Test Objective:

The objective is to automate the below testcase using selenium WebDriver and framework concepts.

Testcase: Tc05

Process: Search For Shipping Locations

Steps to Execute:

Step1: Login to admin portal

Step2: Navigate to System section->Shipping option

Step3:Choose Shipping Location

Step4:Search for text “Discount”

Expected Results: Verify the search is displayed data with “Discount” keyword or not and when no match check the No matching records found”

Source code:

File1: `ShippingLocation.java`

```java
package com.ibm.groceries;
import java.io.FileInputStream;
import java.io.FileNotFoundException;
import java.io.FileOutputStream;
import java.io.IOException;
import java.util.Date;
import java.util.HashMap;
import java.util.Properties;
import java.util.Set;
import java.util.concurrent.TimeUnit;
import org.apache.commons.io.FileUtils;
import org.openqa.selenium.By;
import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.ie.InternetExplorerDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;
import org.testng.Assert;
import org.testng.Reporter;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.AfterTest;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.BeforeSuite;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.Optional;
import org.testng.annotations.Parameters;
import org.testng.annotations.Test;
import com.ibm.groceriespages.PageLogin;
import com.ibm.groceriespages.ReturnActionsPage;
import com.ibm.groceriespages.ShippingLocationPage;
import com.ibm.groceriespages.PageDashboard;
import com.ibm.initialization.WebDriverLaunch;
import com.ibm.utilities.PropertiesFileHandler;
import jdk.nashorn.internal.runtime.PrototypeObject;

public class ShippingLocation extends WebDriverLaunch{

        @Test(priority=1, testName="SearchShippingLocatoint",groups="low")
        public void searchShippingLocation()throws IOException,InterruptedException
        {
                String url=data.get("url");
                String userName = data.get("username");
                String password = data.get("password");
                String searchKeyword=data.get("searchForShipKeyword");
                String searchMessage=data.get("searchDispalyMessage");
                String noMatchMessage=data.get("noMatchDisplayMessage");

                //Launching the web site for atozgroceries
                driver.get(url);

                PageLogin login = new PageLogin(driver, wait);
                //To enter email address and password and clickon login button
                login.enterEmailAddress(userName);
                login.enterPassword(password);
                login.clickOnLogin();

        Assert.assertTrue(driver.findElement(By.partialLinkText("Logout")).isDisplayed
());

                PageDashboard dashboard=new PageDashboard(driver, wait);
                //calling method to click on System link
                dashboard.clickOnsystem();
                //calling method to click on Shipping
                dashboard.clickOnShipping();
                //Calling method to click on Shippping Location
                dashboard.clickOnShippingLocations();

                ShippingLocationPage location=new ShippingLocationPage(driver,wait);
                String pageSource=location.searchLocation(searchKeyword);

                String pageSource2=pageSource.toLowerCase();
                searchKeyword=searchKeyword.toLowerCase();


                //Verifying for the expected message
                if(pageSource2.contains(searchKeyword))
                {
                System.out.println(searchMessage);
                Assert.assertTrue(pageSource2.contains(searchKeyword));
                }
                else if(pageSource.contains(noMatchMessage))
                {
```

```
            System.out.println(noMatchMessage);
            Assert.assertTrue(pageSource.contains(noMatchMessage));
        }


    }


}
```

File2: PageLogin.java

```
package com.ibm.groceriespages;
import org.openqa.selenium.By;
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.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;

public class PageLogin {

    @FindBy(name="email")
    WebElement emailEle;

    @FindBy(name="pword")
    WebElement passEle;

    //@FindBy(className="btn btn-labeled btn-info m-b-5")
    @FindBy(xpath="//button[@class='btn btn-labeled btn-info m-b-5']")
    WebElement loginEle;

    WebDriverWait wait;
    WebDriver driver;

    public PageLogin(WebDriver driver,WebDriverWait wait)
    {
        PageFactory.initElements(driver, this);
        this.driver=driver;
        this.wait=wait;
    }

    //To enter email address
    public void enterEmailAddress(String userName)
    {
        emailEle.sendKeys(userName);
    }

    //To enter apssword
    public void enterPassword(String password)
    {
        passEle.sendKeys(password);
    }
```

```
        //To click on Login button
        public void clickOnLogin()
        {
              loginEle.click();

        }

}
```

File3: PageDashboard.java

```
package com.ibm.groceriespages;

import org.openqa.selenium.By;

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.ExpectedConditions;

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


public class PageDashboard {


        //@FindBy(xpath="//a[@class='material-ripple']")

        @FindBy(xpath="//a[text()=' Catalog']")

        WebElement catalogEle;


        @FindBy(xpath="//a[text()=' Products']")

        WebElement productEle;


        By prodElt=By.xpath("//a[text()=' Products']");

        WebDriverWait wait;

        WebDriver driver;
```

```
//Locating elements for Marketing link
@FindBy(xpath="//a[text()='  Marketing']")
WebElement marketEle;

//Locating Pushnotification link
@FindBy(xpath="//a[text()=' Push Notification']")
WebElement notificatonEle;



//Locating System link
@FindBy(xpath="//a[text()='   System']")
WebElement systemEle;

//Locating Returns link
@FindBy(xpath="//a[text()='  Returns']")
//@FindBy(xpath("//a[contains(text(),'Returns')]"))
WebElement returnsEle;

//Locating Shipping link
@FindBy(xpath="//a[text()='  Shipping']")
WebElement shippingEle;

//Locating ShippingLocatons link
@FindBy(xpath="//a[text()=' Shipping Locations']")
WebElement locatoinEle;

@FindBy(xpath="//a[text()=' Return Actions']")
WebElement actionsEle;
```

```
public PageDashboard(WebDriver driver,WebDriverWait wait) {
        PageFactory.initElements(driver, this);
        this.driver=driver;
        this.wait=wait;
}

//To click on Catalog
public void clickOnCatalog()
{
        catalogEle.click();
        wait.until(ExpectedConditions.presenceOfElementLocated(prodElt));


        }
//To click on Products
public void clickOnProducts()
        {
        productEle.click();


}



//To click on Marketing link
public void clickOnMarketing()
{


        marketEle.click();


}
```

```
//To click on Push Notificatoin link
public void clickOnPushNotification()
{
	notificatonEle.click();

}

	//TO click on System link
public void clickOnsystem()
{
	systemEle.click();

}

//To click on Retuns link
public void clickOnReturns()
{
	driver.findElement(By.partialLinkText("Returns")).click();
	//returnsEle.click();
}

//To click on Return actoins link
public void clickOnRetrunActions()

{
	actionsEle.click();
}

public void clickOnShipping()
```

```
    {

        driver.findElement(By.partialLinkText("Shipping")).click();

        //shippingEle.click();


    }


    public void clickOnShippingLocations()

    {

        locatoinEle.click();


    }




}
```

