

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:

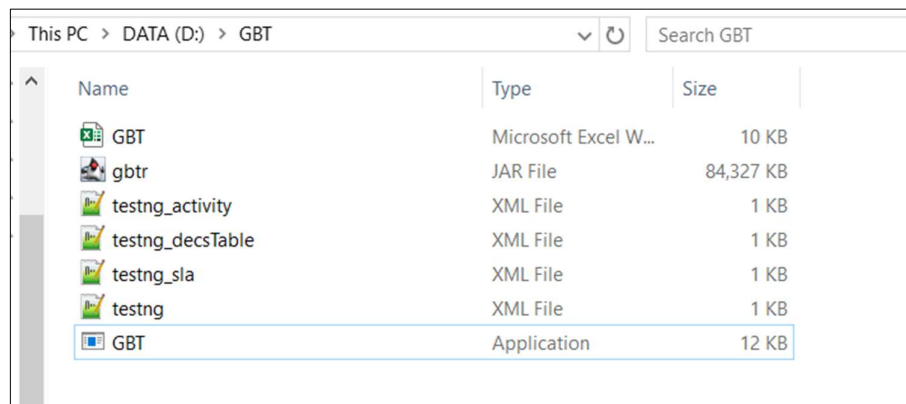
Currently developed for Pega 8.8 platform but with few tweaks it can be used for multiple versions.

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

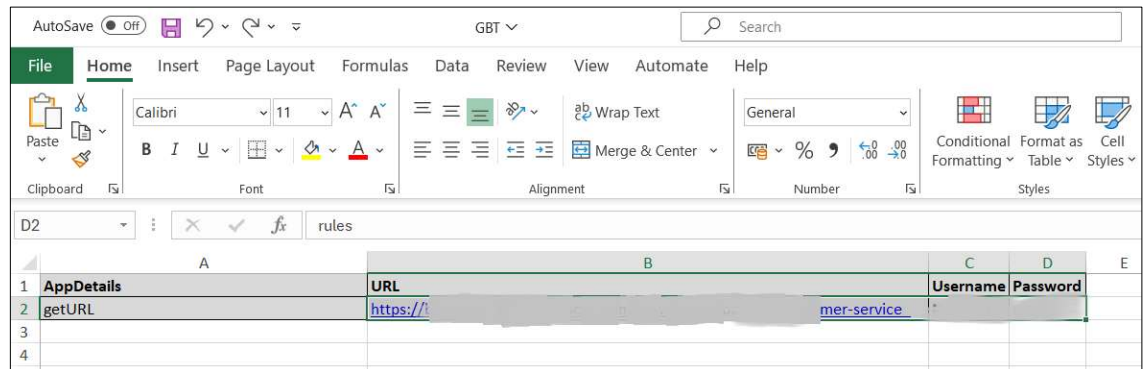
	A	B	C	D	E	F	G	H	I	J	K	L	M
1	AppDetails	URL	Username	Password									
2	getURL												
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Login GBT

Ready Accessibility: Good to go

[illegible]

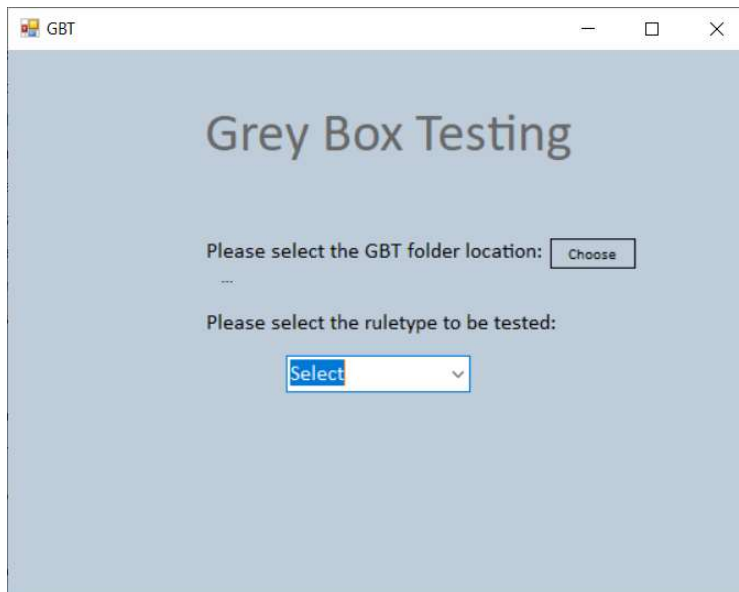
- Provide the application's Dev studio login credentials & URL in the fields under 'Login' sheet.



