

《Android零基础入门课程》—— 涂涂IT学堂

第二章 Android开发环境搭建

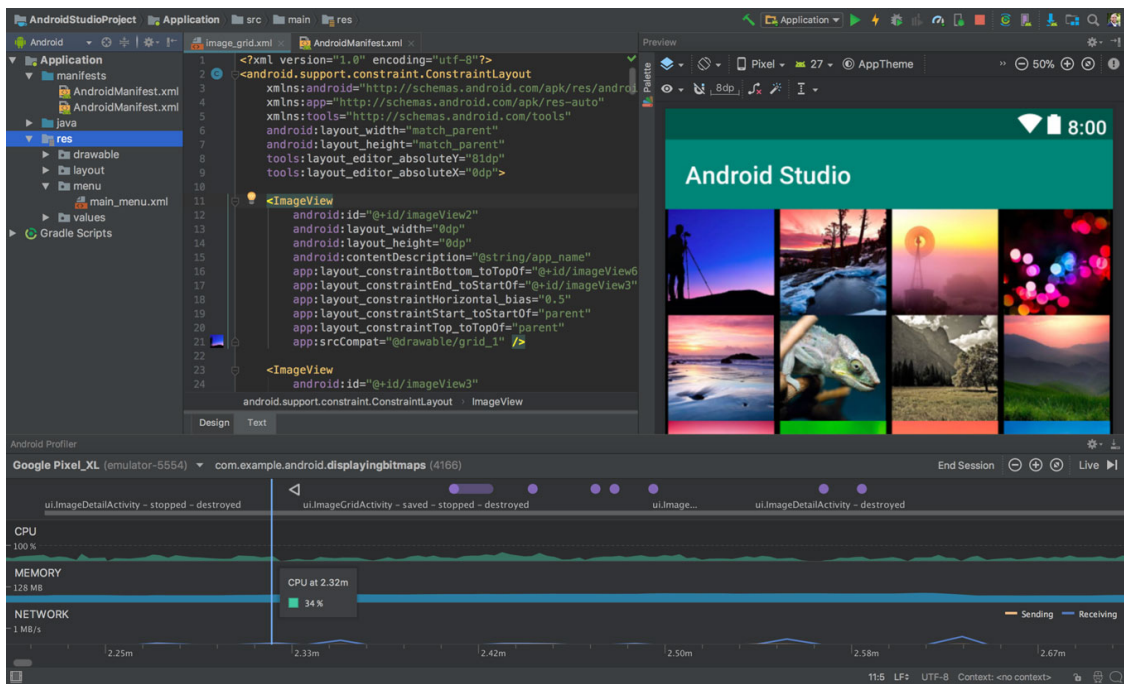
目标

- Android开发工具
- Android SDK
- Java JDK
- 环境变量配置

01 Android开发工具

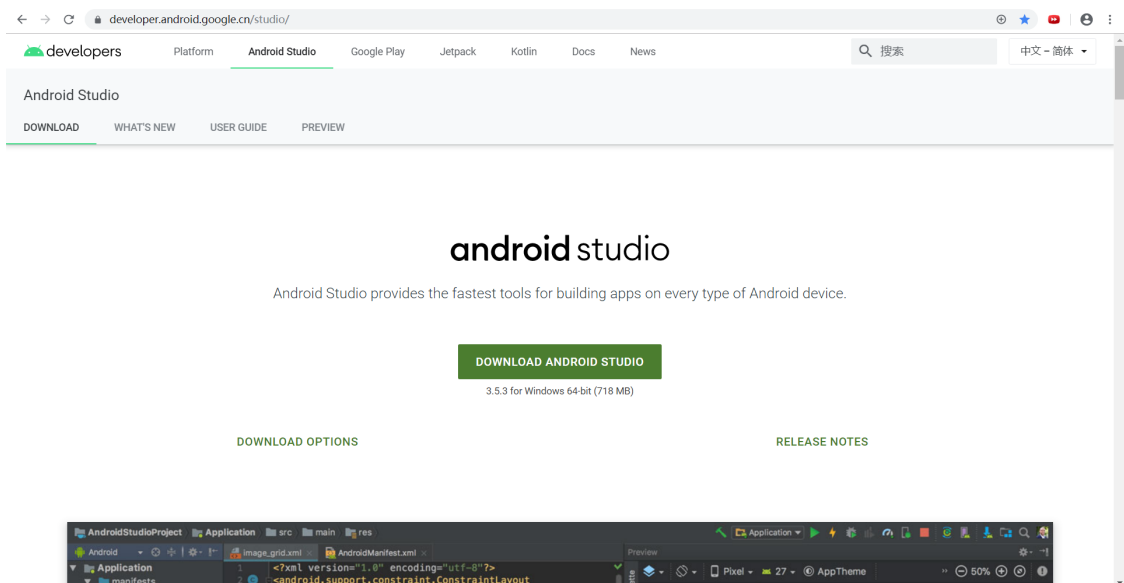
Android Studio

- `Android Studio` 是谷歌推出的一个Android集成开发工具，**基于IntelliJ IDEA**. 类似 Eclipse ADT, `Android Studio` 提供了集成的 Android 开发工具用于开发和调试
- 架构组成
 - 基于Gradle的构建支持
 - Android 专属的重构和快速修复
 - 提示工具以捕获性能、可用性、版本兼容性问题
 - 支持ProGuard 和应用签名
 - 基于模板的向导来生成常用的 Android 应用设计和组件
 - 功能强大的布局编辑器，可以让你拖拉 UI 控件并进行效果预览
- 版本
最新版本为**3.5.3**
- 工具界面如下



