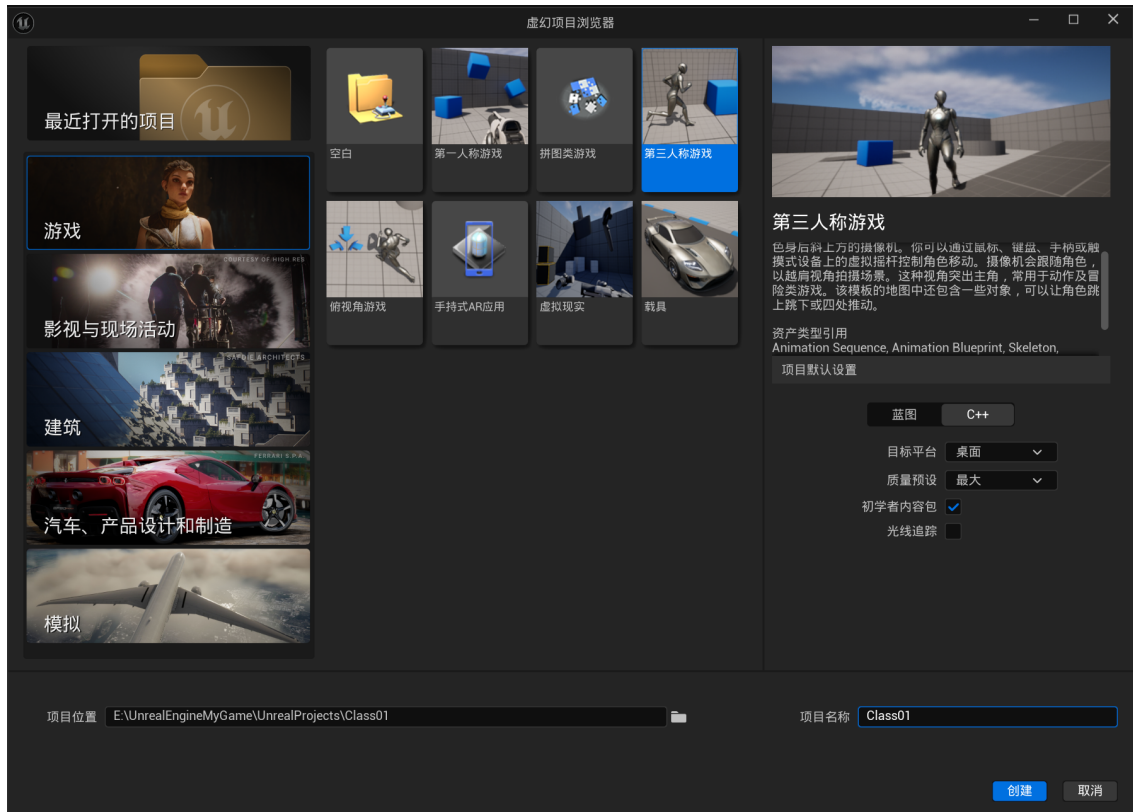


class01作业流程

1.源码编译UE5.4,新建一个C++工程,进行简单场景编辑和工程设置

- 源码编译UE5,略(因为编者电脑上环境太多,不好展示,调整了半天)
