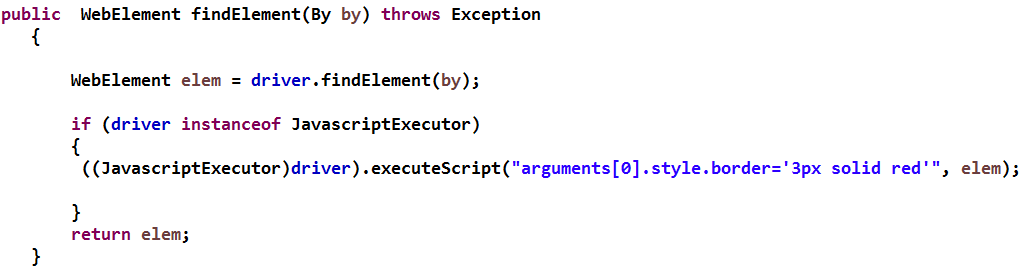
**TC01\_Login.java**

* **The below method is provided by selenium team**



* **Simply we will use this below method in all selenium programs**
* **Purpose: Web Element border is highlighted during Run Time;**
* **We can easily understand driver instructions execution sequence during runtime.**
* **No need to write** *driver*.findElement **every time.**
* **driver will be called implicitly.**

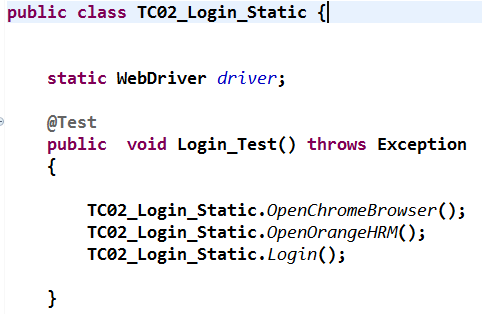
*driver*.findElement(By.*name*("txtUsername")).sendKeys("Admin");🡪 Web Element border won’t be highlighted

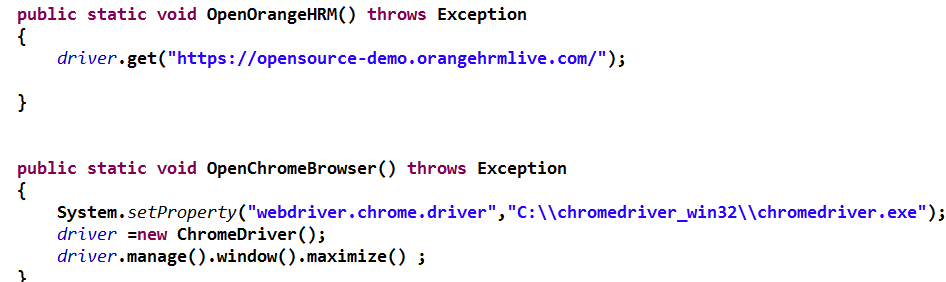
findElement(By.*name*("txtUsername")).sendKeys("Admin");🡪 Web Element border will be highlighted

|  |  |
| --- | --- |
| *driver*.findElement | findElement |
|  |  |

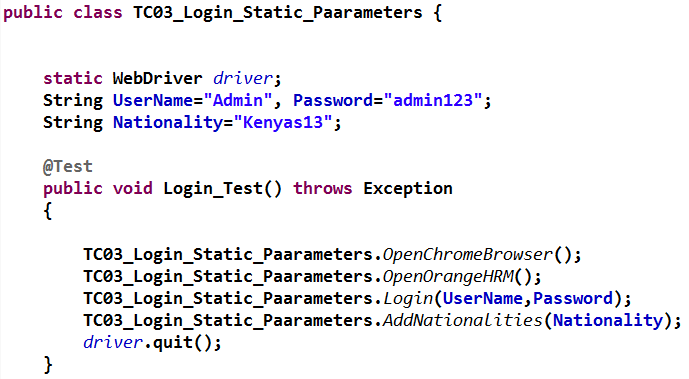
**TC02\_Login\_Static.java**

* **We need to avoid lot of code lines in the main @Test**
* **Simply anybody can easily understand summary of the main Test**
* **Static methods will be called classname.methodname**
* **If a method name contain static keyword , that method will be called as Static method**





