



# ATAK SDK PLUGIN DEVELOPMENT



# PREREQUISITES

Access to the SDK via GIT has been granted.

Once logged into GIT, a request has been made for access to the samples group. And that request has been granted.

# SETTING UP YOUR ENVIRONMENT

- Download and Install GIT  
(Windows) <https://git-scm.com/>
- **(Important)** Download and Install GIT LFS  
<https://github.com/git-lfs/git-lfs/releases>
- Download and Install Android Studio  
<https://developer.android.com/studio>

# INSTALL (WINDOWS) GIT-SCM

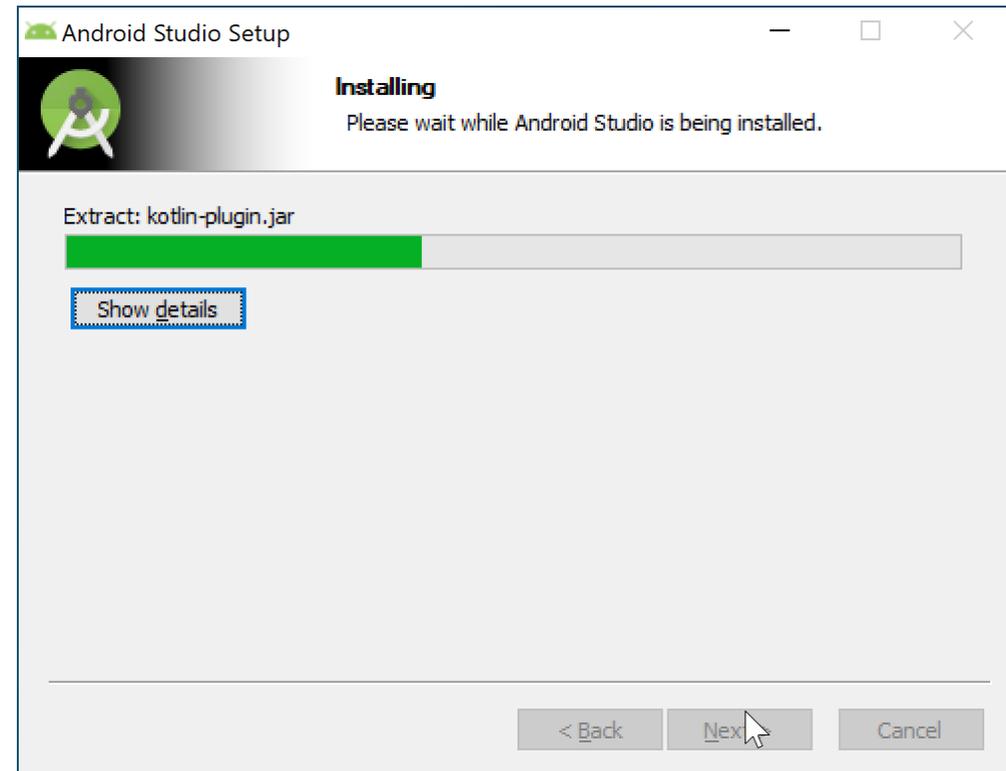
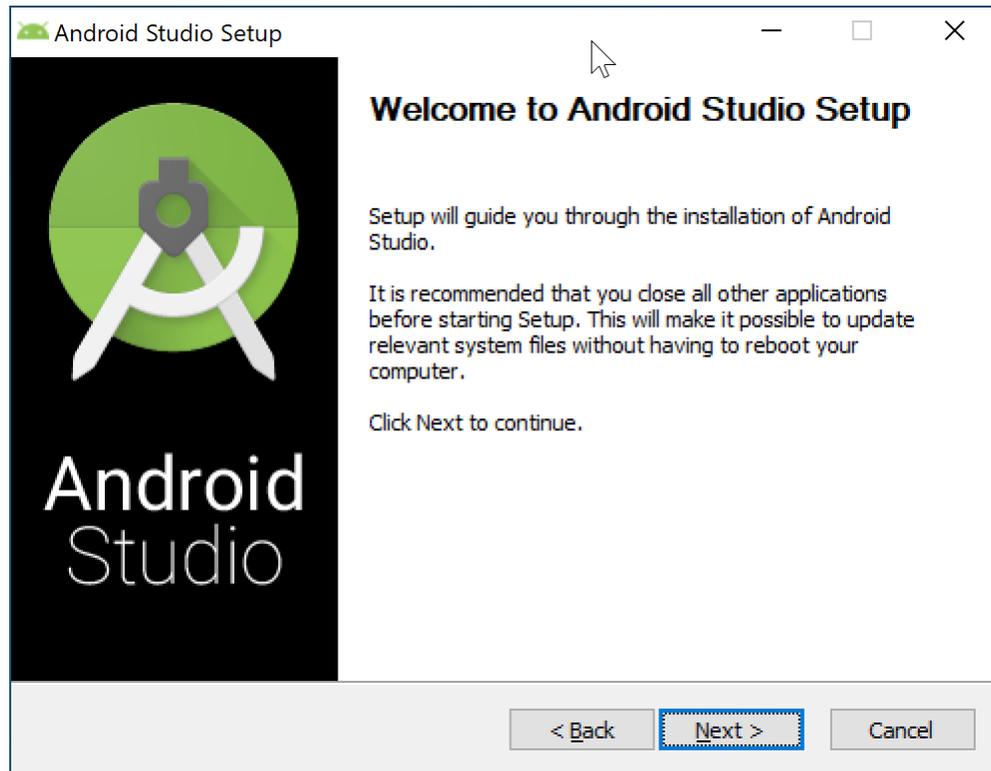
Perform the default installation on Windows and make sure to perform this action prior to continuing with the Android Studio installation.



