WhiteAppLibrary

Contents

[A. Definition 2](#_Toc9862246)

[1. WhiteAppLibrary 2](#_Toc9862247)

[2. WhiteLibrary 2](#_Toc9862248)

[2. SikuliLibrary 2](#_Toc9862249)

[B. Installation 3](#_Toc9862250)

[1. Python 3](#_Toc9862251)

[2. Net framework 3](#_Toc9862252)

[3. WhiteAppLibrary project 4](#_Toc9862253)

[C. Current Implementation 5](#_Toc9862254)

[D. Common Question 6](#_Toc9862255)

[1. How to add a path into Path environment variable? 6](#_Toc9862256)

[2. How to create a new Interpreter in Pycharm? 7](#_Toc9862257)

# Definition

## 1. WhiteAppLibrary

* **WhiteAppLibrary** is a customized automation library which is extended from [WhiteLibrary](#_2._WhiteLibrary). Moreover, this library also contains a helper class to use keywords from SikuliLibrary. This library will be updated often, in order to provide some basic guideline for automation testers to compose scripts which can be used to automate on windows applications. Refer to file “2019-05-17 Win App Automation Definition.docx” at [Research\_Report](https://github.com/mtran21081990/WinAppAutomation/tree/master/Documentation/Research_Report) to know what a Windows application is.
* In order to use **WhiteAppLibrary**, environment need to be setup:

Any prerequisite to run WhiteLibrary.

Any prerequisite to run SikuliLibrary.

* A sample automation project can be located at [WhiteLibraryAutomation](https://github.com/mtran21081990/WinAppAutomation/tree/master/SampleProjects/WhiteLibraryAutomation). This sample project is used to automate on a sample WPF application which can be downloaded at [Restaurant\_Order\_Application](https://github.com/mtran21081990/WinAppAutomation/tree/master/SampleApplication/Restaurant_Order_Application).

## 2. WhiteLibrary

* **WhiteLibrary** is a Robot Framework library for automating Windows GUI. It is a wrapper for **TestStack.White** automation framework, which is based on Microsoft UI Automation API (UIA). For more information regarding TestStack.White, refer to <https://github.com/TestStack/White>. For more information regarding UIA, refer to <https://docs.microsoft.com/en-us/windows/desktop/WinAuto/ui-automation-specification>.
* In order to use **WhiteLibrary**, environment need to be setup:

Python 3.7 or newer.

.NET 4.0 framework.

## 2. SikuliLibrary

* **SikuliLibrary** is a Robot Framework library which provides keywords to automate on UI through **SikuliX**. For more information regarding SikuliX, refer to <http://sikulix.com/>.
* In order to use **SikuliLibrary**, environment need to be setup:

Python 3.7 or newer.

JDK 8.

# Installation

## 1. Python

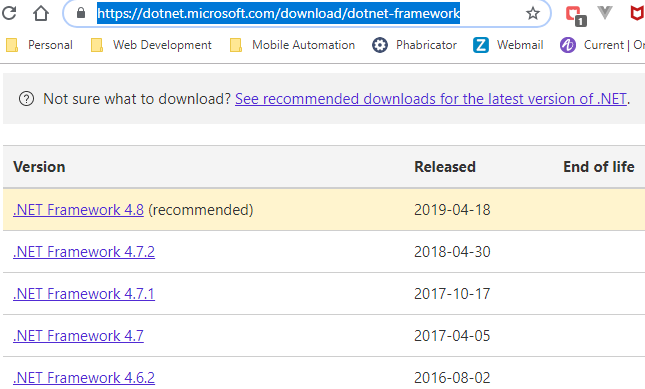
Step 1: Download and install Python latest version (ver. 3.7.3 as May 2019) at: <https://www.python.org/downloads/>



Step 2: Add its installation path into PATH environment variable. Go to **Common Question** section to know how to “[Add Path environment variable](#_1._How_to)”.

