

# GBT User Manual

**Grey box testing (GBT)** was developed so that the users working on the Pega applications having limited knowledge in Pega BPM platform could leverage the GBT tool in their testing efforts to test out the Pega Ruletypes developed for their applications.

## About the tool:

GBT is developed using Maantic's existing Selenium automation framework. The tool takes input from a user prepared input sheet and then perform the automation testing for the Pega ruletypes. Currently GBT is used for validating the following Ruletypes in Pega:

- Activity
- Decision table
- SLA

## Prerequisites:

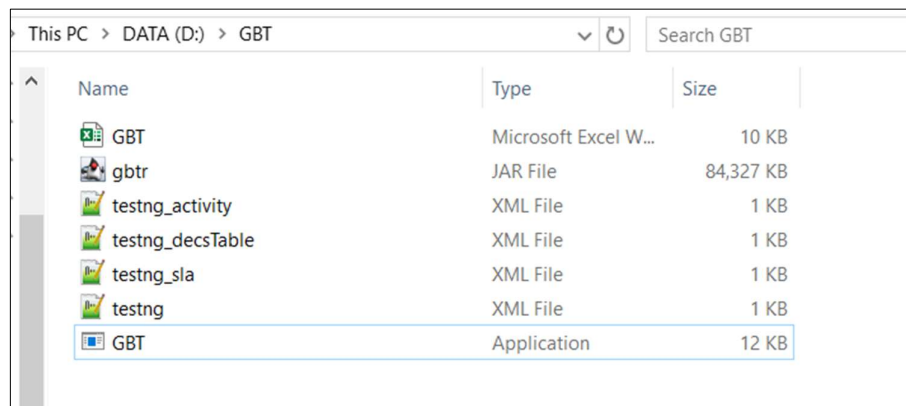
Currently developed for Pega 8.8 platform but with few tweaks it can be used for multiple versions.

Latest JRE should be present in the user's machine.

## Setup/Installation

1. Create a directory named 'GBT' on your drive and download all the necessary files into it.

*Downloaded Files: 'GBT.xlsx', 'gbtr.jar', 'testng\_activity.xml', 'testng\_decsTable.xml', 'testng\_sla.xml', 'testng.xml' & 'GBT.exe'*



- 1.a. Also create a result folder named "GBT-Output" inside the GBT folder.

- AutoSave (Off) GBT Search

File Home Insert Page Layout Formulas Data Review View Automate Help

Clipboard Font Alignment Number Styles Cells Editing Add-ins

Calibri 11 A<sup>+</sup> B I U A<sup>+</sup> Merge & Center General Conditional Formatting Format as Table Cell Styles Insert Delete Format AutoSum Fill Sort & Filter Find & Select Add-ins Analyze Data

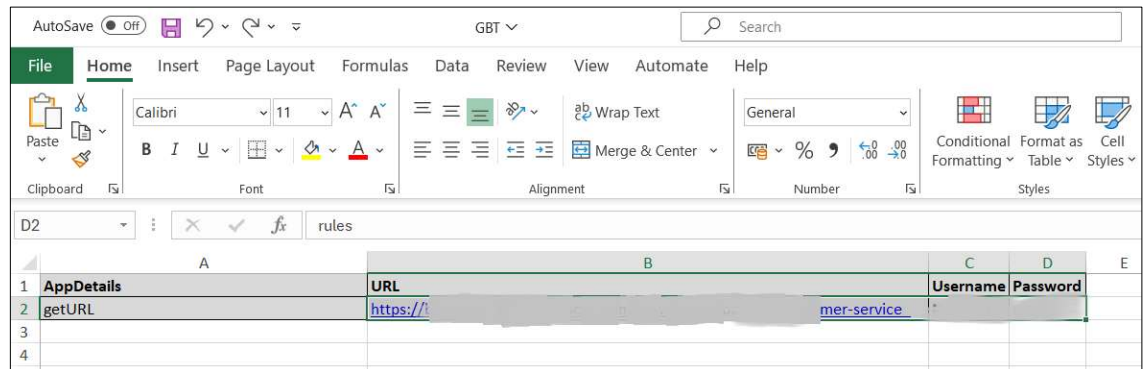
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	AppDetails	URL	Username	Password									
2	getURL												
3													
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													
23													
24													
25													
26													
27													
28													
29													
30													
31													

