Royal University of Bhutan

Unit II: Building an Android Application

CTE308- AS2025

Tutor: Pema Galey

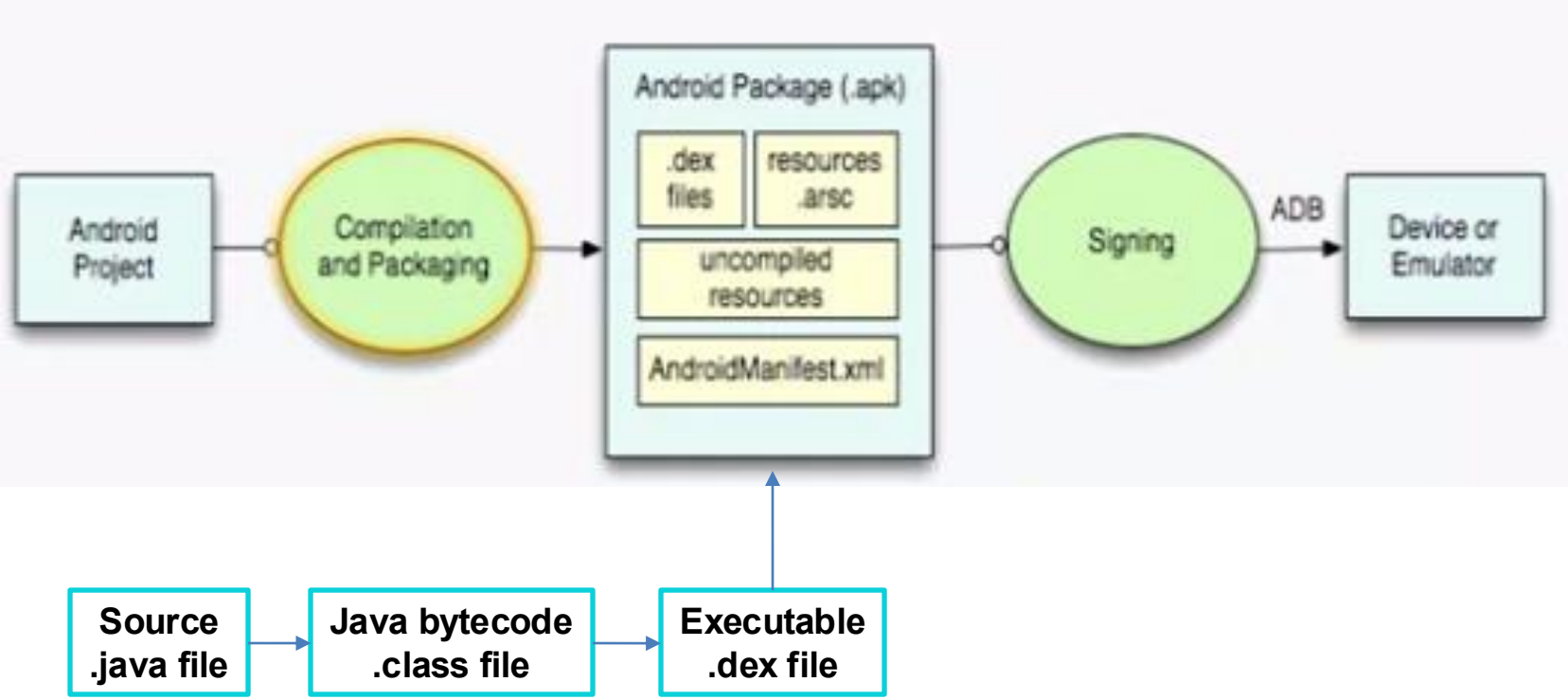
#17682761

Outline

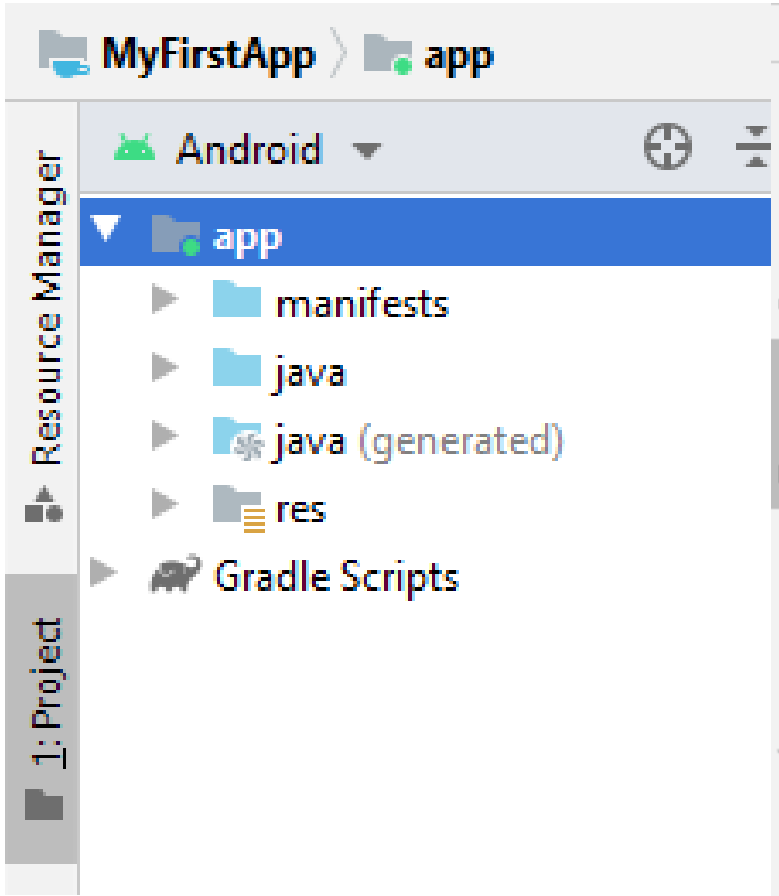
- Project Compilation and Execution
- Identify Project Files