## 2. Net framework

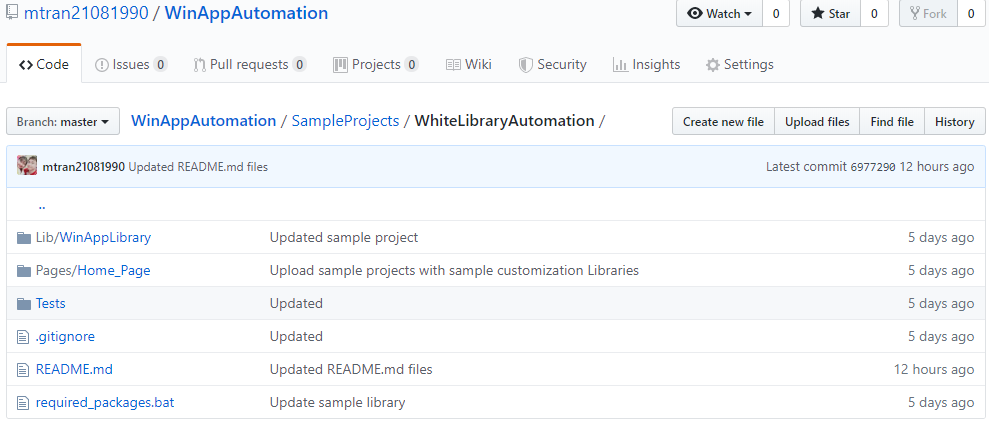
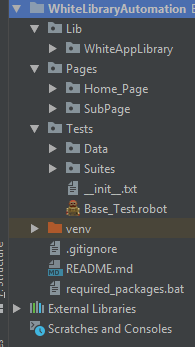
Step 1: Download and install .Net framework latest version (ver. 4.8 as May 2019) at: <https://dotnet.microsoft.com/download/dotnet-framework>

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## 3. WhiteAppLibrary project

Step 1: Pull (or download) this project from GitHub:

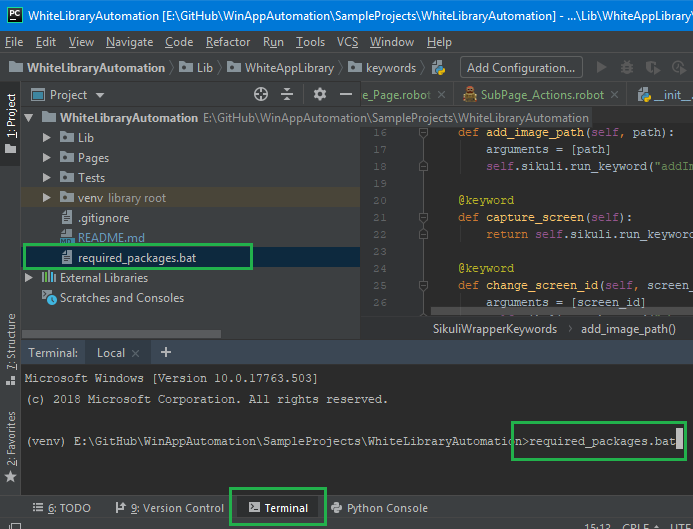
<https://github.com/mtran21081990/WinAppAutomation/tree/master/SampleProjects/WhiteLibraryAutomation>

**Project Details**:

* Lib > WinAppLibrary: contains the customized library which is extended from WhiteLibrary
* Pages: contains resource files for each module of an application. With a desktop application, each Window should be considered a module.
* Tests > Data: contains test data for each test suites.
* Tests > Suites: contains test suites.

Step 2: Open a Python IDE (prefered PyCharm), then open the **WhiteLibraryAutomation** project. Create a new Interpreter for this project in File > Settings > Project Interpreter. Restart IDE (if need). Go to **Common Question** section to know how to “[Create a new Interpreter on Pycharm](#_How_to_create)”.

