

# Manual for Executing Test Cases in Parallel Using Pabot Library

## 1. Introduction

This document provides step-by-step instructions for executing the smoke test script. It includes prerequisites, execution steps, and additional notes.

## 2. Prerequisites

### 2.1 System Requirements

- Operating System: Windows
- Required Software: Python and PyCharm must be Installed.
- RAM: Minimum 32 GB
- Storage: Minimum 250 GB
- Processor: Quad Core (4 core CPU)

### 2.2 Plugins or Library Setup

- Ensure the necessary software and dependencies are installed.
- Ensure that the Allure library is Installed. Follow the below-mentioned steps.

#### Step 1: Install Java (Required for Allure)

Allure requires **Java (JDK 8 or later)**. Check if Java is installed by running following command in CMD as shown in the screenshot. **java -version**

```
Microsoft Windows [Version 10.0.19045.5371]
(c) Microsoft Corporation. All rights reserved.

C:\Users\U1257988>java -version
java version "21.0.5" 2024-10-15 LTS
Java(TM) SE Runtime Environment (build 21.0.5+9-LTS-239)
Java HotSpot(TM) 64-Bit Server VM (build 21.0.5+9-LTS-239, mixed mode, sharing)

C:\Users\U1257988>
```

If this command shows the version, it means java is already installed on the system. If it gives an error, then follow step 2 below.

#### Step 2: Download and Install Java on your system from below link.

## [OpenJDK](#)

**Step 3:** After Installation, verify by running below command in CMD.

**Java -version**

**Step 4:** Install allure using below command in CMD as shown in the screenshot.

```
C:\Users\U1257988>pip install allure-robotframework
```

**Step 5:** Verify Allure installation.

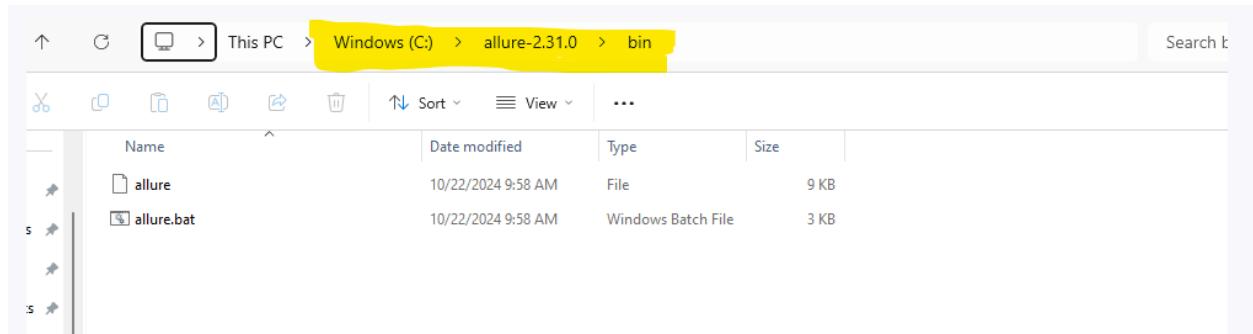
Enter below command in the CMD to make sure allure is installed.

**allure --version**

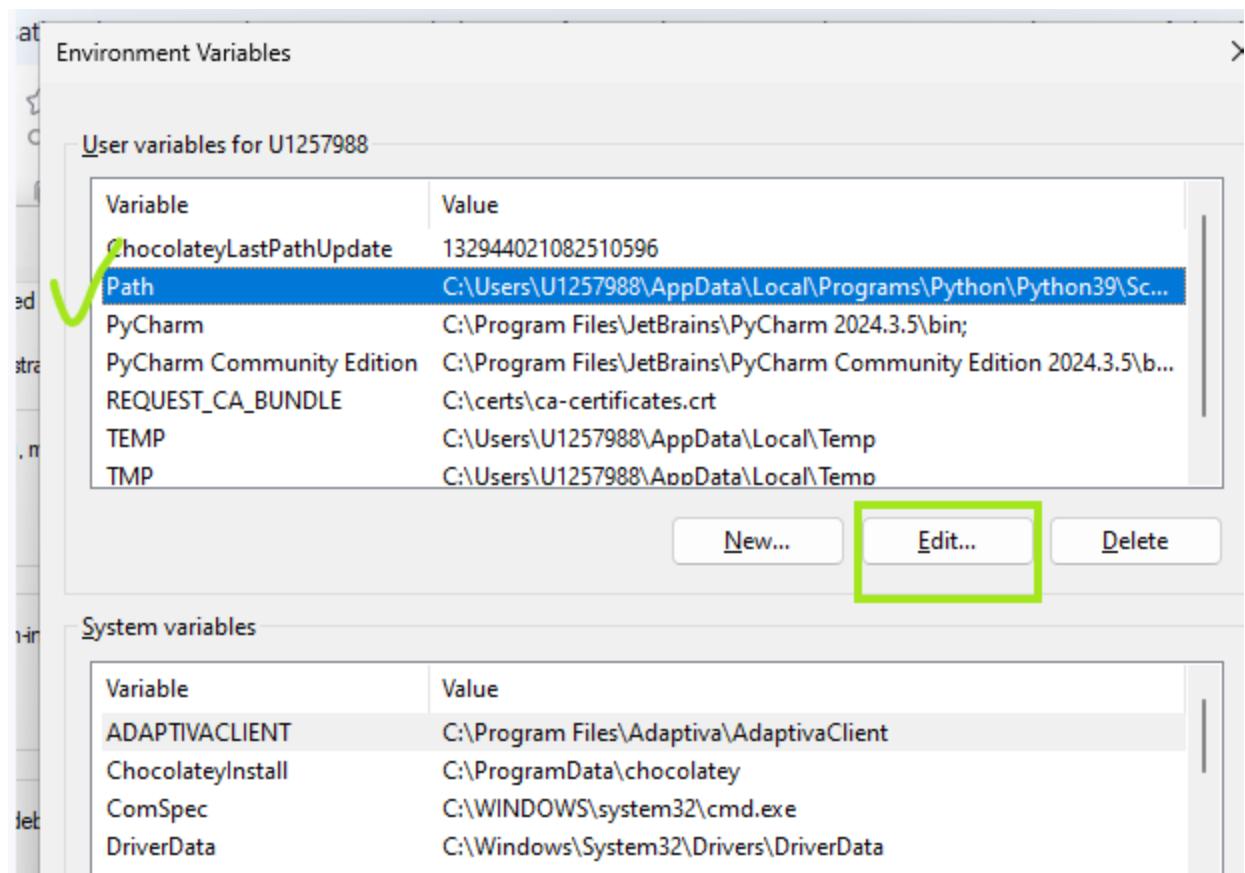
```
C:\Users\U1257988>allure --version  
2.31.0  
C:\Users\U1257988>
```

If the above command is not showing any version and giving an error then follow the below-mentioned steps:

1. Go to following URL <https://github.com/allure-framework/allure2/releases>
2. Download allure\_(Version).zip file
3. Extract the zip file and store it under C drive inside a new folder named as allure
4. Add allure bin folder path to environment variables as shown in the screenshots below.
5. Copy the Path as shown in the highlighted section.



6. Open Edit System Environment Variables screen. Select the Path option and click on Edit button as shown below.



7. Click on New button and paste the copied path of bin folder and click on OK as shown in the below screenshots.

dit environment variable

C:\Users\U1257988\AppData\Local\Programs\Python\Python39\Script...	New
C:\Users\U1257988\AppData\Local\Programs\Python\Python39\	Edit
C:\Users\U1257988\AppData\Local\Microsoft\WindowsApps	Browse...
C:\Program Files\JetBrains\PyCharm Community Edition 2021.3.2\bin	Delete
C:\Users\U1257988\AppData\Local\Programs\Python\Python39\Script...	Move Up
C:\Users\U1257988\AppData\Local\Programs\Microsoft VS Code\bin	Move Down
C:\Users\U1257988\.dotnet\tools	Edit text...
C:\Users\U1257988\AppData\Roaming\npm	
c:\users\u1257988\.local\bin	
C:\Users\U1257988\AppData\Local\Programs\Python\Python39\pyth...	
C:\allure-2.31.0\bin	
C:\Users\U1257988\Documents\Softwares\ggshield-1.36.0-x86_64-pc...	
C:\Users\U1257988\AppData\Local\JetBrains\Toolbox\scripts	
%PyCharm%	
%PyCharm Community Edition%	

er

Edit environment variable

C:\Users\U1257988\AppData\Local\Programs\Python\Python39\Script...	New
C:\Users\U1257988\AppData\Local\Programs\Python\Python39\	Edit
C:\Users\U1257988\AppData\Local\Microsoft\WindowsApps	Browse...
C:\Program Files\JetBrains\PyCharm Community Edition 2021.3.2\bin	Delete
C:\Users\U1257988\AppData\Local\Programs\Python\Python39\Script...	Move Up
C:\Users\U1257988\AppData\Local\Programs\Microsoft VS Code\bin	Move Down
C:\Users\U1257988\.dotnet\tools	Edit text...
C:\Users\U1257988\AppData\Roaming\npm	
c:\users\u1257988\.local\bin	
C:\Users\U1257988\AppData\Local\Programs\Python\Python39\pyth...	
C:\allure-2.31.0\bin	
C:\Users\U1257988\Documents\Softwares\ggshield-1.36.0-x86_64-pc...	
C:\Users\U1257988\AppData\Local\JetBrains\Toolbox\scripts	
%PyCharm%	
%PyCharm Community Edition%	
C:\allure-2.31.0\bin	

