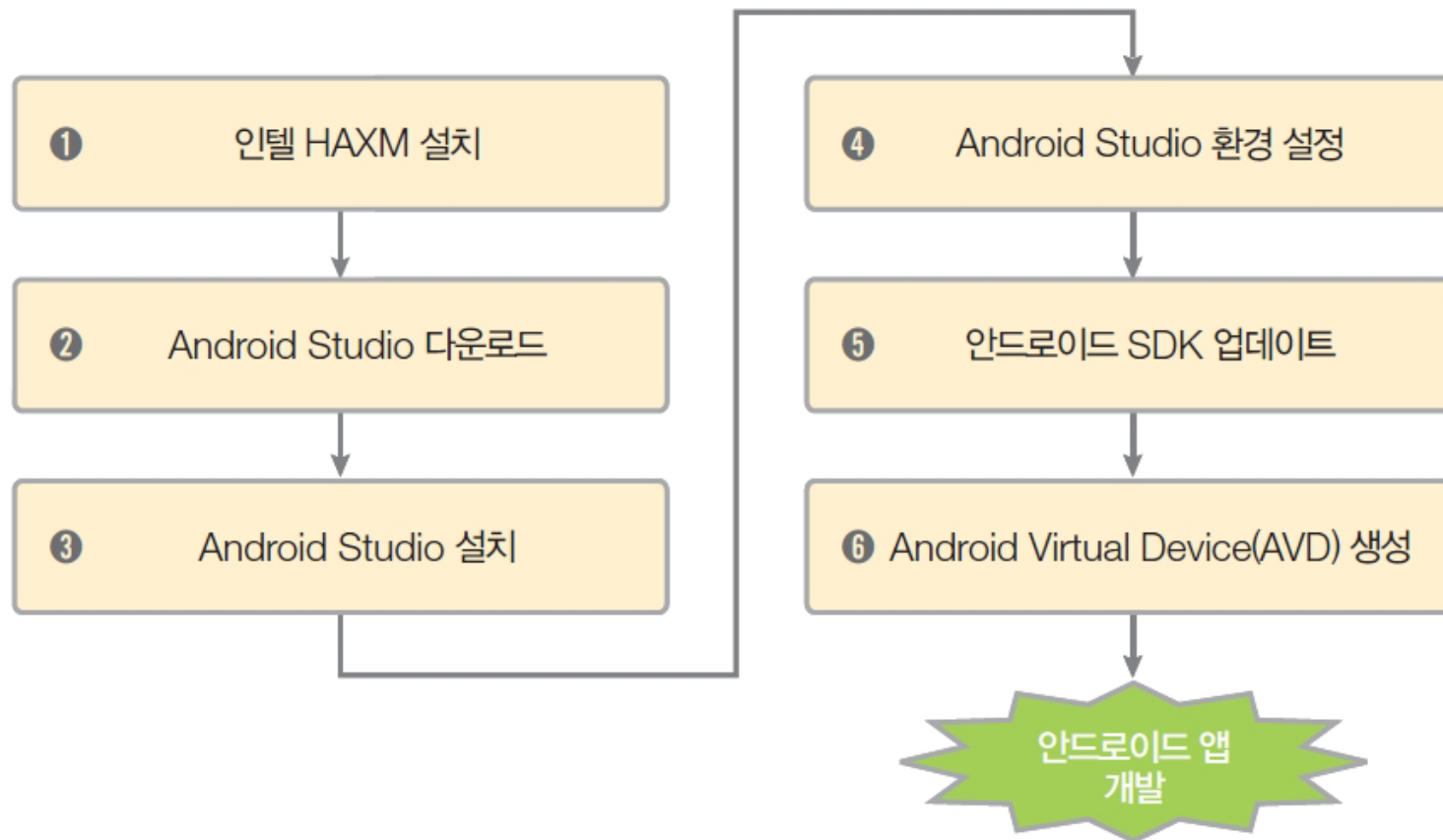


Chapter 02 개발 도구 설치와 앱 실행하기

1.1 Android Studio 다운로드 및 설치하기

· <https://developer.android.com/studio>



** 참고:

인텔 HAXM - Intel Hardware Accelerated Execution Manager

- 안드로이드 에뮬레이터를 실행할 때 속도를 빠르게 해 주고 성능을 향상해 주는 역할 제공
- 인텔 CPU에서만 사용 가능

**** 참고: (AMD CPU의 경우)**

- <https://github.com/google/android-emulator-hypervisor-driver>에 접속
- 최신 버전의 [Android Emulator Hypervisor Driver for AMD Processors] 파일(gvm-windows_버전.zip) 다운로드(3-4) 다운로드한 gvm-windows_버전.zip 파일의 압축을 풀고, 압축을 푼 폴더의 silent_install.bat 파일을 실행하여 설치를 진행

Download and Install

Android Emulator hypervisor driver is released through [android-studio](#). However, only Android Studio with version 4.0 canary 5 or above can both download and install/update the driver. Otherwise, the Android Studio will only download the driver package without performing installation. In the latter case, users are required to install the driver manually.

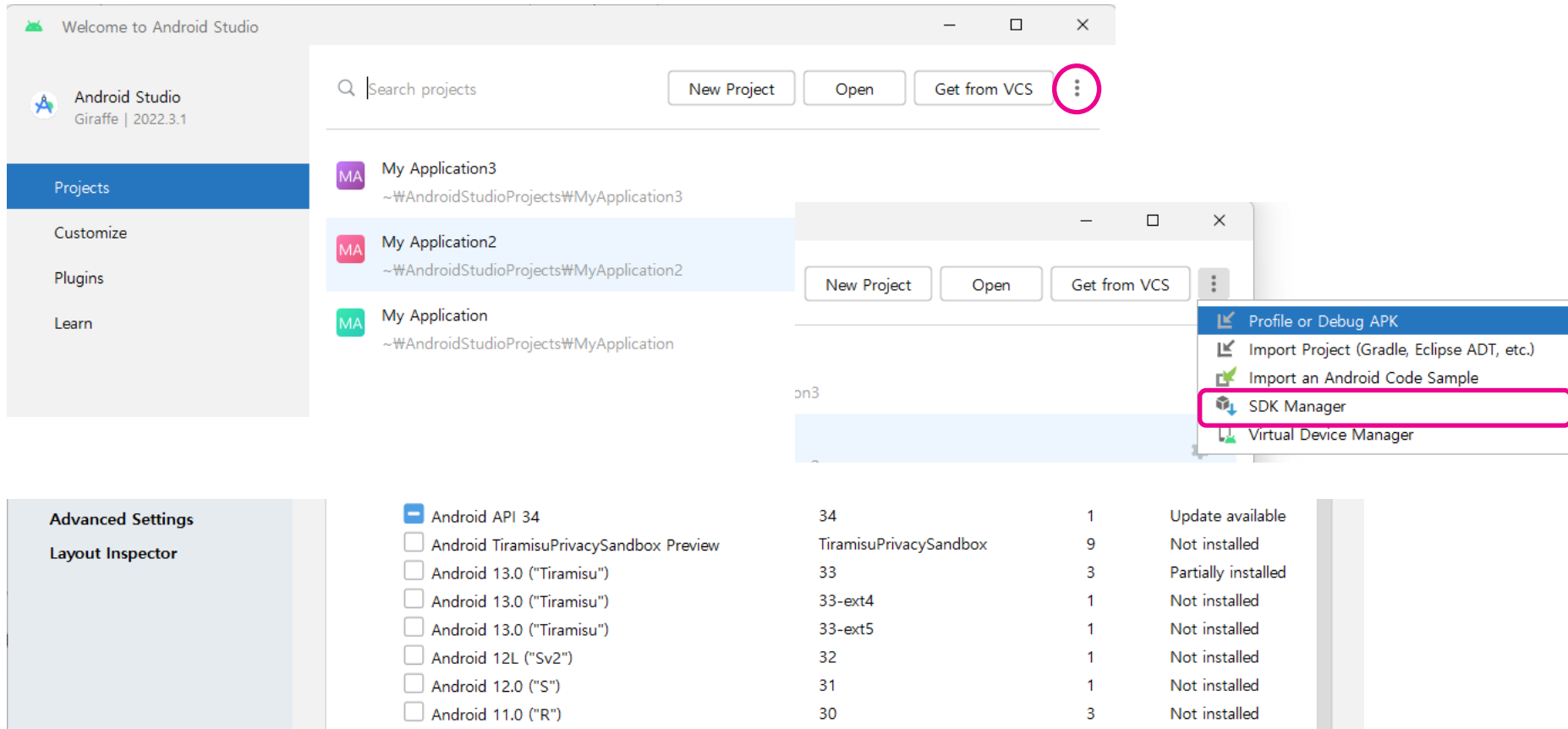
Prerequisite:

1. CPU has virtualization extension and BIOS has NOT disabled the extension.
2. Hyper-V must be disabled. Refer to [this page](#) for more information.

