**Emre Görkem Ağkurt – Assignment 3**

**WebsiteTest Sınıfı**

Bu sınıf, belirli test senaryolarını gerçekleştirmek için Selenium WebDriver kullanarak bir web sitesini test etmek için tasarlanmıştır.

**Metodlar**

**public static void main(String[] args)**

* **Amaç**: Ana test senaryosunu yürütmek için başlangıç noktası sağlar.
* **Parametreler**:
  + **args**: Ana metoda sağlanan argümanlar.
* **Davranış**:
  + WebDriver başlatılır ve belirtilen web sitesine gidilir.
  + Belirli test senaryoları **testCases** metodu ile gerçekleştirilir.
  + WebDriver kapatılır.

**public static void testCases(WebDriver driver, WebDriverWait wait)**

* **Amaç**: Farklı test senaryolarını yürütmek için çağrılan yardımcı bir metottur.
* **Parametreler**:
  + **driver**: WebDriver nesnesi.
  + **wait**: Bekleme süresi.
* **Davranış**:
  + **checkElement** ve **clickAndCheckElement** metodları aracılığıyla çeşitli test senaryoları yürütülür.

**public static void checkElement(WebDriver driver, WebDriverWait wait, By by, String elementName)**

* **Amaç**: Belirtilen bir öğenin varlığını kontrol eder.
* **Parametreler**:
  + **driver**: WebDriver nesnesi.
  + **wait**: Bekleme süresi.
  + **by**: Belirli bir öğeyi bulmak için kullanılacak By nesnesi.
  + **elementName**: Kontrol edilen öğenin adı.
* **Davranış**:
  + Belirtilen **By** nesnesiyle öğe bulunur ve görünür olması beklenir.
  + Öğe görünürse, başarıyla görüntülenir. Aksi takdirde, görüntülenemediği bildirilir.

**public static void clickAndCheckElement(WebDriver driver, WebDriverWait wait, By clickBy, By checkBy, String elementName)**

* **Amaç**: Belirtilen bir öğeye tıklar ve ardından başka bir öğenin varlığını kontrol eder.
* **Parametreler**:
  + **driver**: WebDriver nesnesi.
  + **wait**: Bekleme süresi.
  + **clickBy**: Tıklanacak öğeyi bulmak için kullanılacak By nesnesi.
  + **checkBy**: Kontrol edilecek öğeyi bulmak için kullanılacak By nesnesi.
  + **elementName**: Kontrol edilen öğenin adı.
* **Davranış**:
  + Belirtilen **clickBy** nesnesiyle tıklanabilir bir öğe bulunur ve tıklanır.
  + Ardından, belirtilen **checkBy** nesnesiyle başka bir öğe bulunur ve görünür olması beklenir.
  + Öğe görünürse, başarıyla görüntülenir. Aksi takdirde, görüntülenemediği bildirilir.

**Notlar**

* Webdriver 124 sürümü kullanılmıştır. Chrome 115 sürümü üzerinde; webdriver artık yalnızca json dosyası olarakimport yöntemiyle yüklenecek şekilde güncellendiğinden UNIX sistemlerde paket yöneticileri ile yüklenmesini tavsiye ederim (ben homebrew kullandım)
* Test senaryoları, önceden belirlenmiş XPath ifadeleriyle belirli öğelerin varlığını ve görünürlüğünü kontrol eder.

Vscode üzerinde terminal çıktısı:

(base) gorkemagkurt@gorkyysmac seleniumwebtest % cd /Users/gorkemagku

rt/Desktop/Stajlar/Mobven/Assignment\ 3\ -\ SeleniumWebTest/seleniumwe

btest ; /usr/bin/env /Library/Java/JavaVirtualMachines/jdk-21.jdk/Cont

ents/Home/bin/java @/var/folders/pn/\_twd2gs569l4j4232jy797th0000gn/T/c

p\_c9eojk77gk7dqsr5gxz5uf7bx.argfile com.example.WebsiteTest

Starting ChromeDriver 124.0.6367.91 (51df0e5e17a8b0a4f281c1665dbd1b8a0c6b46af-refs/branch-heads/6367@{#984}) on port 3563

Only local connections are allowed.

Please see https://chromedriver.chromium.org/security-considerations for suggestions on keeping ChromeDriver safe.

ChromeDriver was started successfully.

May 08, 2024 10:51:38 AM org.openqa.selenium.remote.ProtocolHandshake createSession

INFO: Detected dialect: W3C

Exception occurred while checking Apple logo: Expected condition failed: waiting for visibility of element located by By.xpath: //a[@id='ac-gn-firstfocus']//span[contains(@class, 'apple-logo')] (tried for 10 second(s) with 500 milliseconds interval)

Exception occurred while checking 'Store' menu item: Expected condition failed: waiting for visibility of element located by By.xpath: //a[contains(text(), 'Store')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'Shop' button: Expected condition failed: waiting for element to be clickable: By.xpath: //a[contains(text(), 'Store')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'Mac' menu item: Expected condition failed: waiting for visibility of element located by By.xpath: //a[contains(text(), 'Mac')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'MacBook' link: Expected condition failed: waiting for element to be clickable: By.xpath: //a[contains(text(), 'Mac')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'iPad' menu item: Expected condition failed: waiting for visibility of element located by By.xpath: //a[contains(text(), 'iPad')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'iPad Pro' link: Expected condition failed: waiting for element to be clickable: By.xpath: //a[contains(text(), 'iPad')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'iPhone' menu item: Expected condition failed: waiting for visibility of element located by By.xpath: //a[contains(text(), 'iPhone')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'iPhone 13' link: Expected condition failed: waiting for visibility of element located by By.xpath: //a[contains(text(), 'iPhone 13')] (tried for 10 second(s) with 500 milliseconds interval)

