Selenium Introduction

1. Selenium is a free (open source) automated testing suite for web applications across different browsers, platforms and programming languages.
2. Selenium can be easily deployed on platforms such as Windows, Linux, Solaris and Macintosh. Moreover, it supports for mobile applications like iOS and android.
3. Languages supported by Selenium include C#, Java, Perl, PHP, Python and Ruby.
4. Browsers supported by Selenium include Internet Explorer, Mozilla Firefox, Google Chrome and Safari.
5. Automation testing covers both functional and performance test on an application.

Selenium Features

1. Selenium is a free (open source) automated testing suite for web applications across different browsers, platforms and programming languages.
2. Selenium IDE provides a playback and record feature for authoring tests without the need to learn a test scripting language.
3. It helps testers to record their actions and export them as a reusable script with a simple- to-understand and easy-to-use interface.
4. It also supports parallel test execution which reduces time and increases the efficiency of tests.
5. Selenium can be integrated with frameworks like Ant and Maven for source code compilation, and can be integrated with testing frameworks like TestNG for application testing and generating reports.
6. Selenium requires fewer resources as compared to other automation test tools.
7. Selenium web driver does not require server installation, test scripts interact directly with the browser.

Selenium IDE

1. Selenium Integrated Development Environment (IDE) is the simplest framework in the Selenium suite and is the easiest one to learn.
2. It is a Firefox/Chrome plugin that you can install as easily as you can with other plugins.
3. However, because of its simplicity, Selenium IDE should only be used as a prototyping tool.
4. Selenium IDE is implemented as Firefox extension which provides record and playback functionality on test scripts.
5. It allows testers to export recorded scripts in many languages like HTML, Java, Ruby, RSpec, Python, C#, JUnit and TestNG. You can use these exported script in Selenium RC or Webdriver.

Selenium IDE-Installation

1. Open Selenium official website
   seleniumhq.org
   (https://www.selenium.dev/)
2. Then click on Download Section.
3. In the webpage search for Selenium IDE and click on Chrome to install Google Chrome plug-in or click on Firefox to install Firefox Plug-in.
4. Restart you browser, go to the top right corner on your browser and look for the Selenium IDE icon.
5. Click on that icon to launch Selenium IDE.

Selenium IDE-Features

1. Very easy to use and install.
2. No programming experience is requied.
3. Export tests to different programming languages.

Selenium IDE-Limitations

1. Available in only Firefox and Chrome.
2. Designed only to create prototypes of tests.
3. Test execution is slow.

Selenium Webdriver

1. Selenium WebDriver is the most important component of Selenium Tool's Suite.
2. The initial version of Selenium i.e Selenium v1 consisted of only IDE, RC and Grid. Selenium WebDriver was first introduced as a part of Selenium v2.0. However, with the release of Selenium v3, RC has been deprecated and moved to legacy package.
3. In WebDriver, test scripts can be developed using any of the supported programming languages and can be run directly in most modern web browsers. Languages supported by WebDriver include C#, Java, Perl, PHP, Python and Ruby.
4. Selenium Web driver is most popular with Java and C#.
5. Selenium WebDriver performs much faster as compared to Selenium RC because it makes direct calls to the web browsers. RC on the other hand needs an RC server to interact with the browser.
6. Selenium uses drivers, specific to each browser in order to establish a secure connection with the browser without revealing the internal logic of browser's functionality.

7. WebDriver is supporting dynamic web pages where elements of a page may change without the page itself being reloaded.
8. The more pain while doing automation is the handling Javascripts alerts & prompts. The WebDriver very verse with handle the Javascript alerts, prompts and handling multiple frames, multiple browser windows.

Selenium WebDriver-

- Features Multiple
- Browser Support
  Multiple Languages
  Support
- Speed
- Simple Commands

Selenium WebDriver- Installation

- Download and Install Java
- Download and Configure Eclipse
- IDE Download Selenium
- WebDriver Java Client Configure
  Selenium WebDriver

Selenium WebDriver Configuration

- **Step:1** Launch Eclipse IDE and create a java project as "SeleniumClasses". Then create a class under this project. We will write our first Selenium test script in the "BrowserDemo" file under the "SeleniumClasses" test suite.
- **Step:2** In the second step you have to download driver based on the browser. For example geckodriver for firefox, chromedriver for googlechrome, iedriverserver for internetexplorer. You can download
- these file from the official website of selenium.
  Step:3 Visit Selenium Official Website (https://www.selenium.dev/)

and then click on download tab and based on your requirement download any driver related to your Operating System.
Step:4 Open class which we are created in step 1 and write the code which you want to

//InternetExplorer

System.setProperty("webdriver.ie.driver",
"E:\\Softwares\\IEDriverServer.exe"); WebDriver driver = new

```
InternetExplorerDriver(); driver.manage().window().maximize();
driver.get("http://google.com");
System.out.println(driver.getTitle());
System.out.println(driver.getCurrentUrl());
```

```
//GoogleChrome
System.setProperty("webdriver.chrome.driver",
"E:\\Softwares\\ChromeDriver.exe");
WebDriver driver2 = new ChromeDriver();
driver2.manage().window().maxi
mize();
driver2.get("http://google.com");
System.out.println(driver2.getTitle
());
System.out.println(driver2.getCurr
entUrl());
```

```
//Firefox
System.setProperty("webdriver.gecko.driver",
"E:\\Softwares\\geckodriver.exe");
WebDriver driver3 = new InternetExplorerDriver();
driver.manage().window().maximize();
driver3.get("http://google.com");
System.out.println(driver3.getTitle
());
System.out.println(driver3.getCurr
entUrl());
```

1. In selenium, we use **System.setProperty("name","value")** method because the browser doesn't have a built-in server to run the automation code so you will need a Chrome/IE/Gecko(according to requirement) driver server for communicating your Selenium code to the browser. In this method we have to pass two parameters, first parameter is name of the browser which we want to connect and second parameter is the path of the related driver which we have downloaded in **Step 3.**

For example System.setProperty("webdriver.ie.driver", "E:\\Softwares\\SeleniumDrivers\\IEDriverServer.exe");

1. In the next step we have created a browser object to access and to perform some operations on that browser. **WebDriver** defines common methods which all browser classes (such as Firefox, Chrome etc.,) use. All these class methods are derived from WebDriver interface.

For example WebDriver driver = new InternetExplorerDriver();

2. The WebDriver provides the window interface for setting up the browser window size, state, and so on. When we call the **maximize()** method, the browser window will be maximized from normal or minimized state.
   For example **driver.manage().window().maximize();**
3. If we want to open a specific URL on that browser we will use **get()** method. In that method we have to pass the specific URL.
   For example **driver.get("http://google.com");**
4. If we want to get current page title we wil use **driver.gettitle()** method and if we want to get current page URL we will use **driver.getCurrentUrl()** method.

