

# Introduction aux outils *Android*

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*SYM – Systèmes mobiles*

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# SDK Android

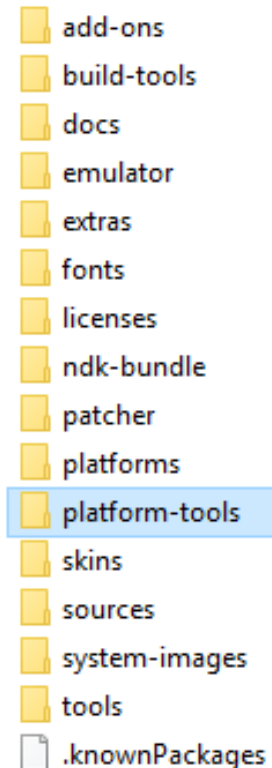
- *Un IDE officiel: Android Studio, version 3.5*  
<https://developer.android.com/studio/index.html>
  - Remplace *Eclipse* depuis 2015
  - Basé sur *IntelliJ* Community Edition
  - Licence Apache 2
- *API Java et Kotlin*
- *Une collection d'outils en lignes de commande (ex: ADB)*
- *Un émulateur*

# SDK Android

## Outils CLI

- Disponibles dans le dossier AndroidSDK  
`C:\Users\[account]\AppData\Local\Android\sdk`  
`C:\AndroidSDK`
- Il est conseillé d'ajouter le dossier `platform-tools` à votre PATH
- L'outil principal est Android Debug Bridge (ADB), il permet aux développeurs (et aux autres outils de l'écosystème Android) de communiquer avec les devices

```
PS C:\Users\fdutoit> adb devices
List of devices attached
emulator-5554    device
0258d29d8532c2b7    device
```



## SDK Android - ADB

`adb devices`

*Permet de lister les périphériques connectés*

`adb install -r /path/to/the.apk`

*Permet d'installer une application*

`adb uninstall your.application.package`

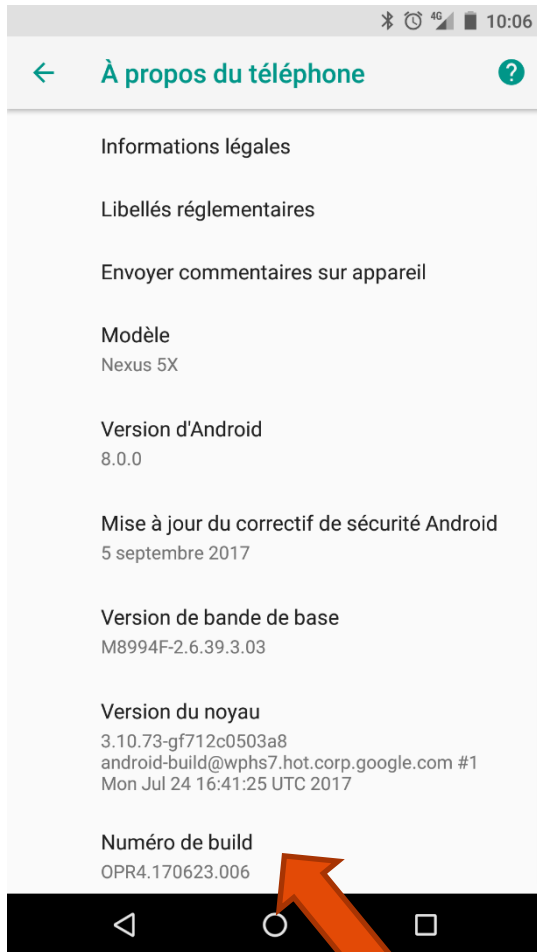
*Permet de désinstaller une application (par nom de package)*

`adb push local.png /path/device.png`

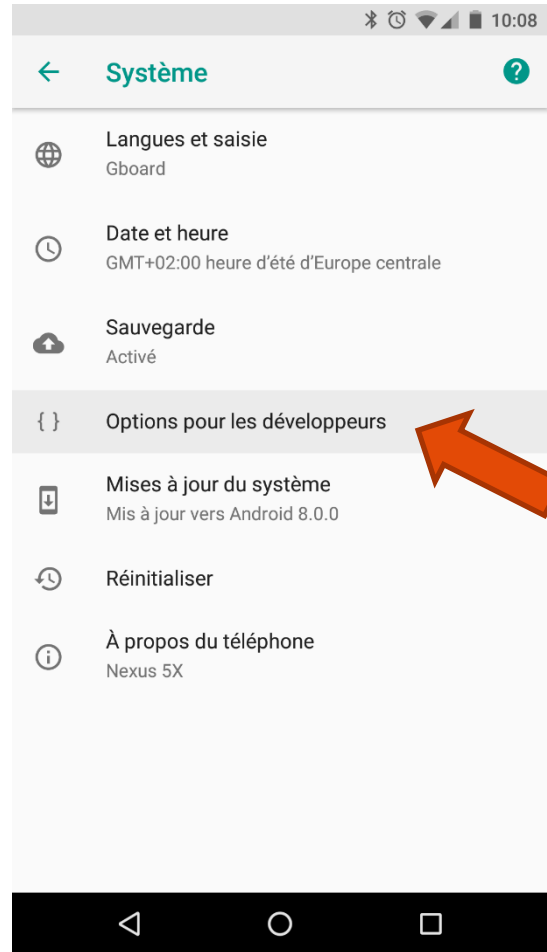
*Permet de copier un fichier sur le device*