OK Cancel

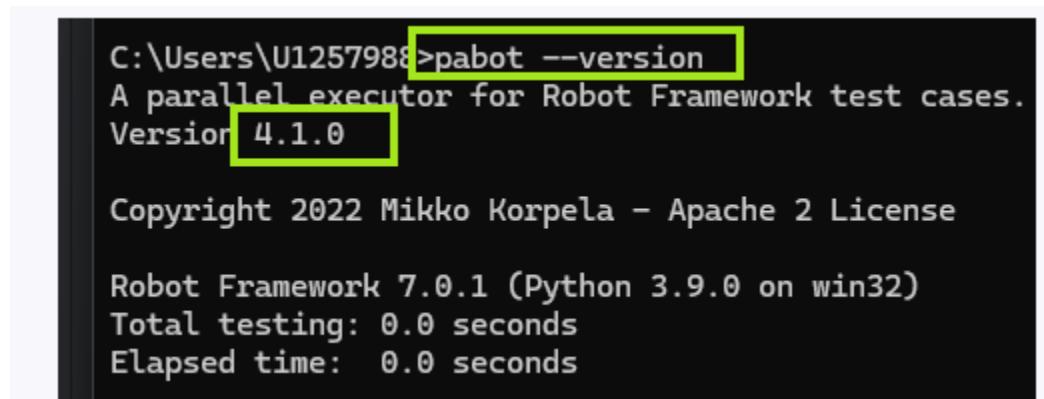
- Now close all open windows and again verify allure version using command prompt as mentioned in the Step 5

## Step 6: Install Pabot Library

- Enter the command below in the CMD.

```
pip install robotframework-pabot
```

- Make sure that the Pabot version is 4.1.0 as shown in the below screenshot if it is not the same then downgrade the version and match with 4.1.0

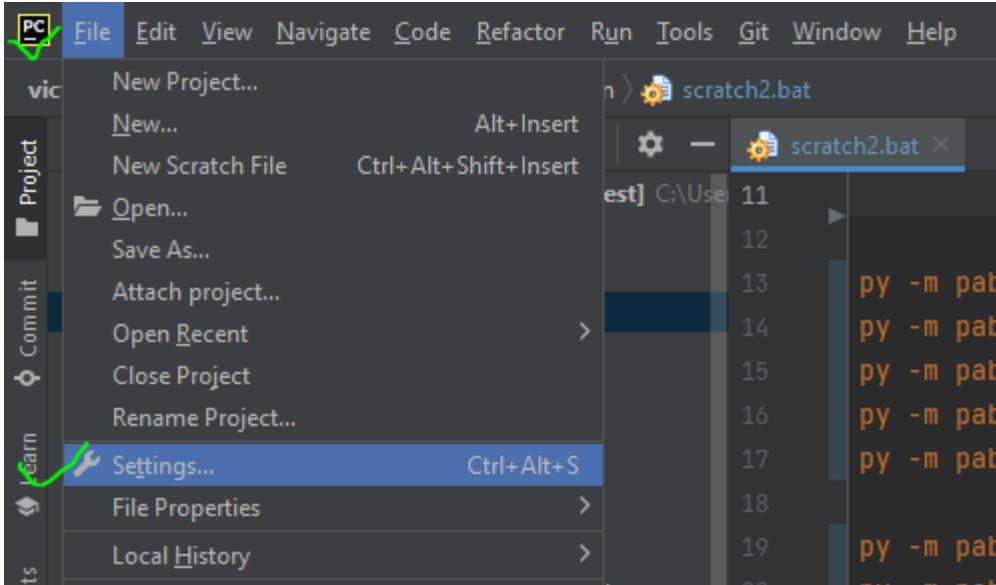


```
C:\Users\U1257988>pabot --version
A parallel executor for Robot Framework test cases.
Version 4.1.0

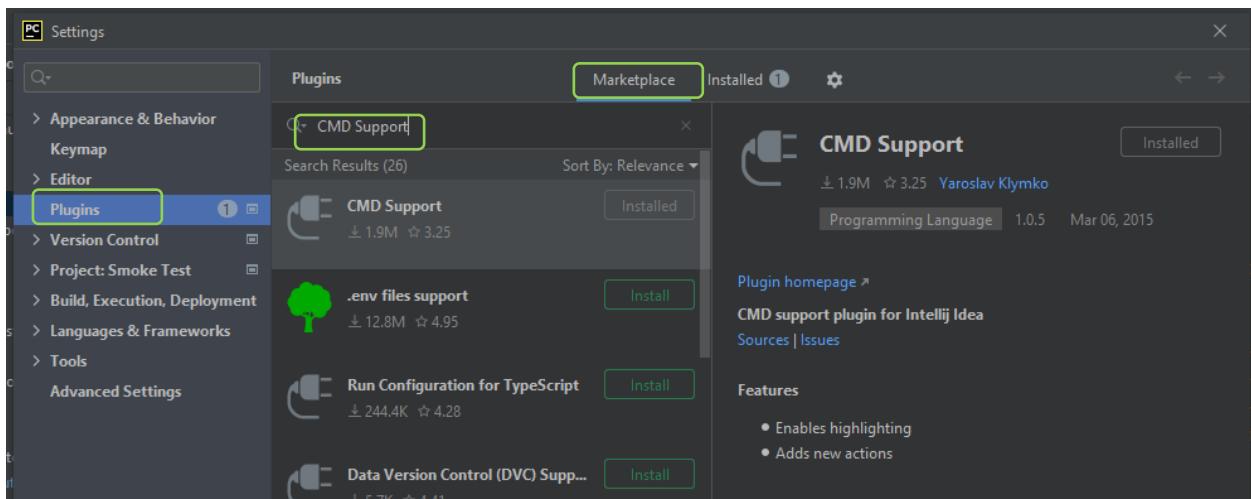
Copyright 2022 Mikko Korpela - Apache 2 License

Robot Framework 7.0.1 (Python 3.9.0 on win32)
Total testing: 0.0 seconds
Elapsed time: 0.0 seconds
```

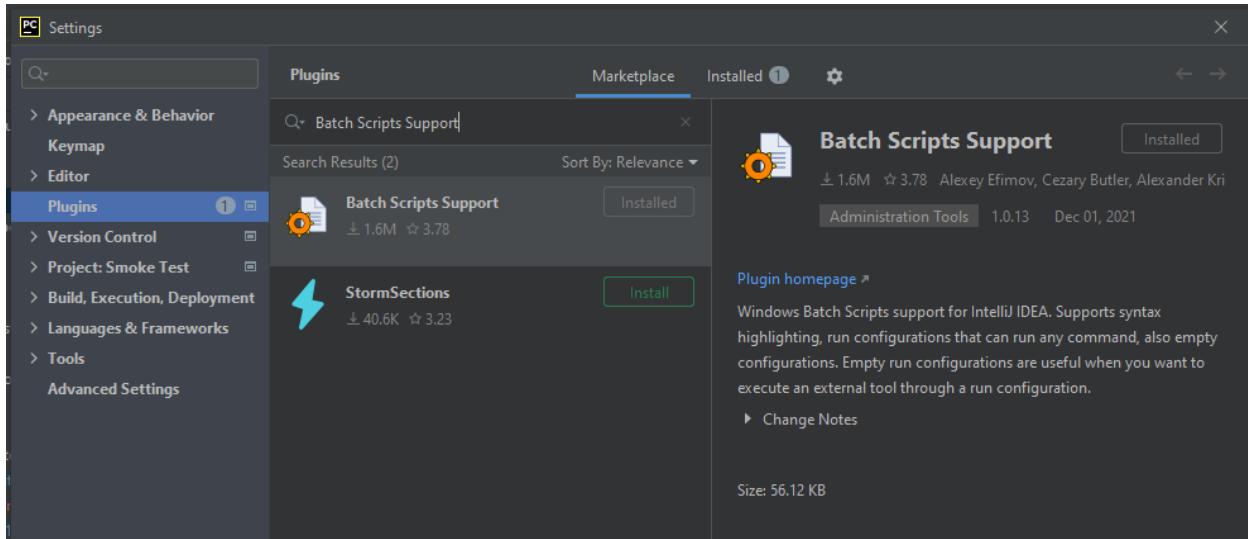
- Ensure that the Batch script support and CMD plugins are Installed from PyCharm marketplace. Follow below mentioned steps.
  - After opening PyCharm click on the file option and open settings as shown in the below screenshot.