Locating Web Elements

- It is an address that identifies a web element (say Text Box, Buttons, Check Boxes etc) uniquely with in the web page.
- Identification of correct elements is a prerequisite to creating an automation script. But accurate identification of elements is more difficult than it sounds.
- We have 8 element Locators to recognise Web Elements. The choice of locator depends largely on your Application Under Test. Those are:

1. **By Id:** Locates element using id attribute of the web element. WebElement element = driver.findElement(By.**id**("elementId"));
2. **By className:** Locates the web element using className attribute. WebElement element = driver.findElement(By.**className**("elementsClass"));
3. **By tagName:** Locates the web element using its html tag like div, a, input etc. WebElement element = driver.findElement(By.**tagName**("a"));
4. **By name:** Locates the web element using name attribute. WebElement element =

driver.findElement(By.**name**("male"));

5. **By linkText:** Locates the web element of link type using their text. WebElement element = driver.findElement(By.**linkText**("Click Here"));
6. **By partialLinkText:** Locates the web element of link type with partial matching of text.
   WebElement element = driver.findElement(By.**partialLinkText**("Click"));
7. **By cssSelector:** Locates the web element using css its CSS Selector patterns WebElement element = driver.findElement(By.**cssSelector**("div#elementId"));
8. **By xpath:** Locates the web element using its XPaths
   WebElement element = driver.findElement(By.**xpath**("//div[@id='elementId']"));

- we prefer using **id** because id of elements are generally unique. But there can be scenarios where we might not have id attributes of web elements, also other locators like name, className might not fetch the unique required web element. In those scenarios, we should use **cssSelector** and **xpath** locators.
- The **sendKeys()** method is used to enter the specified value in the textbox.
- driver.findElement(By.**cssSelector**("div#elementId")).**sendKeys**("TestSel enium "); **Click()** method is used to click on the web element present on the web page. driver.findElement(By.**linkText**("Click Here")).**click**();

```
System.setProperty("webdriver.chrome.driver",
"E:\\Drivers\\chromedriver.exe"); WebDriver driver = new ChromeDriver();
driver.manage().window().maximize();
driver.get("http://fb.com");

driver.findElement(By.id("email")).sendKeys("000000000");
driver.findElement(By.name("pass")).sendKeys("password");
driver.findElement(By.className("inputtext")).sendKeys("abcd@gmail.com");
driver.findElement(By.tagName("input")).sendKeys("000000000");
driver.findElement(By.partialLinkText("Forgotten")).click();
driver.findElement(By.linkText("Forgotten Password?")).click();
driver.findElement(By.cssSelector("#u_0_q")).sendKeys("00000000000");
driver.findElement(By.xpath("//*[@id=\"reg_pages_msg\"]/a")).click();
```

Selenium WebDriver Commands

Here we will learn some of the basic selenium commands for performing operations like opening a URL, clicking on buttons, writing in textbox, closing the browser etc.

Browser Commands

- **get() method:** The driver.get() method is used to navigate to a web page by passing the string URL as parameter.
  driver.get("http://facebook.com");
- **getTitle() method:** In WebDriver, this method fetches the title of the current web page. System.out.println(driver.getTitle());
- **getCurrentUrl() method:** In WebDriver, this method fetches the string representing the Current URL of the current web page.
  System.out.println(driver.getCurrentUrl());
- **close() method:** The driver.close() command is used to close the browser having focus. driver.close();
- **quit() method:** The driver.quit command is used to close all the browser instances open. driver.quit();

Navigation Commands

- **navigate().to() method:** The driver.navigate().to() method does the task of opening a web page like driver.get() method.
  driver.navigate().to("http://youtube.com");
- **navigate().back() method:** Selenium provides navigate().back() command to move backwards in the browser's history.
  driver.navigate().back();
- **navigate().forward() method:** Selenium provides navigate().forward() command to move forward in a browser.
  driver.navigate().forward();
- **navigate().refresh() method:** It is used to refresh a page in Selenium WebDriver. driver.navigate().refresh();
- **sendKeys(Keys.F5) method:** It is used to refresh a page in Selenium

WebDriver on any textbox on the webpage
driver.findElement(By.id("id123")).sendKeys(Keys.F5);

WebElement Commands

- **click() method:** The click() method in Selenium is used to perform the click operation on web elements.
  driver.findElement(By.id("button1")).click();
- **sendKeys() method:** The sendKeys() method can be used for writing in a textbox or any element of text input type.
  driver.findElement(By.id("firstname")).sendKeys("Abhishek");
- **clear() method:** The clear() method can be used to clear the text written in a textbox or any web element of text input type.
  driver.findElement(By.name("surname")).clear();
- **getText() method:** In automation, many a times we need to fetch the text written over a web element for performing some assertions or debugging. For this, we have getText() method in selenium webDriver.
  driver.findElement(By.id("email")).getText();
- **isDisplayed() method:** If the element is displayed it will return TRUE otherwise it will return FALSE.
  driver.findElement(By.id("UserName")).isDisplayed();
- **isEnabled() method:** It is used to test whether the element is enabled to perform some action or not.
  driver.findElement(By.id("UserName")).isEnabled();
- **isSelected() method:** It will display TRUE if the element is selected otherwise it will print FALSE.
  driver.findElement(By.id("Sex-Male")).isSelected()
- ; **submit() method:** It will submit the webpage to the server.
  driver.findElement(By.id("SubmitButton")).submit()
  ;

```
System.setProperty("webdriver.chrome.driver",
"E:\\Drivers\\chromedriver.exe"); WebDriver driver = new ChromeDriver();
driver.manage().window().maximize();

driver.get("file:///C:/Users/user/Desktop/Selenium.html")
 ; System.out.println(driver.getTitle());
 System.out.println(driver.getCurrentUrl());
```

```
driver.findElement(By.xpath("xpath1"));
driver.close
();
driver.quit()
;
driver.navigate().to("https://googl
e.com"); Thread.sleep(10000);
driver.navigate().back();
Thread.sleep(5000);
driver.navigate().forward();
driver.navigate().refresh();
driver.findElement(By.xpath("hello")).sendKeys("90529
38526"); Thread.sleep(5000);
driver.findElement(By.xpath("hello")).clear();
System.out.println(driver.findElement(By.id("heading2")).getText());
System.out.println(driver.findElement(By.id("selenium")).isDisplayed());
System.out.println(driver.findElement(By.id("b2")).isEnabled());
System.out.println(driver.findElement(By.id("male")).isSelected());
```

Handling Textboxes in Selenium

1. Basically a textbox is an input tag and will accept character sequence.
2. Input boxes refer to either of these two types:
   - Text Fields- text boxes that accept typed values and show them as they
   - are. Password Fields- text boxes that accept typed values but mask them as a series of special characters (commonly dots and asterisks) to avoid sensitive values to be displayed.
3. We need to use **sendKeys()** method to enter data into textbox after identifying the webelement on the webpage.
   driver.findElement(By.id("name")).sendKeys("gsdhfgdfsd");
4. To clear the textbox we can use **clear()** method of selenium.
   driver.findElement(By.id("name")).clear();
5. We can retrieve value which we have typed or already typed in text box. It will be useful when we want to verify if correct value is typed or to know existing value in text box. To retrieve value from text box, we need to use **getAttribute("value")** method.
   driver.findElement(By.id("name")).getAttribute("value");