- AndroidStudio下载官网地址

<https://developer.android.google.cn/studio/>



Eclipse

- Android早期开发使用的工具，目前已经淘汰了

02 Android SDK

- **SDK：（software development kit）软件开发工具包。**被软件开发工程师用于为特定的软件包、软件框架、硬件平台、操作系统等建立应用软件的开发工具的集合
- Android SDK 指的是**Android专属的软件开发工具包。**
- Android SDK采用了**Java语言**，所以需要先安装JDK 5.0及以上版本
- 下载SDK压缩包，并解压

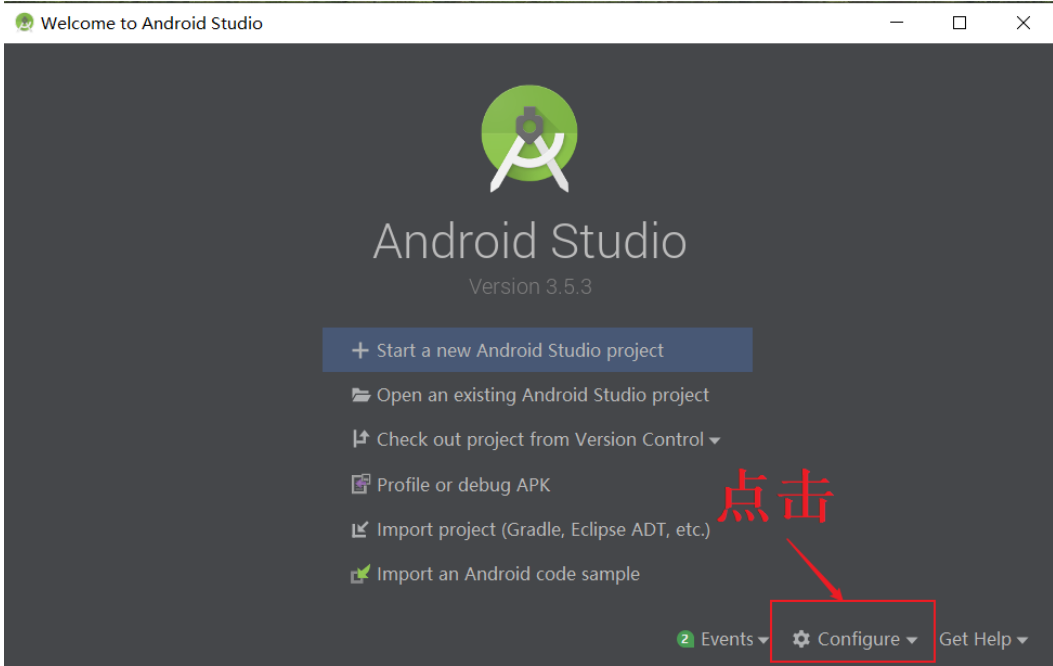
Platform	SDK tools package	Size	SHA-256 checksum
Windows	sdk-tools-windows-4333796.zip	148 MB	7e81d69c303e47a4f0e748a6352d85cd0c8fd90a5a95ae4e076b5e5f960d3c7a
Mac	sdk-tools-darwin-4333796.zip	98 MB	ecb29358bc0f13d7c2fa0f9290135a5b608e38434aad9bf7067d0252c160853e
Linux	sdk-tools-linux-4333796.zip	147 MB	92fee5a1d98d856634e8b71132e8a95d96c83a63fde1099be3d86df3106def9

• 下载Android Studio工具

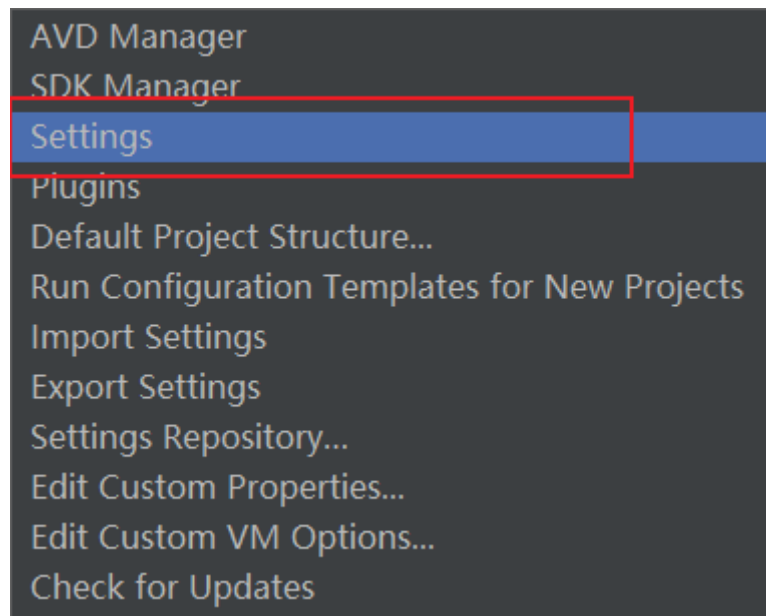
Platform	Android Studio package	Size	SHA-256 checksum
Windows (64-bit)	android-studio-ide-191.6010548-windows.exe Recommended	718 MB	58b3728fc414602e17fd9827e5ad0c969e5942aff1ee82964eedf1686450265b
	android-studio-ide-191.6010548-windows.zip No .exe installer	721 MB	d88d640b3444f0267d1900710911ca350db6ca27d07466039e25caf515d909fe
Windows (32-bit)	android-studio-ide-191.6010548-windows32.zip No .exe installer	721 MB	2786400eb2f5d9ccbe143fe02d4e711915c83f95a335e609a890e897775195b7
Mac (64-bit)	android-studio-ide-191.6010548-mac.dmg	733 MB	6cb545c07ab4880513f47575779be7ae53a2de935435f8f22eb736ef72ecd6e
Linux (64-bit)	android-studio-ide-191.6010548-linux.tar.gz	738 MB	af630d40f276b0d169c6ac8c7663a989f562b0ac48a1d3f0d720f5b6472355db
Chrome OS	android-studio-ide-191.6010548-cros.deb	620 MB	87ca5f17f808ecb909e62c80da3e578156563309ca24f0b820064cc786d1360f

