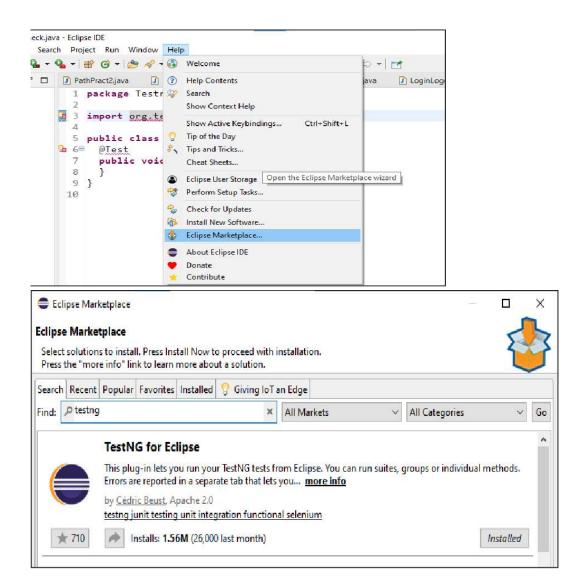
Aim: Installation of TestNg, running TestNg & TestNg annotations.

Installation:



Source code (DemoDataProvider):

```
packageDemoDataProvider;
importorg.testng.annotations.Test;
importorg.testng.annotations.DataProvider;
public class NewTest {
    @Test(dataProvider = "dp")
    public void f(Integer n, String s) {System.out.println(n + " " + s);}

@DataProvider public Object[][] dp() {return new Object[][] {new Object[] { 1, "a" },new Object[] { 2, "b" }, new Object[] { 3, "c"} new Object[] { 4, "Vishal Khedkar"}};}}
```

```
<terminated> NewTest [TestNG] C:\Users\MCALAB-1\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.2.v20220201-1208\jre\bin\javaw.exe (Nov 1, 2022, 3:56: )
[RemoteTestNG] detected TestNG version 7.4.0
1
2
     b
 3
     С
    Vishal Khedkar
 PASSED: f(1, "a")
PASSED: f(2, "b")
PASSED: f(4, "Vishal Khedkar")
PASSED: f(3, "c")
 _____
     Default test
     Tests run: 1, Failures: 0, Skips: 0
 _____
 Default suite
 Total tests run: 4, Passes: 4, Failures: 0, Skips: 0
 -----
```

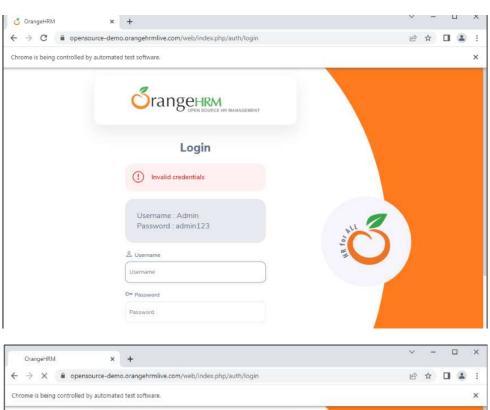
Source code (DemoAnnotation):

