an API level by default. Once installed, IDE will automatically check for updates. Check "show package details" to display individual SDK components.
Name
API Level
Revision
Status
Android 10.0+ (R)
Android SDK Platform 30
30
3
Installed
Sources for Android 30
30
1
Installed
Google APIs Intel x86 Atom System Image
30
9
Not installed
Google APIs Intel x86 Atom_64 System Image
30
9
Not installed
Google Play Intel x86 Atom System Image
30
9
Not installed
Android 10.0 (Q)
Android SDK Platform 29
29
5
Not installed
Sources for Android 29
29
1
Not installed
Android TV Intel x86 Atom System Image
29
3
Not installed
Intel x86 Atom System Image
29
7
Not installed
Intel x86 Atom_64 System Image
29
7
Not installed
Google APIs Intel x86 Atom System Image
29
11
Not installed
Google APIs Intel x86 Atom_64 System Image
29
11
Not installed
Google Play Intel x86 Atom System Image
29
8
Not installed
Google Play Intel x86 Atom_64 System Image
29
8
Not installed
Android 9.0 (Pie)
Hide Obsolete Packages
Show Package Details
OK
Cancel
Apply


Settings
Appearance & Behavior
Appearance
Menus and Toolbars
System Settings
Passwords
HTTP Proxy
Data Sharing
Date Formats
Updates
Android SDK
File Colors
Scopes
Notifications
Quick Lists
Path Variables
Keymap
Editor
Plugins
Version Control
Build, Execution, Deployment
Languages & Frameworks
Tools
Appearance & Behavior › System Settings › Android SDK
Reset
Manager for the Android SDK and Tools used by the IDE
Android SDK Location: C:₩Users₩NT550₩AppData₩Local₩Android₩Sdk
Edit
Optimize disk space
SDK Platforms
SDK Tools
DK Update Sites
Below are the available SDK developer tools. Once installed, IDE will automatically check for updates. Check "show package details" to display available versions of an SDK Tool.
Name
Version
Status
Android SDK Build-Tools
30.0.2
30.0.2
Installed
30.0.1
30.0.1
Not installed
30.0.0
30.0.0
Not installed
29.0.3
29.0.3
Not installed
29.0.2
29.0.2
Not installed
29.0.1
29.0.1
Not installed
29.0.0
29.0.0
Not installed
28.0.2
28.0.2
Not installed
28.0.1
28.0.1
Not installed
Hide Obsolete Packages
Show Package Details
OK
Cancel
Apply