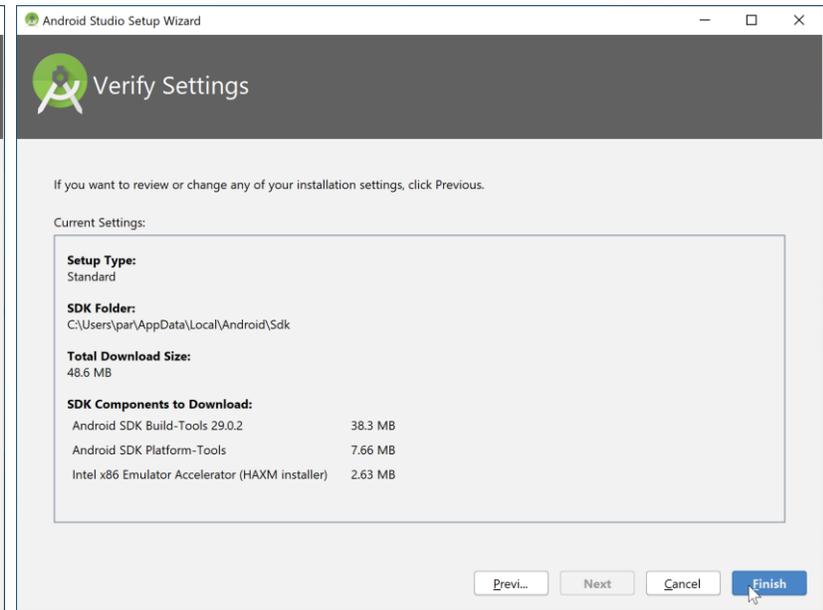
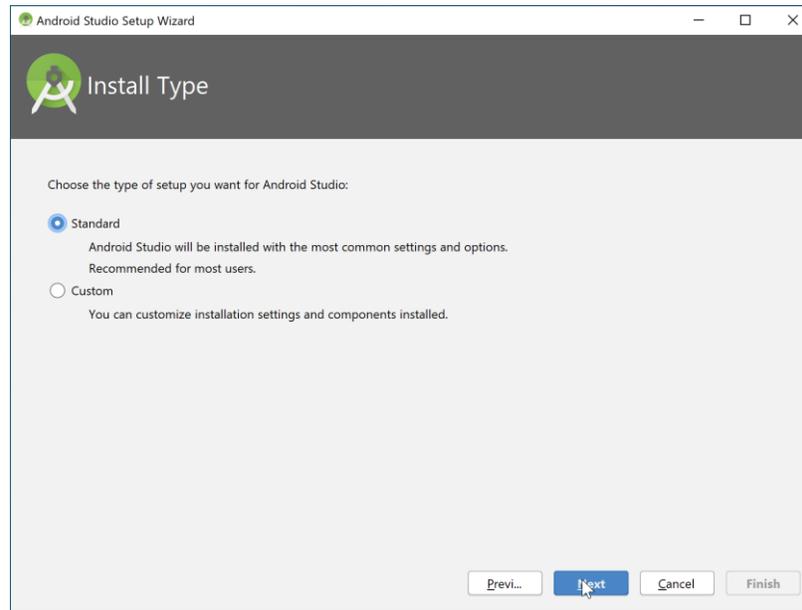
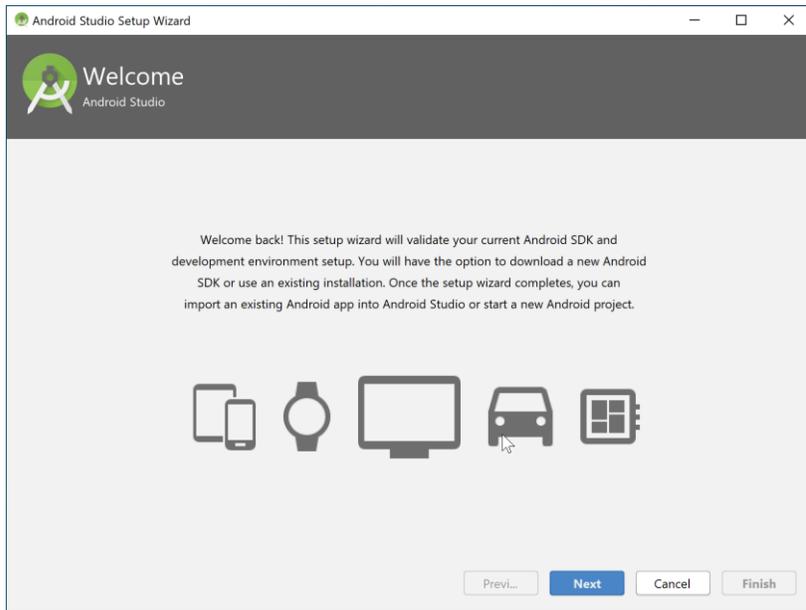
# INSTALL ANDROID STUDIO

Install Android Studio using the default choices.