Compilation and Execution

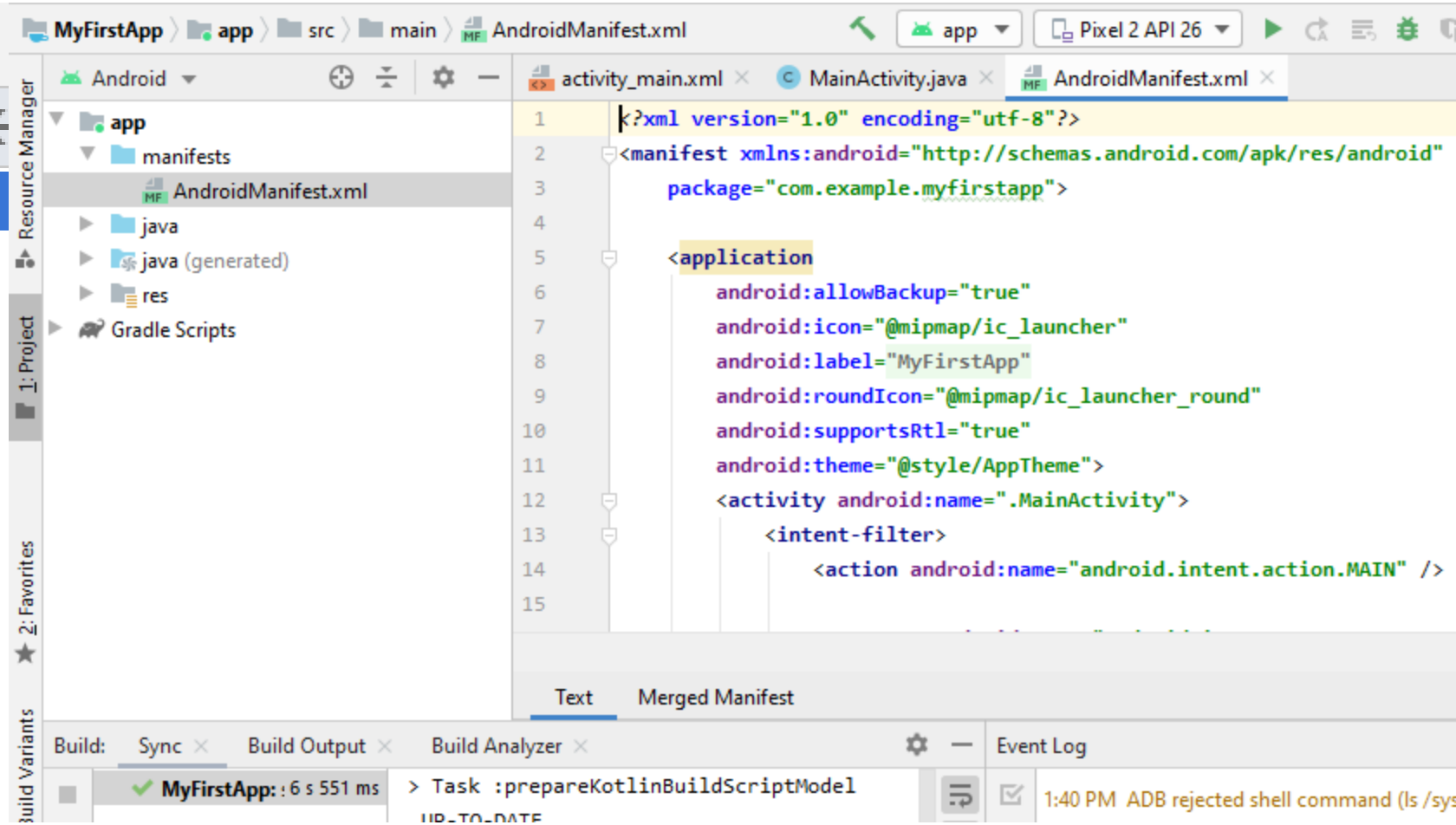
App Compilation & Execution



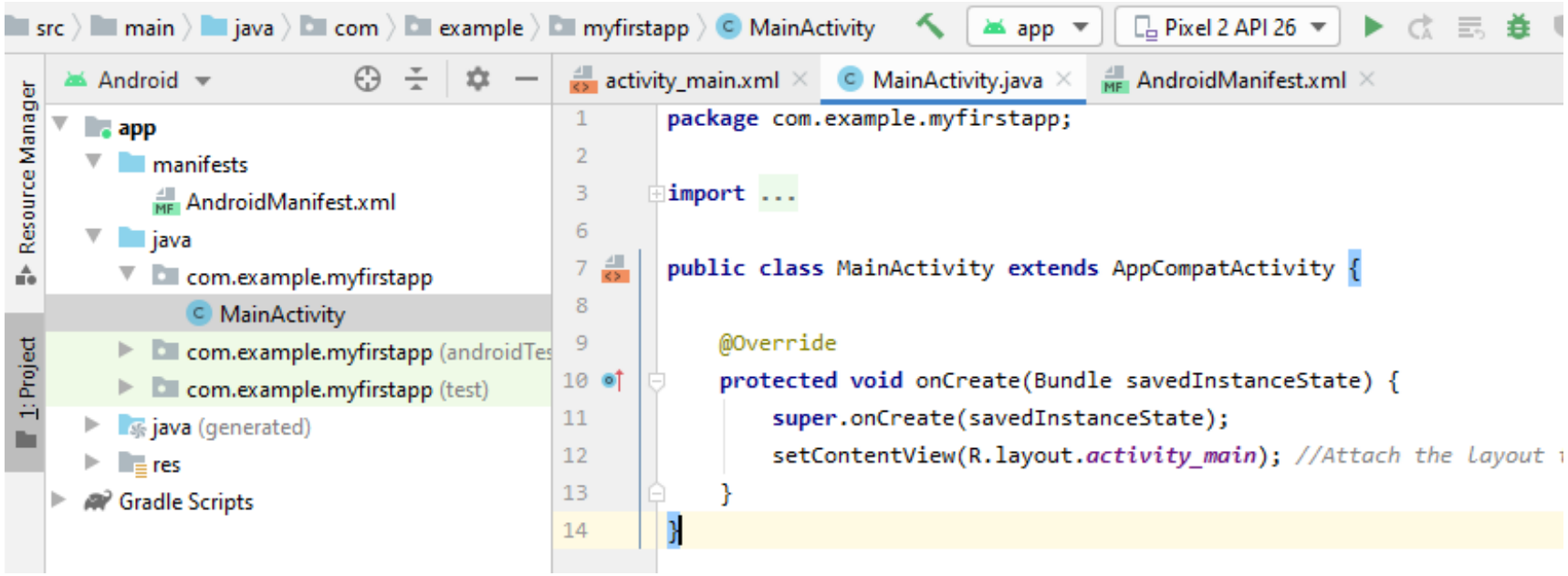
Project Files



Manifests File