`adb help` – *Et beaucoup d'autres fonctionnalités*

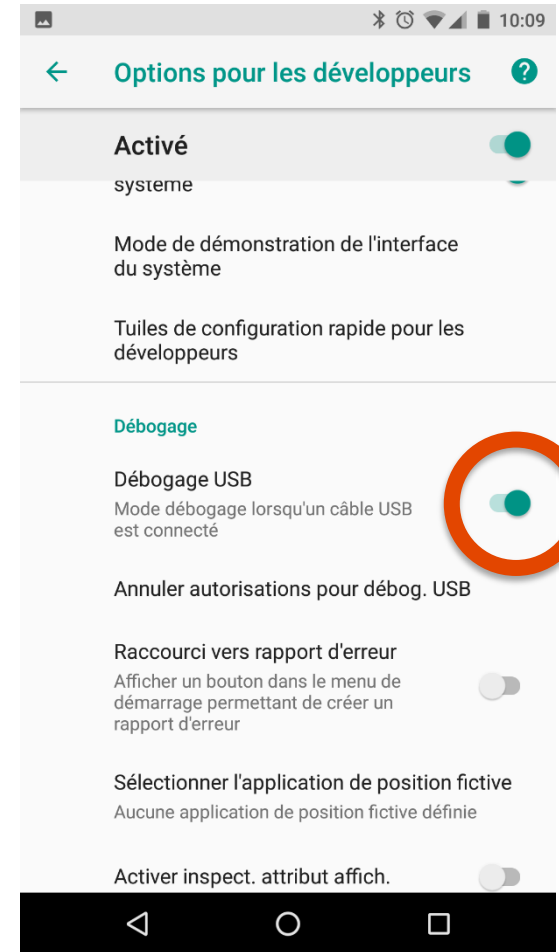
# Activer le mode développeur



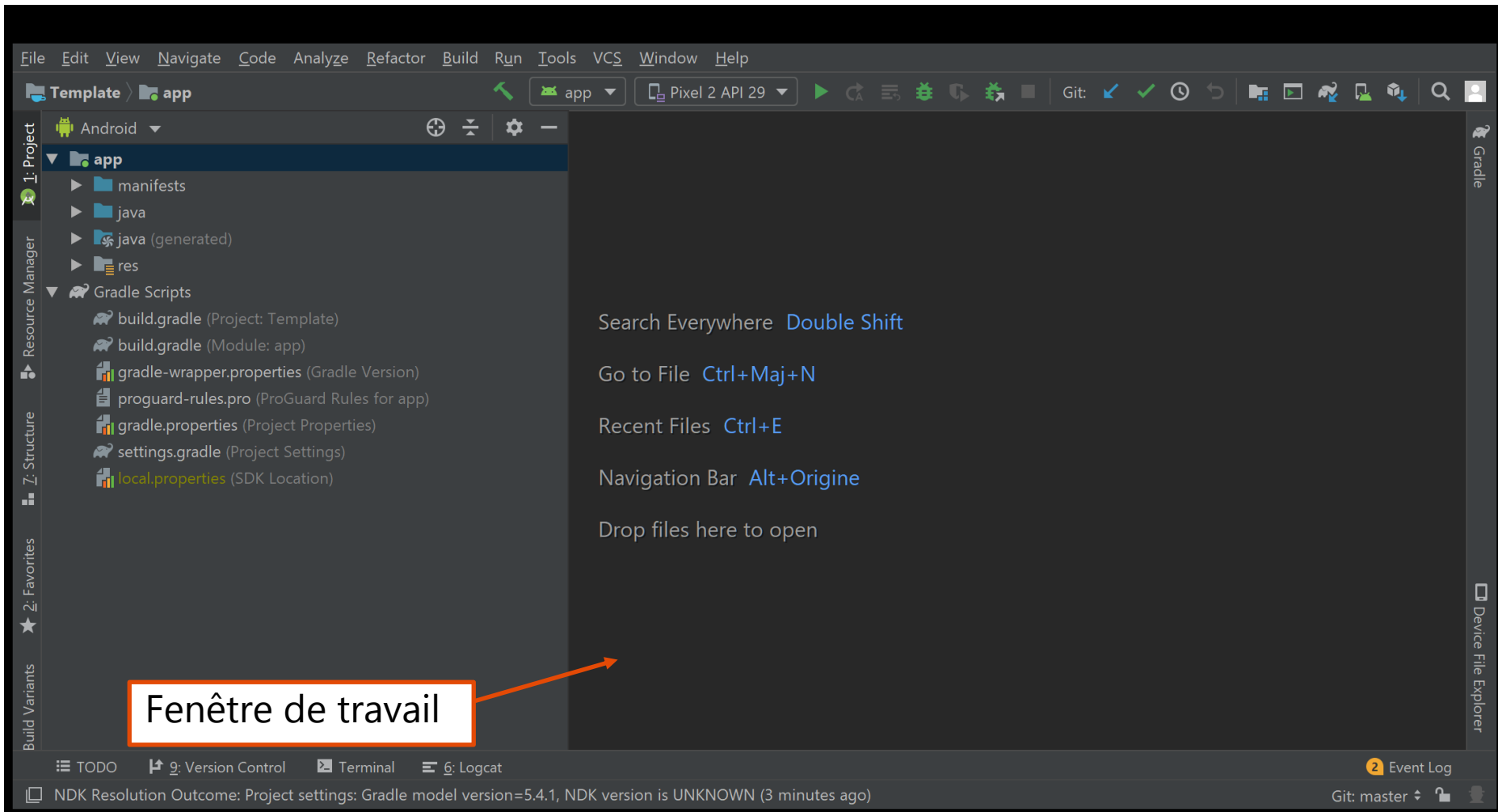
Tapoter 5-6 fois



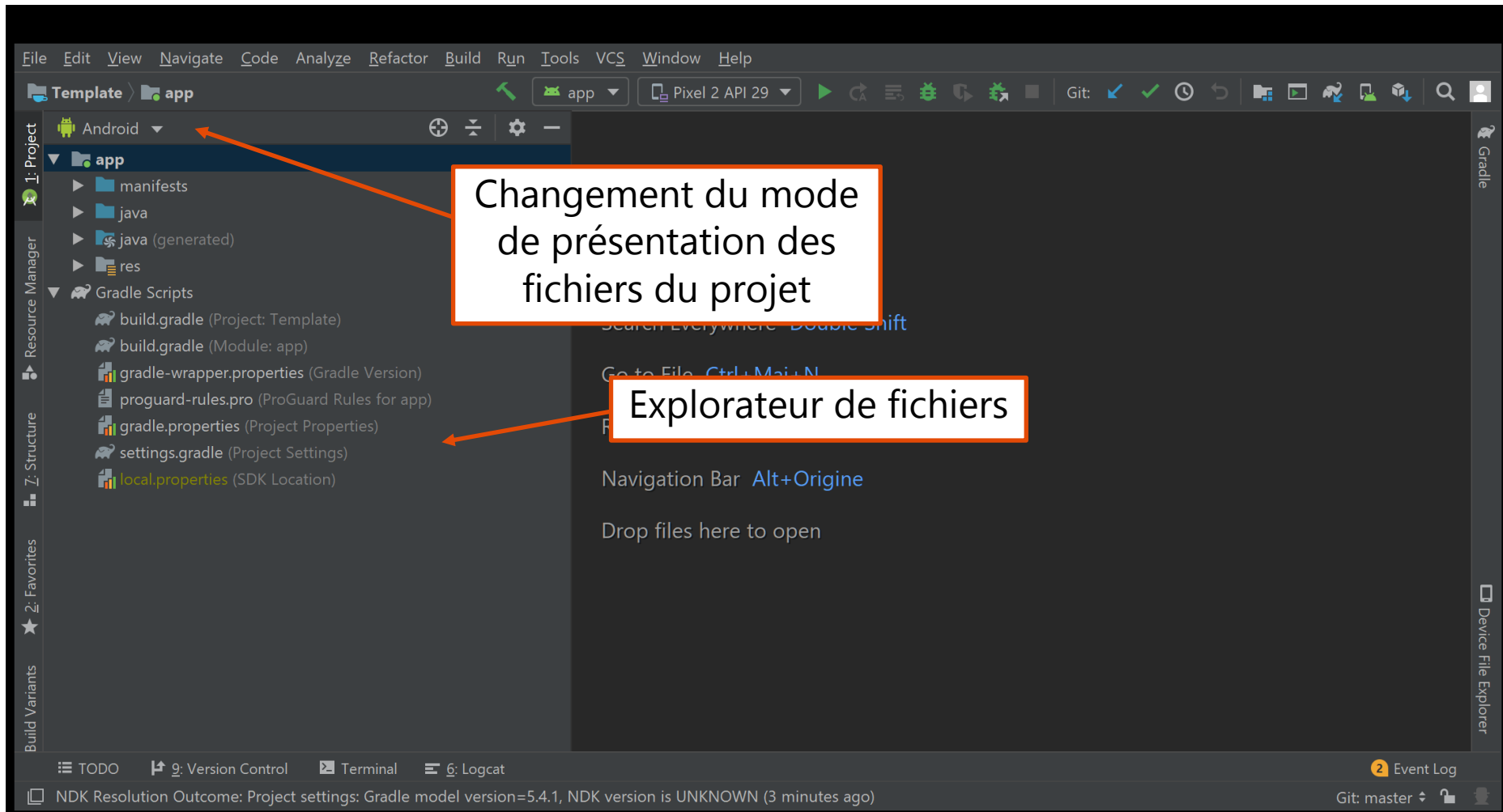
Le menu options pour les développeurs apparaît