File4: `ShippingLocationPage.java`

```
package com.ibm.groceriespages;
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 ShippingLocationPage {

    @FindBy(xpath="//input[@class='form-control input-sm']")
    WebElement searchEle;


    WebDriverWait wait;
    WebDriver driver;

    public ShippingLocationPage(WebDriver driver,WebDriverWait wait) {
        PageFactory.initElements(driver, this);
        this.driver=driver;
        this.wait=wait;
    }

    public String searchLocation(String searchKeyword)
    {
        searchEle.sendKeys(searchKeyword);
        return driver.getPageSource();
```

```
	}
}
```

File5: WebDriverLaunch.java

```
package com.ibm.initialization;
import java.io.IOException;
import java.util.HashMap;
import java.util.concurrent.TimeUnit;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.firefox.FirefoxDriver;
import org.openqa.selenium.ie.InternetExplorerDriver;
import org.openqa.selenium.support.ui.WebDriverWait;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.BeforeSuite;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.Optional;
import org.testng.annotations.Parameters;
import com.ibm.utilities.PropertiesFileHandler;

public class WebDriverLaunch {
	public WebDriver driver;
	public WebDriverWait wait;
	public PropertiesFileHandler propFileHandler;
	public HashMap<String, String> data;

	//Getting the keys from properties file
	//@BeforeSuite
```

```
@BeforeSuite(groups= {"high","low"})
        public void preSetForTest() throws IOException {
        String file = "./TestData/groceries.properties";
        propFileHandler = new PropertiesFileHandler();
        data = propFileHandler.getPropertiesAsMap(file);
}


//@BeforeTest

@BeforeMethod(groups= {"high","low"})
@Parameters({"browser"})
public void Initialization(@Optional("ff")String browser) {
        browserInitialization(browser);
        wait = new WebDriverWait(driver, 60);
        driver.manage().window().maximize();
        driver.manage().timeouts().implicitlyWait(30, TimeUnit.SECONDS);
}



//@AfterMethod
//Closing driver
@AfterMethod(groups= {"high","low"})
public void closeBrowser() {
        driver.quit();
}

//Setting path for webdriver
public void browserInitialization(String browser)
```

```
	{
		switch (browser.toLowerCase()) {
		case "ff":
		case "firefox":
			System.setProperty("webdriver.gecko.driver", "./drivers/geckodriver.exe");
			driver = new FirefoxDriver();
			break;
		case "ch":
			System.setProperty("webdriver.chrome.driver", "./drivers/chromedriver.exe");
			driver = new ChromeDriver();
			break;
		case "ie":
			System.setProperty("webdriver.ie.driver", "./drivers/IEDriverServer.exe");
			driver = new InternetExplorerDriver();
			break;
		default:
			System.out.println("No browser Available "+browser);
			break;
		}
	}
}
```

File6: PropertiesFileHandler.java

```
package com.ibm.utilities;

import java.io.File;
import java.io.FileInputStream;
import java.io.FileOutputStream;
import java.io.IOException;
import java.util.HashMap;

import java.util.Properties;

import java.util.Set;


public class PropertiesFileHandler {

        public HashMap<String, String> getPropertiesAsMap(String file) throws IOException {

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


                FileInputStream fileIn = new FileInputStream(file);

                Properties prop = new Properties();

                prop.load(fileIn);


                Set<Object> keysProp = prop.keySet();

                for (Object key : keysProp) {

                        magentoMap.put(key.toString(), prop.getProperty(key.toString()));

                }

                prop.clear();

                return magentoMap;

        }


        public void setKeyAndValue(String file,String key,String value) throws IOException

        {

                FileInputStream fileIn = new FileInputStream(file);

                Properties prop = new Properties();

                prop.load(fileIn);


                prop.setProperty(key, value);


                FileOutputStream fOut=new FileOutputStream(file);
                prop.store(fOut, "Test Result");

                fOut.close();

                fileIn.close();

        }


}
```

File7:groceries.properties

```
url=https://atozgroceries.com/admin

username=demo@atozgroceries.com

password=456789

expectedMessage=Success: You have successfully deleted data!

notifyName=DemoNotification

notifyMessage=Adding Notification

expNotificationMessage=Success: You have successfully sent push notification to your app!

imagePath=C:\\Users\\IBM_ADMIN\\eclipse-workspace\\TestCases_DataDrivenFramework\\TestData\\globe.jpg

searchForKeyword=refund

searchDispalyMessage=Search with keyword is successful

noMatchDisplayMessage=No matching records found

searchForShipKeyword=Discount
```

File8:testing_Shipping.xml

```xml
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "http://testng.org/testng-1.0.dtd">
<suite name="Suite">
  <test thread-count="5" name="SearchShippingLocation">
  <parameter name="browser" value="firefox"></parameter>
    <classes>
      <class name="com.ibm.groceries.ShippingLocation"/>
    </classes>
  </test> <!-- SearchShippingLocation -->
</suite> <!-- Suite -->
```