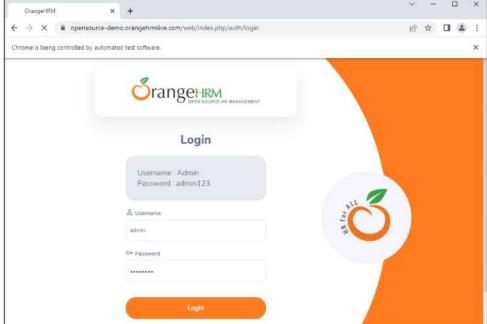
```
package testng;
import org.testng.annotations.Test;
import org.testng.annotations.BeforeMethod;
import org.testng.annotations.AfterMethod;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.AfterClass;
import org.testng.annotations.BeforeTest;
import org.testng.annotations.AfterTest;
import org.testng.annotations.BeforeSuite;
import org.testng.annotations.AfterSuite;
public class DemoAnnotations {
 @Test
 public void f() {System.out.println("Test (Roll no. 30)");}
 @BeforeMethod
 public void beforeMethod() {System.out.println("Before Method");}
 @AfterMethod
 public void afterMethod() {System.out.println("After Method");}
 @BeforeClass
 public void beforeClass() {System.out.println("before class");}
 @AfterClass
 public void afterClass() {System.out.println("after class");}
 @BeforeTest
 public void beforeTest() {System.out.println("before test");}
 @AfterTest
 public void afterTest() {System.out.println("after test");}
 @BeforeSuite
 public void beforeSuite() {System.out.println("before suite");}
 @AfterSuite
 public void afterSuite() {System.out.println("after suite");}}
```

```
⊕ Console ×
                                              <terminated> DemoAnnotations [TestNG] C:\Users\MCALAB-1\.p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.2.v20220201-1208\jre\bin\javaw.exe (Nov 1, 2022)
[RemoteTestNG] detected TestNG version 7.4.0
before suite
before test
 before class
 Before Method
 Test (Roll no. 30)
 After Method
 after class
 after test
 PASSED: f
 _____
    Default test
    Tests run: 1, Failures: 0, Skips: 0
 after suite
 Default suite
 Total tests run: 1, Passes: 1, Failures: 0, Skips: 0
 -----
                                                   Activate Windows
```

Source code (DataOHM):

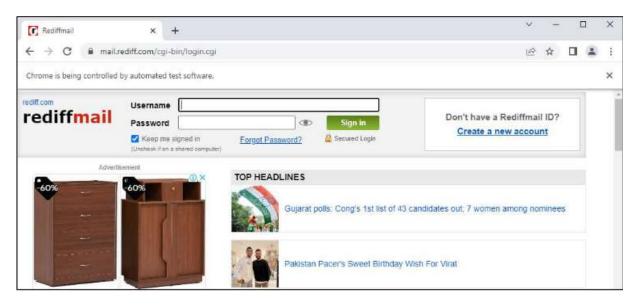
```
importjava.io.FileInputStream;
importjava.io.FileNotFoundException;
importjava.io.IOException;
importjava.util.concurrent.TimeUnit;
importorg.apache.poi.xssf.usermodel.XSSFCell;
importorg.apache.poi.xssf.usermodel.XSSFRow;
importorg.apache.poi.xssf.usermodel.XSSFSheet;
importorg.apache.poi.xssf.usermodel.XSSFWorkbook;
importorg.openqa.selenium.By;
importorg.openqa.selenium.WebDriver;
importorg.openga.selenium.firefox.FirefoxDriver;
publicclassWriteData {
       publicstaticvoid main(String[] args) throwsIOException {
               System.setProperty("webdriver.gecko.driver",
"E:\\Selenium22\\chromedriver win32\\chromedriver.exe");
               WebDriverwd = newFirefoxDriver();
               wd.get("https://opensource-demo.orangehrmlive.com/web/index.php/auth/login");
               wd.manage().timeouts().implicitlyWait(10,TimeUnit.SECONDS);
               FileInputStreamfis = newFileInputStream("E:\\Selenium22\\WriteData.xlsx");
               XSSFWorkbookwb = newXSSFWorkbook(fis);
               XSSFSheetsh = wb.getSheet("Sheet1");
               for(inti=1; i<=sh.getLastRowNum(); i++) {</pre>
                      XSSFRowrw = sh.getRow(i);
                      XSSFCellun = rw.getCell(0);
                      XSSFCellpw = rw.getCell(1);
                      System.out.println("Username --->"+un+" "+"Password --->"+pw);
                      wd.findElement(By.name("username")).sendKeys(un.toString());
                      wd.findElement(By.name("password")).sendKeys(pw.toString());
                      wd.findElement(By.className("oxd-button")).click();}}}
```

