**Selenium**

**Automation Testing:**

To test the application we have , we use different tools like Selenium framework(provides predefined cases ) .To test applications we need to write test cases. Selenium framework test selenium web applications and online web services i.e online banking, amazon etc.

**Selenium web applications**:

If user sent a request to server to access user related data, then server generates response by processing a request.

Example:

To open the browser we must use some predefined classes in selenium i.e WEBDRIVER OBJECT classes we created web driver object. For that we download one executed file ‘chrome.driver’. in D drive for struts 2 and created subfolder selenium, in that we have chrome driver which is exe file i.e executable file. when exe file is executed then chrome opens.

Now to test an application Gmail type its URL by using **get** method. As QA tester, we check whether username and password is valid or not. When user sign ups for gmail by their information. It connects to database and stores user given password and username.

BY is pre defined class, from that we have taken ‘id’ which is email created by goggle chrome. **sendkeys** method sets the data into text field. When we select click() then data verification takes place internally by selenium. we need not write that stuff which is an advantage for selenium framework.(verifying data when clicked on click() button by using predefined objects).

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

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

import org.openqa.selenium.chrome.ChromeDriver;

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

import java.util.List;

import org.openqa.selenium.firefox.\*;

import java.util.concurrent.

public class myClass

{

public static void main(String[] args)

{

//initialize Chrome driver

System.setProperty("webdriver.chrome.driver", "d:\\struts2\\Selenium\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

//Open gmail

driver.get("http://www.gmail.com");

// Enter userd id

WebElement element = driver.findElement(By.id("Email"));

element.sendKeys("chandraaab@gmail.com");

//wait 5 secs for userid to be entered

driver.manage().timeouts().implicitlyWait(5, TimeUnit.SECONDS);

//Enter Password

WebElement element1 = driver.findElement(By.id("Passwd"));

element1.sendKeys("hanihani1603");

//Submit button

element.submit();

WebElement myDynamicElement = (new WebDriverWait(driver, 15)).until(ExpectedConditions.presenceOfElementLocated(By.id("gbg4")));

driver.findElement(By.id("gbg4")).click();

//press signout button

driver.findElement(By.id("gb\_71")).click();

}

}

Create Libraries folder and input jar files for selenium

Example:

Hyperlink is ink to another page.

Reference of any field presented in page we have by.id and by.name. In this example we have By.name , you can see it by selecting any field right click and select ‘inspect’ which takes us to that path.

We use **‘boolean’** to teat cases if they r true or false

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

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

import org.testng.annotations.Test;

public class RegisterTest

{

@Test //This is TestNG annotation

public void testRegister()

{

//WebDriver driver = new FirefoxDriver();

System.setProperty("webdriver.chrome.driver","d:\\struts2\\Selenium\\chromedriver.exe");

WebDriver driver = new ChromeDriver();

driver.get("http://newtours.demoaut.com/");

driver.findElement(By.linkText("REGISTER")).click();

driver.findElement(By.name("firstName")).sendKeys("User1234");

driver.findElement(By.name("lastName")).sendKeys("Surname12");

driver.findElement(By.name("phone")).sendKeys("134567890");

driver.findElement(By.name("userName")).sendKeys("user12347@test.com");

driver.findElement(By.name("address1")).sendKeys("Test Address");

driver.findElement(By.name("city")).sendKeys("Test City");

Select select = new Select(driver.findElement(By.name("country")));

select.selectByVisibleText("INDIA");

driver.findElement(By.name("email")).sendKeys("user12345@test.com");

driver.findElement(By.name("password")).sendKeys("user12347");

driver.findElement(By.name("confirmPassword")).sendKeys("user12345");

driver.findElement(By.name("register")).click();

//driver.close();

//driver.quit();

}

public static void main(String args[])

{

RegisterTest rt=new RegisterTest();

rt.testRegister()

}

}

**J unit test:**

When we need to test any application, then we have to create a logic which is represented by **@test**. System identifies that test case is written as an annotation.

import org.junit.Before;

import org.junit.Test;

public class Junittest

{

@Before

public void beforeTest()

{

System.out.println("Running before test");

}

@Test

public void junitTest()

{

System.out.println("Running Junit test");

}

**Object:** allocated memory for class

To read data or value From excel sheet we have predefined class named **‘fileinputStream’**