Automation Testing

Sikuli for UI Testing

simplilearn

A Day in the Life of an Automation Test Engineer

Joel is an Automation Engineer who wants to identify User-Interface elements based on image recognition on his most recent project.

Automation Test Engineers automate scenarios that require interaction with elements based on images on the screen.

But Selenium cannot identify elements based on image recognition.

To understand the solution to the above scenario, let us go through the lesson.

Learning Objectives

By the end of this lesson, you will be able to :

- Enumerate Sikuli
- Discuss the features of Sikuli
- Discuss the applications of Sikuli

Introduction to Sikuli

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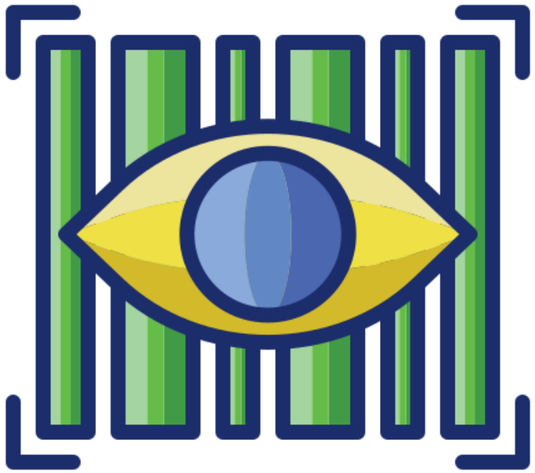
The Sikuli automates anything displayed on the user's screen, whether it is a Windows, Mac, or Linux/Unix computer.



OpenCV is used for image recognition to identify GUI components.

Features of Sikuli

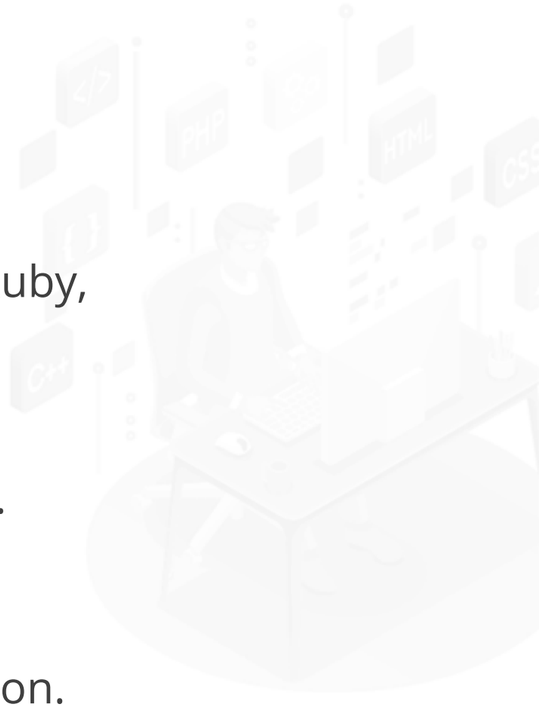
Features of Sikuli

01 It is an open-source automation tool.

02 It supports multiple scripting/programming languages, such as Python, Ruby, JavaScript, Java, Java-based scripting languages, and many others.

03 Sikuli can easily integrate with Selenium or any other Java-based test tool.

04 Sikuli is useful when there is no access to the source code of the application.



Sikuli Applications

Sikuli Integration With Selenium WebDriver

Following are the steps to integrate Sikuli with Selenium:

01 Download the **Sikuli Jar File**

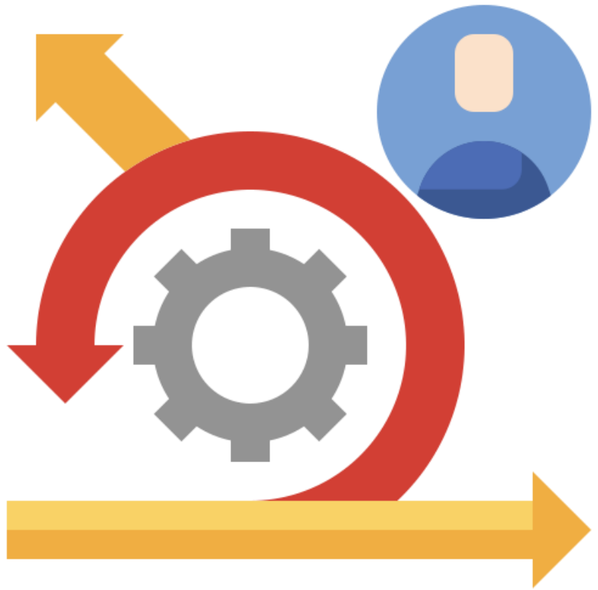
02 Create a new **Java** project in **Eclipse**

03 Add the **Jar file** to **Build Path**

04 Right-click on the project >Build Path > **Configure Build Path**

Screen Class in Sikuli

The Screen Class in Sikuli is a base class that contains predefined methods of on-screen elements, such as click, double-click, text input, hover, etc.



Screen Class in Sikuli

The Screen Class provides the following methods:

Methods	Syntax
Click	Screen s = new Screen(); s.click(“test.png”);
Double-click	Screen s = new Screen(); s.doubleClick(“test.png”);
Hover	s.type(“test.png”,”TEXT”);
Type	s.hover(“test.png”);
Find	s.find(“test.png”);

Pattern Class in Sikuli

The Pattern Class is used to uniquely identify each element of an image file.

Example:

```
Pattern p = new Pattern("Path of image");
```

It takes the path of the image as a parameter.

Pattern Class in Sikuli

Here is a list of the most used methods provided by the Pattern Class:

Methods	Syntax
getFileName()	Pattern pattern = new Pattern(“D:\Demo\test.png”); String filename = p.getFileName();
similar()	Pattern pattern = pattern.similar(0.9f);
exact()	Pattern pattern = pattern.exact();

Key Takeaways

- The Sikuli interacts with Windows and desktop elements through image recognition.
- The OpenCV library is used for image recognition to identify GUIs.
- For interaction and execution, Sikuli provides two main classes, that are, Screen and Pattern.
- The following Screen and Pattern methods are the click(), hover(), type(), find (), getFilename(), and many others.

Thank You