Rough notes

27/07/2024

Index

Automation mock questions by Ali sir

1 why automation testing

2 what are the disadvantages of automation testing

3 what is automation testing and tools of automation

4 what is selenium

5 Explain selenium web driver architechture

6 what is web element.

7 what are locators

***************** New online Batch joined on 04 July 2024 **********************

Basic Selenium content

1)Intro to Automation

*)What automation?

*)when we have to Automatiom?

*)why is Automation?

*)Advantage & disadvantage of Automation?

*)Automation tools

2)Intro to Selenium

*)what is selenium

*)Adv & disadv of selenium

*)Selenium 3 version

*)Selenium 4 version

*)Selenium Architecture.

3)Basic

*)launch the browser

*)Selenium webdriver methods

*)what is locator

*)types of locator

*)Selenium webelement methods

4)others:

*)handle mutiple webelements

*)handle Autosuggestion

*)handle SVG elements

*)handle Keyboards strokes

*)handle scrollBars

*)handle mouseover

*)handle dropdown/listbox

*)Synchronisations

*)frames

5)Popup

*)alert popup

*)hidden division popup/calendar popup

*)window popup

*)file upload popup

*)file download popup

*)Authentication popup

6)Framework

*)DDT data driven testing

*)POM

*)What Testng?

*)Assertion

*)Intro maven

*)Intro Github

*)Intro Jenkins

Day-1   05-July-2024

1)What is Automation testing?

the process of converting Manual Test Case into Automation scripts with help of Automation tool & programming lang.

2)when to go for Automation testing?

1)when the application is stable

2)when we want a very good quality s/w

3)customer is requesting

4)when we have more number of regression cycle

Adv of Automation testing

1)time saving

2)performance will be good

3) better S/w quality

4)parallel execution is easy

Disadv:

1)we cant automate video, audio & captcha

2)skilled labour- knowledge on programming

Types of automation tool

1)selenium

2)qtp

3)fireflink

4)postman

5)appium

6)Jmeter

QTP:

1)licenced tool

2)support oly window

3)support olny edge browser

4)support oly VBscripting

Selenium: is an automation tool which is used test for web appln

Adv:

1)open source tool

2)support 14+ programming lang like java, python, c, c#, ruby etc,,,

3)support all major browser like chrome, firefox, edge etc,,,

4)support all major OS(operating system) like window, mac, linux

5)support 3rd party tool. ex like apache poi.

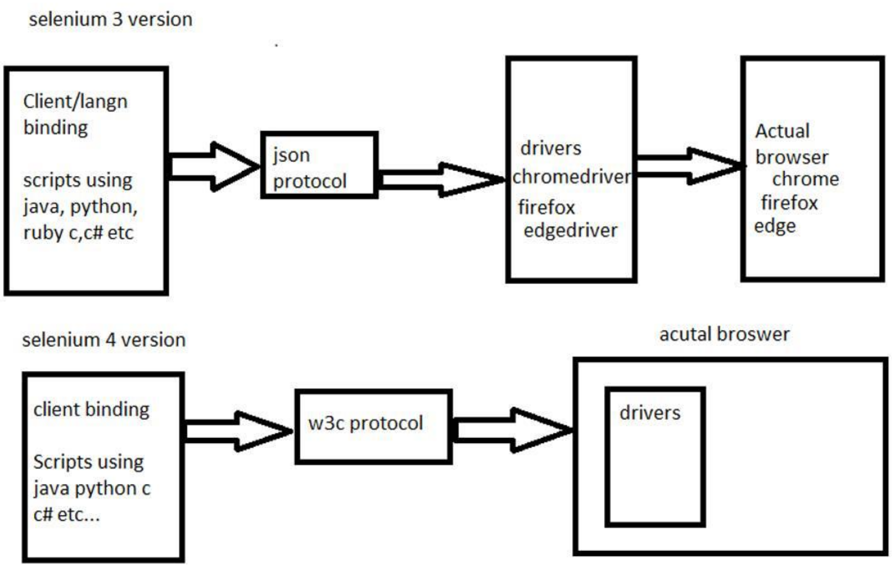
DisAdv:

1)support olny web based appln

2)cant support Destop appln

************ Day-2 08-July-2024 Monday *****************

Selenium Webdriver Architecture:


selenium 3 version
Client/langn binding
scripts using java, python, ruby c,c# etc
json protocol
drivers chromedriver firefox edgedriver
Actual browser chrome firefox edge
selenium 4 version
client binding
Scripts using java python c c# etc...
w3c protocol
acutal broswer
drivers

->Selenium 3 version:

-client/language binding:- we will write a scripts using programming langn like java, python, ruby, c, c# etc....

-json wire protocol:- will help to convert programming langn to browser understandable lang

-driver:- is required

-broswer:- it will launched in that browser.

->selenium 4 version:

-client/language binding:- we will write a scripts using programming langn like java, python, ruby, c, c# etc....

-w3c protocol:- world wide web conortium

-browser:- drivers will be inbuilt.

selenium 4 version download

1)go to https://www.selenium.dev/downloads/ this site

2)click on previous release

3)you have select selenium 4 version(4.12.0)

4)select selenium-server-4.12.0.jar file

****

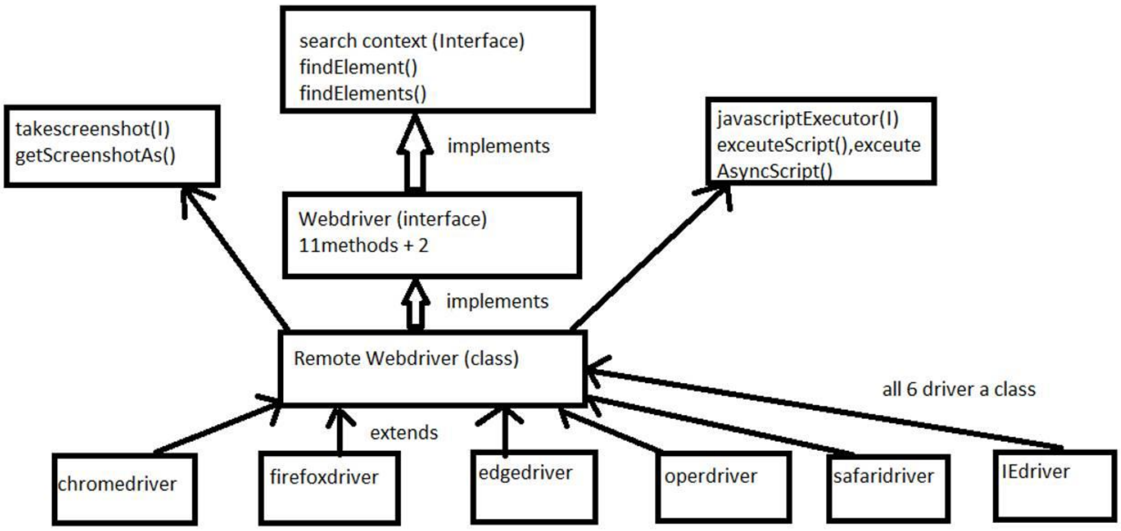
->launch empty browser

```
package basic;

import org.openqa.selenium.chrome.ChromeDriver;

public class LaunchingEmptyBrowser {

	public static void main(String[] args) {
		ChromeDriver driver= new ChromeDriver();

	}
}
```

****

**************************Day-3********************************

Selenium Archetechture :



Webdriver:its an Interface

:its used to perform broswer releated actions

:having 11Abstract Methods + 2 inherited Abstract methods

Abstract Methods of Webdriver interface :

1)get("url"):It is used to navigate particular URL(website).Return type void

2)getTitle():used for fetching the title of the web page.Return Type String

3)getCurrentUrl():used for fetching the url of the web page.Return Type String

4)getPageSource():used for fetching the source code of the web page.Return Type String

5)getWindowHandle():it is used to capture parent window id.Return Type String

6)getWindowHandles():it is used to capture parent window id & child window ids. Return Type set String

7)close():used for closing the tab where driver is focusing on.Return type void

8)quit():used for closing all the tab .Return type void

9)manage():Return type options

*)window():

*)timeout():