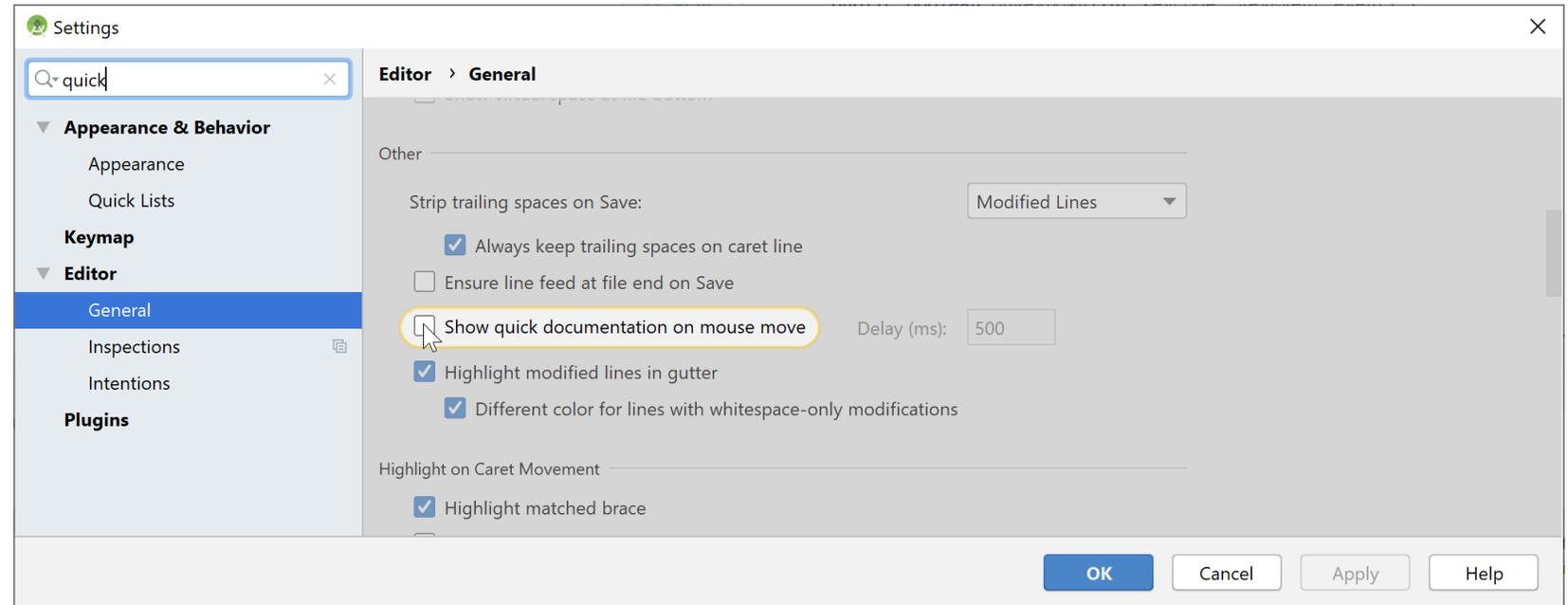
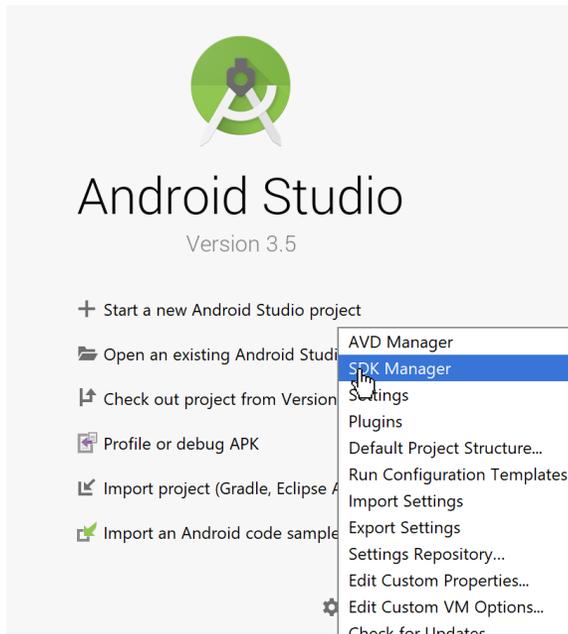
# INSTALL ANDROID STUDIO



# INSTALL ANDROID STUDIO (CONTINUED)

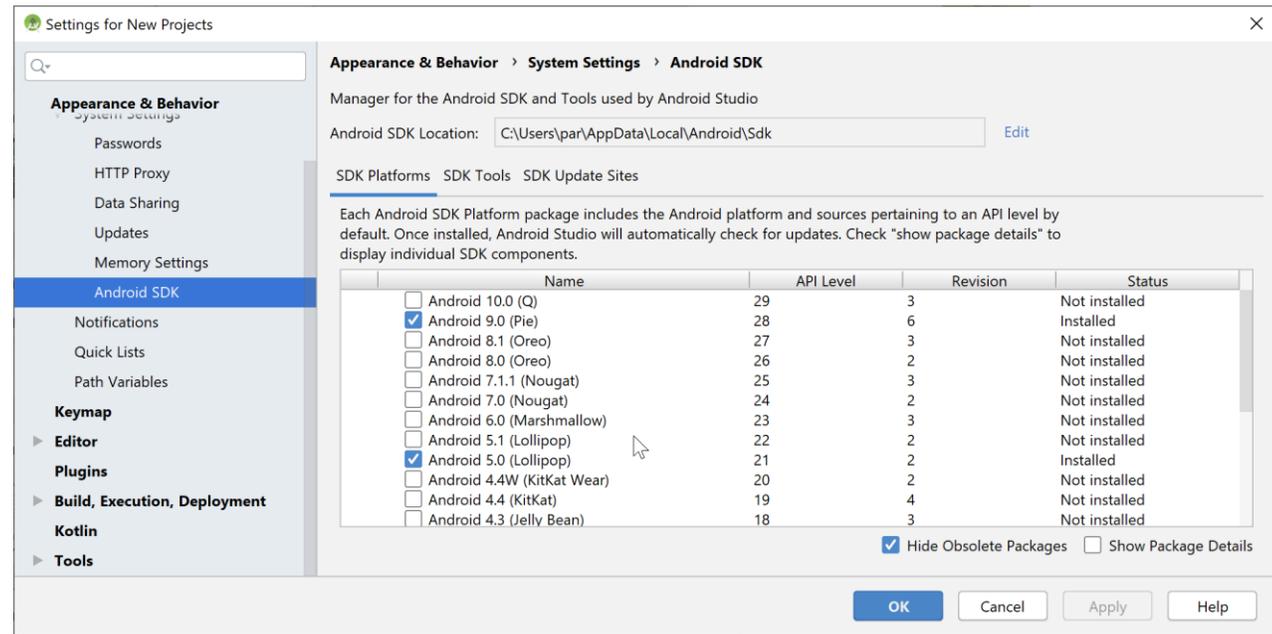
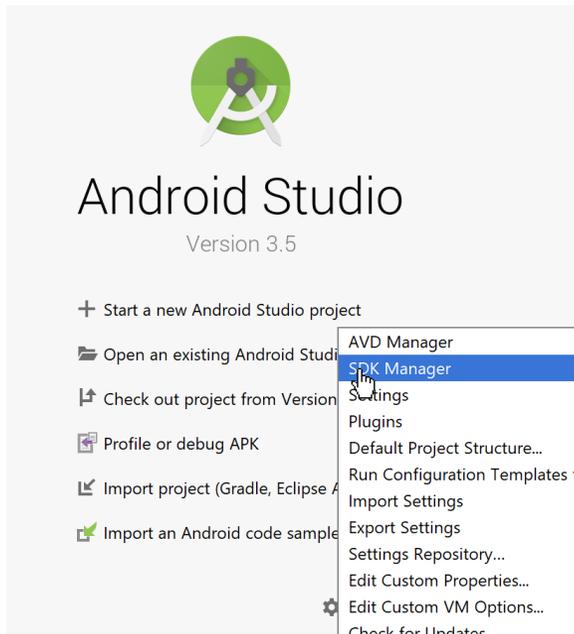


