



Android Development with Kotlin

Android Studio

LECTURE 7: ANDROID STUDIO

Android Studio:

Android Studio is the official integrated development environment (IDE) for Google's Android operating system, built on **JetBrains' IntelliJ IDEA software and designed specifically for Android development**. It is available for download on **Windows, macOS and Linux** based operating systems. It is a replacement for the Eclipse Android Development Tools (ADT) as the primary IDE for native Android application development.

Android Studio was announced on May 16, 2013 at the Google I/O conference. It was in early access preview stage starting from version 0.1 in May 2013, then entered beta stage starting from version 0.8 which was released in June 2014. The first stable build was released in December 2014, starting from version 1.0.

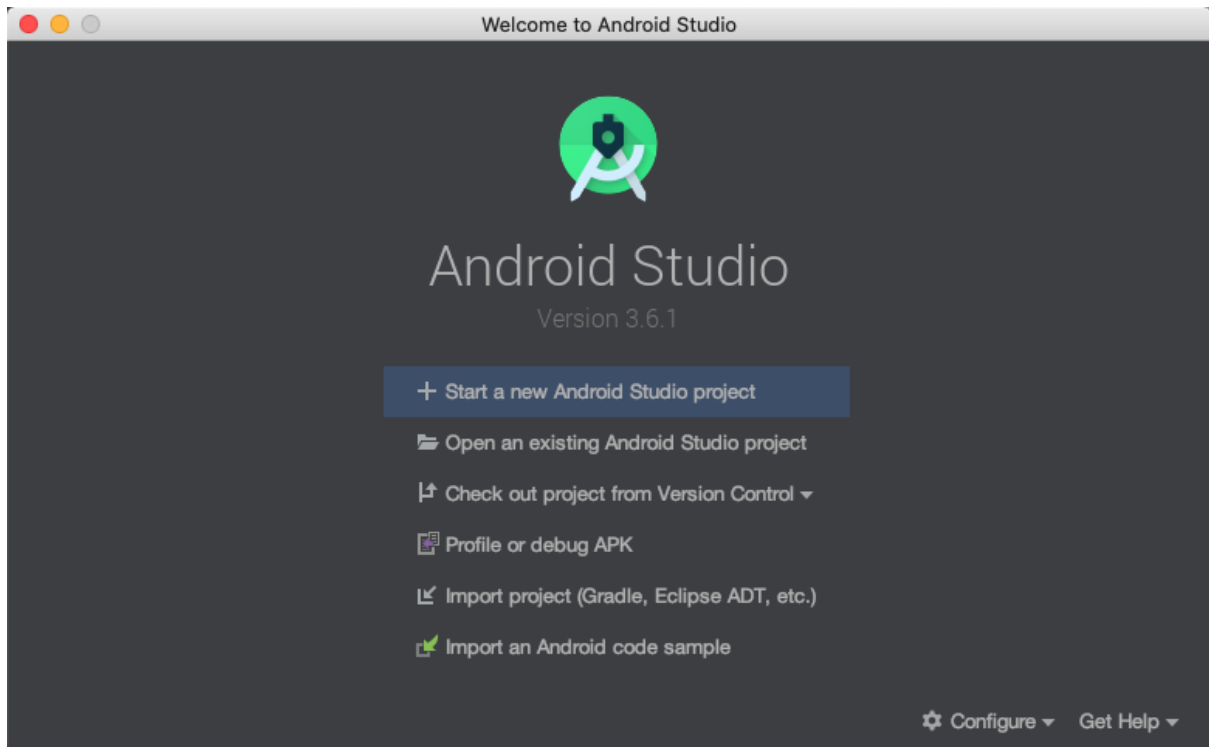
On May 7, 2019, Kotlin replaced Java as Google's preferred language for Android app development. Java is still supported, as is C++(for native coding)

Features:

- A flexible Gradle-based build system
- A fast and feature-rich emulator
- A unified environment where you can develop for all Android devices
- Apply changes to push changes to your running app without building a new APK
- Code templates and GitHub integration to help you build common app features and import sample code
- Extensive testing tools and frameworks
- Lint tools to help you catch performance, usability, version compatibility, and other problems
- C++ and NDK support
- Built-in support for Google Cloud Platform, making it easy to integrate Google Cloud Messaging and Google App Engine
- Plugin architecture for extending Android Studio via plugins

Creating a new Android Project:

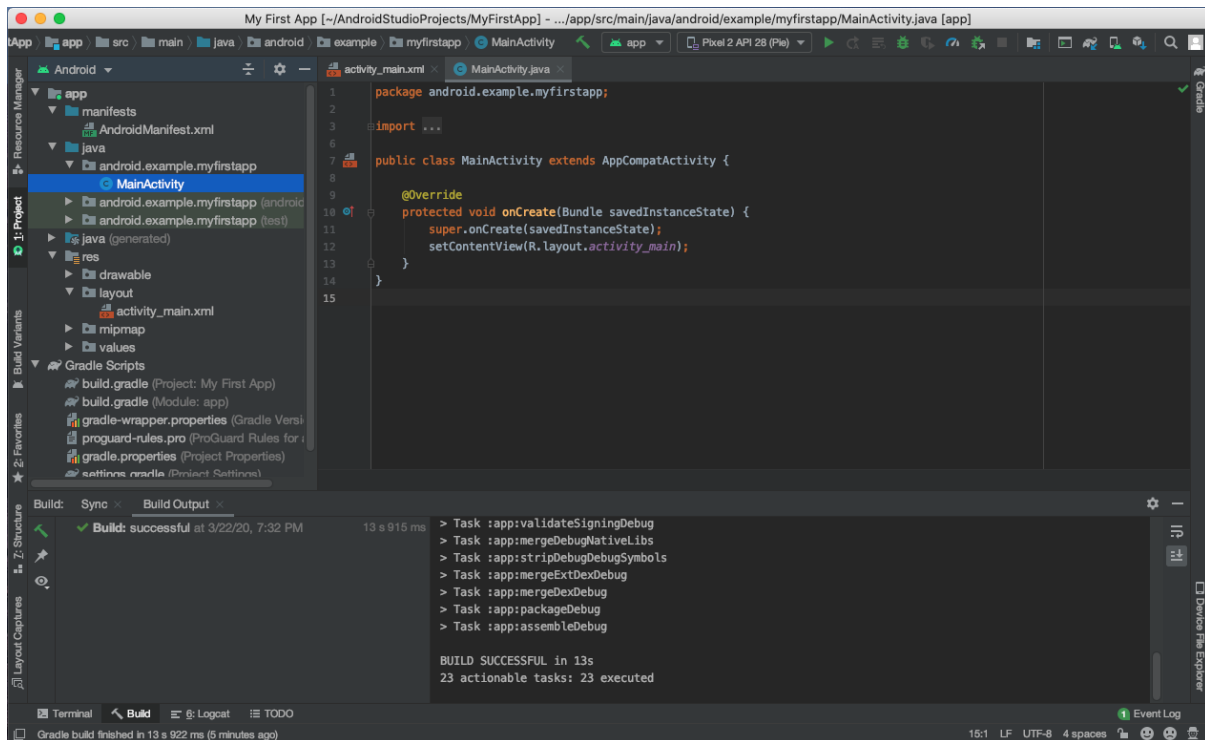
- To create your new Android project, follow these steps:
- Install the latest version of [Android Studio](#).
- In the Welcome to Android Studio window, click Start a new Android Studio project.



Android Studio welcome screen

- If you have a project already opened, select File > New > New Project.
- In the Select a Project Template window, select Empty Activity and click Next.
- In the Configure your project window, complete the following:
- Enter "My First App" in the Name field.
- Enter "com.example.myfirstapp" in the Package name field.
- If you'd like to place the project in a different folder, change its Save location.
- Select either Java or Kotlin from the Language drop-down menu.
- Select the lowest version of Android your app will support in the Minimum SDK field.
- If your app will require legacy library support, mark the Use legacy android.support libraries checkbox.
- Leave the other options as they are.
- Click Finish.

After some processing time, the Android Studio main window appears.



Android Studio main window

Now take a moment to review the most important files.

First, be sure the Project window is open (select View > Tool Windows > Project) and the Android view is selected from the drop-down list at the top of that window. You can then see the following files:

a) app > java > com.example.myfirstapp > MainActivity

This is the main activity. It's the entry point for your app. When you build and run your app, the system launches an instance of this Activity and loads its layout.

b) app > res > layout > activity_main.xml

This XML file defines the layout for the activity's user interface (UI). It contains a TextView element with the text "Hello, World!"

c) app > manifests > AndroidManifest.xml

The manifest file describes the fundamental characteristics of the app and defines each of its components.

d) Gradle Scripts > build.gradle

There are two files with this name: one for the project, "Project: My First App," and one for the app module, "Module: app." Each module has its own build.gradle file, but this project currently has just one module. Use each module's build.file to control how the Gradle plugin builds your app.

All the information regarding Android Studio IDE has been covered extensively in the lecture videos. For more information on the IDE visit the official android developers link:

<https://developer.android.com/training/basics/firstapp/building-ui>

Coding Ninjas