**TC03\_Login\_Static\_Paarameters.java**



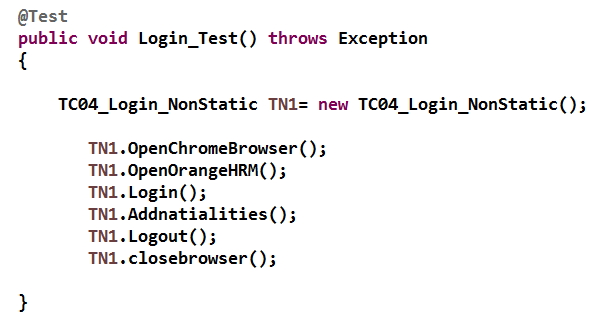
Global variables / Global Declaration

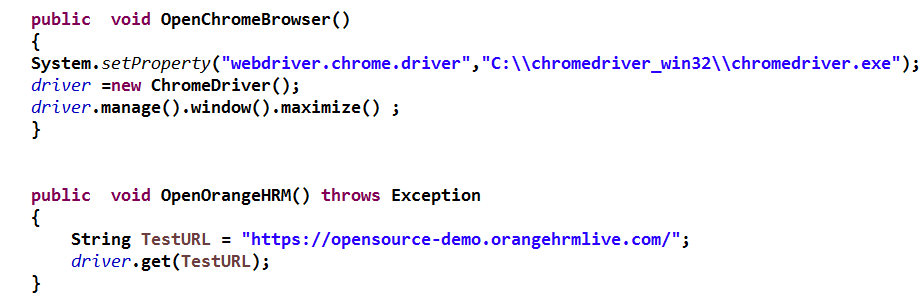


**TC04\_Login\_NonStatic.java**

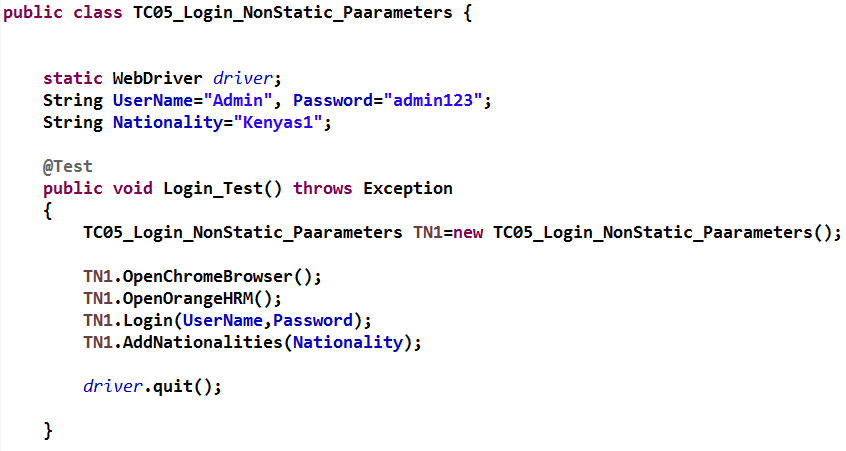
* **If a method name is without static , that method will be called as Non Static method**
* **Non Static methods will be called like 🡪 Object. Method name**
* **In this class we will see , How to create an object**

TN1 is an Object

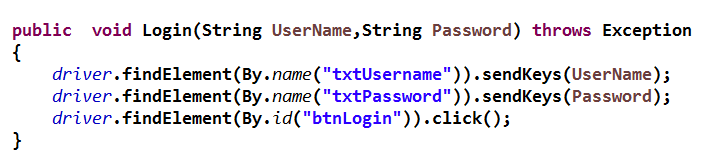




**TC05\_Login\_NonStatic\_Paarameters.java**



Global variables / Global Declaration



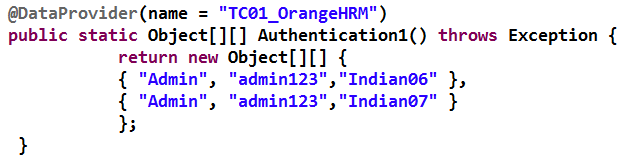
Data Provider provides the Test data to the test

This is an advance concept in selenium

**Package Name:** TestNG\_DataProvider\_Lab1

TC02\_Login\_Static\_Paarameters🡪 testng.xml

@Data Provider



@Test

@Test(dataProvider="TC01\_OrangeHRM")

**public** **void** Login\_Test(String UserName,String Password,String Nationality)

**Package Name:** TestNG\_DataProvider\_Lab2

TC02\_Login\_Static\_Paarameters🡪 testng.xml

@DataProvider

|  |  |  |
| --- | --- | --- |
| Username | **Password** | **Nationality** |
| Admin | admin123 | Indian56 |
| Admin | admin123 | Indian57 |

C:\Users\Sudhakar\Desktop\TC01.xlsx

**@Test**

@Test(dataProvider="TC01\_OrangeHRM")

**public** **void** Login\_Test(String UserName,String Password,String Nationality)

**Data driven framework: Data provider, TestNG.xml**

**Package Name:** TestNG\_DataProvider\_Lab3

TC02\_Login\_Static\_Paarameters.java🡪 testng.xml

@DataProvider

C:\Users\Sudhakar\Desktop\TC02.xlsx

|  |  |  |  |
| --- | --- | --- | --- |
| Browser | **Username** | **Password** | **Nationality** |
| FireFox | Admin | admin123 | Indian56 |
| Chrome | Admin | admin123 | Indian57 |

**@Test**

First Iteration executes on Firefox Browser

Second Iteration executes on Chrome Browser

**Package Name:**TestNG\_Parameters

TC02\_Login\_Static\_Paarameters1.java🡪testng1.xml

<parameter name=*"* Browser1*"* value=*"*Chrome*"*/>

<parameter name=*"* UserName1*"* value=*"*Admin*"*/>

<parameter name=*"* Password1*"* value=*"*admin123*"*/>

<parameter name=*"* Nationality1*"* value=*"*Indian555*"*/>

testng1.xml

@Parameters({"Browser1","UserName1","Password1","Nationality1"})

**@Test**

**public** **void** Login\_Test(String Browser,String UserName,String Password,String Nationality)

**Package Name :** Reporter\_Example

TestExanple.java🡪 testng.xml

So far, we are checking output in the console

Log will be generated in emailable-report.html

Execution Reach? FAIL /PASS

TestExanple1.java🡪 testng1.xml

@BeforeTest

@Test

@AfterTest

TestExanple2.java🡪 testng2.xml

@parameters

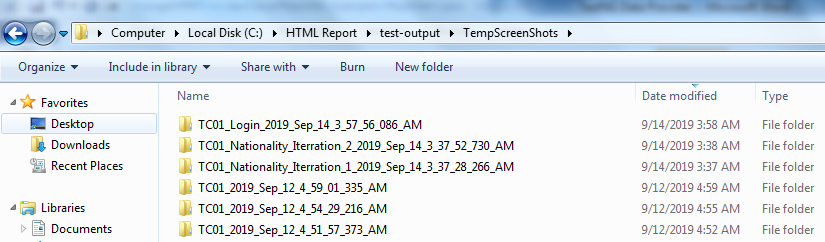
@BeforeTest <parameter name=*"Browser"* value=*"Chrome"*/>