- 新建一个C++工程,进入编辑器后这样选



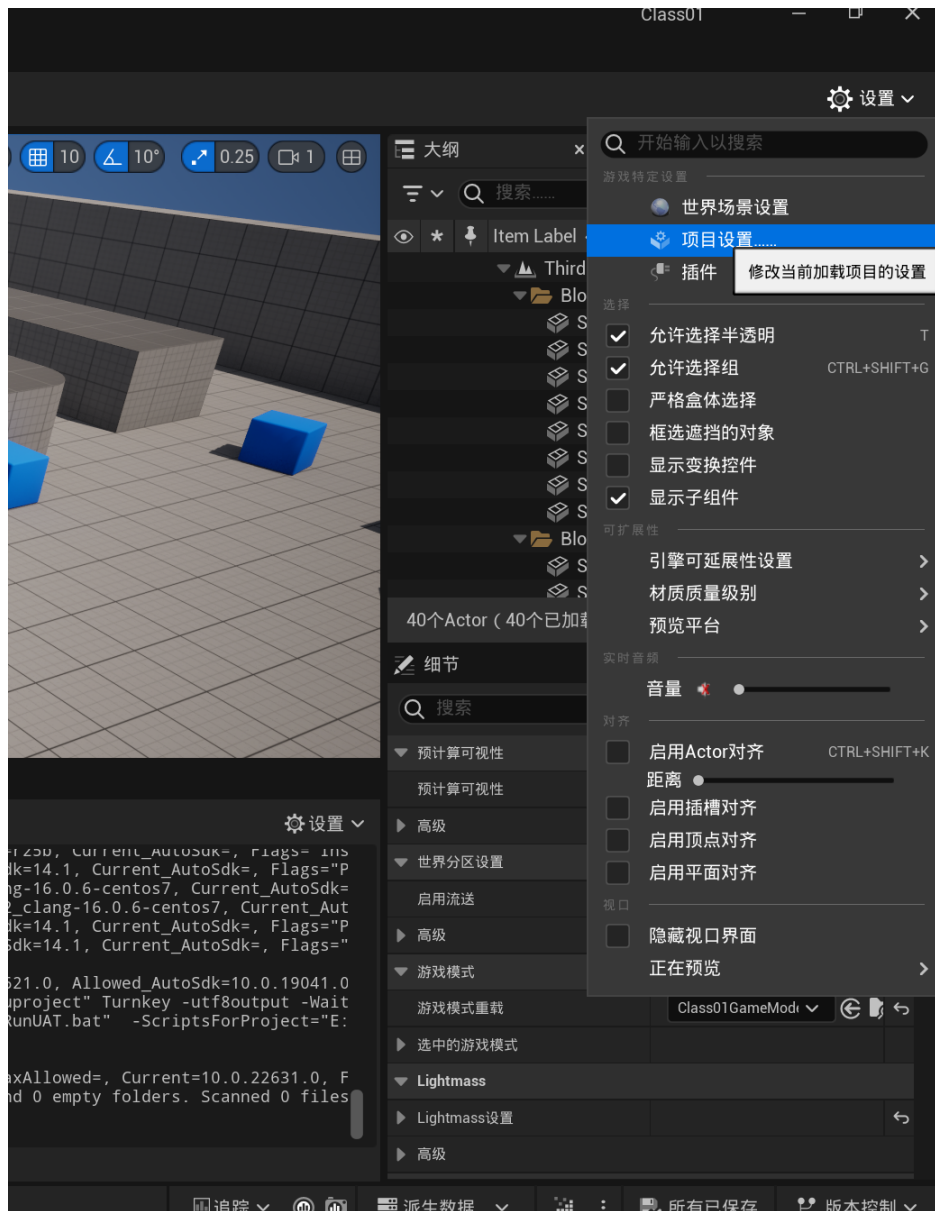
点击创建,然后开始创建,会打开一个新的VS2022项目,该项目就是你刚才创建的UE5项目,进入项目后按F5打开项目

- 简单的场景编辑(略)
- 工程设置(略)