6. We can also get the type of the text box. For this purpose we use **getAttribute("type")** method.

```
driver.findElement(By.id("name")).getAttribute("ty
pe");
```

```
System.setProperty("webdriver.chrome.driver", "E:\\Drivers\\chromedriver.exe");
WebDriver driver = new ChromeDriver();
driver.manage().window().maximize();

driver.get("file:///C:/Users/user/Desktop/Selenium.htm
l"); WebElement name =
driver.findElement(By.id("name"));
name.sendKeys("ratnam");
driver.findElement(By.id("pwd")).sendKeys("ratnam");
name.clear();
System.out.println(name.getAttribute("value"));
System.out.println(name.getAttribute("type"));
```

Handling Alerts / PopUps in Selenium

1. Alert is a small message box which displays on-screen notification to give the user some kind of information or ask for permission to perform certain kind of operation. It may be also used for warning purpose.
2. Selenium WebDriver provides three methods to accept and reject the Alert depending on the Alert types.
3. We need to use **accept()** to click on the 'Ok' button of the alert. driver.switchTo().alert().accept();
4. We can use **dismiss()** to click on the 'Cancel' button of the alert. driver.switchTo().alert().dismiss();
5. We need to use **getText()** to capture the alert message. driver.switchTo().alert().getText();
6. We can use **sendKeys("Text")** to send some data to the alert box. driver.switchTo().alert().sendKeys("Text");

```
System.setProperty("webdriver.chrome.driver", "E:\\Drivers\\chromedriver.exe");
WebDriver driver = new ChromeDriver();
driver.manage().window().maximize();

driver.get("                    ");
```

```
driver.findElement(By.id("file")).click();
driver.findElement(By.id("file")).sendKeys(" "); Thread.sleep(3000);
 driver.switchTo().alert().accept();
 driver.switchTo().alert().dismiss();
 System.out.println(driver.switchTo().alert().getT
 ext());
 driver.switchTo().alert().sendKeys("0000000");
 driver.switchTo().alert().accept();

 Alert alertbox = driver.switchTo().alert();
 alertbox.sendKeys("000000000");
 alertbox.accept();
```

Handling Dropdown in Selenium

1. The 'Select' class in Selenium WebDriver is used for selecting an option in a dropdown. The objects of Select type can be initialized by passing the dropdown webElement as parameter to its constructor.
2. To perform any action, the first task is to identify the element group. I am saying it a group, as DropDown /Multiple Select is not a single element. They always have a single name but and they contain one or more than one element in them.
   Select dropdown = new Select(driver.findElement(By.name("country")));
3. WebDriver provides three ways to select an option from the drop-down menu.
4. We can use **selectByIndex()** to select an option based on its index, beginning with 0. dropdown.selectByIndex(5);
5. We need to use **selectByValue()** to select an option based on its 'value' attribute. dropdown.selectByValue("India");
6. We can use **selectByVisibleText()** to select an option based on the text over the option. dropdown.selectByVisibleText("Database Testing");
7. We can use **getOptions( )** to get the all options belonging to the Select tag. It takes no parameter and returns List<WebElements>.

```
List <WebElement> options =
dropdown.getOptions(); int
size=options.size();
System.out.pri
ntln(size);
for(int i =0;
```

i<size ; i++){
String optValue = options.get(i).getText();
System.out.println(optValue);

```
package anything;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.Select;
public class dropDown {
	public static void main(String[] args) throws InterruptedException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://rahulshettyacademy.com/AutomationPractice/");
//		print text
		Thread.sleep(5000);

System.out.println(driver.findElement(By.xpath("/html/body/h1")).getText());
//		Redio Button
		Thread.sleep(5000);

driver.findElement(By.xpath("//*[@id=\"radio-btn-example\"]/fieldset/label[2]/input")
).click();
//		 sendkeys
		Thread.sleep(5000);
		WebElement rat = driver.findElement(By.id("autocomplete"));
		rat.sendKeys("ratnamam");
		System.out.println(rat.getAttribute("value"));
		System.out.println(rat.getAttribute("type"));
//		 click on check box

		 WebElement check = driver.findElement(By.name("checkBoxOption2"));
		 check.click();

//		 drodown
		 Thread.sleep(5000);
		 Select drop = new
Select(driver.findElement(By.id("dropdown-class-example")));
		 drop.selectByValue("option3");
		 List<WebElement> list=drop.getOptions();
		 int size=list.size();
	    System.out.println(size);
//		 Alerts
		 Thread.sleep(5000);
		 driver.findElement(By.id("name")).sendKeys("rat");
		WebElement alert = driver.findElement(By.id("alertbtn"));
		String text = alert.getText();
```

```
            System.out.println(text);
            alert.click();
            System.out.println(driver.switchTo().alert().getText());
            Thread.sleep(5000);
            driver.switchTo().alert().dismiss();

      }

}================================================================================
```

Handling Tables in Selenium

1. Below tags are generally defined
   - in html tables : 'table' tag defines HTML table.
   - 'tbody' tag defines a container for rows and
   - columns. 'tr' defines rows in an HTML table.
   - 'td'/'th' define the column of an HTML table.
2. First get the entire HTML table and store this in a variable of type web element. WebElement htmltable=driver.findElement(By.xpath("//*[@id='main']/table[1]/tbody"));
3. Get all the rows with tag name 'tr' and store all the elements in a list of web elements. Now all the elements with tag 'tr' are stored in 'rows' list. List<WebElement> rows=htmltable.findElements(By.tagName("tr"));

```
package anything;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
public class Table_handling {
      public static void main(String[] args) throws InterruptedException {
            System.out.println("R-Testing Tools – Manual & Automation Testing");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
            ChromeDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
//          url
            driver.get("https://rahulshettyacademy.com/AutomationPractice/");
//     rows xpath
            List<WebElement> rows =
driver.findElements(By.xpath("//*[@id=\"product\"]/tbody/tr"));
            int rowscount = rows.size();
            System.out.println(rowscount);
//          Colunm xpath
            List<WebElement> colunms =
driver.findElements(By.xpath("//*[@id=\"product\"]/tbody/tr[1]/th"));
            int colunmcount = colunms.size();
            System.out.println(colunmcount);
             for(int i = 1; i <=1; i++) {
```

```
                        for(int j = 1; j<=columnmcount; j++) {
System.out.println(driver.findElement(By.xpath("//table[@id=\"product\"]/tbody/tr["+i
+"]/th["+j+"]")).getText()+ " ");
                        }
                        System.out.println();
                }
                for(int  i = 2; i<rowscount; i++) {
                        for(int j = 1; j<=columnmcount; j++) {

System.out.println(driver.findElement(By.xpath("//table[@id=\"product\"]/tbody/tr["+i
+"]/td["+j+"]")).getText()+" ");
                        }
                        System.out.println();
                }
        }

}
```