10)switchTo():it is used to switch the control. Return type target locator

*)window

*)frame

*)alert

11)navigate():Return type navigation

used for performing browser history actions

back():void

=>used for coming back from one webpage to another webpage

forward():void

=>used for coming forward from one webpage to another webpage

refresh():void

=>used for refreshing a webpage

****************************Day-4********************************

Webdriver method programs

1)get():

```
package webdriverMethods;


import org.openqa.selenium.chrome.ChromeDriver;


public class LearningGetMethod {


	public static void main(String[] args) {
		ChromeDriver driver= new ChromeDriver();
		driver.get("https://demowebshop.tricentis.com/");//used to navigate to application
	}
}
```

****

2)getTitle():

```
package webdriverMethods;


import org.openqa.selenium.chrome.ChromeDriver;


public class LearningGetTitleMethod {


	public static void main(String[] args) {
		ChromeDriver driver= new ChromeDriver();
		driver.get("https://demowebshop.tricentis.com/");
		//System.out.println(driver.getTitle());// to get the title of application


		String title=driver.getTitle();
		System.out.println(title);
	}
}
```

****

3) getCurrentUrl():

```
package webdriverMethods;


import org.openqa.selenium.chrome.ChromeDriver;


public class LearningGetCurrentUrlMethod {


	public static void main(String[] args) {
		ChromeDriver driver= new ChromeDriver();


//		driver.get("https://demowebshop.tricentis.com/");
//		System.out.println(driver.getCurrentUrl());// get the current url of webpage


		driver.get("https://demowebshop.tricentis.com/register");
		System.out.println(driver.getCurrentUrl());
	}
}
```

****

****

4) getPageSource():

```
package webdriverMethods;


import org.openqa.selenium.chrome.ChromeDriver;


public class LearningGetPageSourceMethod {


	public static void main(String[] args) {
		ChromeDriver driver= new ChromeDriver();


		driver.get("https://demowebshop.tricentis.com/");
		System.out.println(driver.getPageSource());// get the source code of webpage
	}
}
```

****

5) getWindowHandle():

```
package webdriverMethods;


import org.openqa.selenium.chrome.ChromeDriver;


public class LearningGetWindowHandleMethod {


	public static void main(String[] args) {
		ChromeDriver driver = new ChromeDriver();


		driver.get("https://demowebshop.tricentis.com/");
		System.out.println(driver.getWindowHandle());//used to get parent window id
	}
}
```

**********************Day-5*************************************

6) GetWindowHandles():

```
package webdriverMethods;


import java.util.Set;


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


public class LearningGetWindowHandles {


	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();


		driver.get("https://demowebshop.tricentis.com/");
		Thread.sleep(3000);
		driver.findElement(By.linkText("Facebook")).click();
		Set<String> windowIds = driver.getWindowHandles();
		System.out.println(windowIds);


	}
}
```

****

7) close():

```
package webdriverMethods;


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


public class LearningCloseMethod {


	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
```

```
        driver.get("https://demowebshop.tricentis.com/");
        Thread.sleep(4000);
        driver.findElement(By.linkText("Facebook")).click();
        Thread.sleep(4000);
        driver.close();


    }
}
```

****

8) quit()

```
package webdriverMethods;

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

public class LearningQuitMethod {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver = new ChromeDriver();

        driver.get("https://demowebshop.tricentis.com/");
        Thread.sleep(4000);
        driver.findElement(By.linkText("Facebook")).click();
        Thread.sleep(4000);
        driver.quit();
    }
}
```

****

9) manage()

```
*)window():-maximise()
            -minimise()
            -fullscreen()
```

```
package webdriverMethods;

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

```
public class LearningManageMethod {


            public static void main(String[] args) throws InterruptedException {
                        ChromeDriver driver= new ChromeDriver();


                        driver.get("https://demowebshop.tricentis.com/");
                        //driver.manage().window().maximize(); //maximize the window
//                      Thread.sleep(3000);
//                      driver.manage().window().minimize(); //minimize window
                        Thread.sleep(3000);
                        driver.manage().window().fullscreen(); //fullscreen window


            }
}
```

**************************************Day-6*************************************

10) navigate( ):

```
package webdriverMethods;


import org.openqa.selenium.chrome.ChromeDriver;


public class LearningNavigateMethod {


            public static void main(String[] args) throws InterruptedException {
                        ChromeDriver driver= new ChromeDriver();


                        driver.manage().window().maximize();
                        driver.get("https://demowebshop.tricentis.com/");
                        Thread.sleep(4000);
                        driver.get("https://demowebshop.tricentis.com/register");
                        Thread.sleep(3000);
                        driver.navigate().back();
                        System.out.println("back action:"+driver.getTitle());
                        Thread.sleep(4000);
                        driver.navigate().forward();
```

```
        System.out.println("forward action:"+ driver.getTitle());
        Thread.sleep(4000);
        driver.navigate().refresh();


    }
}
```

****

11) navigate.to( ) :

```
Package webdriverMethods;
import java.net.MalformedURLException;
import java.net.URL;
import org.openqa.selenium.chrome.ChromeDriver;
public class LearningToMethod {

    public static void main(String[] args) throws InterruptedException, MalformedURLException {
        ChromeDriver driver= new ChromeDriver();

        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/login");
        Thread.sleep(4000);
        driver.navigate().to("https://www.meesho.com/");

        URL url = new URL("https://www.meesho.com/");
        driver.navigate().to(url);


    }
}
```

****

****

```
html-stuctutre


<head>                                                          tagname

        <body>                                                  attributeName=attributeValue

                <input id="cars"> </input>                      text

                <a name="duster">dustercar</a>

                <div scr=i10> </div>

                <a img=kia>    kiacars </a>

        </body>

</head>
```

****

Search context:- is an interface

:- which provides the search mechanism to identify the eelements on webpage

:- there 2 AM

1)findElement()

2)findElements()

findElement()	findElements()
*)it will find the first element present	*)it will find all the first element present
in webpage	in webpage
*)Return type is webelement	*)Return type is list of webelement
*)if driver is not able to find element	*)if driver is not able to find element
then it will through NosuchElement	then it will through empty list {}
exception.	

Locators

************************************Day-7**

Locators : it is a search ceritira to locate the webelement present in webpage.

syntax: driver.findElement(By.locator);

By is an abstract class.

types of locators:

1)Id()-	priority-1	
2)name()-	priority-2	
3)classname()	no-priority	(locator 1 to 6 are direct locator method)
4)linkText()-	priority-3	
5)partialLinkText()	priority-3.1	
6)tagname()	no-priority	
7)css selector()	no-priority	(locators 7-8 are called expressions)
8)xpath()-	priority-4	

****

1) Id(): Syntax : id(“attribute value “)

```
package locatorsMethods;
import org.openqa.selenium.By;
import org.openqa.selenium.chrome.ChromeDriver;
public class LearningIdLocator {
	public static void main(String[] args) {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		driver.findElement(By.id("small-searchterm")).sendKeys("books");
		// if you have entered values wrong so your driver is unable to identify the elements so you have nosunchelement exception
		driver.findElement(By.id("gender-female")).click();//to click on the element
	}
}
```

```
package locatorsMethods;

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

public class LearningIdLocator2 {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/login");
		Thread.sleep(4000);
		driver.findElement(By.id("Email")).sendKeys("chandana@gmail.com");
		Thread.sleep(4000);
		driver.findElement(By.id("Password")).sendKeys("chandana123");
		Thread.sleep(4000);
		driver.quit();
	}
}
```

****************************** Day-8 Monday 15-July-2024 *******************************

2) name( ) : Syntax : By.name(“attribute_value”)

```
package locatorsMethods;

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

public class LearningNameLocator {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		driver.findElement(By.name("q")).sendKeys("book");//working on name
```

```
                    Thread.sleep(4000);
                    driver.quit();
          }
}
```

```
package locatorsMethods;


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


public class LearningNameLocator2 {


          public static void main(String[] args) throws InterruptedException {
                    ChromeDriver driver= new ChromeDriver();
                    driver.manage().window().maximize();
                    driver.get("https://omayo.blogspot.com/");
                    driver.findElement(By.name("q")).sendKeys("selenium");
                    Thread.sleep(4000);
                    driver.quit();
          }
}
```

****

3) linkText():

- *)its should be a text
- *)there should be no space at starting or ending of the text
- *)the text should be present in between anchor tag <a>text</a>

Syntax : linkText("Text")

