

ZUG

- Test automation tool.
- Provides an execution environment for tests specified using CHUR test specification language.
- Platform independent, and can be used on any environment that supports the Java Runtime Environment.

Goals/Objectives

- You'll learn
 - Basics of ZUG and CHUR
 - About work sheets
 - Concepts and Terminologies
 - Write a simple Test Case

CHUR

A simple spreadsheet based test
specification language

Why a new technology?

- Limitations of existing languages
 - Embedded logic / Reusability
 - Specialized staff
 - Cost of maintenance
- The CHUR advantage
 - Spreadsheet based language
 - Logic is separated from test case implementation
 - Very easy to learn.
 - Can be used by non programmers

Concepts and Terminologies

- **Test Suite** : Collection of automated test case. Represented in spreadsheet and consists of following worksheets:
 - Config Worksheet
 - Macro Worksheet
 - TestCases Worksheet
 - Molecule Worksheet
 - Prototype Worksheet
- **Test Case** : A test case is a set of test steps to test certain feature of a product.
- **Test Step** : A test step consists of a action and verification steps. It can also have some property and some clean up steps.
- **Action** : An action is a piece of work that the test case designer wishes to do. Action takes some arguments. An action can be an atom or a molecule and can also have some property.
- **Verification** : Verification steps are used to verify the outcome of the action step. Like action step they also takes arguments and can be a molecule or an atom and may have some property.

Work Sheets

• Config Worksheet

- Contains the environment related information.
- Information is typically used by ZUG to locate supporting programs, and upload results into the database.
- Allows references to additional CHUR spreadsheet files, which contain Molecules and Macros to be included.

	A	B
1	<u>ScriptLocation</u>	<u>C:\Users\skhan\Desktop\</u>
2	<u>DBHostName</u>	<u>http://192.168.0.3:4567</u>
3	<u>DBName</u>	Framework
4	<u>DBUserName</u>	<u>davosuser</u>
5	<u>DBUserPassword</u>	user
6	Test Suite Name	Negative
7	Test Suite Role	<u>Zug Client</u>
8	Include	
9		
10		

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• Note:

- This information can also be provided in the ZugINI.XML file
- If provided in both places, this one will override the configuration file

Work Sheets

- **Macro work sheet**

- Contains symbolic names called macros.
- Macro allows user to give shorter name to constants that can be used in the test case or molecules.
- Macros value are substituted at the time of execution.

	A	B	C
1	Macro Name	Value	Comment
2	\$URL	http://google.com	Giving the URL input which the browser will open.
3	\$Browser	<u>firefox</u>	Specifying which browser to open.
4	<u>\$Login_Verify_Text</u>	Google	Specifying the text which should be verified in the <u>webpage.</u>

Navigation icons: back, forward, search, etc.

Tab bar: Config, **Macros**, TestCases, Molecules, Prototypes

Work Sheets

- Test Cases and Molecule Work sheet

- Contains Header Section and Test Cases

	A	B	C	D	E	F	G	H	I	J	K
1	TestCase ID	Description	property	Step	Action	ActionArg_1	ActionArg_2	ActionArg_3	Verify	VerifyArg_1	VerifyArg_2
2	Comment	Verifies that a specified URL opens									
3	TC001				&OpenUrl	Handle	\$browser	\$URL	&VerifyUrl	%Handle%	\$Login Verify Text
4											

Header Section

Comment Section

TestCase Section

- Test Case sections
 - The **identification** group of columns
 - The **action step** group of columns
 - The **verification** step group of columns

	A	B	C	D	E	F	G	H	I	J	K
1	TestCase ID	Description	property	Step	Action	ActionArg_1	ActionArg_2	ActionArg_3	Verify	VerifyArg_1	VerifyArg_2

The Identification Columns

The Action Step Columns

The Verification Step Columns

Work Sheets

- Identification group of columns

	A	B	C	D
1	TestCase ID	Description	property	Step
2	Comment	Verifies that a specified URL opens		
3	TC001			
4				

The Identification Columns

Unique Test Case Identifier

- The Action group of columns

C	D	F	F	G	H
property	Step	Action	ActionArg_1	ActionArg_2	ActionArg_3
		specified URL opens			
		&OpenUrl	Handle	\$Browser	\$URL

The Action Step Columns


- The Verification group of columns

T	T	K
Verify	VerifyArg_1	VerifyArg_2
&VerifyUrl	%Handle%	\$Login Verify Text

The Verification Step Columns

A Simple Test Case

TestCase ID	Description	property	Step	Action	ActionArg_1	Verify	VerifyArg_1
TC001	Verifies that the file is created			@CreateFile.bat	D:\Testing\Test.txt	@VerifyExistence.bat	D:\Testing\Test.txt



- Command Line execution

```
C:\Windows\system32\cmd.exe .
```

```
C:\Users\skhan>runzug -verbose E:\TestSuite\Template.xls
```

Exercise

- Find the Zug installation folder on your machine
- Go to the "Input Files" folder
- Open Example2.exe
- Can you try to run it?
- What did you need to change?