# INSTALL ANDROID STUDIO (CONTINUED)



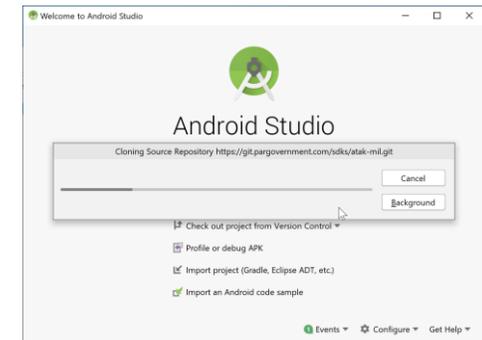
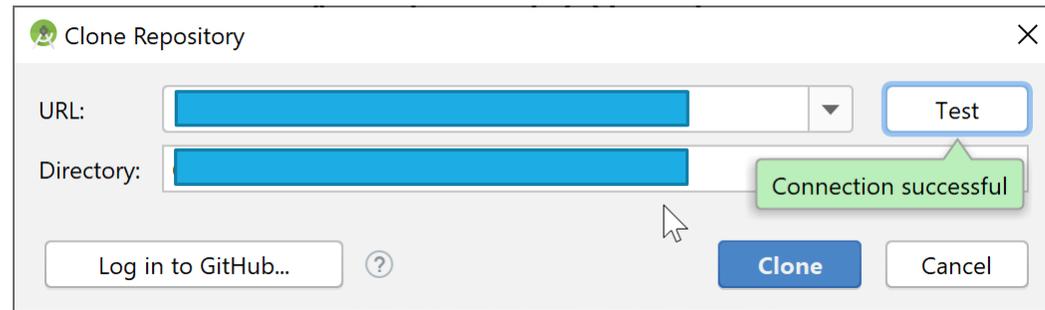
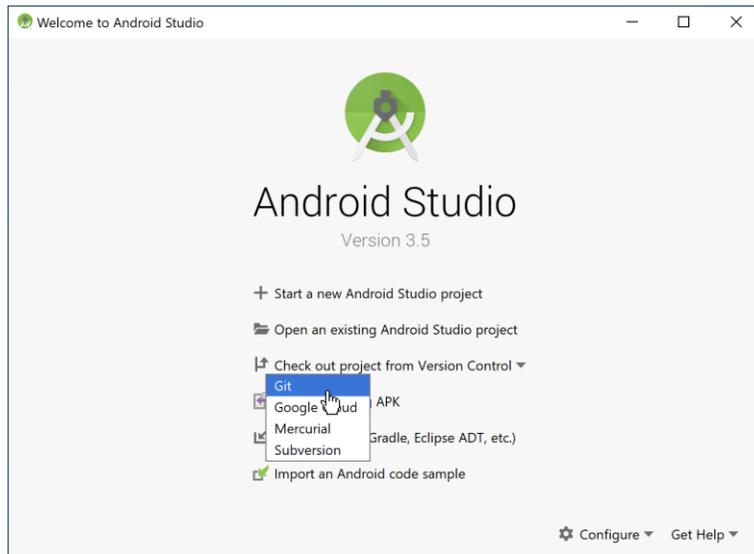
Under Settings, turn on Quick Documentation on Mouse Move in order to see the Java Documentation for the SDK

# INSTALL ANDROID STUDIO (CONTINUED)



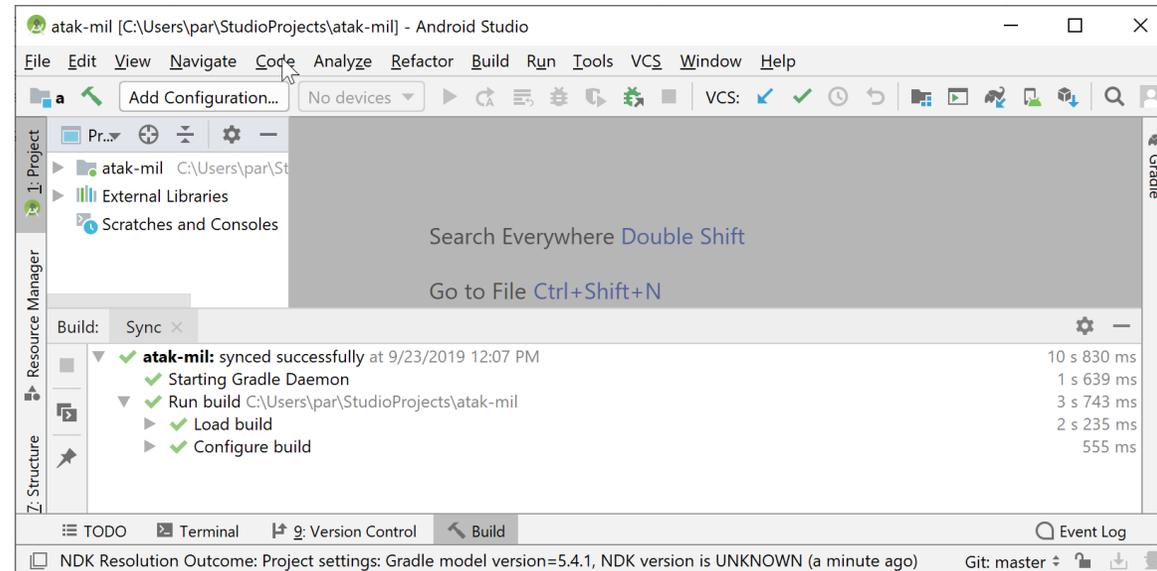
Under the SDK Manager, install Android SDK 21