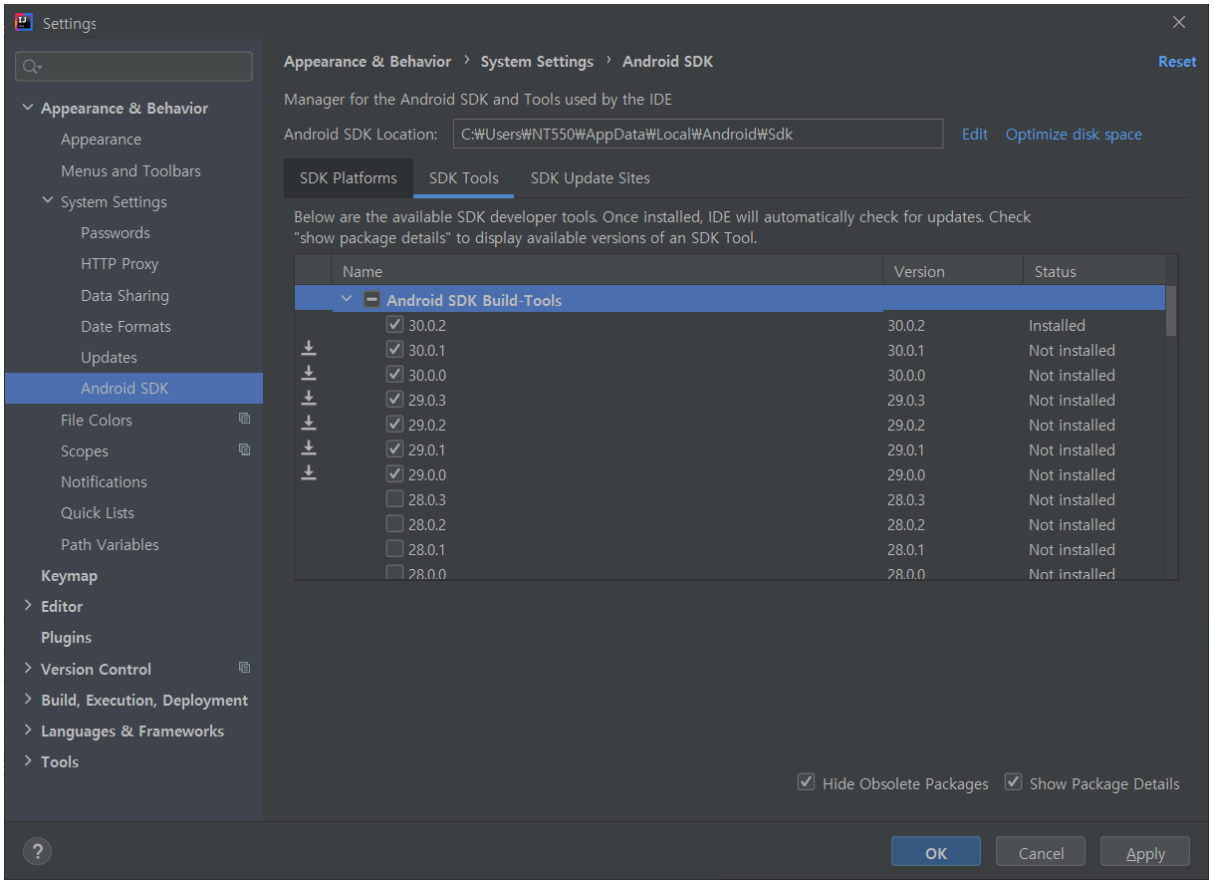




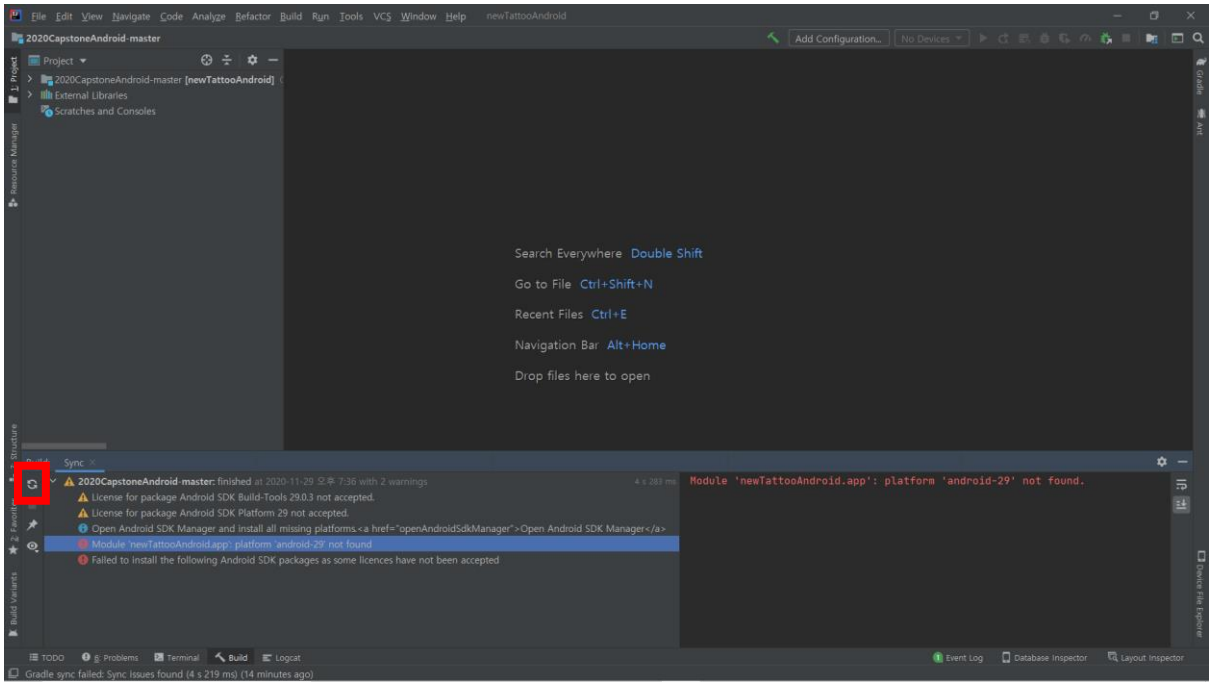
After checking Accept, click Next to install the required versions.



Confirm Done and click Finish.

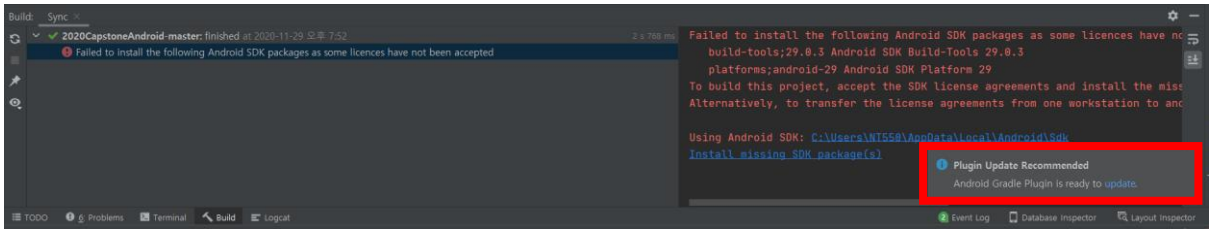


Click Apply and OK.



Click the red boxed icon (Reload Gradle Project).

If the warning below appears, click the link in the pop-up to update the gradle plugin, then click Reload Gradle Project above again.



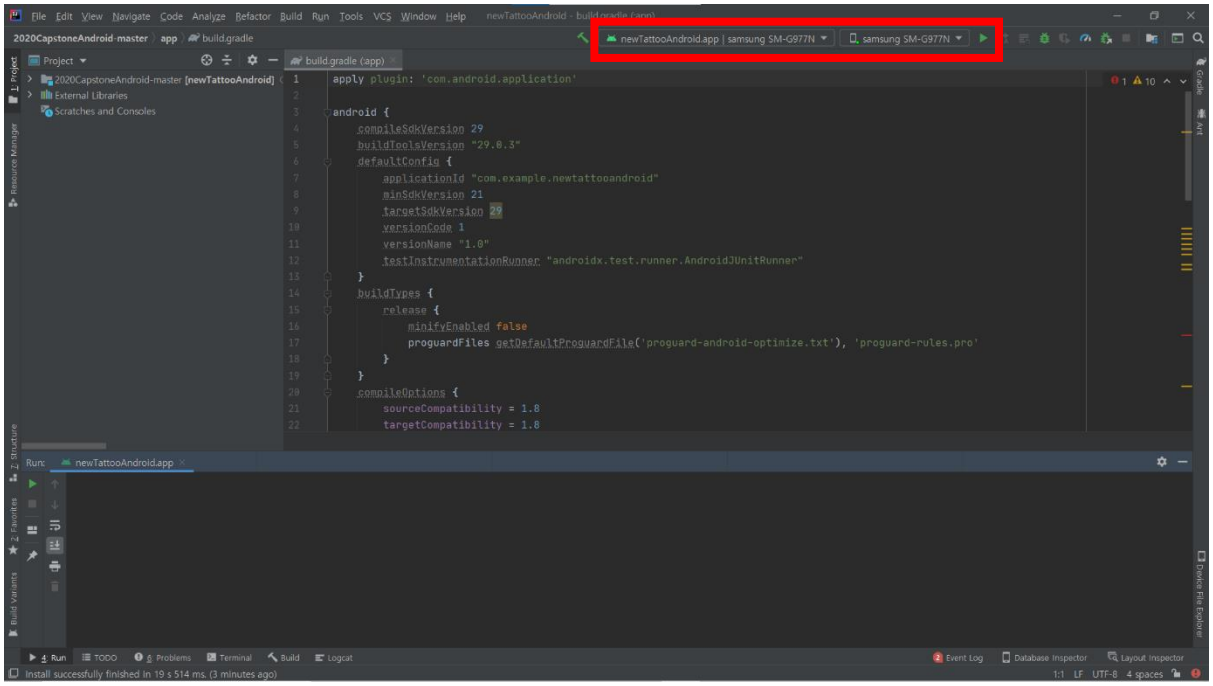
If you complete all of that process, the 2020CapstoneAndroid-master will be built successfully.