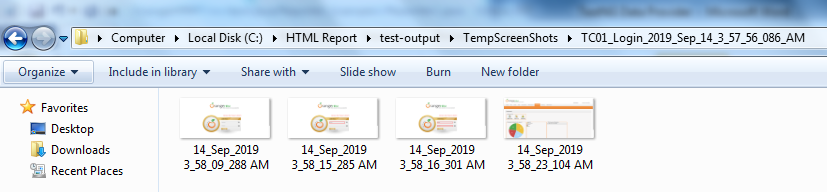
@Test

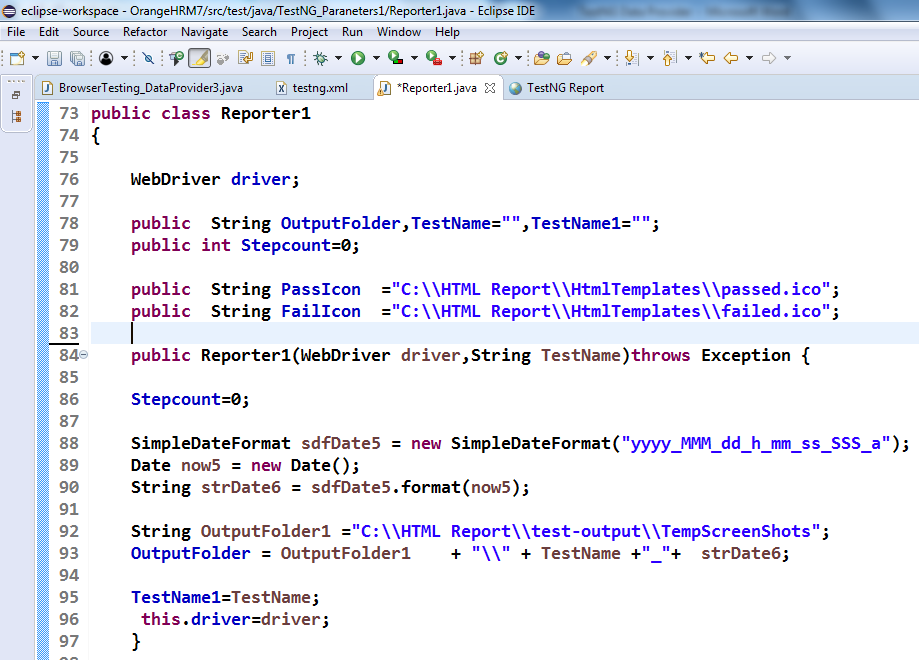
@AfterTest

**Package Name :** Reporter\_Example1

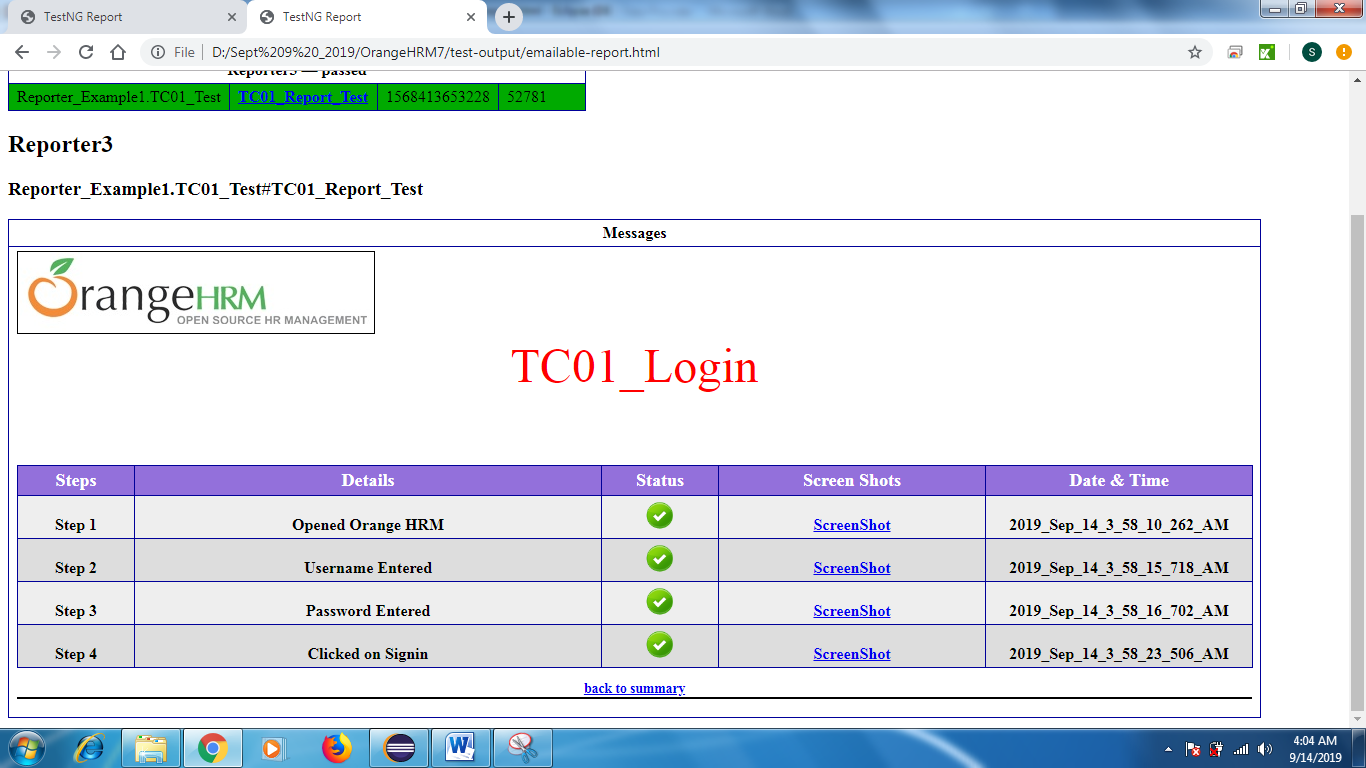
TC01\_Test.java🡪 testng.xml











**Package :** TestNG\_Paraneters1

BrowserTesting\_DataProvider3🡪testng.xml

@Parameters({"Browser"}) testng.xml

<parameter name=*"Browser"* value=*"Chrome"*/>

@BeforeTest

@DataProvider

|  |  |  |
| --- | --- | --- |
| Username | **Password** | **Nationality** |
| Admin | admin123 | Indian56 |
| Admin | admin123 | Indian57 |

C:\Users\Sudhakar\Desktop\TC01.xlsx

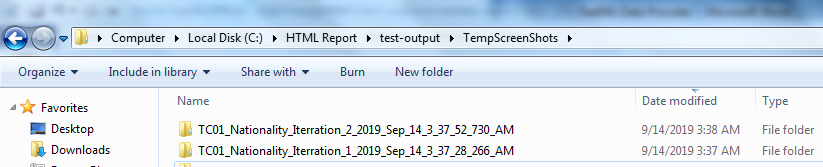
**@Test**

**@AfterTest**

driver.quit();



[**http://bhavasri.com/reports.html**](http://bhavasri.com/reports.html) **-In First Class Demo class**