# Android Studio



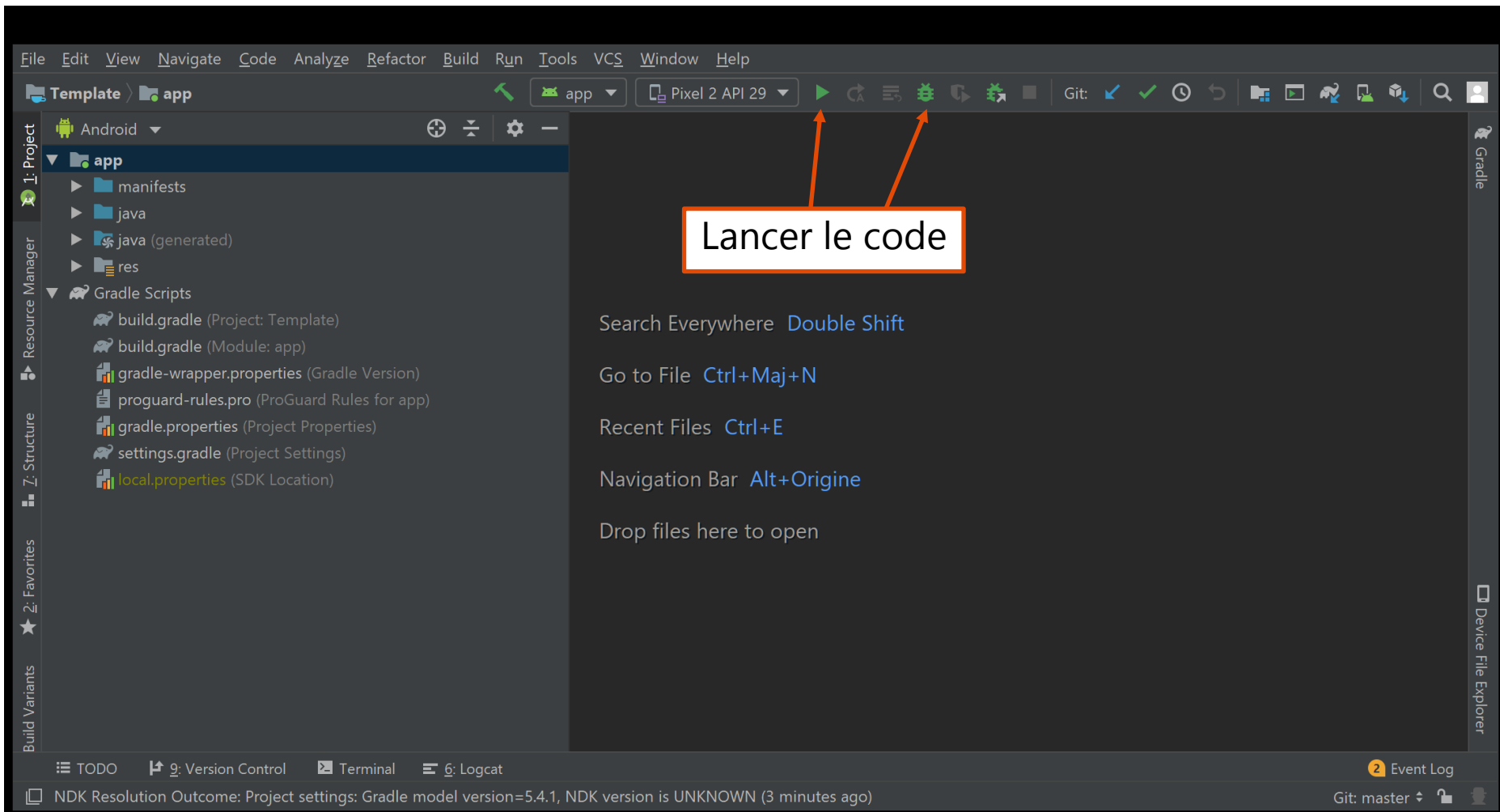
# Android Studio



# Android Studio

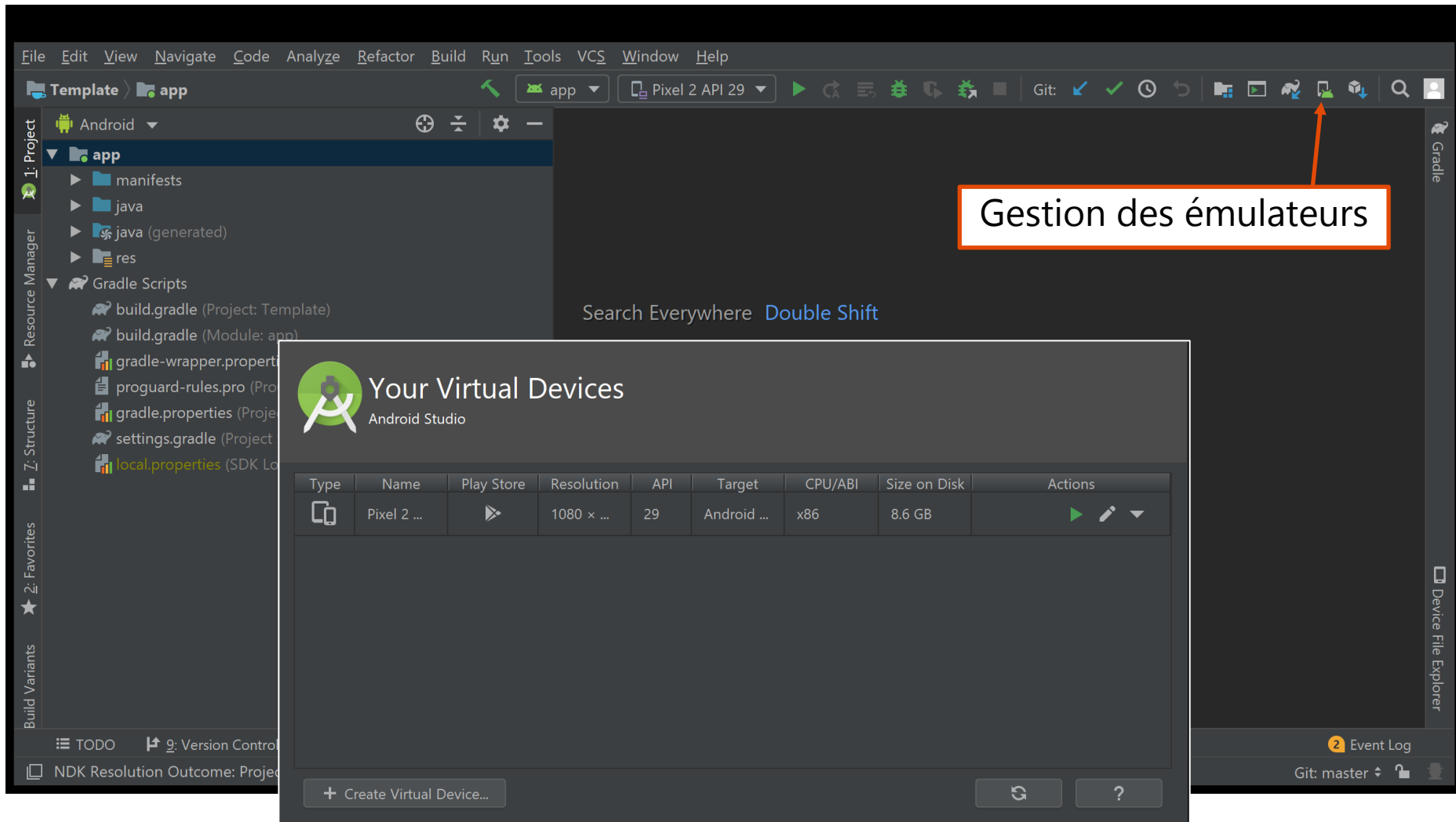
Relancer le code

Lancer le code

