

## **PRACTICE PROJECT**

### **Aim:**

To create a TestNG framework that helps to test the bus ticket booking application in multiple environments.

### **Description:**

#### **Step 1:**

Set Up Your Maven Project:

Create a new Maven project and configure it to include the necessary dependencies. Your pom.xml should include TestNG, Selenium WebDriver, and any other libraries you plan to use.

#### **Step 2:**

Write TestNG Test Classes:

Create TestNG test classes that use the page objects and configuration manager to write test cases. You can parameterize your tests using Data Providers, TestNG XML files, or other means to accommodate different environments.

#### **Step 3:**

Implement Test Data Management:

If your tests require specific data (e.g., for booking tickets), consider using data management techniques such as data providers, data factories, or external data sources.

#### **Step 4:**

Handle Cross-Browser Testing:

If you want to test your application on multiple browsers, consider setting up a WebDriver factory to create different drivers for each browser.

#### **Step 5:**

Implement Reporting:

Integrate a reporting tool (e.g., Extent Reports, Allure) to generate detailed test reports that provide insights into test results.

#### **Step 6:**

Set Up Parallel Testing:

Use TestNG's parallel execution features to run your tests simultaneously on different environments, browsers, or other configurations.

**Source Code1:**

```
package com.redbus.qa.Base;

import java.awt.Desktop;
import java.io.File;
import java.io.IOException;
import java.lang.reflect.Method;


import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.testng.ITestContext;
import org.testng.ITestResult;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.AfterSuite;
import org.testng.annotations.BeforeSuite;
import org.testng.annotations.BeforeTest;


import com.aventstack.extentreports.ExtentReports;
import com.aventstack.extentreports.ExtentTest;
import com.aventstack.extentreports.reporter.ExtentSparkReporter;


public class TestBase {

    // Base class indicates the driver session and Application details
    // this base class will be called in every test class
```

```

public static WebDriver driver;

public static ExtentReports extentreports;

public static ExtentTest extentTest;


public static void openBrowser()
{
    driver = new ChromeDriver();


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

    driver.get("https://www.redbus.in/");
}


@BeforeTest

public void getnameMethod(ITestContext context)
{
    extentTest=    extentreports.createTest(context.getName());
}


@BeforeSuite // this method will be excuted before suite begins its execution

public void InitalizeExtentReport()
{
    ExtentSparkReporter sparkreporter = new ExtentSparkReporter("reportpom.html");

    extentreports = new ExtentReports();

    extentreports.attachReporter(sparkreporter);

    // on the report display more information about OS, browser, java etc

    extentreports.setSystemInfo("OS", System.getProperty("os.name"));

    extentreports.setSystemInfo("JAVA", System.getProperty("java.version"));
}

```

```

    }

    @AfterSuite

    public void generateReports() throws IOException
    {
        extentreports.flush();

        Desktop.getDesktop().browse(new File("reportpom.html").toURI());
    }

    @AfterMethod

    public void generateTestStatus(Method m, ITestResult result)
    {
        if(result.getStatus() == ITestResult.FAILURE )
        {
            System.out.println("Capture Screenshot");
            extentTest.fail(result.getThrowable());
        }

        else if (result.getStatus() == ITestResult.SUCCESS) {
            extentTest.pass(m.getName() + " is passed");
        }
    }
}

```

### Source Code 2:

```

package com.ninja.qa.pages;

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 com.ninja.qa.Base.TestBase;


public class HomePage extends TestBase {


    Actions a = new Actions(driver);

    // Create PageFactory

    // this code will find the element using xpath locator and store it in webelement object
myaccount

    @FindBy(xpath = "//span[text()='My Account']")
    WebElement myaccount;


    @FindBy(xpath = "//a[text()='Register']")
    WebElement register;


    @FindBy(xpath="//a[text()='Login']")
    WebElement login;


    @FindBy(xpath="//a[text()='Desktops']")
    WebElement desktop;


    @FindBy(linkText ="Mac (1)")
    WebElement macdropdown;

```

```
// create constructor of current class to initiate the elements  
  
// every page class will have a constructor initiating the elements
```

```
public HomePage(WebDriver driver) {
```

