# Mobile Automation – Should I use Robotium or Calabash or Appium?

There are a lot of tools available for mobile application automated testing. In this blog post we will try to compare among three of them – Robotium, Calabash and Appium. Let's look at them individually and find out what are their capabilities in terms of a set of parameters.
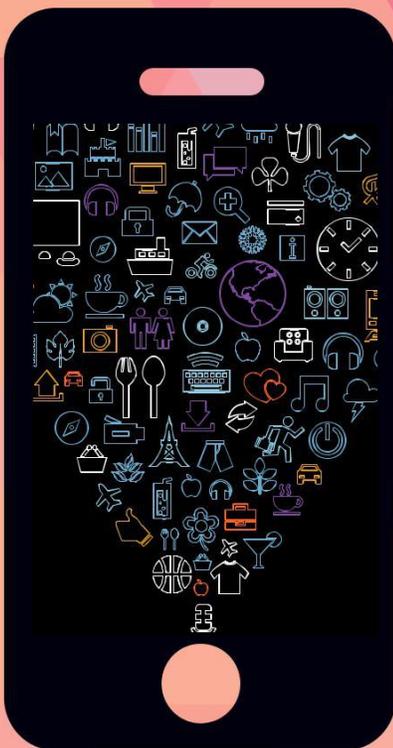
### Appium

Appium provides an API based on Selenium's WebDriver JSON wire protocol and supports platforms like Android, iOS and FirefoxOS. Since the standard automation APIs work on all the platforms, there is no need to recompile the app. Also, we can use any WebDriver compatible language like PHP, Java, Ruby, Python, C#, etc. to write the tests. We can use any testing framework. It actually provides a true cross-platform mobile automation.

### Calabash

Calabash is a free open source project which can help you run tests on iOS, Android and Simulator. It consists of two libraries – calabash android and calabash iOS, which helps in writing tests in domain specific languages. They enable test code to interact with the apps, wherein each of these interactions consists of a number of end user actions like gestures, assertions or screenshots. You can even test the HTML 5 part of the application using the cucumber interface.

### Robotium

Robotium supports both native and hybrid app through its Android test automation framework. It provides the test case developers an easier way to write functional, system and acceptance test scenarios, with minimal knowledge of the application under test in minimal time. Actually, the framework can handle multiple android activities automatical-ly and can integrate smoothly with Maven or Ant for continuous integration. The test case execution is generally fast and more robust.

Apart from the above discussed tools, we have some major tools for mobile test automa-tion like DevJuice, Eggplant, Frank, MonkeyTalk, ranorex, MonkeyRunner, etc. Let's take a look at a comparison matrix of a few of them.

| | Robotium | UI Automator | Espresso | Appium | Calabash |
|---|---|---|---|---|---|
| **Android** | Yes | Yes | Yes | Yes | Yes |
| **ios** | No | No | No | Yes | Yes |
| **Mobile web** | Yes (Android) | Limited to x.y clicks | No | Yes (Android & ios) | Yes (Android) |
| **Scripting Language** | Java | Java | Java | Almost any | Ruby |
| **Test creation tools** | Testdroid Recorder | UI Automator viewer | Hierarchy Viewer | Appium.app | CLI |
| **Supported API levels** | All | 16 => | 8, 10, 15-19 | All | All |
| **Community** | Contributors | Google | Google | Active | Pretty quiet |

# ABOUT ZADO

Zado is a provider of test automation solutions with specific focus on web, mobile and cloud applications. Our framework-driven approach to test automation ensures reliability and performance of your applications in diverse environments and complexities.

Our Center of Excellence works towards ensuring the success of every test automation initiative of our customers, irrespective of the stage that they are in – startup, transitional or mature. We have successfully helped Startup, e-Commerce and Independent Software Vendors with their automation needs. Our goal is to ensure quality of your software using test automation optimally.

We are open to doing POCs and Pilots that prove our credibility. We also have an innovative engagement model, Enhance – Optimize – Transfer (EOT), where we implement automation testing and transition it to your local teams. Our points of intervention after that, will be only towards enhancing the automation framework.

Zado automation frameworks help manual testers write their own test scripts without the necessary automation expertise. This qualifies manual testers into automation testers, providing better economies of scale and faster ROI of your automation efforts.