

# Software Testing Assignment

## Module-5

### 1. What is Automation Testing?

- Automation testing is a software testing technique where automated tools are used to execute pre-scripted tests on software applications.
- It involves the use of specialized software to control the execution of tests, compare actual test results with expected results, and report the outcomes.
- The primary goal of automation testing is to increase the efficiency and effectiveness of the testing process by automating repetitive tasks, reducing human error, and accelerating the testing cycle.

### 2. Which Are the Browsers Supported by Selenium Ide?

- Selenium IDE (Integrated Development Environment) is a tool used for recording and playback of interactions with a web browser.
- As of my last update in January 2022, Selenium IDE supports the following web browsers:
  - Google Chrome
  - Mozilla Firefox
  - Microsoft Edge
- However, the availability of Selenium IDE for different browsers might vary depending on updates and versions released after my last update.
- It's always a good idea to check the official Selenium documentation or website for the most up-to-date information on supported browsers.

### 3. What are the benefits of Automation Testing?

- **Improved Efficiency:** Automation testing can execute tests faster and more reliably compared to manual testing, saving time and effort.
- It allows for the execution of repetitive tasks without human intervention, thereby enhancing efficiency.
- **Reusability:** Test scripts created for automation can be reused across multiple test cycles, reducing duplication of efforts.
- Once developed, automated tests can be rerun easily, making regression testing more manageable and cost-effective.
- **Consistency:** Automated tests perform the same steps and checks consistently, eliminating human errors and ensuring uniformity in test execution.
- This consistency leads to more reliable results and better test coverage.
- **Increased Test Coverage:** Automation allows for the testing of a broader range of scenarios and configurations, including those that may be impractical or time-consuming to test manually.
- This expanded test coverage helps identify defects earlier in the development process.
- **Faster Feedback:** Automated tests can provide rapid feedback on the quality of the software under test, allowing for quick identification and resolution of issues.
- This rapid feedback loop is crucial for maintaining a fast-paced development cycle, particularly in Agile and DevOps environments.

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### **4. What are the advantages of Selenium?**

- Selenium supports various web browsers like Chrome, Firefox, Safari, Edge, etc., allowing you to test web applications across different platforms.
- Selenium supports multiple programming languages such as Java, Python, C#, Ruby, and JavaScript, providing flexibility to developers and testers to choose their preferred language for test automation.
- Selenium offers flexibility in terms of test environment setup and test execution. It can be integrated with other tools and frameworks to enhance automation capabilities.
- Being open-source, Selenium is freely available, and its source code can be modified and customized as per the project requirements.

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

- Selenium is an open-source tool, whereas QTP/UFT is a commercial tool that requires a license fee.
- For organizations with budget constraints, Selenium's cost-effectiveness can be a significant advantage.
- Selenium supports multiple operating systems (Windows, macOS, Linux) and browsers (Chrome, Firefox, Safari, Edge), providing greater flexibility compared to QTP/UFT, which primarily supports Windows-based environments.
- Selenium offers support for multiple programming languages such as Java, Python, C#, Ruby, and JavaScript, allowing testers to work with their preferred programming language.
- Selenium has a large and active community of developers and testers who contribute to its development, share knowledge, and provide support through forums, blogs, and online communities.