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

```
    // driver can now work with your elements and methods of this class
```

```
}
```

```
// We will now write action methods, that will perform action on these elements
```

```
//but these methods will not be executed here.
```

```
public void getTitle()
```

```
{
```

```
    String title = driver.getTitle();
```

```
    System.out.println(title);
```

```
}
```

```
// method name is similar to action to be done
```

```
public void clickonMyAccount()
```

```
{
```

```
    myaccount.click();
```

```
}
```

```
public void clickonLogin()
```

```
{
```

```
    login.click();
```

```
}
```

```
public void clickonRegister()
```

```
{
```

```
    register.click();
```

```
}
```

```
public void clickOnMac() throws InterruptedException
```

```
{
```

```
    a.moveToElement(desktop).build().perform();
```

```
    Thread.sleep(1500);
```

```
    macdropdown.click();
```

```
}
```

```
}
```

### **Source code3**

```
package com.redbus.qa.TestPages;
```

```
import org.testng.annotations.AfterMethod;
```

```
import org.testng.annotations.BeforeMethod;
```

```
import org.testng.annotations.Listeners;
```

```
import org.testng.annotations.Test;
```

```
import com.ninja.qa.Base.TestBase;

import com.ninja.qa.pages.HomePage;
```

```
public class HomePageTest extends TestBase
{
```

```
    HomePage hp;
```

```
    @BeforeMethod
```

```
    public void OpenApp()
```

```
    {
```

```
        openBrowser();
```

```
        hp = new HomePage(driver);
```

```
    }
```

```
    @AfterMethod
```

```
    public void CloseApp()
```

```
    {
```

```
        driver.quit();
```

```
    }
```

```
    @Test(priority='1')
```

```
    public void testTitle()
```

```
    {
```

```
        hp.gettitle();
```

```
    }
```



```

@Test(priority='2')

public void testRegisterLink()

{

    hp.clickonMyAccount(); // on homapge click on myaccount

    hp.clickonRegister(); // clcik on register

    hp.gettitle(); // get title

}

```

```

@Test(priority='3')

public void testLoginLink()

{

    hp.clickonMyAccount(); // on homapge click on myaccount

    hp.clickonLogin(); // clcik on login

    hp.gettitle(); // get title

}

```

```

@Test(priority='4')

public void testMacLink() throws InterruptedException

{

    hp.clickOnMac();

    hp.gettitle(); // get title

}}

```

#### **Source code for register page:**

```

package com.redbus.qa.pages;

import org.openqa.selenium.WebDriver;

```

```

import org.openqa.selenium.WebElement;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;


public class RegisterPage {


    @FindBy(xpath="//input[@id='input-firstname']")
    WebElement firstname;

    @FindBy(xpath="//input[@id='input-lastname']")
    WebElement lastname;

    @FindBy(xpath="//input[@id='input-email']")
    WebElement emailid;

    @FindBy(xpath="//input[@name='telephone']")
    WebElement phone;

    @FindBy(xpath="//input[@id='input-password']")
    WebElement passwd;

    @FindBy(xpath="//input[@id='input-confirm']")
    WebElement confirmpasswd;

    @FindBy(xpath="//input[@name='newsletter'])[1]")
    WebElement subscriberadiobtn;

    @FindBy(xpath="//input[@name='agree']")
    WebElement policycheckbox;

    @FindBy(xpath="//input[@type='submit']")
    WebElement continuebutton;


    public RegisterPage(WebDriver driver) {

        PageFactory.initElements(driver, this);
    }
}

```

```
}
```

```
public void regirsteruser(String name,String lname,String email,String ph,String  
password,String cpasswd) throws InterruptedException {
```

```
    firstname.clear();  
    firstname.sendKeys(name);  
    lastname.clear();  
    lastname.sendKeys(lname);  
    emailid.clear();  
    emailid.sendKeys(email);  
    phone.clear();  
    phone.sendKeys(ph);  
    passwd.clear();  
    passwd.sendKeys(password);  
    confirmpasswd.clear();  
    confirmpasswd.sendKeys(cpasswd);  
    subscriberadiobtn.click();  
    Thread.sleep(1000);  
    policycheckbox.click();  
    Thread.sleep(1000);  
    continuebutton.click();
```

```
}}
```

```
package com.ninja.qa.TestPages;
```

```
import java.io.IOException;
```

```
import org.apache.poi.EncryptedDocumentException;

import org.testng.annotations.AfterMethod;

import org.testng.annotations.BeforeMethod;

import org.testng.annotations.DataProvider;

import org.testng.annotations.Test;
```

```
import com.redbus.qa.Base.TestBase;

import com.redbus.qa.pages.HomePage;

import com.redbus.qa.pages.RegisterPage;

import com.redbus.qa.Utilities.Xls_DataProvider;
```

```
public class TestRegisterPage extends TestBase {
```

```
    HomePage hp;
```

```
    RegisterPage rp;
```

```
    @BeforeMethod
```

```
    public void OpenApp()
```

```
    {
```

```
        openBrowser();
```

```
        hp = new HomePage(driver);
```

```
        rp = new RegisterPage(driver);
```

```
    }
```

```
    @AfterMethod
```

```
    public void CloseApp()
```

```
    {
```

```

        driver.quit();
    }

    @Test(priority='1', dataProvider="testdata")
    public void testregisterUser(String name,String lname,String email,String ph,String
password,String cpasswd) throws InterruptedException
    {
        hp.clickonMyAccount();
        hp.clickonRegister();
        rp.reginsteruser(name,lname,email,ph,password,cpasswd);
    }

    @DataProvider(name="testdata")
    public Object[][] datasupplier() throws EncryptedDocumentException, IOException
    {

        Object[] [] input = Xls_DataProvider.getTestData("Sheet1");
        return input;
    }
}