```
package locatorsMethods;


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


public class LearningLinkTextLocator {
    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        driver.findElement(By.linkText("Register")).click();
        Thread.sleep(3000);
        driver.findElement(By.id("gender-female")).click();
        Thread.sleep(3000);
        driver.findElement(By.id("FirstName")).sendKeys("chandana");
        Thread.sleep(4000);
        driver.quit();


    }
}
```

****

4) partialLinkText():

- *)its should be a text
- *)there should can be space at starting or ending of the text
- *)the text should be present in between anchor tag <a> text </a>
- *) Here complete text is not mandatory we can write partial text value.

Syntax : partialLinkText(“Text”)

```
package locatorsMethods;


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


public class LearningPartialLinkTextLocator {


    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        driver.findElement(By.partialLinkText("Books")).click();
        Thread.sleep(4000);
        driver.quit();
    }
}
```

____

```
package locatorsMethods;

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

public class LearningPartialLinkText {

    public static void main(String[] args) {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        driver.findElement(By.partialLinkText("Apparel & ")).click();
    }
}
```

Day-9******************************

1)classname():

```
package locatorsMethods;

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

public class LearningClassNameLocator {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        Thread.sleep(2000);
        driver.findElement(By.linkText("Log in")).click();
```

```
                Thread.sleep(2000);
                driver.findElement(By.className("email")).sendKeys("chandana@gmail.com");
                Thread.sleep(3000);
                driver.quit();
        }
}
```

we will not perfer classname because there will be lots of duciplate.

****
****

2)tagname():

```
package locatorsMethods;

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

public class LearningTagNameLoactor {

        public static void main(String[] args) throws InterruptedException {
                ChromeDriver driver= new ChromeDriver();
                driver.manage().window().maximize();
                driver.get("https://demowebshop.tricentis.com/login");
                Thread.sleep(2000);
                driver.findElement(By.tagName("input")).sendKeys("books");
                Thread.sleep(4000);
                driver.quit();
        }
}
```

we will not perfer tagname because there will be lots of duciplate.

****
****

3)cssSelector():

*cascading style sheet selector.

*syntax: tagname[AttributeName='AttributeValue']

->Dis-adv:

*)it is unidirectional

*)we cant identify the based on text function.

```
package locatorsMethods;

import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;

public class LearningCssSelectorLocator {


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

		ChromeDriver driver= new ChromeDriver();

		driver.manage().window().maximize();

		driver.get("https://demowebshop.tricentis.com");

		Thread.sleep(3000);

		driver.findElement(By.cssSelector("input[name='q']")).sendKeys("books");

		Thread.sleep(4000);

		driver.quit();

	}

}
```

xpath

******************************* Day- 10 Thursday 18/07/2024 *****************************

1)xpath( ) :

*)xpath by attribute	syntax: //tagname[@AttributeName='AttributeValue']
*)xpath by text	syntax: //tagname[text()='textValue']
*)xpath contains by attribute	syntax: //tagname[contains(@AttributeName,'AttributeValue')]
*)xpath contains by text	syntax: //tagname[contains(text(),'textValue')]

i) xpath by attribute

syntax: //tagname[@AttributeName='AttributeValue']

```
package locatorsMethods;


import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningXpathByAttribute {


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

		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		Thread.sleep(3000);
		driver.findElement(By.xpath("//input[@value='Search store']")).sendKeys("Health Book");
		Thread.sleep(3000);
		driver.findElement(By.xpath("//input[@value='Search']")).click();
		Thread.sleep(4000);
		driver.quit();
	}
}
```

****

ii) xpath by text

*there should be no space at first or end of the text

syntax: //tagname[text()='textValue']

```
package locatorsMethods;

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

public class LearningXpathByText {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		driver.findElement(By.xpath("//a[text()='Register']")).click();
		Thread.sleep(3000);
		driver.quit();
	}
}
```

****

iii) xpath using contains attribute

*)when we are having attribute value long then we will use contains method

syntax: //tagname[contains(@AttributeName,'AttributeValue')]

```
package locatorsMethods;


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


public class LearningXpathByContainsAttribute {


    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        Thread.sleep(3000);
        driver.findElement(By.xpath("//input[contains(@id,'small')]")).sendKeys("Health Book");
        Thread.sleep(4000);
        driver.findElement(By.xpath("//input[@value='Search']")).click();
        Thread.sleep(4000);
        driver.quit();
    }
}
```

****

iv) xpath using contains text

*)when you are having a text long or space then you can go for contains

syntax: //tagname[contains(text(),'textValue')]

```
package locatorsMethods;


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


public class LearningXpathByContainsText {


    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
```

```
                    driver.get("https://demowebshop.tricentis.com/");

                    Thread.sleep(2000);

                    driver.findElement(By.xpath("(//a[contains(text(),'Books')])[1]")).click();

                    Thread.sleep(3000);

                    driver.quit();

          }

}
```

****

->index

*)identify and write xpath

*)if there is duplicate then we give index

syntax:(//a[contains(text(),'Books')])[1]")

Web-element methods

************************** Day-11 Thursday 18/07/2024 **************************

->Webelement methods : the actions that can be perform on the webelements.

1)sendkeys("values");

2)click()

3)clear()

4)getAttribute()

5)getText()

6)getTagname()

7)getRect()

8)isDisplayed()

9)isSelected()

10)inEnabled()

11)getCssvalue()

12)submit()

****

1)sendkeys("values");

->which is used to send the values inside the textbox.

```
package webelementMethods;


import org.openqa.selenium.By;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningSendKeysMethod {


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

		ChromeDriver driver= new ChromeDriver();

		driver.manage().window().maximize();

		driver.get("https://demowebshop.tricentis.com/");

		Thread.sleep(2000);

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

		Thread.sleep(2000);

		WebElement fname=driver.findElement(By.id("FirstName"));

		fname.sendKeys("chandana");

		Thread.sleep(4000);

		driver.quit();
```

```
        }

}
```

****

******************************   Day-12 Friday 19/07/2024   **********************************

1)click():it is used to perform click action on Webelement

```
package webelementMethods;


import org.openqa.selenium.By;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningClickMethod {


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

                ChromeDriver driver= new ChromeDriver();

                driver.manage().window().maximize();

                driver.get("https://demowebshop.tricentis.com/register");

                Thread.sleep(3000);

                WebElement genderButton=driver.findElement(By.xpath("//input[@id='gender-female']"));

                genderButton.click();

                Thread.sleep(3000);

                driver.quit();

        }

}
```

****

2)clear():this method is used to clear the value that is present inside the textbox

```
package webelementMethods;


import org.openqa.selenium.By;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningClearMethod {
    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/register");
        Thread.sleep(2000);
        WebElement fname = driver.findElement(By.xpath("//input[@id='FirstName']"));
        fname.sendKeys("chandana");
        Thread.sleep(3000);
        fname.clear();
        Thread.sleep(4000);
        driver.quit();
    }
}
```

****

3)getAttribute("value") : this method is used to fetch back the value that is entered inside the textbox

- we will get output in the console.

```
package webelementMethods;
import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class LearningGetAttributeMethod {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com");
        Thread.sleep(2000);
        driver.findElement(By.xpath("//a[text()='Log in']")).click();
        Thread.sleep(2000);
        WebElement email=driver.findElement(By.xpath("//input[@name='Email']"));
        email.sendKeys("chandana@gmail.com");
        Thread.sleep(3000);
        System.out.println("value entered in emailTextbox:" + email.getAttribute("value"));
        Thread.sleep(3000);
        WebElement password=driver.findElement(By.xpath("//input[@name='Password']"));
```

```
		password.sendKeys("chandana123");
		Thread.sleep(2000);
		System.out.println("value entered in passwordTextbox:" + password.getAttribute("value"));
		Thread.sleep(2000);
		driver.quit();
	}
}
```

****

Day-13**********************************

1)getText(): this method is used to fetch the text that is present in web page.

return type-String		we will get output in the console.