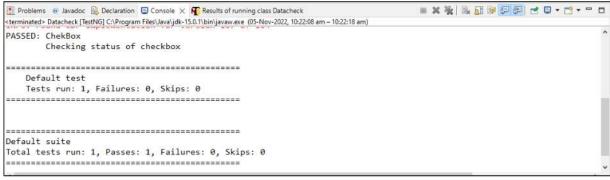




Source code (Datacheck):

```
package Testng;
import org.testng.annotations.Test;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.Assert;
public class Datacheck { @Test(description="Checking status of checkbox")
public void ChekBox() { System.setProperty("webdriver.chrome.driver","D:\\vishal\\My_S
elenium_Drivers\\My_Selenium_Drivers\\chromedriver.exe");
WebDriver wd = new ChromeDriver();
wd.get("https://mail.rediff.com/cgi-bin/login.cgi");
boolean sts = wd.findElement(By.name("remember")).isSelected();
Assert.assertTrue(sts);}}
```

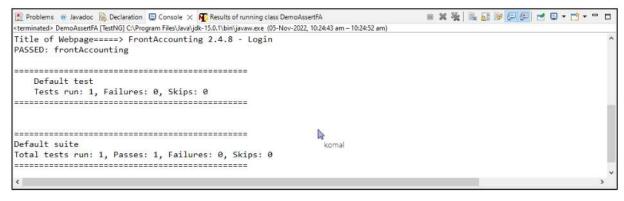




Source code (DemoAssertFA):

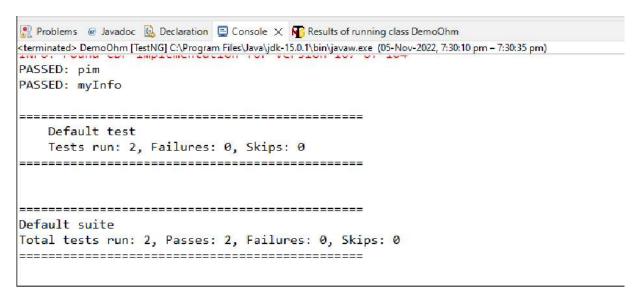
```
package Testng;
import org.testng.annotations.Test;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.Assert;
public class DemoAssertFA {
@Test
public void frontAccounting()
 \{ \ System.setProperty("webdriver.chrome.driver","D: \wishal\My\_S \\
elenium Drivers\\My Selenium Drivers\\chromedriver.exe");
WebDriver wd = new ChromeDriver(); wd.get("http://frontaccounting.squadinfotech.in/index.php");
String expectedTitle = "FrontAccounting 2.4.8 -
Login";//if title is not matching execution will be fail
String actualTitle =wd.getTitle();
Assert.assertEquals(actualTitle, expectedTitle);
System.out.println("Title of Webpage====> " + actualTitle);}}
```

