Automation + Awetest Bootcamp

Goal: To create a online/Distance Learning Training Program (w/ Documentation + Presentations) to quickly ramp up novice users on all aspects of Automated Testing (through Awetest)

# Introduction

## Quality Assurance

### Key Concepts

#### What is QA

#### What is a Test Case

##### Must have Input and Expected Output

##### Scale

###### Validation – Single Pass/Fail

###### Series of Validations

###### Series of Steps or Scenarios

#### What is a Test Step

#### What is a Test Scenario

#### What is a Test Category

#### What is a Test Plan

### Different Types of Testing (Unit, Integration, Functional, User Interface, Regression, and etc.)

#### Definitions

##### Regression

##### Unit

##### Integration

##### Functional

##### User Interface

#### How do these relate to each other and SDLC & ALM in general

#### What are BRDs, FSDs, PRDs

#### How is testing being handled today

#### How are these various pieces managed today (Simple Matrix)

### Roles (QA Manager, Tester, Dev Manager, Developer, etc.)

### How Testing is Changing

#### Waterfall vs. Agile

#### Single OS-Browser vs. Matrix (50+ Combinations)

#### Feature Functionality Increase in Velocity

## Automation

### Yesterday vs. Today

#### Screen scrapers

#### Operating System API

##### AutoIt

##### Win32 API

#### Browser

##### Watir and Watir-webdriver

##### Cucumber

##### Awetestlib

### Basic Concepts

#### Mechanization of manual test scenarios

#### Ease of creation and maintenance

#### Full vs Partial Automation

### Benefits & ROI

#### Hands free

##### Scheduled runs

##### Build runs

#### Repeatable

#### Where is automation appropriate?

##### User Interface

##### Regression

##### Smoke tests

#### Where is automation not appropriate?

##### Frequent manual intervention

### Risks

#### Data dependencies

#### Required manual intervention

#### Using inappropriate technology for desired testing.

#### Browser differences

##### Internet Explorer

###### Frames

##### Chrome

##### Firefox

##### Safari

### Some Best Practices (We have a whole new document)

#### (reference to document)

#### Highlights

##### Factoring

##### Naming conventions

##### etc.

# Awetest Toolset

## Automation of Functional Regression Testing at the User Interface

This is the primary focus of the Awetest toolset.

## Development of Test Scripts: **Awetestlib**

## Central Management and Reporting: **Awetest Server**

## Execution: **Shamisen**

# Getting Started with Cross-Browser Automation

## Introduction

### Technologies we'll be covering

#### Ruby

#### Watir

#### Watir-Webdriver

#### Cucumber

#### Awetestlib (Awetest DSL)

### Pros, Cons

#### Watir

##### IE only

##### Fast

##### Reliable

##### Requires AutoIT to handle modal alerts and dialogues

#### Watir-Webdriver

##### All browsers

##### Unreliable with IE

##### Slower in IE

##### Awkward child browser window handling

##### Modal alert handling built in

#### Cucumber

##### Easy to understand

##### Easy to write new tests once step library at critical mass

##### No conditional execution of steps

##### First fail causes remaining steps to be skipped

#### Awetestlib (Awetest DSL)

##### All browsers

##### Can use Watir with IE

##### Conditional Execution

##### Failing validations do not end the script

##### Mature library of existing methods

##### Full reporting

##### Reference tags

## Sample Test Case

### Zoho Sample

#### Open browser and go to [www.zoho.com](http://www.zoho.com)

#### Sign in as [joeklienwatir@gmail.com](mailto:joeklienwatir@gmail.com) with password watir001

#### Navigate to ‘CRM Software’

#### Navigate to ‘Accounts’

#### Add an Account ‘Acct yyyymmddhhmmss’

#### Save the account and acknowledge the alert

#### Verify that the account has been created

#### Delete the account

#### Verify that the acount has been deleted

#### Sign out

#### Close the browser

## Watir

### Installation & Setup

### Test Case Scripts

#### Basic Script

## Watir-WebDriver

### Installation & Setup

### Test Case Scripts

#### Basic Script

## Cucumber

### Installation & Setup

### Test Case Scripts

#### Basic Script

#### Step Definitions

## Awetestlib

### Installation & Setup

### Test Case Scripts

#### Basic Script

# 3. Managing Data

## Introduction

### Importance of Data (E.g. in Zoho)

### Data Best Practices

#### Data Independence

#### Avoid literals

#### Keep data values outside the script

#### Unique Data where needed

## Watir/Watir-webdriver

### Data as variables inside the script

### Data in .xls

## Cucumber

### Data as variables inside the script

### Data in .xls

## Awetestlib

### Data as variables inside the script

### Data in .xls

# 4. Creating Reusable Functions

## Introduction

### Benefits

#### Don’t Repeat Yourself

### Refactoring (Scripts are always WIP!)

#### Keep it simple

#### Flow control vs Validation methods

## Ruby

## Watir/ Watir-webdriver

### Update Script to use library module

## Cucumber

### Update Script to use library module

## Awetestlib

### Update Script to use library module

# 5. More Advanced Usage

## Waiting

### Ajax/Javascript

### Browser in complete state

### ‘Loading...’ messages

### Faster running scripts

## Arrays

## Loops

## Hashes

## Browser Table Handling

## AutoIT

## Visibility

### Exists

### Visible

### Enabled

## Developer Toolkit

### Internet Explorer

### Chrome

### Firefox