• Android Studio工具设置SDK Location

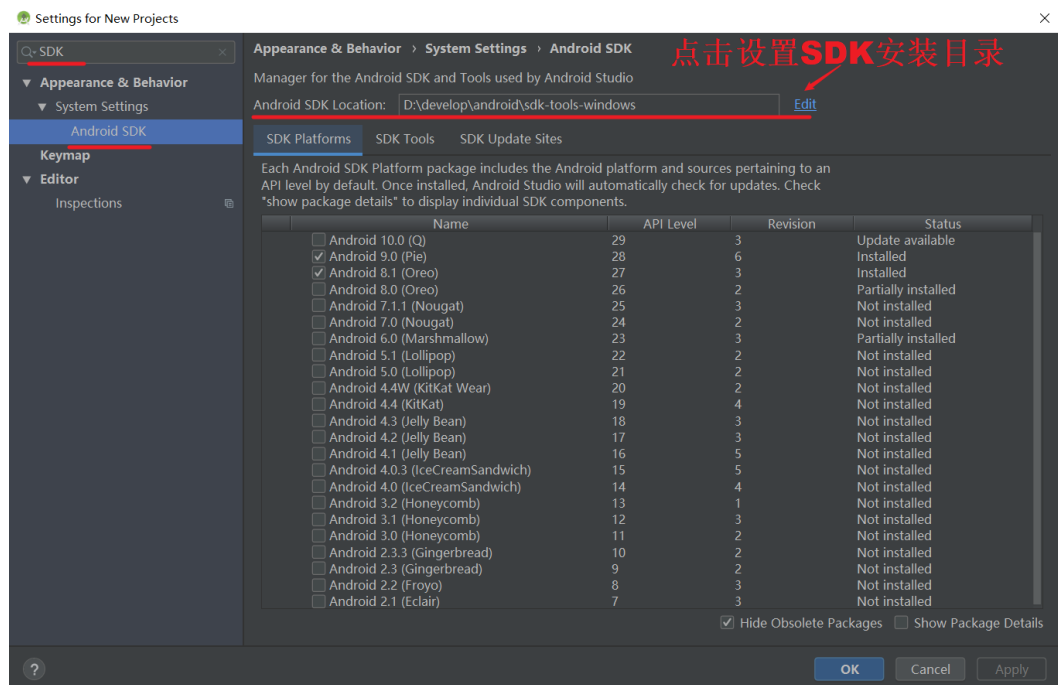
步骤一：点击配置Configure