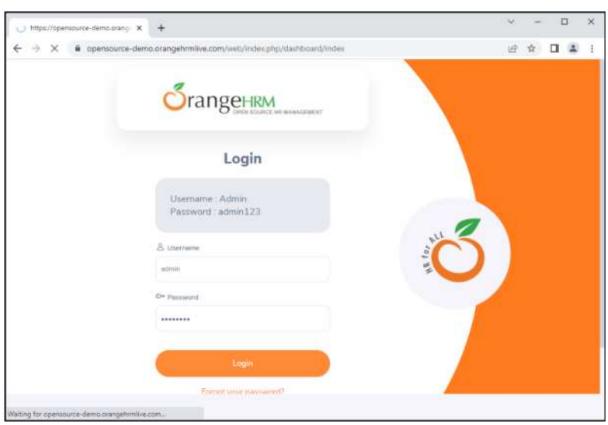


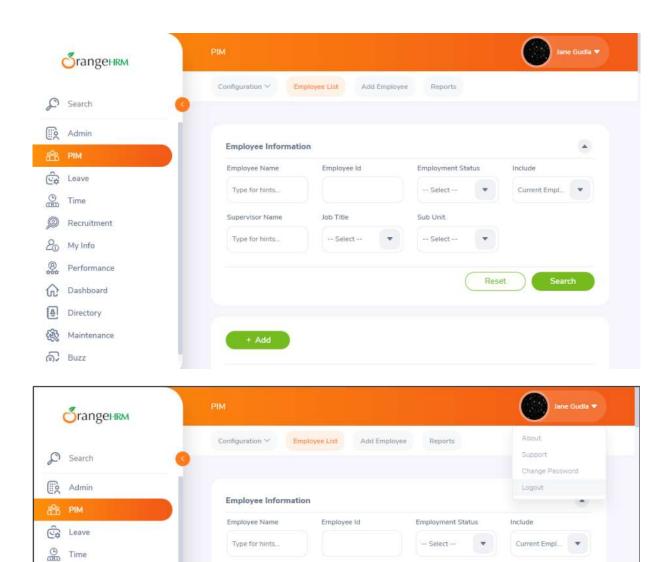


Source code (DemoOHM):

```
package Testng;
import java.util.concurrent.TimeUnit;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openga.selenium.chrome.ChromeDriver;
import org.testng.annotations.AfterClass;
import org.testng.annotations.AfterSuite;
import org.testng.annotations.BeforeClass;
import org.testng.annotations.BeforeSuite;
import org.testng.annotations.DataProvider;
import org.testng.annotations.Test;
public class DemoOhm {
WebDriver wd:
@BeforeSuite
public void openBrowser()
{System.setProperty("webdriver.chrome.driver","D:\\poonam\\My S
elenium Drivers\\My Selenium Drivers\\chromedriver.exe");
wd=new ChromeDriver();}
@BeforeClass
public void loginOHM()
{wd.get("https://opensource-demo.orangehrmlive.com/");
wd.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS);
wd.findElement(By.name("username")).sendKeys("admin");//locato
r id wd.findElement(By.name("password")).sendKeys("admin123");//loc
ater name wd.findElement(By.className("oxd-button")).click();//locator
className}
@Test(priority = 2)
public void myInfo()
{wd.findElement(By.className("oxd-main-menu-item")).click();}
@Test(priority = 1)
public void pim()
{wd.findElement(By.className("oxd-main-menu-item")).click();}
@AfterClass
public void logoutOHM() throws Exception
{wd.findElement(By.className("oxd-userdropdown-
name")).click();//locator partiallinkText
Thread.sleep(2000);
wd.findElement(By.partialLinkText("Logout")).click();//locator
linkText}
@AfterSuite
public void closeBrowser()
{wd.quit();}}
```



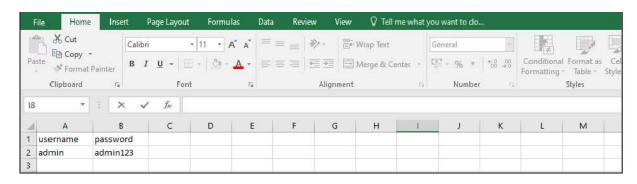


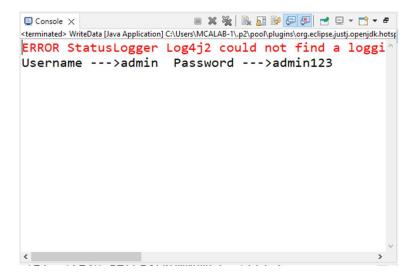


Aim: A] Installation of TestNg, running TestNg & TestNg annotations.

Source code:

```
importjava.io.FileInputStream;
importjava.io.FileNotFoundException;
importjava.io.IOException;
importorg.apache.poi.xssf.usermodel.XSSFCell;
importorg.apache.poi.xssf.usermodel.XSSFRow;
importorg.apache.poi.xssf.usermodel.XSSFSheet;
importorg.apache.poi.xssf.usermodel.XSSFWorkbook;
publicclassWriteData {
       publicstaticvoid main(String[] args) throwsIOException {
               FileInputStreamfis = newFileInputStream("E:\\Selenium22\\WriteData.xlsx");
               XSSFWorkbookwb = newXSSFWorkbook(fis);
               XSSFSheetsh = wb.getSheet("Sheet1");
              for(inti=1; i<=sh.getLastRowNum(); i++) {</pre>
                      XSSFRowrw = sh.getRow(i);
                      XSSFCellun = rw.getCell(0);
                      XSSFCellpw = rw.getCell(1);
                      System.out.println("Username --->"+un+" "+"Password --->"+pw);}}}
```



