**Sourcecode:**

*Github:* ***https://github.com/ramyamogare/Capstoneproject***

**Selenium using TestNG (SportyShoesWithSelenium)**

**BaseTest.java**

package sportyshoes.teststeps;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.edge.EdgeDriver;

import org.testng.annotations.AfterTest;

import org.testng.annotations.BeforeTest;

public class BaseTest {

WebDriver driver;

@BeforeTest

public void launchApplication() {

//1. Open the Browser

driver = new EdgeDriver();

//2. maximize it

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

//3. Navigate to http://localhost:9010/

driver.get("http://localhost:9010/");

}

@AfterTest

public void closeBrowser() {

driver.quit();

}

}

**BuySportyShoesTest.java**

package sportyshoes.teststeps;

import org.testng.annotations.Test;

import static org.testng.Assert.\*;

import sportyshoes.testpages.AddToCartPage;

import sportyshoes.testpages.CartPage;

import sportyshoes.testpages.LandingPage;

import sportyshoes.testpages.LoginPage;

import sportyshoes.testpages.RegistrationPage;

public class BuySportyShoesTest extends BaseTest {

@Test

public void buyShoes() throws InterruptedException {

LandingPage landingPage = new LandingPage(driver);

landingPage.clickNewUser();

RegistrationPage registrationPage = new RegistrationPage(driver);

registrationPage.enterName("Superman");

registrationPage.enterEmail("superman@gmail.com");

registrationPage.enterPassword("123456");

registrationPage.clickRegisterButton();

registrationPage.clickLogoutLink();

LoginPage loginPage = new LoginPage(driver);

loginPage.enterEmail("superman@gmail.com");

loginPage.enterPassword("123456");

loginPage.clickLoginButton();

AddToCartPage addToCartPage = new AddToCartPage(driver);

addToCartPage.clickProfile();

addToCartPage.clickHome();

addToCartPage.clickAddToCart();

assertTrue(addToCartPage.isSuccessMessageDisplayed(), "Success message is not displayed.");

assertEquals(addToCartPage.getSuccessMessageText(), "Success!");

addToCartPage.clickHomeLink();

CartPage cartPage = new CartPage(driver);

cartPage.clickCartLink();

cartPage.clickPlaceOrderButton();

assertTrue(addToCartPage.isSuccessMessageDisplayed(), "Success message is not displayed.");

assertEquals(addToCartPage.getSuccessMessageText(), "Success!");

}

}

**LandingPage.java**

package sportyshoes.testpages;

import java.time.Duration;

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.WebDriverWait;

public class LandingPage {

private WebDriverWait wait;

@FindBy(xpath = "//a[@href='/register']")

private WebElement register;

public LandingPage(WebDriver driver) {

PageFactory.initElements(driver, this);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void clickNewUser() {

register.click();

}

}

**RegistrationPage.java**

package sportyshoes.testpages;

import java.time.Duration;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

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

public class RegistrationPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

@FindBy(id = "name")

private WebElement nameBox;

@FindBy(id = "email")

private WebElement emailBox;

@FindBy(id = "password")

private WebElement passwordBox;

@FindBy(xpath = "//button[@type='submit' and @class='btn btn-primary']")

private WebElement registerButton;

@FindBy(xpath = "//a[@class='nav-link' and @href='/logout']")

private WebElement logoutLink;

public RegistrationPage(WebDriver driver) {

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void enterName(String name) {

nameBox.sendKeys(name);

}

public void enterEmail(String email) {

emailBox.sendKeys(email);

}

public void enterPassword(String password) {

passwordBox.sendKeys(password);

}

public void clickRegisterButton() {

registerButton.click();

}

public void clickLogoutLink() {

logoutLink.click();

}

}

**LoginPage.java**

package sportyshoes.testpages;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

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

import org.openqa.selenium.support.PageFactory;

import java.time.Duration;

public class LoginPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

@FindBy(id = "email")

private WebElement emailBox;

@FindBy(id = "password")

private WebElement passwordBox;

@FindBy(xpath = "//button[@type='submit' and @class='btn btn-primary']")

private WebElement loginButton;

public LoginPage(WebDriver driver) {

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void enterEmail(String email) {

emailBox.sendKeys(email);

}

public void enterPassword(String password) {

passwordBox.sendKeys(password);

}

public void clickLoginButton() {

loginButton.click();

}

}

**AddToCartPage.java**

package sportyshoes.testpages;

import java.time.Duration;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

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

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

import org.openqa.selenium.JavascriptExecutor;

public class AddToCartPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

@FindBy(css = "#mynavbar > ul > li:nth-child(3) > a")

private WebElement profile;

