

1. What is Automation testing?

Automation testing is a type of software testing that uses specialized tools and scripts to automatically execute test cases, compare actual outcomes with expected results, and report the results. It aims to reduce manual effort, improve accuracy, increase test coverage, and speed up the software development lifecycle.

2. Which Are The Browsers Supported By Selenium Ide?

Mozilla Firefox

3. What are the benefits of Automation Testing?

Automation testing offers numerous benefits that can significantly enhance the software development and quality assurance process. Here are the key advantages:

1. **Faster Execution:** Automated tests run significantly faster than manual tests, especially during regression testing or when testing large applications.
2. **Reusability of Test Scripts:** Once created, test scripts can be reused across different versions of the application, saving time and effort in the long run.
3. **Increased Test Coverage:** Automation allows testing a large number of test cases across different environments, browsers, and devices, leading to broader test coverage.
4. **Accuracy and Consistency:** Automated tests perform the same operations precisely each time they are run, eliminating human error and ensuring consistent results.
5. **Cost-Effective in the Long Term:** Although the initial investment is higher, automation reduces testing time and resources over time, making it cost-effective in the long run.
6. **Faster Feedback:** Developers get quicker feedback on code changes, which speeds up the development cycle and helps in early detection of bugs.
7. **Support for Continuous Integration/Continuous Deployment (CI/CD):** Automation testing integrates seamlessly with CI/CD pipelines, enabling rapid and reliable software delivery.
8. **Better Resource Utilization:** Automation frees up testers from repetitive tasks, allowing them to focus on exploratory testing and other high-value activities.
9. **Improved Reporting:** Most automation tools generate detailed logs and reports that help in better analysis and decision-making.
10. **24/7 Test Execution:** Automated tests can run anytime without human intervention, including overnight or during non-working hours, increasing productivity.

4. What are the advantages of Selenium?

- **Open Source and Free:** Selenium is free to use, with no licensing costs, making it highly cost-effective for individuals and organizations.

- **Supports Multiple Languages:** Selenium supports various programming languages such as Java, Python, C#, Ruby, JavaScript, and Kotlin, giving testers flexibility
- **Cross-Browser Testing:** Selenium supports major browsers including Chrome, Firefox, Safari, Edge, and Internet Explorer, enabling broad compatibility testing.
- **Cross-Platform Compatibility:** It works on various operating systems like Windows, macOS, and Linux.
- **Integration with Other Tools:** Selenium integrates well with tools like Maven, TestNG, JUnit, Jenkins, Docker, and cloud testing platforms like Sauce Labs and BrowserStack.
- **Parallel Test Execution:** Using Selenium Grid, tests can be executed in parallel across multiple machines and environments, saving time
- **Supports Web Applications Only:** Selenium is specifically designed for automating web applications, making it highly optimized and efficient for this purpose.
- **Large Community and Rich Documentation:** Being widely used, Selenium has a strong community, plenty of tutorials, forums, and documentation to support testers at all levels.
- **Flexible and Extensible:** Selenium can be customized with plugins and extensions, and allows you to write complex test scripts for advanced testing needs.
- **Easy to Learn and Use:** For those with basic programming knowledge, Selenium has a relatively low learning curve and is intuitive to use

5 Why testers should opt for Selenium and not QTP?

selenium	QTP
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	Supports mobile devise using 3rd party software
Can execute tests while the browser is Needs to have the application under test minimized to be visible on the desktop	Needs to have the application under test