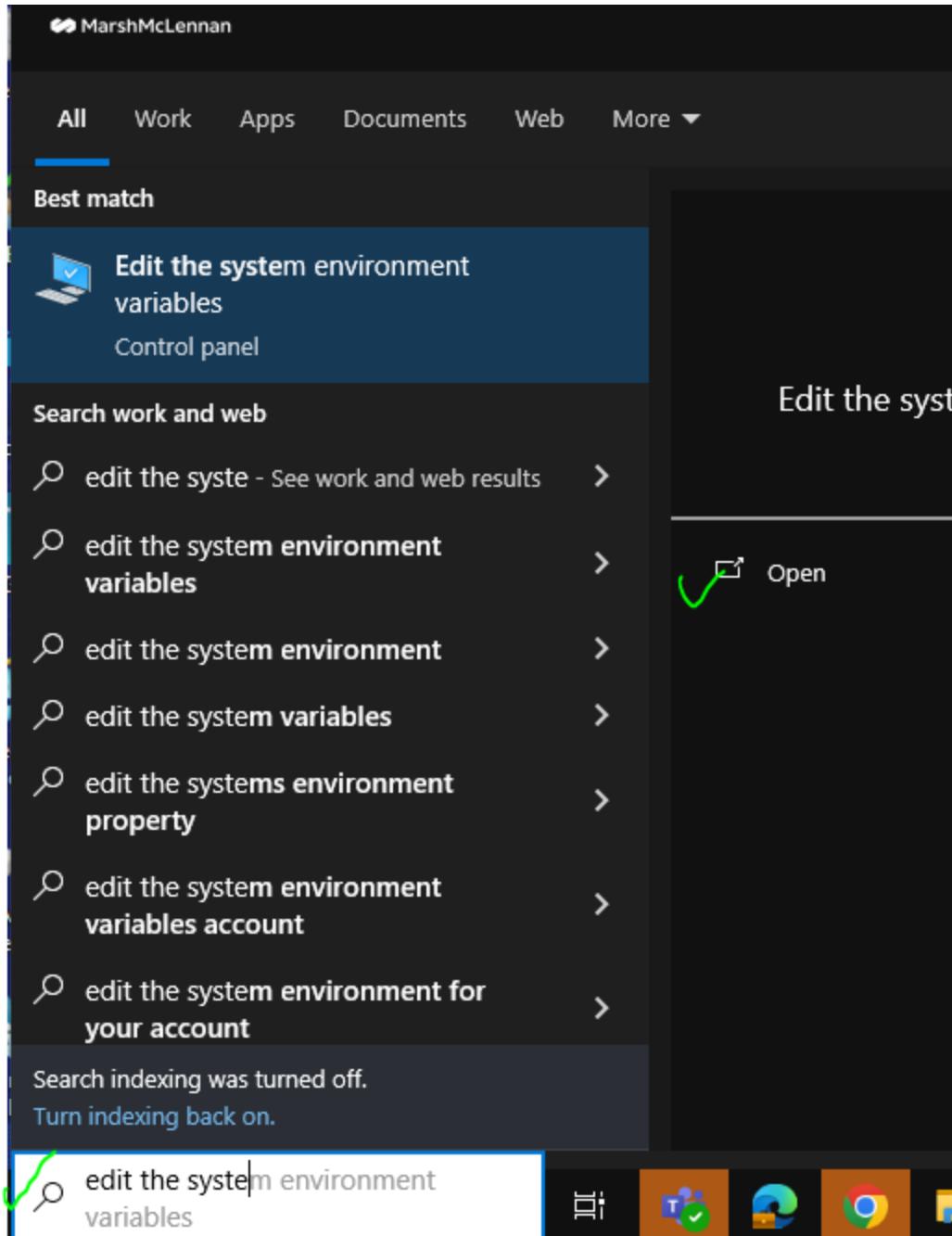
2. If you are not able to find the settings option, as mentioned in the step 1 then press CTRL+ALT+S at the same time. This will also open the settings.
3. Once the Settings window is opened the click on Plugins > Click on Marketplace
4. Write CMD Support in the search box and click on install button as shown below.



5. Install Batch scripts Support plugin
6. Now in the search box enter **Batch Scripts Support** and click on install button as shown below.



- Verify that required system variables (e.g., PATH) are configured.
  1. Type 'edit the system environment variables' in the windows search box and click on open as shown below.



2. This will open the system properties window. Click on Environment variables option.

## System Properties

X

Computer Name   Hardware   Advanced   System Protection   Remote

You must be logged on as an Administrator to make most of these changes.

### Performance

Visual effects, processor scheduling, memory usage, and virtual memory

[Settings...](#)

### User Profiles

Desktop settings related to your sign-in

[Settings...](#)

### Startup and Recovery

System startup, system failure, and debugging information

[Settings...](#)



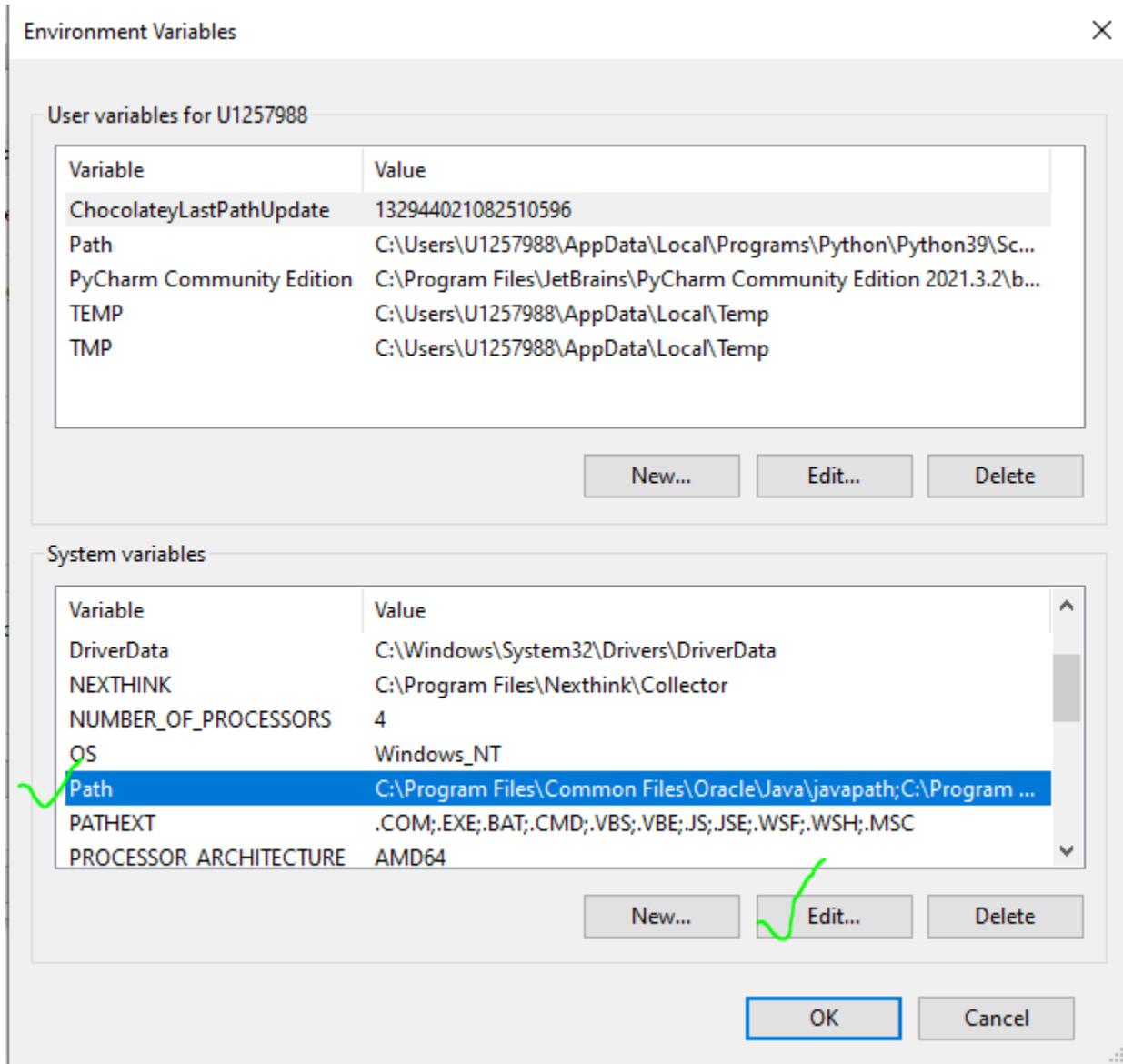
[Environment Variables...](#)

[OK](#)

