

BRILLY BEE

Developer Environment Setup Guide

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Please follow these steps to configure your local machine for mobile development.

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1.0 Core SDK Installation

You will need both the Java Development Kit (JDK) and the Android SDK. To save time, both of these are available on the shared office hard drive, but you can also download them directly if preferred.

1.1 JDK 17

- **Option A (Recommended):** Copy the JDK 17 installation files directly from the provided external hard drive.
- **Option B:** Download JDK 17 from the official Oracle website or Eclipse Adoptium
 - I. Eclipse Adoptium: [Click here](#)
 - II. Oracle Website: [Click here](#)

1.2 Android SDK




- **Option A (Recommended):** Copy the Android SDK files from the provided external hard drive.
- **Option B:** Download and install Android Studio, which will automatically bundle and install the necessary Android SDK tools.



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2.0 Development Tools

Next, install the core software required for writing code and managing versions.

Tools	URL
 Git	Click here
 Vs Code	Click here
	Click Here

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3.0 IDE Configuration

Once your tools are installed, you need to configure VS Code to recognize our framework.

3.1 Installing Flutter and Dart

- Install the SDK: Follow the official Flutter installation guide for your operating system at flutter.dev/install/quick
- Install IDE Extensions: Open VS Code, navigate to the Extensions tab, and install the official Flutter extension published by Dart Code (this will automatically install the required Dart extension).
- Verify Setup: Open your terminal and run flutter doctor to ensure there are no missing dependencies before proceeding.
- (Note: You can safely ignore any errors or warnings regarding Visual Studio - develop Windows apps or the "Desktop development with C++" workload, as we do not target Windows desktop).

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4.0 Android Toolchain Configuration

4.1 Resolving "Unable to locate Android SDK"

if your flutter doctor summary shows an error locating the Android toolchain, you must manually point Flutter to your Android SDK directory, configure your standalone Java Development Kit (JDK), and accept the developer licenses. Follow the steps below to fully resolve these build dependencies based on your environment.

4.1.1 Method A: Using a Copied or Standalone Android SDK (Custom Path)

Follow these steps if you were given a pre-packaged SDK folder or downloaded the standalone command-line tools.

1. **Locate the SDK Directory:** Find the exact folder path where your Android SDK is saved (e.g., C:\Android\sdk or D:\DevTools\android-sdk) in this process the directory that will be used is C:\devtools\android-sdk.
2. **Set the Path in Flutter:** Open your terminal ([shift + `] in Vs Code or [Win + R] => cmd) and run the following command, replacing the path with your actual SDK location. Keep the quotation marks if your path contains spaces

```
flutter config --android-sdk "C:\path\to\your\copied\android-  
sdk"
```

eg:

```
flutter config --android-sdk " C:\devtools\android-sdk".
```

3. **Accept Android Licenses:** You must accept the terms of service before building an app. Run the following command and press y for each prompt:

```
flutter doctor --android-licenses
```

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4.1.2 Method B: Using Android Studio (Default Installation)

Follow these steps if you installed the Android SDK via the official Android Studio installer.

1. **Find the SDK Location:**

- Open Android Studio.
- Navigate to **Tools > SDK Manager** (or Settings > Appearance & Behaviour > System Settings > Android SDK).
- Near the top of the window, copy the file path listed under **Android SDK Location** (typically: C:\Users\<YourUsername>\AppData\Local\Android\Sdk on Windows).

2. **Enable Command-line Tools:** While still in the SDK Manager, click the **SDK Tools** tab. Ensure **Android SDK Command-line Tools (latest)** is checked. If it is not, check it and click **Apply** to install.

3. **Set the Path in Flutter:** Open your terminal and run the configuration command using the path you copied:

```
flutter config --android-sdk  
"C:\Users\<YourUsername>\AppData\Local\Android\Sdk"
```

4. **Accept Android Licenses:** Run the license command and press y for each prompt to accept the terms:

```
flutter doctor --android-licenses
```

4.1.3 Java Development Kit (JDK) Configuration

Because our environment utilizes a standalone Android SDK, you must manually configure the Java Development Kit (JDK) so the Android build tools can compile the application. We have provided an automated script to handle this safely.

1. Extract the JDK Ensure your downloaded JDK is extracted to a permanent directory on your machine (for example: C:\devtools\jdk17).

2. Obtain the Configuration Script Download the automated setup script, **Setup-JDKEnvironment.ps1**, from our team repository:

- **Via GitHub:** Clone or download the file from our internal repository at [dev-onboarding](#)
- **Via Shared Drive:** Alternatively, copy the script directly from [dev-tools](#)
- Save this file to your Desktop or a known local folder.

3. Update the Script Directory Before running the script, you must ensure it points to where you actually extracted the JDK.

- Right-click the Setup-JDKEnvironment.ps1 file and select **Open with > Notepad** (or VS Code).
- Locate the following line near the top of the file: `$jdkPath = "C:\devtools\jdk17"`
- If you extracted your JDK to a different folder, update the path inside the quotation marks to match your exact location. Save the file and close the editor.

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4. Execute the Configuration Script Windows prevents custom scripts from running by default, so you must execute it with bypassed permissions.

- Click the Windows Start menu, type **PowerShell**, right-click the app, and select **Run as Administrator**.
- Navigate to the folder where you saved the script
(e.g., `cd C:\Users\YourName\Desktop`).
- Run the following command exactly as written to temporarily bypass the execution policy and execute the script:

PowerShell

```
Set-ExecutionPolicy Bypass -Scope Process -Force; .\Setup-  
JDKEnvironment.ps1
```

5. Verify the Installation After the script outputs "Setup Complete!", you **must completely close** your PowerShell window and open a fresh terminal or command prompt. Run the following command to verify your machine recognizes the JDK:

Bash

```
java -version
```

(You should see your installed Java version printed in the output. If it says "command not found," your terminal was not restarted or the path inside the script did not match your actual JDK folder).

4.1.4 Confirmation on Android SDK

After configuring your Android SDK path, accepting the developer licenses, and setting up your JDK, you must verify that Flutter successfully recognizes the entire toolchain.

- **Run the Doctor:** Open your terminal (ensure you have completely closed any older instances so your new `JAVA_HOME` environment variable is fully loaded) and run the flutter doctor command again.
- **Verify the Output:** Look for the Android toolchain - develop for Android devices category in the output summary. It should now display a green checkmark [✓]. (Note: While running `java -version` previously confirmed that your operating system recognizes Java, this green checkmark confirms that Flutter can successfully utilize your JDK to build apps).
- **Troubleshooting:** If the toolchain still displays a warning [!] or an error [X], carefully read the specific error message provided by the doctor tool. Common issues at this stage include:
 - **Java Errors:** The `JAVA_HOME` environment variable is missing or points to the wrong folder. Ensure you fully restarted your terminal after running the setup script, or double-check the path you entered in the script.
 - **SDK Errors:** Typos in your SDK path configuration, missing command-line tools in the `C:\Sdk` folder, or Android licenses that were accidentally skipped.

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