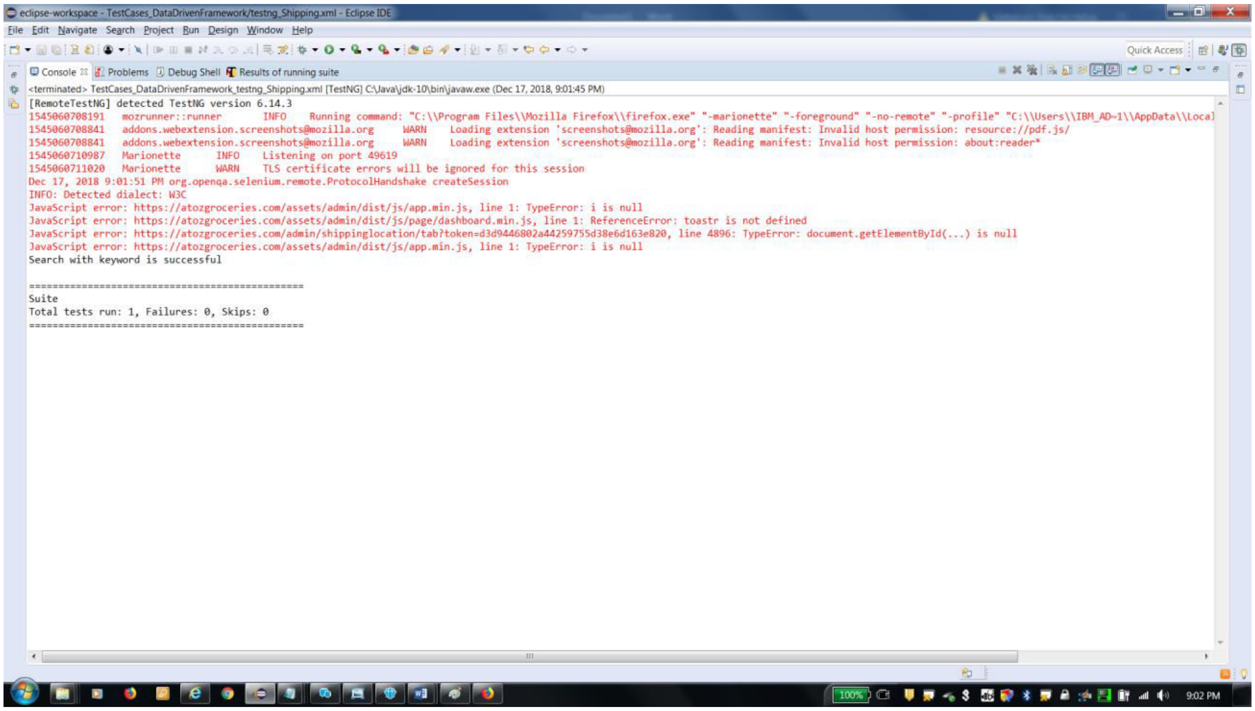
Test Result:

It is verified that the search is displayed data with “Discount” keyword when matching result found.

It is also verified for expected message ‘No matching records found’ when no matching result found.

Screenshots:

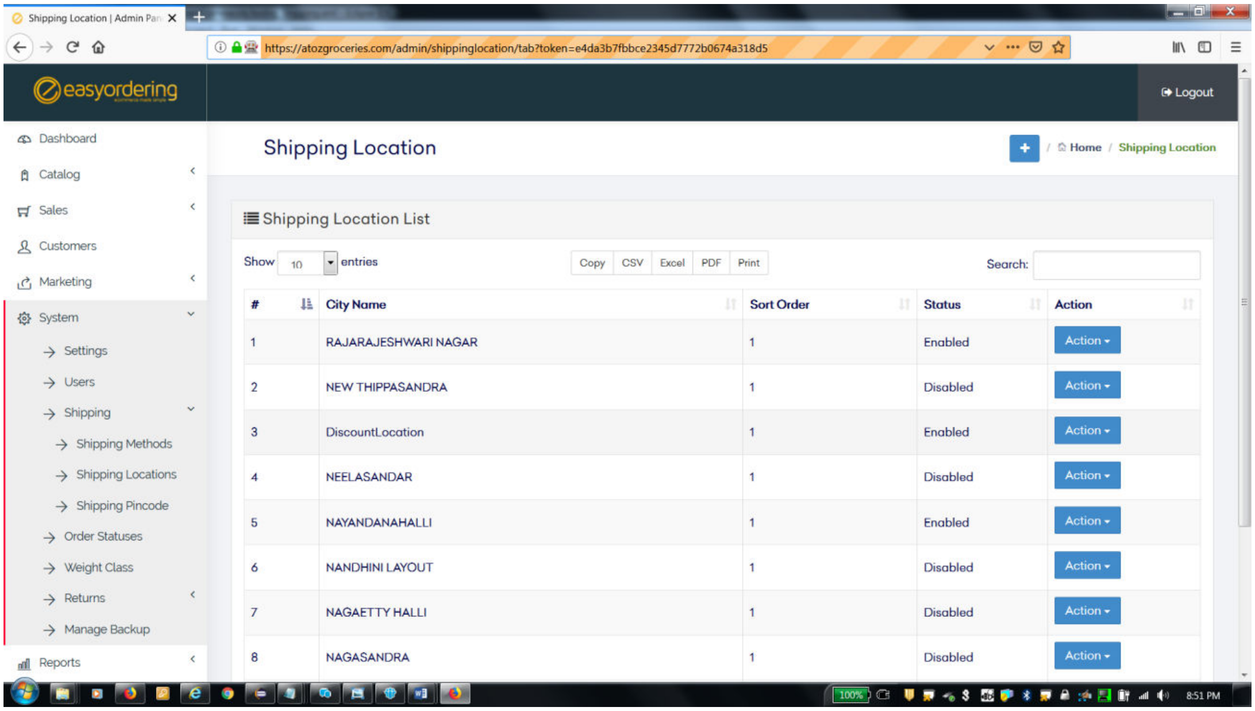
Console output:



eclipse-workspace - TestCases_DataDrivenFramework/testng_Shipping.xml - Eclipse IDE
File Edit Navigate Search Project Run Design Window Help
Quick Access
Console
Problems
Debug Shell
Results of running suite