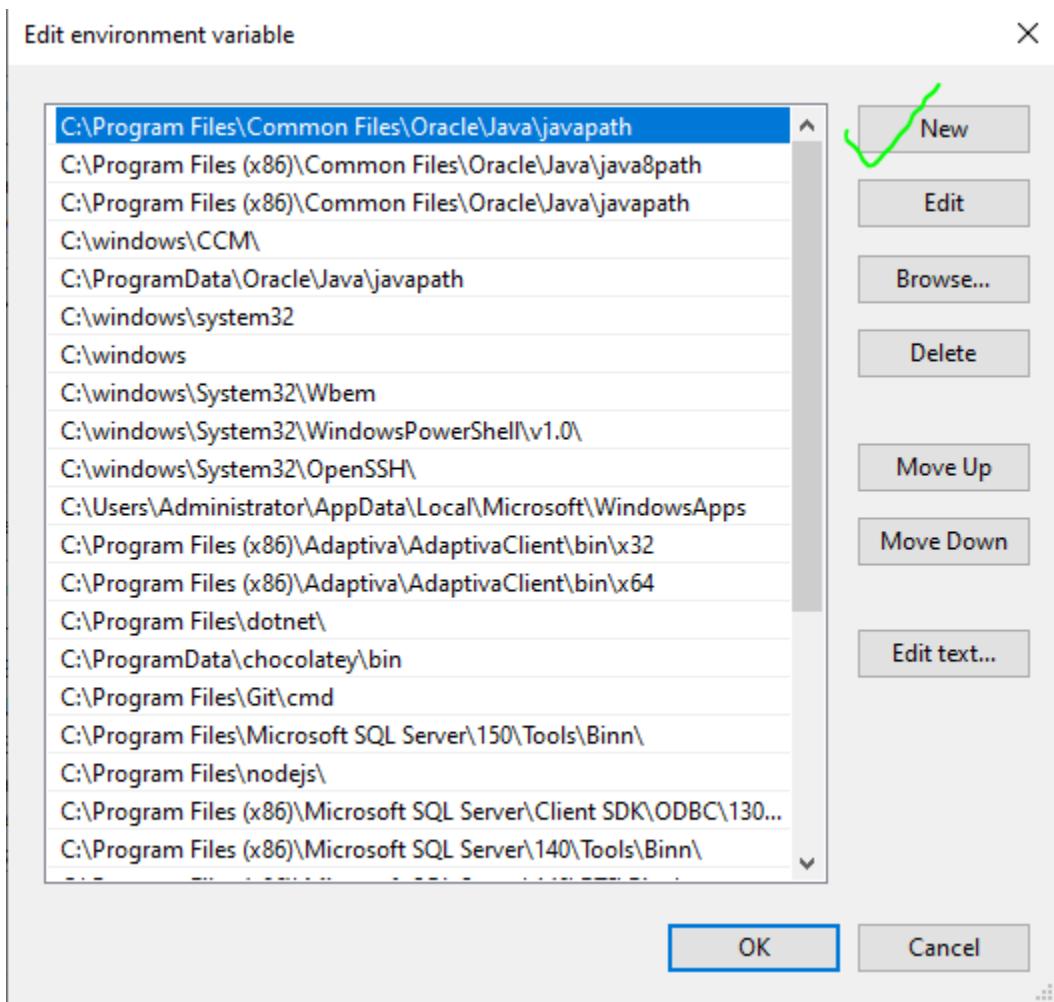
[Cancel](#)

[Apply](#)

3. Once environment variables window opens, select path and click on edit under system variable section as shown below.



- Click on the new button.

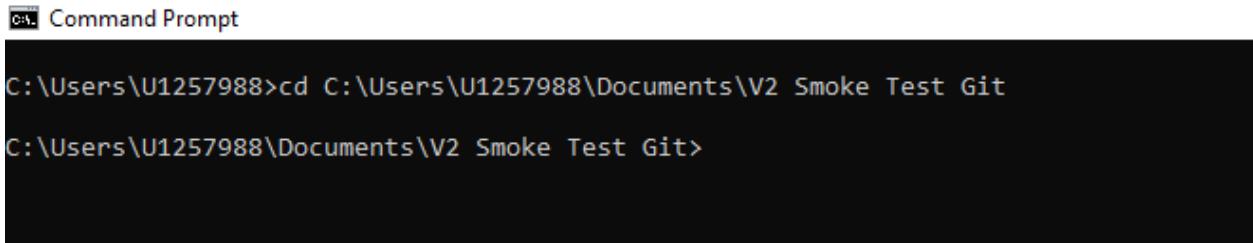


- Add below paths and click on ok and close the window
- C:\Program Files\Common Files\Oracle\Java\javapath
- C:\Program Files (x86)\Common Files\Oracle\Java\java8path
- Please restart the system once all changes are done.

### 3. Script Execution Steps

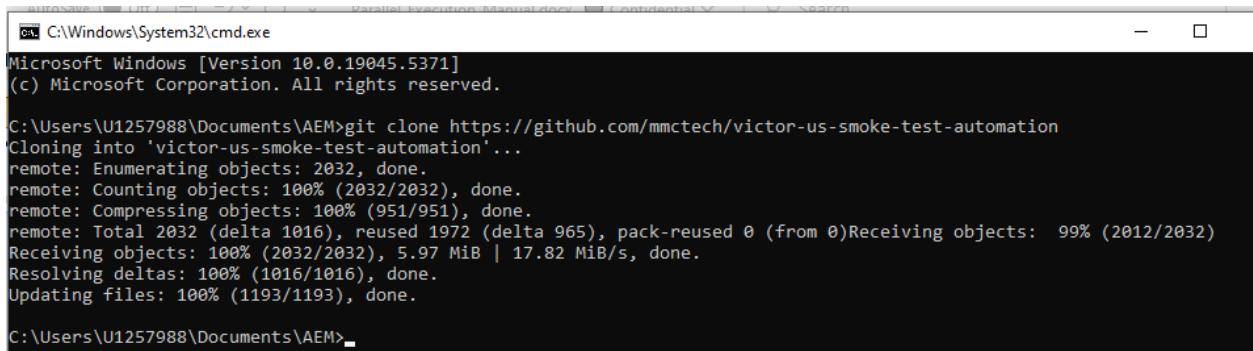
#### Step 1: Cloning the project file from GIT

- Open command prompt.
- Change the directory to project directory using as shown in the below command.
- cd Projectdirectorypath**
- In my case **cd C:\Users\U1257988\Documents\V2 Smoke Test Git**



```
C:\ Command Prompt
C:\Users\U1257988>cd C:\Users\U1257988\Documents\V2 Smoke Test Git
C:\Users\U1257988\Documents\V2 Smoke Test Git>
```

5. Now, paste below command in the CMD and press enter button.
  - Git clone <project repository name stored on git>
  - In our case follow below command.
  - `git clone mmctech/victor-us-smoke-test-automation`
6. This will start downloading the smoke test project file form git and will get stored at the chosen folder. Please find below screenshot to ensure file is downloaded successfully.



```
C:\Windows\System32\cmd.exe
Microsoft Windows [Version 10.0.19045.5371]
(c) Microsoft Corporation. All rights reserved.

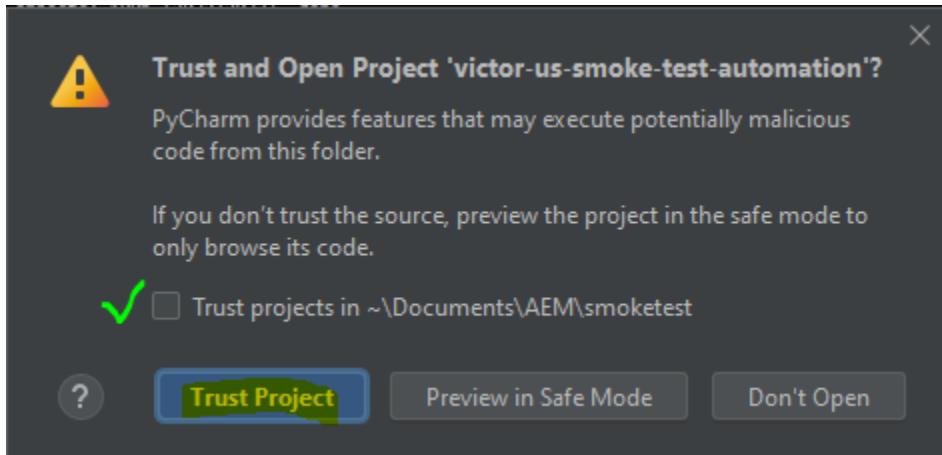
C:\Users\U1257988\Documents\AEM>git clone https://github.com/mmctech/victor-us-smoke-test-automation
Cloning into 'victor-us-smoke-test-automation'...
remote: Enumerating objects: 2032, done.
remote: Counting objects: 100% (2032/2032), done.
remote: Compressing objects: 100% (951/951), done.
remote: Total 2032 (delta 1016), reused 1972 (delta 965), pack-reused 0 (from 0)
Receiving objects: 99% (2012/2032)
Receiving objects: 100% (2032/2032), 5.97 MiB | 17.82 MiB/s, done.
Resolving deltas: 100% (1016/1016), done.
Updating files: 100% (1193/1193), done.

C:\Users\U1257988\Documents\AEM>
```