Application execution

Running by connecting a smartphone to a PC

Run by connecting an Android smartphone with USB debugging enabled to a PC.

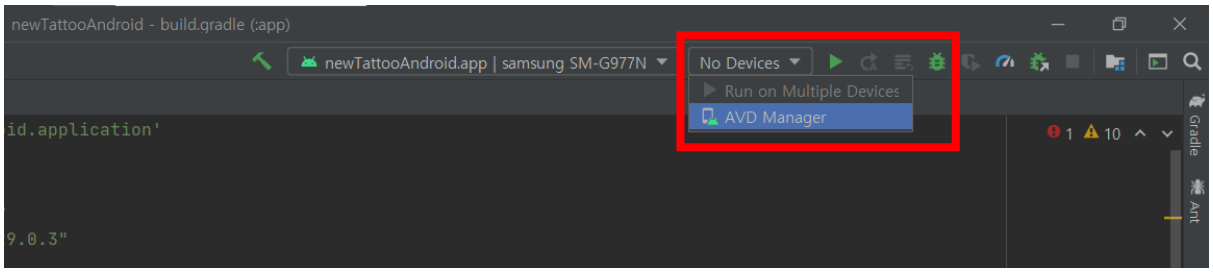
When a smartphone with USB debugging enabled is connected to a PC, No Device is automatically changed to the connected smartphone. Click the Run button to run the application.

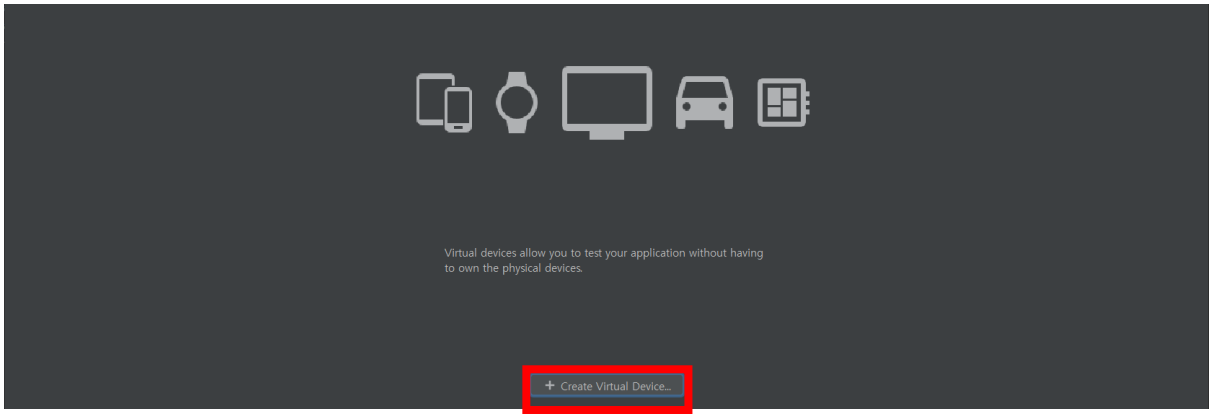


You can use the application on your smartphone.

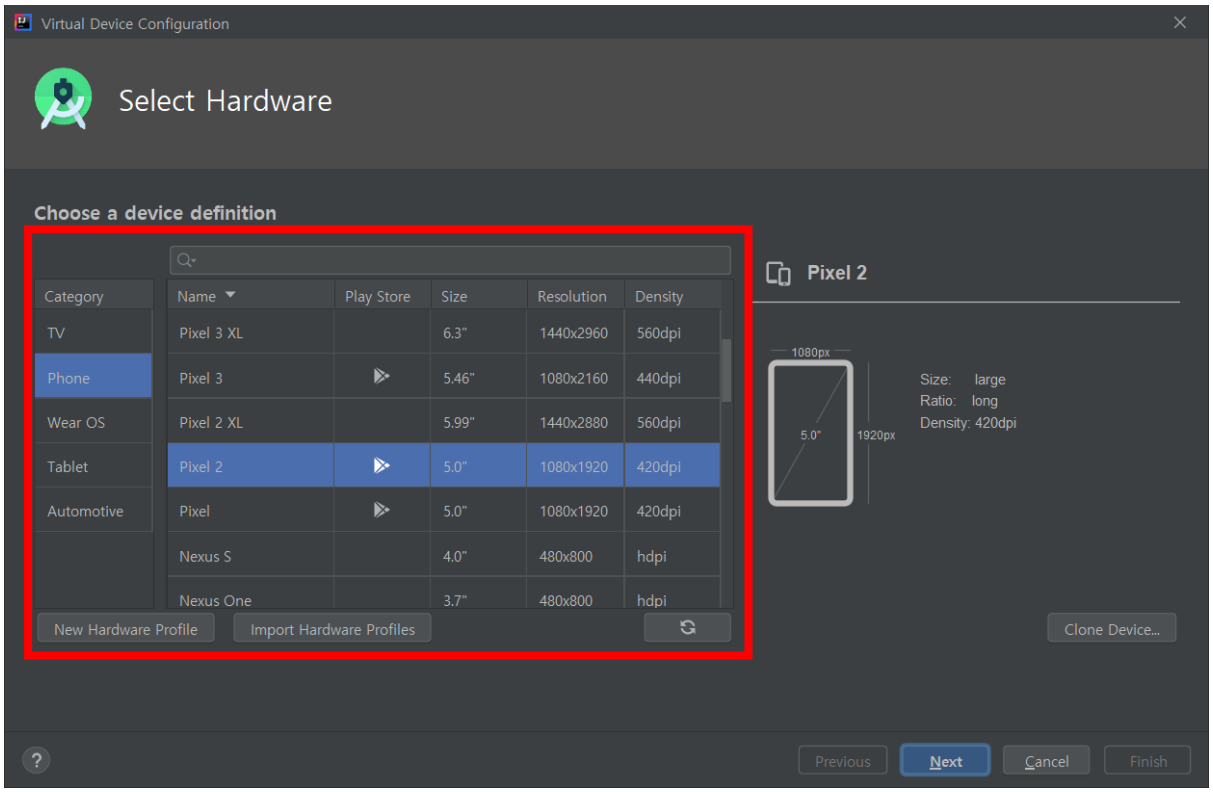
Execution using AVD virtual environment

Click AVD Manger.