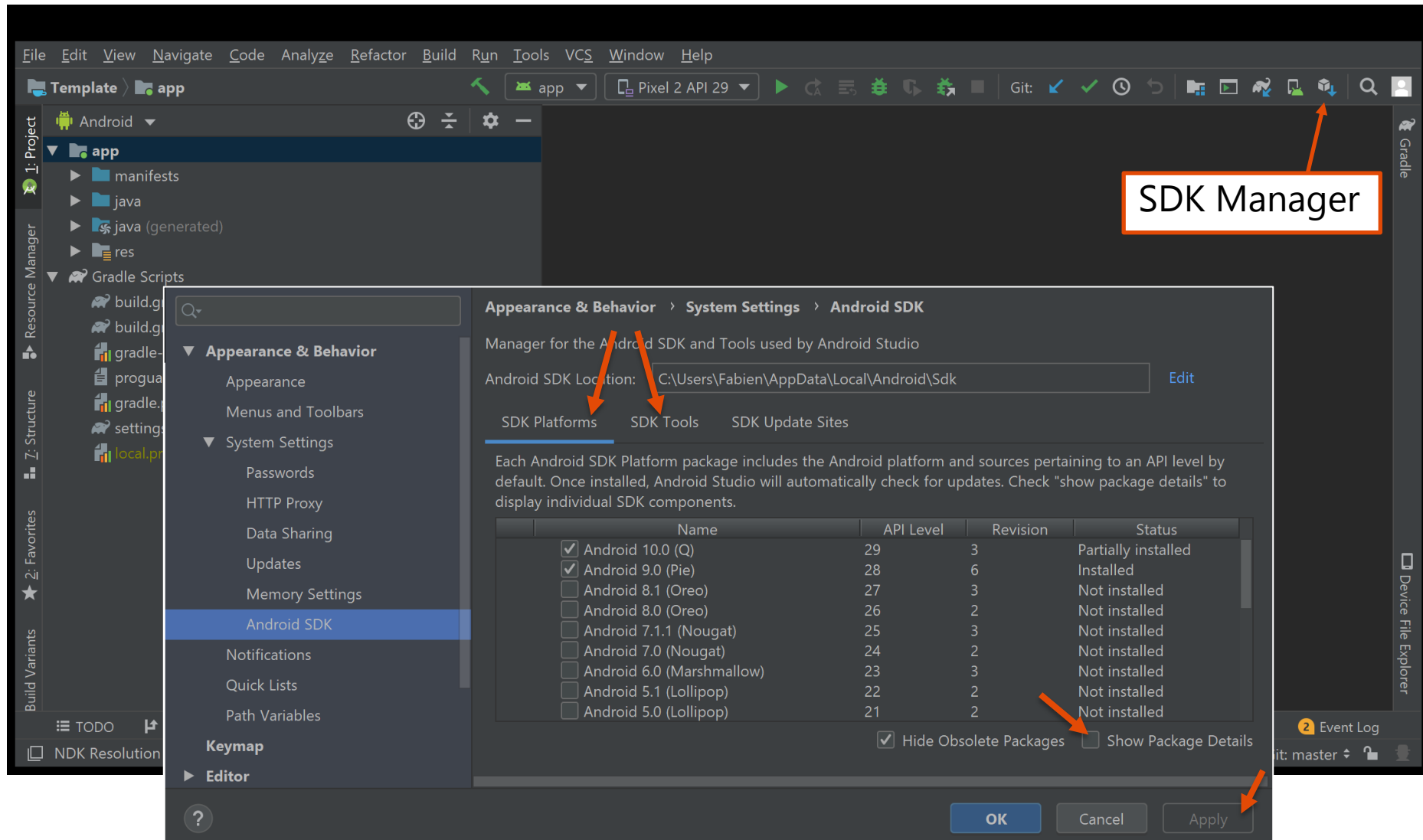




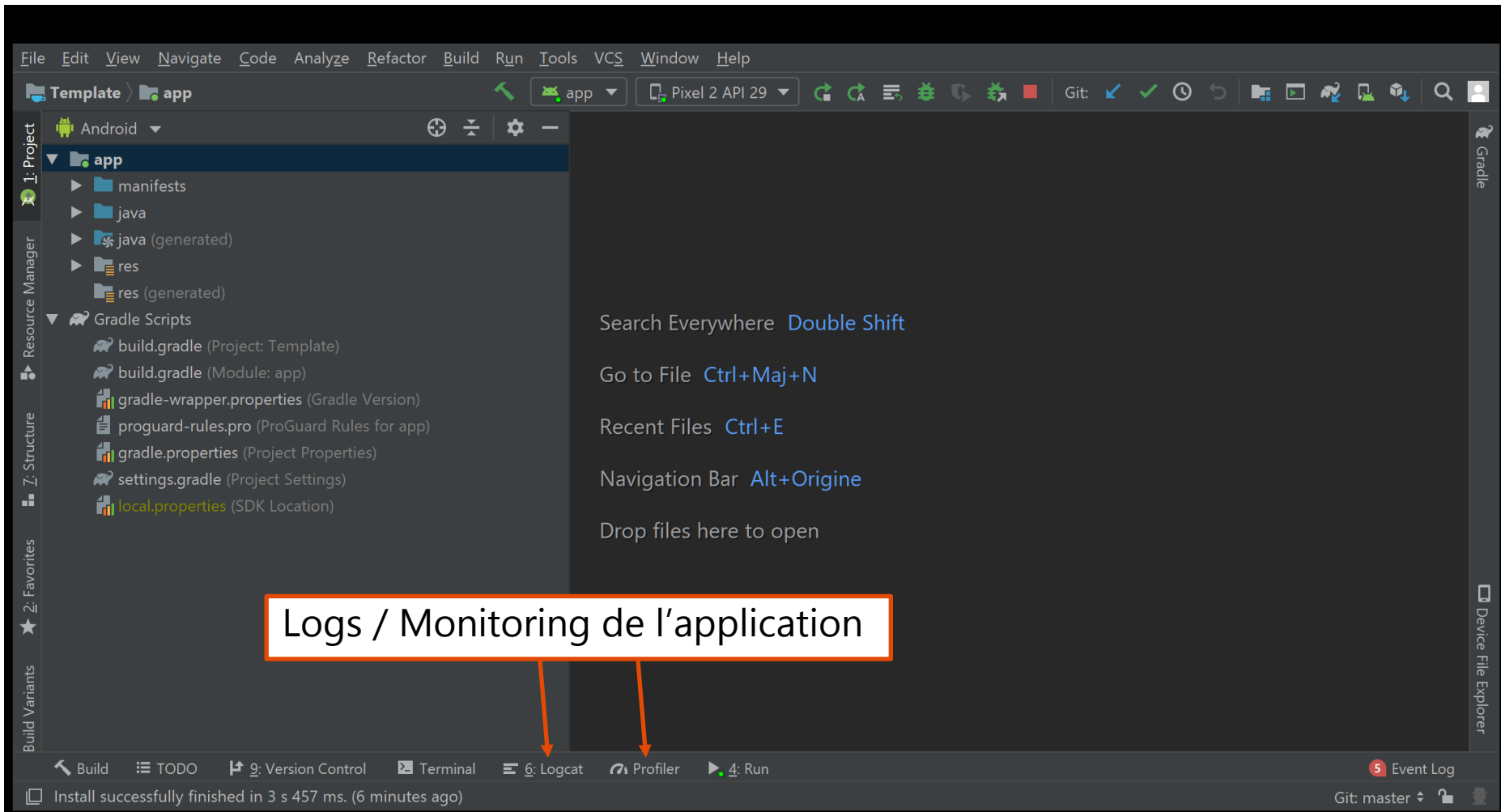
# Android Studio



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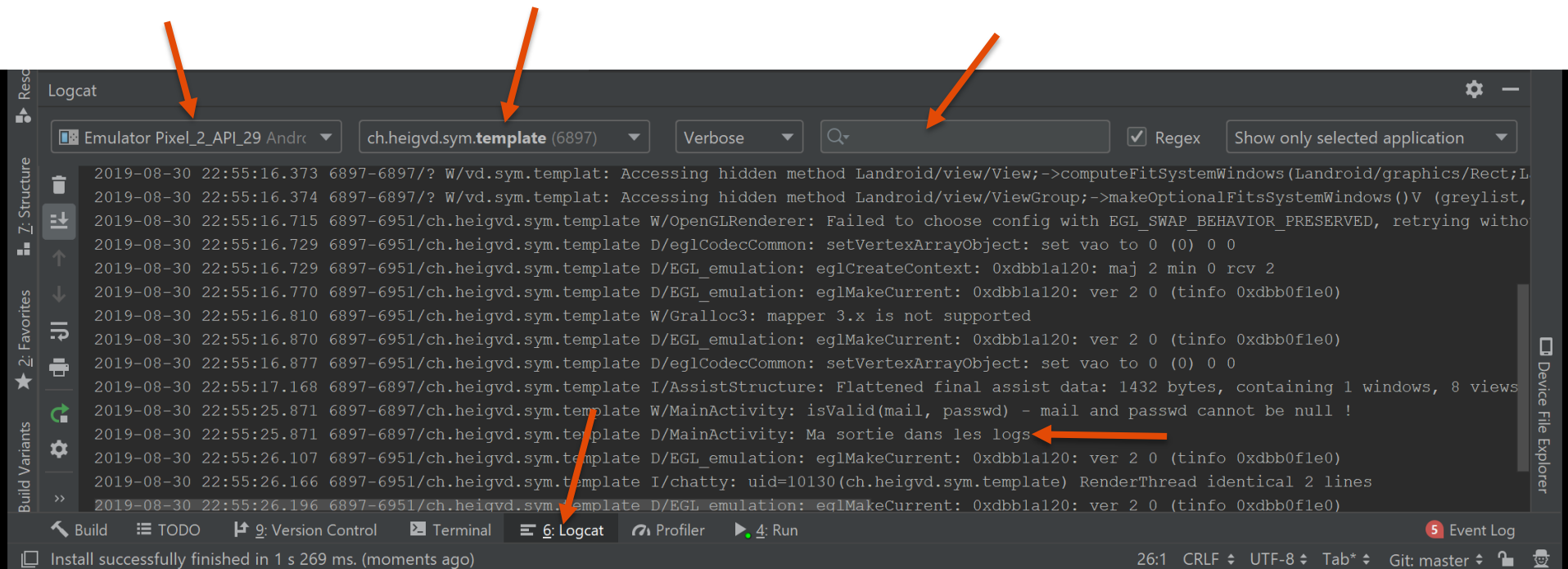


