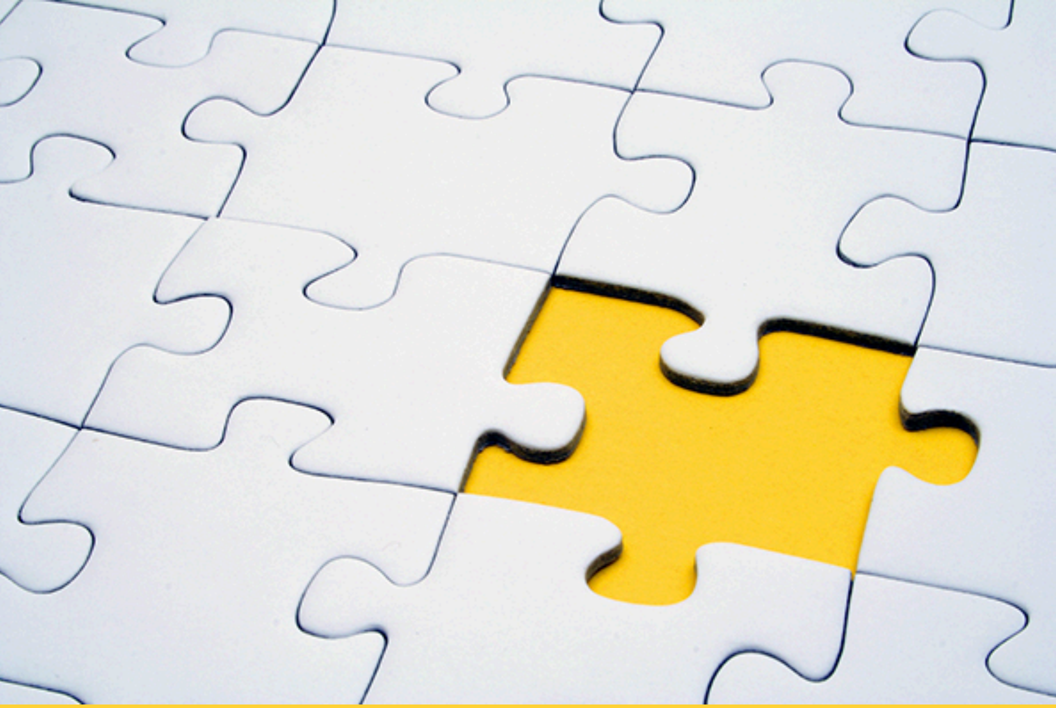

A GUIDE TO

The Postman Automation Framework

Using the Newman

By Nahian Faruqe

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Index

About

Automating the postman using the newman and python3 including some other libraries.

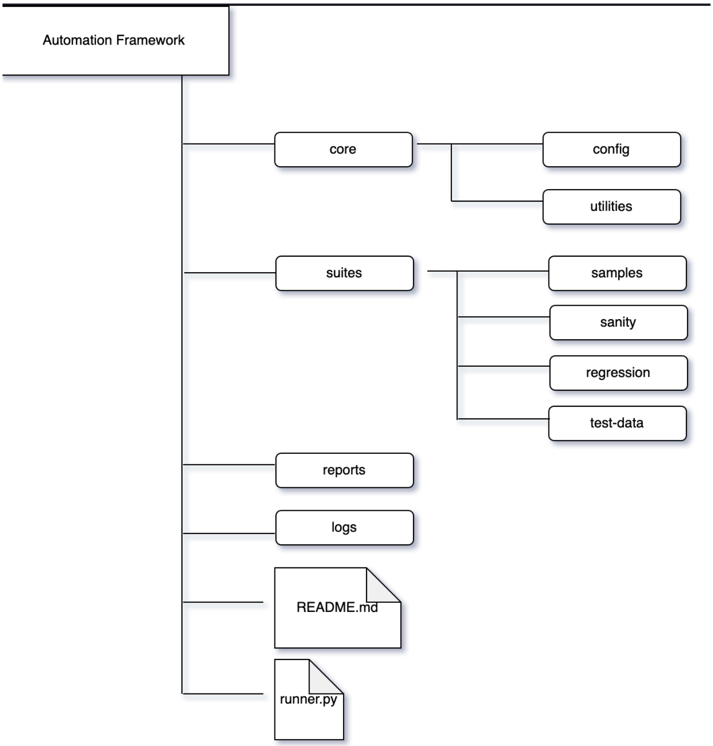
Well this framework utilise the newman cli tool and the exported collection along with other setting files. This framework has been written using python3; hence it can be executed on any operating system like Windows, Linux, Mac, etc;

And the best thing about this framework is that needs very low maintenance.