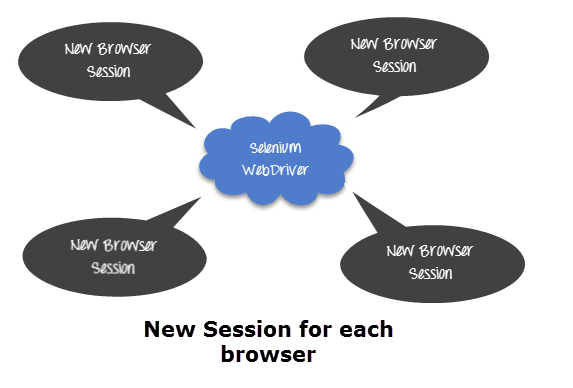


**ParallelMethods : Methods will be executed in parallel of a java class file**

**ParallelClasses - multiple java Classes will be executed in parallel**

**ParallelTests - Tests will be executed in parallel as defined in TestNG.xml**

TC01\_update Address\_Employee



TC01\_Add\_Nationality

TC01\_Add\_Employee

## Test Case order and Dependency

You can set order and dependency of[Test Case](https://www.guru99.com/test-case.html)execution.

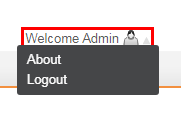
**Package Name:**Waits

**Even though our program is correct, sometimes program execution will be failed, Because of performance issue in the application (Orange HRM).**