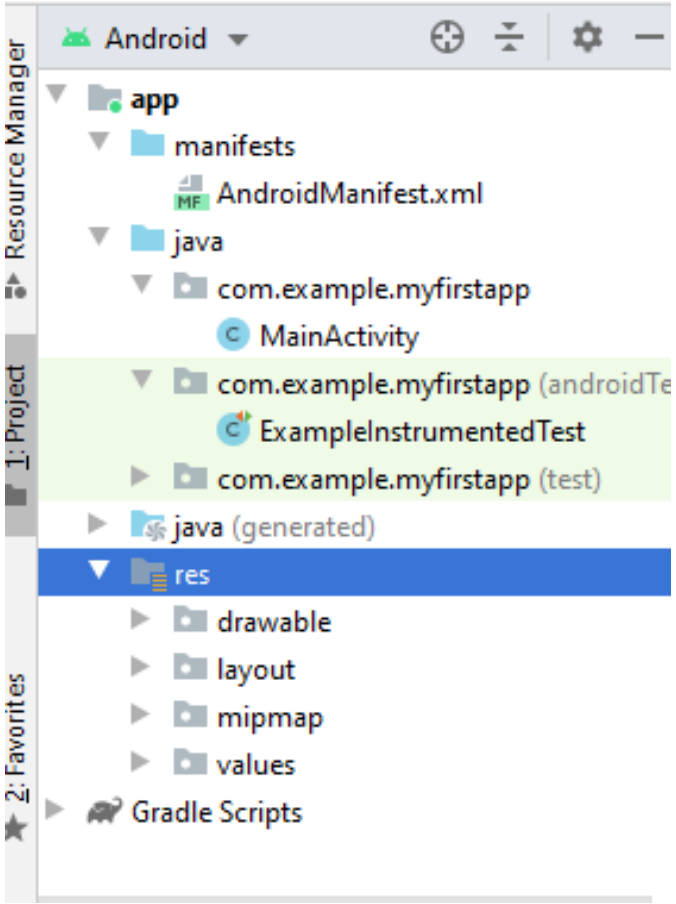
Java Files



Purpose:

- Code Development
- UI Testing
- JUnit Testing

Resource Files



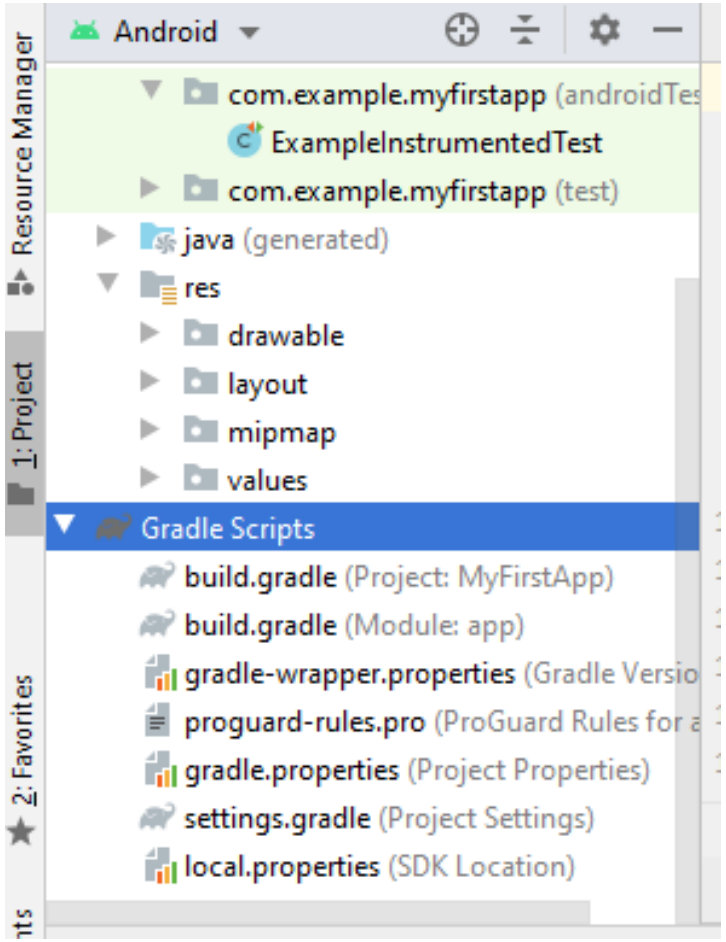
Use-case:

- Images, Animation parts in **drawable**
- App layout in **layout**
- Different resolution devices app icons in **mipmap**
- other resources such as String, Color and Style in **values**.