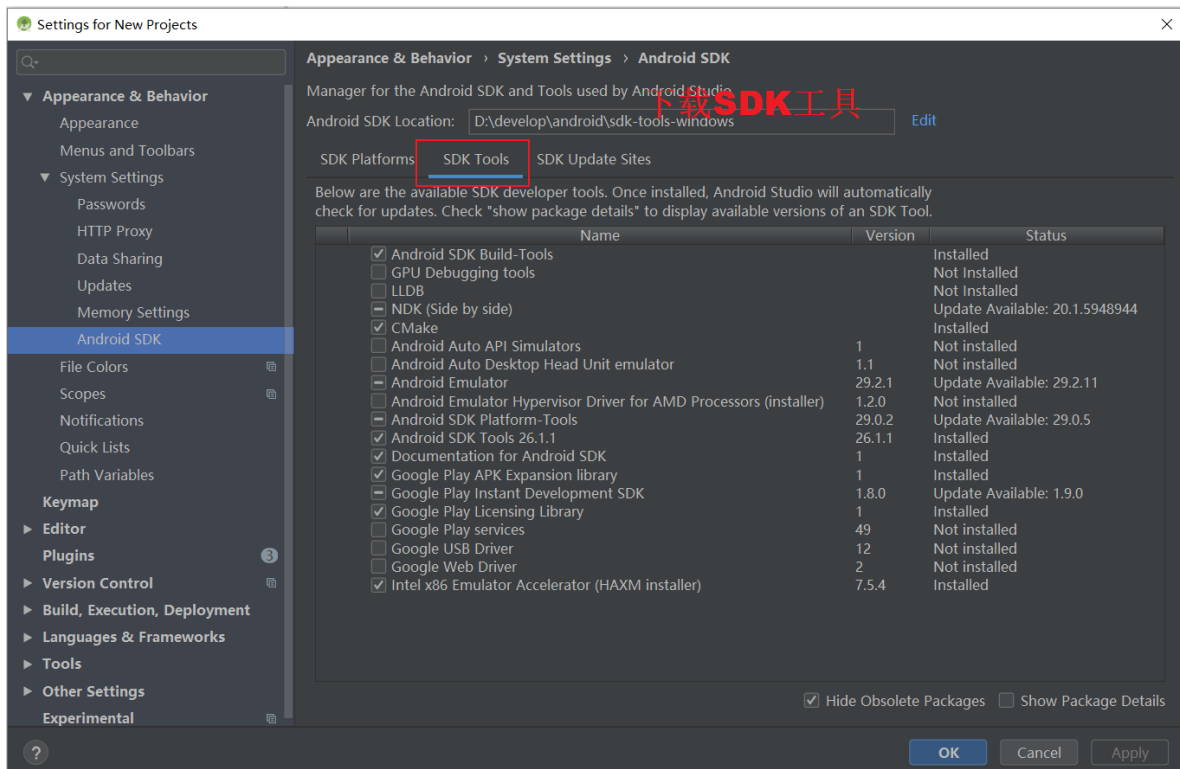
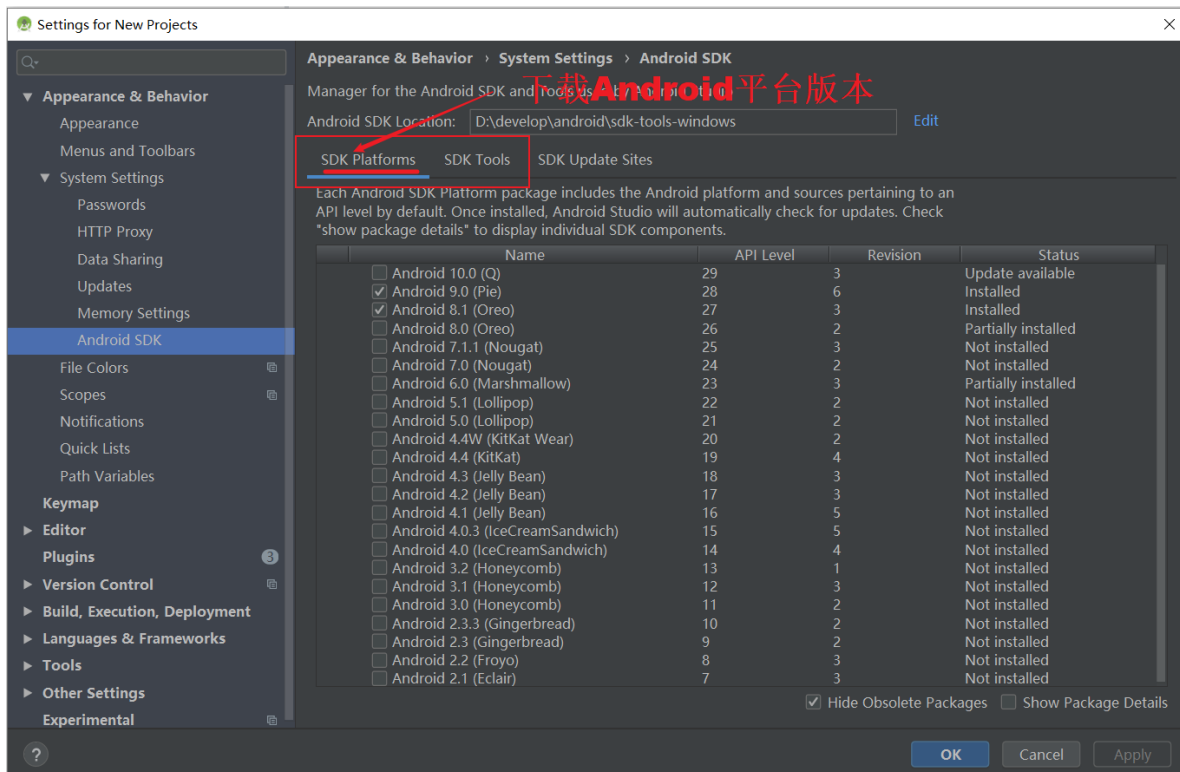
步骤二：选择设置Settings