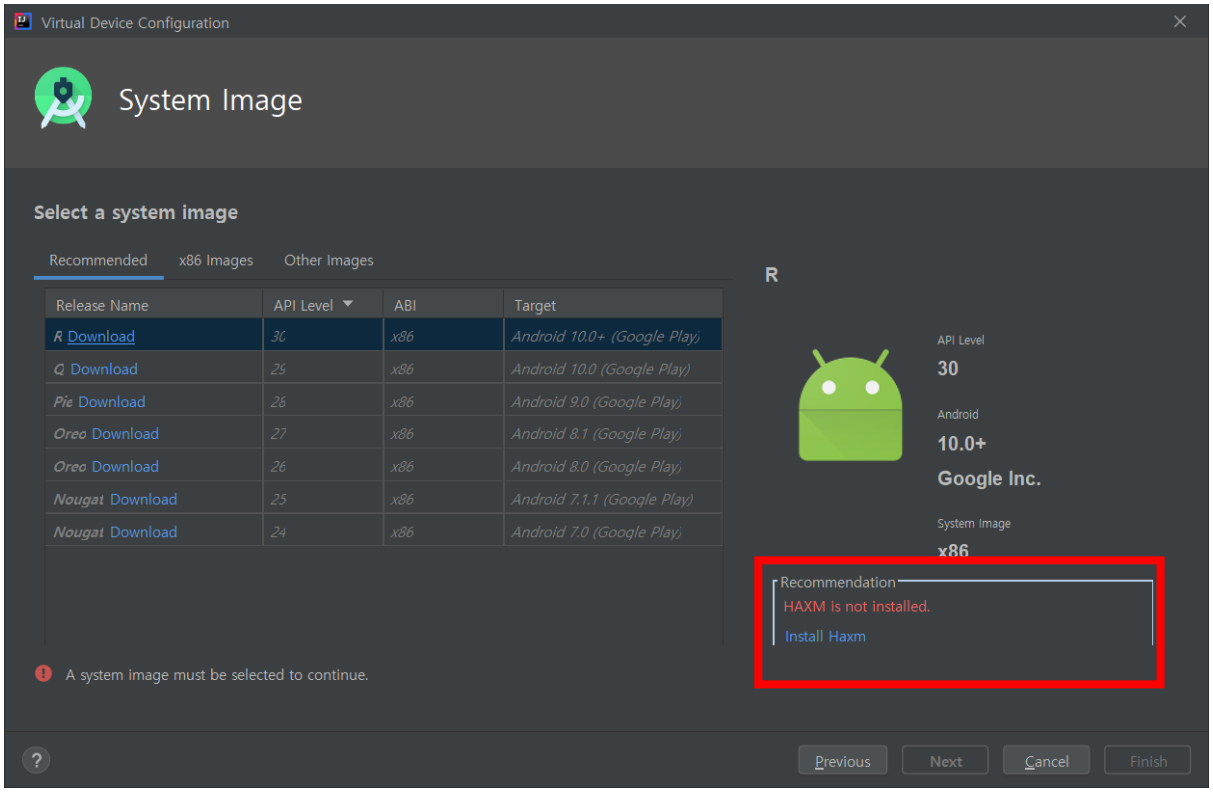




Click + Create Virtual Device...

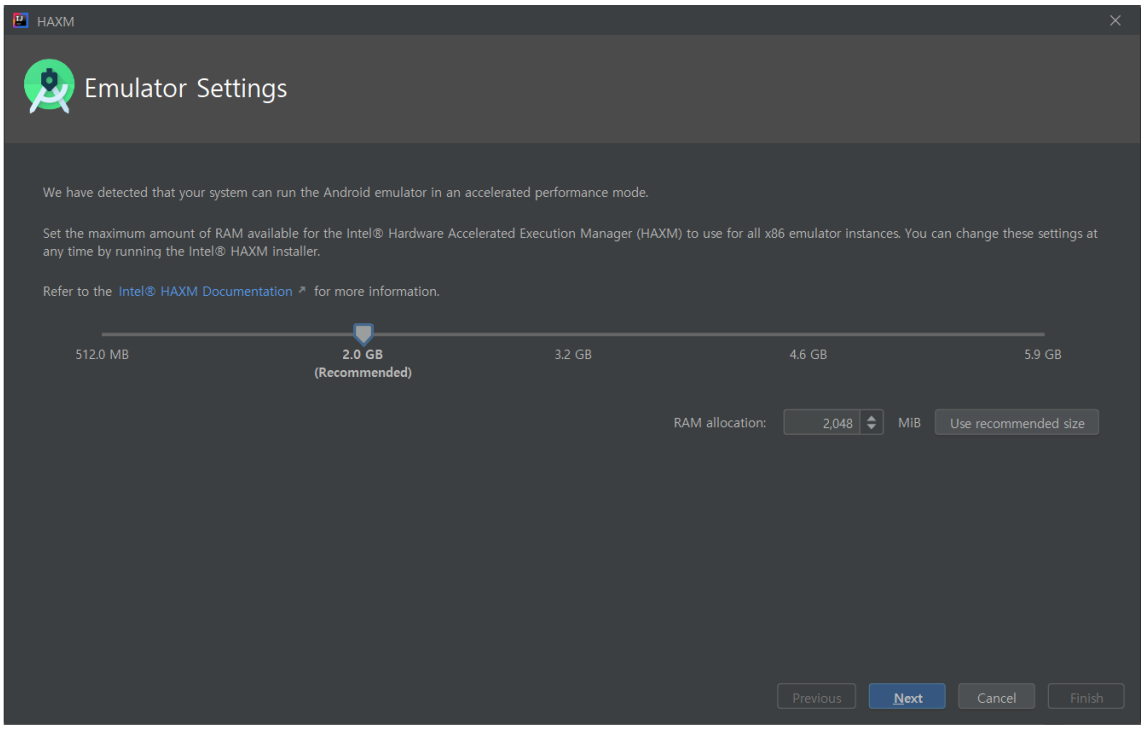


Select Phone> Pixel 2 and Click Next.