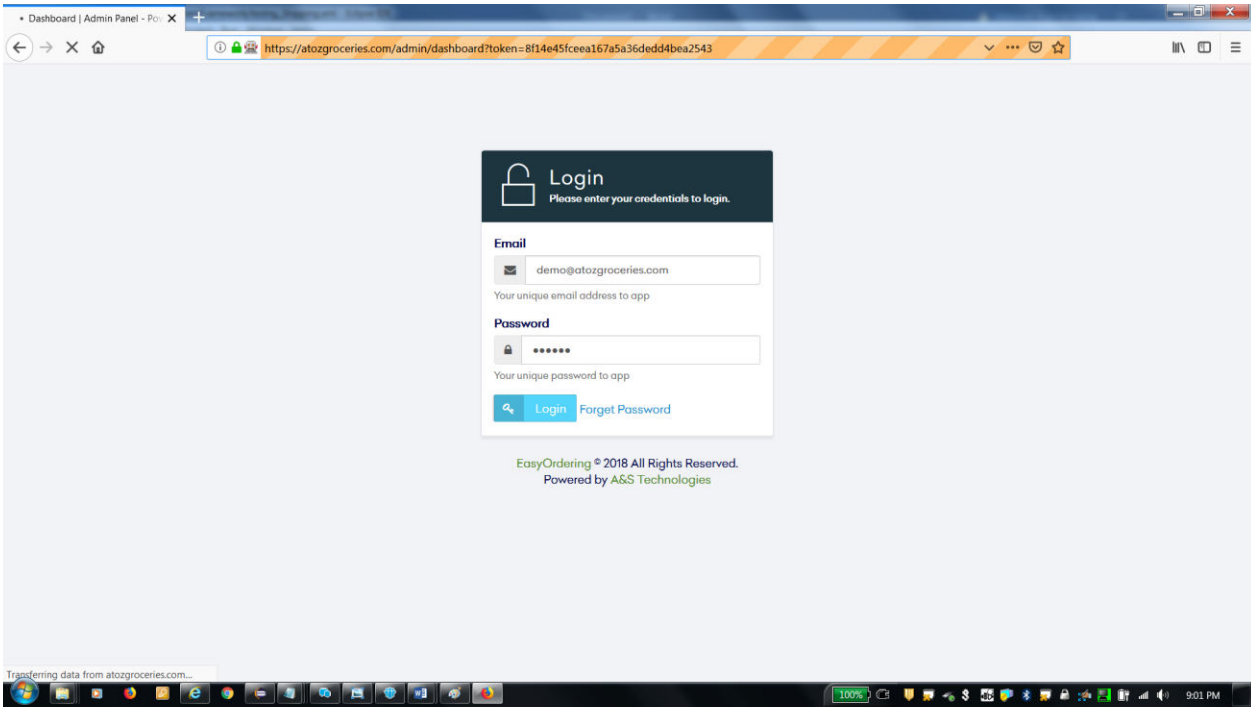
```
<terminated> TestCases_DataDrivenFramework_testng_Shipping.xml [TestNG] C:\Java\jdk-10\bin\javaw.exe (Dec 17, 2018, 9:01:45 PM)
[RemoteTestNG] detected TestNG version 6.14.3
1545060708191   mozrunner::runner       INFO    Running command: "C:\\Program Files\\Mozilla Firefox\\firefox.exe" "-marionette" "-foreground" "-no-remote" "-profile" "C:\\Users\\IBM_AD~1\\AppData\\Local
1545060708841   addons.webextension.screenshots@mozilla.org     WARN    Loading extension 'screenshots@mozilla.org': Reading manifest: Invalid host permission: resource://pdf.js/
1545060708841   addons.webextension.screenshots@mozilla.org     WARN    Loading extension 'screenshots@mozilla.org': Reading manifest: Invalid host permission: about:reader*
1545060710987   Marionette      INFO    Listening on port 49619
1545060711020   Marionette      WARN    TLS certificate errors will be ignored for this session
Dec 17, 2018 9:01:51 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
JavaScript error: https://atozgroceries.com/assets/admin/dist/js/app.min.js, line 1: TypeError: i is null
JavaScript error: https://atozgroceries.com/assets/admin/dist/js/page/dashboard.min.js, line 1: ReferenceError: toastr is not defined
JavaScript error: https://atozgroceries.com/admin/shippinglocation/tab?token=d3d9446802a44259755d38e6d163e820, line 4896: TypeError: document.getElementById(...) is null
JavaScript error: https://atozgroceries.com/assets/admin/dist/js/app.min.js, line 1: TypeError: i is null
Search with keyword is successful

===============================================
Suite
Total tests run: 1, Failures: 0, Skips: 0
===============================================
```

Existing Shipping Location List:



#	City Name	Sort Order	Status	Action
1	RAJARAJESHWARI NAGAR	1	Enabled	Action ▾
2	NEW THIPPASANDRA	1	Disabled	Action ▾
3	DiscountLocation	1	Enabled	Action ▾
4	NEELASANDAR	1	Disabled	Action ▾
5	NAYANDANAHALLI	1	Enabled	Action ▾
6	NANDHINI LAYOUT	1	Disabled	Action ▾
7	NAGAETTY HALLI	1	Disabled	Action ▾
8	NAGASANDRA	1	Disabled	Action ▾

Login page Is displayed with entered username and password


Dashboard | Admin Panel - Po
https://atozgroceries.com/admin/dashboard?token=8f14e45fceea167a5a36dedd4bea2543

Login

Please enter your credentials to login.