# CHECK OUT THE ATAK SDK



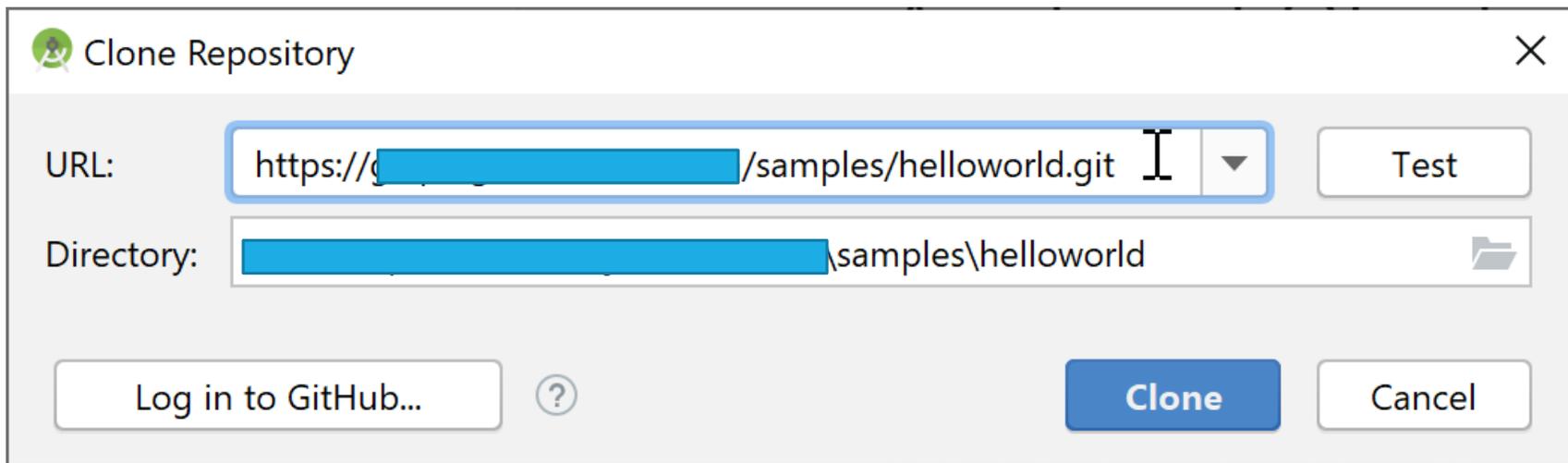
Please use the provided repository URL. The directory that the repository is cloned into will be important when cloning the sample plugins.

# CHECK OUT THE ATAK SDK



Close the project and under the Windows file system, locate atak.apk and install it on your device. This is the developer version of ATAK. Plugins developed using the SDK are only compatible with this apk until built using the TAK Autobuilder.

# CHECK OUT ONE OF THE SAMPLE SDK PLUGINS



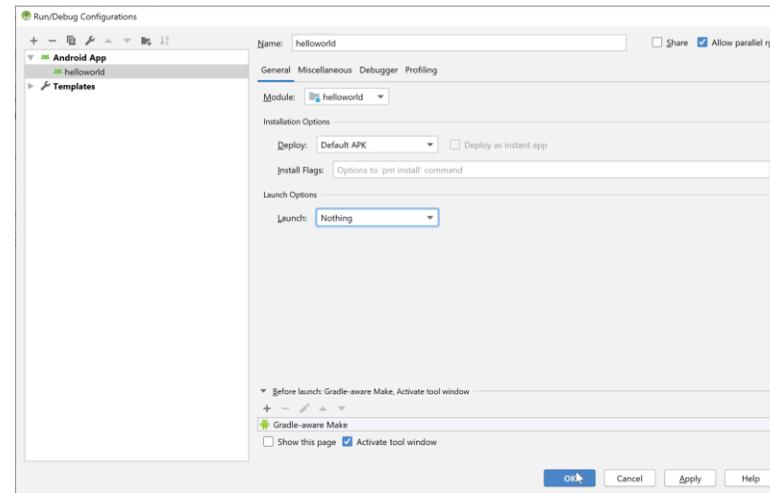
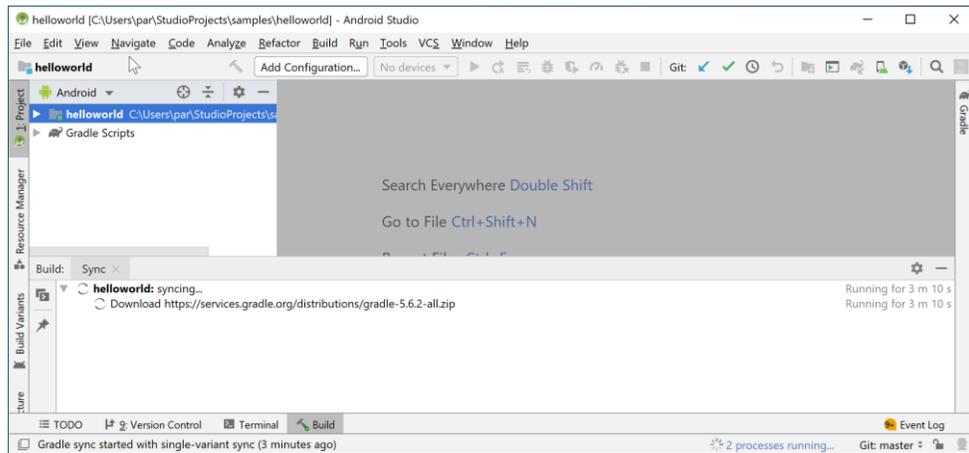
For this guide, we will be demonstrating how to check out the HelloWorld plugin supplied as a catch all example for some commonly used capabilities in ATAK. It is important this project is checked out in the appropriate directory. In this case the samples directory lives directly below the location where the SDK was checked out