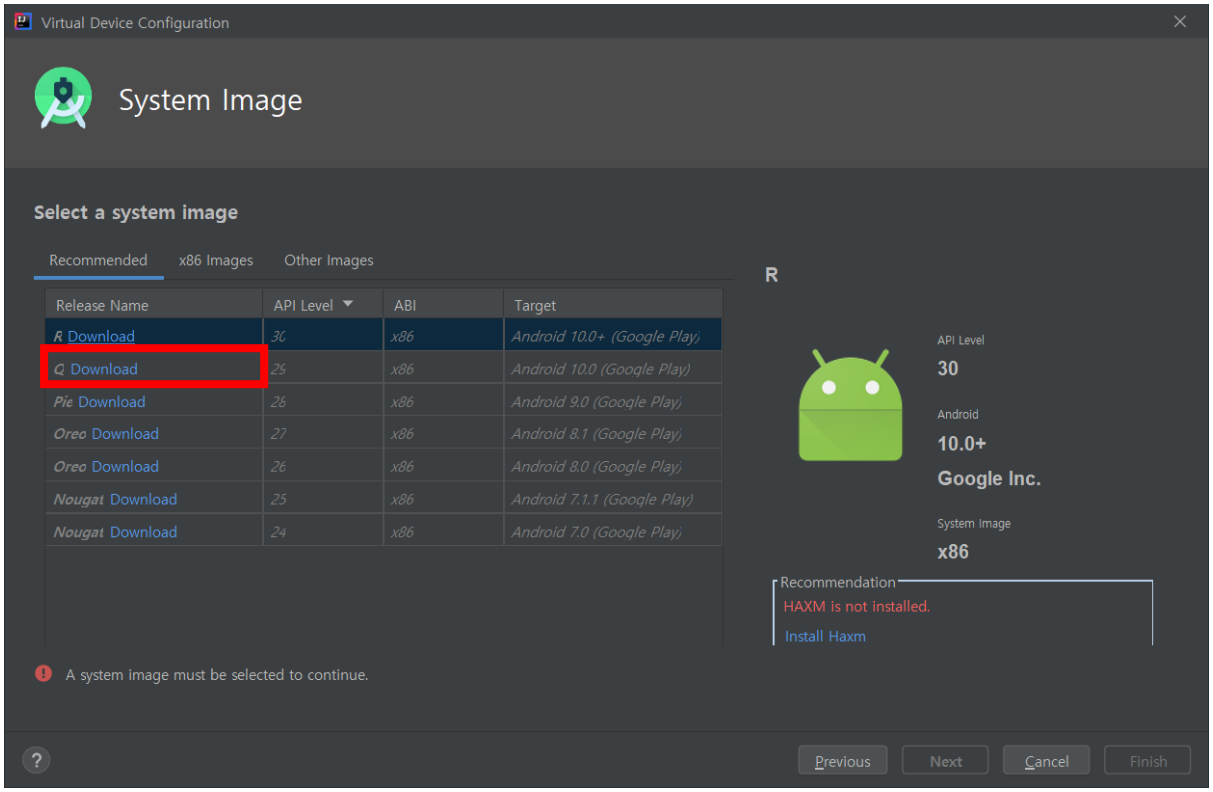


Clcik Install Haxm.

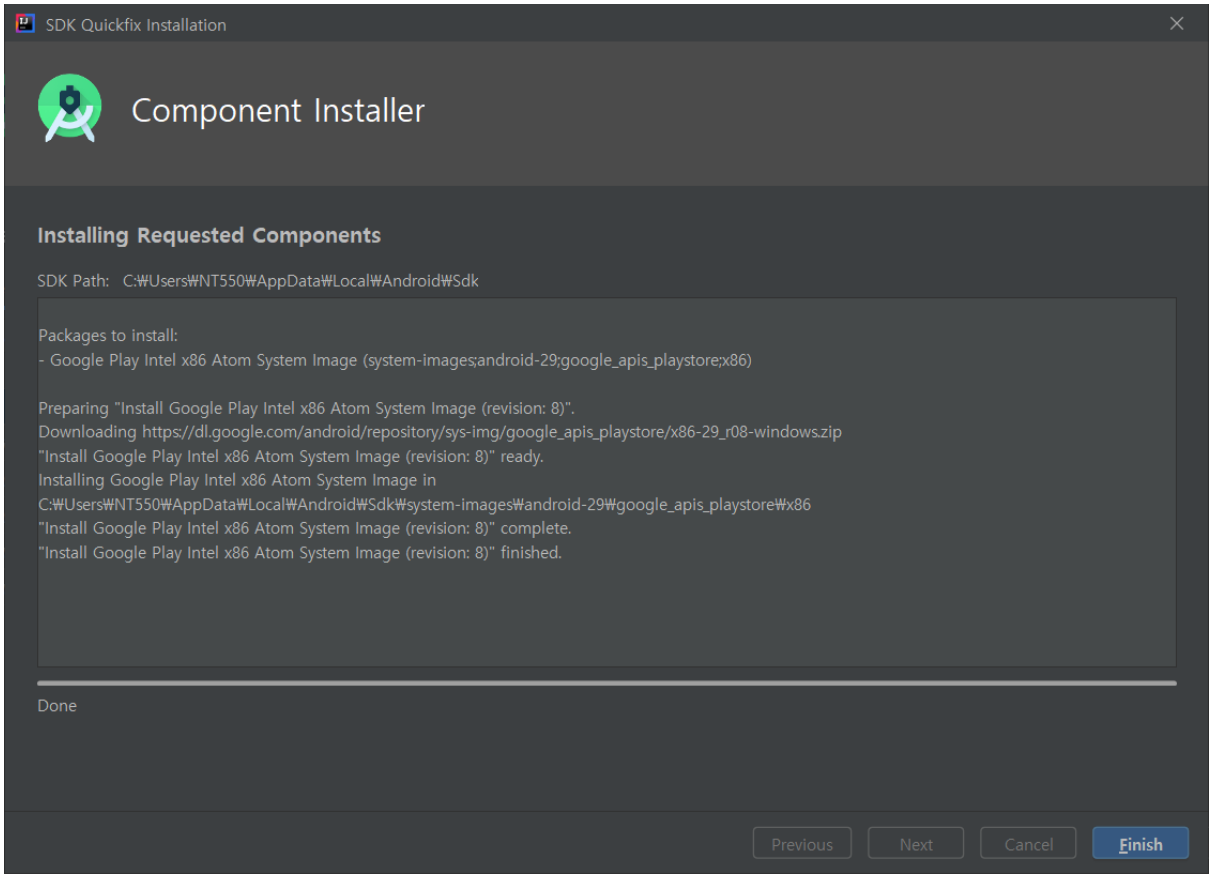
If your pc is using an AMD CPU, a different warning message will be displayed instead of Install Haxm. Please check the AVD virtual environment for AMD CPU tab in the manual.



