**Module-5**

**(1) What is Automation Testing?**

* Test automation involves automating a manual process already in place that uses a formalized testing process.

**(2) Which Are The Browsers Supported By Selenium Ide?**

* Supported browsers
* **Google Chrome**: Available as a [Chrome extension on the Chrome Web Store](https://chromewebstore.google.com/detail/selenium-ide/mooikfkahbdckldjjndioackbalphokd)
* **Mozilla Firefox**: Available as a Firefox add-on
* **Microsoft Edge**: Requires EdgeDriver and Windows to run

**(3) What are the benefits of Automation Testing?**

* Automation testing can improve software quality and efficiency by reducing manual testing and increasing test coverage.

* **Benefits**

1. **Increased test coverage:-** More test cases can be run, which helps find bugs and improve application performance
2. **Faster feedback:-** Testers can provide feedback to developers faster, which can lead to quicker fixes
3. **Improved ROI**:- Automation testing can save money in the long run by reducing manual testing efforts
4. **Reusability**:- Automated test cases can be reused, and the setup configuration is easy
5. **Scalability**:- Automated testing can handle thousands of test cases simultaneously, so fewer QA testers are needed
6. **Early bug detection:-** Critical bugs can be found early in testing, which can reduce the cost of fixing them
7. **Improved accuracy:-** Automated tests can execute tests with 100% accuracy because they consistently produce the same result

**(4) What are the advantages of Selenium?**

* Open Source
* Supports all browsers like IE, Firefox, Mozilla, Safari
* Supports all Operating Systems.
* Supports all programming languages Java, Ruby, C# and Python.
* Run multiple tests at a time.
* Selenium is easy to implement.
* It offers reusability and integrations.
* It allows for parallel test execution.
* It allows for faster market launch.
* It allows for consistent test results.
* It allows for accurate and thorough testing.

**(5) Why testers should opt for Selenium and not QTP?**

* Testers should generally opt for Selenium over QTP (now known as UFT) because Selenium is an open-source, free tool that supports multiple programming languages and browsers, making it significantly more flexible and cost-effective than the proprietary QTP, which is primarily limited to VBScript and can be expensive to license and maintain; this allows testers to write scripts in their preferred language and test across various platforms with ease.
* Key points in favor of Selenium:-
* **Open-source and Free:** No licensing cost, making it accessible to anyone.
* **Multi-browser support:** Test scripts can run across different browsers like Chrome, Firefox, Safari, etc.
* **Multiple language support:** Write test scripts in various languages like Java, Python, C#, Ruby, etc.
* **Community support:** Large community with readily available documentation and support forums.

Drawbacks of QTP:

* **Costly licensing:** Requires a paid license to use.
* **Limited language support:** Primarily uses VBScript.
* **Vendor lock-in:** Reliance on a single vendor for updates and support.

**(6)Difference between selenium vs QTP**

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| --- | --- |
| Selenium | QTP |
| 1) Open source, free to use, and free of charge  2) Highly extensible  3) Can run tests across different browsers  4) Supports various operating systems  5) Supports mobile device  6) Can execute tests while the browser is minimized  7) Can only execute in parallel  8) Can test both web and desktop applications  9) Comes with a built-in object repository | Quick Test Professional(QTP)  1) Commercial  2) Limited add-ons  3) Can only run tests in Firefox, Internet Explorer and Chrome  4) Can only be used in Windows  5) Supports mobile devices using 3rd party software  6) Needs to have the application under test to be visible on the desktop  7) Can only execute in parallel but using Quality Center which is again a paid product.  8) Can only test web applications  9) Has no built-in object repository |