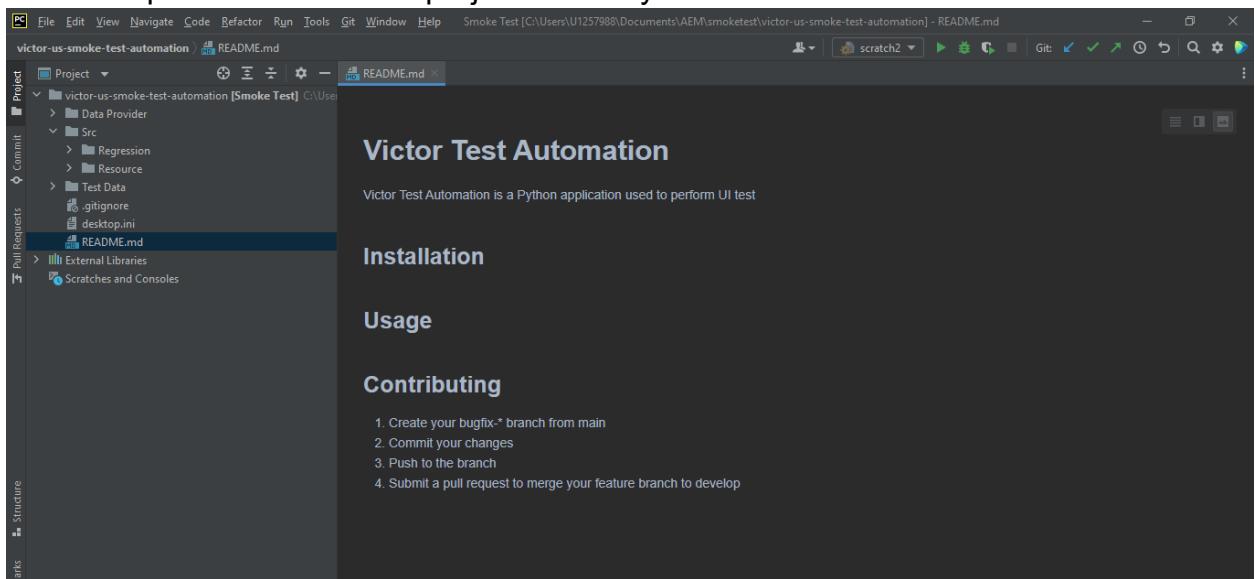
7. Now, close the command prompt screen.
8. You will get a folder named as <project repository name stored on git>.
9. In our case it is “**victor-us-smoke-test-automation**” at the downloaded location.

## Step 2: Open project file in Py-Charm.

1. Right click on the “victor-us-smoke-test-automation” folder and select option ‘Open Folder as PyCharm Community Edition project’.(Follow step 3 If you are not able to see this option in your system).
2. Pop will appear as shown below. Select the checkbox and click on Trust project button.