@FindBy(css = "#mynavbar > ul > li:nth-child(1) > a")

private WebElement home;

@FindBy(xpath = "//a[@href='add-to-cart?id=101' and @class='btn btn-primary']")

private WebElement addToCartButton;

@FindBy(css = "body > div:nth-child(3) > div > strong")

private WebElement successMessage;

@FindBy(xpath = "//a[@class='nav-link' and @href='/home']")

private WebElement homeLink;

public AddToCartPage(WebDriver driver) {

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void clickProfile() {

profile.click();

}

public void clickHome() {

home.click();

}

public void clickAddToCart() throws InterruptedException {

scrollToElement(addToCartButton);

wait.until(ExpectedConditions.visibilityOf(addToCartButton));

wait.until(ExpectedConditions.elementToBeClickable(addToCartButton)).click();

}

public boolean isSuccessMessageDisplayed() {

return successMessage.isDisplayed();

}

public String getSuccessMessageText() {

return successMessage.getText();

}

public void clickHomeLink() {

homeLink.click();

}

private void scrollToElement(WebElement element) {

((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView({ behavior: 'smooth', block: 'center' });", element);

}

}

**CartPage.java**

package sportyshoes.testpages;

import java.time.Duration;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.JavascriptExecutor;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

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

public class CartPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

JavascriptExecutor js;

@FindBy(css = "#mynavbar > ul > li:nth-child(1) > a")

private WebElement cartLink;

@FindBy(css = "//a[@href='place-order' and contains(@class, 'btn btn-primary')]")

private WebElement placeOrderButton;

@FindBy(css = "body > div:nth-child(3) > div > strong")

private WebElement successMessage;

public CartPage(WebDriver driver) {

js=(JavascriptExecutor)driver;

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void clickCartLink() {

cartLink.click();

}

@FindBy(xpath = "(//a[contains(@class,'btn btn-primary')])[1]")

private WebElement placeOrderBtn;

public void clickPlaceOrderButton() throws InterruptedException

{

Thread.sleep(2000);

js.executeScript("arguments[0].scrollIntoView()",placeOrderBtn);

js.executeScript("arguments[0].click()",placeOrderBtn);

}

public boolean isSuccessMessageDisplayed() {

return successMessage.isDisplayed();

}

public String getSuccessMessageText() {

return successMessage.getText();

}

}

**Cucumber (SportyShoesWithCucumber)**

Feature: Buying Sporty Shoes

Scenario: User buys shoes

Given User is on the Landing page

When User registers with valid credentials

And User logs in with registered email and password

And User adds shoes to the cart

Then Success message is displayed after adding to cart

And User goes to the cart and places an order

Then Success message is displayed after placing an order

**Tools.java**

**package** sportyshoes.teststeps;

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

**public** **class** Tools {

**protected** **static** WebDriver *driver*;

}

**Driver.java**

package sportyshoes.teststeps;

import org.openqa.selenium.edge.EdgeDriver;

import sportyshoes.testpages.AddToCartPage;

import sportyshoes.testpages.CartPage;

import sportyshoes.testpages.LandingPage;

import sportyshoes.testpages.LoginPage;

import sportyshoes.testpages.RegistrationPage;

public class Driver extends Tools {

protected static LandingPage landingPage;

protected static RegistrationPage registrationPage;

protected static LoginPage loginPage;

protected static AddToCartPage addToCartPage;

protected static CartPage cartPage;

public static void init() {

driver = new EdgeDriver();

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

driver.get("http://localhost:9010/");

landingPage = new LandingPage(driver);

registrationPage = new RegistrationPage(driver);

loginPage = new LoginPage(driver);

addToCartPage = new AddToCartPage(driver);

cartPage = new CartPage(driver);

}

}

**BeforeAfter.java**

package sportyshoes.teststeps;

import sportyshoes.teststeps.Driver;

import io.cucumber.java.After;

import io.cucumber.java.Before;

import io.cucumber.java.Scenario;

public class BeforeAfter extends Tools{

@Before

public void setUp(Scenario scenario) {

Driver.init();

}

@After

public void tearDown() {

driver.quit();

}

}

**BuySportyShoesTest.java**

package sportyshoes.teststeps;

import static org.testng.Assert.assertEquals;

import static org.testng.Assert.assertTrue;

import io.cucumber.java.en.Given;

import io.cucumber.java.en.Then;

import io.cucumber.java.en.When;

public class BuySportyShoesTest extends Driver {

@Given("User is on the Landing page")

public void user\_is\_on\_the\_landing\_page() {

landingPage.clickNewUser();