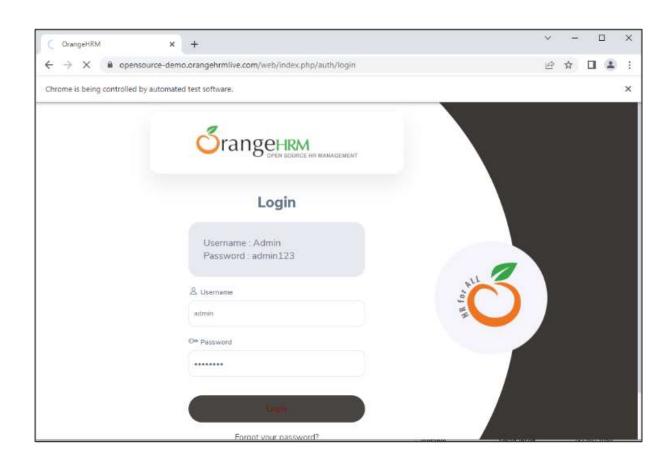


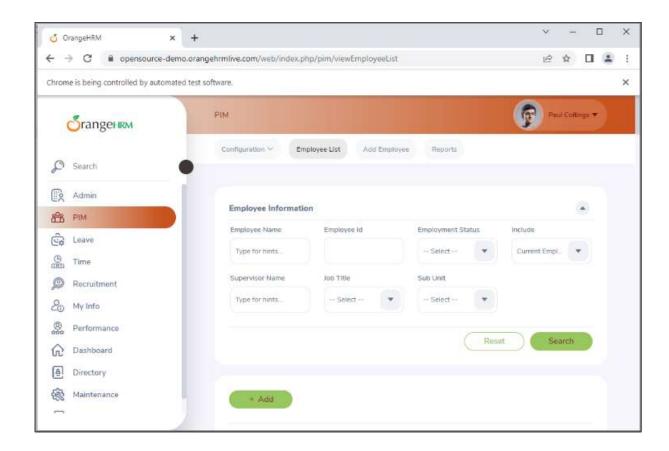
B] Write a Program to Read data from an Excel file and login in to site.

Source code:

```
package practical;
import java.io.FileInputStream;
import java.io.IOException;
import java.util.concurrent.TimeUnit;
import org.apache.poi.xssf.usermodel.XSSFCell;
import org.apache.poi.xssf.usermodel.XSSFRow;
import org.apache.poi.xssf.usermodel.XSSFSheet;
import org.apache.poi.xssf.usermodel.XSSFWorkbook;
import org.openqa.selenium.By;
import org.openga.selenium.WebDriver;
import org.openga.selenium.chrome.ChromeDriver;
public class WriteDataOrangeHRM {
public static void main(String[] args) throws IOException {
// TODO Auto-generated method stub
System.setProperty("webdriver.chrome.driver",
"D:\\Poonam\\STQA\\chromedriver win32\\chromedriver.exe");
WebDriver wd=new ChromeDriver();
wd.get("https://opensource-demo.orangehrmlive.com/");
wd.manage().timeouts().implicitlyWait(10,TimeUnit.SECONDS);
FileInputStream fis = new
FileInputStream("D:\\Vishal\\STQA\\Vishal.xlsx");
XSSFWorkbook wb = new XSSFWorkbook(fis);
XSSFSheet sh = wb.getSheet("Vishal");
for(int i=1;i<=sh.getLastRowNum();i++) {
XSSFRow rw=sh.getRow(i);
XSSFCell un=rw.getCell(0);
XSSFCell pw=rw.getCell(1); System.out.println("username ="+ un + " " + "Password
="+ pw); wd.findElement(By.name("username")).sendKeys(un.toString());
wd.findElement(By.name("password")).sendKeys(pw.toString());
wd.findElement(By.className("oxd-button")).click();}}}
```