**** 참고: 이전 버전의 Android Studio 다운로드**

- <https://developer.android.co/studio/releases/archives?hl=ko>
 - 다운로드 가능한 각 버전의 특징 설명
- <https://developer.android.com/studio/archive?hl=ko>
 - android studio 파일 다운로드 가능

** 참고: Android Studio에서 사용하는 SDK 업데이트



** 참고: Android Studio에서 사용하는 SDK 업데이트

- Android Studio에서 [File]-[Settings] 선택
- [Language & Frameworks]-[Android SDK]

Settings

Q

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> C/C++

> Schemas and DTDs

Android SDK

> Kotlin

Markdown

Template Data Languages

> Tools

Advanced Settings

Kotlin Compiler

> Experimental

Languages & Frameworks > Android SDK

Manager for the Android SDK and Tools used by the IDE

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

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, the IDE will automatically check for updates. Check "show package details" to display individual SDK components.

Name	API Level	Revision	Status
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	TiramisuPrivacySandbox	9	Installed
<input checked="" type="checkbox"/> Android 13.0 ("Tiramisu")			
<input checked="" type="checkbox"/> Android SDK Platform 33	33	3	Installed
<input type="checkbox"/> Sources for Android 33	33	1	Not installed
<input type="checkbox"/> Android TV ARM 64 v8a System Image	33	5	Not installed
<input type="checkbox"/> Android TV Intel x86 Atom System Image	33	5	Not installed
<input type="checkbox"/> Google TV ARM 64 v8a System Image	33	5	Not installed
<input type="checkbox"/> Google TV Intel x86 Atom System Image	33	5	Not installed
<input type="checkbox"/> Google APIs ARM 64 v8a System Image	33	13	Not installed
<input checked="" type="checkbox"/> Google APIs Intel x86_64 Atom System Image	33	13	Installed
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	33	7	Installed
<input checked="" type="checkbox"/> Android 13.0 ("Tiramisu")			
<input checked="" type="checkbox"/> Android SDK Platform 33-ext4	33-ext4	1	Installed
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	33-ext4	1	Installed
<input checked="" type="checkbox"/> Android 13.0 ("Tiramisu")			
<input checked="" type="checkbox"/> Android SDK Platform 33-ext5	33-ext5	1	Installed
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	33-ext5	1	Installed
<input checked="" type="checkbox"/> Android 12L ("Sv2")			

☒ Hide Obsolete Packages☒ Show Package Details

?

OK

Cancel

Apply

Settings

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Languages & Frameworks > Android SDK

Manager for the Android SDK and Tools used by the IDE

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

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, the IDE will automatically check for updates. Check "show package details" to display individual SDK components.

Name	API Level	Revision	Status
<input checked="" type="checkbox"/> Android SDK Platform 33-ext5	33-ext5	1	Installed
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	33-ext5	1	Installed
Android 12L ("Sv2")			
<input checked="" type="checkbox"/> Android SDK Platform 32	32	1	Installed
<input type="checkbox"/> Sources for Android 32	32	1	Not installed
<input type="checkbox"/> Desktop ARM 64 v8a System Image	32	5	Not installed
<input type="checkbox"/> Desktop Intel x86_64 Atom System Image	32	5	Not installed
<input type="checkbox"/> Google APIs ARM 64 v8a System Image	32	6	Not installed
<input checked="" type="checkbox"/> Google APIs Intel x86_64 Atom System Image	32	7	Installed
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	32	3	Installed
Android 12.0 ("S")			
<input checked="" type="checkbox"/> Android SDK Platform 31	31	1	Installed
<input type="checkbox"/> Sources for Android 31	31	1	Not installed
<input type="checkbox"/> Android TV ARM 64 v8a System Image	31	4	Not installed
<input type="checkbox"/> Android TV Intel x86 Atom System Image	31	4	Not installed
<input type="checkbox"/> ARM 64 v8a System Image	31	4	Not installed
<input type="checkbox"/> Intel x86_64 Atom System Image	31	5	Not installed
<input type="checkbox"/> Google TV ARM 64 v8a System Image	31	4	Not installed
<input type="checkbox"/> Google TV Intel x86 Atom System Image	31	4	Not installed

☒ Hide Obsolete Packages☒ Show Package Details

?

OK

Cancel

Apply

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Languages & Frameworks > Android SDK

Manager for the Android SDK and Tools used by the IDE

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

EditOptimize disk space

SDK PlatformsSDK ToolsSDK Update Sites

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

Name	API Level	Revision	Status
<input checked="" type="checkbox"/> Google APIs Intel x86_64 Atom System Image			
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	32	3	Installed
<input checked="" type="checkbox"/> Android 12.0 ("S")			
<input checked="" type="checkbox"/> Android SDK Platform 31	31	1	Installed
<input type="checkbox"/> Sources for Android 31	31	1	Not installed
<input type="checkbox"/> Android TV ARM 64 v8a System Image	31	4	Not installed
<input type="checkbox"/> Android TV Intel x86 Atom System Image	31	4	Not installed
<input type="checkbox"/> ARM 64 v8a System Image	31	4	Not installed
<input type="checkbox"/> Intel x86_64 Atom System Image	31	5	Not installed
<input type="checkbox"/> Google TV ARM 64 v8a System Image	31	4	Not installed
<input type="checkbox"/> Google TV Intel x86 Atom System Image	31	4	Not installed
<input type="checkbox"/> Google APIs ARM 64 v8a System Image	31	10	Not installed
<input checked="" type="checkbox"/> Google APIs Intel x86_64 Atom System Image	31	14	Installed
<input checked="" type="checkbox"/> Google Play Intel x86_64 Atom System Image	31	9	Installed
<input type="checkbox"/> Android 11.0 ("R")			
<input type="checkbox"/> Android SDK Platform 30	30	3	Not installed
<input type="checkbox"/> Sources for Android 30	30	1	Not installed
<input type="checkbox"/> Android TV Intel x86 Atom System Image	30	4	Not installed
<input type="checkbox"/> Wear OS 3 ARM 64 v8a System Image	30	11	Not installed

☒ Hide Obsolete Packages☒ Show Package Details

?

OKCancelApply

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Manager for the Android SDK and Tools used by the IDE

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

SDK Platforms

SDK Tools

SDK Update Sites

Below are the available SDK developer tools. Once installed, the 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 34		
<input checked="" type="checkbox"/> 34.0.0	34.0.0	Installed
<input type="checkbox"/> 34.0.0-rc3	34.0.0 rc3	Not installed
<input type="checkbox"/> 34.0.0-rc2	34.0.0 rc2	Not installed
<input type="checkbox"/> 34.0.0-rc1	34.0.0 rc1	Not installed
<input checked="" type="checkbox"/> 33.0.2	33.0.2	Installed
<input checked="" type="checkbox"/> 33.0.1	33.0.1	Installed
<input checked="" type="checkbox"/> 33.0.0	33.0.0	Installed
<input type="checkbox"/> 32.1.0-rc1	32.1.0 rc1	Not installed
<input checked="" type="checkbox"/> 32.0.0	32.0.0	Installed
<input checked="" type="checkbox"/> 31.0.0	31.0.0	Installed
<input checked="" type="checkbox"/> 30.0.3	30.0.3	Installed
<input type="checkbox"/> 30.0.2	30.0.2	Not installed
<input type="checkbox"/> 30.0.1	30.0.1	Not installed
<input type="checkbox"/> 30.0.0	30.0.0	Not installed
<input type="checkbox"/> 29.0.3	29.0.3	Not installed
<input checked="" type="checkbox"/> 29.0.2	29.0.2	Installed
<input type="checkbox"/> 29.0.1	29.0.1	Not installed
<input type="checkbox"/> 29.0.0	29.0.0	Not installed

☒ Hide Obsolete Packages☒ Show Package Details

OKCancelApply

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Manager for the Android SDK and Tools used by the IDE

