Software Testing Assignment – Module_5 Automation and Selenium

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Course: Software Testing

1. **What is Automation Testing?**
   ➤ To execute test cases by the test engineer with using automation tools.
   ➤ Test automation is the use of software to control the execution of tests, the comparison of actual outcomes to predicted outcomes, the setting up of test preconditions, and other test control and test reporting functions.
   ➤ Test automation is a process of writing a computer program to do testing that would otherwise need to be done manually.
   ➤ E.g. Selenium, Appium, Katalon studio, QTP.

2. **Which Are The Browsers Supported By Selenium Ide?**
   ➤ Google Chrome 12.0.712.0 and above (current version is 22.0.1229.94 m)
   ➤ Mozilla firefox
   ➤ Opera 11.5 and above (current version is 12.02)
   ➤ Microsoft Edge
   ➤ Safari
   ➤ Android- 2.3 and above for phones and tablets (devices & emulators) iOS 3+ for phones (devices & emulators) and 3.2+ for tablets (devices & emulators) HtmlUnit 2.9 and above (current version is 2.10)

3. **What are the benefits of Automation Testing?**
   ➤ Automation testing saves time.
   ➤ Very easy to use and install.
   ➤ Automation testing helps in risk reduction.
   ➤ No programming experience is required, through knowledge of HTML and DOM are needed.
   ➤ Automation testing saves money.
   ➤ Automation testing helps you stay compliant.
   ➤ Can experts test to formats usable in selenium RC and web driver.
   ➤ Has built in help and test results reporting module.
   ➤ Provides support for extensions.
   ➤ Automation testing gives you a competitive advantage.

4. What are the advantages of Selenium?

- ➢ Can only test web applications.
- ➢ Has no built-in object repository.
- ➢ Automates at a slower rate because it does not have a native IDE, and only third-party IDE can be used for development.
- ➢ Data-driven testing is more cumbersome since you have to rely on the programming language's capabilities for setting values for your test data.
- ➢ Cannot access elements outside of the web application under test.
- ➢ No official user support is being offered.
- ➢ Has no native capability to export runtime data onto external formats.
- ➢ Parameterization can be done via programming but is difficult to implement.
- ➢ No native support to generate test /bug reports.
- ➢ Open Source
- ➢ Supports all browsers like IE, Firefox, Mozilla, Safari
- ➢ Supports all Operating Systems.
- ➢ Supports all programming languages Java, Ruby# and Python.
- ➢ Run multiple tests at a time.

5. Why should testers opt for Selenium and not QTP?

QTP	SELENIUM
Open source, free to use, and free of charge.	Commercial.
Highly extensible.	Limited add-ons.
Can run tests across different browsers.	Can only run tests in Firefox, Internet Explorer and Chrome.
Supports various operating systems.	Can only be used in Windows.
Supports mobile devices.	Needs to have the application under test to be visible on the desktop.
Can execute tests while the browser is minimized.	Can only execute in parallel but using Quality Centre which is again a paid product.
Can execute tests in parallel.	Supports mobile device using 3rd party software.