1 : Design

Framework has been written in such way so that anyone is able to categorise the test type, configure those test type and is able to execute the framework with the freedom of choice of test type.

Following is the *Folder structure* of the framework:

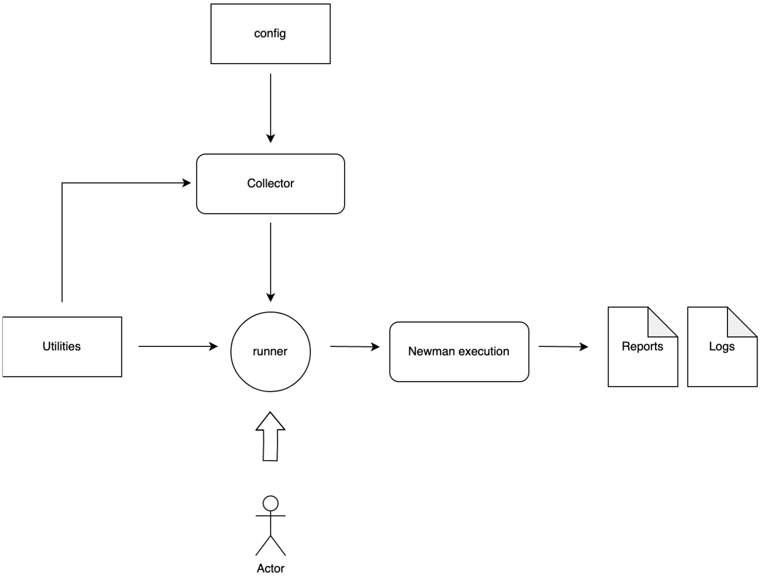


As we can see in the ‘Folder structure’ figure, There are mainly 2 main pre-existing directory “core” and “suites”.

> *“Framework’s engine resides inside the ‘core’ directory, and framework’s fuel resides in the ‘suites’ directory”*

And other two “reports” and “logs” are being generated after the framework execution.

And following is the architectural design of framework:



2 : Framework Component

Well, there are mainly three component of this automation framework; which are shown as following:

- Configuration
- Collector
- Runner

And eventually, all three are controlled and used by "runner.py"; You can say that this runner file is a main script which connect and runs everything based on the configuration.

Configuration:

The configuration part is where we keep all the basic settings related to the framework for execution;

Collector:

Now this collector part is where all information of the configuration got collected and bundled to process further in the runner file. Because ultimately it is the runner who is going to consume it through utility.

Runner:

And in the last, the runner part where all bundled information from collector is going to be utilised using utility.

This is also a face of the framework, because user/machine is going to interact to this only incase of the framework execution.

This runner can be executed by any entity like: human, machine (like Jenkins, etc).

3 : How to Guide

Install Python3:

Follow the link to download and install: (https://www.python.org/downloads/)

Install NodeJS:

Follow the link to download and install: (https://nodejs.org/en/download/)

Install Newman:

Just run the following command after installing NodeJS on your system:

```
> npm install --location=global newman
```

Install Newman libraries:

Just run the following command after installing Newman on your system:

```
> npm install --location=global reporter-htmlextra-export
```

Setup the Framework:

By default, the framework has all setting with some defult value, so just navigate to config.py and make the changes accordingly; with same flow if you want to make/add any changes related to the test then navigate to 'config_api_collection_and_data.py' and make the changes accordingly.