F	file Home	Inse	rt P	age Layout	Formulas	Data	Rev	iew V	iew ℚ Te	ll me what	you want to do			
	Cut		Calibri	~	11 - A	A* =	==	39/-	Wrap Text Merge & Center		General + 0.0 000 00 + 0.0		Conditional Format as C Formatting * Table * Styl	
Pa	ste S Format		B 1	<u>u</u> - 🗆	- B - A	· = 3		● ●						
	Clipboard	Fa .		Font		F2		Aligni	nent	Ġ	Numbe	r G		Styles
18	÷	; ×	~	f _{sc}										
d	А	В		С	D	E	F	G	н	1	J	К	L	М
1	username	password												
2	admin	admin1	23											
3														



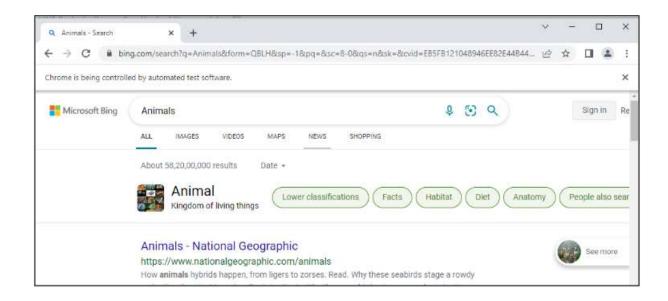


<u>Aim</u>: Demonstrate validation testing.

Source code:

package pack; import org.openqa.selenium.By; import org.openqa.selenium.Keys; import org.openqa.selenium.WebDriver; import org.openqa.selenium.chrome.ChromeDriver; public class Bing { public static void main(String[] args)throws Exception { System.setProperty("webdriver.chrome.driver","C:\\Users\\mcala b-1\\Documents\\STQA_Practicals\\Vishal\\chromedriver_win32\\chromedri ver.exe"); WebDriver wd=new ChromeDriver(); wd.get("https://www.bing.com/"); Thread.sleep(2000); wd.findElement(By.id("sb_form_q")).sendKeys("Animals"); wd.findElement(By.id("sb_form_q")).sendKeys(Keys.ENTER);}}

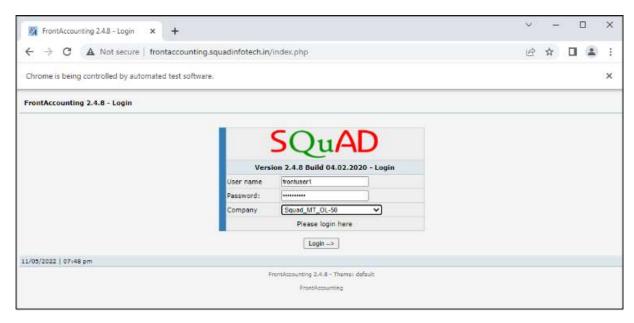


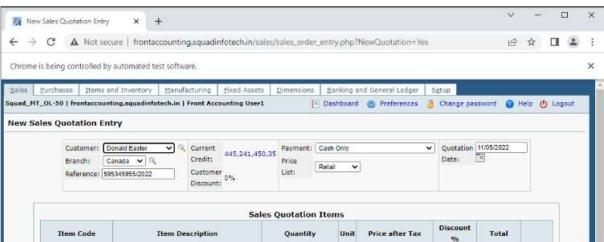


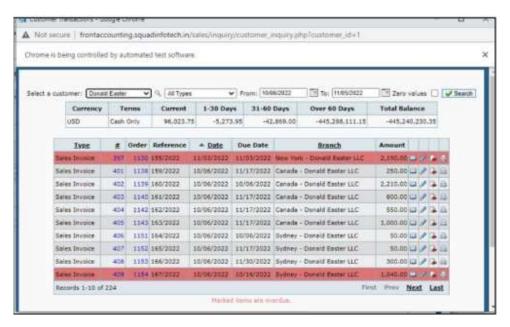
Aim: A] Demonstrate Handling multiple window in selenium.

