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Practical no 8

AIM: Write and test a program to count the number of check boxes on the page checked and unchecked count.

Theory :

Xpath

XPath stands for XML Path Language. It uses a non-XML syntax to provide a flexible way of addressing (pointing to) different parts of an XML document. It can also be used to test addressed nodes within a document to determine whether they match a pattern or not.

XPath is mainly used in XSLT, but can also be used as a much more powerful way of navigating through the DOM of any XML-like language document using XPathExpression, such as HTML and SVG, instead of relying on the Document.getElementById() or ParentNode.querySelectorAll() methods, the Node.childNodes properties, and other DOM Core features.

XPath uses a path notation (as in URLs) for navigating through the hierarchical structure of an XML document. It uses a non-XML syntax so that it can be used in URIs and XML attribute values.

Xpath Syntax

XPath contains the path of the element situated at the web page. Standard syntax for creating XPath is.

Xpath = //tagname[@attribute =0 value0]

Literal	Description
// :	Select current node.
Tagname:	Tagname of the particular node.
@:	Select attribute.
Attribute:	Attribute name of the node
Value:	Value of the attribute.

Types of Xpath

There are two types of xpath:

1. Absolute xpath : It is the direct way to find the element, but the disadvantage of the absolute XPath is that if there are any changes made in the path of the element then that XPath gets failed. The key characteristic of XPath is that it begins with the single forward slash(/) ,which means you can select the element from the root node.

Example: /html/body/div[2]/div[1]/div/h4[1]/b/html[1]/body[1]/div[2]/div[1]/div[1]/h4[1]/b[1]

2. Relative xpath : Relative Xpath starts from the middle of HTML DOM structure. It starts with double forward slash (//). It can search elements anywhere on the webpage, means no need to write a long xpath and you can start from the middle of HTML DOM structure. Relative Xpath is always preferred as it is not a complete path from the root element. Below is the example of a relative XPath expression of the same element shown in the below screen. This is the common format used to find element through a relative XPath.

Example: //div[@class =0 featured − boxcloumnsize1 0]//h4[1]//b[1]

Code:

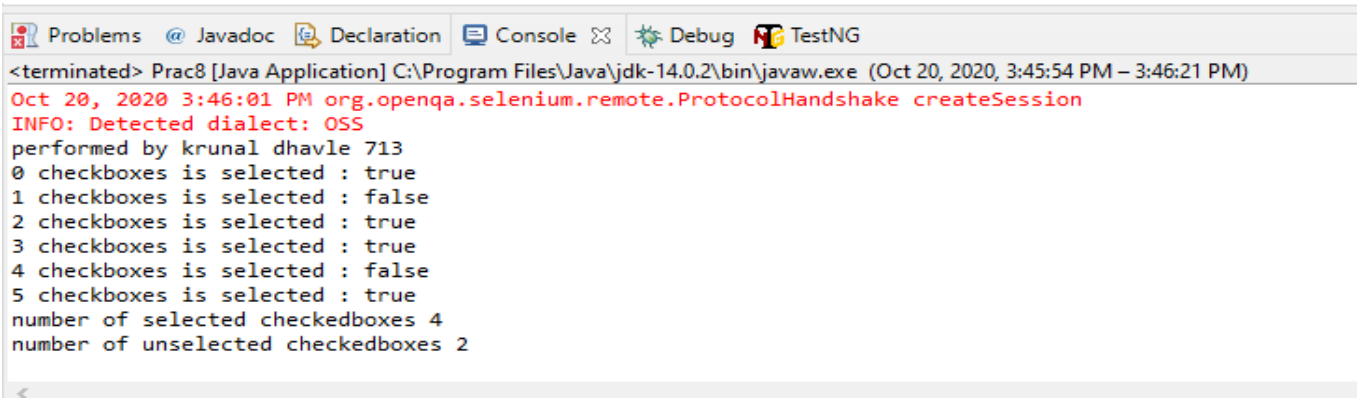
Part A

```
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 Prac8 {
	static String driverPath="E:\\tycs\\stqa
prac\\prac2\\chromedriver_win32\\chromedriver.exe";
	public static void main(String[] args) throws InterruptedException {
		System.setProperty("webdriver.chrome.driver", driverPath);
		WebDriver driver= new ChromeDriver();
		//driver.get("http://www.ironspider.ca/forms/checkradio.htm");
		driver.get("http://www.echoecho.com/htmlforms09.htm");
		//driver.get("file:///E:/tycs/stqa%20prac/prac8/radio.html");
		List<WebElement> checkboxes = driver.findElements(By.xpath("//input[@type =
'checkbox']"));
		for(int i = 0 ; i<checkboxes.size() ; i=i+1)
		{
			checkboxes.get(i).click();
		}
		System.out.println("performed by krunal dhavle 713");
		int checkedCount = 0 , uncheckedCount =0;
		for(int i =0 ; i < checkboxes.size() ; i++)
		{
			System.out.println(i + " " + "checkboxes is selected : "+check-
boxes.get(i).isSelected());
			if(checkboxes.get(i).isSelected())
				checkedCount++;
			else
				uncheckedCount++;
		}
		Thread.sleep(5000);
		System.out.println("number of selected checkedboxes " + checkedCount);
		System.out.println("number of unselected checkedboxes " + uncheckedCount);
		driver.close();
	}
}
```