```
package webelementMethods;
import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class LearningGetTextMethod {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/register");
		Thread.sleep(2000);
		WebElement text=driver.findElement(By.xpath("//h1[text()='Register']"));
		System.out.println("text that is displayed:" + text.getText());
		System.out.println(driver.findElement(By.xpath("//strong[text()='Your Personal Details']")).getText());

		//System.out.println(driver.findElement(By.xpath("//h1[text()='Register']")).getText());

		Thread.sleep(3000);
		driver.quit();
	}
}
```

****

2)getTagname() : It will fetch the tag name of the webelement

return type-String

```
package webelementMethods;
import org.openqa.selenium.By;
import org.openqa.selenium.chrome.ChromeDriver;
public class LearningGetTagnameMethod {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/register");
		Thread.sleep(2000);
		System.out.println(driver.findElement(By.id("small-searchterms")).getTagName());
		Thread.sleep(2000);
		driver.quit();
	}
}
```

****

3)getRect():this method is used to get dimension & coordinates of the Webelement. return type is Rectangle.

```
package webelementMethods;
import org.openqa.selenium.By;
import org.openqa.selenium.Rectangle;
import org.openqa.selenium.chrome.ChromeDriver;

public class LearningGetRectMethod {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/register");
		Rectangle textBox=driver.findElement(By.id("small-searchterms")).getRect();
		System.out.println("height of textbox: "+ textBox.getHeight());
		System.out.println("width of textbox: "+ textBox.getWidth());
```

```
        System.out.println("x coordinate: "+ textBox.getX());
        System.out.println("y cooordinate: "+ textBox.getY());
        Thread.sleep(2000);
        driver.quit();
    }
}
```

****
****

4)isDisplayed():this method is used to verify whether element is displayed in web page. Return type is boolean.

```
package webelementMethods;

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

public class LearningIsDisplayedMethod {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        Thread.sleep(2000);
        WebElement logo=driver.findElement(By.xpath("//img[@alt='Tricentis Demo Web Shop']"));
        System.out.println(logo.isDisplayed());
        Thread.sleep(2000);
        driver.quit();
    }
}
```

****
****

5)isSelected(): this method is used to verify the state of radio button r check box. return type is boolean

```
package webelementMethods;

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


public class LearningIsSelectedMethod {


	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/register");
		WebElement radio=driver.findElement(By.id("gender-female"));
		System.out.println("before clicking on radio button: "+radio.isSelected());
		Thread.sleep(2000);
		radio.click();
		System.out.println("after clicking on radio button: "+radio.isSelected());
		Thread.sleep(2000);
		driver.quit();


	}


}
```

****
****

Day 14*****************************

1)isEnabled():this method is used to check whether the element(textbox r button) is enabled r not. return type boolean

```
package webelementMethods;


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


public class LearningIsEnabledMethod {


    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/register");
        Thread.sleep(2000);
        WebElement button=driver.findElement(By.id("register-button"));
        System.out.println(button.isEnabled());
        Thread.sleep(2000);
        driver.quit();
    }
}
```

****

2)submit():this method is also used to click on button but there is 2 condition:

*)the button type should be submit,

*)it should be child of form tag

```
package webelementMethods;


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


public class LearningSubmitMethod {


    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/register");
        Thread.sleep(2000);
        driver.findElement(By.id("register-button")).submit();
        Thread.sleep(3000);
        driver.quit();
    }
}
```

****
****

3)getCssValue():this method is used to verify css value of element.Return type is string

color will be in rgba- red,green,blue,alpha

```
package webelementMethods;

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

public class LearningCssValueMethod {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/register");
        Thread.sleep(2000);
        WebElement color = driver.findElement(By.linkText("Register"));
        System.out.println(color.getCssValue("color"));
        Thread.sleep(2000);
        driver.quit();
    }
}
```

****
****

->findElements:

```
package findElementsProgm;

import java.util.List;

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

```
public class LearningFindElementsMethod {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/register");
		List<WebElement> gender = driver.findElements(By.name("Gender"));
		for(WebElement ele:gender) {
			ele.click();
			Thread.sleep(3000);
		}
	}
}
```

**********************************   Day-15   Wednesday 25/07/2024   **********************

Select Class

Select Class:

*)to handle the dropdown

*)in your select class there a non static methods

*)select class will work only the dropdown that are present in Select tagname

steps:

1)identify the dropdown & store it

2)create a object of select class & while create store the dropdown inside the constuctor

synatx: Select sel= new Select(dropdown webelement);

3)call the methods that are present inside the select class

sel.methods();

types:

*)single select dropdown

*)multi select dropdown

methods:

1)isMultiple()-Return boolean.this method will come to no dropdown is single select r multi select dropdown

2)getOptions()- it will fetch all the options that are present in dropdown. return list<webelement>.

3)selectByIndex():

4)selectByvalue()

5)selectByVisibleText()

6)deselectByIndex()

7)deselectByvalue()

8)deselectByVisibleText()

9)getAllselectedOptions()

value='0'

value='1'   selectByIndex()

value='2'

value='car'

value='bike'   selectByvalue()

value='bus'

>bike<

>car<   selectByvisibleText()

>bus<

Single select dropdown

single select dropdown:

```
package selectClass;


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 SingleSelectDropdown {


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

		ChromeDriver driver = new ChromeDriver();

		driver.manage().window().maximize();

		driver.get("https://demowebshop.tricentis.com/");

		Thread.sleep(2000);

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

		Thread.sleep(2000);

		WebElement dropdown=driver.findElement(By.id("products-orderby"));

		Select sel= new Select(dropdown);

		System.out.println(sel.isMultiple());


		List<WebElement> option = sel.getOptions();

		for(WebElement ele:option) {

			System.out.println(ele.getText());

		}

		sel.selectByVisibleText("Name: Z to A");

		Thread.sleep(3000);

		driver.quit();


	}

}
```

****

****************************** Day-16 Thursday 25/07/2024 *********************

Multi select dropdown

1)Multi select dropdown

```
package selectClass;


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 MultiSelectDropDown {


	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://omayo.blogspot.com/");
		Thread.sleep(2000);
		WebElement dropdown = driver.findElement(By.id("multiselect1"));
		Select sel= new Select(dropdown);
		System.out.println(sel.isMultiple());
		List<WebElement> option = sel.getOptions();
		for(WebElement ele:option) {
			System.out.println(ele.getText());
		}
		System.out.println("************************");
		sel.selectByValue("volvox");
		Thread.sleep(2000);
		sel.selectByVisibleText("Hyundai");
		Thread.sleep(2000);
		List<WebElement> selectOpt = sel.getAllSelectedOptions();
		for(WebElement e:selectOpt) {
			System.out.println(e.getText());
		}
		sel.deselectByValue("volvox");
		Thread.sleep(2000);
		driver.quit();
```

```
        }
}
```

****

Auto suggestion

Auto suggestion:

```
package autosuggestion;


import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningAutoSuggestion {


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

                ChromeDriver driver= new ChromeDriver();

                driver.manage().window().maximize();

                driver.get("https://demowebshop.tricentis.com/");

                Thread.sleep(2000);

                driver.findElement(By.id("small-searchterms")).sendKeys("comp");

                Thread.sleep(3000);

                driver.findElement(By.linkText("Computing and Internet")).click();

                Thread.sleep(3000);

                driver.quit();

        }

}
```

************************   Day-17 Friday 26/07/2024   ***************************

Dynamic Element

```
package locatorsMethods;

import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;

public class LearningDynamicElement {
	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/books");
		Thread.sleep(3000);
		//driver.findElement(By.xpath("//input[@value='Add to cart']/../../../..//a[text()='Computing and Internet']")).click();


		driver.findElement(By.xpath("//a[text()='Computing and Internet']/../..//input[@value='Add to cart']")).click();
	}
}
```

Frame

Frame:

*)frame is nothing but a webpage present inside another webpage.