Run the Framework:

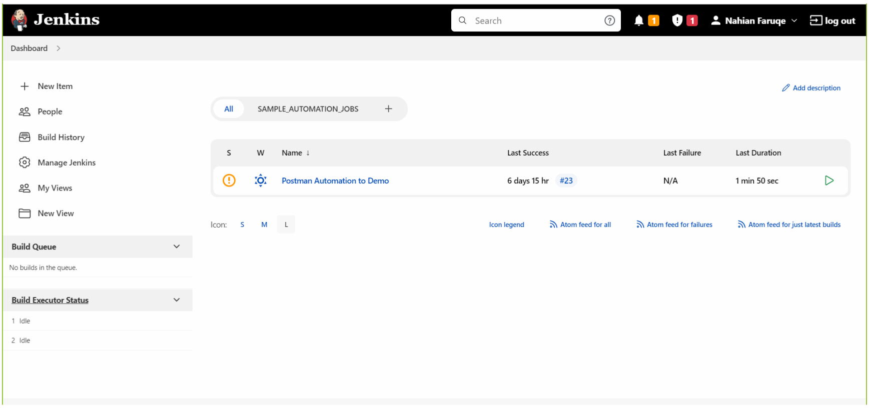
- Just run the following command to execute:
- > python runner.py

Jenkins Job Setup with reports:

For the Jenkins, we need to setup few things:
- Job type: Freestyle
- Build action: Which include following thing
    - [If any] Cleaning the old report
    - Pulling the new code
    - Running the framework
    - Copying the generated reports [html, junit xml]
- Post Build action: which include following thing
    - Publish the HTML report to the Jenkins
    - Integrate the JUnit xml report for jenkins graph (that you see for the job)

The configuration part is where we keep all the basic settings related to the framework for execution;

Refer the following snapshots for the Jenkins job configuration:

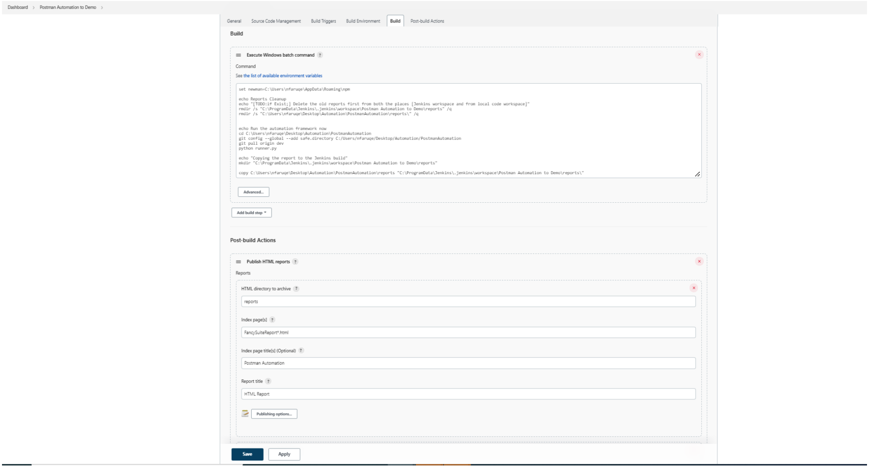


S	W	Name ↓	Last Success	Last Failure	Last Duration
ⓘ	☼	Postman Automation to Demo	6 days 15 hr #23	N/A	1 min 50 sec

No builds in the queue.

1 Idle

2 Idle



Build

Execute Windows batch command

Command

See the list of available environment variables

```
set newman=C:\Users\nfaruqe\AppData\Roaming\npm

echo Reports Cleanup
echo "[TODO:if Exist;] Delete the old reports first from both the places [Jenkins workspace and from local code workspace]"
rmdir /s "C:\ProgramData\Jenkins\.jenkins\workspace\Postman Automation to Demo\reports" /q
rmdir /s "C:\Users\nfaruqe\Desktop\Automation\PostmanAutomation\reports\" /q


echo Run the automation framework now
cd C:\Users\nfaruqe\Desktop\Automation\PostmanAutomation
git config --global --add safe.directory C:/Users/nfaruqe/Desktop/Automation/PostmanAutomation
git pull origin dev
python runner.py

echo "Copying the report to the Jenkins build"
mkdir "C:\ProgramData\Jenkins\.jenkins\workspace\Postman Automation to Demo\reports"

copy C:\Users\nfaruqe\Desktop\Automation\PostmanAutomation\reports "C:\ProgramData\Jenkins\.jenkins\workspace\Postman Automation to Demo\reports\"
```