Email

demo@atozgroceries.com

Your unique email address to app

Password

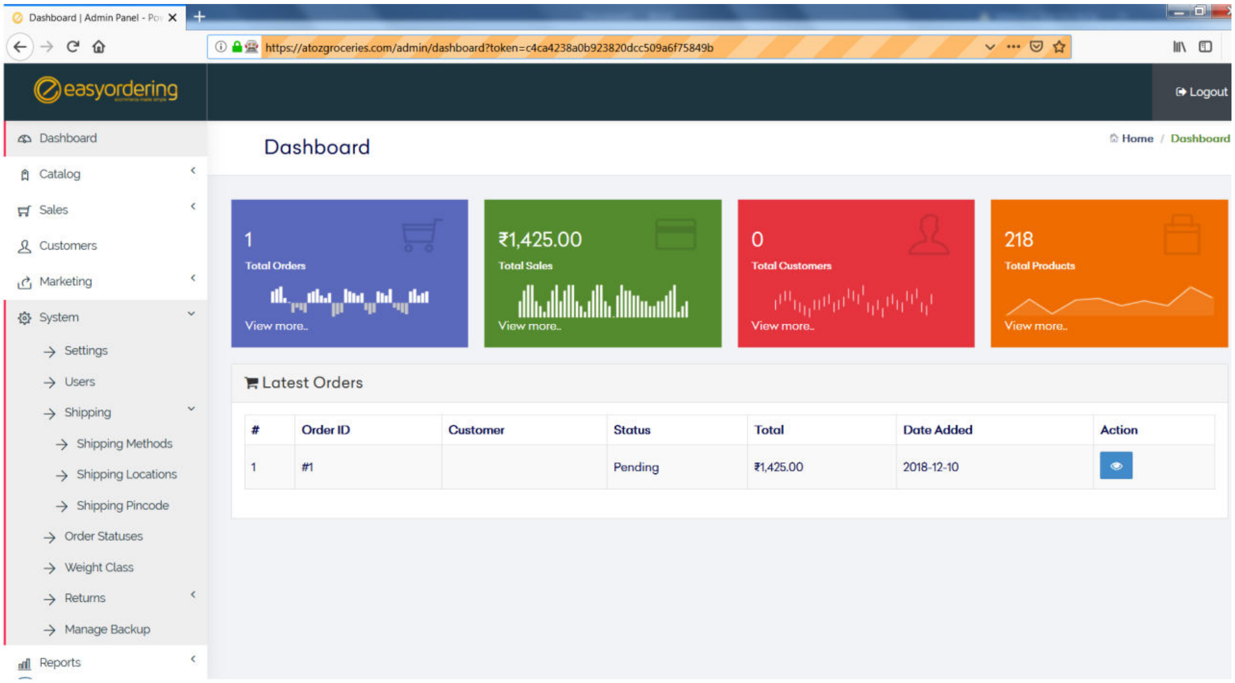
••••••

Your unique password to app

EasyOrdering © 2018 All Rights Reserved.
Powered by A&S Technologies

Transferring data from atozgroceries.com...
100%
9:01 PM

Dashboard page is displayed with System->Shipping->Shipping Locations



Dashboard

1 Total Orders

₹1,425.00 Total Sales

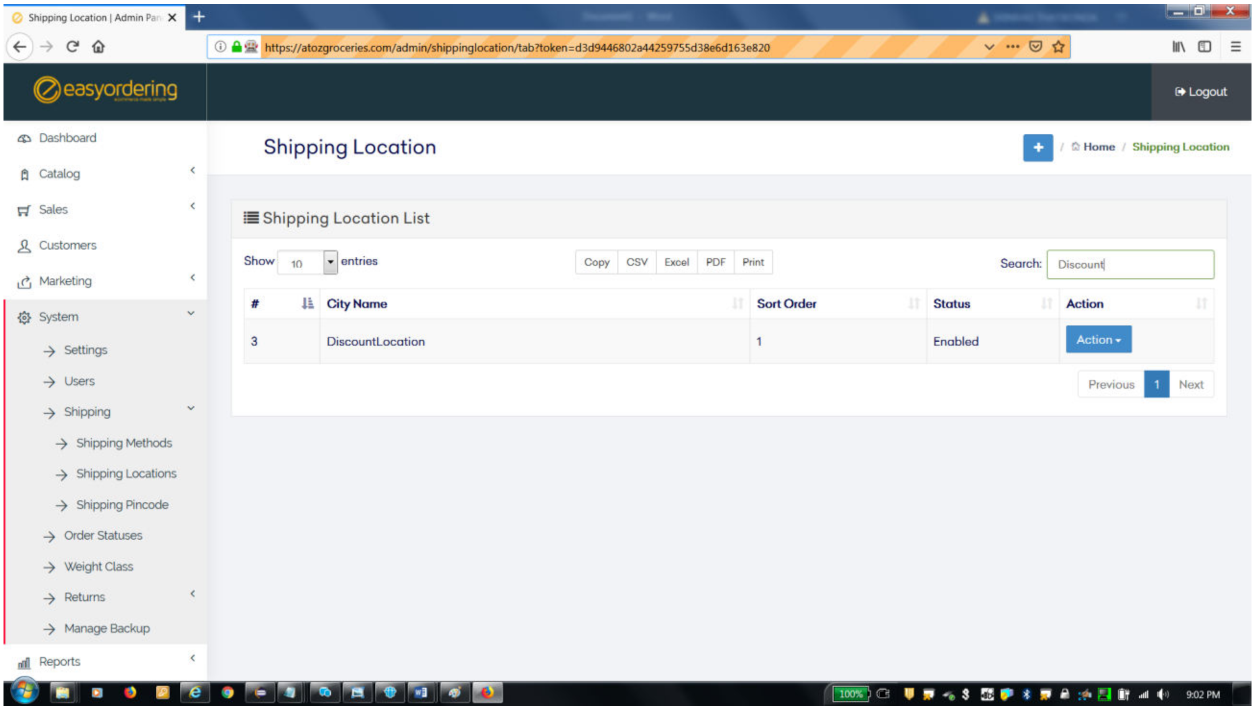
0 Total Customers

218 Total Products

Latest Orders

#	Order ID	Customer	Status	Total	Date Added	Action
1	#1		Pending	₹1,425.00	2018-12-10	👁

Shipping Location page is displayed with search keyword ‘Discount’ and matching record is found



