QA Environment Setup

1. Java Installation
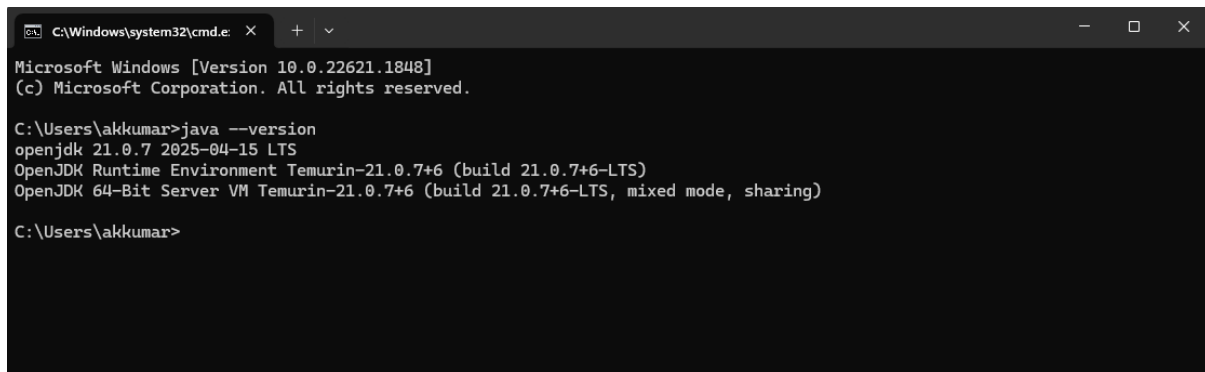
Required for running Maestro and Android build tools.

Local Machine

- Download and install **Java 17 (Temurin)**
  https://adoptium.net/temurin/releases/

Verify:
java --version

```
Microsoft Windows [Version 10.0.22621.1848]
(c) Microsoft Corporation. All rights reserved.

C:\Users\akkumar>java --version
openjdk 21.0.7 2025-04-15 LTS
OpenJDK Runtime Environment Temurin-21.0.7+6 (build 21.0.7+6-LTS)
OpenJDK 64-Bit Server VM Temurin-21.0.7+6 (build 21.0.7+6-LTS, mixed mode, sharing)

C:\Users\akkumar>
```

2. Android Studio + SDK Installation

Local Machine
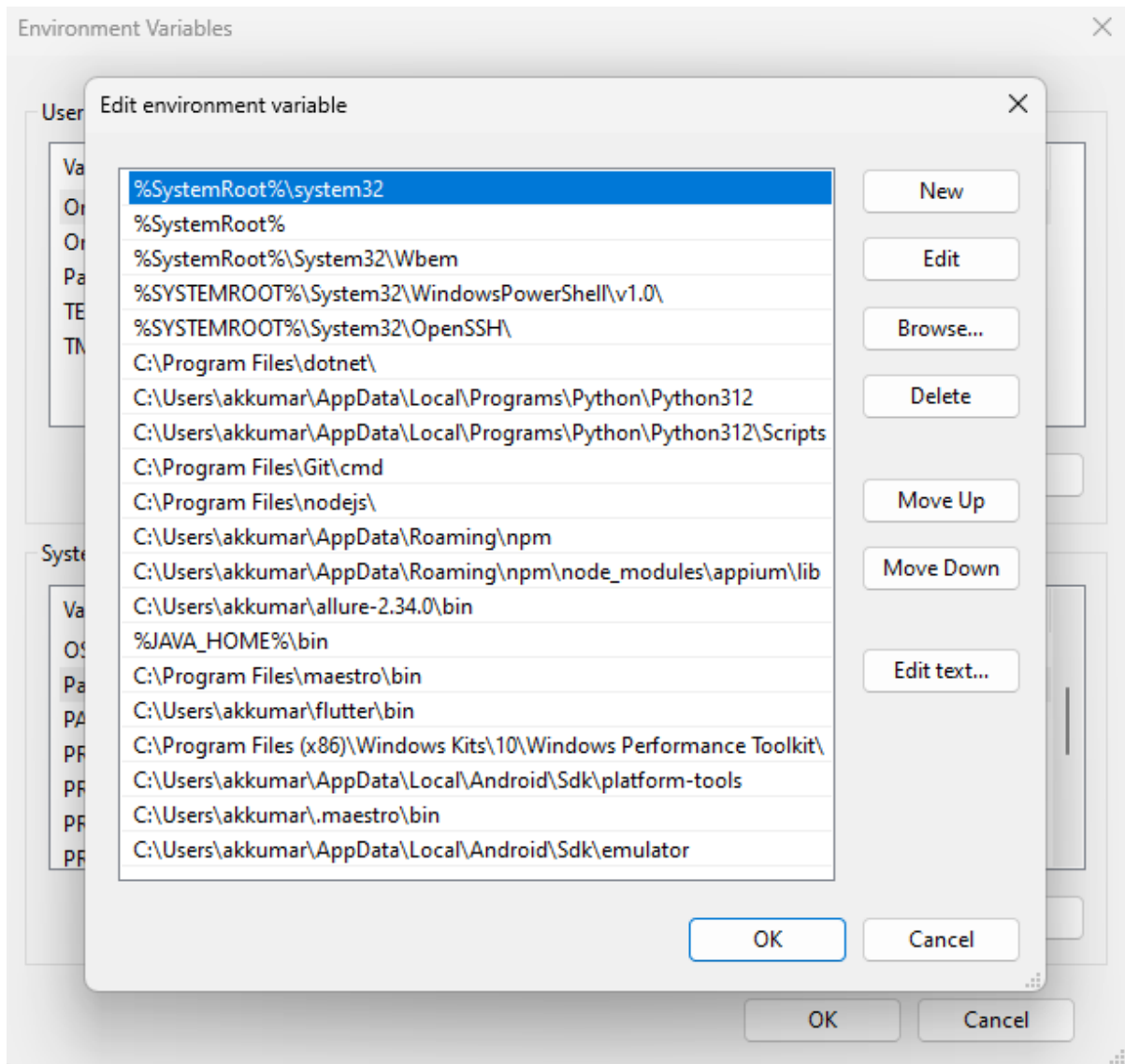
- Install **Android Studio**
  https://developer.android.com/studio