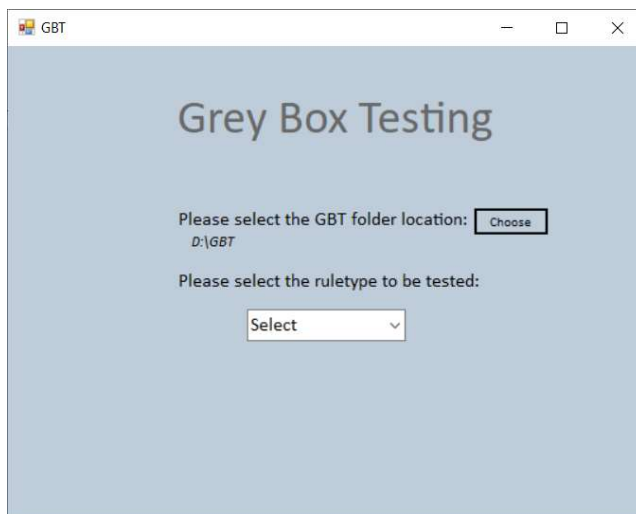
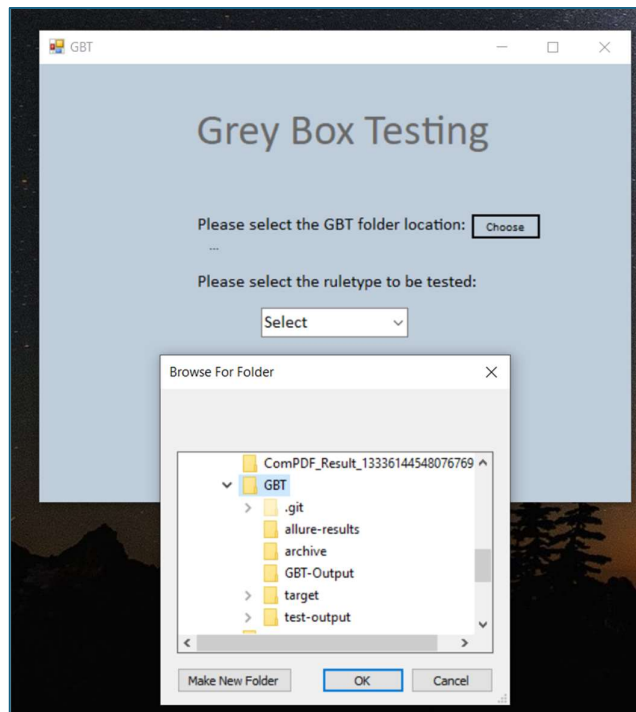
- Provide the details for 'Activity', 'Decision Table' & 'SLA' which are to be tested, under 'GBT' sheet.

	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		

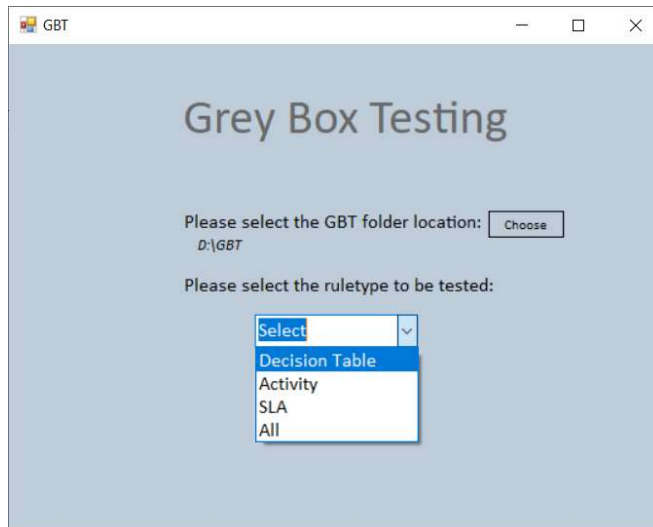
- Now run the 'GBT.exe' application.