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

EditOptimize disk space

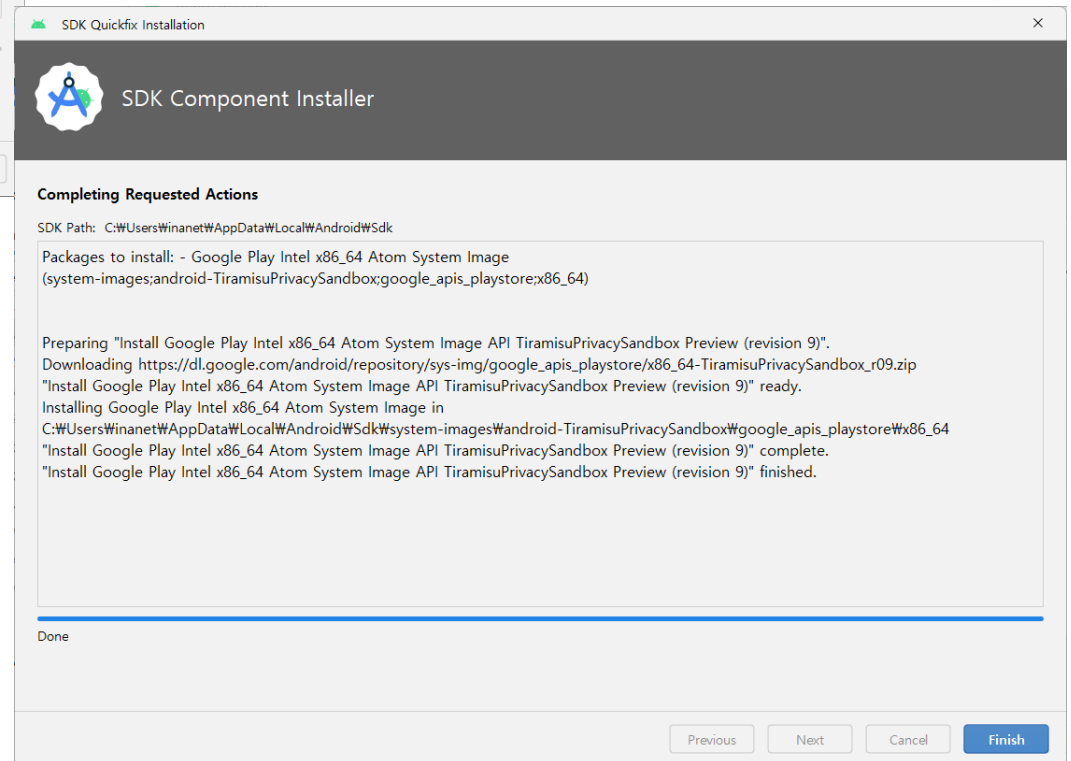
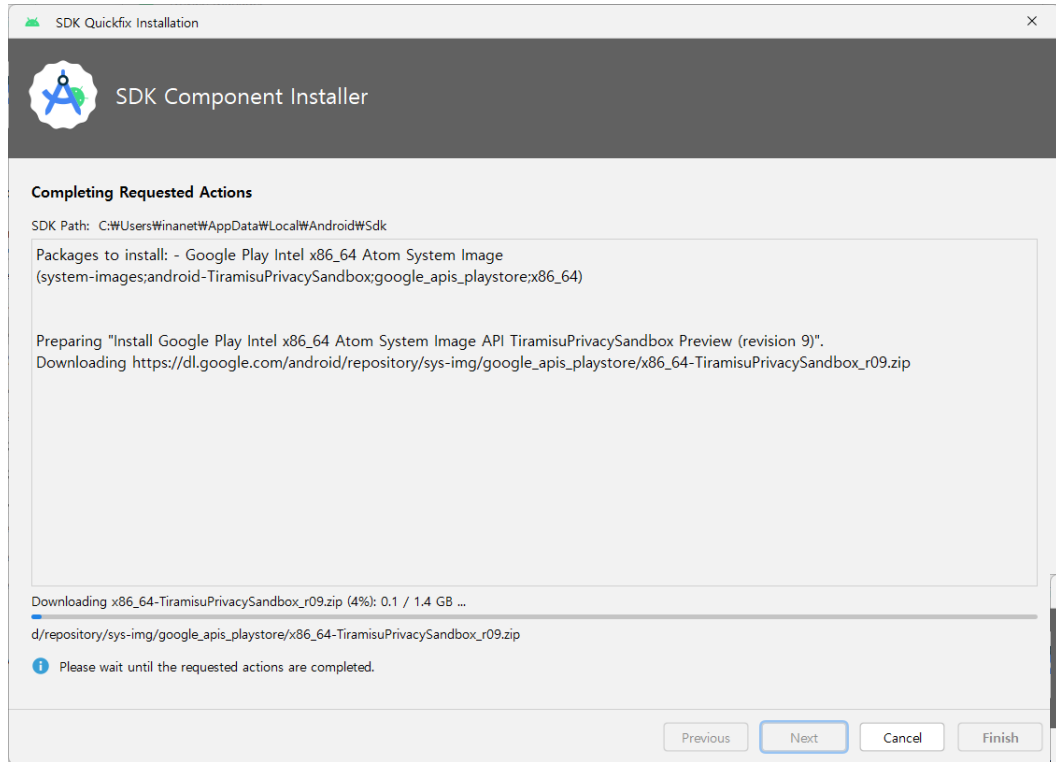
SDK PlatformsSDK ToolsSDK Update Sites

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

Name	Version	Status
<input type="checkbox"/> Cmake		
<input type="checkbox"/> 3.22.1	3.22.1	Not installed
<input type="checkbox"/> 3.18.1	3.18.1	Not installed
<input type="checkbox"/> 3.10.2.4988404	3.10.2	Not installed
<input type="checkbox"/> 3.6.4111459	3.6.4111459	Not installed
<input type="checkbox"/> Android Auto API Simulators	1	Not installed
<input type="checkbox"/> Android Auto Desktop Head Unit Emulator	2.0	Not installed
<input checked="" type="checkbox"/> Android Emulator	32.1.15	Installed
<input checked="" type="checkbox"/> Android Emulator hypervisor driver (installer)	2.0.0	Installed
<input checked="" type="checkbox"/> Android SDK Platform-Tools	34.0.4	Installed
<input type="checkbox"/> Google Play APK Expansion library	1	Not installed
<input type="checkbox"/> Google Play Instant Development SDK	1.9.0	Not installed
<input type="checkbox"/> Google Play Licensing Library	1	Not installed
<input type="checkbox"/> Google Play services	49	Install ready
<input type="checkbox"/> Google USB Driver	13	Not installed
<input type="checkbox"/> Google Web Driver	2	Not installed
<input checked="" type="checkbox"/> Intel x86 Emulator Accelerator (HAXM installer)	7.6.5	Installed
<input checked="" type="checkbox"/> Layout Inspector image server for API 29-30	6	Installed
<input checked="" type="checkbox"/> Layout Inspector image server for API 31-34	3	Installed
<input type="checkbox"/> Layout Inspector image server for API S	3	Not installed

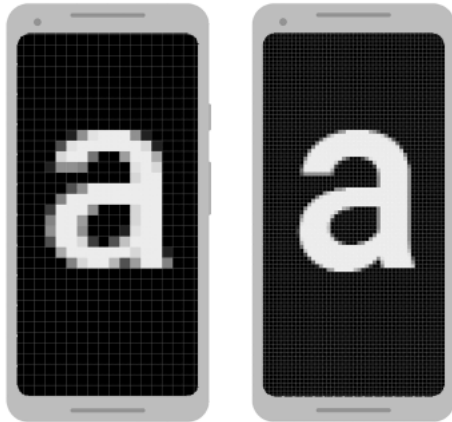
☒ Hide Obsolete Packages☒ Show Package Details