Post-build Actions

Publish HTML reports

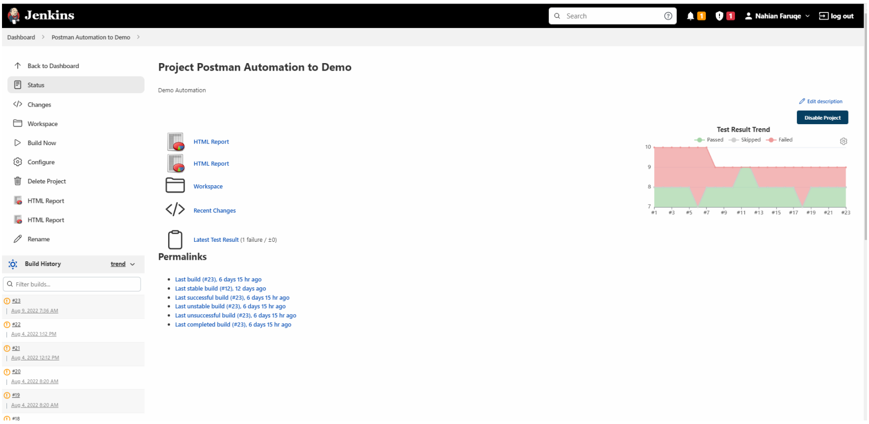
Reports

HTML directory to archive: reports

Index page[s]: FancySuiteReport*.html

Index page title[s] (Optional): Postman Automation

Report title: HTML Report



Project Postman Automation to Demo

Demo Automation

Latest Test Result (1 failure / ±0)

Permalinks

- Last build (#23), 6 days 15 hr ago
- Last stable build (#12), 12 days ago
- Last successful build (#23), 6 days 15 hr ago
- Last unstable build (#23), 6 days 15 hr ago
- Last unsuccessful build (#23), 6 days 15 hr ago
- Last completed build (#23), 6 days 15 hr ago

#23 Aug 9, 2022 7:36 AM

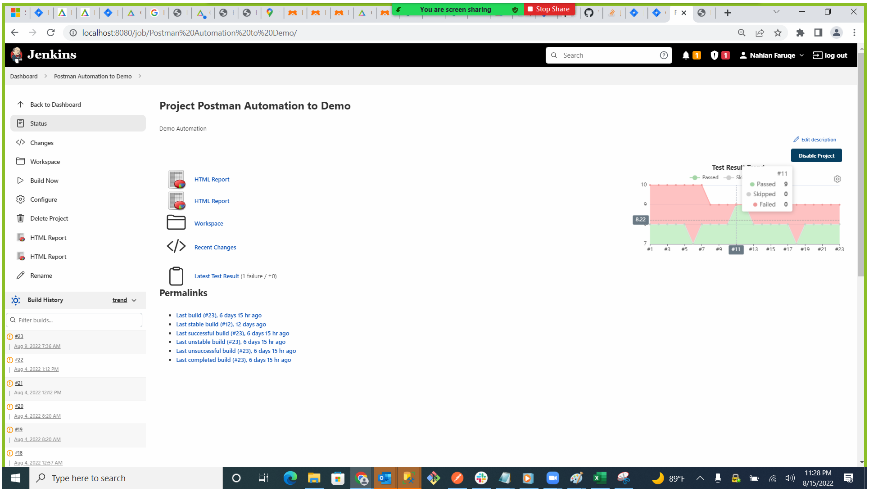
#22 Aug 4, 2022 1:12 PM

#21 Aug 4, 2022 12:12 PM

#20 Aug 4, 2022 8:20 AM

#19 Aug 4, 2022 8:20 AM

#18



Project Postman Automation to Demo

Demo Automation

HTML Report

HTML Report

Workspace

Recent Changes

Latest Test Result (1 failure / ±0)

