Framework types:

1. Data-driven
2. Keyword driven
3. Hybrid

Selenium Framework:

Frame is code structure which helps programmer to:

1. Make code maintenance simple
2. Less time consuming to work on framework
3. Code reusability is more

* Frame is breaking code into small pieces as per functionality of code.

Advantages of frame:

1. Code reusability is more
2. Code readability is also more
3. Reduced script maintance
4. Easy to understand
5. Easy to enhance framework.

Data Driven:

The framework in which code is structured in such way that test data is separated from actual test script/automation script.

* This test data is fed through external source like excelsheet, csv file, TestNg Data provider.
* This framework is totally depends external test data file.
* If we want to make some changes or we want add new tests then there is no impact on test file.
* Similarly if we change test data from file then it will not impact on automation script.
* By changing test data only we can add more test cases

Advantages of data driven framekwork:

1. Application can be tested with multiple test data.
2. Functions/methods can be reused.
3. Any changes in test data will not impact on automation script.
4. Test data is separate from programming logic.

Disadvantages:

1. Skilled programmer/automation tester is required.
2. If there is large test data it will take some time to prepare test data.
3. Separate file is require to maintain test data.

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Keyword driven framework:

In this framework all the actions and functions are controlled through external sheet.

* Similarity between data driven and keyword driven is that both are depends on external file.
* In Keyword driven methods which needs to be exeuted are handled through external sheet.

Advantages:

1. Method can be controlled through external file.
2. We can specify methods which we want to execute.

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Hybrid Framework :

The combination of both framework.

**package** pom;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.WebElement;

**import** org.openqa.selenium.support.FindBy;

**import** org.openqa.selenium.support.PageFactory;

**public** **class** Sample {

//Declaration

@FindBy(xpath="//input[@id='email']") **private** WebElement userName;

@FindBy(xpath="//input[@id='pass']") **private** WebElement password;

@FindBy(xpath="//button[@name='login']")**private** WebElement loginBtn;

//Intilization

Sample(WebDriver driver){

PageFactory.*initElements*(driver, **this**);

}

//Usage

**public** **void** enterUserName() {

userName.sendKeys("Tester");

}

**public** **void** enterPassword() {

password.sendKeys("12345");

}

**public** **void** clickOnLogin() {

loginBtn.click();

}

}

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**package** pom;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.chrome.ChromeDriver;

**import** config.Configuration;

**public** **class** TestCase {

**public** **static** **void** main(String[] args) **throws** InterruptedException {

System.*setProperty*("webdriver.chrome.driver", Configuration.*driverPath*);

WebDriver driver = **new** ChromeDriver();

driver.get("https://www.facebook.com/");

driver.manage().window().maximize();

Sample s1= **new** Sample(driver);

s1.enterUserName();

Thread.*sleep*(2000);

s1.enterPassword();

s1.clickOnLogin();

}

}

**package** pom;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.WebElement;

**import** org.openqa.selenium.support.FindBy;

**import** org.openqa.selenium.support.PageFactory;

**public** **class** Signup\_POM {

//Declaration

@FindBy(xpath="//input[@name='firstname']")**private** WebElement fName;

@FindBy(xpath="//input[@name='lastname']")**private** WebElement lName;

@FindBy(xpath="//input[@name='reg\_email\_\_']")**private** WebElement email;

@FindBy(xpath="//input[@name='reg\_passwd\_\_']")**private** WebElement newPass;

@FindBy(xpath="(//input[@type='radio'])[2]")**private** WebElement radioBtn;

//Intilization

Signup\_POM(WebDriver ddd){

PageFactory.*initElements*(ddd, **this**);

}

//Usage

**public** **void** enterFirstName() {

fName.sendKeys("Tester1");

}

**public** **void** enterLastName() {

lName.sendKeys("ABC");

}

**public** **void** enterEmail() {

email.sendKeys("test@gamil.com");

}

**public** **void** enterNewPassword() {

newPass.sendKeys("123456");

}

**public** **void** clickOnRadio() {

radioBtn.click();

}

}

**package** pom;

**import** org.openqa.selenium.WebDriver;

**import** org.openqa.selenium.chrome.ChromeDriver;

**import** config.Configuration;

**public** **class** TestCase02 {

**public** **static** **void** main(String[] args) {

System.*setProperty*("webdriver.chrome.driver", Configuration.*driverPath*);

WebDriver driver = **new** ChromeDriver();

driver.get("https://www.facebook.com/signup");

driver.manage().window().maximize();

Signup\_POM signup = **new** Signup\_POM(driver);

signup.enterFirstName();

signup.enterLastName();

signup.enterEmail();

signup.enterNewPassword();

signup.clickOnRadio();

}

}

package pom;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

import org.openqa.selenium.support.ui.Select;

public class Signup\_POM {

//Declaration

@FindBy(xpath="//input[@name='firstname']")private WebElement fName;

@FindBy(xpath="//input[@name='lastname']")private WebElement lName;

@FindBy(xpath="//input[@name='reg\_email\_\_']")private WebElement email;

@FindBy(xpath="//input[@name='reg\_passwd\_\_']")private WebElement newPass;

@FindBy(xpath="(//input[@type='radio'])[2]")private WebElement radioBtn;

@FindBy(xpath="//select[@name='birthday\_month']")private WebElement month;

//Intilization

Signup\_POM(WebDriver ddd){

PageFactory.initElements(ddd, this);

}

//Usage

public void enterFirstName(String name) {

fName.sendKeys(name);

}

public void enterLastName(String lastName) {

lName.sendKeys(lastName);

}

public void enterEmail(String emailID) {

email.sendKeys(emailID);

}

public void enterNewPassword(String pass) {

newPass.sendKeys(pass);

}

public void clickOnRadio() {

radioBtn.click();

}

public void selectMonth(String mon) {

Select sel = new Select(month);

sel.selectByVisibleText(mon);

}

}

package pom;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import config.Configuration;

public class TestCase02 {

public static void main(String[] args) throws InterruptedException {

System.setProperty("webdriver.chrome.driver", Configuration.driverPath);

WebDriver driver = new ChromeDriver();

driver.get("https://www.facebook.com/signup");

driver.manage().window().maximize();

Signup\_POM ss = new Signup\_POM(driver);

//TC01

ss.enterFirstName("Tester1");

ss.enterLastName("Test");

ss.enterEmail("test@gamil.com");

ss.enterNewPassword("12345");

ss.clickOnRadio();

ss.selectMonth("Jan");

Thread.sleep(3000);

driver.navigate().refresh();

//TC02

ss.enterFirstName("Ramesh");

ss.enterLastName("Test2");

ss.enterEmail("ramesh@gamil.com");

ss.enterNewPassword("456789");

ss.clickOnRadio();

ss.selectMonth("Feb");

Thread.sleep(3000);

driver.navigate().refresh();

//TC03

ss.enterFirstName("Dinesh");

ss.enterLastName("Test3");

ss.enterEmail("dinesh@gamil.com");

ss.enterNewPassword("1111111");

ss.clickOnRadio();

ss.selectMonth("Nov");

Thread.sleep(3000);

driver.navigate().refresh();

//TC04

ss.enterFirstName(" ");

ss.enterLastName(" ");

ss.enterEmail(" ");

ss.enterNewPassword(" ");

ss.clickOnRadio();

ss.selectMonth("Dec");

}

}