**Page Object Model**

using OpenQA.Selenium;

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using OpenQA.Selenium.Chrome;

using OpenQA.Selenium.Support.PageObjects;

using System.Threading;

namespace SeleniumAutomation.pageobjectmodel

{

class LoginLogoutPage

{

IWebDriver oBrowser = null;

public LoginLogoutPage(IWebDriver oBrowser)

{

this.oBrowser = oBrowser;

PageFactory.InitElements(oBrowser,this);

}

[FindsBy(How = How.Id, Using = "username")]

public IWebElement oUser { get; set; }

[FindsBy(How = How.Name, Using = "pwd")]

public IWebElement oPassword { get; set; }

[FindsBy(How = How.XPath, Using = "//div[text()='Login ']")]

public IWebElement oLogin { get; set; }

}

}

using OpenQA.Selenium;

using OpenQA.Selenium.Chrome;

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Threading;

using System.Collections;

using OpenQA.Selenium.Support.UI;

using SeleniumAutomation.pageobjectmodel;

namespace SeleniumAutomation

{

class Program

{

public static IWebDriver oBrowser = null;

public static LoginLogoutPage page = null;

static void Main(string[] args)

{

LaunchBrowser();

Navigate();

LoginLogout();

}

static void LaunchBrowser()

{

oBrowser = new ChromeDriver();

Thread.Sleep(4000);

page = new LoginLogoutPage(oBrowser);

}

static void Navigate()

{

oBrowser.Navigate().GoToUrl("http://localhost/login.do");

Thread.Sleep(4);

}

static void LoginLogout()

{

try

{

page.oUser.SendKeys("admin");

page.oPassword.SendKeys("manager");

page.oLogin.Click();

Thread.Sleep(10);

}

catch(Exception e)

{

Console.WriteLine(e.ToString());

}

}

}

}

**JavaScript in C# Selenium:**

using OpenQA.Selenium;

using OpenQA.Selenium.Chrome;

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Threading;

using System.Collections;

using OpenQA.Selenium.Support.UI;

using SeleniumAutomation.pageobjectmodel;

namespace SeleniumAutomation

{

class Program

{

public static IWebDriver oBrowser = null;

public static LoginLogoutPage page = null;

static void Main(string[] args)

{

LaunchBrowser();

Navigate();

GetURL();

GetTitle();

DisplayNumberOfLinks();

// EnterText1();

EnterText2();

ClickOnButton();

Console.ReadLine();

}

static void LaunchBrowser()

{

oBrowser = new ChromeDriver();

Thread.Sleep(4000);

}

static void Navigate()

{

oBrowser.Navigate().GoToUrl("file:///F:/KK/Sample.html");

Thread.Sleep(4);

}

static void GetURL()

{

IJavaScriptExecutor js = (IJavaScriptExecutor) oBrowser;

string url=(string)js.ExecuteScript("var url=document.URL;return url;");

Console.WriteLine(url);

}

static void GetTitle()

{

IJavaScriptExecutor js = (IJavaScriptExecutor)oBrowser;

string title = (string)js.ExecuteScript("var title=document.title;return title;");

Console.WriteLine(title);

}

static void DisplayNumberOfLinks()

{

IJavaScriptExecutor js = (IJavaScriptExecutor)oBrowser;

long links = (long) js.ExecuteScript("var kk=document.getElementsByTagName('a');return kk.length;");

Console.WriteLine("# of Links :"+links);

}

static void EnterText1()

{

IJavaScriptExecutor js = (IJavaScriptExecutor)oBrowser;

js.ExecuteScript("document.getElementById('pwd1pass1word1').value='DemoUser1';");

}

static void EnterText2()

{

IWebElement oEle = oBrowser.FindElement(By.Id("pwd1pass1word1"));

IJavaScriptExecutor js = (IJavaScriptExecutor)oBrowser;

js.ExecuteScript("arguments[0].value='DemoUser123'",oEle);

}

static void ClickOnButton()

{

IJavaScriptExecutor js = (IJavaScriptExecutor)oBrowser;

js.ExecuteScript("document.getElementById('btn1submit1button1').click();");

}

}

}

Singleton Concept:

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace SeleniumAutomation.exampleprograms

{

class Test

{

public static Test obj = null;

private Test()

{

// private Constructor

}

public static Test GetInstance()

{

if (obj==null)

{

obj = new Test();

}

return obj;

}

public void addition(int x,int y)

{

int Res = x + y;

Console.WriteLine("Addition Result :" + Res);

}

public void multiplication(int x, int y)

{

int Res = x \* y;

Console.WriteLine("Multiplication Result :" + Res);

}

}

}

using OpenQA.Selenium;

using OpenQA.Selenium.Chrome;

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

using System.Threading;

using System.Collections;

using OpenQA.Selenium.Support.UI;

using SeleniumAutomation.pageobjectmodel;

using SeleniumAutomation.exampleprograms;

namespace SeleniumAutomation

{

class Program

{

static void Main(string[] args)

{

Test t1 = Test.GetInstance();

t1.addition(30, 40);

t1.multiplication(10, 20);

Test t2 = Test.GetInstance();

t2.addition(10, 90);

t2.multiplication(15, 15);

Test t3 = Test.GetInstance();

t3.addition(300, 600);

t3.multiplication(25, 25);

Console.ReadLine();

}

}

}