Android Setup Guide

1. System Requirements

Before starting, ensure your system meets the following:

- **Operating System:** Windows 10/11, macOS, or Linux

- **RAM:** Minimum 8 GB (recommended 16 GB)

- **Storage:** At least 10 GB free space

- **JDK (Java Development Kit):** Version 11 or later

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2. Install Android Studio

1. Go to developer.android.com/studio.

2. Download the latest **Android Studio** installer for your operating system.

3. Run the installer and follow on-screen instructions.

4. Launch Android Studio and complete the initial setup wizard:

   o Install required **SDK components**

   o Configure **Android Virtual Device (AVD)** if needed

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3. Configure SDK & Environment

- Open **Android Studio → More Actions → SDK Manager**

- Select latest **Android SDK Platform** and **SDK Tools** (e.g., Build-Tools, Emulator, Platform-Tools)

- Click **Apply → OK**

- Verify installation using the terminal:

- adb --version

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4. Create Your First Project

1. Open Android Studio → **New Project**

2. Choose a template (e.g., "Empty Activity")

3. Set:

- o **Name:** MyFirstApp

- o **Package name:** com.example.myfirstapp

- o **Language:** Java or Kotlin

- o **Minimum SDK:** Android 8.0 (Oreo) or later

4. Click **Finish**

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5. Run the App

- **Option 1:** Use the **Android Emulator**

  - o Select **Run → Run 'app'**

  - o Choose a virtual device from AVD Manager

- **Option 2:** Connect a real Android device

  - o Enable **Developer Options → USB Debugging** on your phone

  - o Connect via USB and allow permissions

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6. Troubleshooting Tips

- If the emulator is slow, enable **hardware acceleration** (Intel HAXM or Hypervisor).

- Use Logcat to view runtime logs.

- Ensure adb devices lists your connected device.