OKCancelApply



**** 참고: 픽셀 밀도**

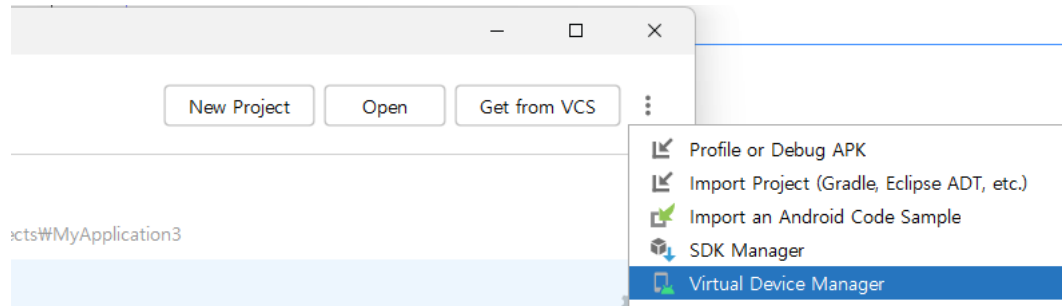
- px / dp / sp
- 기기의 다양한 크기(스마트폰, 태블릿, TV 등), 다양한 픽셀 크기
- [예] 한 기기에서 제곱인치당 160 픽셀을 사용하고, 다른 기기에서 480 픽셀을 사용하는 경우
 - 같은 이미지가 흐리게 표시되는 경우 발생 가능
- 픽셀로 크기를 정의하면 화면 크기에 따라 픽셀의 밀도가 달라져서, 같은 개수의 픽셀이라도 기기가 다르면 실제 크기가 달라질 수 있는 문제 발생
- 밀도가 다른 화면에서 UI 표시 크기를 유지하려면, 밀도 독립형 픽셀(dp)을 측정 단위로 사용해서 UI 디자인
- 1 dp는 기준밀도 160dpi에서 1px와 거의 동일한 가상 픽셀 단위
- 안드로이드는 dp 값을 밀도마다 적합한 실제 픽셀 수로 변환
- 텍스트 크기를 정의할 때는 sp 단위 사용

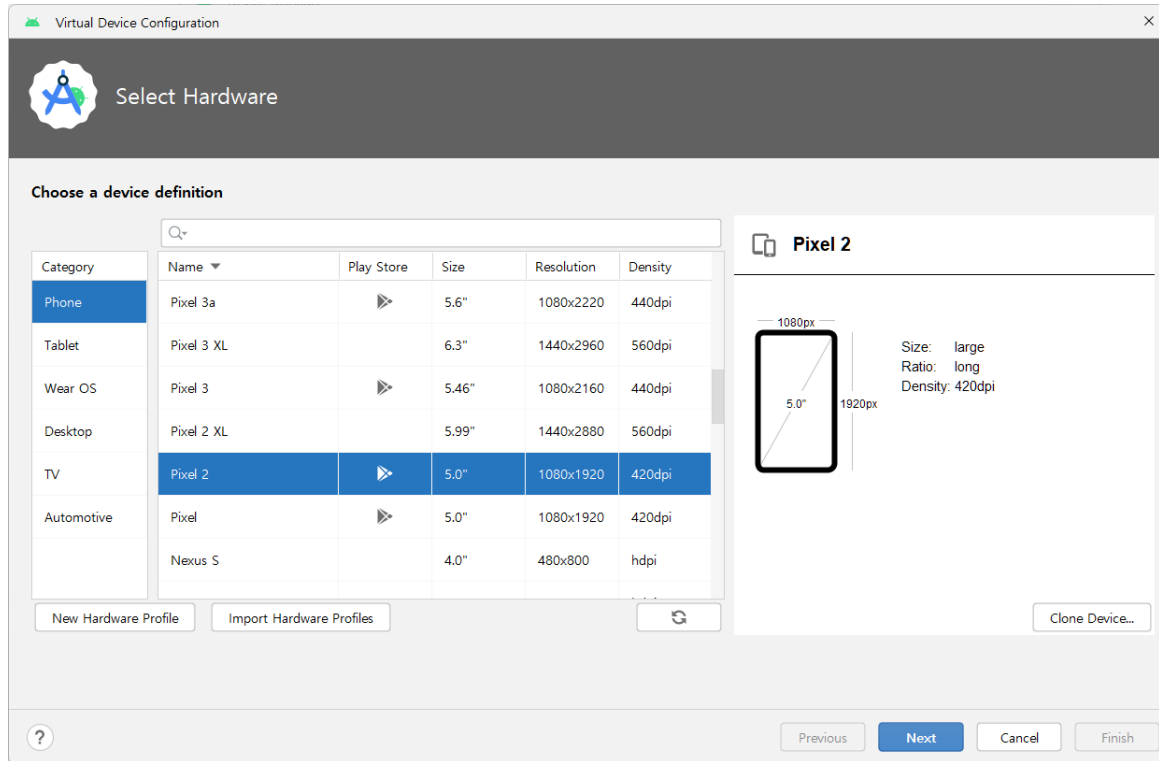


- 두 뷰의 크기를 100px로 정의하면,
- 100dp를 사용하여 뷰가 동일한 크기로 표시되도록 한다.

2.1 에뮬레이터 생성 및 실행하기

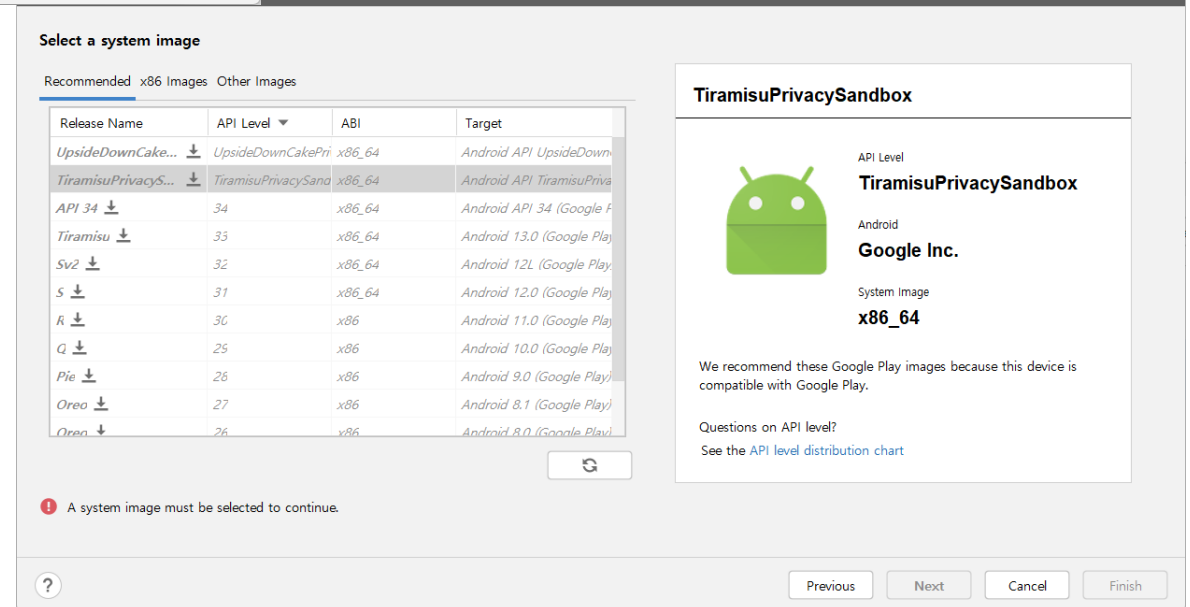
· 기본 AVD 확인





****디바이스 선택시 유의할 점**

- 가급적 낮은 사양의 디바이스 선택
- 코드의 양이 많아지면 android studio가 느려진다.



Virtual Device Configuration

Android Virtual Device (AVD)

Verify Configuration

AVD Name

T - AVD

Pixel 2

5.0 1080x1920 420dpi

Change...