# CHECK OUT ONE OF THE SAMPLE SDK PLUGINS

Example Path -

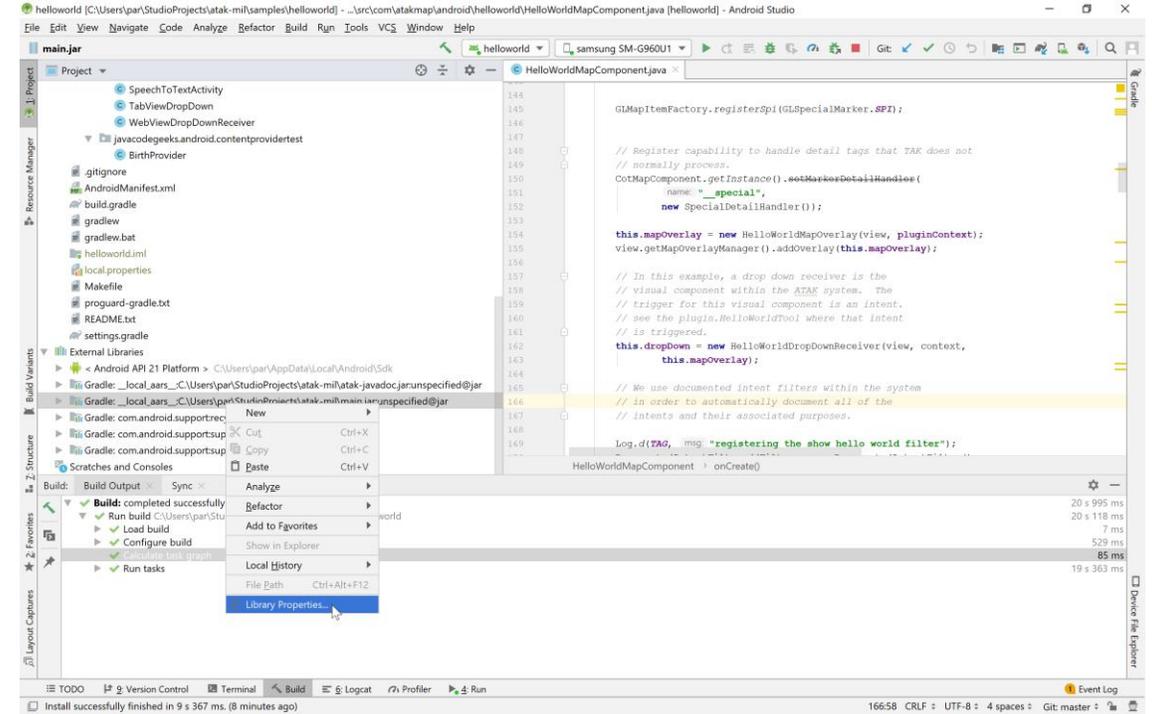
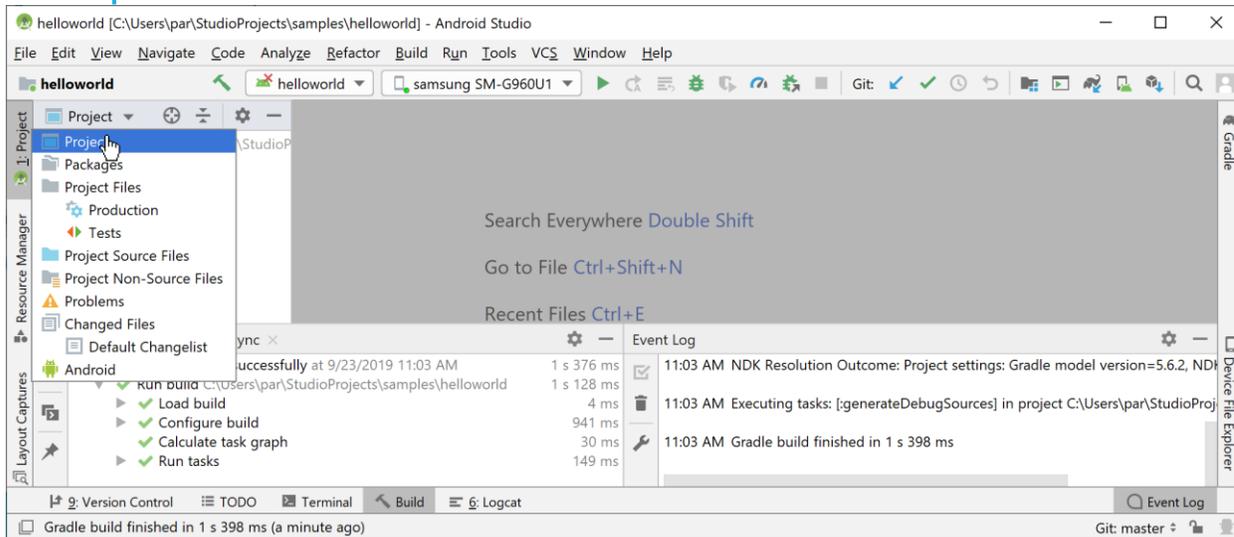
<cloned atak-sdk directory> / samples / <cloned plugin directory>