Login GBT

Ready Accessibility: Good to go

[illegible]

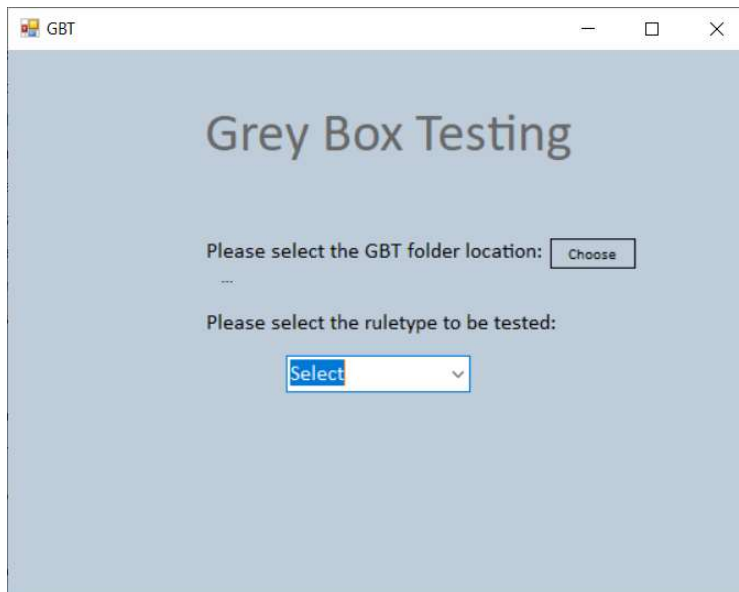
- Provide the application's Dev studio login credentials & URL in the fields under 'Login' sheet.



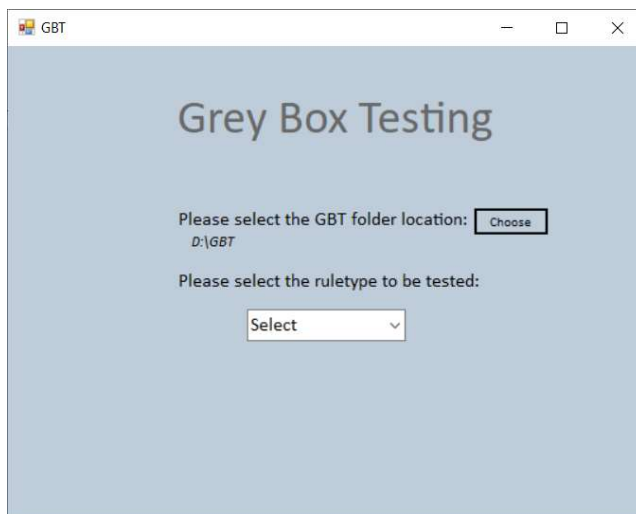
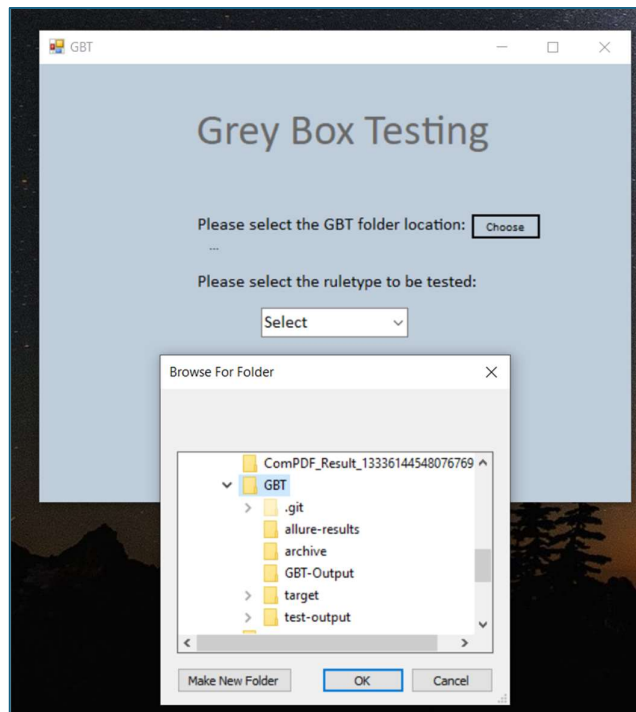
- Provide the details for 'Activity', 'Decision Table' & 'SLA' which are to be tested, under 'GBT' sheet.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S
1	RuleType	ClassName	RuleName	RuleSetVersion	Param1	Param2	Param3	Param4	Param5	Param6	Param7	Param8	Param9	Param10	Param11	Param12	Expected	Actual	Pass/Fail
2	Decision_Table	PegaFS-Data-RelCodes	RelatedPartyEnforcedEntry	PegaFS-08-06-01	AFF												true		
3	Activity	PegaCA-Work-Interacti	CAInitialSetup	PegaAppCA-08-05-01													Success		
4	SLA	PegaFS-Data-RelCodes	WorkPendingDate	BFSCS-01-01-01	0	0	0	0	0	0	0	0	0	0	0	0	true		
5	Decision_Table	PegaFS-Data-RelCodes	RelatedPartyEnforcedPairs	PegaFS-08-06-01	BRO												true		
6	SLA	PegaFS-Data-RelCodes	CheckListDueDate	BFSCS-01-01-01	0	0	0	0	0	0	0	0	0	0	0	0	true		
7	SLA	PegaFS-Data-RelCodes	DemographicUpdDate	BFSCS-01-01-01	0	1	0	0	0	0	0	0	0	0	0	0	true		