Output:-

HTML	EXPLANATION	EXAMPLE
checkbox name= value= align= tabindex= checked	Choose one or more options Name of the field. Value that is submitted if checked. Alignment of the field. Tab order of the field. Default check this field.	

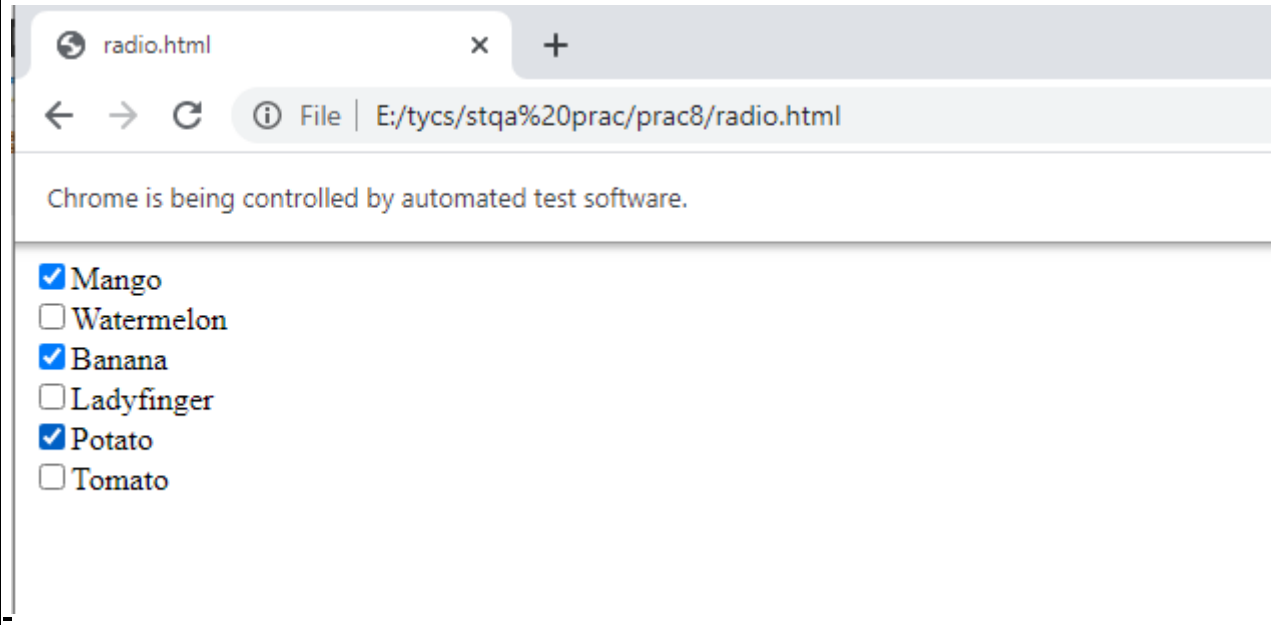


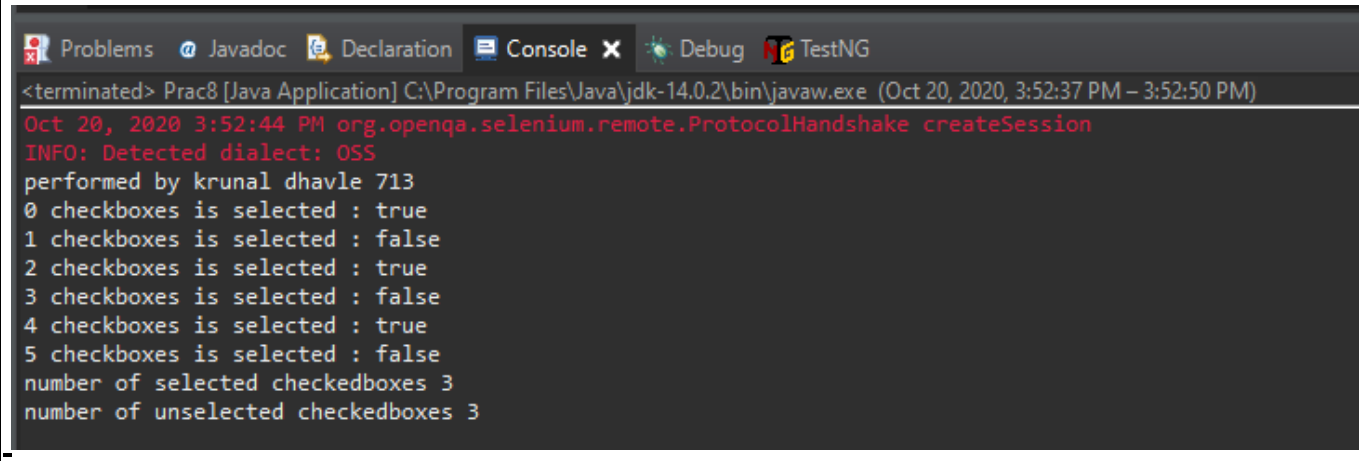
Part -2

```
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 Prac8 {
	static String driverPath="E:\\tycs\\stqa
prac\\prac2\\chromedriver_win32\\chromedriver.exe";
	public static void main(String[] args) throws InterruptedException {
		System.setProperty("webdriver.chrome.driver", driverPath);
		WebDriver driver= new ChromeDriver();
		driver.get("file:///E:/tycs/stqa%20prac/prac8/radio.html");
		List<WebElement> checkboxes = driver.findElements(By.xpath("//input[@type =
'checkbox']"));
		for(int i = 0 ; i<checkboxes.size() ; i=i+2)
		{
			checkboxes.get(i).click();
		}
		System.out.println("performed by krunal dhavle 713");
		int checkedCount = 0 , uncheckedCount =0;
		for(int i =0 ; i < checkboxes.size() ; i++)
		{
			System.out.println(i + " " + "checkboxes is selected : "+check-
boxes.get(i).isSelected());
			if(checkboxes.get(i).isSelected())
				checkedCount++;
			else
				uncheckedCount++;
		}
		Thread.sleep(5000);
		System.out.println("number of selected checkedboxes " + checkedCount);
		System.out.println("number of unselected checkedboxes " + uncheckedCount);
		driver.close();
	}
}
```

Output:-


radio.html
File | E:/tycs/stqa%20prac/prac8/radio.html
Chrome is being controlled by automated test software.
Mango
Watermelon
Banana
Ladyfinger
Potato
Tomato


Problems
Javadoc
Declaration
Console
Debug
TestNG
<terminated> Prac8 [Java Application] C:\Program Files\Java\jdk-14.0.2\bin\javaw.exe (Oct 20, 2020, 3:52:37 PM – 3:52:50 PM)
Oct 20, 2020 3:52:44 PM org.openqa.selenium.remote.ProtocolHandshake createSession
INFO: Detected dialect: OSS
performed by krunal dhavle 713
0 checkboxes is selected : true
1 checkboxes is selected : false
2 checkboxes is selected : true
3 checkboxes is selected : false
4 checkboxes is selected : true
5 checkboxes is selected : false
number of selected checkedboxes 3
number of unselected checkedboxes 3