# Katalon

The Katalon was released in January 2015. The latest version is 8.0.0 which was introduced in May 2021. It is an open source tool, and used for automating web and mobile testing so, it uses Appium and Selenium libraries. This tool is available for windows with 7,8, and 10 version, and MAC with 10, and 11 version. It provides good GUI from where you can create and manage test cases. Mainly, Katalon reuses the automated test script for UI without coding. UI elements are used for automated testing in Katalon, including wait-time, iFrames, and pop-ups. For users with different programming skills, Katalon provides them dual scripting interfaces. Therefore, testers with bounded technical expertise may use a user interface that does not need them to write a code. More experienced users have access to scripts with code suggestions, debugging, and syntax highlighting. Katalon provides a built-in artifact structure, including test objects, test cases, test suites, and report templates. Groovy (Java) is used, which is the scripting language.

The major features of Katalon is the ease of creation of test cases. It also has integration with tools like JIRA, Jenkins and Kit. It provides end-to-end solution for web, windows desktop, API, and mobile testing (Android 6+, iOS 9+, and Cloud Services) data driven testing makes simple with support for multiple data sources and databases to maximize your test coverage. Moreover, Katalon studio supports BDD with native gherkin editor and the manual and scripting views make it easy to use for both experts and beginners. Katalon analytics helps in team management thousands of test execution logs. It will help in business optimize automation strategies, reduce the run cycle, and deploy faster.

Selenium is open for integration with other tools and frameworks to enhance its capabilities whereas Katalon is a software tool with built-in features. Just need to configure the software and use it for automation. Background knowledge isn’t required for programming but in Selenium strong programming skills are required. Katalon is only java based whereas Selenium has various programming languages like java, JS, python, Ruby, and C#.

**API Testing:**

Katalon Studio is different from Selenium and Ranorex in that it allows you to test APIs without additional integration. Testers can use this built-in module for automated scripting, API testing, and management of their tests. Code snippets, code inspection, code completion, references, and debugger are the main functions of this module.

**Web Testing:**

Katalon provides a comprehensive web testing solution, which includes DevOps and continuous delivery/continuous integration interfaces. Selenium compatible tools include code assist features such as built-in object spy, in-context references, and code refactoring. It also consists of an XPath location mechanism and various reporting tools. In addition, native plugins are easily integrated with Jenkins, qTest, JIRA, and Git.

**Mobile Testing:**

This module allows users to test hybrid applications, Android applications, mobile Web, and native iOS. With cross-environment execution capabilities, tests can be executed remotely and locally with cloud-based services, real devices, or simulators.

**Desktop** **Testing:**

Katalon Studio 7 and higher allow automated testing (locally and remotely) for desktop apps written on Win32, WinForms, WPF, and UWP.

# **Ranorex**

Ranorex was introduce in December 2019. It is a flexible integrated UI testing tool that can seamlessly run automated tests on all environments and devices. Ranorex is super smart object recognition identifies the change and keeps the test rolling like nothing ever happened. It is affordable, and easy to use. Whether you are an expert or just a beginner.

Selenium is an open source for automating web applications. On the other hand, Ranorex is a full-featured automation framework which works on mobile and desktop applications as well as on web applications.

# **Selenium**

Selenium is an automated testing tool. It can automate the process of testing an application unlike the manual testing tools where every possibility of input output and interaction with application has to be recorded reported and compared manually. In April 2018, the latest release of the selenium version is 3.12.0. Selenium is an open source tool it does not require license. Whereas QTP, RFT required license and it will be expensive for a single person. It costs high for a single person. QTP and RFT does not require to be much of the coder there is completely need some coding skills though in case of selenium we need to explore the coding skills. QTP and RFT only work on only windows but selenium on the other hand works well on almost any operating system. Now, the language support QTP supports only VB Script, RFT supports Java and C#, whereas selenium gives dynamic range of support for almost all popular programming languages like Java, C#, Ruby, PHP, Python, JavaScript (Node.js) and Perl.

1314 companies reportedly use selenium including Delivery hero, Bitpanda, Accenture, Alibaba Travels, CRED, Trivago and etc.

# **Testim**

Testim was introduced in 2014. It is AI based platform. It can be end-to-end test. Testing could be used by both developers and testers. It provides many features that makes testing efficient, and reliable. Minimal setup is required to work with Testim to build a test. Smart locators that is tested secret ingredient even when certain properties of an element change Testim can still identify the element. Testim is powerful AI based algorithm identifies hundreds of properties for each element. Multiple people can collaborate and write test each time you changed and save so, revision history is maintained. It can use multiple operating systems and various browsers.

Ranorex can do automated, browser, and website testing on the other hand Testim do automated testing and error tracking. Testim is a free license but Ranorex isn’t. Ranorex can’t track the errors.

# **LambdaTest**

Lambda test is a cross-browser testing tool on the cloud. It allows cross-browser testing on more than 2000 real browsers and operating systems such as Windows, MAC, and IOS. Basically, it is done with two manual methods as well as an automated way. In this case, the business identifies that the application must support the tester’s browser and then use a different browser by rerun the same test case, observing the application’s behavior, and reporting errors. Performing manually cross-browser checking is costly and time-consuming, and on different browsers, the automated way of cross-browser testing runs the same set of test cases multiple times.

As compare to TestComplete tool LambdaTest is easier to use. TestComplete is language independent whereas LambdaTest supports major languages like Python, C#, Java, and Ruby.