1. Selenium Overview
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What is a Framework?

In general, a framework is a real or conceptual structure intended to serve as a support or guide for the building of something that expands the structure into something useful.

Prior to knowing about the Hybrid Test Automation Framework, we should know about the existing frameworks. Generally we have,

Data Driven Framework

Keyword Driven Framework

Test Library Architecture Framework

Hybrid Framework

Combination of above all framework is nothing but Hybrid Driven Framework.

**Why Selenium?**

**Open Source** is the Key

Can run tests **across different browsers**

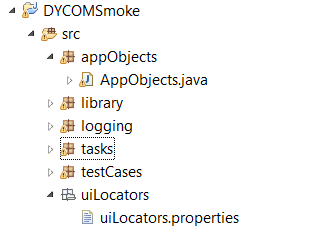
Supports **mobile devices**

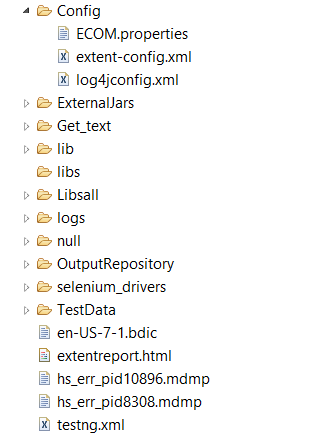
Supports various **operating systems**

A Growing Ecosystem of **Support**

## 

**Framework File structure**





**Framework Design:**

Test Data

Data Validation

Fails

Run Fails\

Generate report

F

Pass

Test case 1

Test case 2

…….

* **AppObjects Package**:

**AppObjects:** Package breaks input sting into Xpath, ID, Name from “uiLocators.properties” as required by tasks.

* **Library Package:**

**CaptureScreenshot:** To capture Screenshots as required

**GetDataFromExcel:** To Get data from Excel

**Output:** To create output folder

* **Logging Package**:

NewLogForEachRunFileAppender, NewResultForEachRunFileAppender: To create new log and results for each run.

* **Tasks** **Package**:

**Tasks:** Contains all action like EnterText, ClickButton, MouseHover, ClickLink, VeridfyText, Wait etc.

**2 Enums**:

ActionEnum and TasksEnum: All actions are maintained in these two Enums.

* **TestCases** **Package:**

**DriverScripts:** Contains Main(), Run starts from here

**Test cases:** Acts as a Test modules router.

* **uiLocators.properties:** (Object Repository)

It’s a property file that contains all object locations.

E.g. MyProfile\_Message = " ID: | Name: | Xpath:"

* **Config:**

**ECOM.properties:** Browser and Environment can be configuration

##BROWSER SELECT##

browser=chrome

#browser=ie

#browser=FF

##ENVIRONMENT SELECT##

aut= http:stg3.davidyurman.com/

#aut= http://10.31.40.13:4503/content/david-yurman/en\_us.html

#aut= http:www.davidyurman.com/\

* **OutputRepository:** Report and Screenshots are saved here after a Run
* **Selenium\_driver:** Used to store browser drivers
* **TestData:** Used to Provide text data

Atleast Two files should exists to start a run.

**Config.xlsx:** Configuring test(Project/Module)

**TextCase.**xlsx: Test cases for configured Project/Module.

**Available actions in Framework:**

|  |  |  |
| --- | --- | --- |
| Action | Mandatory Fields | Optional Fields |

1. **Enter text in a text Field:**

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **EnterText** | Object Identifier | Text |
|  | accepts |  |
| ClickButton | CSS | Description |
|  |  |  |
| **Example** |  |  |
| EnterText | LogIn\_UserID | [Skumartentu@deloitte.com](mailto:Skumartentu@deloitte.com) |
|  | Refers |  |
| **Source** | From uiLocators.properties | From Input Excel |

1. **Click a Button:**

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **ClickButton** | Object Identifier | Description |
|  | accepts |  |
| ClickButton | CSS | Description |
|  |  |  |
| **Example** |  |  |
| ClickButton | LogIn\_Button | Description |
|  | Refers |  |
|  | From uiLocators.properties | Description |

1. **Cleartext:**

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **ClearText** | Object Identifier | Description |
|  | accepts |  |
| ClickButton | CSS | Description |
|  |  |  |
| **Example** |  |  |
| ClearText | User\_ID | Description |
|  | Refers |  |
|  | From uiLocators.properties | Description |

1. **ClickButton:**

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **ClickButton** | Object Identifier | Description |
|  | accepts |  |
| ClickButton | CSS | Description |
|  |  |  |
| **Example** |  |  |
| ClickButton | LogIn\_Submit | Description |
|  | Refers |  |
|  | From uiLocators.properties | Description |

1. ClickCheckBox

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **ClickCheckBox** | Object Identifier | Description |
|  | accepts |  |
| ClickButton | CSS | Description |
|  |  |  |
| **Example** |  |  |
| ClickCheckBox | LogIn\_EPS\_CheckBox | Description |
|  | Refers |  |
|  | From uiLocators.properties | Description |

1. **clickLinkXpath**

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **clickLinkXpath** | Object Identifier | Description |
|  | accepts |  |
| ClickButton | Xpath | Description |
|  |  |  |
| **Example** |  |  |
| clickLinkXpath | LogIn\_EPS\_CheckBox | Description |
|  | Refers |  |
|  | From uiLocators.properties | Description |

1. **DeleteFromList:**

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **DeleteFromList** | Object Identifier | text match |
|  | accepts |  |
|  | CSS | text match |
|  |  |  |
| **Example** |  |  |
| DeleteFromList | Reg\_Address | shravan |
|  | Refers |  |
|  | From uiLocators.properties | excel |

1. **Fillform:**

|  |  |  |
| --- | --- | --- |
| **Action** | **Parameters** | |
| **Fillform** | Form type | Test data divided by ; |
|  | from |  |
| ClickButton | inside task | Test data divided by ; |
|  |  |  |
| **Example** |  |  |
| Fillform | Address\_Guest | Select;Mr.;Shravan;Tentu;Select;Canada; Wellington Street; Addresss;Ottawa;Select;Alberta;K1A 0G9;9704017015;Shravantentu@gmail.com |
|  | Refers |  |
|  | Form Referance | excel |

**Tools**

IntelliJ IDE - Best Java IDE in the Whole Wide World!!!

Eclipse Java EE

Java 7+

WebDriverJs - JavaScript

WebDriver 2.5+

Apache Ant

Apache Maven – not Yet Implemented

JUnit 4.10

Jenkins (Hudson) - Not implemented yet

XML

Log4j – For Reports

Others Open-Source tools

**DY Smoke Automation:**

* DY Smoke
* EPS Smoke
* PROD Server Monitor