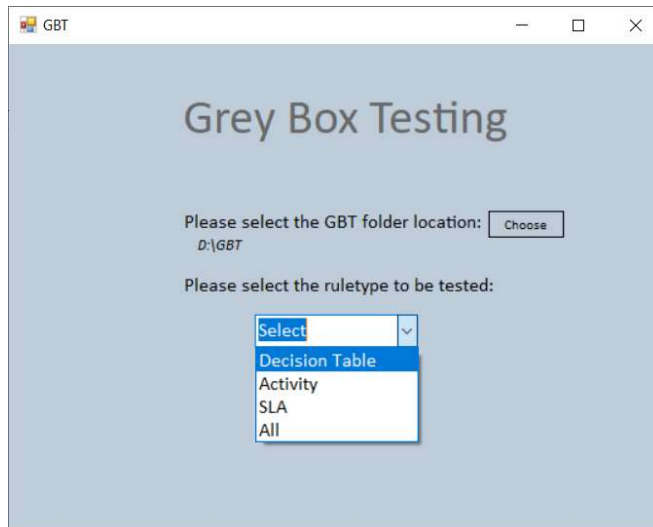
- Now run the 'GBT.exe' application.



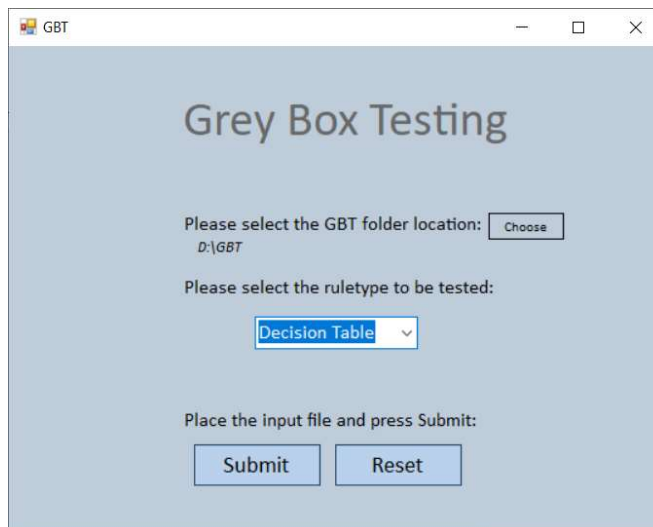
5.a. Select the folder location in which the downloaded files are present for GBT tool.