}

@When("User registers with valid credentials")

public void user\_registers\_with\_valid\_credentials() {

registrationPage.enterName("Superman");

registrationPage.enterEmail("superman@gmail.com");

registrationPage.enterPassword("123456");

registrationPage.clickRegisterButton();

registrationPage.clickLogoutLink();

}

@When("User logs in with registered email and password")

public void user\_logs\_in\_with\_registered\_email\_and\_password() {

loginPage.enterEmail("superman@gmail.com");

loginPage.enterPassword("123456");

loginPage.clickLoginButton();

}

@When("User adds shoes to the cart")

public void user\_adds\_shoes\_to\_the\_cart() throws InterruptedException {

addToCartPage.clickProfile();

addToCartPage.clickHome();

addToCartPage.clickAddToCart();

}

@Then("Success message is displayed after adding to cart")

public void success\_message\_is\_displayed\_after\_adding\_to\_cart() {

assertTrue(addToCartPage.isSuccessMessageDisplayed(), "Success message is not displayed.");

assertEquals(addToCartPage.getSuccessMessageText(), "Success!");

addToCartPage.clickHomeLink();

}

@Then("User goes to the cart and places an order")

public void user\_goes\_to\_the\_cart\_and\_places\_an\_order() throws InterruptedException {

cartPage.clickCartLink();

cartPage.clickPlaceOrderButton();

}

@Then("Success message is displayed after placing an order")

public void success\_message\_is\_displayed\_after\_placing\_an\_order() {

assertTrue(addToCartPage.isSuccessMessageDisplayed(), "Success message is not displayed.");

assertEquals(addToCartPage.getSuccessMessageText(), "Success!");

}

}

**TestRunner.java**

package sportyshoes.teststeps;

import io.cucumber.testng.AbstractTestNGCucumberTests;

import io.cucumber.testng.CucumberOptions;

@CucumberOptions(

features = "Features//buy\_sporty\_shoes.feature",

glue = "sportyshoes.teststeps"

)

public class TestRunner extends AbstractTestNGCucumberTests {

}

**LandingPage.java**

package sportyshoes.testpages;

import java.time.Duration;

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.WebDriverWait;

public class LandingPage {

private WebDriverWait wait;

@FindBy(xpath = "//a[@href='/register']")

private WebElement register;

public LandingPage(WebDriver driver) {

PageFactory.initElements(driver, this);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void clickNewUser() {

register.click();

}

}

**RegistrationPage.java**

package sportyshoes.testpages;

import java.time.Duration;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

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

public class RegistrationPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

@FindBy(id = "name")

private WebElement nameBox;

@FindBy(id = "email")

private WebElement emailBox;

@FindBy(id = "password")

private WebElement passwordBox;

@FindBy(xpath = "//button[@type='submit' and @class='btn btn-primary']")

private WebElement registerButton;

@FindBy(xpath = "//a[@class='nav-link' and @href='/logout']")

private WebElement logoutLink;

public RegistrationPage(WebDriver driver) {

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void enterName(String name) {

nameBox.sendKeys(name);

}

public void enterEmail(String email) {

emailBox.sendKeys(email);

}

public void enterPassword(String password) {

passwordBox.sendKeys(password);

}

public void clickRegisterButton() {

registerButton.click();

}

public void clickLogoutLink() {

logoutLink.click();

}

}

**LoginPage.java**

package sportyshoes.testpages;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

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

import org.openqa.selenium.support.PageFactory;

import java.time.Duration;

public class LoginPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

@FindBy(id = "email")

private WebElement emailBox;

@FindBy(id = "password")

private WebElement passwordBox;

@FindBy(xpath = "//button[@type='submit' and @class='btn btn-primary']")

private WebElement loginButton;

public LoginPage(WebDriver driver) {

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void enterEmail(String email) {

emailBox.sendKeys(email);

}

public void enterPassword(String password) {

passwordBox.sendKeys(password);

}

public void clickLoginButton() {

loginButton.click();

}

}

**AddToCartPage.java**

package sportyshoes.testpages;

import java.time.Duration;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

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

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

import org.openqa.selenium.JavascriptExecutor;

public class AddToCartPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

@FindBy(css = "#mynavbar > ul > li:nth-child(3) > a")

private WebElement profile;

@FindBy(css = "#mynavbar > ul > li:nth-child(1) > a")

private WebElement home;

@FindBy(xpath = "//a[@href='add-to-cart?id=101' and @class='btn btn-primary']")

private WebElement addToCartButton;

@FindBy(css = "body > div:nth-child(3) > div > strong")

private WebElement successMessage;