# Android Studio

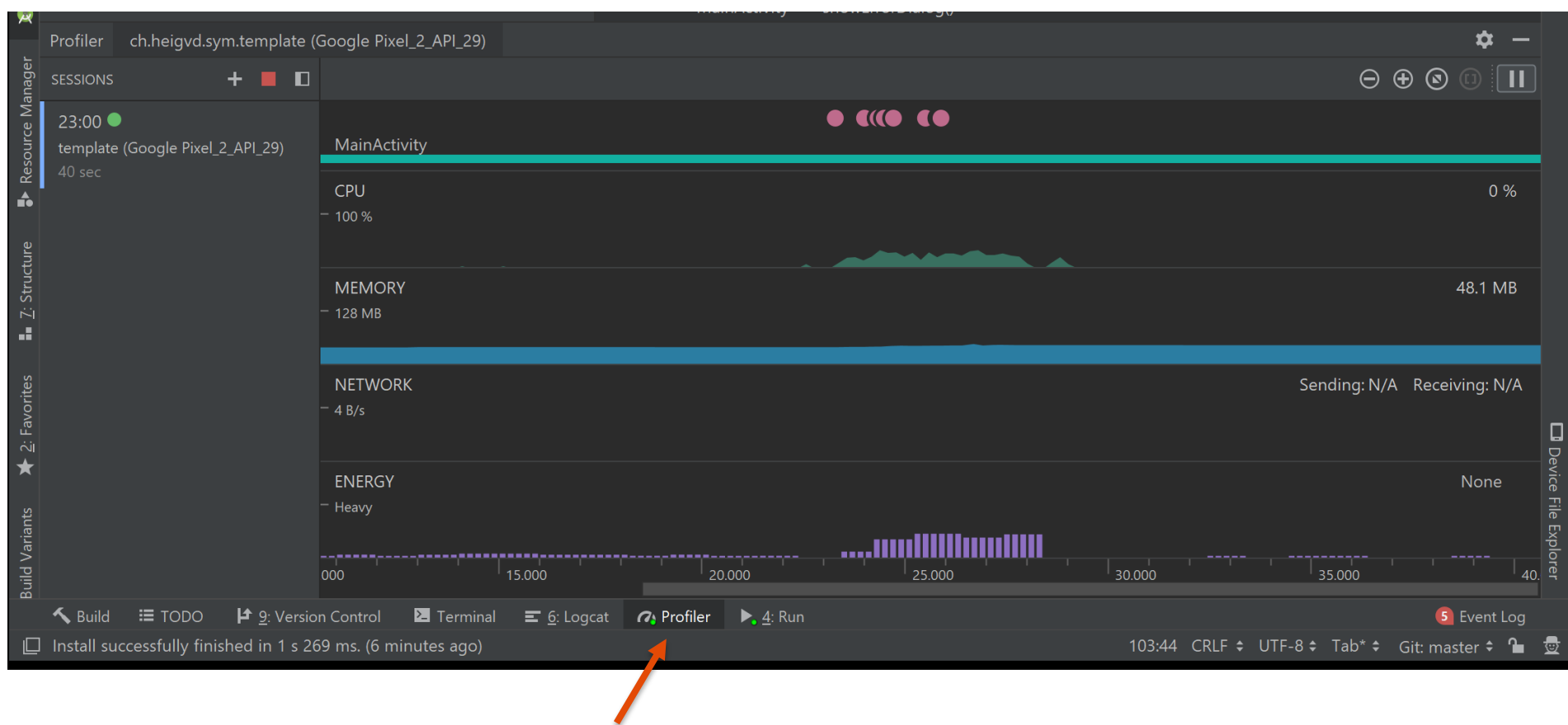


# Android Studio - Logs

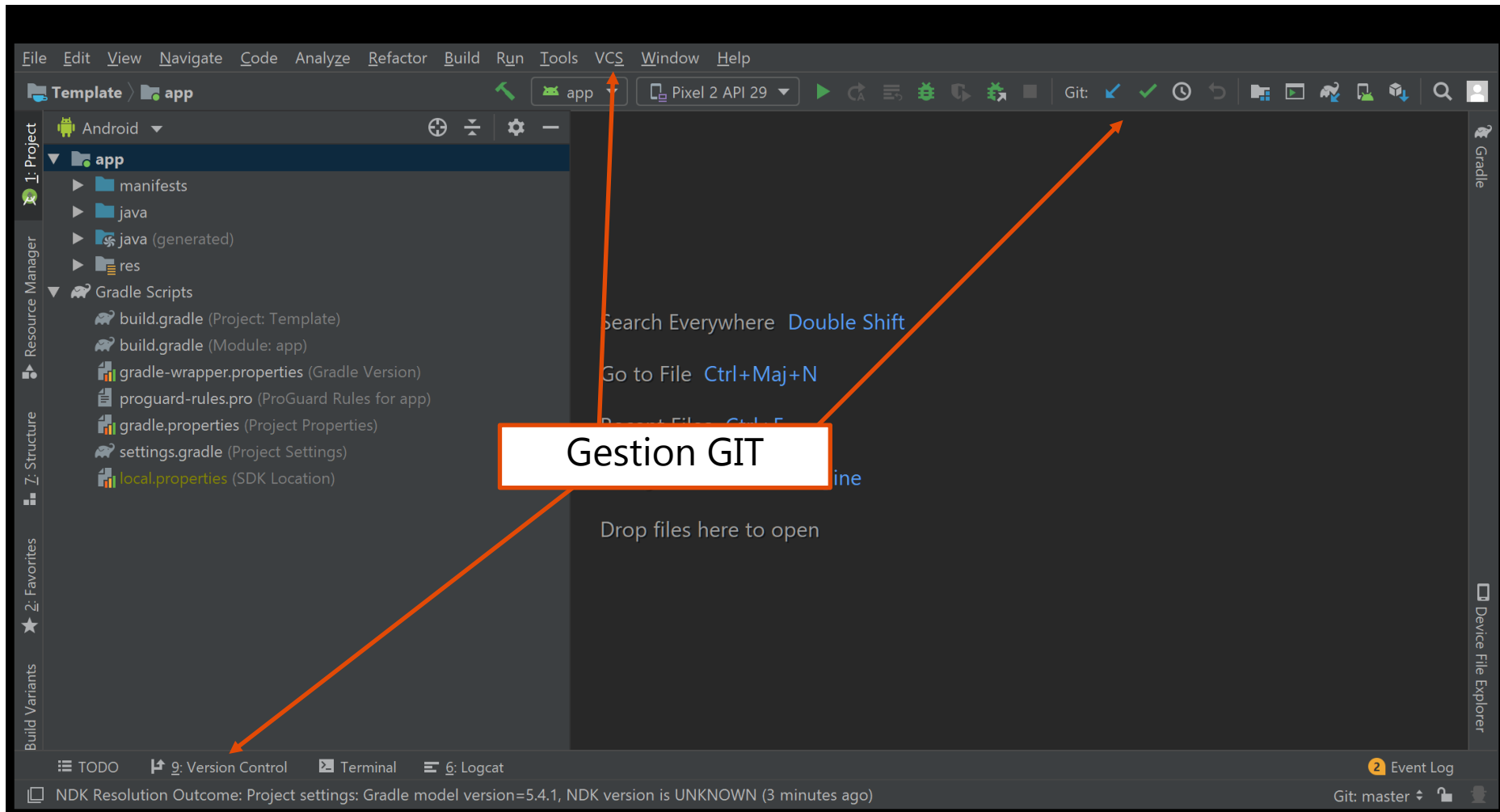
```
7/ch.heigvd.sym.template D/MainActivity: Ma sortie dans les logs
```