How?

- Anything you use from res folder is registered in R.java which is system generated file.
- Reference from Java code as **R.**
- Reference from XML code as **@resourcefolder.**

Gradle Scripts



Gradle?

- Subsystem of Android Studio
- Flexibility and Performance

Build Gradle Types

- Project
- Module
- Settings

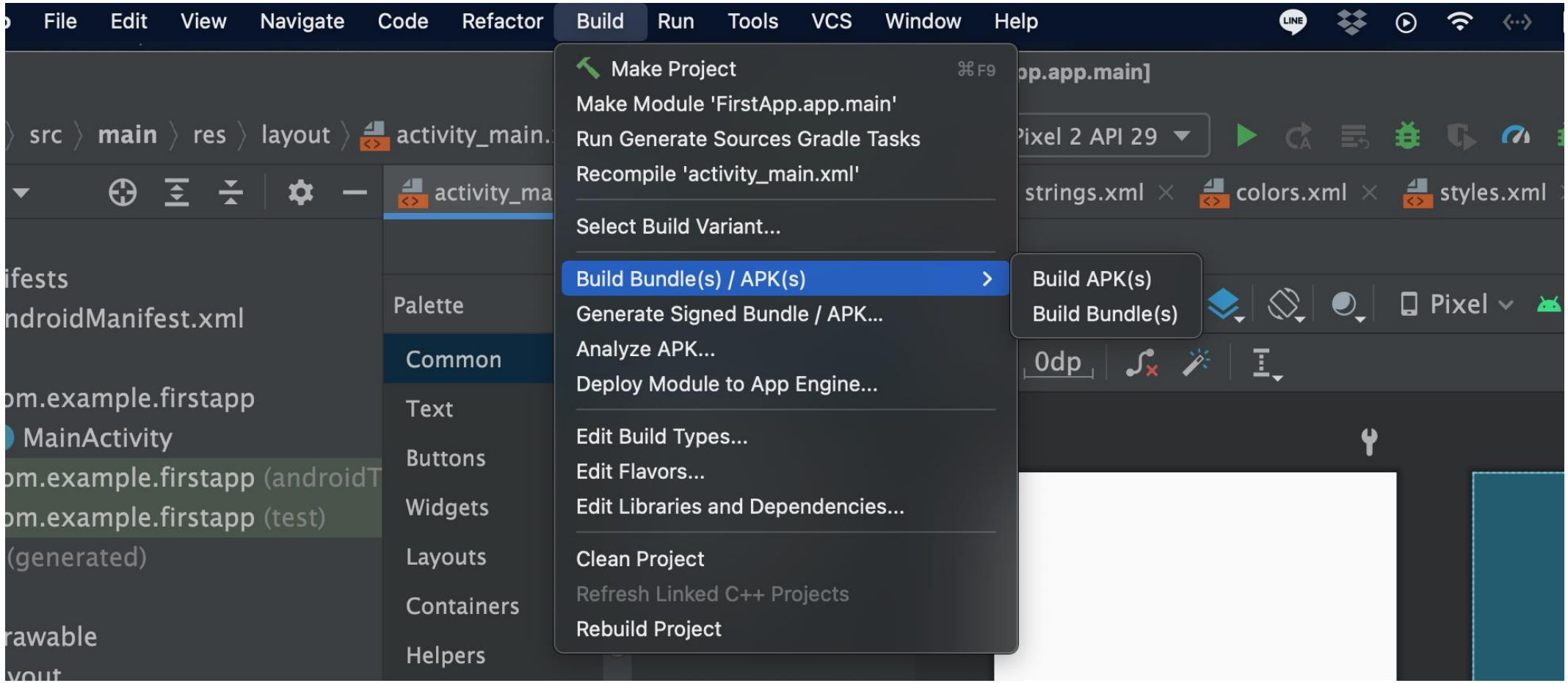
APK vs AAB

- **App Bundles (.aab)** are a publishing format, whereas **APK** (Android application Package) is the packaging format which eventually will be installed on device.
- App Bundles use bundletool to create a set of APK (.apks). This can be extracted and the base and configuration splits as well as potential dynamic feature modules can be deployed to a device.

