# Assignment 1

## Automate Google.com with Selenium WebDriver

Automate Google search using the explicit wait command of Selenium WebDriver. This is somewhat advanced level code where we'll handle Ajax calls using Selenium.

### Script:

package UI;  
  
import org.openqa.selenium.By;  
import org.openqa.selenium.WebDriver;  
import org.openqa.selenium.WebElement;  
import org.openqa.selenium.chrome.ChromeDriver;  
import org.openqa.selenium.edge.EdgeDriver;  
import org.openqa.selenium.support.ui.ExpectedConditions;  
import org.openqa.selenium.support.ui.WebDriverWait;  
import java.time.Duration;  
import java.util.List;  
  
public class GoogleSearchAutomation {  
 public static void main(String[] args) {  
 // Set the path for the ChromeDriver  
 System.setProperty("webdriver.chrome.driver", "path/to/chromedriver");  
 // Create a new instance of the Chrome driver  
 WebDriver driver = new EdgeDriver();  
 try {  
 // Open Google homepage  
 driver.get("https://www.google.com");  
 // Create an explicit wait  
 WebDriverWait wait = new WebDriverWait(driver, Duration.ofSeconds(10));  
 // Wait until the search box is present  
 WebElement searchBox = wait.until(ExpectedConditions.presenceOfElementLocated(By.name("q")));  
 // Enter a search term  
 String searchTerm = "Selenium WebDriver";  
 searchBox.sendKeys(searchTerm);  
  
 // Submit the search  
 searchBox.submit();  
  
 // Wait until the results are loaded  
 wait.until(ExpectedConditions.visibilityOfElementLocated(By.id("search")));  
  
 // Get search results  
 List<WebElement> results = driver.findElements(By.cssSelector("h3"));  
 System.out.println("Search results for: " + searchTerm);  
 for (WebElement result : results) {  
 System.out.println(result.getText());  
 }  
  
 } catch (Exception e) {  
 e.printStackTrace();  
 } finally {  
 // Close the browser  
 driver.quit();  
 }  
 }  
}

# Assignment 2

## Read Data from Web Table with Selenium WebDriver

In this assignment, you'll learn to handle web tables with Selenium. It's quite a tricky task to automate web tables as there are no direct commands in Selenium for this. But this assignment will teach you the tricks to read table data.

### Script:

package Assignment;  
  
import java.util.concurrent.TimeUnit;  
import org.openqa.selenium.By;  
import org.openqa.selenium.WebDriver;  
import org.openqa.selenium.chrome.ChromeDriver;  
import io.github.bonigarcia.wdm.WebDriverManager;  
  
public class WebTable {  
 static WebDriver driver = null;  
  
 public static void main(String[] args) {  
 // Setup WebDriverManager for ChromeDriver  
 try {  
 driver = new ChromeDriver();  
 driver.get("https://www.w3schools.com/html/html\_tables.asp");  
 driver.manage().window().maximize();  
 driver.manage().timeouts().implicitlyWait(10, TimeUnit.SECONDS);  
 driver.manage().timeouts().pageLoadTimeout(10, TimeUnit.SECONDS);  
 String value = "Mexico";  
  
 boolean val = checkWhetherValueIsPresentInWebTable(value);  
 System.out.println("Value found: " + val);  
 } catch (Exception e) {  
 e.printStackTrace();  
 } finally {  
 if (driver != null) {  
 driver.quit(); // Ensure the driver quits even if an exception occurs  
 }  
 }  
 }  
  
 public static boolean checkWhetherValueIsPresentInWebTable(String value) {  
 int rowCount = driver.findElements(By.xpath("//table[@id='customers']//tr")).size();  
 int colCount = driver.findElements(By.xpath("//table[@id='customers']//th")).size();  
 boolean checkPoint = false;  
  
 // Loop through each row  
 for (int i = 1; i < rowCount; i++) { // Start from 1 to skip the header row  
 // Loop through each column  
 for (int j = 1; j <= colCount; j++) { // Use <= to include the last column  
 // Get the cell value  
 String Val = driver.findElement(By.xpath("//table[@id='customers']//tr[" + (i + 1) + "]//td[" + j + "]")).getText();  
 // Check if the cell value matches the desired value  
 if (Val.equalsIgnoreCase(value)) {  
 checkPoint = true;  
 break; // Break out of the inner loop if the value is found  
 }  
 }  
 }  
 return checkPoint;  
 }  
}