## **Meshtastic Android Build instructions**

## [​](https://meshtastic.org/docs/development/android#build-instructions)

1. **First install Java Development Kit (JDK) & Android Studio.**

To check if JDK is already installed in your system or not, open command prompt

Type the following command and press Enter:

**java -version**

If Java is installed, you should see information about the installed Java version. If it's not installed, you may see a message indicating that the command is not recognized.

To install the Java Development Kit (JDK) on Windows:

Visit the Oracle JDK download page:[Oracle JDK Downloads](https://www.oracle.com/java/technologies/javase-downloads.html)

1. **Clone the Repository:**

open command prompt Type the following command and press Enter:

**git clone https://github.com/meshtastic/Meshtastic-Android.git**

Go to the same Directory where git is cloned using cd …/…

1. Use ‘**git submodule update --init --recursive**’ to pull in the various sub-modules we depend on.
2. There are a few config files which you'll need to copy from templates included in the project. Run the following commands to do so:

For Windows:

del .\app\google-services.json

copy .\app\google-services-example.json .\app\google-services.json

del .\app\src\main\res\values\curfirmwareversion.xml

copy .\app\special\curfirmwareversion.xml .\app\src\main\res\values\

For Linux:

rm ./app/google-services.json

cp ./app/google-services-example.json ./app/google-services.json

rm ./app/src/main/res/values/curfirmwareversion.xml

cp ./app/special/curfirmwareversion.xml ./app/src/main/res/values/

**3) Build the Project in Android Studio:**

Choose "Open an existing Android Studio project" and select the cloned Meshtastic Android project.

Wait for Gradle Sync:

Android Studio will now open the project and start syncing with Gradle. This process may take some time as Android Studio downloads the necessary dependencies.

Build the Project:

Once Gradle sync is complete, you can build the project by clicking on the "Build" menu and selecting "Make Project" or by pressing Ctrl + F9 (Windows/Linux) or Cmd + F9 (Mac).

Run on Emulator or Device:

After a successful build, you can run the application on an emulator or a physical Android device. Click on the "Run" menu, choose your target device, and click "Run."

Generate APK:

If you want to generate the APK without running on a device, you can do so by clicking on the "Build" menu, selecting "Build Bundle(s) / APK(s)," and then choosing "Build APK(s)."

Locate APK File:

After the build process is complete, you can find the generated APK file in the app/build/outputs/apk directory of your project.

**CMD prompt window for reference:**

Microsoft Windows [Version 10.0.19045.3693]

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**C:\Users\Dell>**java -version

java version "21.0.1" 2023-10-17 LTS

Java(TM) SE Runtime Environment (build 21.0.1+12-LTS-29)

Java HotSpot(TM) 64-Bit Server VM (build 21.0.1+12-LTS-29, mixed mode, sharing)

**C:\Users\Dell>**javac -version

javac 21.0.1

**C:\Users\Dell>**git clone https://github.com/meshtastic/Meshtastic-Android.git

Cloning into 'Meshtastic-Android'...

remote: Enumerating objects: 27647, done.

remote: Counting objects: 100% (5936/5936), done.

remote: Compressing objects: 100% (1139/1139), done.

remote: Total 27647 (delta 3791), reused 5633 (delta 3636), pack-reused 21711

Receiving objects: 100% (27647/27647), 7.08 MiB | 3.68 MiB/s, done.

Resolving deltas: 100% (16330/16330), done.

**C:\Users\Dell>**cd C:\Users\Dell\Meshtastic-Android

C:\Users\Dell\Meshtastic-Android>git submodule update --init --recursive

Submodule 'app/src/main/proto' (https://github.com/meshtastic/protobufs.git) registered for path 'app/src/main/proto'

Submodule 'design' (https://github.com/meshtastic/design.git) registered for path 'design'

Cloning into 'C:/Users/Dell/Meshtastic-Android/app/src/main/proto'...

Cloning into 'C:/Users/Dell/Meshtastic-Android/design'...

Submodule path 'app/src/main/proto': checked out '59a67810ca07b731839cf1b44b142778fa55b5bf'

Submodule path 'design': checked out '2865a55d39dea5f6d9f2c09ac1ec485666a833da'

**C:\Users\Dell\Meshtastic-Android>**del .\app\google-services.json

**C:\Users\Dell\Meshtastic-Android>**copy .\app\google-services-example.json .\app\google-services.json

1 file(s) copied.

**C:\Users\Dell\Meshtastic-Android>**del .\app\src\main\res\values\curfirmwareversion.xml

**C:\Users\Dell\Meshtastic-Android>**copy .\app\special\curfirmwareversion.xml .\app\src\main\res\values\

1 file(s) copied.