**Web Elements will be loaded slowly in the HTML page**

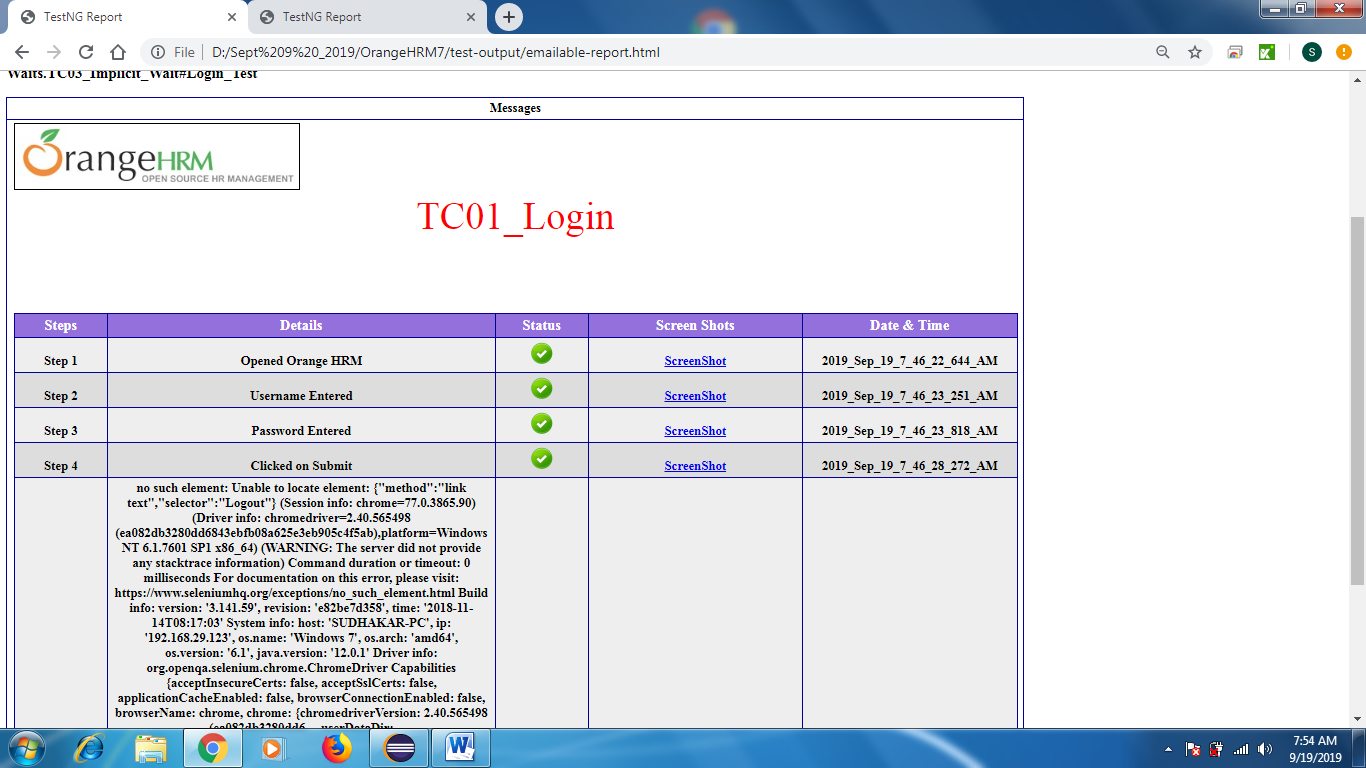
1. **After clicking on Welcome,** Logout **web element is loading slowly in the html page.**
2. **Driver is unable to find that web element in the html page ,during the execution/run time**

*driver.findElement*(By.*linkText*("Logout")).click();