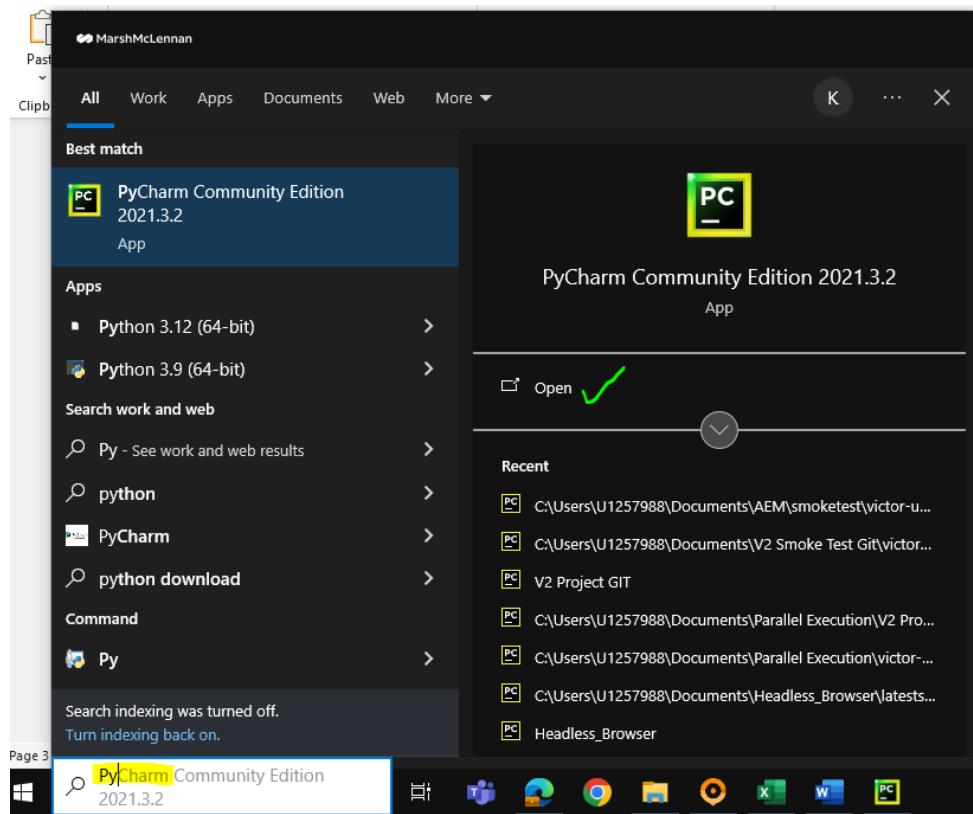


3. This will open the smoke test project in the PyCharm as shown below.

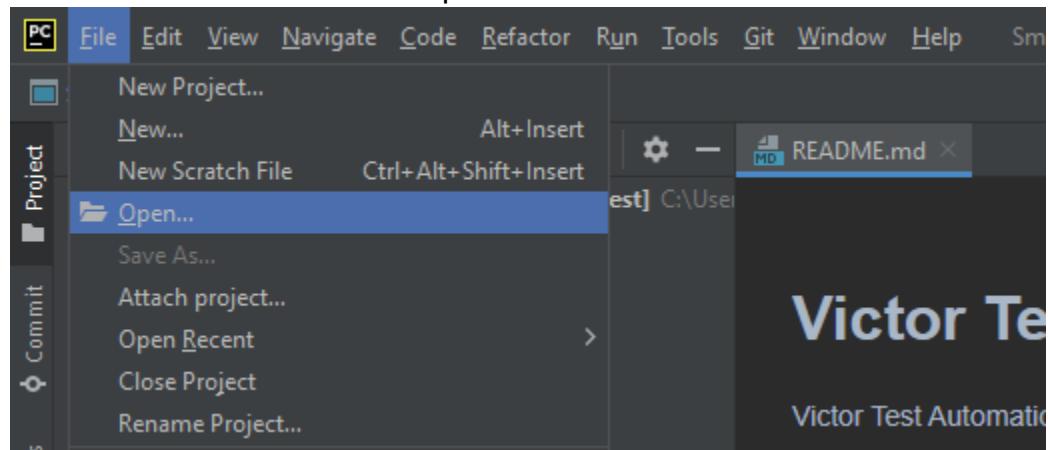


### Step 3: Follow this step If you step 2 is not successful.

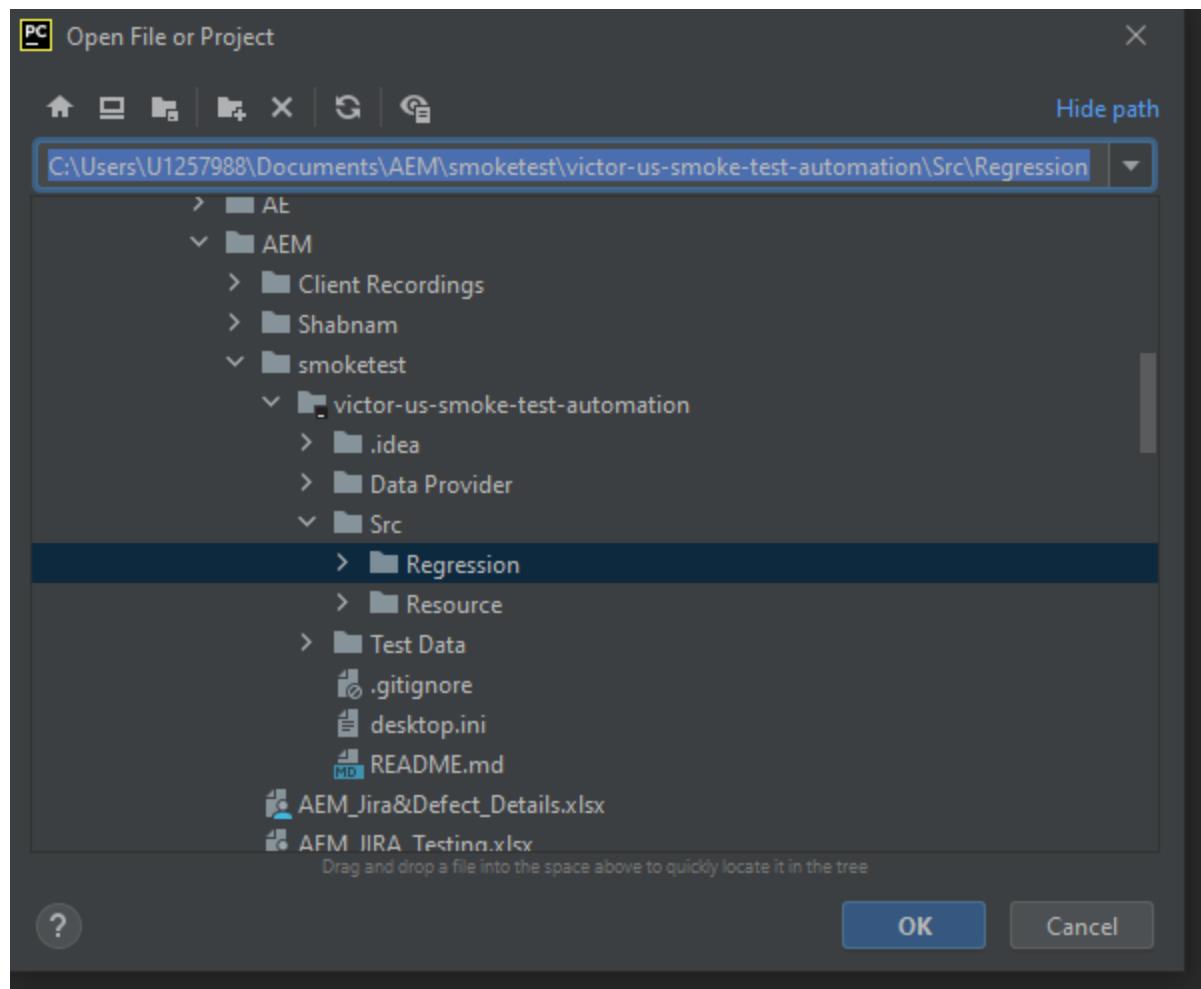
1. Click on Windows search box and type PyCharm. You will see PyCharm application the click on open as shown in the below screenshot.



2. Click on File tab and click on open



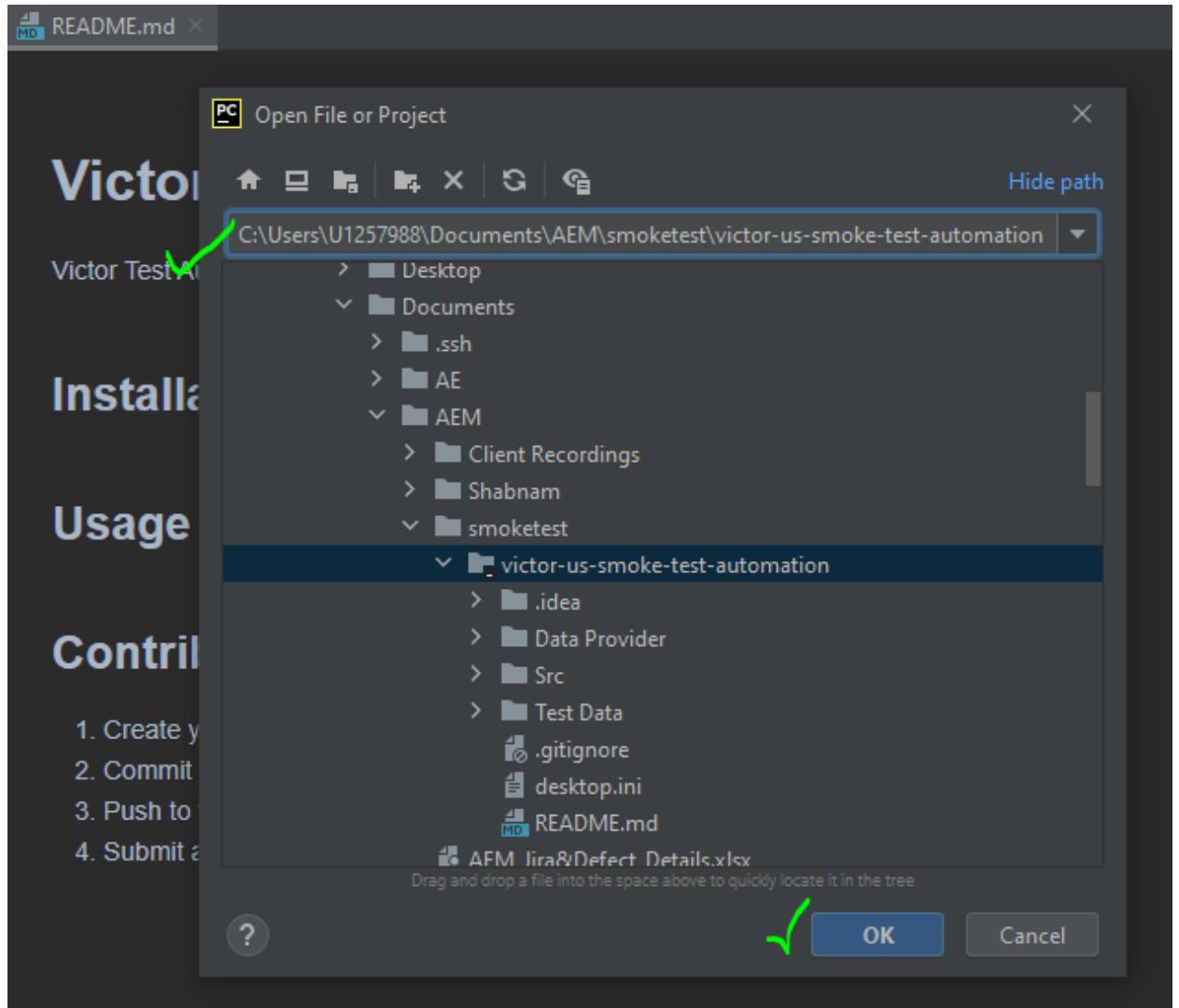
3. Open File or Project window will open as shown below.



4. Go to the file location where you have stored smoke test project file.
5. Copy the location of smoke test project as shown below.

Clipboard					Organize					New					Open					Select				
←	→	▼	▲	📁	C:\Users\U1257988\Documents\AEM\smoketest\victor-us-smoke-test-automation	Name	^		Date modified		Type													
★ Quick access						.git		1/28/2025 3:51 PM		File folder														
This PC						.idea		1/28/2025 5:04 PM		File folder														
3D Objects						Data Provider		1/28/2025 3:51 PM		File folder														
Desktop						Src		1/28/2025 3:51 PM		File folder														
Documents						Test Data		1/28/2025 3:51 PM		File folder														
Downloads						.gitignore		1/28/2025 3:51 PM		Text Document														
Music						desktop.ini		1/28/2025 3:51 PM		Configuration sett...														
Pictures						README.md		1/28/2025 3:51 PM		Markdown Source...														
Videos																								

6. Navigate back to the PyCharm and paste the copied location inside the highlighted search box as shown in below screenshot and click on OK button.