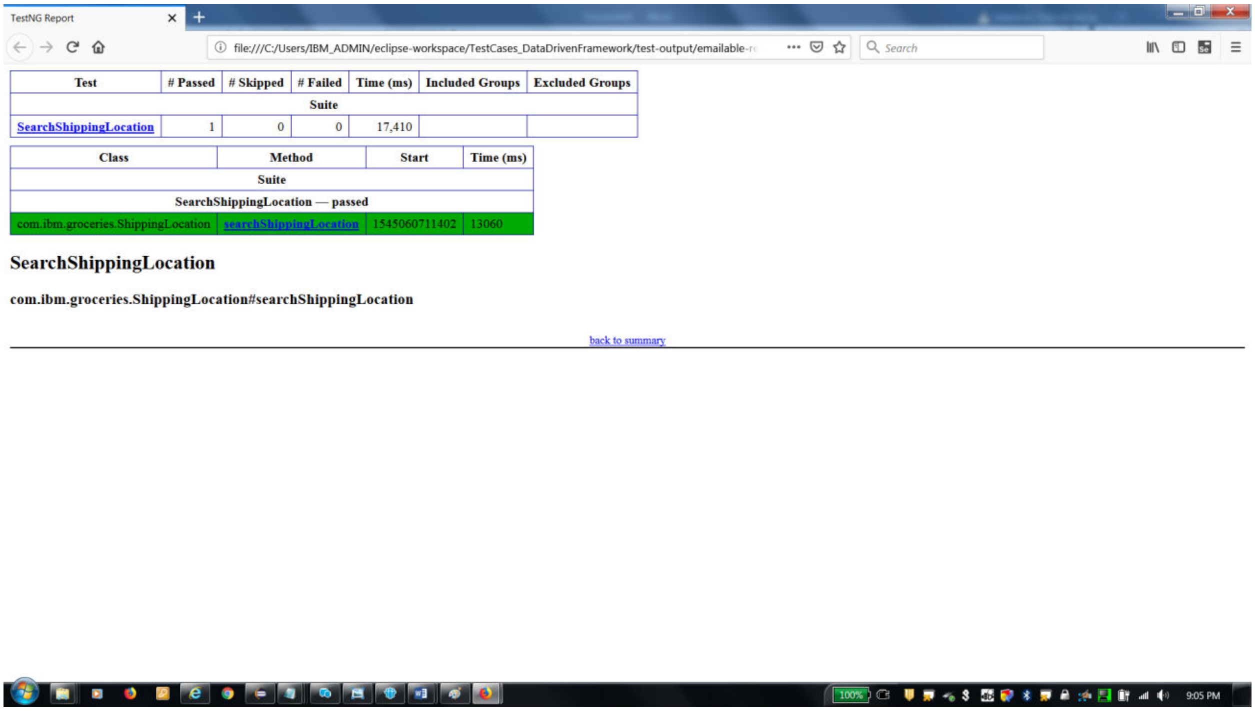
Shipping Location

Shipping Location List

Show 10 entries

Search: Discount

#	City Name	Sort Order	Status	Action
3	DiscountLocation	1	Enabled	Action ▾


TestNG Report
file:///C:/Users/IBM_ADMIN/eclipse-workspace/TestCases_DataDrivenFramework/test-output/emailable-r
Search
9:05 PM

Test	# Passed	# Skipped	# Failed	Time (ms)	Included Groups	Excluded Groups
Suite						
SearchShippingLocation	1	0	0	17,410		

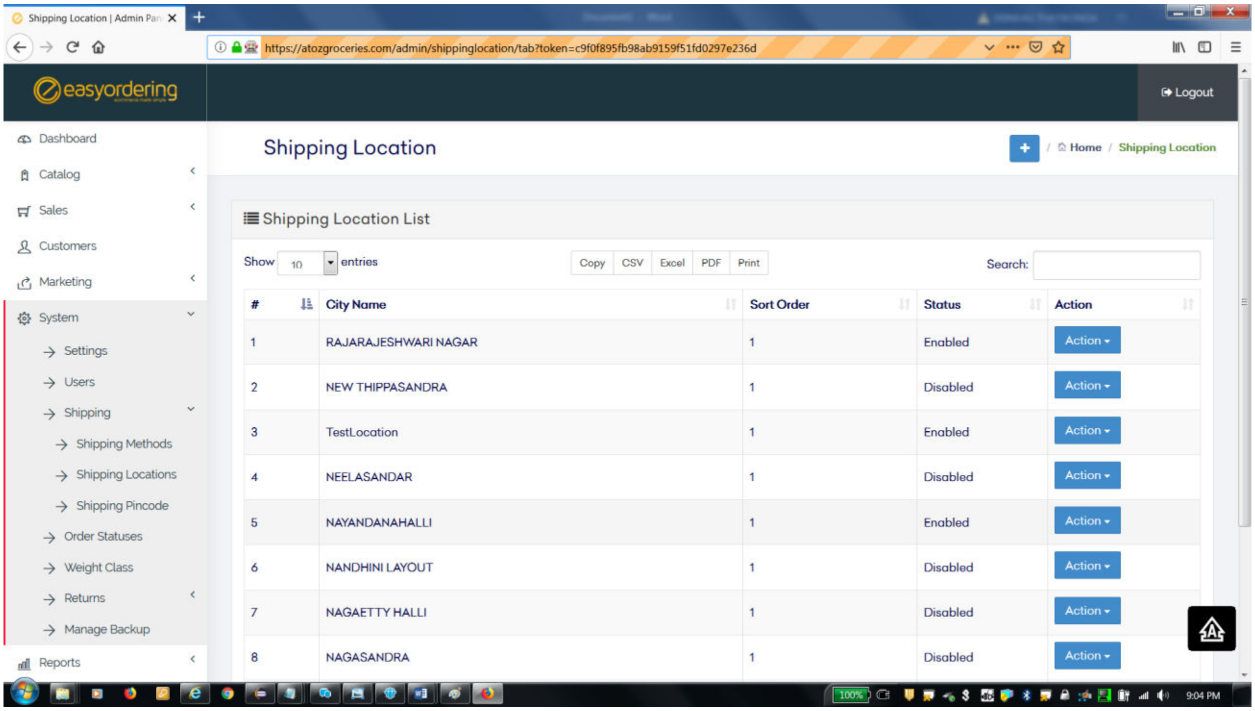
Class	Method	Start	Time (ms)
Suite			
SearchShippingLocation — passed			
com.ibm.groceries.ShippingLocation	searchShippingLocation	1545060711402	13060