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System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Exception occurred while checking 'Support' menu item: Expected condition failed: waiting for visibility of element located by By.xpath: //a[contains(text(), 'Support')] (tried for 10 second(s) with 500 milliseconds interval)

Build info: version: '3.141.59', revision: 'e82be7d358', time: '2018-11-14T08:17:03'

System info: host: 'gorkyysmac.local', ip: 'fe80:0:0:0:1cd4:67fe:9582:c499%en0', os.name: 'Mac OS X', os.arch: 'aarch64', os.version: '14.4.1', java.version: '21.0.3'

Driver info: org.openqa.selenium.chrome.ChromeDriver

Capabilities {acceptInsecureCerts: false, browserName: chrome, browserVersion: 124.0.6367.119, chrome: {chromedriverVersion: 124.0.6367.91 (51df0e5e17a8..., userDataDir: /var/folders/pn/\_twd2gs569l...}, fedcm:accounts: true, goog:chromeOptions: {debuggerAddress: localhost:49599}, javascriptEnabled: true, networkConnectionEnabled: false, pageLoadStrategy: normal, platform: MAC, platformName: MAC, proxy: Proxy(), setWindowRect: true, strictFileInteractability: false, timeouts: {implicit: 0, pageLoad: 300000, script: 30000}, unhandledPromptBehavior: dismiss and notify, webauthn:extension:credBlob: true, webauthn:extension:largeBlob: true, webauthn:extension:minPinLength: true, webauthn:extension:prf: true, webauthn:virtualAuthenticators: true}

Session ID: 2f7ea3a7d80401ff16649d210d76ac37

Driver code:

package com.example;

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.support.ui.ExpectedConditions;

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

public class WebsiteTest {

public static void main(String[] args) {

System.setProperty("webdriver.chrome.driver", "/usr/local/bin/chromedriver");

WebDriver driver = new ChromeDriver();

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

WebDriverWait wait = new WebDriverWait(driver, 10);

testCases(driver, wait);

driver.quit();

}

public static void testCases(WebDriver driver, WebDriverWait wait) {

checkElement(driver, wait, By.xpath("//a[@id='ac-gn-firstfocus']//span[contains(@class, 'apple-logo')]"), "Apple logo");

checkElement(driver, wait, By.xpath("//a[contains(text(), 'Store')]"), "'Store' menu item");

clickAndCheckElement(driver, wait, By.xpath("//a[contains(text(), 'Store')]"), By.xpath("//a[contains(text(), 'Shop')]"), "'Shop' button");

checkElement(driver, wait, By.xpath("//a[contains(text(), 'Mac')]"), "'Mac' menu item");

clickAndCheckElement(driver, wait, By.xpath("//a[contains(text(), 'Mac')]"), By.xpath("//a[contains(text(), 'MacBook')]"), "'MacBook' link");

checkElement(driver, wait, By.xpath("//a[contains(text(), 'iPad')]"), "'iPad' menu item");

clickAndCheckElement(driver, wait, By.xpath("//a[contains(text(), 'iPad')]"), By.xpath("//a[contains(text(), 'iPad Pro')]"), "'iPad Pro' link");

checkElement(driver, wait, By.xpath("//a[contains(text(), 'iPhone')]"), "'iPhone' menu item");

clickAndCheckElement(driver, wait, By.xpath("//a[contains(text(), 'iPhone')]"), By.xpath("//a[contains(text(), 'iPhone 13')]"), "'iPhone 13' link");

checkElement(driver, wait, By.xpath("//a[contains(text(), 'Support')]"), "'Support' menu item");

}

*// Belirtilen By nesnesiyle bir öğenin varlığını kontrol eden fonksiyon*

public static void checkElement(WebDriver driver, WebDriverWait wait, By by, String elementName) {

try {

WebElement element = wait.until(ExpectedConditions.visibilityOfElementLocated(by));

if (element.isDisplayed()) {

System.out.println(elementName + " is displayed.");

} else {

System.out.println(elementName + " is not displayed.");

}

} catch (Exception e) {

System.out.println("Exception occurred while checking " + elementName + ": " + e.getMessage());

}

}

*// Belirtilen By nesnesine tıklayıp ardından başka bir öğenin varlığını kontrol eden fonksiyon*

public static void clickAndCheckElement(WebDriver driver, WebDriverWait wait, By clickBy, By checkBy, String elementName) {

try {

WebElement element = wait.until(ExpectedConditions.elementToBeClickable(clickBy));

element.click();

WebElement checkElement = wait.until(ExpectedConditions.visibilityOfElementLocated(checkBy));

if (checkElement.isDisplayed()) {

System.out.println(elementName + " is displayed.");

} else {

System.out.println(elementName + " is not displayed.");

}

} catch (Exception e) {

System.out.println("Exception occurred while checking " + elementName + ": " + e.getMessage());

}

}

}