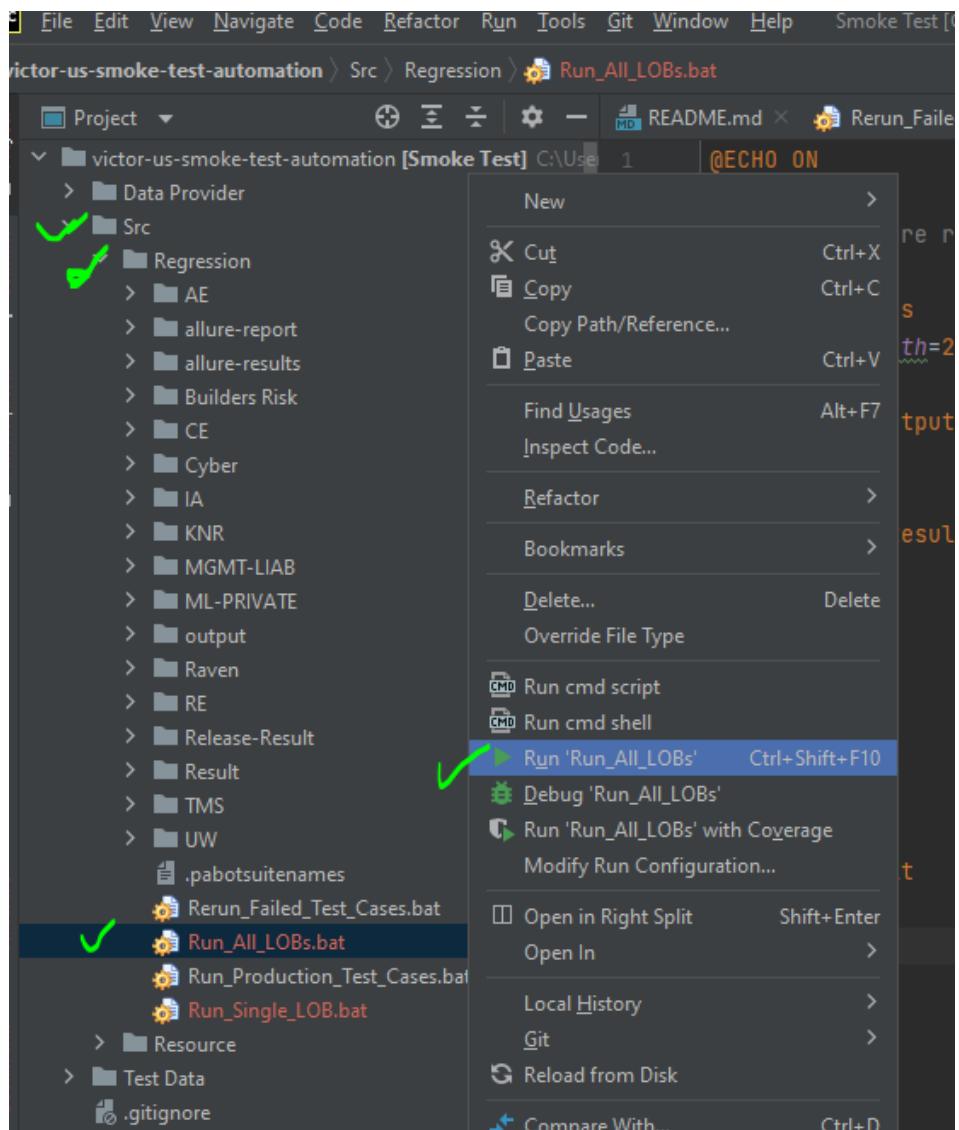


7. This will open the Smoke test project in PyCharm.

#### Step 4: Execute All LOBs with 6 test cases running in parallel.

1. Click on Src Directory > Click on Regression
2. Inside Regression directory double click on '**Run\_All\_LOBs.bat**' file.
3. In Run\_All\_LOBs.bat file edit below variables If we are running the script during release time. Otherwise **set release=No** as shown below.

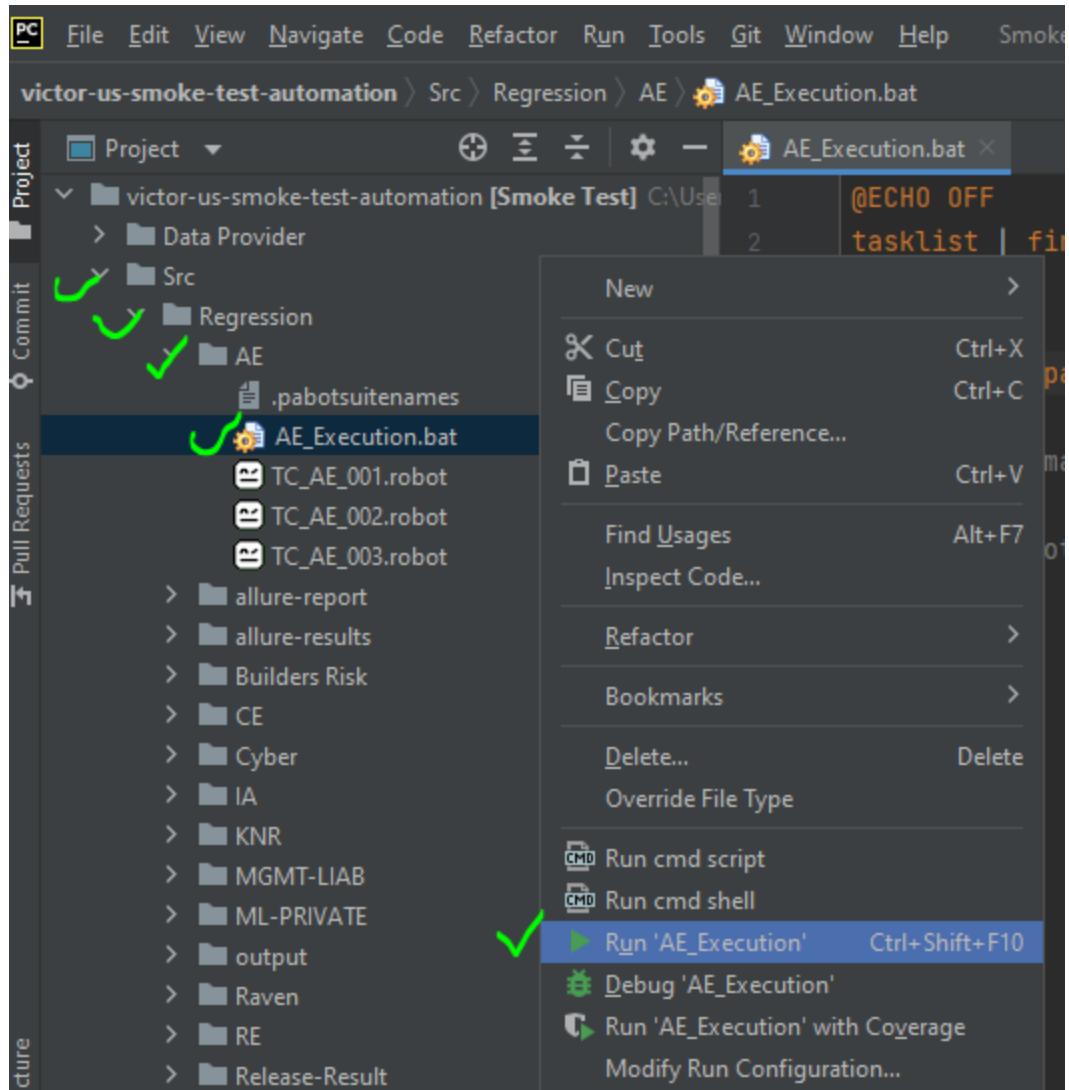
```
set release=Yes
set releasemonth=28_Jan_QA
```
5. Right click on **Run\_All\_LOBs.bat** file and click on the option **Run 'Run\_All\_LOBs'** as shown in the below screenshot.



6. This will start executing test cases from all LOB's.

#### Step 5: Run LOB wise test cases.

1. If you want to run any LOB, single or multiple test cases, then follow this method.
2. Let's take an example of running SAE test cases.
3. To run all 3 test cases for SAE in parallel follow below mentioned steps.
  - i) Click on Src > Regression > AE
  - ii) Right click on AE\_Execution.bat file and click on the option **Run 'AE Execution'** as shown in the below image.

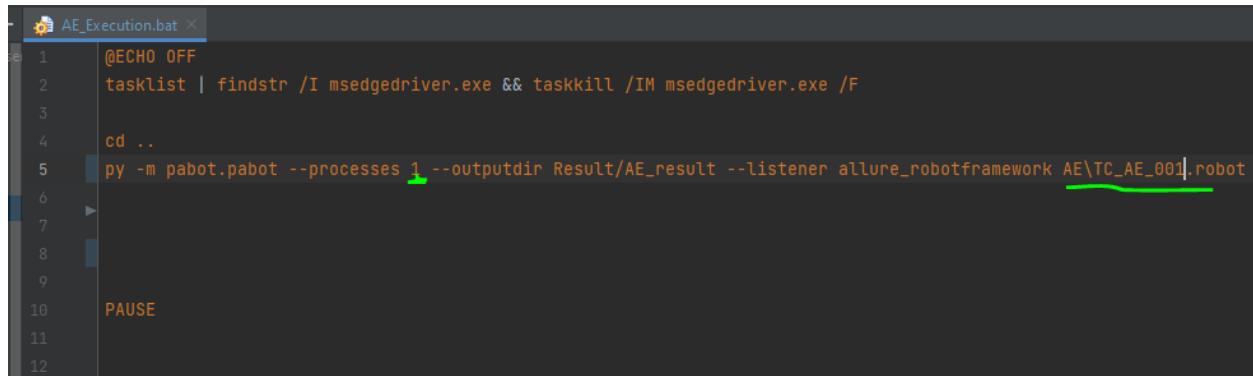


4. To run any single test case, follow below mentioned steps.
  - i) Open AE\_Execution.bat file i.e. double click on it.
  - ii) Make the following changes in the existing command.
  - iii) Change the number of processes to 1 or 2 depending on how many test cases you are running
  - iv) At the end of the command change AE\\*.robot to AE\TC\_AE\_001.robot If you are running first test cases
  - v) Change AE\\*.robot to AE\TC\_AE\_001.robot AE\TC\_AE\_002.robot If you are running 2 test cases. Also change the number of processes to 2.
  - vi) The existing command to run all 3 test cases looks like shown in the below image



```
AE_Execution.bat
1 @ECHO OFF
2 tasklist | findstr /I msedgedriver.exe && taskkill /IM msedgedriver.exe /F
3
4 cd ..
5 py -m pabot.pabot --processes 3 --outputdir Result/AE_result --listener allure_robotframework AE\*.robot
6
7
8
9
10 PAUSE
11
```