SearchShippingLocation

com.ibm.groceries.ShippingLocation#searchShippingLocation

back to summary

Existing Shipping Location List to verify when no match found



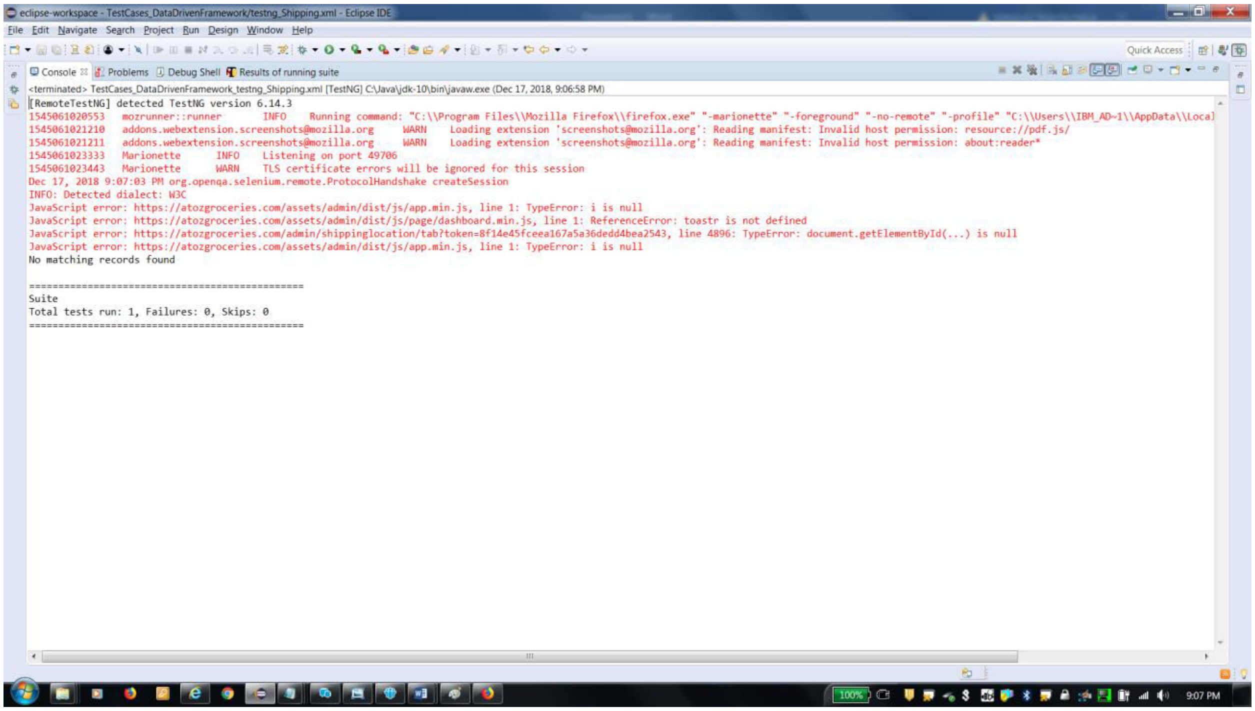
Shipping Location

Shipping Location List

Show 10 entries

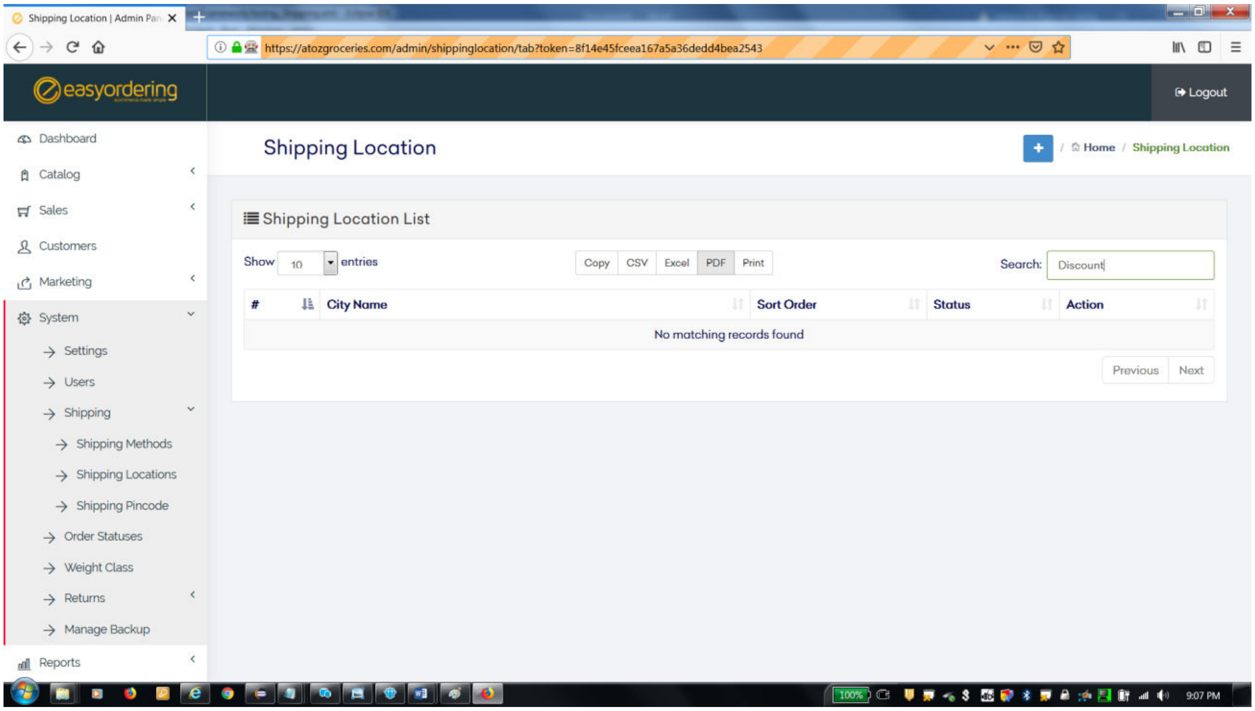
Search:

#	City Name	Sort Order	Status	Action
1	RAJARAJESHWARI NAGAR	1	Enabled	Action ▾
2	NEW THIPPASANDRA	1	Disabled	Action ▾
3	TestLocation	1	Enabled	Action ▾
4	NEELASANDAR	1	Disabled	Action ▾
5	NAYANDANAHALLI	1	Enabled	Action ▾
6	NANDHINI LAYOUT	1	Disabled	Action ▾
7	NAGAETTY HALLI	1	Disabled	Action ▾
8	NAGASANDRA	1	Disabled	Action ▾



```
<terminated> TestCases_DataDrivenFramework_testng_Shipping.xml [TestNG] C:\Java\jdk-10\bin\javaw.exe (Dec 17, 2018, 9:06:58 PM)
[RemoteTestNG] detected TestNG version 6.14.3
1545061020553   mozrunner::runner       INFO    Running command: "C:\\Program Files\\Mozilla Firefox\\firefox.exe" "-marionette" "-foreground" "-no-remote" "-profile" "C:\\Users\\IBM_AD~1\\AppData\\Local
1545061021210   addons.webextension.screenshots@mozilla.org     WARN    Loading extension 'screenshots@mozilla.org': Reading manifest: Invalid host permission: resource://pdf.js/
1545061021211   addons.webextension.screenshots@mozilla.org     WARN    Loading extension 'screenshots@mozilla.org': Reading manifest: Invalid host permission: about:reader*
1545061023333   Marionette      INFO    Listening on port 49706
1545061023443   Marionette      WARN    TLS certificate errors will be ignored for this session
Dec 17, 2018 9:07:03 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: W3C
JavaScript error: https://atozgroceries.com/assets/admin/dist/js/app.min.js, line 1: TypeError: i is null
JavaScript error: https://atozgroceries.com/assets/admin/dist/js/page/dashboard.min.js, line 1: ReferenceError: toastr is not defined
JavaScript error: https://atozgroceries.com/admin/shippinglocation/tab?token=8f14e45fceea167a5a36dedd4bea2543, line 4896: TypeError: document.getElementById(...) is null
JavaScript error: https://atozgroceries.com/assets/admin/dist/js/app.min.js, line 1: TypeError: i is null
No matching records found

===============================================
Suite
Total tests run: 1, Failures: 0, Skips: 0
===============================================
```