Handling iFrames in Selenium

1. IFrame is a web page which is embedded in another web page or an HTML document embedded inside another HTML document.
2. The IFrame is often used to insert content from another source, such as an advertisement, into a Web page.
3. We cannot detect the frames by just seeing the page or by inspecting.
4. We can identify the iframes using methods given below:
   - Right click on the element, If you find the option like 'This Frame', 'view Frame source' or "Reload Frame' then it is an iframe.
   - Right click on the page and click 'View Page Source' and Search with the 'iframe', if you can find any tag name with the 'iframe' then it is meaning to say the page consisting an iframe.
5. We can even identify total number of iframes by using below snippet. int size = driver.findElements(By.tagName("iframe")).size();
6. Basically, we can switch over the elements in frames using 2 ways.
7. **Switch to the frame by index :** Index is one of the attributes for the Iframe through which we can switch to it. Index of the iframe starts with '0'. driver.switchTo().frame(0);
8. **Switch to the frame by Name or ID :** Name and ID are attributes of iframe through which we can switch to the frame. driver.switchTo().frame("iframe1");
9. **Switch back to the Main Frame :** To move back to the parent frame, you can either use switchTo().parentFrame() or if you want to get back to the main (or

most parent) frame, you can use switchTo().defaultContent();
driver.switchTo().parentFrame();
driver.switchTo().defaultContent();

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class iframe {

	public static void main(String[] args) {

		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://asdfghjk.com/");

//		Frames
		driver.switchTo().frame(0);
	   WebElement card= driver.findElement(By.name("cardnumber"));
	  card.sendKeys("0000000000000000");
	  //date
	  WebElement
date=driver.findElement(By.xpath("//*[@id=\"root\"]/form/div/div[2]/span[2]/span/span
/input"));
	  date.sendKeys("00/00");
	  //cvv
	  WebElement
cvv=driver.findElement(By.xpath("//*[@id=\"root\"]/form/div/div[2]/span[3]/span/span/
input"));
	  cvv.sendKeys("000");

	  driver.switchTo().defaultContent();
	  driver.findElement(By.xpath("//button[text()='Pay 5']")).click();


	}

}
```

Handle Multiple Windows/Tabs in Selenium

1. On an HTML page, a link can open up in a new window/tab.
2. There is only one way you can get multiple windows via Selenium web driver,

that is by clicking on a link that opens the page in a new browser window.

3. Selenium web driver keeps a track of how many windows it opened during a session.
4. Window handle is a unique string value that uniquely identifies a Browser window on desktop. It is guaranteed that each browser will have a unique window handle.
5. To get Window handle WebDriver interface provides two methods – getWindowHandle(), getWindowHandles().
6. **getWindowHandle() :** method return a string value and it returns the Window handle of current focused browser window.
7. **getWindowHandles() :** method returns a set of all Window handles of all the browsers that were opened in the session.
8. There is a concept of current focused window which means that all selenium webdriver commands will go to the focused window. By default the focus is always on the Parent window.
9. **WebDriver.SwitchTo().window(String windowHandle) :** This command takes in a window handle and switches the driver context on that window. Once the Switch happens all the driver commands will go to the newly focused window. This is very important to understand, without switching to the desired window we wil not be able to perform any action on that window.
10. **WebDriver.Close() :** command will close the current window on which the focus is present. This can be used to close windows selectively. Just switch to the window that you want to close by using the correct Window handle and the call the WebDriver.close command.

WebDriver.quit() : command will close all the windows opened in the session. This

```
package anything;

import java.util.Set;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Window_Handling {

	public static void main(String[] args) throws InterruptedException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
```

```
		//		URl

driver.get("https://www.hyrtutorials.com/p/window-handles-practice.html");

		//		Window handling

		JavascriptExecutor jse = (JavascriptExecutor) driver;
		jse.executeScript("window.scrollBy(0,200)");
		Thread.sleep(10000);
		String parentwindowhandle = driver.getWindowHandle();
		System.out.println("parent window handle" + parentwindowhandle);
		WebElement search = driver.findElement(By.id("newWindowBtn"));
		String text = search.getText();
		System.out.println(text);
		search.click();
//		JavascriptExecutor jse = (JavascriptExecutor) driver;
//		jse.executeScript("arguments[0].click()", search);
		Set<String> windowhales = driver.getWindowHandles();
		for(String windowhandle : windowhales) {
			if(!windowhandle.equals(parentwindowhandle)) {
				driver.switchTo().window(windowhandle);
				driver.manage().window().maximize();
				WebElement test =
driver.findElement(By.xpath("//*[@id=\"Blog1\"]/div[1]/div/div[1]/div[1]/div/h1"));
				String ss = test.getText();
				System.out.println(ss);
				driver.close();
			}

		}
		Thread.sleep(10000);
		driver.switchTo().window(parentwindowhandle);
	}

}
```

/=======================Tabe Handling===============

```
package anything;

import java.util.Set;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class tabHandling {

	public static void main(String[] args) throws InterruptedException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		//		URl
```

```
driver.get("https://www.hyrtutorials.com/p/window-handles-practice.html");

		//		Window handling
		JavascriptExecutor jse = (JavascriptExecutor) driver;
		jse.executeScript("window.scrollBy(0,300)");
		Thread.sleep(10000);
		String parentwindowhandle = driver.getWindowHandle();
		System.out.println("parent window handle" + parentwindowhandle);
		WebElement search = driver.findElement(By.id("newTabBtn"));
		String text = search.getText();
		System.out.println(text);
		search.click();
//		JavascriptExecutor jse = (JavascriptExecutor) driver;
//		jse.executeScript("arguments[0].click()", search);
		Set<String> windowhales = driver.getWindowHandles();
		for(String windowhandle : windowhales) {
			if(!windowhandle.equals(parentwindowhandle)) {
				driver.switchTo().window(windowhandle);
				driver.manage().window().maximize();
				WebElement test =
driver.findElement(By.xpath("//*[@id=\"Blog1\"]/div[1]/div/div[1]/div[1]/div/h1"));
				String ss = test.getText();
				System.out.println(ss);
				driver.close();
			}

		}
		Thread.sleep(10000);
		driver.switchTo().window(parentwindowhandle);
	}

}
```

Mouse Click

1. Actions class is an ability provided by Selenium for handling keyboard and mouse events.
2. In Selenium WebDriver, handling these events includes operations such as drag and drop, clicking on multiple elements with the control key.
3. The following are the most commonly used keyboard and mouse events provided by the Actions class.

```
package anything;
import org.openqa.selenium.By;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.interactions.Actions;
public class Mouse_Action {
	public static void main(String[] args) throws InterruptedException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
```

```
            driver.get("https://nxtgenaiacademy.com/");
            Thread.sleep(5000);
            Actions mouse = new Actions(driver);
            mouse

.moveToElement(driver.findElement(By.xpath("//*[@id=\"menu-item-4131\"]/a/span")))

.moveToElement(driver.findElement(By.xpath("//*[@id=\"menu-item-4157\"]/a")))

.moveToElement(driver.findElement(By.xpath("//*[@id=\"menu-item-4134\"]/a/span")))
            .click()
            .perform();
      }}
```

How to Find All Broken links using Selenium

Broken links or URLs that are not reachable. They may be down or not

functioning due to some server error.

2. You should always make sure that there are no broken links on the site because the

use Should not an d into an error page.

3. Manual checking of links is a tedious task, because each webpage may have a large number of links & manual process has to be repeated for all pages.
4. Collect all the links in the web page based on **<a>** tag.

c5ou.rsSaryend **HTTP request** for the link and read **HTTP response** code.

6. Find out whether the link is valid or broken based on HTTP response code.
7. Repeat this for all the links captured.
8. There are different HTTP status codes which are having different purposes.
9. An URL will always have a status with **2xx** which is valid.
10. For an invalid request, HTTP status is **4xx** and **5xx**.
11. 4xx class of status code is mainly for client side error, and 5xx class of status codes is mainly for the server response error.
12. We will most likely be unable to confirm if that link is working or not until we click and confirm it.

1O3pe.nIdentify all links in a webpage and store them in List.

List<WebElement> links = driver.findElements(By.tagName("a"));

14. Obtain Iterator to traverse through the List. Iterator it = links.iterator();
15. Now the most important part is to check in the links are working. Here I will introduce to you a Class from Java, called **HttpURLConnection** class. This class is used to make HTTP requests to the webserver hosting the links extracted
16. Consider an air ticket booking application. The color of booked and available seats are different. Red represents the booked seats, and available seats are represented by green. So, for verifying whether a seat is booked or available, QAs need to fetch the attribute (color) value through the test script. Once the status of the seat is verified, only then can QAs verify further test scenarios.