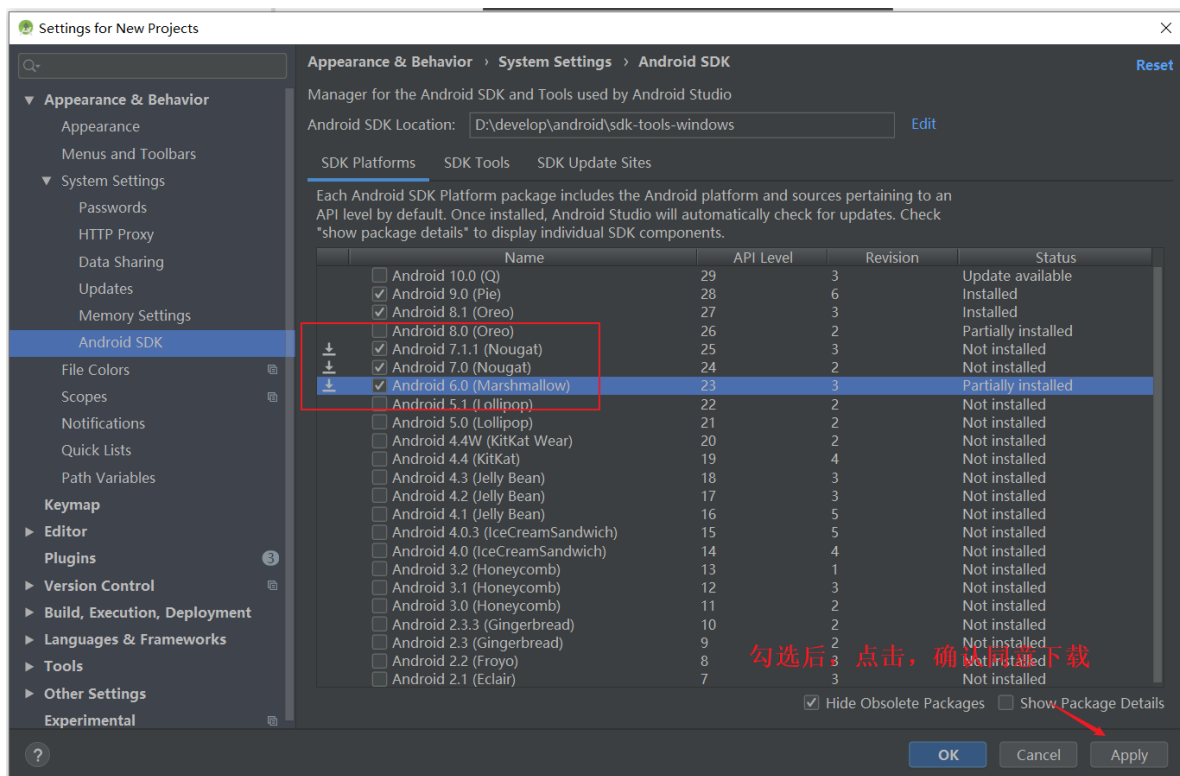


步骤三：搜索SDK，选择Android SDK项，设置Android SDK Location目录为SDK解压的目录



Android SDK 下载相关资源





03 Java JDK

- JDK是 **Java 语言的软件开发工具包**，主要用于移动设备、嵌入式设备上的java应用程序。JDK是整个java开发的核心，它包含了**JAVA的运行环境（JVM+Java系统类库）和JAVA工具**。
- 下载JDK



Java SE Development Kit 8u231

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Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	72.9 MB	jdk-8u231-linux-arm32-vfp-hflt.tar.gz
Linux ARM 64 Hard Float ABI	69.8 MB	jdk-8u231-linux-arm64-vfp-hflt.tar.gz
Linux x86	170.93 MB	jdk-8u231-linux-i586.rpm
Linux x86	185.75 MB	jdk-8u231-linux-i586.tar.gz
Linux x64	170.32 MB	jdk-8u231-linux-x64.rpm
Linux x64	185.16 MB	jdk-8u231-linux-x64.tar.gz
Mac OS X x64	253.4 MB	jdk-8u231-macosx-x64.dmg
Solaris SPARC 64-bit (SVR4 package)	132.98 MB	jdk-8u231-solaris-sparcv9.tar.Z
Solaris SPARC 64-bit	94.16 MB	jdk-8u231-solaris-sparcv9.tar.gz
Solaris x64 (SVR4 package)	133.73 MB	jdk-8u231-solaris-x64.tar.Z
Solaris x64	91.96 MB	jdk-8u231-solaris-x64.tar.gz
Windows x86	200.22 MB	jdk-8u231-windows-i586.exe
Windows x64	210.18 MB	jdk-8u231-windows-x64.exe

Java SE Development Kit 8u231 Demos and Samples Downloads

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Product / File Description	File Size	Download
Linux ARM 32 Hard Float ABI	9.08 MB	jdk-8u231-linux-arm32-vfp-hflt-demos.tar.gz
Linux ARM 64 Hard Float ABI	9.06 MB	jdk-8u231-linux-arm64-vfp-hflt-demos.tar.gz
Linux x86	56.42 MB	jdk-8u231-linux-i586-demos.rpm
Linux x86	56.28 MB	jdk-8u231-linux-i586-demos.tar.gz
Linux x64	56.52 MB	jdk-8u231-linux-x64-demos.rpm
Linux x64	56.38 MB	jdk-8u231-linux-x64-demos.tar.gz
Mac OS X	56.55 MB	jdk-8u231-macosx-x86_64-demos.zip
Solaris SPARC 64-bit	12.23 MB	jdk-8u231-solaris-sparcv9-demos.tar.Z
Solaris SPARC 64-bit	8.44 MB	jdk-8u231-solaris-sparcv9-demos.tar.gz
Solaris x64	12.19 MB	jdk-8u231-solaris-x64-demos.tar.Z
Solaris x64	8.44 MB	jdk-8u231-solaris-x64-demos.tar.gz
Windows x86	57.26 MB	jdk-8u231-windows-i586-demos.zip
Windows x64	57.28 MB	jdk-8u231-windows-x64-demos.zip