TiramisuPrivacySandbox

Android API TiramisuPrivacySandbox x86_64

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

Device Manager

Create Device

Device	API	Size on Disk	Actions
Pixel_3a_API_34_extension_level_7_x86_64 Android API 34 Google APIs x86_64	34	11 GB	
T - AVD Android TiramisuPrivacySandbox Preview Google Play x86_64	TiramisuPrivacySandbox	6.6 GB	

Launch this AVD in t

Launching emulator

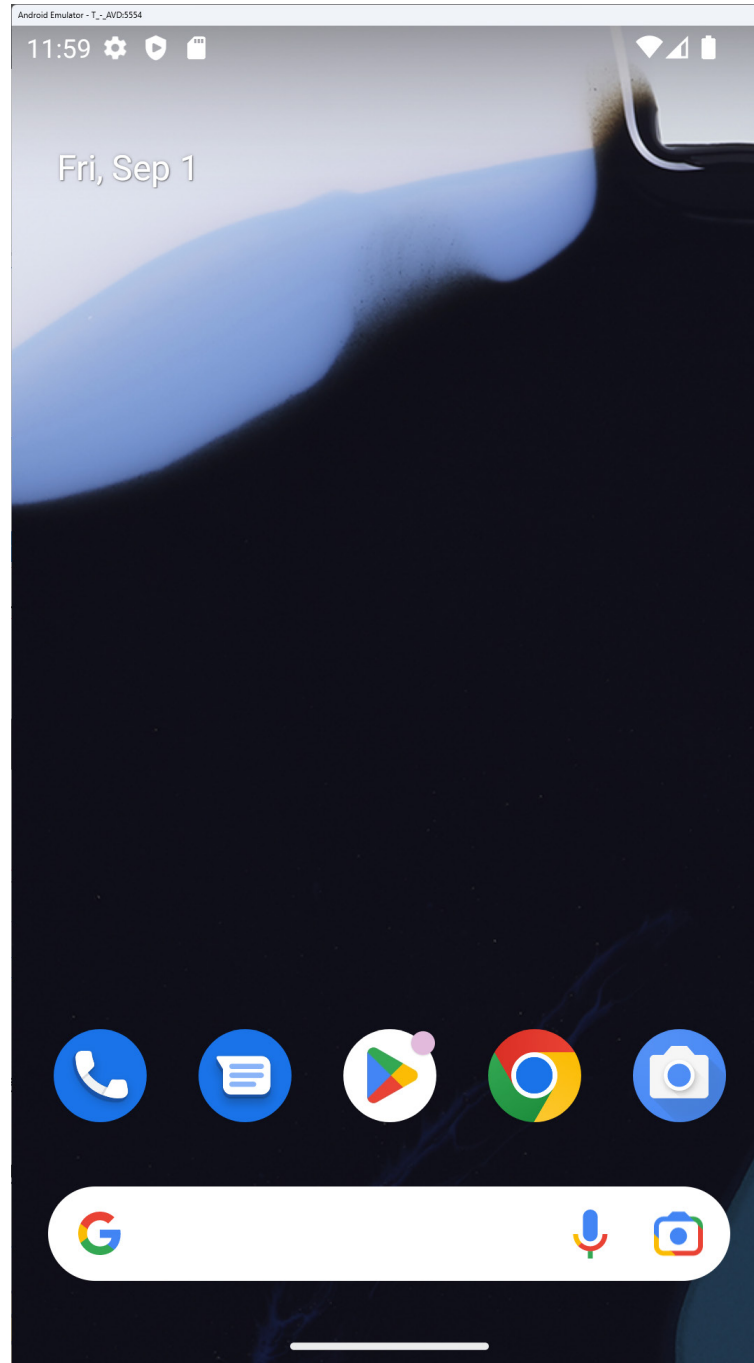
Starting AVD...

Minimize

Virtual Physical

Create Device

Device	API	Size on Disk	Actions
Pixel_3a_API_34_extension_level_7_x86_64 Android API 34 Google APIs x86_64	34	11 GB	
T - AVD Android TiramisuPrivacySandbox Preview Google Play x86_64	TiramisuPrivacySandbox	8.6 GB	



**** 참고: 에뮬레이터가 실행되지 않아요**

· 교재 p66 참고

2.2 스마트폰 설정 및 연결하기

Step 1: 스마트폰의 [설정]으로 이동

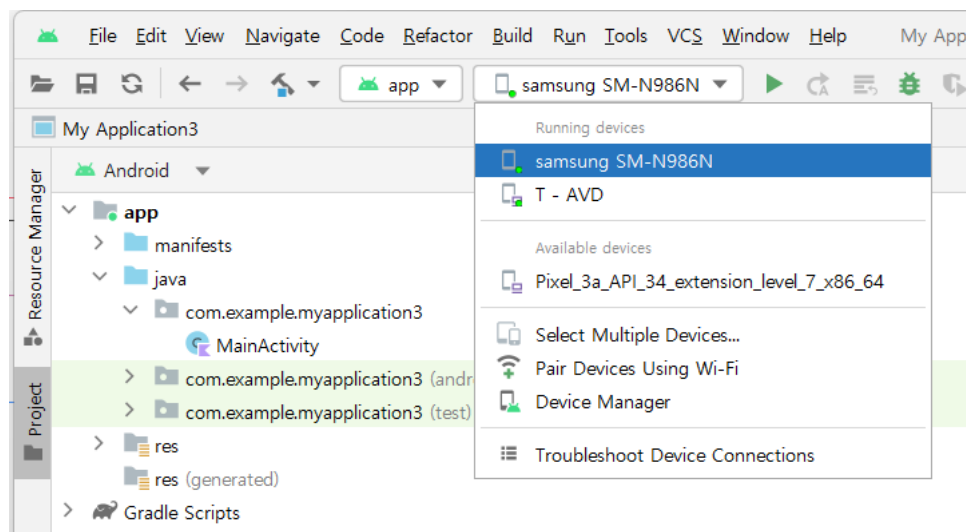
Step 2: [휴대전화 정보] - [소프트웨어 정보] - [빌드번호]를 5회 이상 연속해서 터치
개발자 모드 활성화 메시지 확인

