**Assignment 5**

** What is Automation Testing?**

Automation testing is the use of software tools and scripts to automate the testing process of software applications. It involves writing scripts that can simulate user actions and system events to test software applications. The goal of automation testing is to reduce the time and effort required to test software applications and improve the overall quality of the software.

Automated tests are executed by tools that simulate user actions, such as clicking buttons, filling out forms, and navigating menus. These tools can also validate the results of these actions, such as checking that the correct information is displayed on the screen or that the correct data is saved in the database.

Automation testing can be used to test a wide range of software applications, from web applications to mobile apps to desktop software. It is often used to perform repetitive or time-consuming tests, as well as to perform tests that are difficult or impossible to perform manually.

Benefits of automation testing include faster testing cycles, more consistent and reliable results, and improved test coverage. However, it requires significant upfront investment in tooling and scripting, and may not be suitable for all types of tests.

 **Which Are the Browsers Supported by Selenium Ide?**

Selenium IDE is one of the most accessible record and play tools in the Selenium Tool Suite, which requires no particular setup. Selenium IDE has add-ons for Firefox and Chrome browsers. Selenium IDE comes with a rich set of commands that are powered by Selenese, and it allows to record and test different interactions of a web application with the browser. There are also limitations that should be kept in mind before choosing the Selenium IDE.

 **What are the benefits of Automation Testing?**

Automation testing has several benefits over manual testing, including:

1.Faster and more efficient testing: Automation testing can execute test cases much faster than manual testing, reducing the overall time and effort required for testing. It can also run tests overnight or during weekends, allowing testers to focus on other tasks during the day.

2. Improved accuracy and reliability: Automation testing eliminates the risk of human errors and ensures that tests are executed consistently and accurately every time. It can also detect defects and errors that may be missed during manual testing.

3. Increased test coverage: Automation testing can test a large number of test cases and scenarios that are difficult or impossible to perform manually. This improves the test coverage of the application and helps identify issues that may be missed during manual testing.

4. Reusability of test scripts: Automated test scripts can be reused across multiple test cycles, reducing the time and effort required for future testing cycles.

5. Cost-effective: Although there is an initial investment in automation testing tools and resources, in the long run, it can be more cost-effective than manual testing, as it reduces the need for manual testers and can identify defects earlier in the development process.

6. Continuous testing: Automation testing can be integrated into the continuous integration and continuous delivery (CI/CD) process, enabling developers to identify and fix issues quickly and efficiently.

Overall, automation testing offers several benefits that can improve the quality, speed, and efficiency of software testing.

** What are the advantages of Selenium?**

Selenium is a popular open-source software testing tool that offers several advantages, including:

1. Cross-platform compatibility: Selenium can be used on different operating systems (Windows, Linux, macOS) and different browsers (Chrome, Firefox, Safari, Internet Explorer, Edge), making it a versatile tool for testing web applications.
2. Supports multiple programming languages: Selenium supports multiple programming languages such as Java, Python, Ruby, C#, JavaScript, etc. This allows testers to write test scripts in their preferred language.
3. Open-source: Selenium is open-source software, which means it's free to use and can be customized to fit specific testing needs.
4. Large community: Selenium has a large and active community of users and developers who contribute to its development and provide support to other users.
5. Integration with other tools: Selenium can be integrated with other tools and frameworks such as TestNG, JUnit, Maven, Jenkins, and many more. This allows testers to leverage the benefits of these tools and frameworks in their testing process.
6. Easy to use: Selenium is relatively easy to use, even for testers who have limited programming skills. Its user-friendly interface and easy-to-understand documentation make it accessible to beginners.
7. Supports multiple testing types: Selenium supports various types of testing, including functional testing, regression testing, and performance testing. This makes it a versatile tool for testing different aspects of web applications.

Overall, Selenium is a powerful and versatile testing tool that offers numerous advantages to testers, developers, and organizations. Its cross-platform compatibility, open-source nature, and large community make it a popular choice for automated testing of web applications.

 **Why testers should opt for Selenium and not QTP?**

There are several reasons why testers may prefer Selenium over QTP (QuickTest Professional), such as:

1. platform compatibility: Selenium supports multiple operating systems and browsers, while QTP is limited to Windows and Internet Explorer.
2. Programming languages: Selenium supports multiple programming languages, including Java, Python, Ruby, and C#, while QTP supports only VBScript.
3. Flexibility: Selenium is more flexible than QTP, as it can be easily integrated with other tools and frameworks, such as TestNG, JUnit, Maven, Jenkins, and many more.
4. Community support: Selenium has a large and active community of users and developers who contribute to its development and provide support to other users, while QTP has a smaller community and limited resources available for support.
5. Maintenance: Selenium requires less maintenance compared to QTP, as it is an open-source tool with regular updates and bug fixes available from the community.
6. Future-proofing: Selenium is constantly evolving and adapting to new technologies, while QTP is not as actively developed as Selenium.

Overall, while QTP is a powerful tool for test automation, Selenium offers several advantages in terms of cost, flexibility, and community support, making it a popular choice among testers. However, the choice of tool ultimately depends on the specific requirements and constraints of the testing project

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// Generated by Selenium IDE

import org.junit.Test;

import org.junit.Before;

import org.junit.After;

import static org.junit.Assert.\*;

import static org.hamcrest.CoreMatchers.is;

import static org.hamcrest.core.IsNot.not;

import org.openqa.selenium.By;

import org.openqa.selenium.WebDriver;

import org.openqa.selenium.firefox.FirefoxDriver;

import org.openqa.selenium.chrome.ChromeDriver;

import org.openqa.selenium.remote.RemoteWebDriver;

import org.openqa.selenium.remote.DesiredCapabilities;

import org.openqa.selenium.Dimension;

import org.openqa.selenium.WebElement;

import org.openqa.selenium.interactions.Actions;

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

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

import org.openqa.selenium.JavascriptExecutor;

import org.openqa.selenium.Alert;

import org.openqa.selenium.Keys;

import java.util.\*;

import java.net.MalformedURLException;

import java.net.URL;

public class DemoTest {

private WebDriver driver;

private Map<String, Object> vars;

JavascriptExecutor js;

@Before

public void setUp() {

driver = new ChromeDriver();

js = (JavascriptExecutor) driver;

vars = new HashMap<String, Object>();

}

@After

public void tearDown() {

driver.quit();

}

@Test

public void demo() {

driver.get("https://www.tops-int.com/it-training-vadodara");

driver.manage().window().setSize(new Dimension(1346, 728));

driver.findElement(By.linkText("Web Development Course")).click();

driver.findElement(By.id("inq\_name")).click();

driver.findElement(By.id("inq\_name")).sendKeys("arpita");

driver.findElement(By.id("inq\_email")).sendKeys("arpita.brahmkshatriya@gmail.com");

driver.findElement(By.id("inq\_contact")).sendKeys("9536785634");

}

}