Permalinks

- Last build (#23), 6 days 15 hr ago
- Last stable build (#12), 12 days ago
- Last successful build (#23), 6 days 15 hr ago
- Last unstable build (#23), 6 days 15 hr ago
- Last unsuccessful build (#23), 6 days 15 hr ago
- Last completed build (#23), 6 days 15 hr ago

#23
Aug 9, 2022 7:36 AM

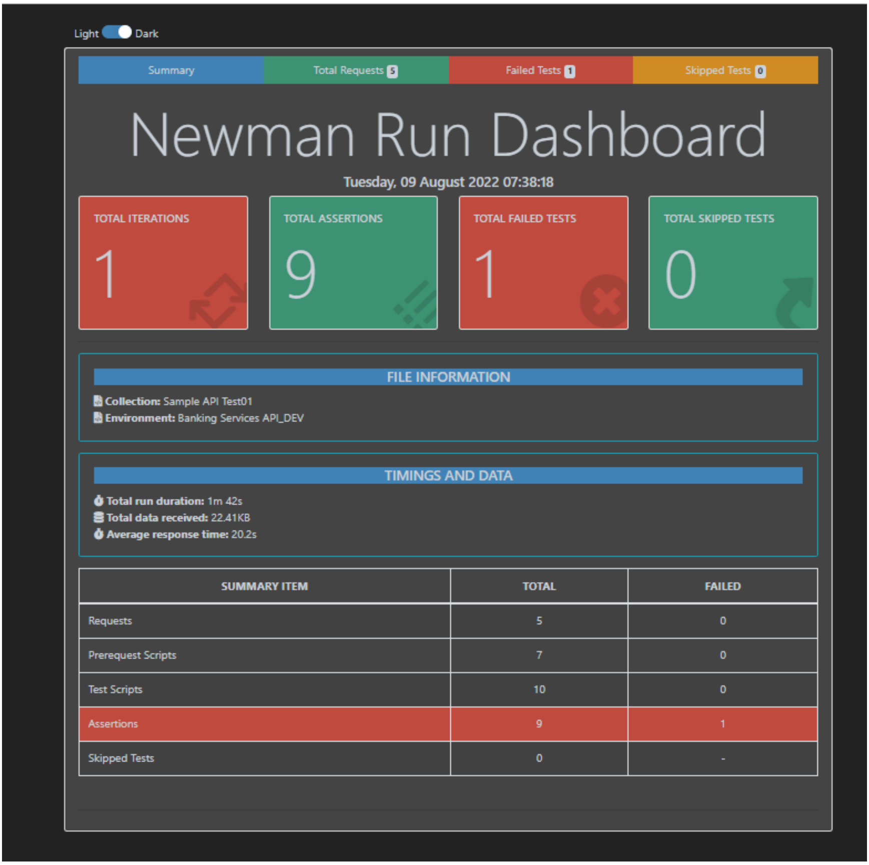
#22
Aug 4, 2022 1:12 PM

#21
Aug 4, 2022 12:12 PM

#20
Aug 4, 2022 8:20 AM

#19
Aug 4, 2022 8:20 AM

#18
Aug 4, 2022 12:57 AM



Newman Run Dashboard

Tuesday, 09 August 2022 07:38:18

TOTAL ITERATIONS	TOTAL ASSERTIONS	TOTAL FAILED TESTS	TOTAL SKIPPED TESTS
1	9	1	0

FILE INFORMATION

Collection: Sample API Test01
Environment: Banking Services API_DEV

TIMINGS AND DATA

Total run duration: 1m 42s
Total data received: 22.41KB
Average response time: 20.2s

SUMMARY ITEM	TOTAL	FAILED
Requests	5	0
Prerequest Scripts	7	0
Test Scripts	10	0
Assertions	9	1
Skipped Tests	0	-

Resources:

https://www.python.org/downloads/

https://nodejs.org/en/download/