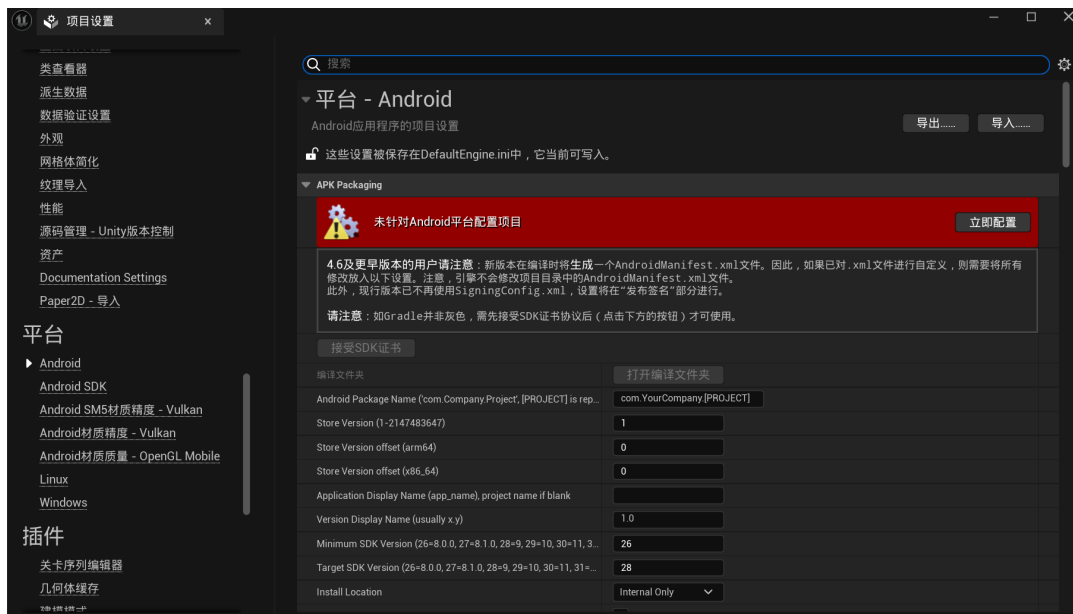
2.编译并构建安装包,确保能够用来将游戏工程安装到手机正常运行

- 编译并构建安装包(如果需要考虑**安卓9到12版本**的兼容性,那么请往下阅读)

1. 进入编辑器后点击**项目设置**



2. 找到平台,找到Android选项



3. 点击立即配置,

4. 然后从上往下找到,Application Display Name(app_name), project name if blank设置你的应用名称AppName,

Application Display Name (app_name), project name if blank

JIEJIE

5. 更改**Minimum SDK Version**为**28**以支持安卓9及以上手机(虽然编者前期在此处更改,并没有让UE5使用预期的Android-28进行打包),

Minimum SDK Version (26=8.0.0, 27=8.1.0, 28=9, 29=10, 30=11, 3...

28

6. 更改**Package game data inside.apk?**选定为√,游戏数据会直接被打包到生成的 .apk 文件中。

Package game data inside .apk?



7. 更改**Force small OBB files**为√,将较大的游戏数据拆分成多个较小的 OBB 文件

Force small OBB files.



8. 找到**Advanced APK Packaging**下有**Extra Permissions**这里可以用来申请一些权限,点击旁边+号,创建四个元素,分别填入