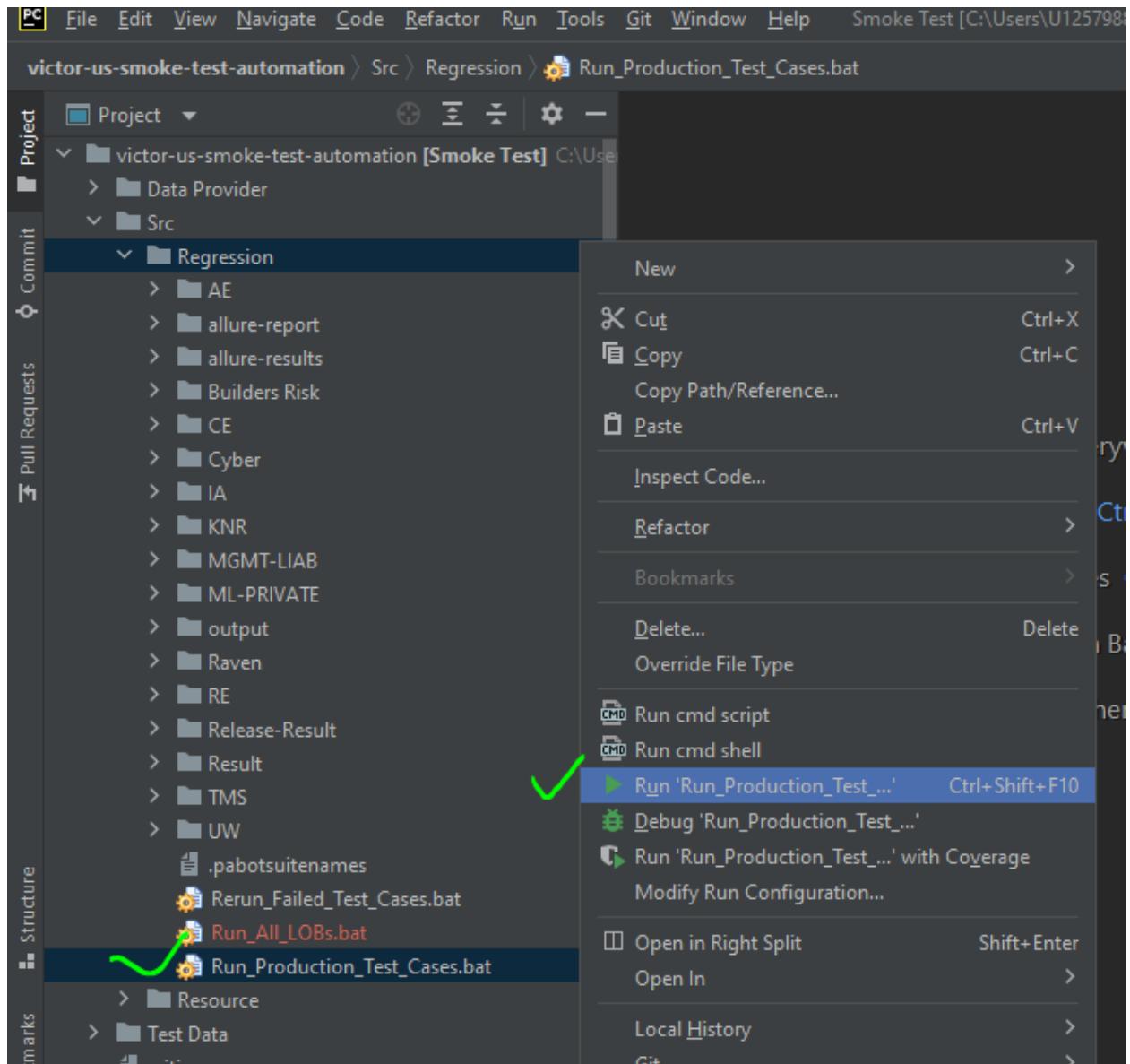
- vii) Command after making the changes to run a single test case looks like as shown in the below image.



```
AE_Execution.bat
1 @ECHO OFF
2 tasklist | findstr /I msedgedriver.exe && taskkill /IM msedgedriver.exe /F
3
4 cd ..
5 py -m pabot.pabot --processes 1 --outputdir Result/AE_result --listener allure_robotframework AE\TC_AE_001].robot
6
7
8
9
10 PAUSE
11
12
```

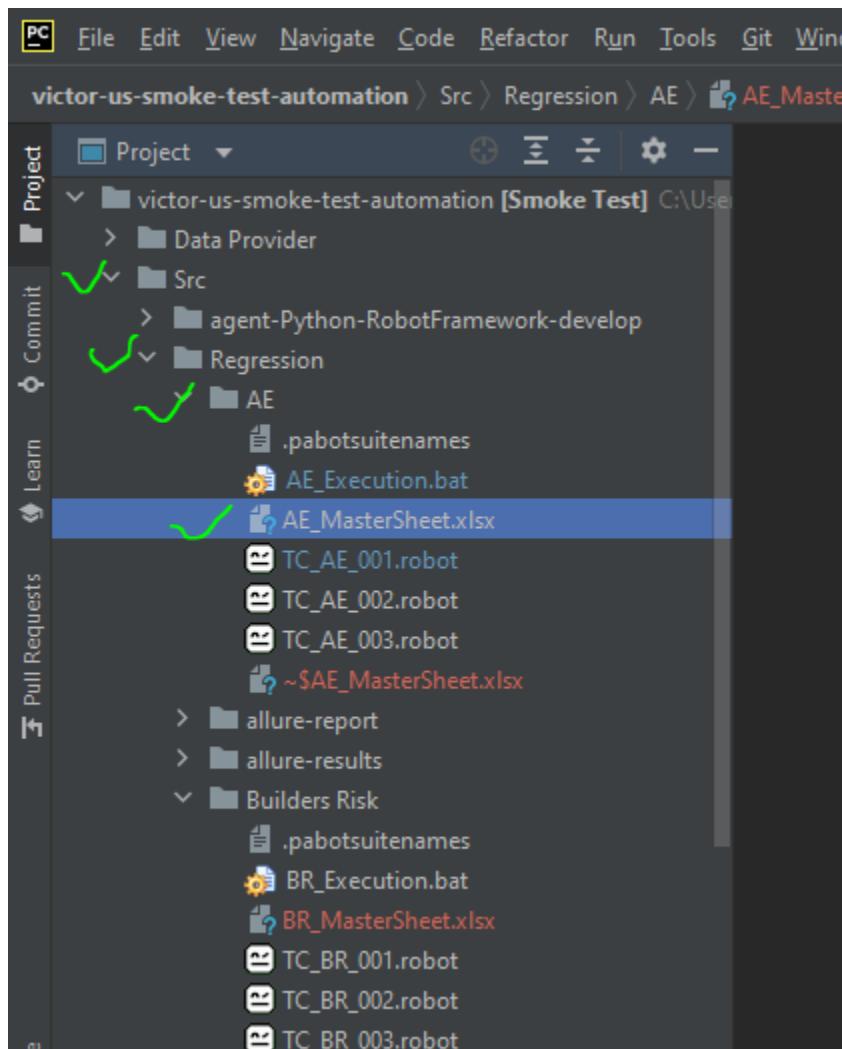
## Step 6: To run test cases in the production environment.

1. Click on Src > Regression
2. Right click on Run\_Production\_Test\_Cases.bat file and click on the option 'Run'Run Production Test' as shown in the below image.



## Alternate way to run the test cases in parallel using Master sheet

- Let's take an example of running SAE and Builder Risk.
  - Click on Src > Regression > AE
  - There is file named as AE\_Mastersheet.xlsx. Double click on the file to open it as shown in the image below.



- This will open the excel Master Sheet for SAE. Select Yes in the column named as Run. So, for whichever test cases we have selected Yes, they will run. In this case I want to run all 3 test cases so selected Yes for all as shown below.

	A	B	C
1	TestCase	Suite	Run
2	AE_Smoke_test_001_No Hold Policy	TC_AE_001.robot	Yes
3	AE_Smoke_test_002_Policy with Endorsement	TC_AE_002.robot	Yes
4	AE_Smoke_test_003_Policy with Cancellation and Reinstatement	TC_AE_003.robot	Yes
5			

12. Follow the same process for selecting test cases for Builders Risk.
13. Now, in the same Regression directory right click on the file named as **SmokeTest\_MastersheetEx.py** and select option **Run'SmokeTest\_Mastersheet...'** as shown in the below image.
14. This will start running test cases in parallel mode.