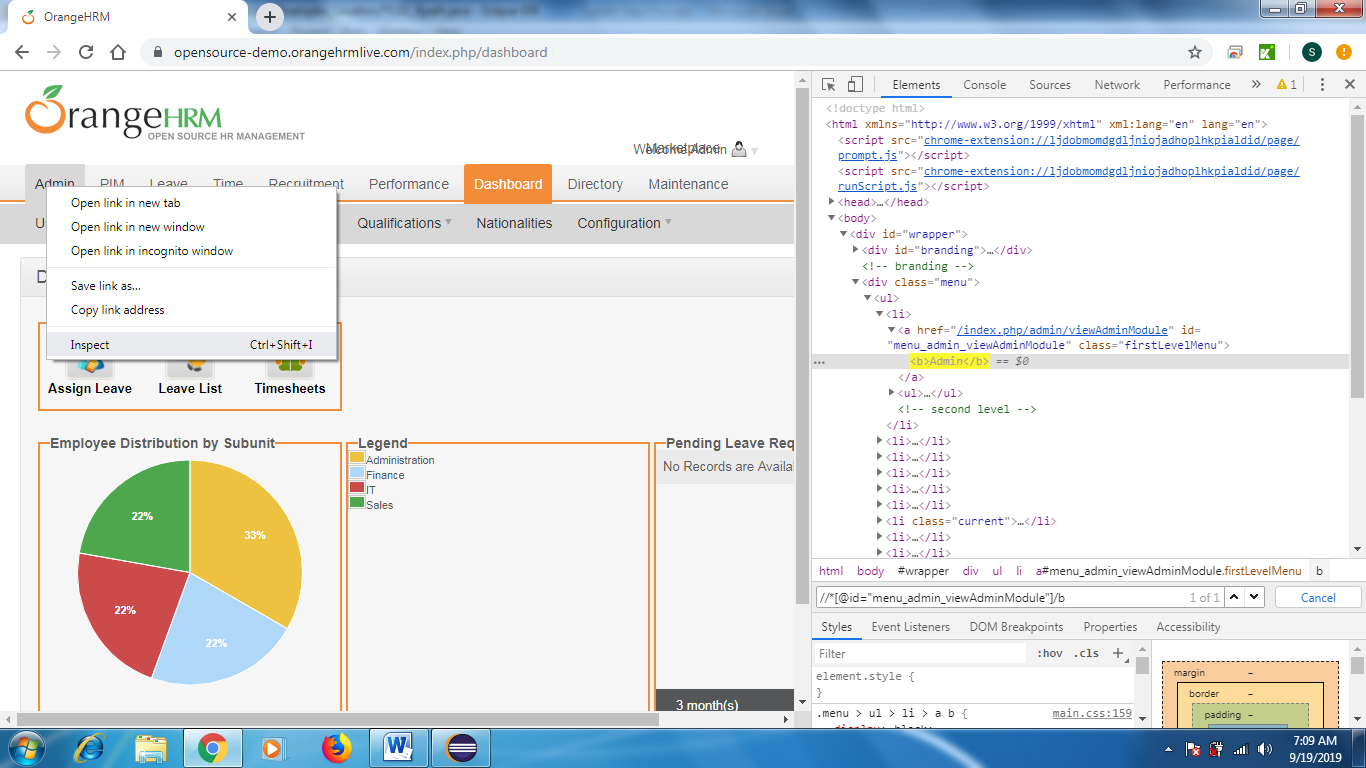


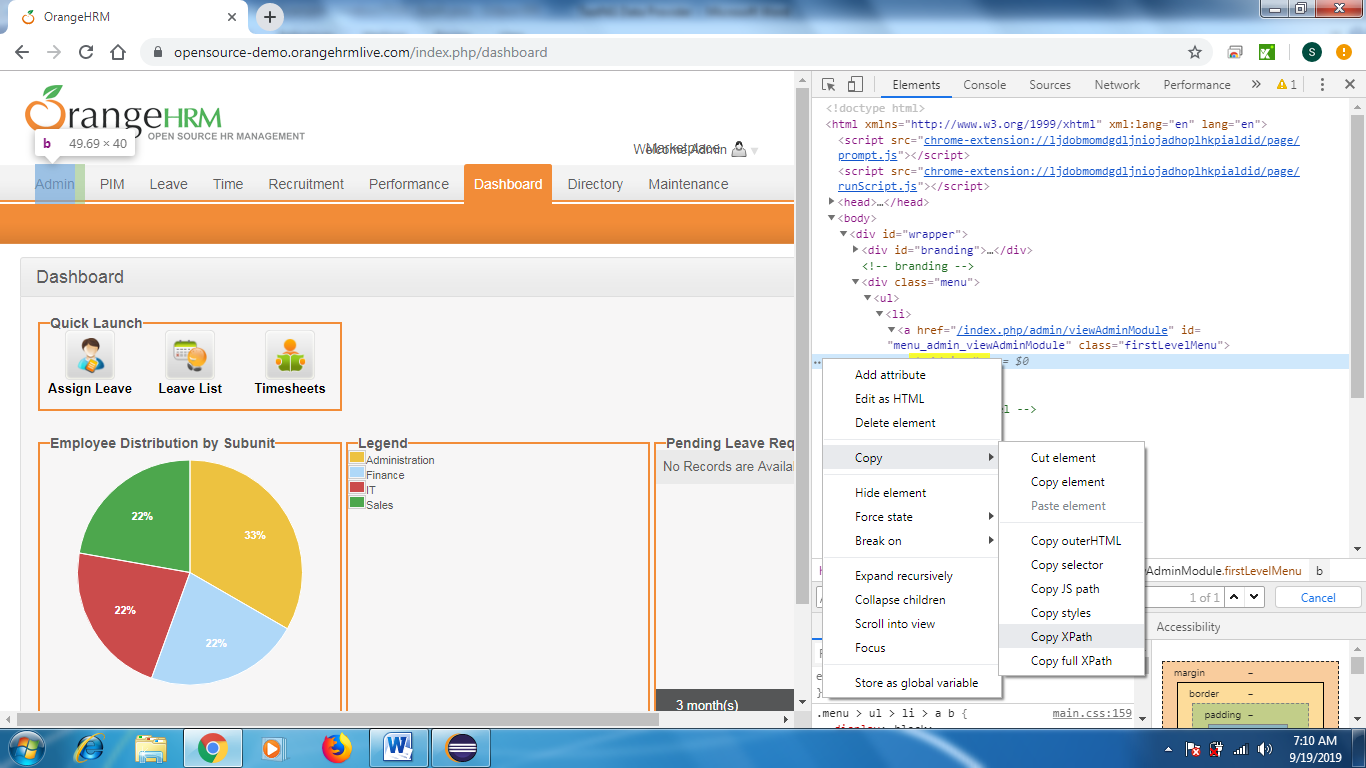
1. org.openqa.selenium.**NoSuchElementException**: no such element: Unable to locate element: {"method":"link text","selector":"Logout"}

|  |
| --- |
| **Implicit Wait :**  **Driver will wait max 30 seconds only, when Web element is loading in a HTML page.**  *driver*.manage().timeouts().implicitlyWait(30, TimeUnit.***SECONDS***); |
| **Explicit Wait:**  **Driver will wait for specific web element until specified time**  WebDriverWait wait= new WebDriverWait(driver,60);  wait.until(ExpectedConditions.visibilityOfElementLocated(By.id("welcome"))) ; |
| **Fluent Wait**  **Driver will wait for specific web element until specified time and**  **In that Driver search for that Web element for every 20 seconds.**  WebDriverWait wait2= new WebDriverWait(driver,60);  wait2.pollingEvery(20,TimeUnit.SECONDS);  wait2.until(ExpectedConditions.visibilityOfElementLocated(By.id("welcome"))) ; |