```

**Source code for Search page:**

```

package com.redbus.qa.pages;

import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.support.FindBy;
import org.openqa.selenium.support.PageFactory;

```

```
public class SearchPage {

    @FindBy(xpath="//input[@name='search']")
    WebElement searchbox;

    @FindBy(xpath="//button[@class='btn btn-default btn-lg']")
    WebElement searchboxbtn;

    @FindBy(linkText="iMac")
    WebElement product;

    public SearchPage(WebDriver driver) {

        PageFactory.initElements(driver, this);

    }

    public void searchproduct()
    {
        searchbox.sendKeys("mac");
        searchboxbtn.click();
    }

    public void selectproduct()
    {
        product.click();
    }
}
```

```
}
```

```
}
```

```
package com.redbus.qa.TestPages;
```

```
import org.testng.annotations.AfterMethod;
```

```
import org.testng.annotations.BeforeMethod;
```

```
import org.testng.annotations.Test;
```

```
import com.ninja.qa.Base.TestBase;
```

```
import com.ninja.qa.pages.HomePage;
```

```
import com.ninja.qa.pages.RegisterPage;
```

```
import com.ninja.qa.pages.SearchPage;
```

```
public class TestSearchPage extends TestBase {
```

```
    SearchPage sp;
```

```
    @BeforeMethod
```

```
    public void OpenApp()
```

```
    {
```

```
        openBrowser();
```

```
        sp = new SearchPage(driver);
```

```
    }
```

```
    @AfterMethod
```

```
public void CloseApp()
{
    driver.quit();
}

@Test
public void searchProduct() throws InterruptedException
{
    sp.searchproduct();
    Thread.sleep(1000);
    sp.selectproduct();
}
}
```

**Screen Shot:**





## India's No. 1 Online Bus Ticket Booking Site



From



To



Date

SEARCH BUSES

### TRENDING OFFERS



BUS

Save up to Rs 250 on  
bus tickets

Valid till 31 Oct



BUS

Save up to Rs 300 in  
AP,TS routes

Valid till 31 Oct



BUS

Save up to Rs 300 on  
MH, Goa, Gujarat, MP,

Valid till 31 Oct



BUS

Save up to Rs 300 on  
Kerala routes

Valid till 31 Oct

```
[RemoteTestNG] detected TestNG version 7.7.1
SLF4J: No SLF4J providers were found.
SLF4J: Defaulting to no-operation (NOP) logger implementation
SLF4J: See https://www.slf4j.org/codes.html#noProviders for further details.
Testing has started
Oct 12, 2023 11:25:36 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 118, so returning the closest version found: 115
Test method has been started
Online Bus Ticket Booking at Low Price and Best Offers - redBus
Test method is success
Oct 12, 2023 11:25:39 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 118, so returning the closest version found: 115
Test method has been started
Online Bus Ticket Booking at Low Price and Best Offers - redBus
Test method is success
Oct 12, 2023 11:25:44 AM org.openqa.selenium.devtools.CdpVersionFinder findNearestMatch
WARNING: Unable to find an exact match for CDP version 118, so returning the closest version found: 115
Test method has been started
Online Bus Ticket Booking at Low Price and Best Offers - redBus
Test method is success
Testing has ended

=====
test1
Total tests run: 3, Passes: 3, Failures: 0, Skips: 0
Configuration Failures: 1, Skips: 0
=====
```