android.permission.READ_EXTERNAL_STORAGE

android.permission.READ_MEDIA_IMAGES

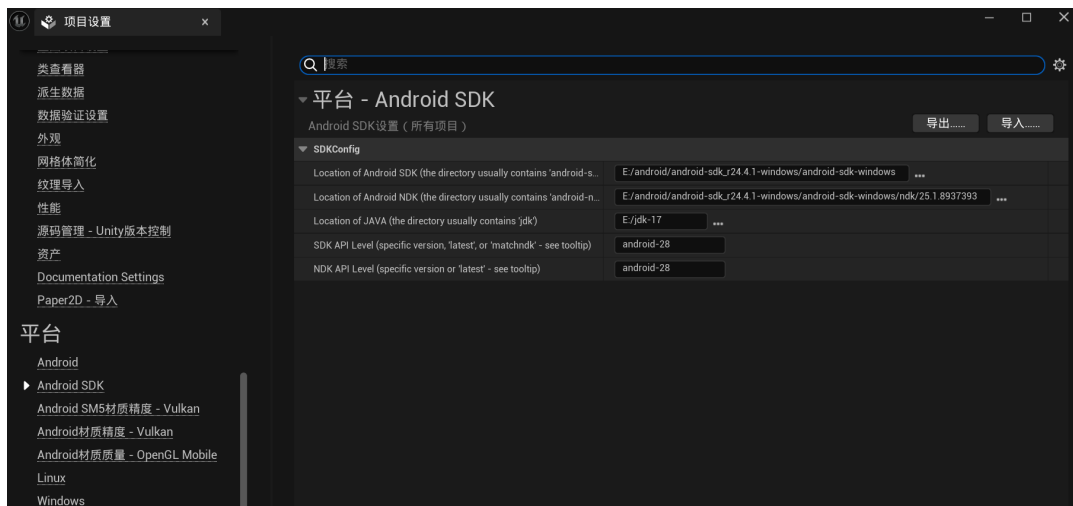
android.permission.READ_MEDIA_VIDEO

android.permission.READ_MEDIA_AUDIO

用于申请一些常见权限

▼ Advanced APK Packaging		
Extra Tags for <manifest> node	0数组元素	⊕ 🗑
Extra Tags for <application> node	0数组元素	⊕ 🗑
Extra Settings for <application> section (\n to separate lines)		
Extra Tags for com.epicgames.unreal.GameActivity <activity> node	0数组元素	⊕ 🗑
Extra Settings for <activity> section (\n to separate lines)		
▼ Extra Permissions (e.g. 'android.permission.INTERNET')	4 数组元素	⊕ 🗑
索引 [0]	android.permission.READ_EXTERNAL_STORAGE	▼
索引 [1]	android.permission.READ_MEDIA_IMAGES	▼
索引 [2]	android.permission.READ_MEDIA_VIDEO	▼
索引 [3]	android.permission.READ_MEDIA_AUDIO	▼
Add permissions to support Voice chat (RECORD_AUDIO)	<input type="checkbox"/>	
Request permission at startup for Voice chat (RECORD_AUDIO)	<input type="checkbox"/>	
Add support for multicast Wi-Fi traffic (CHANGE_WIFI_MULTICASTING)	<input type="checkbox"/>	
Package for Meta Quest devices.	<input type="checkbox"/>	
Remove Oculus Signature Files from Distribution APK	<input type="checkbox"/>	

9. 在边栏上切换到**Android SDK**下,从**Android Studio**中下载**sdk-28**(编者电脑上下载过较多环境,这里也不展示了,因为编者想不起来我又额外下载了什么东西,如果需要我会将我下载过的 android sdk放在文末**附录1**),**ndk**,并且下载**Java17**,填入对应的版本