Source code:

```
package practicals;
import java.util.Set;
import org.openga.selenium.By;
import org.openga.selenium.WebDriver;
import org.openga.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.Select;
public class WindowHandling
{public static void main(String[] args)throws Exception {
System.setProperty("webdriver.chrome.driver","D:\\vishal\\My Seleniu
m Drivers\\My Selenium Drivers\\chromedriver.exe");
WebDriver wd=new ChromeDriver();
wd.get("http://frontaccounting.squadinfotech.in/index.php");
Thread.sleep(3000);
wd.findElement(By.name("user name entry field")).sendKeys("frontuser
1");wd.findElement(By.name("password")).sendKeys("frontuser1");
Select s = new Select(wd.findElement(By.name("company login name")));
s.selectByVisibleText("Squad MT OL-50"); wd.findElement(By.name("SubmitUser")).click();
wd.findElement(By.xpath("/html/body/table[1]/tbody/tr/td/table[1]/tb
ody/tr/td/div[2]/table/tbody/tr[1]/td/table/tbody/tr[2]/td[1]/a[1]")
).click(); String pid = wd.getWindowHandle();
System.out.println("Parent ID: " + pid);
wd.findElement(By.xpath("/html/body/table[1]/tbody/tr/td/table[1]/tb
ody/tr/td/div[2]/form/center[1]/table/tbody/tr/td[2]/table/tbody/tr[
1]/td[2]/a")).click();
Set<String> allwin = wd.getWindowHandles();
for(String W:allwin){wd.switchTo().window(W); System.out.println(wd.getTitle());
if(!(W.equals(pid)))
\{\text{Select ss} = \text{new}\}
Select(wd.findElement(By.id("customer id")));
ss.selectByIndex(0);
wd.manage().window().maximize();
wd.close();}
wd.switchTo().window(pid);
Thread.sleep(3000);
wd.findElement(By.linkText("Logout")).click();
Thread.sleep(3000);
wd.close();}}
```





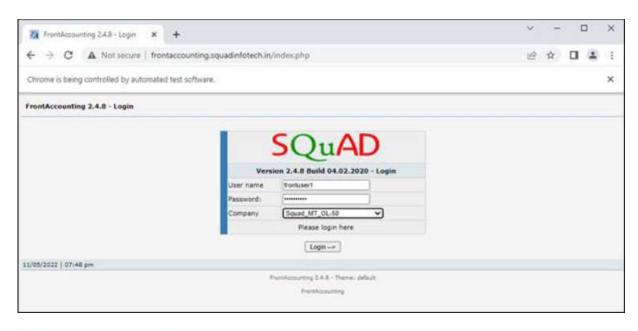


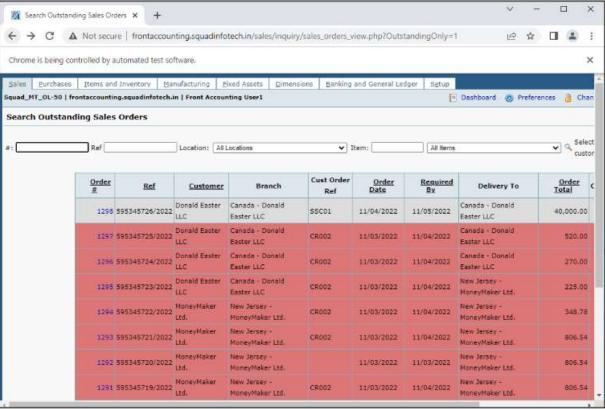


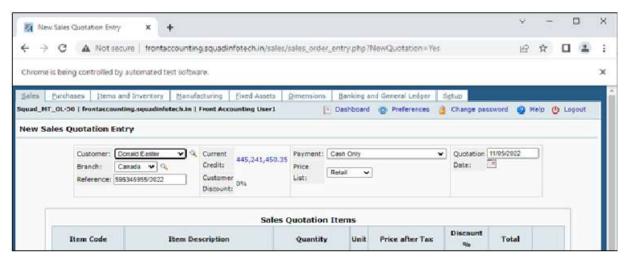
B] Window handling.