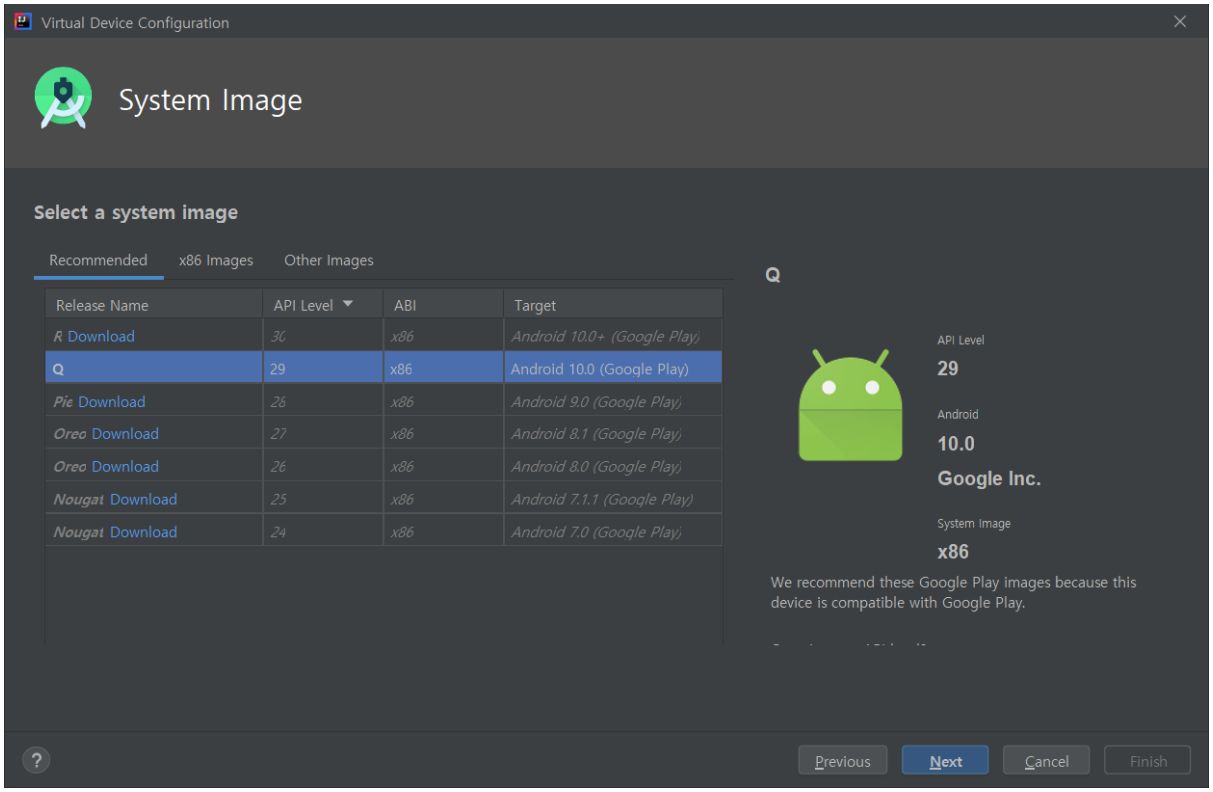
Click Next and click Finish when the download is complete.



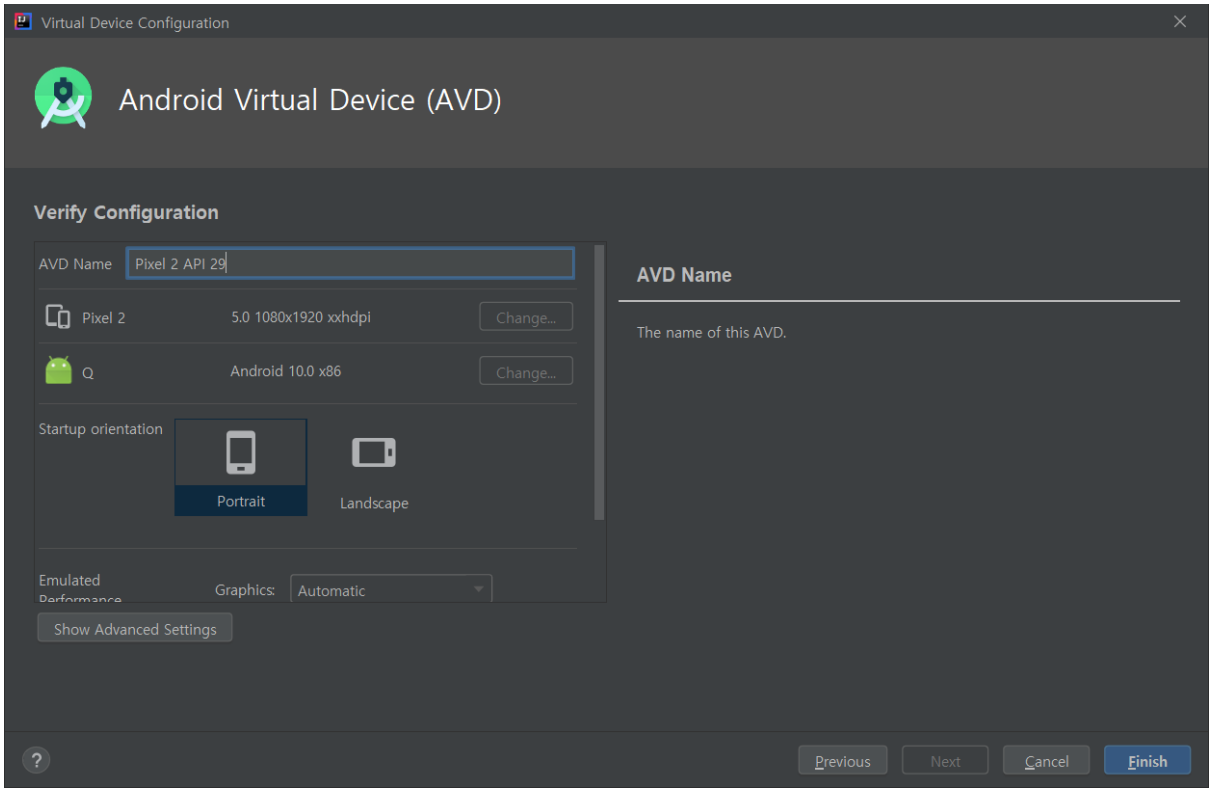
Click Q Download.