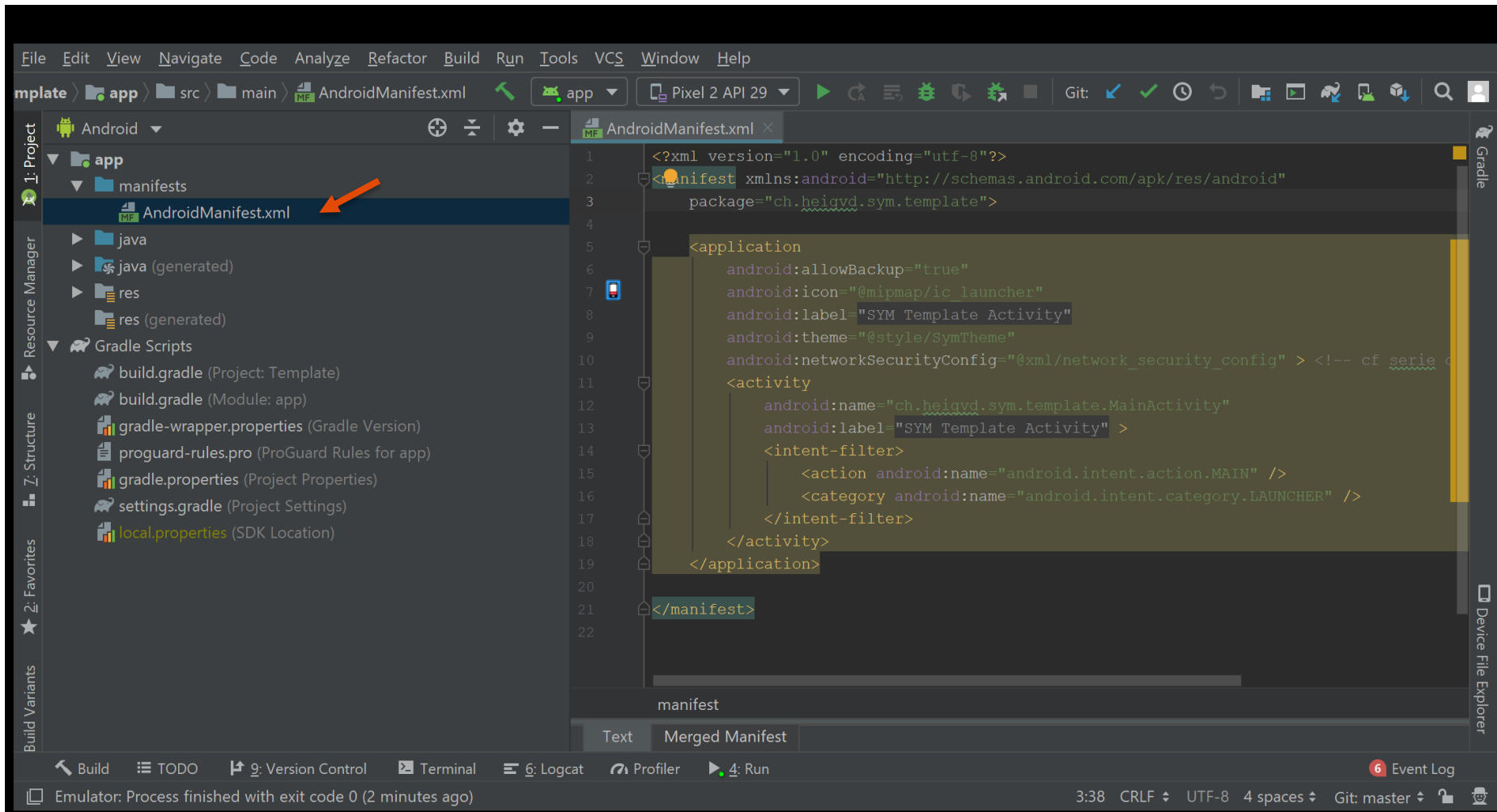
# Android Studio - Monitoring



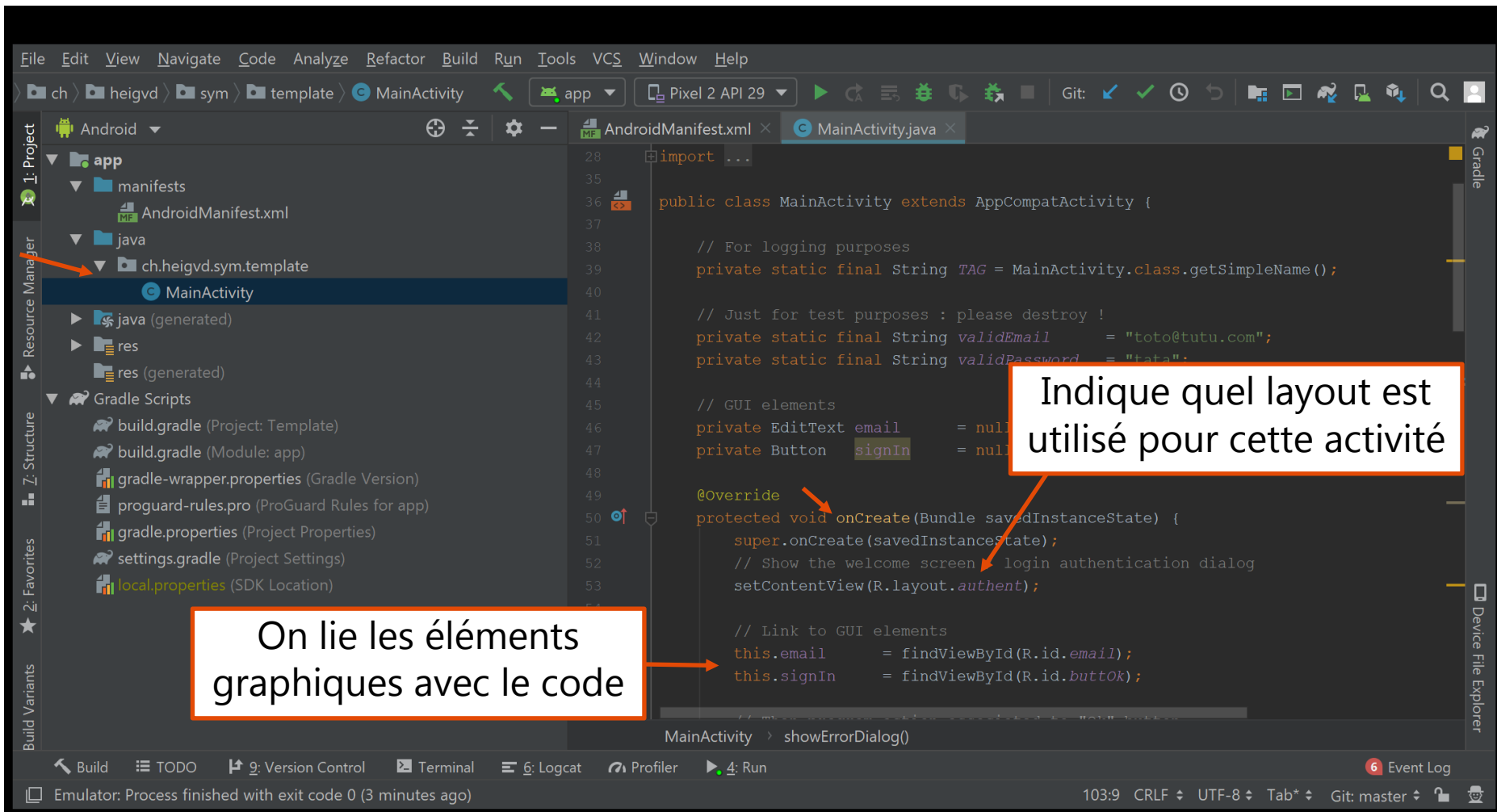
# Android Studio



# Android Studio

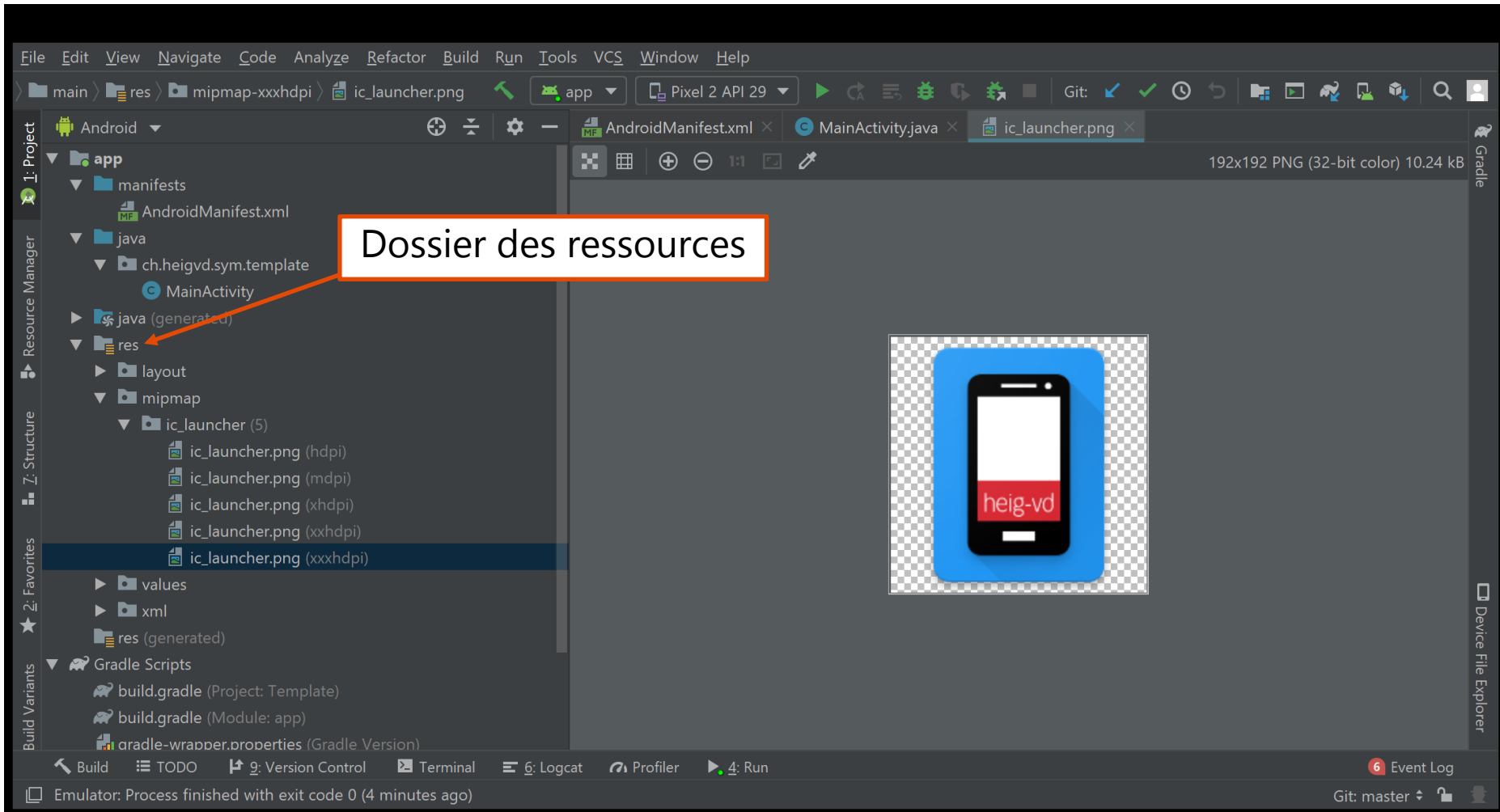


# Android Studio

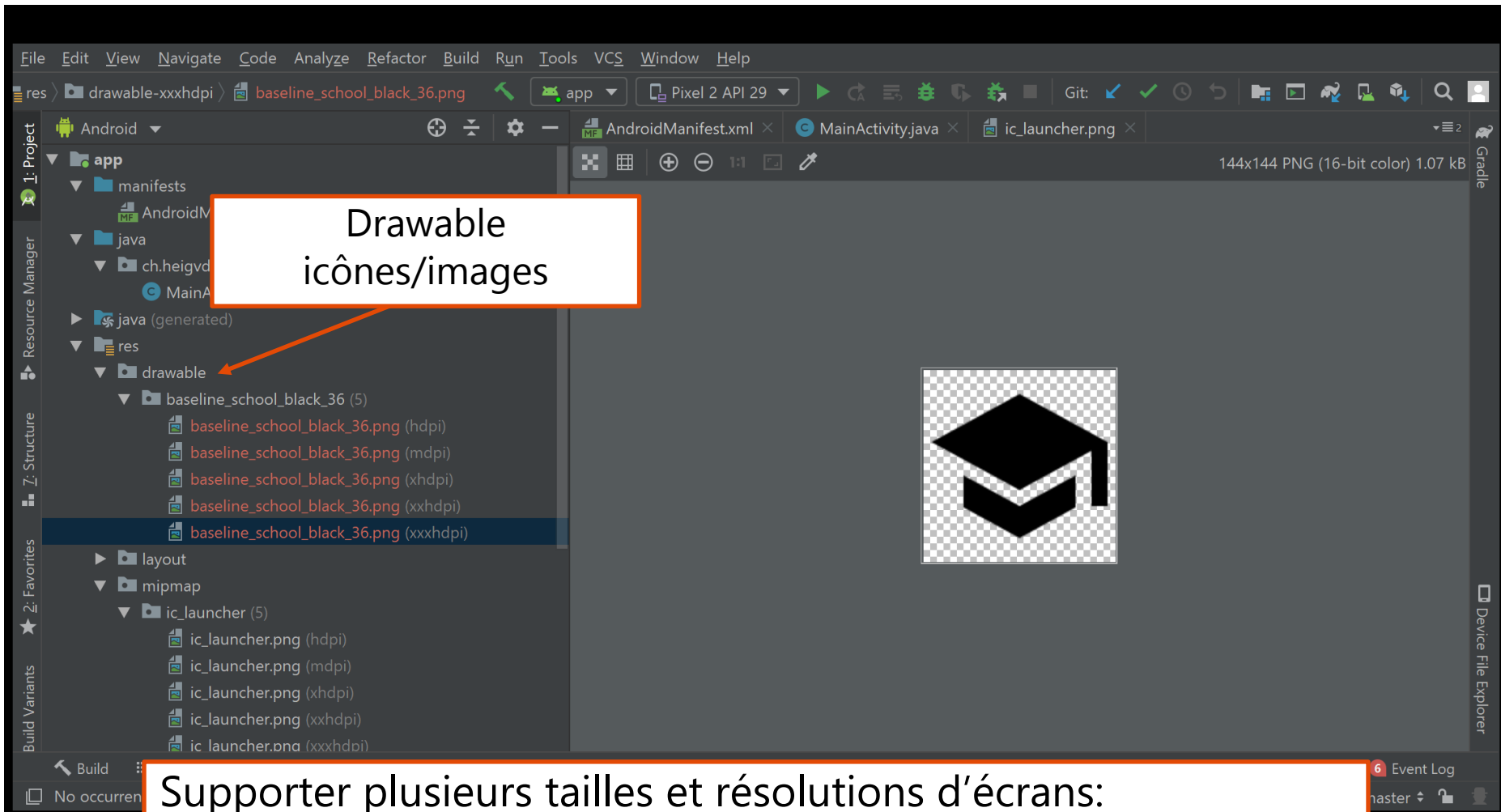




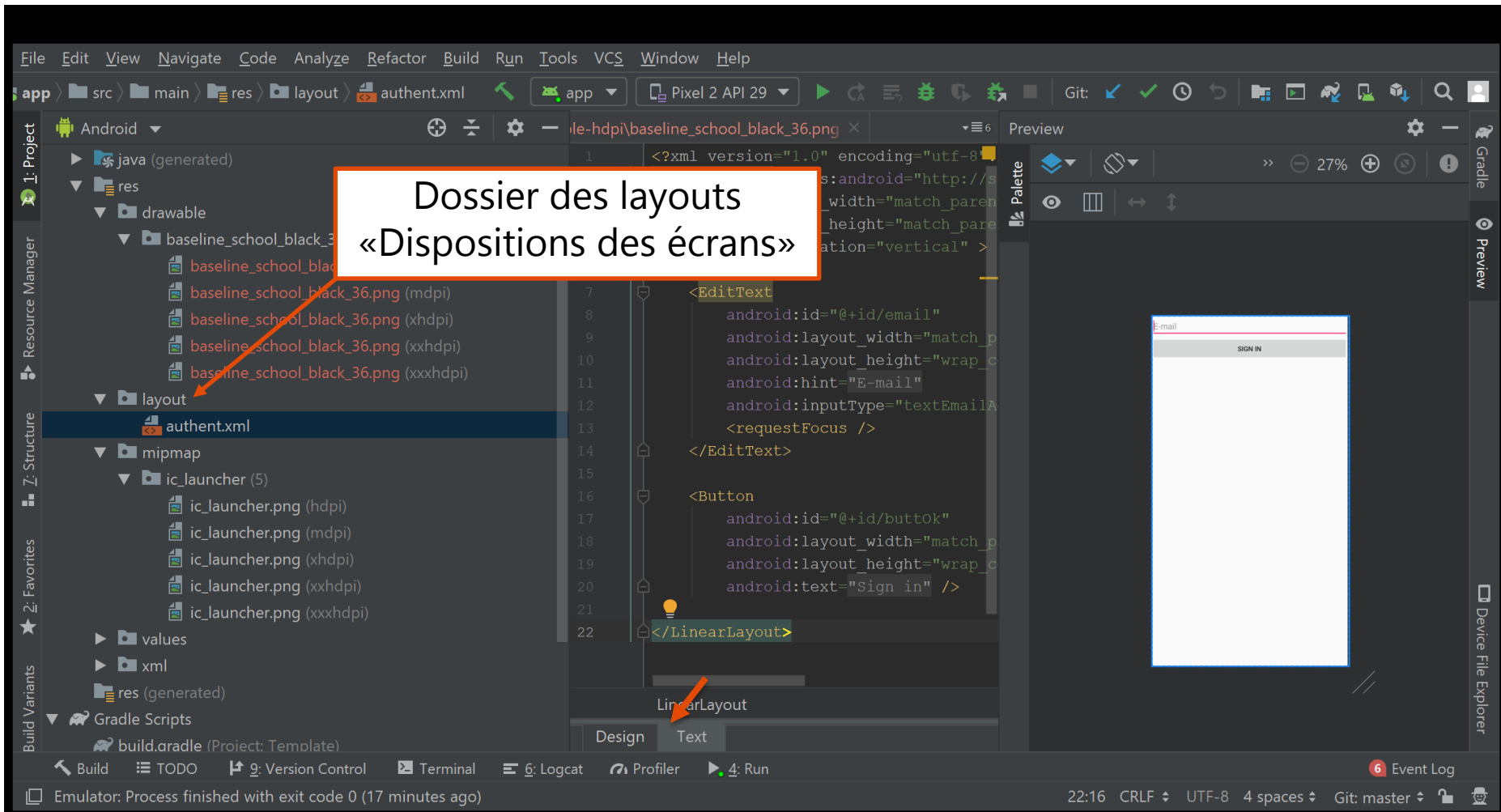
# Android Studio



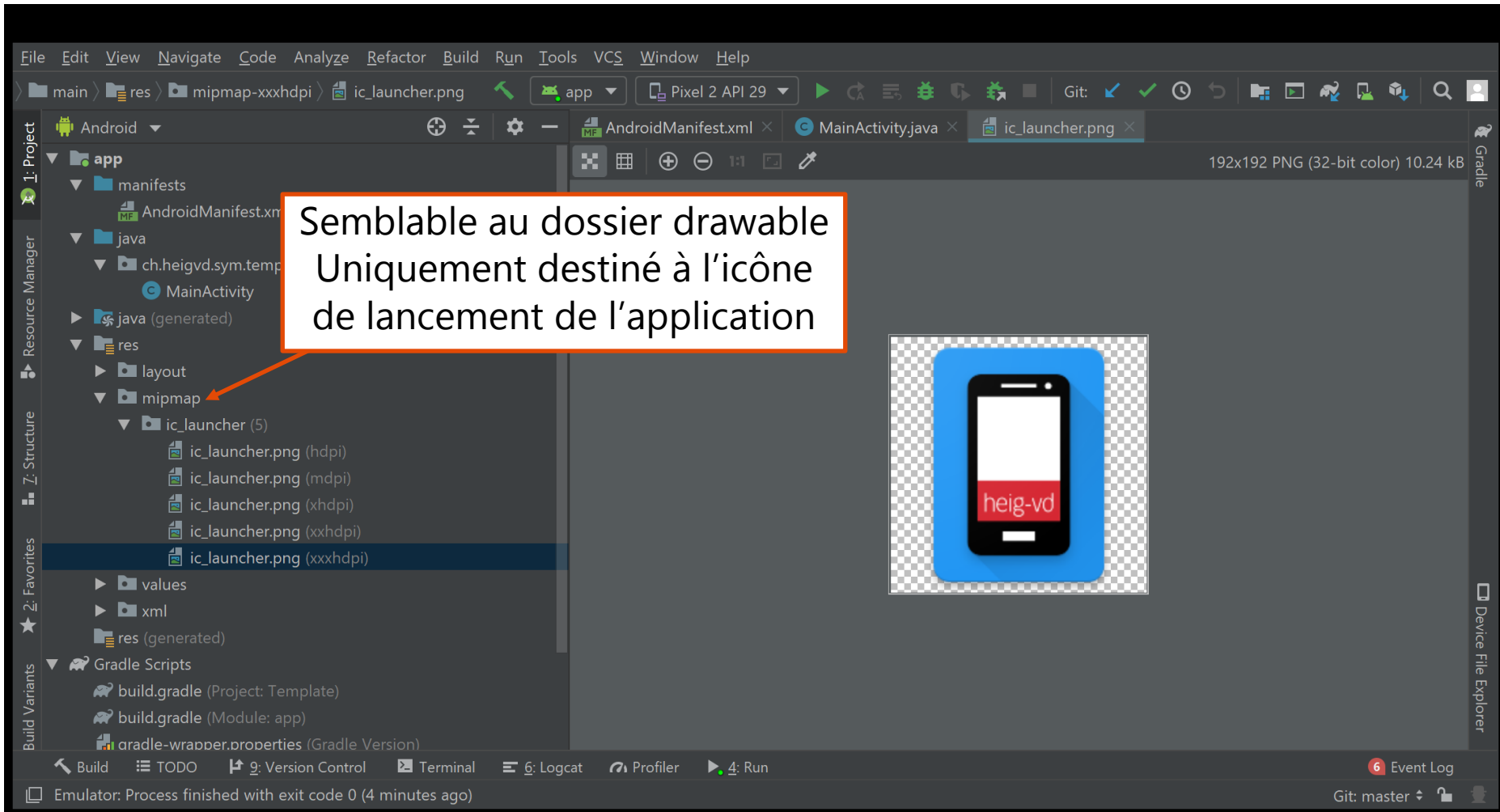
# Android Studio



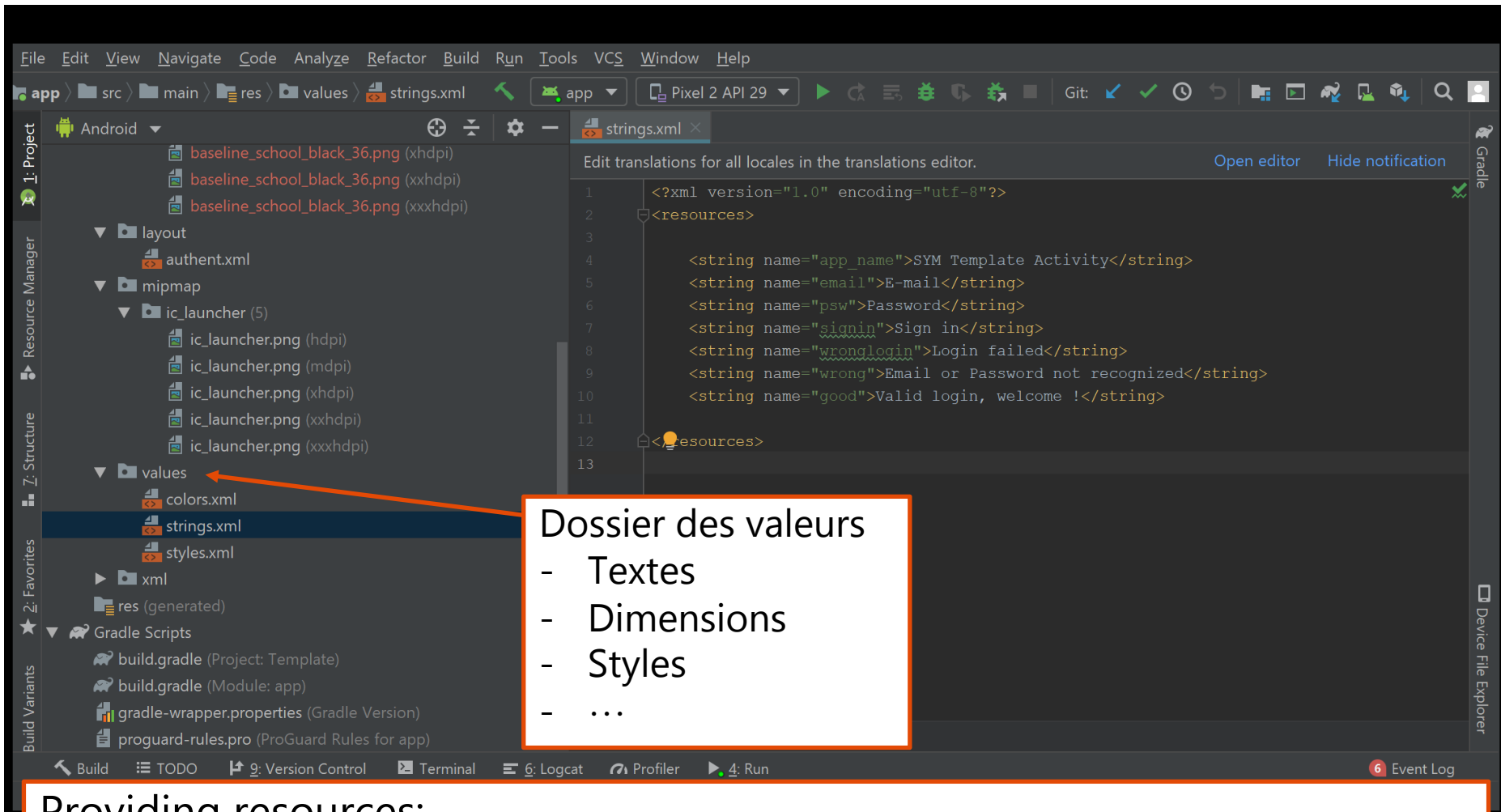
# Android Studio



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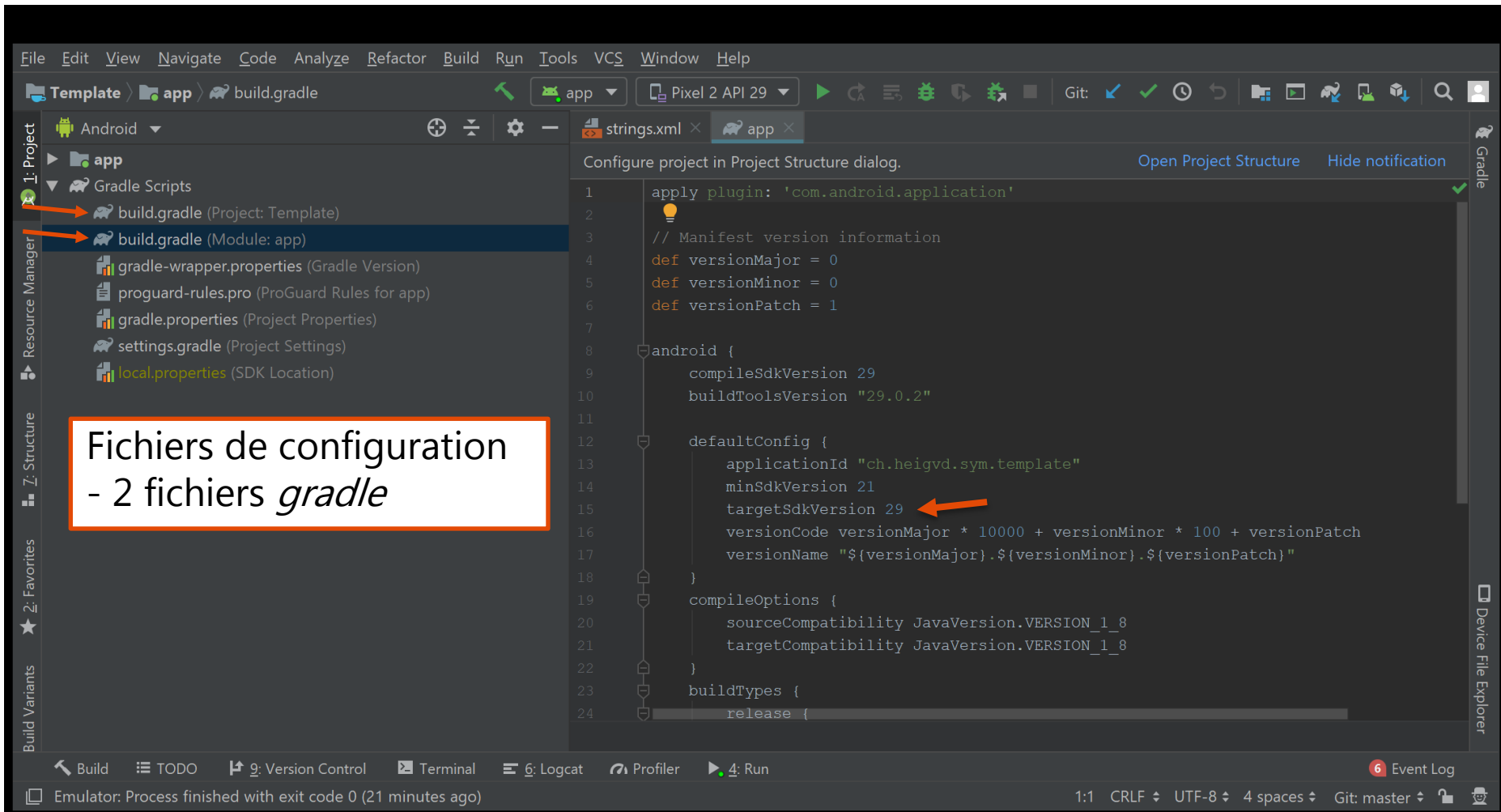
# Android Studio



Providing resources:

<https://developer.android.com/guide/topics/resources/providing-resources.html>

# Android Studio



## Emulateurs

*Bien que l'émulateur fourni de base avec le SDK d'Android soit à présent relativement complet et bien optimisé, il existe d'autres alternatives:*

- *Genymotion – Version personnelle gratuite  
<https://www.genymotion.com/fun-zone/>*
- *Visual Studio Emulator for Android  
Version autonome aussi disponible  
<https://www.visualstudio.com/fr/vs/msft-android-emulator>*

# Documentation

- *Documentation*  
<https://developer.android.com/guide/index.html>
- *API Android (JAVA)*  
<https://developer.android.com/reference/classes.html>
- *Conseils Material Design*  
<https://developer.android.com/design/index.html>
- *Changements apportés par les nouvelles versions*  
<https://developer.android.com/preview>
- *The Busy Coder's Guide to Android Development*  
<https://commonsware.com/Android/>