Step 3: [설정] - [개발자 옵션] 화면으로 이동

Step 4: [USB 디버깅] 메뉴를 On으로 변경

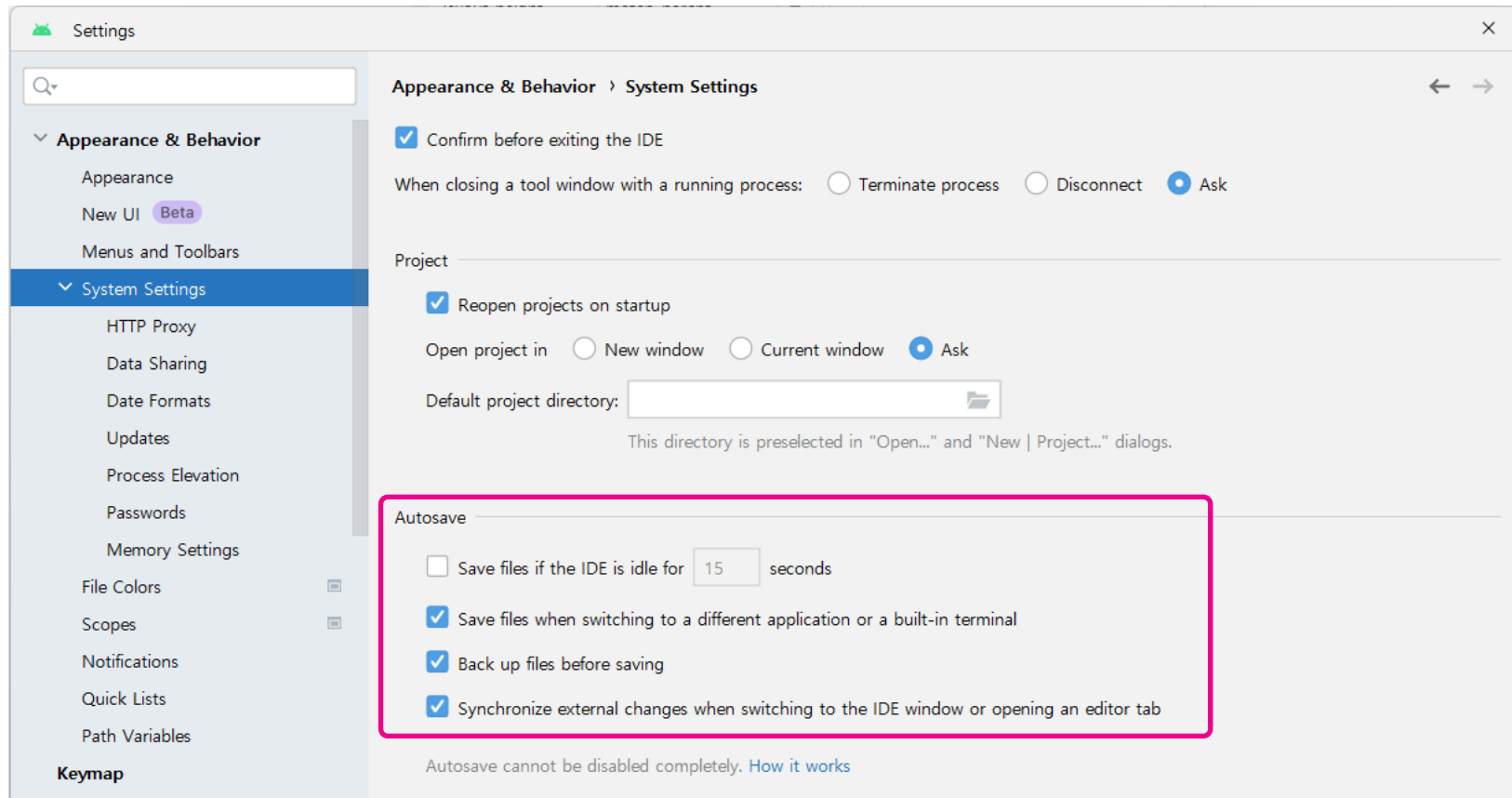
Step 5: USB 케이블을 이용해서 스마트폰과 PC 연결

Step 6: Android Studio의 [Running devices] 목록에서 해당 기기 연결 확인



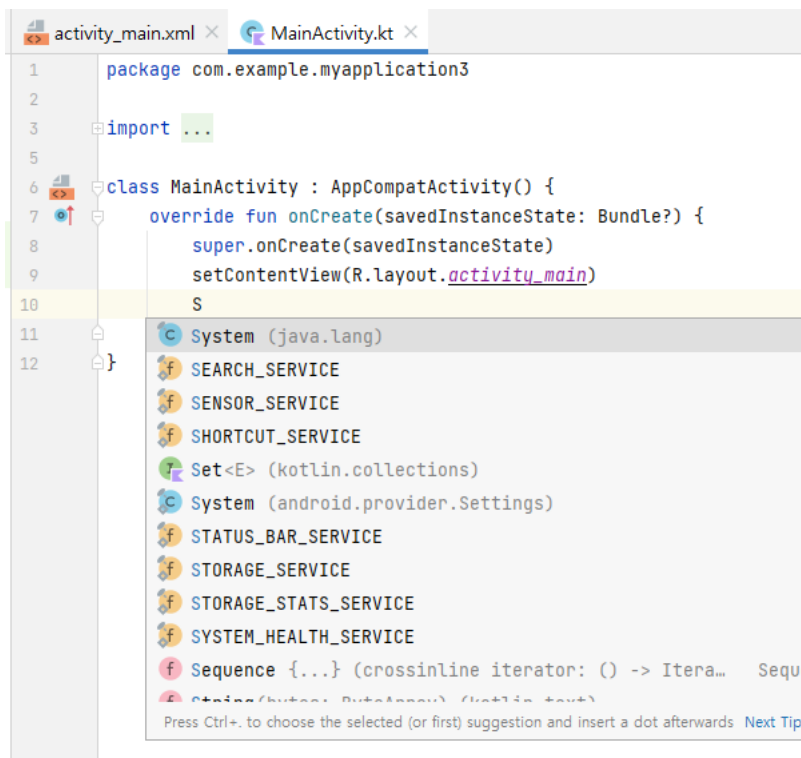
2.3 개발을 도와주는 유용한 기능

· 자동 저장



· 코드 자동 완성

- 앞에 몇 글자를 입력하면 입력된 글자를 포함하는 코드를 제안해 주는 기능
- 제안된 목록에서 선택하고 Enter 키 입력하면 코드 자동 입력



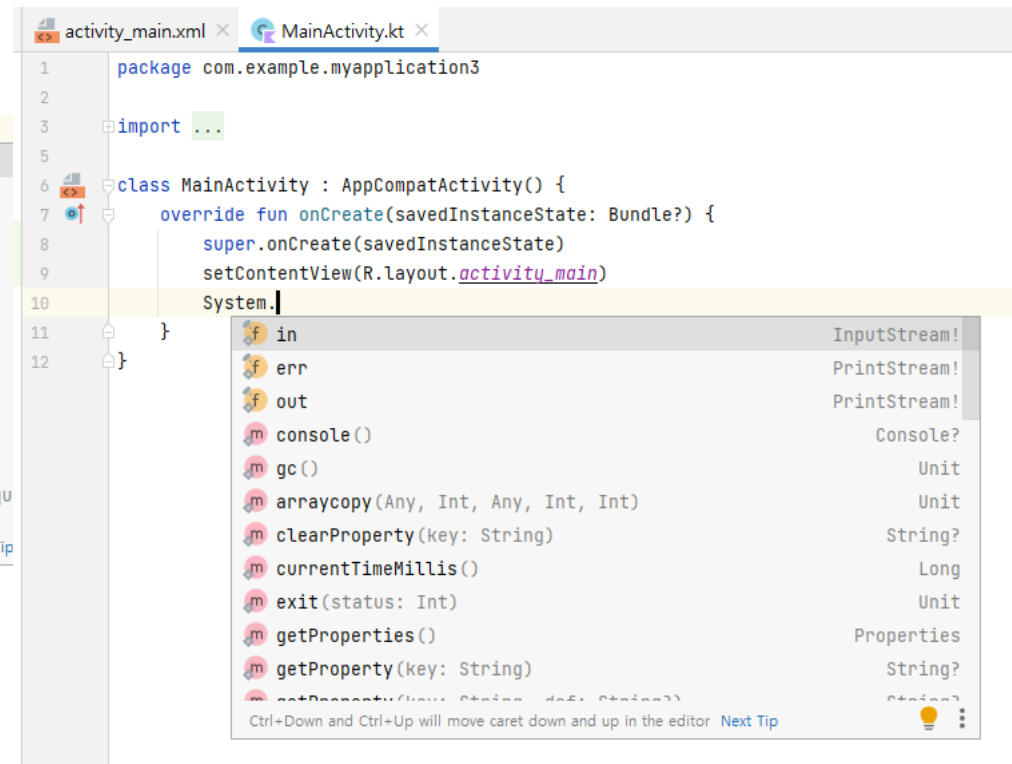
The screenshot shows an IDE with two tabs: 'activity_main.xml' and 'MainActivity.kt'. The 'MainActivity.kt' file is open, showing the following code:

```
1 package com.example.myapplication3
2
3 import ...
4
5
6 class MainActivity : AppCompatActivity() {
7     override fun onCreate(savedInstanceState: Bundle?) {
8         super.onCreate(savedInstanceState)
9         setContentView(R.layout.activity_main)
10        S
11
12    }
```

A dropdown menu is visible below the 'S' on line 10, listing suggestions:

- System (java.lang)
- SEARCH_SERVICE
- SENSOR_SERVICE
- SHORTCUT_SERVICE
- Set<E> (kotlin.collections)
- System (android.provider.Settings)
- STATUS_BAR_SERVICE
- STORAGE_SERVICE
- STORAGE_STATS_SERVICE
- SYSTEM_HEALTH_SERVICE
- Sequence {...} (crossinline iterator: () -> Itera...
- String (kotlin.text)

At the bottom, a tip reads: "Press Ctrl+. to choose the selected (or first) suggestion and insert a dot afterwards Next Tip".



The screenshot shows the same IDE with the 'MainActivity.kt' file. The code is now:

```
1 package com.example.myapplication3
2
3 import ...
4
5
6 class MainActivity : AppCompatActivity() {
7     override fun onCreate(savedInstanceState: Bundle?) {
8         super.onCreate(savedInstanceState)
9         setContentView(R.layout.activity_main)
10        System.
11
12    }
```

A dropdown menu is visible below 'System.', listing suggestions:

- in
- err
- out
- console()
- gc()
- arraycopy(Any, Int, Any, Int, Int)
- clearProperty(key: String)
- currentTimeMillis()
- exit(status: Int)
- getProperties()
- getProperty(key: String)
- setProperty(key: String, def: String?)

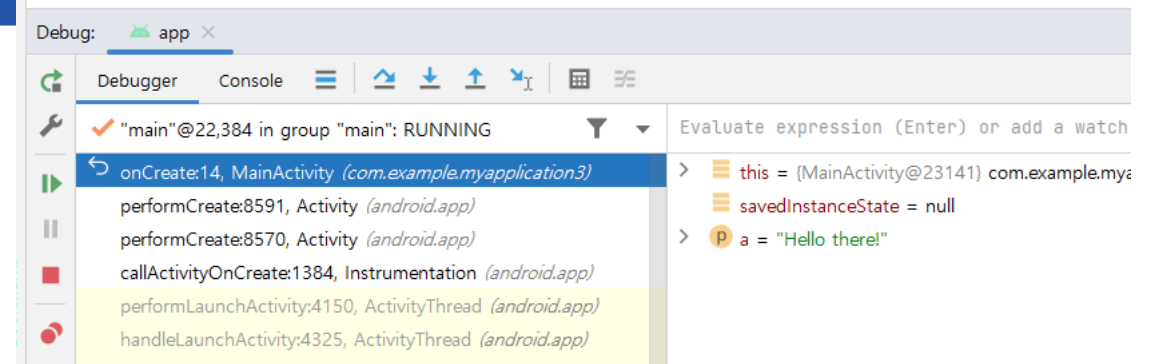
At the bottom, a tip reads: "Ctrl+Down and Ctrl+Up will move caret down and up in the editor Next Tip".