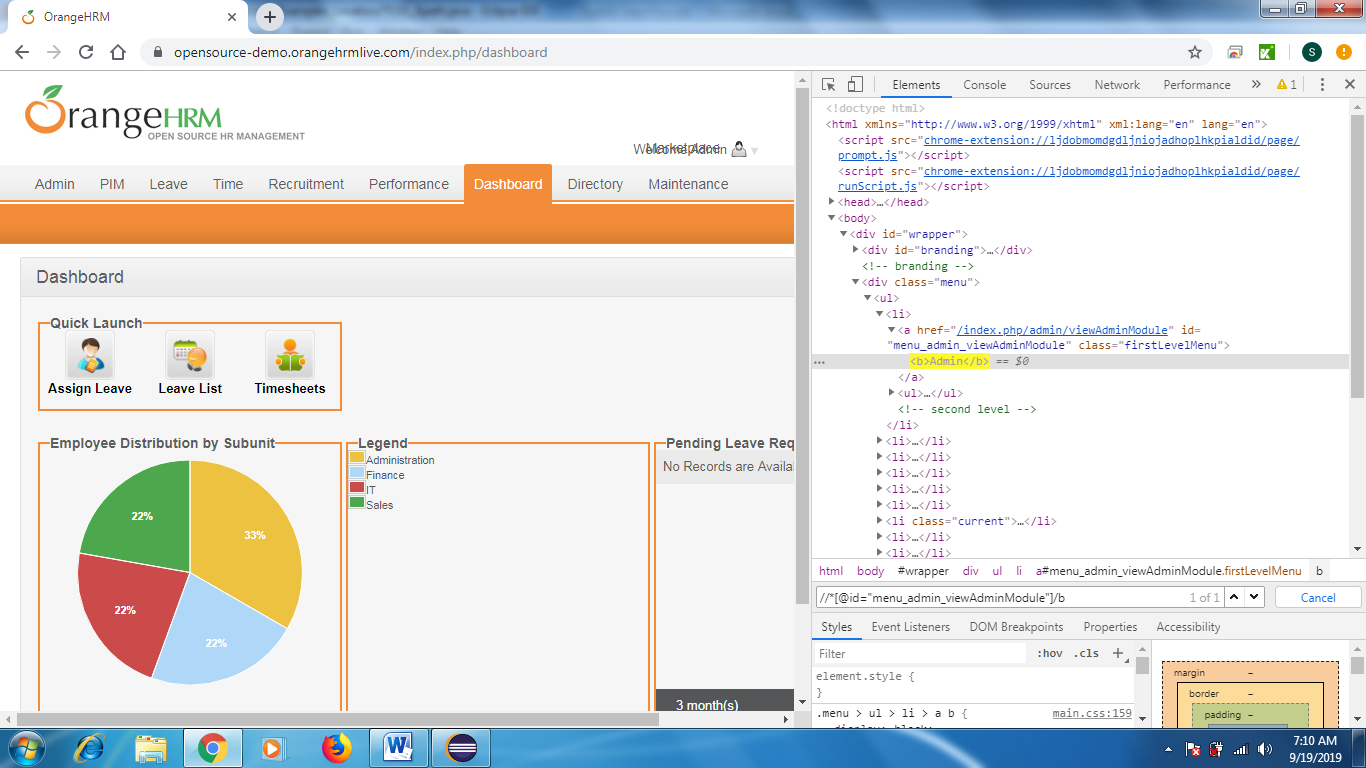


**XPATH**





**Xpath is correct only when 1 of 1 is displayed**



|  |  |  |  |
| --- | --- | --- | --- |
| **Project Work: Page Object Model + Data Driven framework** | | | |
| Page Object Model:  For each web page, write corresponding methods in a java file. This concept is known as Page Object Model | | | |
|  | **Web Page** | **Java** | **Methods/Operations** |
|  | **Login Page** | **Login.java** | openOrangeHRM(String TestURL)  OrangeHRMlogin(String UserName,String Password)  OrangeHRMSigninClick() |
|  | **Nationality Page** | **Nationality**  **.java** | AddNationalityDetails(String Nationality ) |
|  | **HomePage** | **HomePage**  **.java** | Logout() |
|  | **Employee Page** | **Employee.java** | **Add Employee()**  **Modify Employee()** |
| TC01\_Add\_Nationality.java  Step 1  @BeforeTest  driver = TestBrowser.OpenChromeBrowser();  @Test  Login l1 = **new** Login();  l1.Login(driver, R1);  l1.openOrangeHRM(TestURL);  l1.OrangeHRMlogin(UserName, Password);  Step 2  l1.OrangeHRMSigninClick();  Nationality Nati = **new** Nationality();  Nati.Nationality(driver, R1);  Nati.AddNationalityDetails(NationalityText);  @AfterTest  Step 3  HomePage HM= new HomePage(driver, R1);  HM.Logout();  TestBrowser.CloseBrowser(driver); | | | |
|  | | | |

|  |
| --- |
| TC01\_Add\_Employee.java  Step 1  @BeforeTest  driver = TestBrowser.OpenChromeBrowser();  @Test  Login l1 = **new** Login();  Step 2  l1.Login(driver, R1);  l1.openOrangeHRM(TestURL);  l1.OrangeHRMlogin(UserName, Password);  l1.OrangeHRMSigninClick();  Employee emp = **new** Employee();  emp.Employee(driver, R1);  emp.addEmpdetails(String FirstName,  String MiddleName,String LastName,String Id )  Step 3  @AfterTest  HomePage HM= new HomePage(driver, R1);  HM.Logout();  TestBrowser.CloseBrowser(driver); |
|  |

**TC01\_Priority\_Order.java**

|  |  |
| --- | --- |
| **Priority Indicates execution order in a java class file** | **Execution Order** |
| @Test(priority=1)  **public** **void** Test1\_OpenChromeBrowser() | **1-PASS** |
| @Test(priority=2)  **public** **void** Test2\_OpenOrangeHRM() | **2-PASS** |
| @Test(priority=3)  **public** **void** Test3\_Login() | **3-PASS** |
| @Test(priority=4)  **public** **void** Test4\_Addnatialities() | **4-PASS** |
| @Test(priority=5)  **public** **void** Test5\_Logout() | **5-PASS** |
| @Test(priority=6)  **public void** Test6\_closebrowser() | **6-PASS** |