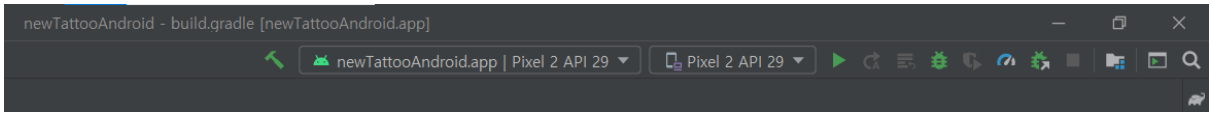


When the download is complete, click Finish.



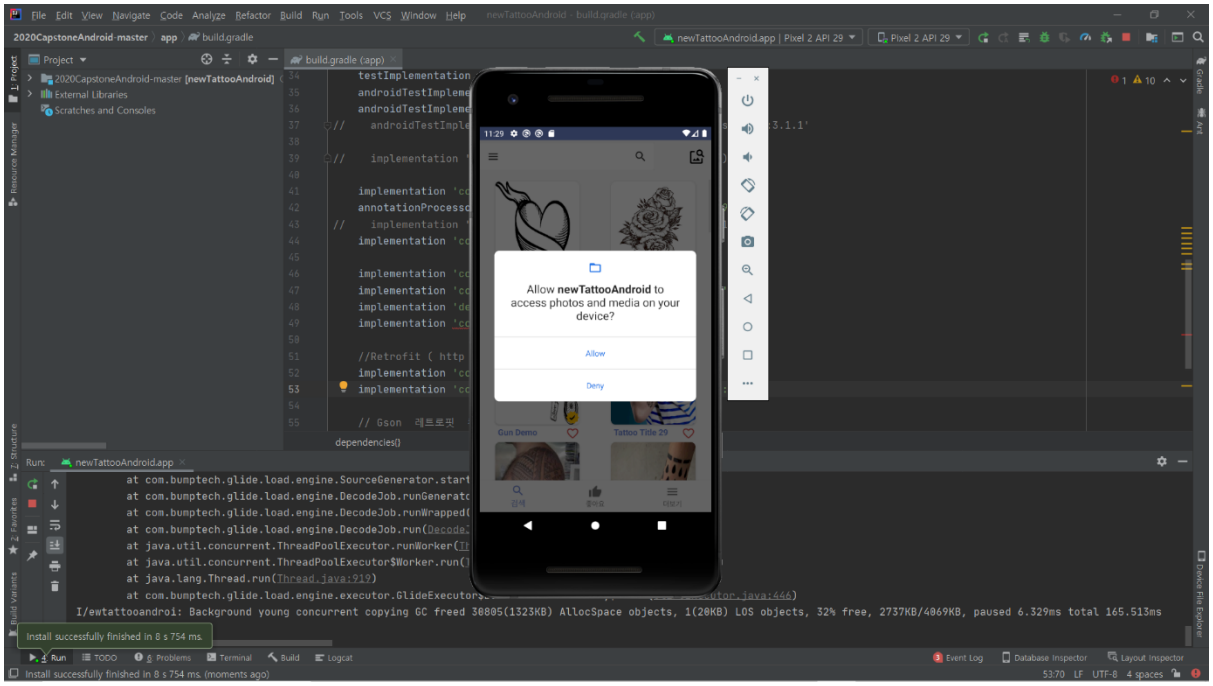
Select Q and then click Next.





When you return to the Intellij main page, the virtual smartphone is confirmed as follows.

Click Run to run the application.



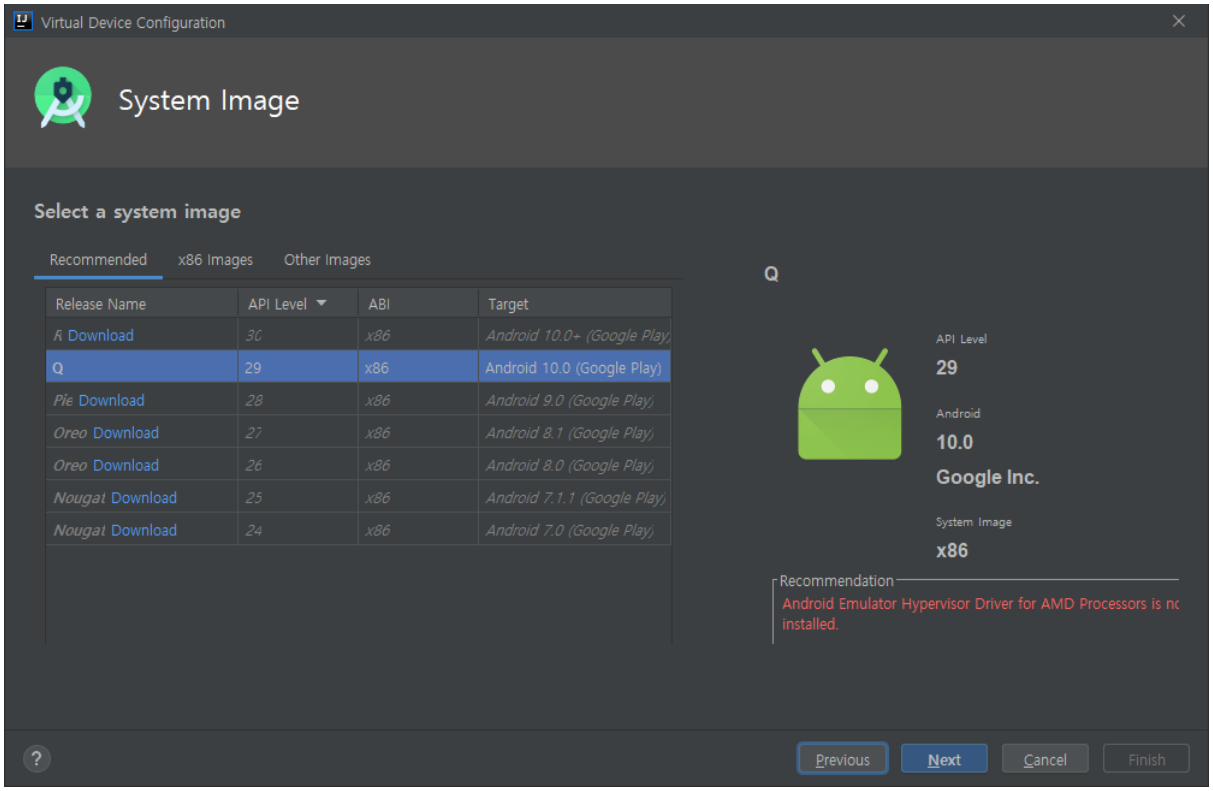
Check that the application runs normally in the virtual environment.