# CHECK OUT ONE OF THE SAMPLE SDK PLUGINS



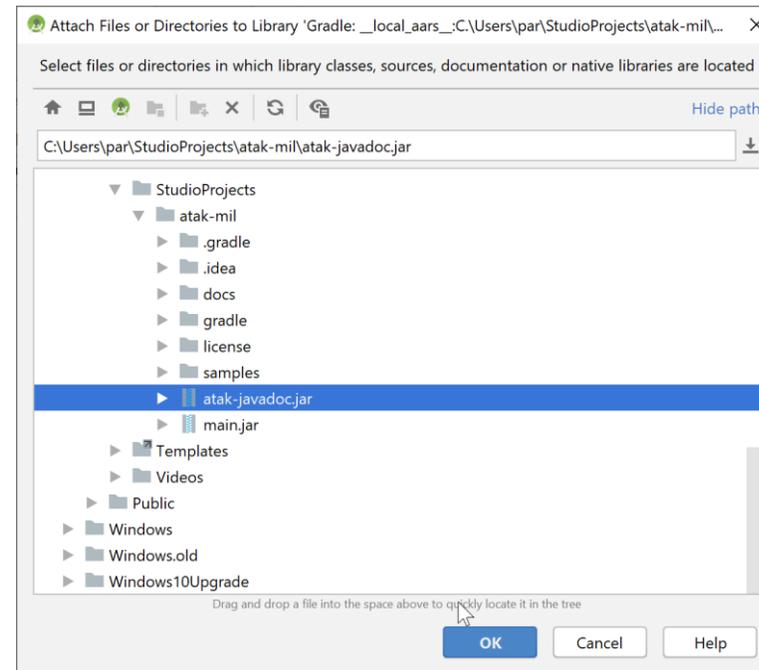
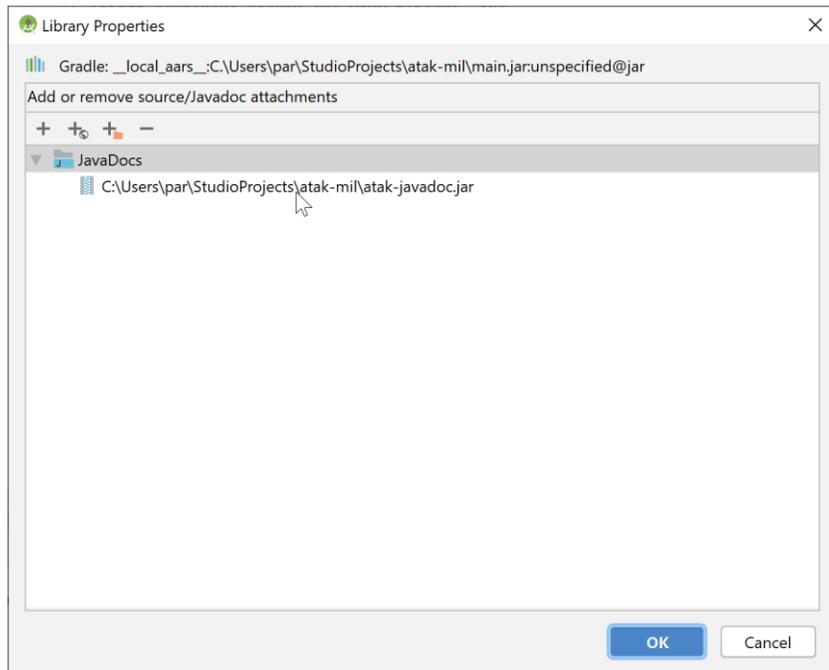
Once checked out, you will need to modify the run/debug configuration so that the Launch Option is set to **Nothing**. This is because plugins are APK's that cannot be run.