The expected message found when no matching records found for keyword.



https://atozgroceries.com/admin/shippinglocation/tab?token=8f14e45fceea167a5a36dedd4bea2543

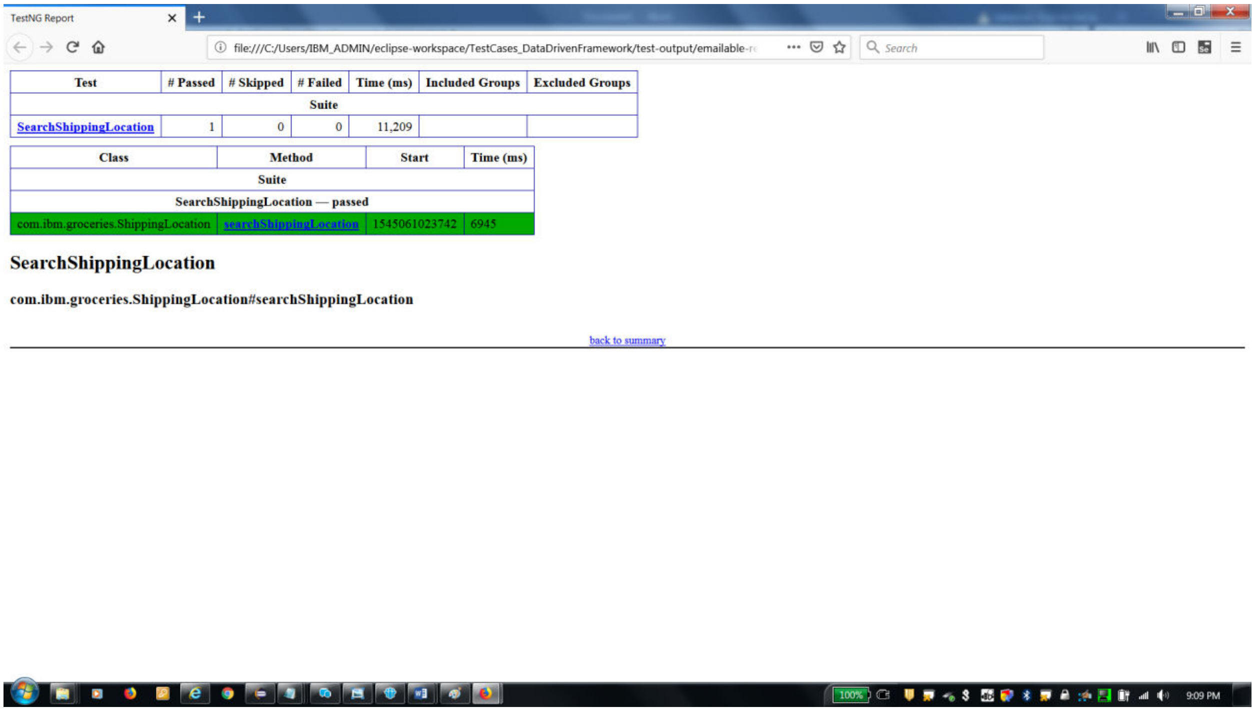
Shipping Location

Shipping Location List

Show 10 entries

Search: Discount

#	City Name	Sort Order	Status	Action
No matching records found				



file:///C:/Users/IBM_ADMIN/eclipse-workspace/TestCases_DataDrivenFramework/test-output/emailable-r

Test	# Passed	# Skipped	# Failed	Time (ms)	Included Groups	Excluded Groups
Suite						
SearchShippingLocation	1	0	0	11,209		

Class	Method	Start	Time (ms)
Suite			
SearchShippingLocation — passed			
com.ibm.groceries.ShippingLocation	searchShippingLocation	1545061023742	6945

SearchShippingLocation

com.ibm.groceries.ShippingLocation#searchShippingLocation

back to summary

Flow Information:

Initially a property file ‘groceries.properties’ is created in Test Data folder of the project and list of key, values for url, username,password ,key word to search,expected validation message, etc. are stored in this property file.

Under the class ‘WebDriverLaunch’ ,a Test NG annotation ‘Before Suite’ is used to invoke the method ‘preSetFortTest’ which is used to instantiate object for class PropertiesFileHandler to return the list of these key,values in to a HashMap.

The Test NG annotation ‘Before Method’ is used by passing the parameter for browser to select and to invoke the method ‘Initialization’ which is used to call another method and to create webdriver object for the firefoxdriver or chromedriver or internetexplorer by using switch statement and setting path for webdriver exe.

The PageLogin class is defined with methods to locate the web elements email,password and login buttons. PageFactory is used in the constructor of this class. The method sendKeys is used to enter the email address and password. The method click is used to click on login button

The class ‘PageDashboard’ is defined with methods to locate the web elements System,Shipping and Shipping Locations. PageFactory is used in the constructor of this class.The method click is used to click on System, Shipping and Shipping Locations links.

The class ‘ShippingLocationsPage’ is defined with method searchLocation to enter the keyword for searching in search text box and the method returns pagesource. The search text box is located using ‘FindBy’ notation . PageFactory method is used in the in the constructor of this class.

The annotation @Test is used with method searchShippingLocation in the class ‘ShippingLocation’. This method is used to get the values for username,password ,keyword to search,valiation message etc. The get method is called to launch the web url for admin portal. The objects for classes PageLogin,PageDashboard, ShippingLocationsPage are created and the above necessary methods are called on these objects. Finally the Assert is used to verify presence of the keyword searched and expected message when no match found.The testng_Shipping.xml file is having the parameter ‘firefox’ to launch Firefox browser.