*)to handle the frame we have to use switchTo().

syntax: driver.switchTo().frame();

methods:

1)using frame index(0)

2)using name/id of frame("value")

3)using frame webelement -- store it in variable & then you have give a reference variable

****

```
package frame;
import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;

public class LearningFrameDream11 {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver = new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://www.dream11.com/");
        Thread.sleep(2000);
        //driver.switchTo().frame("send-sms-iframe");//using frame id

        WebElement frame = driver.findElement(By.id("send-sms-iframe"));
        driver.switchTo().frame(frame);//using webelement
        Thread.sleep(2000);
        driver.findElement(By.id("regEmail")).sendKeys("9897653567");



    }
}
```

****

****

Eg2. driver.switchTo().parentFrame();   //switch back driver control to parent frame

```
package frame;
import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;


public class LearningFrameDream11 {


	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://www.dream11.com/");
		Thread.sleep(2000);
		//driver.switchTo().frame("send-sms-iframe");//using frame id


		WebElement frame = driver.findElement(By.id("send-sms-iframe"));
		driver.switchTo().frame(frame);//using webelement
		Thread.sleep(2000);
		driver.findElement(By.id("regEmail")).sendKeys("9897653567");
		Thread.sleep(2000);
		driver.switchTo().parentFrame();		//switch back driver control to parent frame
		driver.findElement(By.id("hamburger")).click();
		Thread.sleep(2000);
		driver.quit();
	}
}
```

****

```
// open the link https://www.google.com/ and click on app icon and click
on map option
package frame;

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

```java
public class L03_Task_googlemap_icon {

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

		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://www.google.com/");

		driver.findElement(By.xpath("//a[@role='button']")).click();
		Thread.sleep(3000);

		driver.switchTo().frame("app");
		driver.findElement(By.xpath("//span[text()='Maps']")).click();

		Thread.sleep(3000);
		driver.quit();
	}
}
```

Day-18********************************

1)frame program:

```
package frame;

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

public class Frame_GoggleApp {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://www.google.com/");
		Thread.sleep(2000);
		driver.findElement(By.xpath("//a[@aria-label='Google apps']")).click();
		Thread.sleep(2000);
		driver.switchTo().frame("app");
		driver.findElement(By.xpath("//span[text()='Maps']")).click();

	}
}
```

****
****

->svg: scalable vector Graphics

*)this method is used to design the diagram, graphs in the webpages

syntax: //*[name()='svg' and @attribute='attributeValue']

```
package svgTag;

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

public class LearningSvgTag {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://www.shoppersstack.com/products_page/6");
		Thread.sleep(30000);
		driver.findElement(By.xpath("//*[name()='svg' and @data-testid='InfoOutlinedIcon']")).click();
	}
}
```

**********************************   **Day-19** **********************

Actions

Actions():

*)it is a class present in selenium which is used to perform mouse over actions

*)the methods are non static

Step:

1)identify the elements

2)Create a object for Actions class & inside the constructor used pass the driver referance

syntax: Actions actions= new Actions(driver);

3)we will be calling the methods that are present in actions class & perform()

syntax: actions.method().perform();

methods:

1)click();

2)double click();

3)context click();

4)drag & drop();

5)click & hold();

6)sendkeys();

7)move to element();

****
****

1)click(); this method is used to click on the element.

```
package actionsMethod;
```

```
import org.openqa.selenium.By;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.interactions.Actions;


public class LearningClickMethod {


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

                ChromeDriver driver= new ChromeDriver();

                driver.manage().window().maximize();

                driver.get("https://demowebshop.tricentis.com/");

                WebElement link = driver.findElement(By.linkText("Register"));

                Actions actions= new Actions(driver);

                actions.click(link).perform();

                Thread.sleep(3000);

                driver.quit();

        }

}
```

****
****

2)doubleClick(); this method is used to double click on the elements

```
package actionsMethod;


import org.openqa.selenium.By;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.interactions.Actions;


public class LearningDoubleClick {


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

                ChromeDriver driver= new ChromeDriver();

                driver.manage().window().maximize();

                driver.get("https://demoapp.skillrary.com/product.php?product=testing");
                WebElement doubleClick = driver.findElement(By.id("add"));
                Actions actions= new Actions(driver);
                actions.doubleClick(doubleClick).perform();
                Thread.sleep(5000);
                driver.quit();
        }
}
```

****
****

3)contextClick(); this method is used to do right click action on the element

```
package actionsMethod;

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

public class LearningContextClick {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver = new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demo.guru99.com/test/simple_context_menu.html");
        WebElement rightClick = driver.findElement(By.xpath("//span[text()='right click me']"));
        Actions actions = new Actions(driver);
        actions.contextClick(rightClick).perform();
        Thread.sleep(3000);
        driver.quit();
    }
}
```

****
****

4)dragAndDrop(); this method is used to drag and drop the element

```
package actionsMethod;
```

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

public class LearningDragAndDrop {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://jqueryui.com/resources/demos/droppable/default.html");
		WebElement source = driver.findElement(By.id("draggable"));
		WebElement target = driver.findElement(By.id("droppable"));
		Actions actions= new Actions(driver);
		actions.dragAndDrop(source, target).perform();
		Thread.sleep(4000);
		driver.quit();
	}
}
```

****

5)clickAndHold(); this method is used to click the element and hold it

```
package actionsMethod;

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

public class LearningClickAndHold {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://selenium08.blogspot.com/2020/01/click-and-hold.html");
```

```
                WebElement ele = driver.findElement(By.name("C"));
                Actions actions= new Actions(driver);
                actions.clickAndHold(ele).perform();
                Thread.sleep(6000);
                driver.quit();
        }
}
```

****
****

6)sendkeys(): this method is used to send the values to text box

```
package actionsMethod;

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

public class LearningSendKeys {

        public static void main(String[] args) throws InterruptedException {
                ChromeDriver driver= new ChromeDriver();
                driver.manage().window().maximize();
                driver.get("https://demowebshop.tricentis.com/");
                WebElement searchBox = driver.findElement(By.id("small-searchterms"));
                Actions actions= new Actions(driver);
                actions.sendKeys(searchBox, "book").perform();
                Thread.sleep(4000);
                driver.quit();
        }
}
```

**********************   **Day-20**   ************************

1)moveToElement(): this method is used to do mouse over action

```
package actionsMethod;

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

public class LearningMoveToElement {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		Thread.sleep(3000);
		WebElement ele = driver.findElement(By.partialLinkText("COMPUTERS"));
		Actions actions= new Actions(driver);
		actions.moveToElement(ele).perform();
		Thread.sleep(4000);
		driver.quit();
	}
}
```

****
****

2)scroll(): this method is used to scroll the window

```
package actionsMethod;

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

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

        ChromeDriver driver= new ChromeDriver();

        driver.manage().window().maximize();

        driver.get("https://demowebshop.tricentis.com/");

        Thread.sleep(3000);

        Actions actions= new Actions(driver);

        actions.scrollByAmount(0, 500).perform();//scroll window down

        Thread.sleep(3000);

        actions.scrollByAmount(0, 500).perform();

        Thread.sleep(3000);

        actions.scrollByAmount(0, -500).perform();//scroll window up

    }

}
```

JavaScriptExecutor

JavaScriptExecutor:

*)its a interface.

*)javascript code in selenium

*)its used to scroll,disabled element

methods:

1)executeScript()

2)executeAsynScript()

syntax: JavaScriptExecutor js= (JavaScriptExecutor) driver;

1)scrollBy(); this method is used to scroll the window

```
package javaScriptExc;


import org.openqa.selenium.JavascriptExecutor;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningScrollWindow {


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

```
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		Thread.sleep(3000);
		JavascriptExecutor js= (JavascriptExecutor)driver;
		js.executeScript("window.scrollBy(0,500);");
		Thread.sleep(3000);
		js.executeScript("window.scrollBy(0,500);");
		Thread.sleep(3000);
		js.executeScript("window.scrollBy(0,-500);");
	}
}
```

****
****

2)value(); this method is used to send the values to disabled element

```
package javaScriptExc;

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

public class LearningDisabledElement {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demoapp.skillrary.com/");
		Thread.sleep(2000);
		JavascriptExecutor js= (JavascriptExecutor)driver;
		WebElement ele = driver.findElement(By.xpath("//input[@class='form-control']"));
		js.executeScript("arguments[0].value='selenium';", ele);
	}
}
```

***************************** Day-21 *********************************

TakeScreenshot

TakeScreenShot:

*)it is an interface in selenium

*)it is used whenever you want to take screen shot in selenium.

*)whenever script is failed and we want to take Screenshot we take help of TakeScreenShot interface.

method:

1)getScreenShotAs();

we can take a screenshot of:

1)webpage

2)webelement

syntax: TakeScreenShot ts= (TakeScreenShot) driver;

program 1: write a script to take screenshot of webpage