@FindBy(xpath = "//a[@class='nav-link' and @href='/home']")

private WebElement homeLink;

public AddToCartPage(WebDriver driver) {

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void clickProfile() {

profile.click();

}

public void clickHome() {

home.click();

}

public void clickAddToCart() throws InterruptedException {

scrollToElement(addToCartButton);

wait.until(ExpectedConditions.visibilityOf(addToCartButton));

wait.until(ExpectedConditions.elementToBeClickable(addToCartButton)).click();

}

public boolean isSuccessMessageDisplayed() {

return successMessage.isDisplayed();

}

public String getSuccessMessageText() {

return successMessage.getText();

}

public void clickHomeLink() {

homeLink.click();

}

private void scrollToElement(WebElement element) {

((JavascriptExecutor) driver).executeScript("arguments[0].scrollIntoView({ behavior: 'smooth', block: 'center' });", element);

}

}

**CartPage.java**

package sportyshoes.testpages;

import java.time.Duration;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.JavascriptExecutor;

import org.openqa.selenium.interactions.Actions;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

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

public class CartPage {

private WebDriver driver;

private Actions actions;

private WebDriverWait wait;

JavascriptExecutor js;

@FindBy(css = "#mynavbar > ul > li:nth-child(1) > a")

private WebElement cartLink;

@FindBy(css = "//a[@href='place-order' and contains(@class, 'btn btn-primary')]")

private WebElement placeOrderButton;

@FindBy(css = "body > div:nth-child(3) > div > strong")

private WebElement successMessage;

public CartPage(WebDriver driver) {

js=(JavascriptExecutor)driver;

this.driver = driver;

PageFactory.initElements(driver, this);

actions = new Actions(driver);

wait = new WebDriverWait(driver, Duration.ofSeconds(60));

}

public void clickCartLink() {

cartLink.click();

}

@FindBy(xpath = "(//a[contains(@class,'btn btn-primary')])[1]")

private WebElement placeOrderBtn;

public void clickPlaceOrderButton() throws InterruptedException

{

Thread.sleep(2000);

js.executeScript("arguments[0].scrollIntoView()",placeOrderBtn);

js.executeScript("arguments[0].click()",placeOrderBtn);

}

public boolean isSuccessMessageDisplayed() {

return successMessage.isDisplayed();

}

public String getSuccessMessageText() {

return successMessage.getText();

}

}

**RestAssured (SportyShoesUsingRestAssured)**

**TestBase.java**

package capstoneproject;

import org.apache.log4j.Level;

import org.apache.log4j.Logger;

import org.apache.log4j.PropertyConfigurator;

import org.testng.annotations.BeforeClass;

import io.restassured.response.Response;

import io.restassured.specification.RequestSpecification;

public class TestBase {

public static RequestSpecification httpRequest;

public static Response response;

public Logger logger;

@BeforeClass

public void setUp() {

logger = Logger.getLogger("LogDemo");

PropertyConfigurator.configure("log4j.properties");

logger.setLevel(Level.DEBUG);

}

}

**SportyShoes.java**

package capstoneproject;

import java.util.HashMap;

import org.testng.annotations.Test;

import io.restassured.RestAssured;

import io.restassured.path.json.JsonPath;

import io.restassured.response.Response;

public class SportyShoes extends TestBase {

HashMap<String, String> map = new HashMap<String, String>();

Response response;

@Test(priority = 0)

public void createPayLoad() {

map.put("id", "101");

map.put("image", "image\_url");

map.put("name", "SampleShoe");

map.put("category", "Running");

map.put("size", "9");

map.put("price", "1000");

RestAssured.baseURI = "http://localhost:9010/";

RestAssured.basePath = "add-shoe";

logger.info("Payload created");

}

@Test(priority = 1)

public void RetriveAllProdList() {

RestAssured

.given()

.contentType("application/json")

.when()

.get("http://localhost:9010/get-shoes")

.then()

.statusCode(200)

.log().all();

logger.info("The list of all products in the store is retrived.");

}

@Test(priority = 2)

public void RetriveAllRegUsersList() {

RestAssured

.given()

.contentType("application/json")

.when()

.get("http://localhost:9010/get-users")

.then()

.statusCode(200)

.log().all();

logger.info("The list of all registered users in the store is retrived.");

}

@Test(priority = 3)

public void AddTheProduct() {

RestAssured

.given()

.contentType("application/json")

.body(map)

.when()

.post("http://localhost:9010/add-shoe?id=101&image=image\_url&name=SampleShoe&category=Running&sizes=9&price=1000")

.then()

.statusCode(200)

.log().all();

logger.info("The new product is added to the list.");

}

}