· 디버깅

- 디버깅 도구를 사용하려면 에뮬레이터가 먼저 실행되어야 한다.
- Android Studio 편집기에서 중단점(Break Point) 설정
- 디버깅 모드로 실행

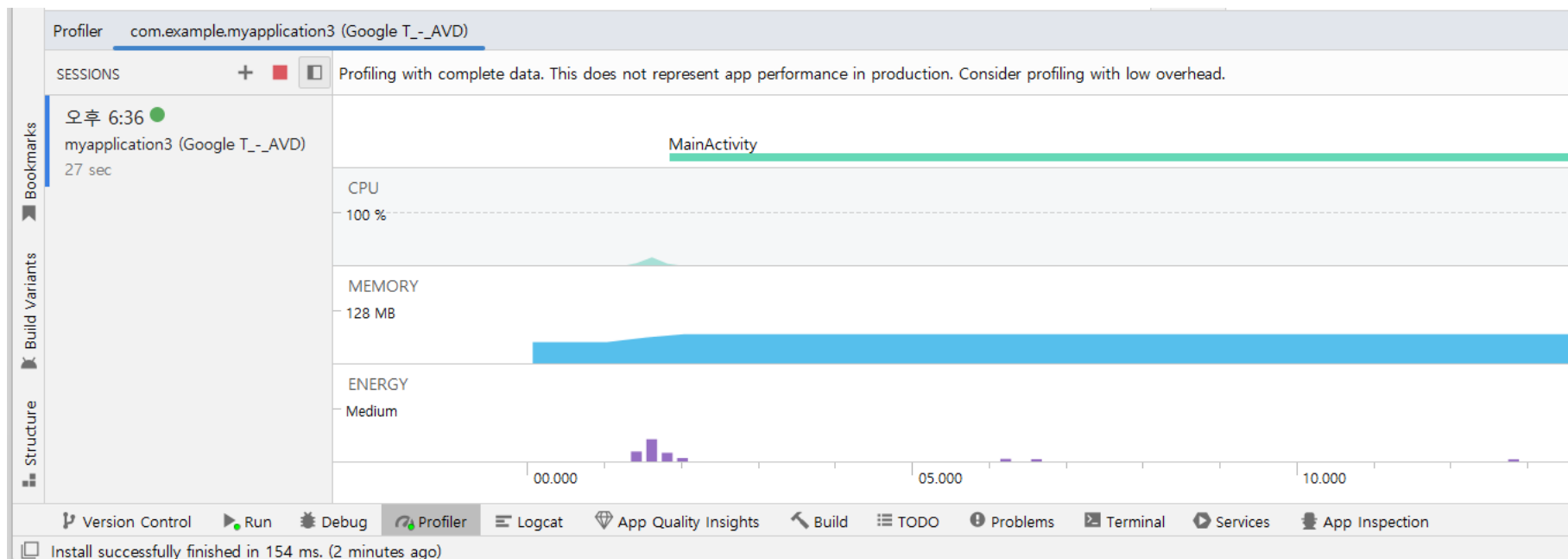


```
activity_main.xml x MainActivity.kt x android-33/UnavailableSource x
1 package com.example.myapplication3
2
3 import ...
4
5
6 class MainActivity : AppCompatActivity() {
7     override fun onCreate(savedInstanceState: Bundle?) { savedInstanceState: null
8         super.onCreate(savedInstanceState) savedInstanceState: null
9         setContentView(R.layout.activity_main)
10
11         var a = "Hello" a: "Hello there!"
12         a = a + " there!"
13         print(a) a: "Hello there!"
14
15 }
```



· 성능 모니터링

- 앱을 실행한 뒤에
- 창 아래에서 [Profile] 탭을 선택
- Profile 창의 왼쪽에서 Session 추가 버튼 [+]을 클릭하여 모니터링할 앱 추가



2.4 앱 만들어 실행하기

Step 1

프로젝트 생성

Step 2

레이아웃 편집

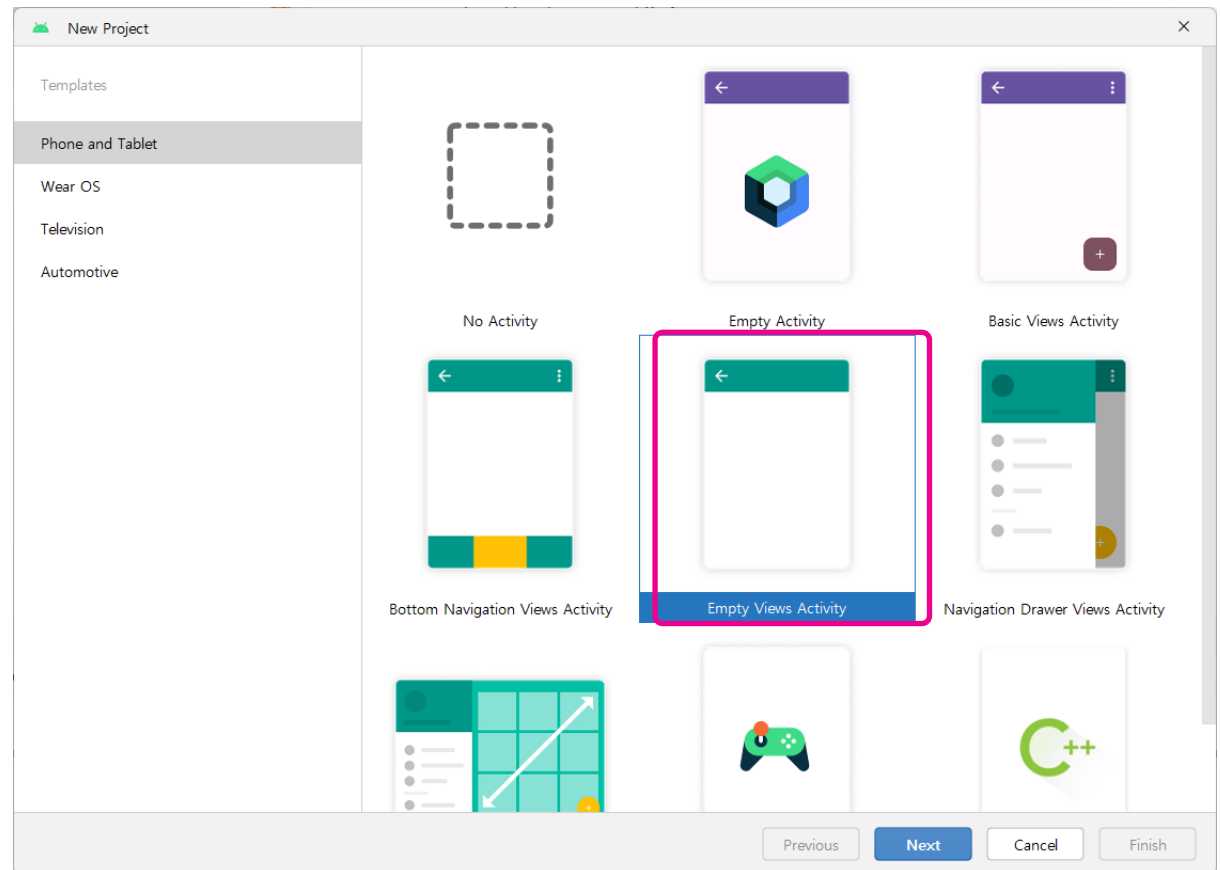
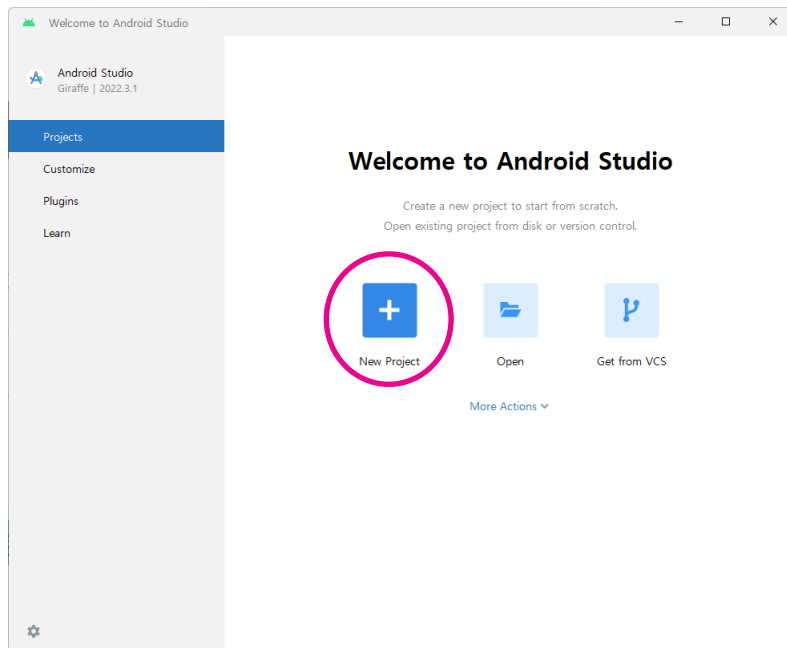
Step 3