```java
package takeScreenShotMethod;

import java.io.File;
import java.io.IOException;

import org.openqa.selenium.OutputType;
import org.openqa.selenium.TakesScreenshot;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.io.FileHandler;

public class L01_LearningScreenshotOf_Webpage {

	public static void main(String[] args) throws InterruptedException, IOException {
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		Thread.sleep(3000);

		TakesScreenshot ts = (TakesScreenshot) driver;
		File source = ts.getScreenshotAs(OutputType.FILE);
		File target = new File("./screenShot/webpage.png");
		FileHandler.copy(source, target);
	// it is used to establish the connection of source and target.
		Thread.sleep(3000);

	}
}
```

P2 : write a script to take screenshot of webpage where the name of the image should be change automatically by the help of LocalDateTime.

1)screen shot of webpage:

```
package takeScreenShotMethod;


import java.io.File;

import java.io.IOException;

import java.time.LocalDateTime;

import org.openqa.selenium.OutputType;

import org.openqa.selenium.TakesScreenshot;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.io.FileHandler;


public class LearningScreenShotWebpage {


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

		ChromeDriver driver= new ChromeDriver();

		driver.manage().window().maximize();

		driver.get("https://demowebshop.tricentis.com/");

		LocalDateTime dateTime= LocalDateTime.now();

		String date = dateTime.toString().replace(":", "-");

		Thread.sleep(2000);

		TakesScreenshot ts= (TakesScreenshot)driver;

		File source = ts.getScreenshotAs(OutputType.FILE);

		File target= new File("./screenShot/"+date+".png");

		FileHandler.copy(source, target);


	}

}
```

** Day-22 Friday 02/08/2024 ***

1)webelement:

```
package takeScreenShotMethod;


import java.io.File;

import java.io.IOException;


import org.openqa.selenium.By;

import org.openqa.selenium.OutputType;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.io.FileHandler;


public class LearningScreenShotWebelement {


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

                ChromeDriver driver= new ChromeDriver();

                driver.manage().window().maximize();

                driver.get("https://demowebshop.tricentis.com/");

                Thread.sleep(2000);

                File source = driver.findElement(By.xpath("//img[@alt='Tricentis Demo Web
Shop']")).getScreenshotAs(OutputType.FILE);

                File target= new File("./screenShot/webelement.png");

                FileHandler.copy(source, target);


        }

}
```

****

Synchronisation wait

Synchronisation :we have to match the application loading speed & the automation script execution speed should get matched

1)thread.sleep(int);   -blind wait

*)implicit wait

*)explicit wait   -intelligent wait

*)fluent wait

1)implicit wait:

synatx: driver.manage().timeouts().implicityWait(Duration.ofseconds(int));

*)implicit wait will work for findelement(),findelements(), @findBy

*)if driver is not able to identify the elements so it will through findelement()-nosuchelementexecption, findelements()-emptylist{}

```
package wait;


import java.time.Duration;


import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningImplictWait {


    public static void main(String[] args) {

        ChromeDriver driver= new ChromeDriver();

        driver.manage().window().maximize();

        driver.manage().timeouts().implicitlyWait(Duration.ofSeconds(3));

        driver.get("https://demowebshop.tricentis.com/");

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

        driver.findElement(By.id("gender-female")).click();

        driver.findElement(By.id("FirstName")).sendKeys("chandana");


    }

}
```

****

2)explicit wait:

*)it will work for the condition.

syntax: Webdriverwait wait= new Webdriverwait(driver, Duration.ofseconds(int));

    wait.until(ExpectedConditions.(condition));

*)if the conditions is not satisifed it will through an execption-timeoutexecption

```
package wait;
```

```
import java.time.Duration;


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

public class LearningExplicitWait {

    public static void main(String[] args) {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        WebDriverWait wait= new WebDriverWait(driver, Duration.ofSeconds(3));
        driver.findElement(By.linkText("Register")).click();
        wait.until(ExpectedConditions.elementToBeClickable(By.partialLinkText("Jewelry")));
        driver.findElement(By.id("gender-female")).click();
        driver.findElement(By.id("FirstName")).sendKeys("chandana");

    }
}
```

---

3) FluentWait :

```
package wait;

import java.time.Duration;


import http://org.openqa.selenium.By;
import org.openqa.selenium.chrome.ChromeDriver;
import org.openqa.selenium.support.ui.ExpectedConditions;
import org.openqa.selenium.support.ui.FluentWait;

public class LearningFluentWait {

    public static void main(String[] args) {
        ChromeDriver driver= new ChromeDriver();
```

```
		driver.manage().window().maximize();

		driver.get("https://demowebshop.tricentis.com/");

		//FluentWait fw= new FluentWait(driver);

		FluentWait fw= new FluentWait(driver);

		fw.withTimeout(Duration.ofSeconds(3)).pollingEvery(Duration.ofMillis(300));

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

		fw.until(ExpectedConditions.elementToBeClickable(By.partialLinkText("Jewelry")));

		driver.findElement(http://By.id("gender-female")).click();

		driver.findElement(http://By.id("FirstName")).sendKeys("chandana");



	}

}
```

******************************   Day-23   *********************************

Pop-up:

*)its a GUI-graphical user interface which apper on the window when user open browser.

*)

1)javascript popup:the popup is created using javascript language.

*)3 types:

1)Alert Popup

2)confirmation popup

3)prompt popup

*)behaviours:

1)we cannot inspect it

2)we cannot move this popup

to handle it Alert:

1)accept()

2)dismiss()

3)senkeys()

1)Alert popup:

*)in the popup will be having only ok button

syntax: driver.switchTo().alert().accept();

```
package popups;


import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningAlertPopup {


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

		ChromeDriver driver= new ChromeDriver();

		driver.manage().window().maximize();

		driver.get("https://demowebshop.tricentis.com/");

		driver.findElement(By.xpath("//input[@type='submit']")).click();

		Thread.sleep(3000);

		driver.switchTo().alert().accept();//to click on ok button

		Thread.sleep(3000);

		driver.quit();

	}
```

2)confirmation popup:

*)in the popup will be having 2 button

1)ok button:

syntax: driver.switchTo().alert().accept();

2)cancel button:

syntax: driver.switchTo().alert().dismiss();

```
package popups;

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

public class LearningConfirmationPopup {

	public static void main(String[] args) throws InterruptedException {
		ChromeDriver driver = new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://licindia.in/");
		Thread.sleep(2000);
		driver.findElement(By.partialLinkText("Pay Premium")).click();
		Thread.sleep(2000);
		//driver.switchTo().alert().accept();//to click on ok button
		driver.switchTo().alert().dismiss();//to click on cancel button
		Thread.sleep(2000);
		driver.quit();
	}
}
```

****

3)prompt popup:

*)will be having 2 button & textbox

1)ok button

syntax: driver.switchTo().alert().accept();

2)cancel button

syntax: driver.switchTo().alert().dismiss();

3)textbox

syntax: driver.switchTo().alert().sendKeys("values");

```
package popups;

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

public class LearningPromptPopup {

        public static void main(String[] args) throws InterruptedException {
                ChromeDriver driver= new ChromeDriver();
                driver.manage().window().maximize();
                driver.get("https://www.w3schools.com/js/tryit.asp?filename=tryjs_prompt");
                Thread.sleep(2000);
                driver.switchTo().frame("iframeResult");
                Thread.sleep(2000);
                driver.findElement(By.xpath("//button[text()='Try it']")).click();
                Thread.sleep(2000);
                Alert a = driver.switchTo().alert();
                a.sendKeys("selenium");
                a.accept();
                Thread.sleep(3000);
                driver.quit();
        }
}
```

*************************** **Day-24** ***************************

2)hidden division/calendar popup:

*)this popup is created using html code.

*)we can inspect hidden division popup so we can handle it using findElement().

*)we cant move popup

```
package popups;


import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningCalendarPopup {


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

		ChromeDriver driver = new ChromeDriver();

		driver.manage().window().maximize();

		driver.get("https://in.via.com/");

		Thread.sleep(2000);

		driver.findElement(By.id("wzrk-cancel")).click();

		Thread.sleep(2000);

		driver.findElement(By.xpath("(//div[@class='calendar-icon'])[1]")).click();