```
package anything;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class broken_Links {

	public static void main(String[] args) {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://www.mercurytravels.co.in/");

		List<WebElement> links = driver.findElements(By.tagName("a"));
		int ss = links.size();
		System.out.println(ss);
		for(WebElement link:links) {
			System.out.println(link.getText() + " " +
link.getAttribute("href"));
		}

	}

}
```

==========

Practice Code

Alerts:

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class alerts {

	public static void main(String[] args) throws InterruptedException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://rahulshettyacademy.com/AutomationPractice/");
//		print text
		Thread.sleep(5000);

System.out.println(driver.findElement(By.xpath("/html/body/h1")).getText());
//		Redio Button
		Thread.sleep(5000);

driver.findElement(By.xpath("//*[@id=\"radio-btn-example\"]/fieldset/label[2]/input")
).click();
//		 sendkeys
		Thread.sleep(5000);
		WebElement rat = driver.findElement(By.id("autocomplete"));
		rat.sendKeys("ratnamam");
		System.out.println(rat.getAttribute("value"));
		System.out.println(rat.getAttribute("type"));
//		 click on check box

		 WebElement check = driver.findElement(By.name("checkBoxOption2"));
		 check.click();
//		 Alerts
		 Thread.sleep(5000);
		 driver.findElement(By.id("name")).sendKeys("rat");
		WebElement alert = driver.findElement(By.id("alertbtn"));
		String text = alert.getText();
		System.out.println(text);
		alert.click();

		System.out.println(driver.switchTo().alert().getText());
		Thread.sleep(5000);

		driver.switchTo().alert().accept();
	}

}
```

Brokenlinks:

```
package anything;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class broken_Links {

	public static void main(String[] args) {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://www.mercurytravels.co.in/");

		List<WebElement> links = driver.findElements(By.tagName("a"));
		int ss = links.size();
		System.out.println(ss);
		for(WebElement link:links) {
			System.out.println(link.getText() + " " +
link.getAttribute("href"));
		}

	}

}
```

DropDown:

```
package anything;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.Select;

public class dropDown {

	public static void main(String[] args) throws InterruptedException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://rahulshettyacademy.com/AutomationPractice/");
//		print text
		Thread.sleep(5000);
```

```
System.out.println(driver.findElement(By.xpath("/html/body/h1")).getText());
//            Redio Button
              Thread.sleep(5000);

driver.findElement(By.xpath("//*[@id=\"radio-btn-example\"]/fieldset/label[2]/input")
).click();
//             sendkeys
              Thread.sleep(5000);
              WebElement rat = driver.findElement(By.id("autocomplete"));
              rat.sendKeys("ratnamam");
              System.out.println(rat.getAttribute("value"));
              System.out.println(rat.getAttribute("type"));
//             click on check box

               WebElement check = driver.findElement(By.name("checkBoxOption2"));
               check.click();

//             drodown

               Thread.sleep(5000);
               Select drop = new
Select(driver.findElement(By.id("dropdown-class-example")));
               drop.selectByValue("option3");
               List<WebElement> list=drop.getOptions();
               int size=list.size();
            System.out.println(size);

//             Alerts
               Thread.sleep(5000);
               driver.findElement(By.id("name")).sendKeys("rat");
              WebElement alert = driver.findElement(By.id("alertbtn"));
              String text = alert.getText();
              System.out.println(text);
              alert.click();

              System.out.println(driver.switchTo().alert().getText());
              Thread.sleep(5000);
              driver.switchTo().alert().dismiss();

       }

}
```

Iframes:

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class iframe {

       public static void main(String[] args) {
```

```
            System.out.println("R-Testing Tools - Manual & Automation Testing");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
            ChromeDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
            driver.get("https://asdfghjk.com/");

//          Frames
            driver.switchTo().frame(0);
          WebElement card= driver.findElement(By.name("cardnumber"));
        card.sendKeys("00000000000000000");
        //date
        WebElement
date=driver.findElement(By.xpath("//*[@id=\"root\"]/form/div/div[2]/span[2]/span/span
/input"));
        date.sendKeys("00/00");
        //cvv
        WebElement
cvv=driver.findElement(By.xpath("//*[@id=\"root\"]/form/div/div[2]/span[3]/span/span/
input"));
        cvv.sendKeys("000");

        driver.switchTo().defaultContent();
        driver.findElement(By.xpath("//button[text()='Pay 5']")).click();


      }

}
```

IsDisplayed:

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Isdisplayed {

      public static void main(String[] args) throws InterruptedException {
            System.out.println("All the best to all become a quality asurence");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
            ChromeDriver driver = new ChromeDriver();
            driver.manage().window().maximize();

//           enter url
            driver.get("https://demo.automationtesting.in/Register.html");
            System.out.println(driver.getTitle());

            String sss = "Register";
            if (driver.getTitle().equalsIgnoreCase(sss)) {
                  System.out.println("chrome is opened");
            }else {
                  System.out.println("chrome is not open");
```

```
		}

	WebElement ee =
driver.findElement(By.xpath("//*[@id=\"header\"]/div/div/div/div[2]/h1"));
	boolean s = ee.isDisplayed();
	if(s) {
		System.out.println("Validate");
	}else {
		System.out.println("not validate");
	}
	System.out.println(ee.getText());
	Thread.sleep(10000);
// isSelected methode

	WebElement button = driver.findElement(By.id("submitbtn"));
	button.click();
	if(button.isSelected()) {
		System.out.println("yes it's working");
	}else {
		System.out.println("Not working");
	}
	}

}
```

```
package anything;
```

JavaexcutorScript:

```
import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class JavaexcutorScript {

	public static void main(String[] args) {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();

		WebElement drop = driver.findElement(By.id(""));
		JavascriptExecutor jse = (JavascriptExecutor) driver;
		jse.executeScript("arguments[0].click()", drop);

	}

}
```

Locators:

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.chrome.ChromeDriver;

public class Locators {
```

```
	public static void main(String[] args) throws InterruptedException {
		System.out.println("All the best to all become a quality asurence");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();

