Ionic 1 Android Emulator Setup – Step-by-Step (Windows)

# 1. Installed Compatible Tool Versions

* ✔️ Node.js v10.24.1 (via `nvm`) for compatibility with Ionic 1 and Gulp
* ✔️ Installed Ionic CLI v6.20.9: `npm install -g @ionic/cli@6.20.9`
* ✔️ Installed Cordova v10.0.0: `npm install -g cordova@10.0.0`
* ✔️ Installed native-run but skipped it later due to Node 10 conflict

# 2. Fixed Legacy Gulp Error (`primordials`)

* Used Node 10 to avoid the `primordials is not defined` error when using Ionic 1's Gulp

# 3. Installed Required Cordova Plugins and Dependencies

* Installed project dependencies with: `npm install`
* Installed native-run (even though it was later bypassed): `npm install -g native-run`

# 4. Bypassed Native-Run Compatibility Error

* Skipped native-run (which requires Node 14+), by running: `ionic cordova emulate android --no-native-run`

# 5. Fixed Android SDK Tool Path Errors

* Located SDK path: `C:\Users\maykk\AppData\Local\Android\Sdk`
* Manually added to System PATH:
* - `...\Sdk\emulator`
* - `...\Sdk\cmdline-tools\latest\bin`
* - `...\Sdk\platform-tools`

# 6. Fixed Misplaced SDK Folder

* Corrected folder path from: `...\cmdline-tools\latest\cmdline-tools\bin` ❌
* To: `...\cmdline-tools\latest\bin` ✅

# 7. Installed Java 17 (Required by avdmanager)

* Installed Adoptium Temurin JDK 17
* Set JAVA\_HOME to JDK 17 folder
* Updated system PATH to include `%JAVA\_HOME%\bin`

# 8. Created Android Virtual Device (AVD)

* Verified tools with: `avdmanager list avd`
* Confirmed working AVD: Pixel\_3a\_API\_34\_extension\_level\_7\_x86\_64

# 9. Launched the Emulator

* Fixed `emulator` not recognized by adding it to PATH
* Launched manually: `emulator -avd Pixel\_3a\_API\_34\_extension\_level\_7\_x86\_64`

# 10. Waited for Emulator to Fully Boot

* First boot took ~2 minutes (expected)
* Emulator displayed UI successfully

# 11. Installed the App on the Emulator

* Ran: `ionic cordova run android --no-native-run`
* App installed and launched correctly

# Optional (But Recommended) Tools You Can Use

* Chrome debugging at `chrome://inspect`
* Android Studio’s AVD Manager (GUI)
* .bat script to automate launching + build