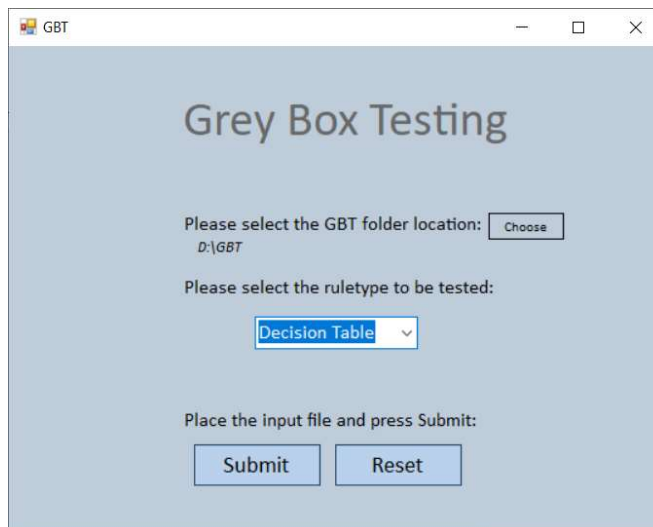
5.a. Select the folder location in which the downloaded files are present for GBT tool.



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

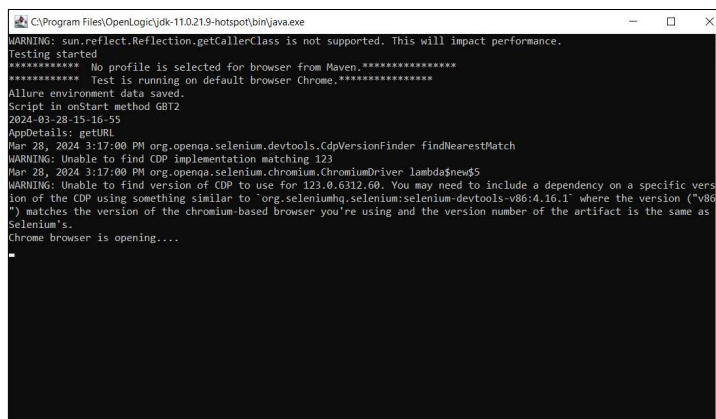


The screenshot shows the 'Grey Box Testing' application window. It has a title bar with 'GBT' and standard window controls. The main content area has a light blue background. At the top, it says 'Grey Box Testing'. Below that, there's a label 'Please select the GBT folder location:' followed by a text field containing 'D:\GBT' and a 'Choose' button. Then, there's another 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 for 'ruletype' 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.

his PC > DATA (D:) > GBT

Name	Type	Size
 GBT	Microsoft Excel W...	10 KB
 gbtr	JAR File	84,327 KB
 testng_activity	XML File	1 KB
 testng_decsTable	XML File	1 KB
 testng_sla	XML File	1 KB
 testng	XML File	1 KB
 GBT	Application	12 KB
 GBT-Output	File folder	

his PC > DATA (D:) > GBT > GBT-Output

Name	Type	Size
 GBT_Results_2024-08-22-10-54-19	Microsoft Excel W...	10 KB

AutoSave

GBT_Results_2024-03-28-15-1...

Saved to this PC

Search

Narvnet Singh

FileHomeInsertPage LayoutFormulasDataReviewViewAutomateHelp

Clipboard

Paste

Calibri

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A⁺

A⁻

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Font Color

Background Color

Align Left

Align Center

Align Right

Justify

Wrap Text

Merge & Center

General

Number

Conditional Formatting

Format as Table

Cell Styles

Insert

Delete

Format

AutoSum

Fill

Clear

Sort & Filter

Find & Select

Clipboard

Font

Alignment

Number

Styles

Cells

Editing

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	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U		
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	Activity	PegaCA-Work-Interactic	CAInitialSetup	PegaAppCA-08-05-01																			
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	0	0	0	0	0	0	0	0	0	0	0	true	true	Pass				
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						
8																							

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.