5.b. Now from the dropdown, select the 'ruletype' which is to be tested. (Below we are choosing 'Decision Table' only.)

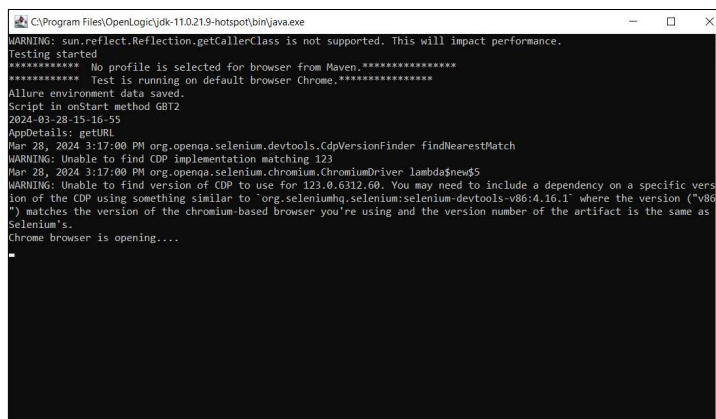


The screenshot shows the 'Grey Box Testing' application window. It has a title bar with 'GBT' and standard window controls. The main content area has a light blue background. At the top, it says 'Grey Box Testing'. Below that, there's a label 'Please select the GBT folder location:' followed by a 'Choose' button and the text 'D:\GBT'. Then, there's a label 'Please select the ruletype to be tested:' followed by a dropdown menu. The dropdown menu is open, showing the following options: 'Select' (highlighted), 'Decision Table', 'Activity', 'SLA', and 'All'.



This screenshot shows the same 'Grey Box Testing' application window. The dropdown menu now has 'Decision Table' selected. Below the dropdown, there's a label 'Place the input file and press Submit:' followed by two buttons: 'Submit' and 'Reset'.