Step 3: Install all required packages for the project:

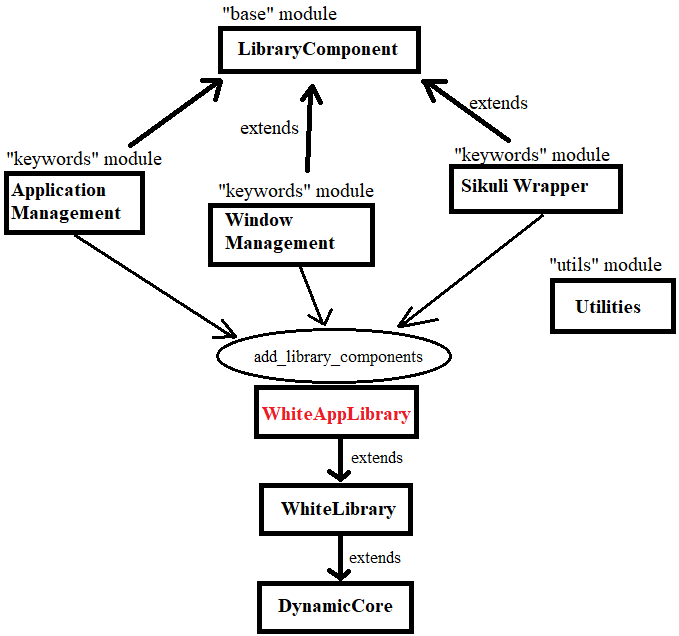
- Open **Terminal**

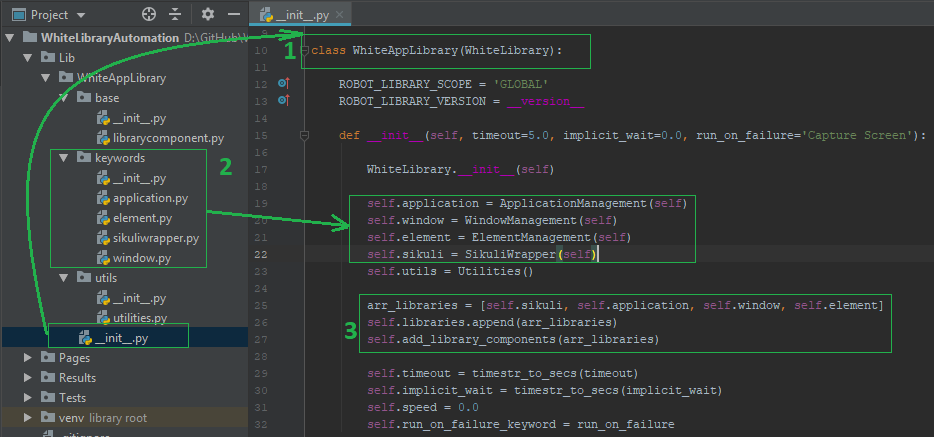
- Input “required\_package.bat”

- Press ENTER.

🡺 This will install the following libraries: robotframework, robotframework-SikuliLibrary, robotframework-appiumlibrary and pyyaml.

# Current Implementation





(1) **WhiteAppLibrary** is extended from WhiteLibrary, so it contains all keywords of WhiteLibrary.

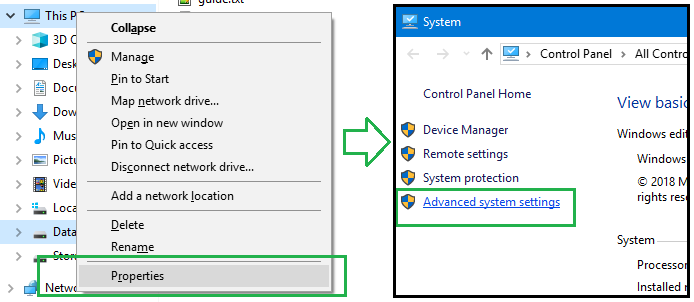
(2) All user-customized keywords are contains in “keywords” module (All \*.py files in keywords folder).

(3) If any user-customized keywords want to be used in scripts, it should be added into **WhiteAppLibrary** using add\_library\_components.