- 安装JDK

- 双击安装程序进行安装，首先建一个java目录，然后分别建一个jdk目录和jre目录



- 安装jre



■ 安装完成

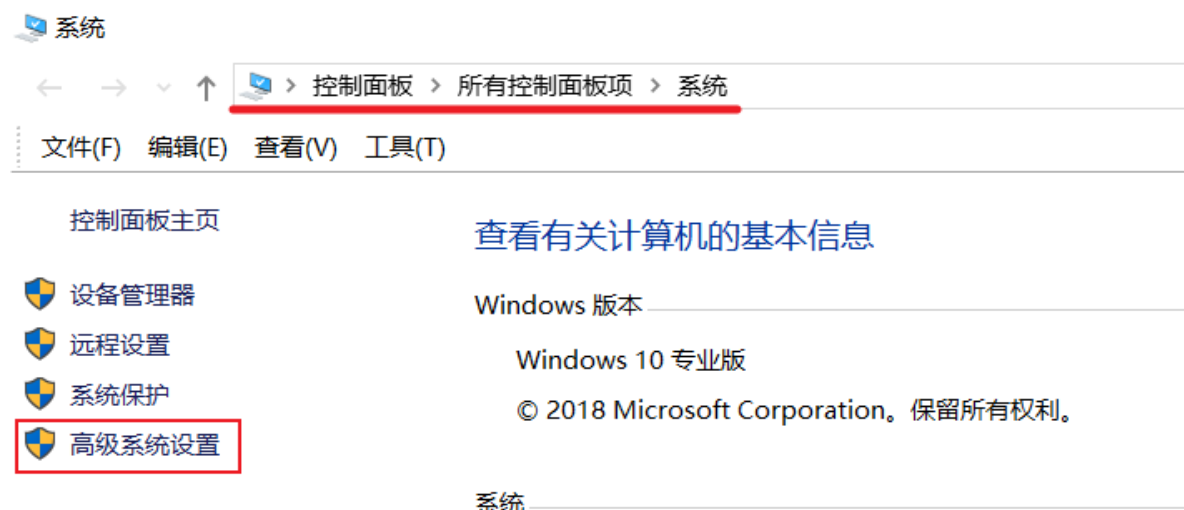
此电脑 > Work (D:) > develop > java >

名称	修改日期	类型
IntelliJ IDEA 2019.3	2019/12/3 14:35	文件夹
jdk1.8.0_221	2019/9/4 20:35	文件夹
jre1.8.0_221	2019/9/4 20:35	文件夹

04 环境变量的配置

4.1 SDK 环境变量配置

- 打开控制面板——系统——高级系统设置



计算机名

硬件

高级

系统保护

远程

要进行大多数更改，你必须作为管理员登录。

性能

视觉效果，处理器计划，内存使用，以及虚拟内存

设置(S)...

用户配置文件

与登录帐户相关的桌面设置

设置(E)...

启动和故障恢复

系统启动、系统故障和调试信息

点击

设置(T)...

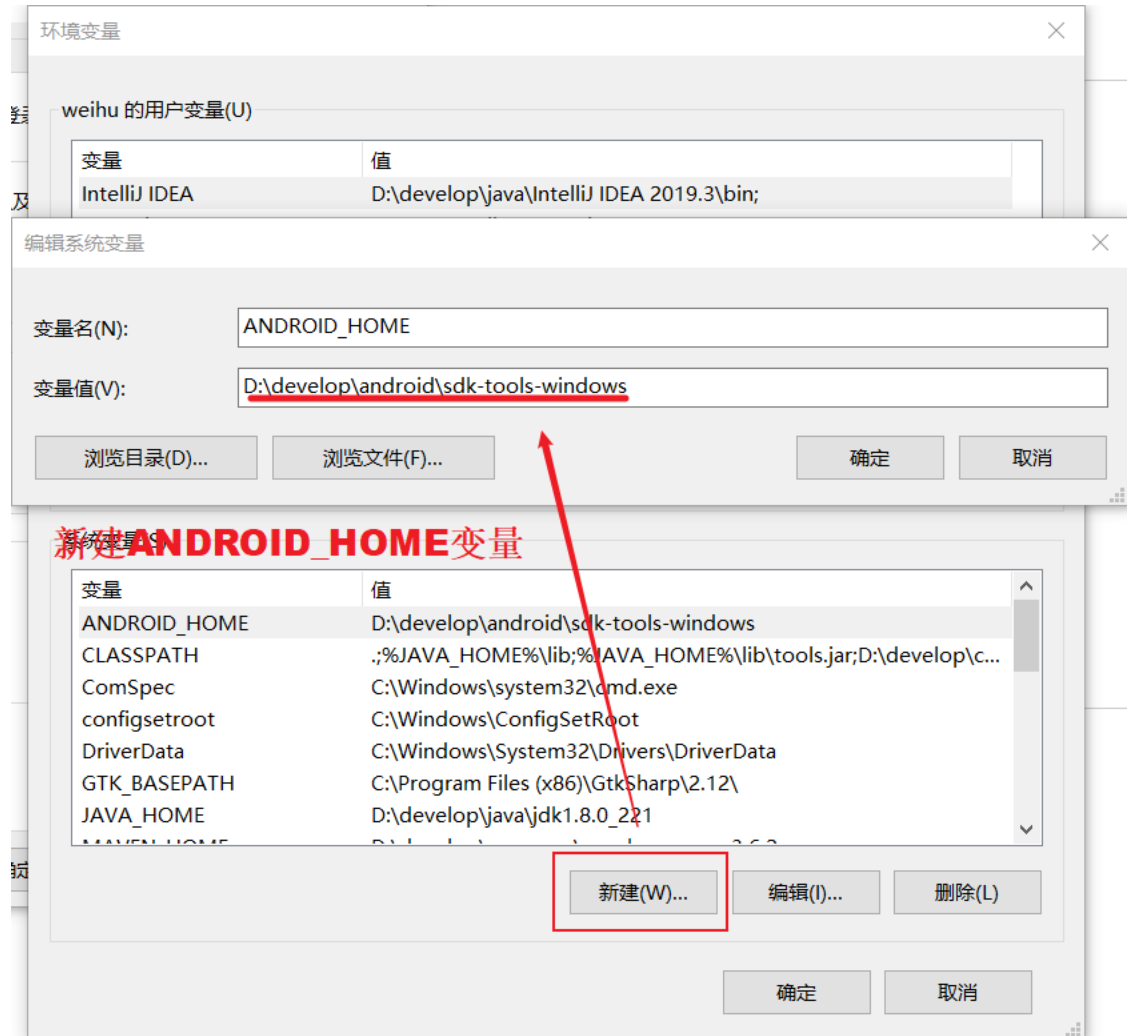
环境变量(N)...