//		 enter url
		driver.get("https://demo.automationtesting.in/Register.html");

		driver.findElement(By.id(""));
		driver.findElement(By.name(""));
		driver.findElement(By.className(""));
		driver.findElement(By.xpath(""));
		driver.findElement(By.tagName(""));
		driver.findElement(By.linkText(""));
		driver.findElement(By.cssSelector(""));
		driver.findElement(By.partialLinkText(""));


		Thread.sleep(10000);
		driver.close();
	}

}
```

Mouse Actions:

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.interactions.Actions;

public class Mouse_Action {

	public static void main(String[] args) throws InterruptedException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://nxtgenaiacademy.com/");


		Thread.sleep(5000);
		Actions mouse = new Actions(driver);
		mouse

.moveToElement(driver.findElement(By.xpath("//*[@id=\"menu-item-4131\"]/a/span")))

.moveToElement(driver.findElement(By.xpath("//*[@id=\"menu-item-4157\"]/a")))

.moveToElement(driver.findElement(By.xpath("//*[@id=\"menu-item-4134\"]/a/span")))
		.click()
		.perform();
```

```
	}

}
```

MultiCheckBox:

```
package anything;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class MultipleCheckBox_Click {
	public static void main(String[] args) throws InterruptedException {
		System.out.println("All the best to all become a quality asurence");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();

//		 enter url
		driver.get("https://www.hyrtutorials.com/p/basic-controls.html");
//
driver.get("https://fs2.formsite.com/meherpavan/form2/index.html?1537702596407");

		JavascriptExecutor jse = (JavascriptExecutor) driver;
		jse.executeScript("window.scrollBy(0, 500)");
		Thread.sleep(2000);

		List<WebElement> checks =
driver.findElements(By.xpath("//input[@type=\"checkbox\"]"));
		int size = checks.size();
		System.out.println(size);
		for(int i = 0; i <size; i++) {
		 checks.get(i).click();
		}

		Thread.sleep(5000);
		driver.close();
	}

}
```

Navigation Method:

```
package anything;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebElement;
```

```
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.Select;

public class Navigation {

	public static void main(String[] args) throws InterruptedException {
		System.out.println("Welcome to selenium automation testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		String url = "https://demo.automationtesting.in/Register.html";

		driver.get(url);

//		Condition
		String text = "Register";
		if(driver.getTitle().equalsIgnoreCase(text)) {
			System.out.println("Oh get title is matched");
		}else {
			System.out.println("Oh get title is not matched");
		}
		WebElement send = driver.findElement(By.xpath("//*[@placeholder=\"First
Name\"]"));
		boolean b =  send.isDisplayed();
		if(b) {
			System.out.println("its working");
		}else {
			System.out.println("not working");
		}
		send.sendKeys("Ratnam");
		System.out.println("The first name is: " + " " +
send.getAttribute("value"));
		System.out.println("The type value is: " + " " +
send.getAttribute("type"));

		//  Secand way
		Thread.sleep(10000);


driver.findElement(By.xpath("//*[@id=\"basicBootstrapForm\"]/div[1]/div[2]/input")).s
endKeys("gera");

//		JavascriptExecutor j = (JavascriptExecutor) driver;
//		Thread.sleep(5000);
//		j.executeScript("window.scrollBy(0,500)");
//		Thread.sleep(5000);

//		Sub Branch (Navigation)
		driver.navigate().forward();
		driver.get("https://rahulshettyacademy.com/AutomationPractice/");
//		Thread.sleep(5000);

System.out.println(driver.findElement(By.xpath("/html/body/h1")).getText());
//		Redio Button
```

```
            Thread.sleep(5000);

driver.findElement(By.xpath("//*[@id=\"radio-btn-example\"]/fieldset/label[2]/input")
).click();
//             sendkeys
//            Thread.sleep(5000);
              WebElement rat = driver.findElement(By.id("autocomplete"));
              rat.sendKeys("ratnamam");
              System.out.println(rat.getAttribute("value"));
              System.out.println(rat.getAttribute("type"));
//             click on check box

              WebElement check = driver.findElement(By.name("checkBoxOption2"));
              check.click();

//            drodown

//             Thread.sleep(5000);
              Select drop = new
Select(driver.findElement(By.id("dropdown-class-example")));
              drop.selectByValue("option3");
              List<WebElement> list=drop.getOptions();
              int size=list.size();
           System.out.println(size);

//             Alerts
//             Thread.sleep(5000);
              driver.findElement(By.id("name")).sendKeys("rat");
            WebElement alert = driver.findElement(By.id("alertbtn"));
            String text1 = alert.getText();
            System.out.println(text1);
            alert.click();

            System.out.println(driver.switchTo().alert().getText());
//          Thread.sleep(5000);
            driver.switchTo().alert().dismiss();

//     Main Branch
              driver.navigate().back();
          WebElement gun  =
driver.findElement(By.xpath("//*[@id=\"basicBootstrapForm\"]/div[2]/div/textarea"));
            gun.sendKeys("Guntur");
            System.out.println(gun.getAttribute("value"));
            System.out.println(gun.getAttribute("type"));

      }

}
```

ScreenShot:

```
package anything;

import java.io.File;
import java.io.IOException;
import java.util.List;
```

```
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.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class ScreenShot {

	public static void main(String[] args) throws InterruptedException,
IOException {
		System.out.println("R-Testing Tools – Manual & Automation Testing");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demo.automationtesting.in/Register.html");

		System.out.println(driver.getTitle());

		String sss = "Register";
		if (driver.getTitle().equalsIgnoreCase(sss)) {
			System.out.println("chrome is opened");
		}else {
			System.out.println("chrome is not open");
		}


		/*
		 We can also check if some text exists with the help of findElements
method with
		  xpath locator. Then we shall use the text() function to create a
customized xpath.
		  The findElements() method returns a list of elements. We shall use the
size() method
		  to verify if list size is greater than 0.

		 */
// Screen Shot

		  TakesScreenshot ss = (TakesScreenshot)driver;
		  File rr = ss.getScreenshotAs(OutputType.FILE);
		FileUtils.copyFile(rr, new
File("C:\\Users\\Ratnam\\Desktop\\srcfile\\photo.png"));
		System.out.println("Screen Shot was printed");

		  WebElement ee =
driver.findElement(By.xpath("//*[@id=\"header\"]/div/div/div/div[2]/h1"));
		System.out.println(ee.getText());

		// multiple text print with single locator
		List<WebElement> ww =
driver.findElements(By.xpath("//*[@class=\"col-md-3 col-xs-3 col-sm-3
control-label\"]"));
```

```
			int aa = ww.size();
			System.out.println(aa);
			for(int u = 0; u < aa; u++) {
				String dd = ww.get(u).getText();
				ww.get(2).click();
				System.out.println(dd);
			}

			Thread.sleep(5000);
//			driver.close();
	}

}
```

SendKeys:

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.Keys;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.Select;

public class Sendkeys {

	public static void main(String[] args) throws InterruptedException {


			/*
			 sendkeys in Selenium
		sendkeys() in Selenium is a method used to enter editable content in the
text and password
		fields during test execution. These fields are identified using locators
like name, class,
		id, etc. It is a method available on the web element. Unlike the type
method,
		sendkeys() method does not replace existing text in any text box.
			 */

			System.out.println("All the best to all become a quality asurence");
			System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
			ChromeDriver driver = new ChromeDriver();
			driver.manage().window().maximize();