# CHECK OUT ONE OF THE SAMPLE SDK PLUGINS



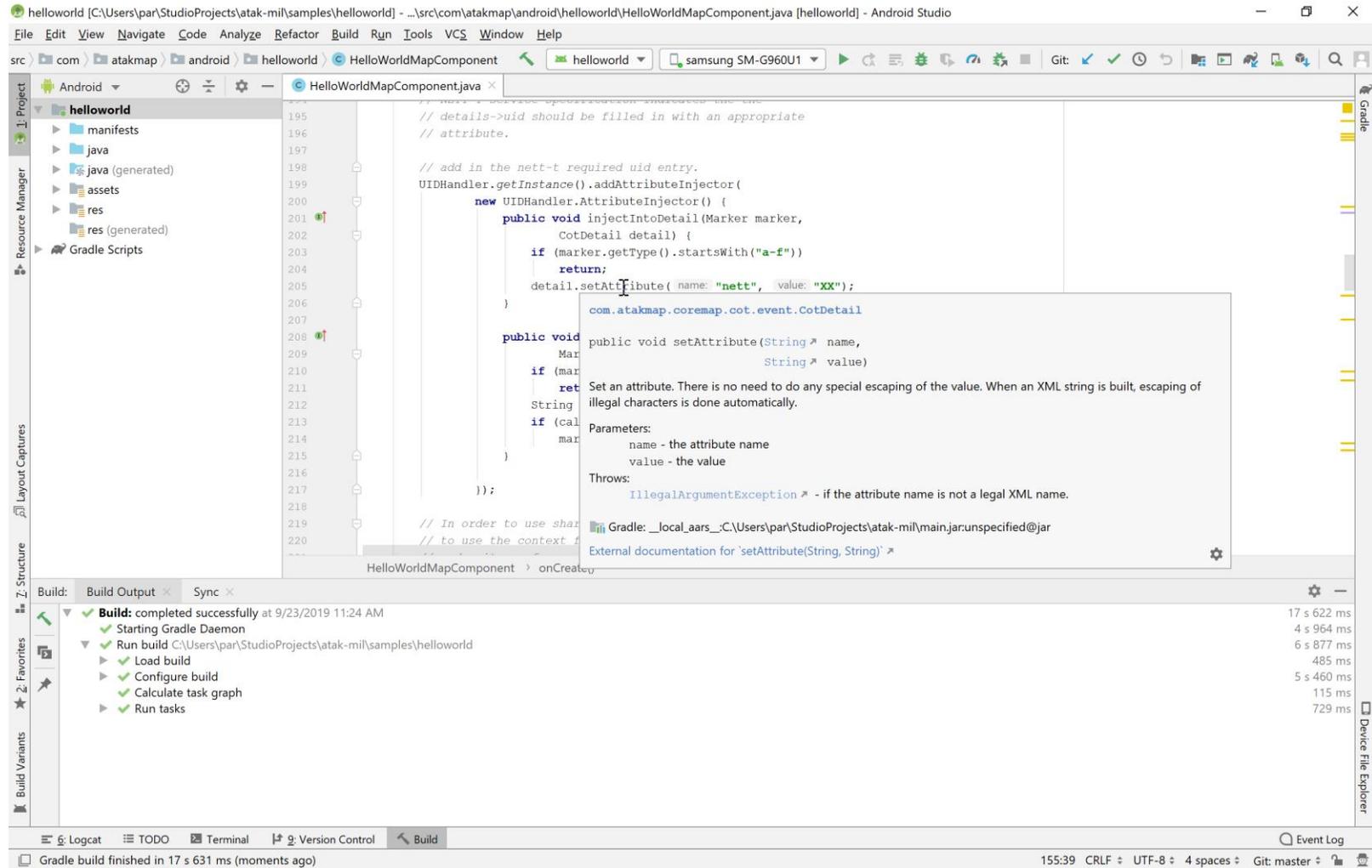
Now we need to associate the Java Documentation with the plugin. This is done by going from Android view to Project view. Next right click on the main.jar External Libraries.

# CHECK OUT ONE OF THE SAMPLE SDK PLUGINS



Select library Properties. Then associate atak-javadoc.jar with the main.jar file. Restart Android Studio and you should now have full Javadoc displayed when hovering over method names.

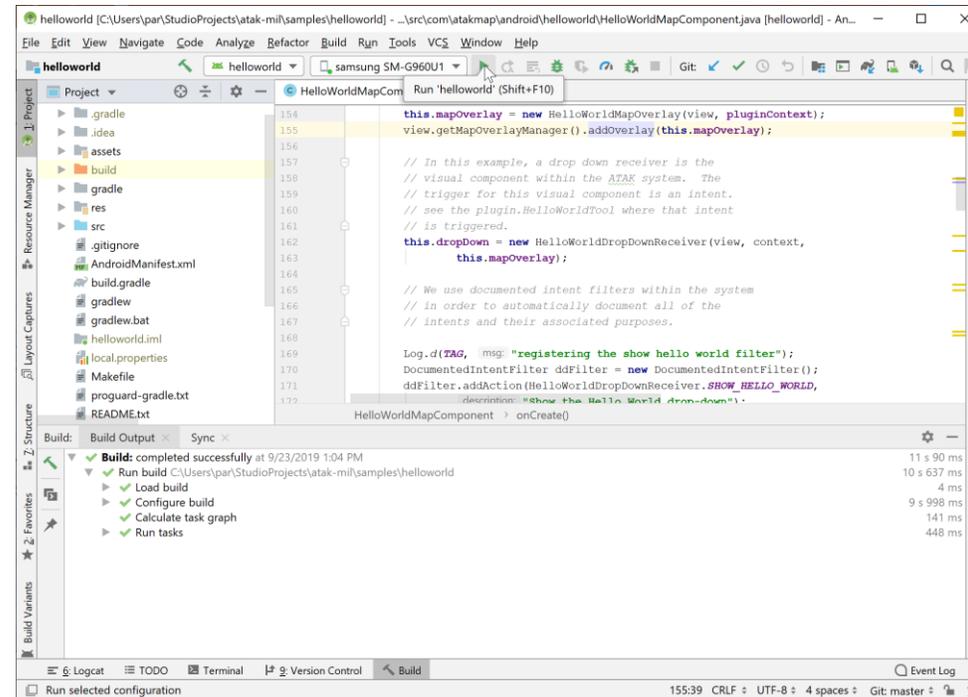
# CHECK OUT ONE OF THE SAMPLE SDK PLUGINS



The screenshot shows the Android Studio interface with the following components:

- Project Explorer:** Shows the project structure for 'helloworld' with folders for manifests, java, assets, res, and res (generated).
- Code Editor:** Displays the `HelloWorldMapComponent.java` file. The code includes a `UIDHandler.getInstance().addAttributeInjector()` call and a `public void injectIntoDetail()` method. A tooltip is visible over the `setAttribute` method call, showing its signature: `public void setAttribute(String name, String value)`. The tooltip also includes a description: "Set an attribute. There is no need to do any special escaping of the value. When an XML string is built, escaping of illegal characters is done automatically." and lists parameters and throws.
- Build Output:** Shows a successful build at 9/23/2019 11:24 AM with a list of tasks and their durations: Starting Gradle Daemon (4 s 964 ms), Run build (6 s 877 ms), Load build (485 ms), Configure build (5 s 460 ms), Calculate task graph (115 ms), and Run tasks (729 ms).
- Bottom Bar:** Includes Logcat, TODO, Terminal, Version Control, and Build tabs. The status bar at the bottom indicates the build finished in 17 s 631 ms.

# DEPLOY HELLO WORLD



Make sure that ATAK is running on the device and hit the play button.  
Follow the prompts on the Android Device