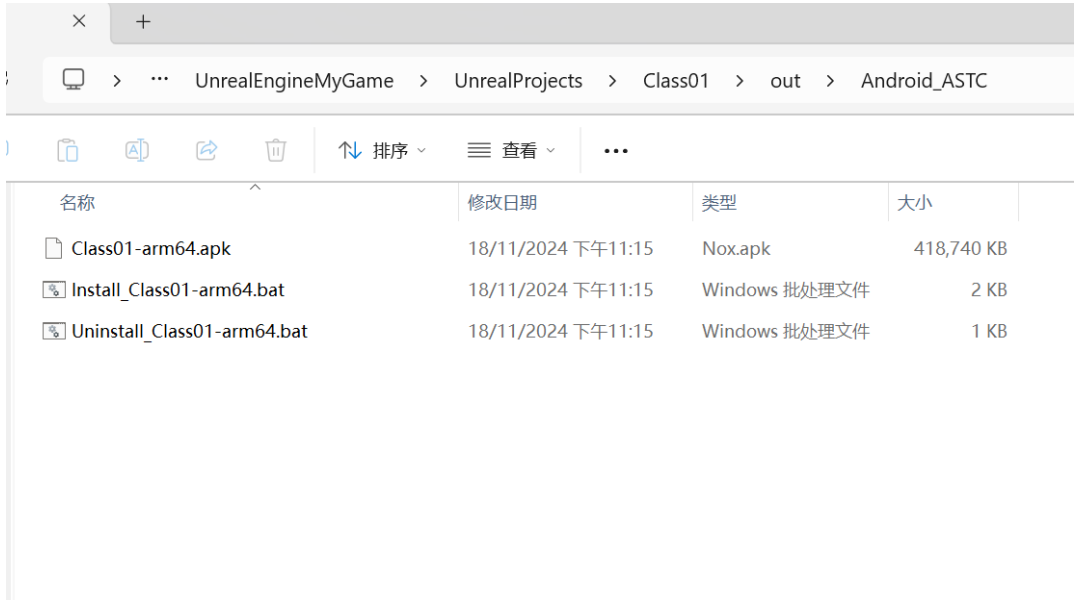
10. 然后返回主页面,刷新平台状态



然后打包项目,即可,在你的打包的目标路径下会生成apk文件就是你要的了,另外两个安装和删除适用于usb调试用的



11. 在输出文件夹中会有如下文件,将apk发送给手机即可,编者在Android14和Android9上都测试可用,理论中间版本也可用,请读者自行验证



附录1

android sdk和sdk tools

编者的电脑上之前还安装了android sdk manager 不知道会不会有影响,如有需要请联系

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	Revi...	Status
<input checked="" type="checkbox"/>	Android 15.0 ("VanillaIceCream")	35	1	Installed
<input type="checkbox"/>	Android UpsideDownCakePrivacySandbox Preview UpsideDownCakePrivacySand...		3	Not installed
<input type="checkbox"/>	Android 14.0 ("UpsideDownCake")	34	3	Partially install...
<input type="checkbox"/>	Android 14.0 ("UpsideDownCake")	34-ext8	1	Not installed
<input type="checkbox"/>	Android 14.0 ("UpsideDownCake")	34-ext10	1	Not installed
<input type="checkbox"/>	Android 14.0 ("UpsideDownCake")	34-ext11	1	Not installed
<input type="checkbox"/>	Android 14.0 ("UpsideDownCake")	34-ext12	1	Not installed
<input type="checkbox"/>	Android TiramisuPrivacySandbox Preview	TiramisuPrivacySandbox	9	Not installed
<input checked="" type="checkbox"/>	Android 13.0 ("Tiramisu")	33	3	Installed
<input type="checkbox"/>	Android 13.0 ("Tiramisu")	33-ext4	1	Not installed
<input type="checkbox"/>	Android 13.0 ("Tiramisu")	33-ext5	1	Not installed
<input type="checkbox"/>	Android 12L ("Sv2")	32	1	Not installed
<input type="checkbox"/>	Android 12.0 ("S")	31	1	Not installed
<input checked="" type="checkbox"/>	Android 11.0 ("R")	30	3	Installed
<input checked="" type="checkbox"/>	Android R Preview	R	2	Installed
<input checked="" type="checkbox"/>	Android 10.0 ("Q")	29	4	Update availab...
<input checked="" type="checkbox"/>	Android 9.0 ("Pie")	28	6	Update availab...
<input type="checkbox"/>	Android 8.1 ("Oreo")	27	3	Not installed
<input type="checkbox"/>	Android 8.0 ("Oreo")	26	2	Not installed
<input type="checkbox"/>	Android 7.1.1 ("Nougat")	25	3	Not installed

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
<div> <div></div> <div></div> </div>	Android SDK Build-Tools 35		
<input checked="" type="checkbox"/>	35.0.0	35.0.0	Installed
<input type="checkbox"/>	35.0.0-rc4	35.0.0 rc4	Not installed
<input type="checkbox"/>	35.0.0-rc3	35.0.0 rc3	Not installed
<input type="checkbox"/>	35.0.0-rc2	35.0.0 rc2	Not installed
<input type="checkbox"/>	35.0.0-rc1	35.0.0 rc1	Not installed
<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 type="checkbox"/>	33.0.3	33.0.3	Not installed
<input type="checkbox"/>	33.0.2	33.0.2	Not installed
<input checked="" type="checkbox"/>	33.0.1	33.0.1	Installed
<input type="checkbox"/>	33.0.0	33.0.0	Not installed
<input type="checkbox"/>	32.1.0-rc1	32.1.0 rc1	Not installed
<input type="checkbox"/>	32.0.0	32.0.0	Not installed
<input type="checkbox"/>	31.0.0	31.0.0	Not installed
<input type="checkbox"/>	30.0.3	30.0.3	Not 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 checked="" type="checkbox"/>	29.0.3	29.0.3	Installed
<input type="checkbox"/>	29.0.2	29.0.2	Not installed
<input type="checkbox"/>	29.0.1	29.0.1	Not installed
<input type="checkbox"/>	28.0.0	28.0.0	Not installed