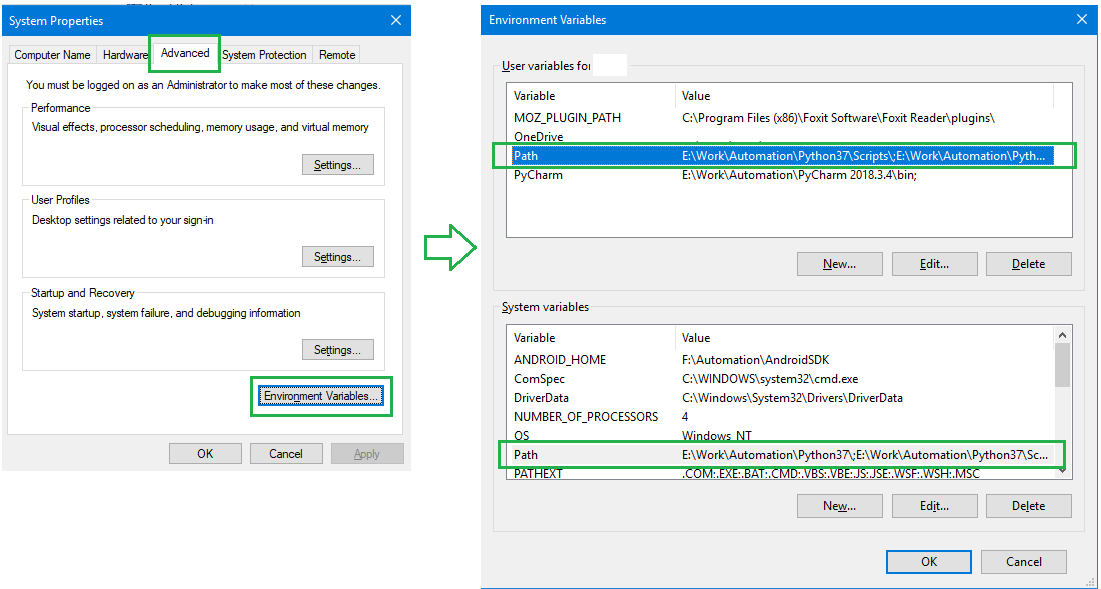
# Common Question

## How to add a path into Path environment variable?

Step 1: Right click on **My Computer** and select “Properties” to open **System** dialog. On **System** dialog, click “Advanced system settings” to open **System Properties** dialog.

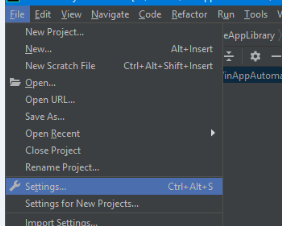


Step 2: On **System Properties** dialog, open “Advanced” tab, click “Environment Variables” button to open **Environment Variables** dialog. Add the new path into a ‘Path” variable (one is enough).

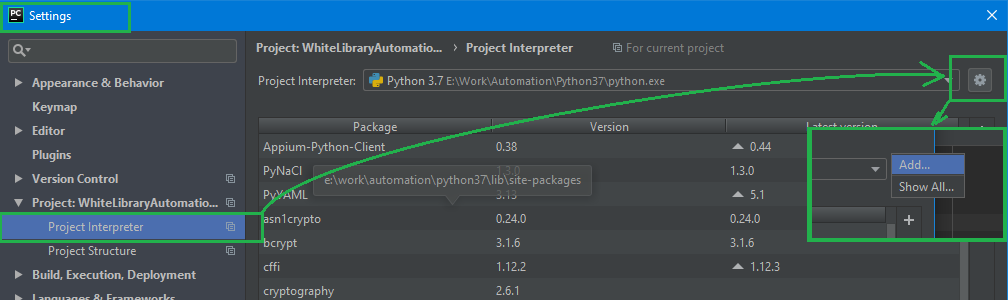


## How to create a new Interpreter in Pycharm?

Step 1: Open “File” on top menu and click “Settings” to open **Settings** dialog.



Step 2: On **Settings** dialog, open “Project Interpreter”, on the right section click on the **Gear** icon and select “Add” to open **Add Python Interpreter** dialog.



Step 3: On **Add Python Interpreter** dialog, select “New environment” radio button and uncheck any checkboxes. Click **OK** button.