소스코드 연결

Step 4

앱 실행

· Step 1: 프로젝트 생성



 New Project ✕

Empty Views Activity

Creates a new empty activity

Name

MyApp01

Package name

com.android.myapplication01

Package 이름에 'example'이 포함되는 경우
Google App Store에 등록 불가

Save location


C:\Users\Winanet\AndroidStudioProjects\MyApp01


Language

Kotlin

Minimum SDK

API 33 ("Tiramisu"; Android 13.0)

 Your app will run on approximately 15.0% of devices.
[Help me choose](#)

Build configuration language 

Kotlin DSL (build.gradle.kts) [Recommended]

Previous

Next

Cancel

Finish


· Step 2: 레이아웃 편집

- activity_main.xml

- MainActivity.kt

```
class MainActivity : AppCompatActivity() {  
    override fun onCreate(savedInstanceState: Bundle?) {  
        super.onCreate(savedInstanceState)  
        setContentView(R.layout.activity_main)  
    }  
}
```

res/layout 폴더의 activity_main.xml
파일 사용



- activity_main.xml 탭을 선택하고, [Design] 모드로 변경

activity_main.xml MainActivity.kt

Code Split **Design**

activity_main.xml

Common

- Ab TextView
- Button**
- ImageView
- RecyclerView
- FragmentCont...
- ScrollView
- Switch

Text

Buttons

Widgets

Layouts

Containers

Helpers

Google

Legacy

Component Tree

- ConstraintLayout
 - Ab TextView "Hello World!"
 - button "Button"**

드래그/드롭으로
화면 영역에 버튼 위젯 생성

id button

Declared Attributes

layout_width	wrap_content
layout_height	wrap_content
id	button
text	Button

Layout

Constraint Widget

Constraints (0)

layout_width	wrap_content
layout_height	wrap_content
visibility	
visibility	

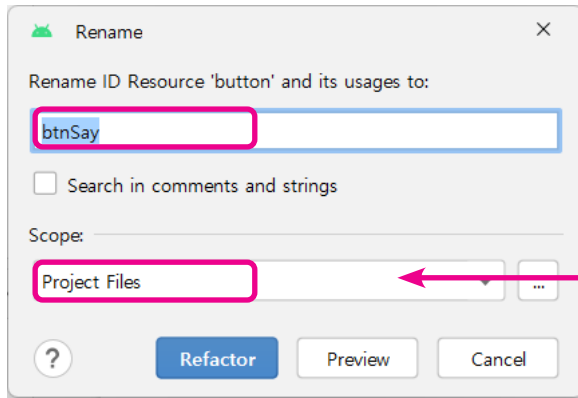
Transforms

View

Rotation

· Step 2: 레이아웃 편집(계속)

- 화면에 배치한 위젯의 id를 변경하면, 다음과 같은 창에서 Scope 설정



"Current File"로 변경

- Text 위젯의 id를 'textSay'로 변경
textSize를 24sp로 변경

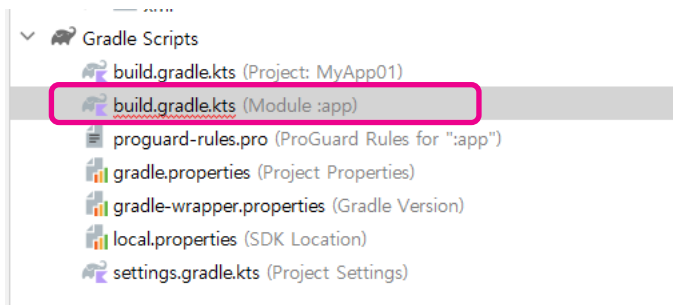
2.5 코틀린 코드와 레이아웃 연결하기

· Step 3: 소스코드 연결

- 뷰 View: 레이아웃이나 면에 배치한 위젯의 id를 변경하면, 다음과 같은 창에서 Scope 설정
- Android에서는 findViewById() 함수 사용하여
- Kotlin에서는 부가 기능으로 Kotlin Extension 제공
 - Kotlin Extension은 코틀린에서만 사용 가능
 - 자바에서는 사용 불가
 - 일부 상황에서 뷰를 찾을 수 없는 오류 발생
 - 어디서나 뷰를 호출할 수 있기 때문에 잘못된 참조로 인해 앱이 강제 종료될 수 있음
- 예) activity_main.xml과 fragment_sub.xml에서 동일한 button id를 사용하면?
- 모듈화를 사용하는 경우 다른 모듈에서 뷰에 대한 접근 불가능

- 소스코드 연결 단계

- 단계 1: build.gradle.kts 파일에서 viewBinding 설정을 추가
viewBinding = true
- 단계 2: Android Studio 상단에 나타나는 [Sync Now] 버튼을 클릭해서 변경 적용



```
1 plugins { this: PluginDependenciesSpecScope
2     id("com.android.application")
3     id("org.jetbrains.kotlin.android")
4 }
5
6 android { this: BaseAppModuleExtension
7     buildFeatures { this: ApplicationBuildFeatures
8         viewBinding = true
9     }
10     namespace = "com.android.myapp01"
11     compileSdk = 33
12 }
```

Sync Now

· Step 3: 소스코드 연결(계속)

- 소스코드 연결 단계

- 단계 3: 다음과 같이 코드 변경

```
1 package com.android.myapp01
2
3 import androidx.appcompat.app.AppCompatActivity
4 import android.os.Bundle
5 import com.android.myapp01.databinding.ActivityMainBinding
6
7 class MainActivity : AppCompatActivity() {
8     override fun onCreate(savedInstanceState: Bundle?) {
9         super.onCreate(savedInstanceState)
10        // 추가
11        ActivityMainBinding
12        //
13        setContentView(R.layout.activity_main)
14    }
15 }
```

추가된 행을 다음과 같이 변경

```
val binding = ActivityMainBinding.inflate(layoutInflater)
```

기존 코드의 마지막 행을 다음과 같이 변경

```
setContentView(binding.root)
```

· Step 3: 소스코드 연결(계속)

- 소스코드 연결 단계

- 단계 3: 다음과 같이 코드 추가

```
setContentView(binding.root)
binding.btnSay.setOnClickListener {
    binding.textSay.text = "Hello Kotlin!!!!!"
}
```

```
1 package com.android.myapp01
2
3 import androidx.appcompat.app.AppCompatActivity
4 import android.os.Bundle
5 import android.view.LayoutInflater
6 import com.android.myapp01.databinding.ActivityMainBinding
7
8 class MainActivity : AppCompatActivity() {
9     override fun onCreate(savedInstanceState: Bundle?) {
10         super.onCreate(savedInstanceState)
11         // 추가
12         val binding = ActivityMainBinding.inflate(layoutInflater)
13         //
14         //setContentView(R.layout.activity_main)
15         setContentView(binding.root)
16         // 추가 - 버튼 클릭에 따른 Text 변경
17         binding.btnSay.setOnClickListener { it: View!
18             binding.textSay.setText("Hello, Kotlin!!!!!")
19         }
20     }
21 }
```

· Step 4: 실행