确定

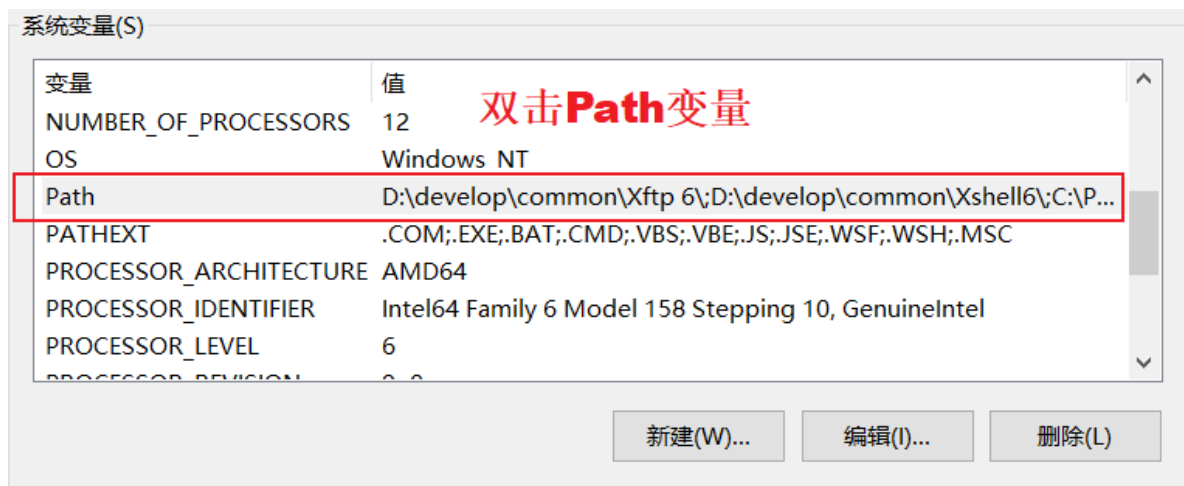
取消

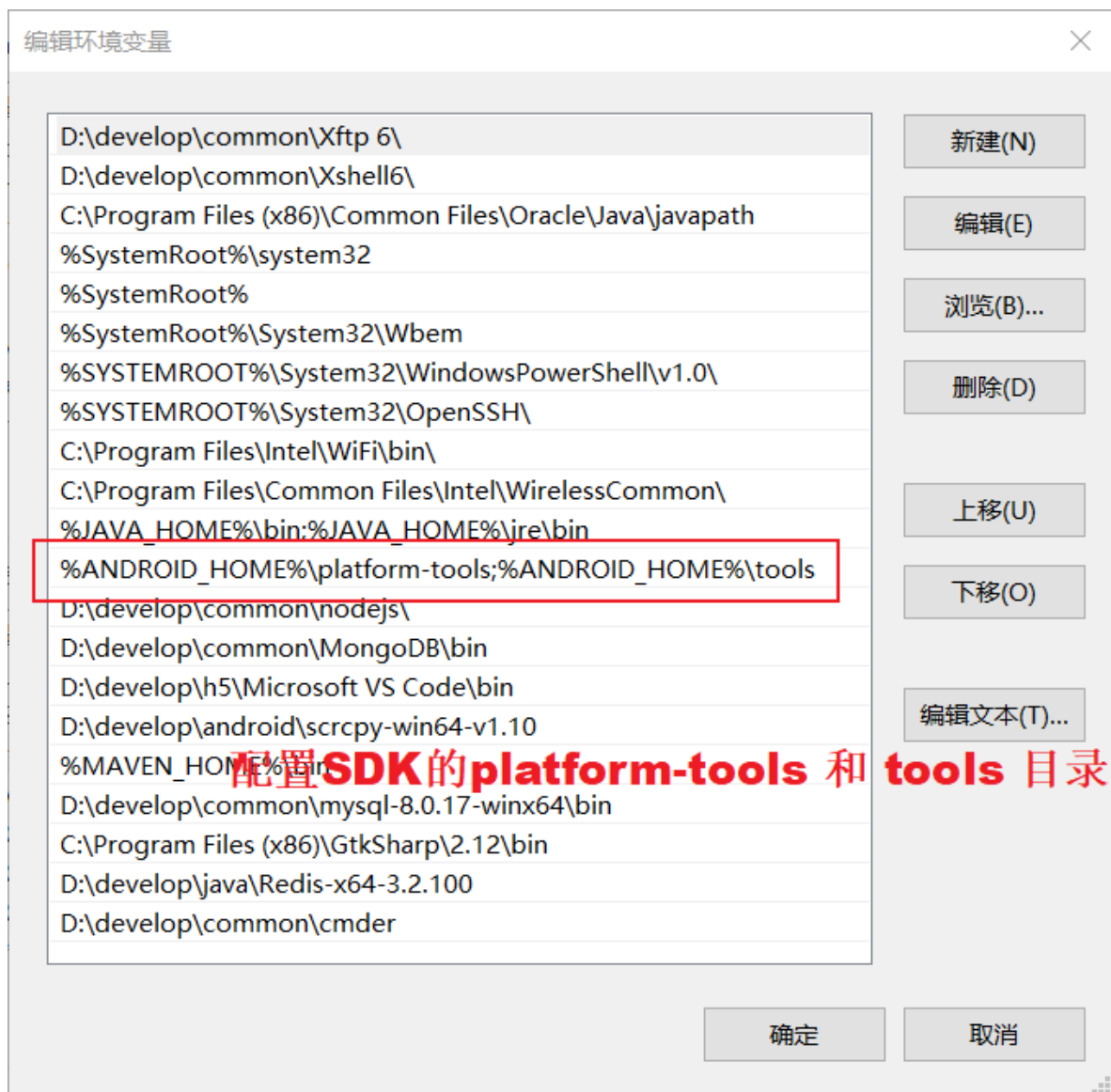
应用(A)

- 新建系统变量ANDROID_HOME, 值为SDK的目录

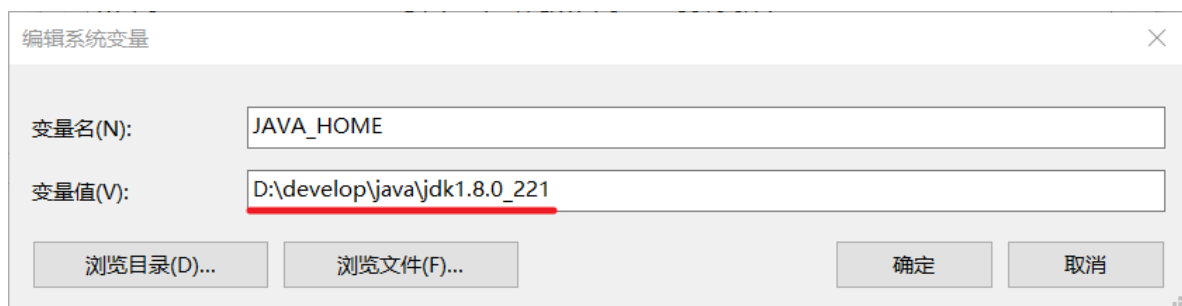


- 配置Path变量, 添加platform-tools 和tools目录





4.2 JDK 环境变量配置



4.3 检验环境变量配置是否成功

- adb

C:\Windows\system32\cmd.exe

Microsoft Windows [Version 10.0.17763.864]
(c) 2018 Microsoft Corporation. All rights reserved.

```
C:\Users\weihu>adb
Android Debug Bridge version 1.0.41
Version 29.0.2-5738569
Installed as D:\develop\android\scrcpy-win64-v1.10\adb.exe
```

global options:

```
-a      listen on all network interfaces, not just localhost
-d      use USB device (error if multiple devices connected)
-e      use TCP/IP device (error if multiple TCP/IP devices available)
-s SERIAL use device with given serial (overrides $ANDROID_SERIAL)
-t ID    use device with given transport id
-H      name of adb server host [default=localhost]
-P      port of adb server [default=5037]
-L SOCKET listen on given socket for adb server [default=tcp:localhost:5037]
```

general commands:

```
devices [-l]      list connected devices (-l for long output)
help              show this help message
version           show version num
```

networking:

```
connect HOST[:PORT] connect to a device via TCP/IP [default port=5555]
disconnect [HOST[:PORT]]
disconnect from given TCP/IP device [default port=5555], or all
forward --list      list all forward socket connections
forward [--no-rebind] LOCAL REMOTE
forward socket connection using:
  tcp:<port> (<local> may be "tcp:0" to pick any open port)
  localabstract:<unix domain socket name>
  localreserved:<unix domain socket name>
```

- `java -version`

C:\Windows\system32\cmd.exe

Microsoft Windows [Version 10.0.17763.864]
(c) 2018 Microsoft Corporation. All rights reserved.

```
C:\Users\weihu>java -version
java version "1.8.0_221"
Java(TM) SE Runtime Environment (build 1.8.0_221-b11)
Java HotSpot(TM) 64-Bit Server VM (build 25.221-b11, mixed mode)
```

```
C:\Users\weihu>_
```