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
<div> <div> <div></div> <div>NDK (Side by side)</div> </div> <div> <div></div> <div>28.0.12433566</div> </div> <div>28.0.12433566 rc1</div> <div>Not installed</div> </div>		
<div> <div></div> <div>27.2.12479018</div> </div> <div>27.2.12479018</div> <div>Not installed</div>		
<div> <div></div> <div>27.1.12297006</div> </div> <div>27.1.12297006</div> <div>Not installed</div>		
<div> <div></div> <div>27.0.12077973</div> </div> <div>27.0.12077973</div> <div>Not installed</div>		
<div> <div></div> <div>27.0.11902837</div> </div> <div>27.0.11902837 rc2</div> <div>Not installed</div>		
<div> <div></div> <div>27.0.11718014</div> </div> <div>27.0.11718014 rc1</div> <div>Not installed</div>		
<div> <div></div> <div>26.3.11579264</div> </div> <div>26.3.11579264</div> <div>Not installed</div>		
<div> <div></div> <div>26.2.11394342</div> </div> <div>26.2.11394342</div> <div>Not installed</div>		
<div> <div></div> <div>26.1.10909125</div> </div> <div>26.1.10909125</div> <div>Not installed</div>		
<div> <div></div> <div>26.0.10792818</div> </div> <div>26.0.10792818</div> <div>Not installed</div>		
<div> <div></div> <div>25.2.9519653</div> </div> <div>25.2.9519653</div> <div>Not installed</div>		
<div> <div></div> <div>25.1.8937393</div> </div> <div>25.1.8937393</div> <div>Installed</div>		
<div> <div></div> <div>25.0.8775105</div> </div> <div>25.0.8775105</div> <div>Not installed</div>		
<div> <div></div> <div>24.0.8215888</div> </div> <div>24.0.8215888</div> <div>Not installed</div>		
<div> <div></div> <div>23.2.8568313</div> </div> <div>23.2.8568313</div> <div>Not installed</div>		
<div> <div></div> <div>23.1.7779620</div> </div> <div>23.1.7779620</div> <div>Not installed</div>		
<div> <div></div> <div>23.0.7599858</div> </div> <div>23.0.7599858</div> <div>Not installed</div>		
<div> <div></div> <div>22.1.7171670</div> </div> <div>22.1.7171670</div> <div>Not installed</div>		
<div> <div></div> <div>22.0.7026061</div> </div> <div>22.0.7026061</div> <div>Not installed</div>		
<div> <div></div> <div>21.4.7075529</div> </div> <div>21.4.7075529</div> <div>Not installed</div>		
<div> <div></div> <div>21.3.6528147</div> </div> <div>21.3.6528147</div> <div>Installed</div>		
<div> <div></div> <div>21.2.6472646</div> </div> <div>21.2.6472646</div> <div>Not installed</div>		
<div> <div></div> <div>21.1.6352462</div> </div> <div>21.1.6352462</div> <div>Not installed</div>		
<div> <div></div> <div>21.0.6113660</div> </div> <div>21.0.6113660</div> <div>Not installed</div>		

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 35		
>	NDK (Side by side)		
∨	Android SDK Command-line Tools (latest)		
	<input type="checkbox"/> Android SDK Command-line Tools (latest)	16.0	Not installed
	<input checked="" type="checkbox"/> Android SDK Command-line Tools	16.0	Installed
	<input type="checkbox"/> Android SDK Command-line Tools	16.0.0 rc1	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	13.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	12.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	11.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	10.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	9.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	8.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	7.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	6.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	5.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	4.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	3.0	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	2.1	Not installed
	<input type="checkbox"/> Android SDK Command-line Tools	1.0	Not installed

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 35		
>	NDK (Side by side)		
>	Android SDK Command-line Tools (latest)		
∨	CMake		
	<input type="checkbox"/> 3.31.0	3.31.0	Not installed
	<input type="checkbox"/> 3.30.5	3.30.5	Not installed
	<input type="checkbox"/> 3.30.4	3.30.4	Not installed
	<input type="checkbox"/> 3.30.3	3.30.3	Not installed
	<input checked="" type="checkbox"/> 3.22.1	3.22.1	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

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 35		
>	 NDK (Side by side)		
>	 Android SDK Command-line Tools (latest)		
>	 CMake		
<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	35.2.10	Installed
<input type="checkbox"/>	Android Emulator hypervisor driver (installer)	2.2.0	Not installed
<input checked="" type="checkbox"/>	Android SDK Platform-Tools	35.0.2	Installed
	Android SDK Tools 25.2.5	25.2.5	Update Available: 26.1.1
<input type="checkbox"/>	Android Support Repository	47.0.0	Not 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	Not installed
<input type="checkbox"/>	Google Repository	58	Not installed
	Google USB Driver, rev 12	12.0.0	Update Available: 13
<input checked="" type="checkbox"/>	Google Web Driver, rev 2	2.0.0	Installed
<input type="checkbox"/>	Intel x86 Emulator Accelerator (HAXM installer) - Deprecated	7.6.5	Not installed
<input type="checkbox"/>	Layout Inspector image server for API 29-30	6	Not installed
<input type="checkbox"/>	Layout Inspector image server for API 31-36	5	Not installed
<input type="checkbox"/>	Layout Inspector image server for API S	3	Not installed