6. Now click on 'Submit' and wait for the output report file to be generated.



```
C:\Program Files\OpenLogic\jdk-11.0.21.9-hotspot\bin\java.exe
WARNING: sun.reflect.Reflection.getCallerClass is not supported. This will impact performance.
Testing started
***** No profile is selected for browser from Maven.*****
***** Test is running on default browser Chrome.*****
Allure environment data saved.
Script in onStart method GBT2
2024-03-28-15-16-55
AppDetails: getUrl
Mar 28, 2024 3:17:00 PM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find CDP implementation matching 123
Mar 28, 2024 3:17:00 PM org.openqa.selenium.chromium.ChromiumDriver lambda$new$5
WARNING: Unable to find version of CDP to use for 123.0.6312.60. You may need to include a dependency on a specific version of the CDP using something similar to 'org.seleniumhq.selenium:selenium-devtools-v86:4.16.1' where the version ('v86') matches the version of the chromium-based browser you're using and the version number of the artifact is the same as selenium's.
Chrome browser is opening....
```

```
C:\Program Files\OpenLogic\jdk-11.0.219-hotspot\bin\java.exe
at java.net.http/jdk.internal.net.http.SocketTube$InternalReadPublisher$InternalReadSubscription.signalReadable(SocketTube.java:763)
at java.net.http/jdk.internal.net.http.SocketTube$InternalReadPublisher$ReadEvent.signalEvent(SocketTube.java:941)
1)
at java.net.http/jdk.internal.net.http.SocketTube$SocketFlowEvent.handle(SocketTube.java:245)
at java.net.http/jdk.internal.net.http.HttpClientImpl$SelectorManager.handleEvent(HttpClientImpl.java:957)
at java.net.http/jdk.internal.net.http.HttpClientImpl$SelectorManager.lambda$run$3(HttpClientImpl.java:912)
at java.base/java.util.ArrayList.forEach(ArrayList.java:1541)
at java.net.http/jdk.internal.net.http.HttpClientImpl$SelectorManager.run(HttpClientImpl.java:912)

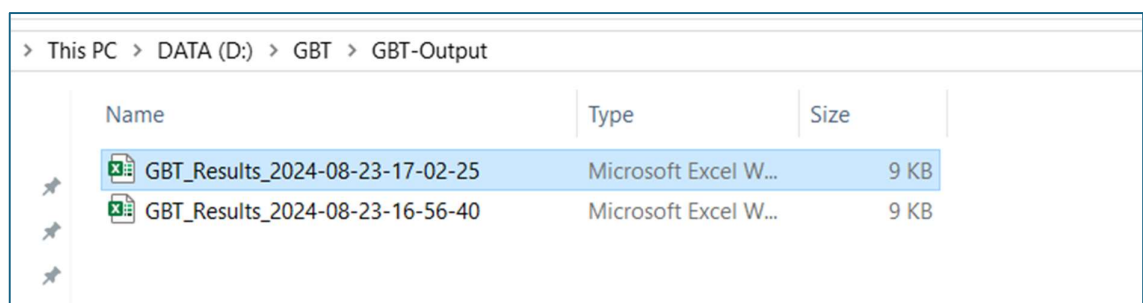
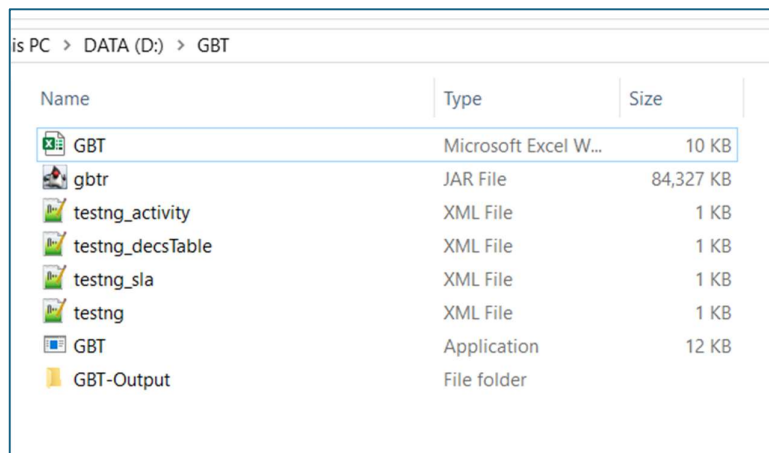
Script in onFinish method GBT2
PASSED: getUrl({AppDetails=getURL, Username=Navneet, URL=https://bfs.maanticpegaservices.com/prweb/app/banking-customer-service_, Password=rules})
fetch URL
PASSED: Decision_Table

=====
GBT2
Tests run: 2, Failures: 0, Skips: 0
=====

Excel file copied successfully!
Blank i/p sheet generated successfully

=====
All Test Suite
Total tests run: 2, Passes: 2, Failures: 0, Skips: 0
=====
```

7. After a successful run, open the latest excel report file which is generated 'GBT\_Results\_xxxxx.xlsx' from the 'GBT-Output' folder location.



AutoSave

Off

GBT\_Results\_2024-08-23-17-0...

Saved to this PC

Search

Navneet

File

Home

Insert

Page Layout

Formulas

Data

Review

View

Automate

Help

A3

Decision\_Table

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
1	RuleType	ClassName	RuleName	RuleSetVersion	Param1	Param2	Param3	Param4	Param5	Param6	Param7	Param8	Param9	Param10	Param11	Param12	Expected	Actual	Pass/Fail	
2	Decision_Table	PegaFS-Data-RelCodes	RelatedPartyEnforcedEntry	PegaFS:08-06-01	AFF												true	NA	RuleName not found	
3	Decision_Table	PegaFS-Data-RelCodes	RelatedPartyEnforcedPairs	PegaFS:08-06-01	BRO												true	true	Pass	
4																				
5																				
6																				
7																				
8																				
9																				
10																				

Since we chose to run only 'Decision Table' ruletype, therefore the results for decision table are displayed in the 'Pass/Fail' column in the above image.

Similarly, by selecting different ruletype from the dropdown of the 'GBT.exe' application, we can perform different testing.