

# Python on Android

Python is a multi-paradigm programming language, initially developed by Guido Van Rossum, in 1989. In analogy with Java, is both compiled and interpreted, note that compilation could also come at runtime Python source files ( \*.py ) are compiled in bytecode, which is executed by an interpreter. It is often used as a scripting language, but is also used in a wide range of non-scripting contexts. Using third-party tools it can also be packaged into standalone executables.

## In Pills

- Emphasize the readability
- Concise Syntax
- Multi-Paradigm
- Duck Typing
- No modifier, but Decorators
- Completely Cross-Platform

## SL4A

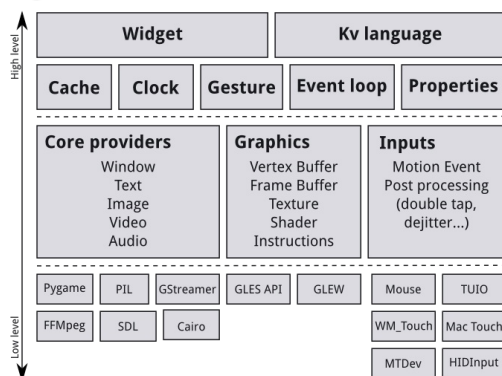
As mentioned, Python runs on an interpreter. This allows to develop multiplatform code, just like Java. The Scripting Layer for Android ( SL4A ) allows to run various script directly on Android devices. Supported languages includes Python, Perl, Ruby, Lua, JavaScript and so on... SL4A is designed for developers and is still alpha quality software.

## Python for Android

Python for android is a project to create your own Python distribution. The software allows you to include all the modules you want and use them to compile and apk.

## Kivy

### Kivy Architecture



Kivy is a cross-platform Python framework for rapid development of application. Using python-for-android technology to create a python distribution that includes kivy allows you to run the same application code on any Android device.

**All without modify a single line of code.**

This is possible because the framework itself is written in pure python.

As many other frameworks do, kivy provides a set of classes for building the GUI, but also to manage internal process and touch input.

However, Kivy comes with a further kind of approach.

Both GUI layout and widgets can be described using the Kv Language.

This technology is cross between UIML ( Layout definition ) and XML ( Structure definition ). The second approach makes kivy easily extensible.