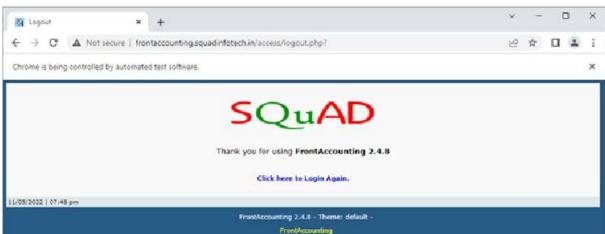
Source code:

```
package practicals;
import java.util.Set;
import org.openga.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openga.selenium.chrome.ChromeDriver;
import org.openga.selenium.support.ui.Select;
public class WindowsHandlingPracticse {
public static void main(String[] args)throws Exception {
// TODO Auto-generated method stub
System.setProperty("webdriver.chrome.driver","D:\\vishal\\My Seleniu
m Drivers\\My Selenium Drivers\\chromedriver.exe");
WebDriver wd=new ChromeDriver();
wd.get("http://frontaccounting.squadinfotech.in/index.php");
Thread.sleep(3000);wd.findElement(By.name("user name entry field")).sendKeys("frontuser
1");wd.findElement(By.name("password")).sendKeys("frontuser1");
Select s = new Select(wd.findElement(By.name("company login name")));
s.selectByVisibleText("Squad MT OL-50");
wd.findElement(By.name("SubmitUser")).click();
wd.findElement(By.xpath("/html/body/table[1]/tbody/tr/td/table[1]/tb
ody/tr/td/div[2]/table/tbody/tr[1]/td/table/tbody/tr[2]/td[1]/a[5]")
).click();String pid = wd.getWindowHandle();
System.out.println("Parent ID : " + pid);
wd.findElement(By.xpath("/html/body/table[1]/tbody/tr/td/table[1]/tb
odv/tr/td/table/tbody/tr/td/table[1]/tbody/tr/td/div/a[2]")).click();
wd.findElement(By.xpath("/html/body/table[1]/tbody/tr/td/table[1]/tb
ody/tr/td/div[2]/table/tbody/tr[1]/td/table/tbody/tr[2]/td[1]/a[1]")
).click();Set<String> allwin = wd.getWindowHandles();
for(String W:allwin){wd.switchTo().window(W);System.out.println(wd.getTitle());
if(!(W.equals(pid))){Select ss = newSelect(wd.findElement(By.id("supplier id")));
ss.selectByIndex(1);wd.manage().window().maximize();
wd.close();}}wd.switchTo().window(pid);
Thread.sleep(4000);wd.findElement(By.linkText("Logout")).click();
Thread.sleep(4000);wd.close();}}
```









Aim: Perform regression testing.

Theory:

What is Regression Testing?

REGRESSION TESTING is defined as a type of software testing to confirm that a recent program or code change has not adversely affected existing features. Regression Testing is nothing but a full or partial selection of already executed test cases which are re-executed to ensure existing functionalities work fine. This testing is done to make sure that new code changes should not have side effects on the existing functionalities. It ensures that the old code still works once the latest code changes are done.

Need of Regression Testing

The Need of Regression Testing mainly arises whenever there is requirement to change the code and we need to test whether the modified code affects the other part of software application or not. Moreover, regression testing is needed, when a new feature is added to the software application and for defect fixing as well as performance issue fixing. How to do Regression Testing

In order to do Regression Testing process, we need to first debug the code to identify the bugs. Once the bugs are identified, required changes are made to fix it, then the regression testing is done by selecting relevant test cases from the test suite that covers both modified and affected parts of the code.

Software maintenance is an activity which includes enhancements, error corrections, optimization and deletion of existing features. These modifications may cause the system to work incorrectly. Therefore, Regression Testing becomes necessary.

Regression Test Selection

Regression Test Selection is a technique in which some selected test cases from test suite are executed to test whether the modified code affects the software application or not. Test cases are categorized into two parts, reusable test cases which can be used in further regression cycles and obsolete test cases which can not be used in succeeding cycles.