

# 1. Download Required Tools

Visit the [Android Command Line Tools download page](https://developer.android.com/studio#command-line-tools-only) ( <https://developer.android.com/studio#command-line-tools-only> ) and download the "Command line tools only" package for your operating system:

- **Windows:** `commandlinetools-win-*.zip`
- **macOS:** `commandlinetools-mac-*.zip`
- **Linux:** `commandlinetools-linux-*.zip`

# 2. Create Directory Structure and Extract Files

The Android SDK tools require a specific directory structure. Follow the steps below for your operating system.





Windows:

1. **Create the directory structure:**
2. `C:\Android\`
3. `└─ cmdline-tools\`
4. `└─ latest\`
5. **Extract the downloaded zip file.** The archive contains a `cmdline-tools` folder with `bin`, `lib`, and other files.
6. **Move all contents** from the extracted `cmdline-tools` folder into `C:\Android\cmdline-tools\latest\`

Your final directory structure should look like this:

```
C:\Android\  
└─ cmdline-tools\  
    └─ latest\  
        ├─ bin\  
        ├─ lib\  
        └─ [other files]
```

> Local Disk (C:) > Android > cmdline-tools > latest

Name	Date modified	Type	Size
 <code>bin</code>	20/1/2026 6:38 πμ	File folder	
 <code>lib</code>	20/1/2026 6:38 πμ	File folder	
 <code>NOTICE.txt</code>	20/1/2026 6:38 πμ	Text Document	66 KB
 <code>source.properties</code>	20/1/2026 6:38 πμ	PROPERTIES File	1 KB

## 3. Configure Environment Variables

Set up environment variables so your system can locate the Android SDK tools.

Windows (PowerShell - permanent):

Run these commands in PowerShell to set environment variables permanently:

```
[System.Environment]::SetEnvironmentVariable('ANDROID_HOME', 'C:\Android', 'User')  
  
$currentPath = [System.Environment]::GetEnvironmentVariable('Path', 'User')  
  
[System.Environment]::SetEnvironmentVariable('Path',  
"$currentPath;C:\Android\cmdline-tools\latest\bin;C:\Android\platform-  
tools;C:\Android\emulator", 'User')
```

## 4. Install SDK Components

Use `sdkmanager` to install the required Android SDK components: platform tools, an Android platform, a system image, and the emulator.

Windows:

```
sdkmanager --sdk_root=C:\Android "platform-tools" "platforms;android-35" "system-images;android-  
35;google_apis;x86_64" "emulator"
```

## 5. Create an Android Virtual Device (AVD)

An AVD is a device configuration that defines the characteristics of an Android device you want to simulate.

List Available Device Profiles (Optional):

Before creating an AVD, you can view all available device profiles (e.g., Pixel, Nexus) to choose from:

```
avdmanager list devices
```

Create Your AVD:

Create a new AVD with the following command:

**Windows:**