		Thread.sleep(2000);

		driver.findElement(By.xpath("//span[text()='Aug']/../../..//div[text()='9']")).click();

		Thread.sleep(5000);

		driver.quit();

	}

}
```

** ********

3)child broswer popup:

*)when user open webpage so that window will call a main window & the other window which is opened using main window

will call that window as child browser popup

*)we can inspect

*)we can move

*)we can see new window is opened

*)here we will take a help of getwindowhandle(),getwindowhandles() methods.

synatx: driver.switchTo().window(windowId);

```
package popups;

import java.util.Set;

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

public class LearningChildWindowPopup {

    public static void main(String[] args) throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        Thread.sleep(2000);
        driver.findElement(By.linkText("Facebook")).click();
        String parentId = driver.getWindowHandle();
        Set<String> windowsId = driver.getWindowHandles();
        windowsId.remove(parentId);
        for(String i:windowsId) {
            Thread.sleep(2000);
            driver.switchTo().window(i);
            System.out.println(driver.getTitle());
            driver.findElement(By.name("email")).sendKeys("abc@gmail.com");
            Thread.sleep(2000);
            driver.close();
        }
        driver.switchTo().window(parentId);
    }
}
```

********************************** Day-25 ******************************

1)file upload popup:

*)this popup which will open when user want to upload file.

*)we cant inspect it

*)we can move the popup

*)we can handle it using Robot class & autoIt tool.

*)when ever we are working on robot class(java) so there are 2 methods keypress & keyrelease button

```
package popups;


import java.awt.AWTException;

import java.awt.Robot;

import java.awt.event.KeyEvent;


import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningFileUploadPopup {


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

                ChromeDriver driver= new ChromeDriver();

                driver.manage().window().maximize();

                driver.get("https://www.naukri.com/");

                Thread.sleep(2000);

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

                Thread.sleep(2000);

                driver.findElement(By.xpath("//p[contains(text(),'I have work experience (excluding internships)')]")).click();

                Thread.sleep(2000);

                driver.findElement(By.xpath("//button[text()='Upload Resume']")).click();


                Robot robot= new Robot();

                Thread.sleep(2000);

                robot.keyPress(KeyEvent.VK_C);

                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_H);
                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_A);
                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_N);
                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_D);
                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_U);
                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_TAB);
                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_TAB);
                Thread.sleep(2000);
                robot.keyPress(KeyEvent.VK_ENTER);

                robot.keyRelease(KeyEvent.VK_C);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_H);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_A);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_N);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_D);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_U);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_TAB);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_TAB);
                Thread.sleep(2000);
                robot.keyRelease(KeyEvent.VK_ENTER);
        }
}
```

** Day-26 Pre-final Mock 06/08/2024 **

Authentication pop-up :

*) we can not move the pop up

*) we can not inspect the pop up

1)Authentication popup:

*)this popup will appear whenever user is working on some gateway application & only certain user can use it.

*)we cant inspect it

*)we cant move it

*)so we will handle it using robot class

```
package popup;

import java.awt.AWTException;
import java.awt.Robot;
import java.awt.event.KeyEvent;

import org.openqa.selenium.chrome.ChromeDriver;

public class L11_Authentication_popup {

      public static void main(String[] args) throws InterruptedException, AWTException
{
            ChromeDriver driver = new ChromeDriver();
            driver.manage().window().maximize();
            driver.get("https://the-internet.herokuapp.com/basic_auth");
            Thread.sleep(2000);

            Robot robot = new Robot();

            //username
            robot.keyPress(KeyEvent.VK_A);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_D);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_M);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_I);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_N);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_TAB);
            Thread.sleep(2000);

            //password
            robot.keyPress(KeyEvent.VK_A);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_D);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_M);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_I);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_N);
            Thread.sleep(2000);
            robot.keyPress(KeyEvent.VK_TAB);
            Thread.sleep(2000);
```

```
        robot.keyPress(KeyEvent.VK_ENTER);
        Thread.sleep(2000);

        // Key release
        robot.keyRelease(KeyEvent.VK_A);
        Thread.sleep(2000);
        robot.keyRelease(KeyEvent.VK_D);
        Thread.sleep(2000);
        robot.keyRelease(KeyEvent.VK_M);
        Thread.sleep(2000);
        robot.keyRelease(KeyEvent.VK_I);
        Thread.sleep(2000);
        robot.keyRelease(KeyEvent.VK_N);
        Thread.sleep(2000);
        robot.keyRelease(KeyEvent.VK_TAB);
        Thread.sleep(2000);
        robot.keyRelease(KeyEvent.VK_ENTER);
        Thread.sleep(2000);

        driver.quit();

    }
}
```

****

2)file download popup:

*)this popup which will open whenever user download the file.

*)we cant inspect it

*)so file download popup will get vanished automatically once its download

*************************** Day – 27 DDT *********************************

1)data driven testing(DDT):

*)fetching the test data from the external file to script is called as DDT.

*)here will will store the data

1)property file

2)excel file

1)property file:

steps:

1)create an object for fileinputstream & should give path of file

2)create an object for properties file

3)call the load() method

4)use getproperty(string key).

---

propertyfile:store data in key value for you can use : = or space

```
url:https://demowebshop.tricentis.com/

email:abc@gmail.com

password:abc123
```

```
package ddt;


import java.io.FileInputStream;

import java.io.IOException;

import java.util.Properties;


import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningToFetchDataFromProperty {


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

                //1)create an object for fileinputstream & should give path of file.

                FileInputStream fis= new FileInputStream("./testdata/commonData.properties");
                //2)create an object for properties file
                Properties p= new Properties();


                //3)call the load() method
                p.load(fis);


                //4)use getproperty(string key)
                String URL = p.getProperty("url");
                String Email = p.getProperty("email");
                String pswd = p.getProperty("password");


                System.out.println(URL);
                System.out.println(Email);
                System.out.println(pswd);


                ChromeDriver driver= new ChromeDriver();
                driver.manage().window().maximize();
                driver.get(URL);
                Thread.sleep(2000);
                driver.findElement(By.linkText("Log in")).click();
                driver.findElement(By.id("Email")).sendKeys(Email);
                driver.findElement(By.id("Password")).sendKeys(pswd);
        }
}
```

********************************* Day-28 *******************************

1)excel file:we can store test data in excel file. so to work on excel file there is no inbuilt method so we have to take a help of 3rd party tool that is ApachePoi.

step:

1)create fileinputstream object & should give file path

2)create workbook object with workbookFactory

3)create a sheet & then call row & cell value

4)then call the method using

*)getstringcellvalue()

*)getnumericcellvalue()

*)getbooleancellvalue()

```
package ddt;


import java.io.FileInputStream;

import java.io.IOException;


import org.apache.poi.EncryptedDocumentException;

import org.apache.poi.ss.usermodel.Workbook;

import org.apache.poi.ss.usermodel.WorkbookFactory;

import org.openqa.selenium.By;

import org.openqa.selenium.chrome.ChromeDriver;


public class LearningToFetchDataFromExcel {


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


		FileInputStream fis= new FileInputStream("./testdata/excelTestData.xlsx");


		Workbook wb= WorkbookFactory.create(fis);


		String value = wb.getSheet("Sheet1").getRow(0).getCell(0).getStringCellValue();
```

```
        double num = wb.getSheet("Sheet1").getRow(2).getCell(1).getNumericCellValue();
        boolean boolen = wb.getSheet("Sheet1").getRow(4).getCell(2).getBooleanCellValue();

        System.out.println(value);
        System.out.println(num);
        System.out.println(boolen);

        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        String url = wb.getSheet("Sheet2").getRow(1).getCell(1).getStringCellValue();
        driver.get(url);
        Thread.sleep(2000);
        driver.findElement(By.linkText("Log in")).click();
        String Email = wb.getSheet("Sheet2").getRow(3).getCell(0).getStringCellValue();
        driver.findElement(By.id("Email")).sendKeys(Email);
    }
}
```

Day29

TestNG:

*)It is a unit testing tool which is used to developer.

*)test next generation

*)it is a third party tool used in selenium

why?

adv:

*)batch execution

*)parallel exceution

*)report

Rules:

1)here will be not using main method instead of it will be using @Test

2)here will be not using system.out.println(), instead will be using Reporter.log()