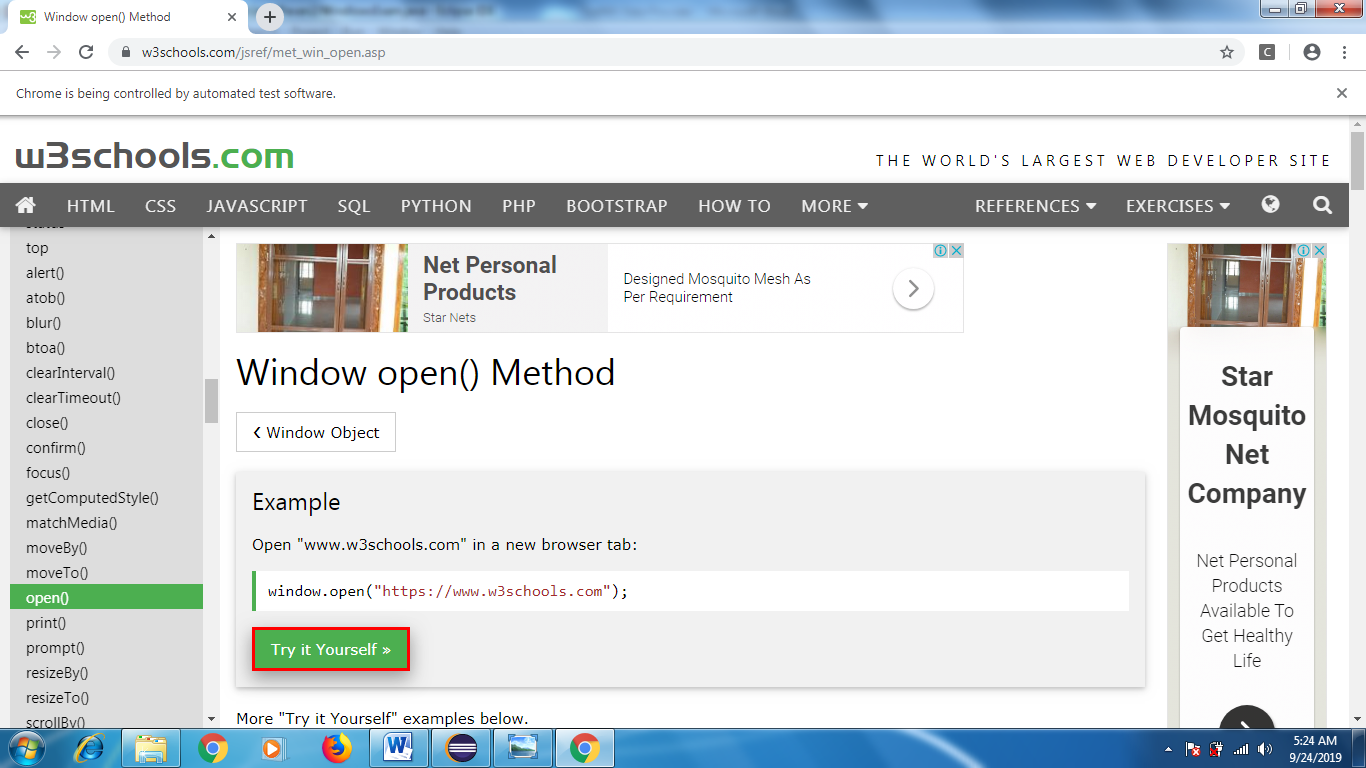
**TC02\_Without\_Priority.java**

|  |  |
| --- | --- |
| **Tests will be executed based on Alphabetical order** | **Execution Order** |
| @Test  **public** **void** Test1\_OpenChromeBrowser() | **1-PASS** |
| @Test  **public** **void** Test2\_OpenOrangeHRM() | **2-PASS** |
| @Test  **public** **void** Test3\_Login() | **3-PASS** |
| @Test  **public** **void** Test4\_Addnatialities() | **4-PASS** |
| @Test  **public** **void** Test5\_Logout() | **5-PASS** |
| @Test  **public void** Test6\_closebrowser() | **6-PASS** |

**TC03\_Change\_MethodName.java**

|  |  |
| --- | --- |
| **Tests will be executed based on Alphabetical order** | **Execution Order** |
| @Test  **public** **void** Test1\_OpenChromeBrowser() | **1-PASS** |
| @Test  **public** **void** Test99\_OpenOrangeHRM() | **No Run** |
| @Test  **public** **void** Test3\_Login() | **2- Failed** |
| @Test  **public** **void** Test4\_Addnatialities() | **No Run** |
| @Test  **public** **void** Test5\_Logout() | **No Run** |
| @Test  **public void** Test6\_closebrowser() | **No Run** |

**Multiple\_Windows**





|  |
| --- |
| FileInputStream fis = new FileInputStream(xlFilePath);  XSSFWorkbook workbook = new XSSFWorkbook(fis);  XSSFSheet sheet = workbook.getSheet(sheetName);  XSSFRow row = sheet.getRow(1);  XSSFCell cell = row.getCell(0);  String str6=cell.getStringCellValue();  TC02\_Excel\_Test\_xlsx eat=**new** TC02\_Excel\_Test\_xlsx();    TestURL=eat.getCellData("C://HTML Report//OrangeHRM6//TC01\_Nationality1.xlsx","Sheet1",1,0);  UserName=eat.getCellData("C://HTML Report//OrangeHRM6//TC01\_Nationality1.xlsx","Sheet1",1,1);  Password=eat.getCellData("C://HTML Report//OrangeHRM6//TC01\_Nationality1.xlsx","Sheet1",1,2); |

|  |  |
| --- | --- |
|  |  |
| Window1 - driver | Window2 ( Youtube) |
| Google  **Youtube** | Add |
|  |  |

Driver.switchTO.window( 2) ;

Driver.switchTO.window( 1) ;

aas