			//			enter url
			driver.get("https://demo.automationtesting.in/Register.html");
			System.out.println(driver.getTitle());
			System.out.println(driver.getCurrentUrl());

			WebElement send = driver.findElement(By.xpath("//*[@placeholder=\"First
Name\"]"));
			boolean b =  send.isDisplayed();
			if(b) {
```

```
                System.out.println("its working");
            }else {
                System.out.println("not working");
            }
            send.sendKeys("Ratnam", Keys.ENTER);
            System.out.println("The first name is: " + " " +
send.getAttribute("value"));
            System.out.println("The type value is: " + " " +
send.getAttribute("type"));

            //  Secand way
            Thread.sleep(10000);


driver.findElement(By.xpath("//*[@id=\"basicBootstrapForm\"]/div[1]/div[2]/input")).s
endKeys("gera");

            JavascriptExecutor j = (JavascriptExecutor) driver;
            Thread.sleep(5000);
            j.executeScript("window.scrollBy(0,500)");
            Thread.sleep(5000);


            Select drop = new
Select(driver.findElement(By.xpath("//*[@id=\"msdd\"]")));
            drop.selectByIndex(10);
            JavascriptExecutor jse = (JavascriptExecutor) driver;
            jse.executeScript("arguments[0].click()", drop);
            //          driver.close();

      }

}
```

TabHandling:

```
package anything;

import java.util.Set;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class tabHandling {

      public static void main(String[] args) throws InterruptedException {
            System.out.println("R-Testing Tools – Manual & Automation Testing");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
            ChromeDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
            //          URl

driver.get("https://www.hyrtutorials.com/p/window-handles-practice.html");
```

```
//            Window handling

            JavascriptExecutor jse = (JavascriptExecutor) driver;
            jse.executeScript("window.scrollBy(0,300)");
            Thread.sleep(10000);
            String parentwindowhandle = driver.getWindowHandle();
            System.out.println("parent window handle" + parentwindowhandle);
            WebElement search = driver.findElement(By.id("newTabBtn"));
            String text = search.getText();
            System.out.println(text);
            search.click();
//          JavascriptExecutor jse = (JavascriptExecutor) driver;
//          jse.executeScript("arguments[0].click()", search);
            Set<String> windowhales = driver.getWindowHandles();
            for(String windowhandle : windowhales) {
                  if(!windowhandle.equals(parentwindowhandle)) {
                        driver.switchTo().window(windowhandle);
                        driver.manage().window().maximize();
                        WebElement test =
driver.findElement(By.xpath("//*[@id=\"Blog1\"]/div[1]/div/div[1]/div[1]/div/h1"));
                        String ss = test.getText();
                        System.out.println(ss);
                        driver.close();
                  }

            }
            Thread.sleep(10000);
            driver.switchTo().window(parentwindowhandle);
      }

}
```

Tablehandling:

```
package anything;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Table_handling {

      public static void main(String[] args) throws InterruptedException {
            System.out.println("Welcome to R-Testing Solutions +91 9966804142");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver-win32\\chromedriver-win32\\chromedriver.e
xe");
            WebDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
            driver.get("https://cosmocode.io/automation-practice-webtable/");

            Thread.sleep(5000);
//          pge down
```

```
			JavascriptExecutor js = (JavascriptExecutor)driver;
			js.executeScript("window.scrollBy(0,400)", "");
//			click on check boxs
			List<WebElement> ch =
driver.findElements(By.xpath("//*[@type=\"checkbox\"]"));
			int si = ch.size();
			System.out.println(si);
			for(int i = 0; i<si; i++) {
				ch.get(i).click();
			}
//			Identify the table
			WebElement table = driver.findElement(By.id("countries"));
//			Retrieve table data

			List<WebElement> rows = table.findElements(By.tagName("tr"));
//			using for eaach
			for(WebElement row: rows) {
//				verify the cells
				List<WebElement> cells = row.findElements(By.tagName("td"));
				for(WebElement cell: cells) {
					String text = cell.getText();
				 System.out.println(text);
//				 System.out.println(cell.getText());
				}
			}

		}
}
```

Text Validation

```
package anything;

import java.sql.Driver;
import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Text_validation {
public static void main(String[] args) throws InterruptedException {
		System.out.println("All the best to all become a quality asurence");
		System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
//		 enter url
		driver.get("https://demo.automationtesting.in/Register.html");
		System.out.println(driver.getTitle());

		String sss = "Register";
		if (driver.getTitle().equalsIgnoreCase(sss)) {
			System.out.println("chrome is opened");
		}else {
```

```
			System.out.println("chrome is not open");
		}
		/*
		 We can also check if some text exists with the help of findElements method
with
		  xpath locator. Then we shall use the text() function to create a customized
xpath.
		  The findElements() method returns a list of elements. We shall use the
size() method
		  to verify if list size is greater than 0.
		 */
		WebElement ee =
driver.findElement(By.xpath("//*[@id=\"header\"]/div/div/div/div[2]/h1"));
		System.out.println(ee.getText());

		// multiple text print with single locator
		List<WebElement> ww = driver.findElements(By.xpath("//*[@class=\"col-md-3
col-xs-3 col-sm-3 control-label\"]"));
		int aa = ww.size();
		System.out.println(aa);
		for(int u = 0; u < aa; u++) {
			String dd = ww.get(u).getText();
			System.out.println(dd);
		}

		Thread.sleep(5000);
//		driver.close();
}
}
```

Wait Commends:

```
package anything;


import java.time.Duration;

import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.WebDriverWait;

public class Waits {
	public static void main(String[] args) throws InterruptedException {
			System.out.println("All the best to all become a quality asurence");
			System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
			ChromeDriver driver = new ChromeDriver();
			driver.manage().window().maximize();
			driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(70));
			WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(130));
			driver.get("https://www.hyrtutorials.com/p/basic-controls.html");
```

```
wait.until(ExpectedConditions.visibilityOfAllElementsLocatedBy(By.xpath("//*[@id=\"ba
sicBootstrapForm\"]/div[1]/div[1]/input")));

            WebElement sendk =
driver.findElement(By.xpath("//*[@id=\"basicBootstrapForm\"]/div[1]/div[1]/input"));
            sendk.sendKeys("xysaaghjkl");
            System.out.println(sendk.getAttribute("value"));
            System.out.println(sendk.getAttribute("type"));


wait.until(ExpectedConditions.presenceOfAllElementsLocatedBy(By.xpath("//*[@id=\"basi
cBootstrapForm\"]/div[1]/div[1]/input")));
            WebElement send =
driver.findElement(By.xpath("//*[@id=\"basicBootstrapForm\"]/div[1]/div[1]/input"));
            send.sendKeys("rrrrrrr");
            System.out.println(send.getAttribute("value"));
            System.out.println(send.getAttribute("type"));
            Thread.sleep(5000);
      }
}
```

Windowhandling:

```
package anything;

import java.util.Set;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Window_Handling {

      public static void main(String[] args) throws InterruptedException {
            System.out.println("R-Testing Tools – Manual & Automation Testing");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
            ChromeDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
            //          URl

driver.get("https://www.hyrtutorials.com/p/window-handles-practice.html");