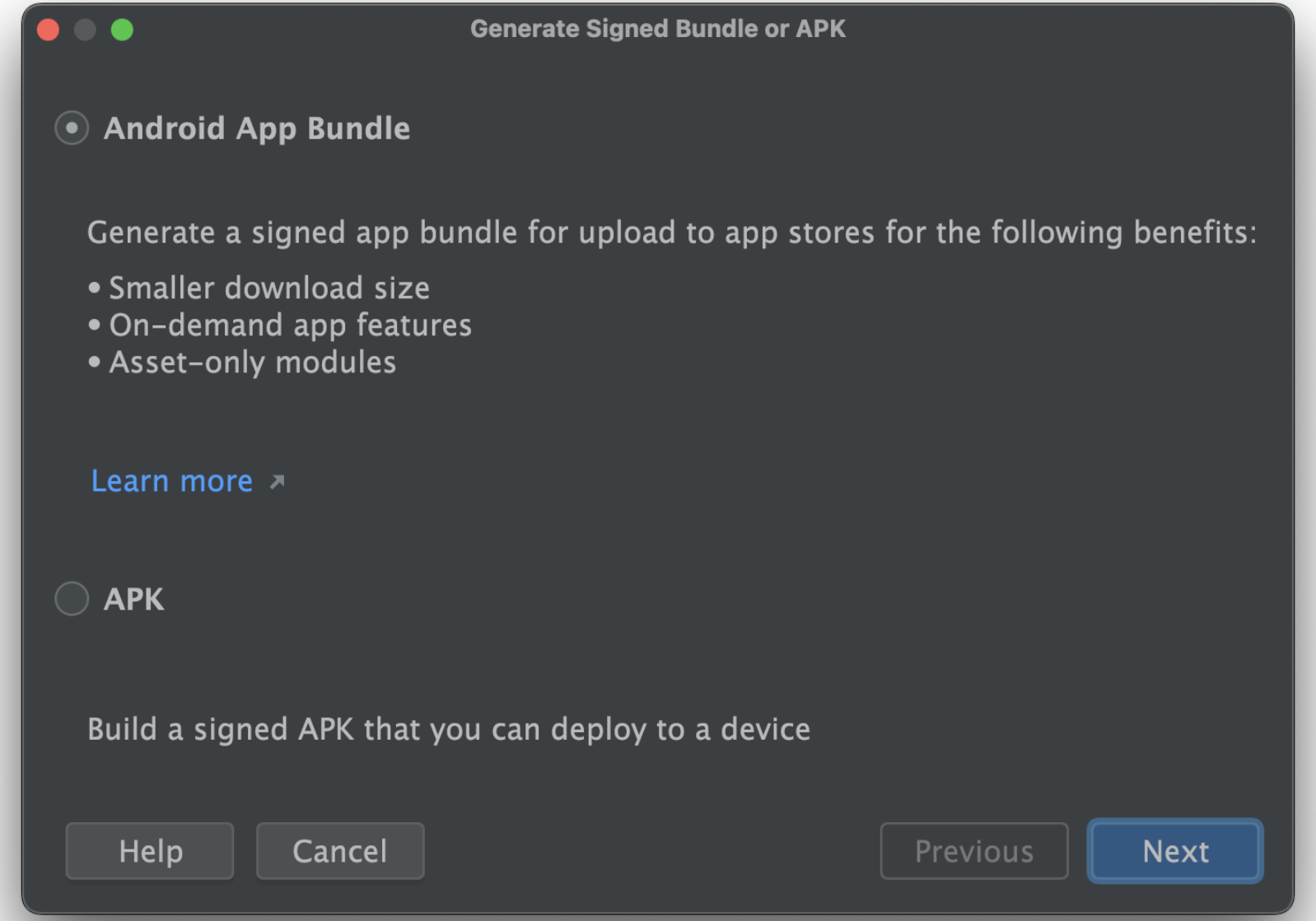
Android App Bundle

- Google uses **app bundle** to generate and serve **optimized** APKs for each user's device configuration, so they download only the code and resources they need to run your app.
- Therefore, users can get **smaller** and more **optimized** downloads.

Buidling AAD/APK



Android App Bundle



Thank you!