Execution with .apk file

If the PC does not run in the above two ways, run the .apk file in the usb on the Android smartphone and download the application manually.

AVD virtual environment for AMD CPU

This part is a manual for users running in AMD CPU Environment, not Intel CPU, Project Required Environment of the manual. Users who have confirmed the execution of the application with the contents of the previous manual can skip it.



On PCs with AMD CPUs, the above warning is displayed instead of Haxm Install.

Since the installation of the Android Emulator Hypervisor Driver for AMD Processor is a fairly complex process, I attach a reference link to Android Developers instead of describing it in the manual. Please check the below link.

<Android Developers reference>

https://androidstudio.googleblog.com/2019/10/android-emulator-hypervisor-driver-for.html

<AMD CPU에서 android emulator 설치 오류 해결하기> : written in Korean

https://jhleed.tistory.com/184

Application configuration

Main Screen

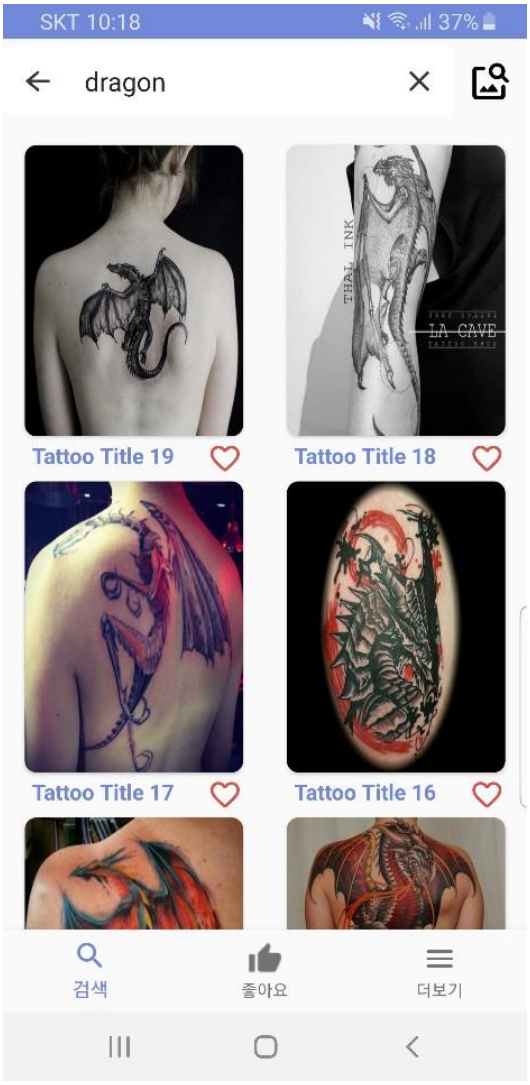
The photo and title in the box with red borders represents a single post posted by the tattooist. At the bottom right of the post, a special sticker appears in yellow when the cleanliness review score is 3.5 or higher, and those posts are always displayed at the top.

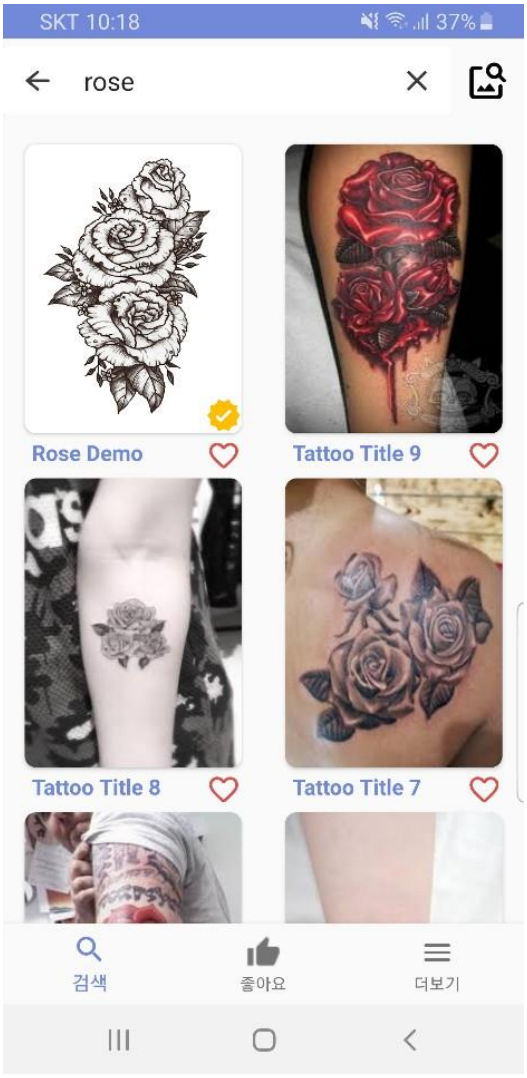
Posts that press the Like button can be viewed separately on the Like page.

The magnifying glass at the top allows you to collect and view only relevant posts when entering keywords (ex. rose, tiger).

The magnifying glass in the navigation bar below refers to the main page in the photo, the center is the page where you can collect posts that have clicked the Like button, and the icon on the far right refers to the personal setting and personal page where the tattooist can write.

Keyword Search





If you enter the keyword you want to search in the search box at the top, relevant posts are collected and displayed.

The keyword search function only supports English search.

Tattoo Virtual Simulation

This page can be accessed through the detail page that appears when you click a post on the main page.

You can change the background image by tapping the background selection icon on the top left. Currently, you can see that the arm photo is set. The tattoo image in the center can be moved and resized. By clicking the “Composite on my arm” button, you can simulately composite the tattoo image into the arm of the background image.

If you click the Save button on the top right, you can save the tattoo image with the transformation applied to the gallery.