            //          Window handling

            JavascriptExecutor jse = (JavascriptExecutor) driver;
            jse.executeScript("window.scrollBy(0,200)");
            Thread.sleep(10000);



            String parentwindowhandle = driver.getWindowHandle();
            System.out.println("parent window handle" + parentwindowhandle);
            WebElement search = driver.findElement(By.id("newWindowBtn"));
```

```
			String text = search.getText();
			System.out.println(text);
			search.click();
//			JavascriptExecutor jse = (JavascriptExecutor) driver;
//			jse.executeScript("arguments[0].click()", search);
			Set<String> windowhales = driver.getWindowHandles();
			for(String windowhandle : windowhales) {
				if(!windowhandle.equals(parentwindowhandle)) {
					driver.switchTo().window(windowhandle);
					driver.manage().window().maximize();
					WebElement test =
driver.findElement(By.xpath("//*[@id=\"Blog1\"]/div[1]/div/div[1]/div[1]/div/h1"));
					String ss = test.getText();
					System.out.println(ss);
					driver.close();
				}

			}
			Thread.sleep(10000);
			driver.switchTo().window(parentwindowhandle);
		}

}
```

WindowScroling:

```
package anything;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class WindowScrooling {
	public static void main(String[] args) throws InterruptedException {
			System.out.println("All the best to all become a quality asurence");
			System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver_win32\\chromedriver.exe");
			ChromeDriver driver = new ChromeDriver();
			driver.manage().window().maximize();

//			 enter url
			driver.get("https://demo.automationtesting.in/Register.html");
			System.out.println(driver.getTitle());

			String sss = "Register";
			if (driver.getTitle().equalsIgnoreCase(sss)) {
				System.out.println("chrome is opened");
			}else {
				System.out.println("chrome is not open");
			}
//			window scrooling
			JavascriptExecutor jse = (JavascriptExecutor) driver;
			jse.executeScript("window.scrollBy(0, 1200)");
			Thread.sleep(2000);
```

```
		Thread.sleep(10000);

// isSelected method

		WebElement button = driver.findElement(By.id("submitbtn"));
//		String text = button.getText();
		System.out.println(button.getText());
		button.click();
		if(button.isDisplayed()) {
			System.out.println("yes it's working");
		}else {
			System.out.println("Not working");
		}
		Thread.sleep(2000);
		jse.executeScript("window.scrollBy(0, -100)");
		Thread.sleep(2000);
		jse.executeScript("window.scrollBy(100, -500)");

		}

}
// Button click with button name text
package seleniumpractice;
import java.util.List;
import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
public class Click_withButton_Name {
		public static void main(String[] args) throws InterruptedException {
			System.out.println("Welcome to R-Testing Solutions +91 9966804142");
			System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver-win32\\chromedriver-win32\\chromedriver.e
xe");
			WebDriver driver = new ChromeDriver();
			driver.manage().window().maximize();
			driver.get("https://nxtgenaiacademy.com/multiplewindows/");

			Thread.sleep(5000);
//			type one
			List<WebElement> button =
driver.findElements(By.xpath("//*[@id=\"button1\"]"));
			int size = button.size();
			System.out.println(size);
			for(int i =0; i<size; i++) {
				button.get(0).click();
			}
//			type two
			String text = new String();
			List<WebElement> button =
driver.findElements(By.xpath("//*[@id=\"button1\"]"));
			int size = button.size();
			System.out.println(size);
			for(int i =0; i<size; i++) {
				String text1 = button.get(i).getText();
```

```
                        System.out.println(text1);
                        String buttonName = "New Browser Window";
                        if(text1.equals(buttonName)) {
                                button.get(i).click();
                                text = text1.toString();
                                System.out.println("button clicked as...." + text);
                        }
                }

        }
}
```

Sendkeys by array

```
package seleniumpractice;

import org.openqa.selenium.By;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Sendkeys_array {

        public static void main(String[] args) throws InterruptedException {
                System.out.println("Welcome to R-Testing Solutions +91 9966804142");
                System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver-win32\\chromedriver-win32\\chromedriver.exe");
                WebDriver driver = new ChromeDriver();
                driver.manage().window().maximize();
                String url = "https://rahulshettyacademy.com/AutomationPractice/";
                driver.get(url);

                Thread.sleep(5000);
                WebElement send = driver.findElement(By.id("autocomplete"));
//              store the values
                String[] values = {"ratnam", "Ramaa", "Ratna", "12345677", "Ratnam"};
                for(String value:values) {
                        send.clear();
                        send.sendKeys(value);
                        Thread.sleep(2000);
                }
        }

}
```

Image upload

```
package seleniumpractice;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class ImageUpload {
        public static void main(String[] args) throws InterruptedException {
```

```
            System.out.println("Welcome to R-Testing Solutions +91 9966804142");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver-win32\\chromedriver-win32\\chromedriver.e
xe");
            WebDriver driver = new ChromeDriver();
            driver.manage().window().maximize();

driver.get("http://nervgh.github.io/pages/angular-file-upload/examples/simple/");

            Thread.sleep(5000);
//          demo click
            WebElement demo = driver.findElement(By.className("dropdown-toggle"));
            demo.click();
//          Uploads only images (with canvas preview)
            Thread.sleep(5000);
            WebElement onlyup =
driver.findElement(By.xpath("//*[@id=\"ng-app\"]/body/div/div[1]/div[2]/ul/li[1]/ul/l
i[2]/a"));
//        onlyup .click();
//      ====================  type two============================
//          JavascriptExecutor js = (JavascriptExecutor)driver;
//          js.executeScript("arguments[0].click();", onlyup);
//    ======================    type three======================
            for(int i=0; i<=5;i++){
                    try{
                           onlyup .click();
                       break;
                    }
                    catch(Exception e){
                       System.out.println("the exception take as..."+
e.getMessage());
                    }
                  }

      }

}
```

Check box’s click

```
package seleniumpractice;

import java.util.List;

import org.openqa.selenium.By;
import org.openqa.selenium.JavascriptExecutor;
import org.openqa.selenium.WebDriver;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class Check_Boxs {
      public static void main(String[] args) throws InterruptedException {
            System.out.println("Welcome to R-Testing Solutions +91 9966804142");
            System.setProperty("webdriver.chrome.driver",
"C:\\Users\\Ratnam\\Downloads\\chromedriver-win32\\chromedriver-win32\\chromedriver.e
xe");
```

```
            WebDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
            driver.get("https://www.hyrtutorials.com/p/basic-controls.html");

            Thread.sleep(5000);
//          page down scrolling
            JavascriptExecutor js = (JavascriptExecutor)driver;
            js.executeScript("window.scrollBy(0,400)", "");
            Thread.sleep(5000);
            List<WebElement> checks = driver.findElements(By.name("language"));
            int ab = checks.size();
            System.out.println(ab);
            for(int i = 0; i<ab; i++) {
                  checks.get(i).click();
            }
            System.out.println(" the check boxs are cliked");
            Thread.sleep(5000);
            js.executeScript("window.scrollBy(400,-300)", "");
      }

}
```

Thank You

RaTnaM

Life is not a roadside name board (placard), Take U_TURN anywhere