```
package testNgConcept;


import org.testng.Reporter;
import org.testng.annotations.Test;

public class Demo {


	@Test
	public void script() {
		Reporter.log("testNG installed",true);
	}


}
```

****

***Day-30**

*)Helper attributes:

1)priority = int

*)if you want to run the method acc to priority wise then we will call this attribute.

*)if we are not using priority attribute then it will get executed acc to alphabets order.

*)here you can give from negative int include zero then positive int

```
package testNgConcept;


import org.testng.Reporter;

import org.testng.annotations.Test;


public class LearningPriority {


	@Test(priority = -1)

	public void login() {

		Reporter.log("user has login the appln",true);

	}


	@Test(priority = 0)

	public void addCart() {

		Reporter.log("user has added a product to cart",true);

	}


	@Test(priority = 1)

	public void logout() {

		Reporter.log("user has logout the appln",true);

	}

}
```

****

2)invocationcount = int

*)if we want to run the script for multiple time.

*)here will be giving only positive int but by default 1

```
package testNgConcept;


import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.Test;


public class LearningInvocationCount {


    @Test(invocationCount = 3)
    public void script() throws InterruptedException {
        ChromeDriver driver= new ChromeDriver();
        driver.manage().window().maximize();
        driver.get("https://demowebshop.tricentis.com/");
        Thread.sleep(2000);
        driver.quit();
    }
}
```

****

3)enabled = boolean

*)if we dont want to run the script we eill call enabled = false.

*)by default it will be true

```
package testNgConcept;


import org.testng.Reporter;
import org.testng.annotations.Test;


public class LearningEnabled {


    @Test(enabled = false)
    public void script() {
        Reporter.log("testNG installed",true);
    }
}
```

****

4)dependsOnMethod = "method name"

*)here one method will de depend on other methods

```
package testNgConcept;

import org.testng.Reporter;
import org.testng.annotations.Test;

public class LearningDependsOnMethod {

	@Test(priority = 1)
	public void login() {
		int i=1/0;//error
		Reporter.log("user has login the appln",true);
	}

	@Test(priority = 2, dependsOnMethods = "login")
	public void addCart() {
		Reporter.log("user added a product to cart",true);
	}

	@Test(priority = 3, dependsOnMethods = "login")
	public void logout() {
		Reporter.log("user has logout",true);
	}
}
```

****

Chronological order of configuration annations:

@beforeSuite - connection of database & report this code

@beforeTest - pre condition for the script

@beforeClass - the code for launch application

@beforeMethod - the code for login action

@test - actual test cse

@afterMethod - the code to logout action

@afterClass - the code quit the browser

@afterTest - post conn for the script

@afterSuite - closing conn of Database & report

Day-31*

1)batch execution:

*)executing multiple scripts with in single click on run button.

*)so here scripts will execute one after the other.

*)how to convert to suite: select the scripts- right click- testNG - convert to testng - click on finish button

*)This is Xml suite:

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "https://testng.org/testng-1.0.dtd">
<suite name="Suite">
  <test thread-count="5" name="Test">
    <classes>
      <class name="scripts.Script5"/>
      <class name="scripts.Script4"/>
      <class name="scripts.Script3"/>
      <class name="scripts.Script2"/>
      <class name="scripts.Script1"/>
    </classes>
  </test> <!-- Test -->
</suite> <!-- Suite -->
```

****

*)Parallel execution:

*)executing multiple scripts at a same time

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE suite SYSTEM "https://testng.org/testng-1.0.dtd">
<suite name="Suite">
  <test thread-count="5" name="Test" parallel="true">
    <classes>
      <class name="scripts.Script5"/>
      <class name="scripts.Script4"/>

      <class name="scripts.Script3"/>

      <class name="scripts.Script2"/>

      <class name="scripts.Script1"/>

    </classes>

  </test> <!-- Test -->

</suite> <!-- Suite -->
```

****

*)Report:

*)By default testNg tool will only generate a report.

*)It will be present in test output folder- emailable-report.html

****

POM :

```
package pom;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.support.FindBy;

import org.openqa.selenium.support.PageFactory;

public class HomePagePom {

        public HomePagePom(WebDriver driver) {

                PageFactory.initElements(driver, this);

        }

        @FindBy(linkText = "Register")

        private WebElement registerLink;


        @FindBy(linkText = "Log in")

        private WebElement loginLink;


        @FindBy(partialLinkText = "Books")

        private WebElement bookButton;


        public WebElement getBookButton() {

                return bookButton;

        }

        public WebElement getRegisterLink() {

                return registerLink;

        }

        public WebElement getLoginLink() {

                return loginLink;

        }

}
```

*************************************Day-32************************************

Assertion:

*)used to verify/validate the test scripts.

types:

1)hard assert

2)soft assert

1)hard assert:

*)its static in nature

*)complex script

*)assertion failed it will stop the execution & through the expection

2)soft assert:

*)its non static in nature

*)simple script

*)assertion failed it will execution & through the expection at last

*)AssertAll() at last line code

*)SoftAssert sa= new SoftAssert();

methods

*)assertEquals("exp con","act con");

*)assertTrue(true);

*)assertFalse(false);

____

*)hard assert();

```
package assertionTopic;


import static org.testng.Assert.assertEquals;

import static org.testng.Assert.assertTrue;

import org.openqa.selenium.By;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.chrome.ChromeDriver;

import org.testng.annotations.Test;
```

```
public class LearningHardAssert {


	@Test
	public void script() {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		assertEquals(driver.getTitle(), "Demo Web Shop","title is not matching");
		driver.findElement(By.linkText("Register")).click();
		assertEquals(driver.getCurrentUrl(), "https://demowebshop.tricentis.com/register","url is not matching");
		WebElement radio = driver.findElement(By.id("gender-female"));
		radio.click();
		assertTrue(radio.isSelected());
		WebElement fname = driver.findElement(By.id("FirstName"));
		fname.sendKeys("chandana");
		assertEquals(fname.getAttribute("value"), "chandana","fname is not matching");


	}
}
```

---

*)soft assert():

```
package assertionTopic;


import static org.testng.Assert.assertEquals;
import static org.testng.Assert.assertTrue;


import org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.Test;
import org.testng.asserts.SoftAssert;


public class LearningSoftAssert {
	@Test
	public void script() {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		SoftAssert sa= new SoftAssert();
		driver.get("https://demowebshop.tricentis.com/");
		sa.assertEquals(driver.getTitle(), "Demo Web Shop","title is not matching");
		driver.findElement(By.linkText("Register")).click();
		sa.assertEquals(driver.getCurrentUrl(), "https://demowebshop.tricentis.com/register","url is not matching");
		WebElement radio = driver.findElement(By.id("gender-female"));
		radio.click();
		sa.assertTrue(radio.isSelected());
		WebElement fname = driver.findElement(By.id("FirstName"));
		fname.sendKeys("chandana");
		sa.assertEquals(fname.getAttribute("value"), "chandana","fname is not matching");
		sa.assertAll();
	}
}
```

WebDriver driver=new ChromeDriver();-upcasting

*)cross browser testing

*)acc to OOAD rule we have to store the object of class to most nearby interface

```
package assertionTopic;
import static org.testng.Assert.assertEquals;
import static org.testng.Assert.assertTrue;

import http://org.openqa.selenium.By;
import org.openqa.selenium.WebElement;
import org.openqa.selenium.chrome.ChromeDriver;
import org.testng.annotations.Test;

public class LearningHardAssert {

	@Test
	public void script() {
		ChromeDriver driver= new ChromeDriver();
		driver.manage().window().maximize();
		driver.get("https://demowebshop.tricentis.com/");
		assertEquals(driver.getTitle(), "Demo Web Shop","title is not matching");
		driver.findElement(By.linkText("Register")).click();
		assertEquals(driver.getCurrentUrl(), "https://demowebshop.tricentis.com/register","url is not 
matching");
		WebElement radio = driver.findElement(http://By.id("gender-female"));
		http://radio.click();
		assertTrue(radio.isSelected());
		WebElement fname = driver.findElement(http://By.id("FirstName"));
		fname.sendKeys("chandana");
		assertEquals(fname.getAttribute("value"), "chandana","fname is not matching");

	}
}
```