- During installation:

  - Install **Android SDK**

  - Install **SDK Platform Tools (adb)**

  - Install **Emulator**

Set environment variables:

ANDROID_HOME = <your-android-sdk-path>

PATH += %ANDROID_HOME%\platform-tools

PATH += %ANDROID_HOME%\emulator

Verify:

    adb devices

    emulator -list-avds

```
C:\Users\akkumar>emulator -list-avds
Medium_Phone_API_36.0
Pixel_8

C:\Users\akkumar>
```

3. Flutter

Install Flutter SDK
https://docs.flutter.dev/get-started/install

Verify:
flutter –version

```
C:\Users\akkumar>emulator -list-avds
Medium_Phone_API_36.0
Pixel_8

C:\Users\akkumar>flutter --version
Flutter 3.32.4 • channel stable • https://github.com/flutter/flutter.git
Framework • revision 6fba2447e9 (2 days ago) • 2025-06-12 19:03:56 -0700
Engine • revision 8cd19e509d (2 days ago) • 2025-06-12 16:30:12 -0700
Tools • Dart 3.8.1 • DevTools 2.45.1

C:\Users\akkumar>
```

Verify Dart:

Dart –version

```
C:\Users\akkumar>dart --version
Dart SDK version: 3.8.1 (stable) (Wed May 28 00:47:25 2025 -0700) on "windows_x64"

C:\Users\akkumar>
```

4. Maestro Installation

Local Machine

curl -Ls "https://get.maestro.mobile.dev" | bash

Verify:
maestro –version

```
C:\Users\akkumar>maestro --version
1.40.3
C:\Users\akkumar>
```

5. Emulator Configuration

Create AVD via Android Studio → AVD Manager
OR list existing:
emulator -list-avds

Launch:

emulator -avd <avd_name>

T o install Junit viewer for reporting

npm install -g junit-viewer

To execute a particular test

maestro test search.yaml --format junit --output ../artifacts/Reports/test-results.xml

To execute all tests in the folder (from root folder)

maestro test tests/ --format junit --output artifacts/Reports/test-results.xml

To execute on Adb device

maestro --device emulator-5554 test tests/ --format junit --output artifacts/Reports/test-results.xml

To convert XML report into HTML report

junit-viewer --results=../artifacts/Reports/test-results.xml --save=../artifacts/Reports/report.html

To convert XML report into HTML format (from root folder for all test cases execution)

junit-viewer --results=artifacts/Reports/test-results.xml --save=artifacts/Reports/report.html

Run the below command if running scripts are disabled on the system

Set-ExecutionPolicy -Scope Process -ExecutionPolicy Bypass