**1) What is Automation Testing?**

⮚ Automated Testing means using special software for tasks that people usually do when checking and testing a software product.

**2) Which Are the Browsers Supported by Selenium Ide?**

⮚ Currently, Firefox, Chrome, Edge, IE, and Safari are supported and the Selenium IDE has great documentation on how to configure your environment.

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

**1.** **Saving Costs:-** More often than not, one hears how expensive automation can be to set up and implement in the initial stage. This is true, but here’s what most testers/developers/management ignore: manual testing costs far more in the long run.

**2.** **Faster Feedback Loop:-** With faster tests and quicker results, teams can get feedback more frequently, which helps them detect issues and improve functionality. Frequent and fast feedback cycles are an integral part of Agile life cycles.

**3. Better Allocation of Resources:-** With automation taking care of mundane, repetitive tests, QAs can devote their time to activities that actually require their discernment and intellectual engagement.

**4. Guarantees Higher Accuracy:-** Given that manual testers are human, they will make mistakes. No matter how meticulous they are, manual testers cannot be expected to deliver 100% accurate results. People get tired, miss steps, and make other errors. Automation, however, runs a script perfectly every single time, and records results in the exact detail it has been instructed to.

**5. increased Test Coverage:-** Among the many advantages of automation testing, this one stands out. By virtue of automation, QAs can execute a much larger number of test cases. More tests ensure maximum coverage of requirements and features in every test cycle.

**6. Detects bugs earlier:-** With automation at hand, developers can run unit tests on their workstations before pushing code to version control. Subsequently, a series of other automated tests (integration, regression, etc.) are also run automatically. As quickly as it is created, every patch of code is tested extensively. Bugs are detected early on, when they tend to be easily fixable and their impact quite minimal.

**7. Test at Scale:-** Even the largest QA teams in the world cannot match the speed, range, and accuracy of an automation framework. For example, automation tests can be used to simulate the activity of a thousand visitors to a site for load testing.

**8. Maximizes ROI:-** aster tests lead to faster results. This, in turn, speeds up product release without compromising on software quality. Achieving accelerated time to market leads to increased Return on Investment (ROI) for a business.

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

**1. Cross-Browser Compatibility:-** Selenium supports multiple browsers like Chrome, Firefox, Safari, and Internet Explorer, making it easier to test web applications on different platforms.

**2. Platform Independence:-** Selenium is a cross-platform tool, which means it can be used on different operating systems like Windows, Linux, and macOS.

**3. Support for Multiple Programming Languages:-** Selenium supports multiple programming languages, including Java, C#, Python, Ruby, and others. This allows developers and testers to choose the language they are most comfortable with.

**4. Large Community and Resources:-** Selenium has a large and active community. This means there is a wealth of documentation, tutorials, and forums available, making it easier for users to find help and solutions to common problems.

**5. Integration with Other Tools:-** Selenium can be easily integrated with other tools and frameworks, such as TestNG, JUnit, Maven, and Jenkins, enhancing its capabilities and making it suitable for various testing needs.

**6. Flexibility and Extensibility:-** Selenium can be extended for various functionalities through its APIs, making it adaptable to different testing scenarios.

**7. Support for Parallel Execution:-** Selenium allows for the parallel execution of test scripts, which can significantly reduce the overall test execution time.

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

**>** Testers should opt for Selenium instead of QTP because it is free, supports multiple languages, works on all browsers and platforms, integrates with modern tools, has better community support and offers higher career opportunities. On the other hand QTP is expensive, limited and slowly losing demand in the market.

**1) Cost Factor**

* Selenium is open-source and free, so any company or individual tester can use it without paying licensing fees.
* QTP (Quick Test Professional, now called UFT) is a paid tool by Micro Focus, and its license cost is very high, making it less favorable for startups or small companies.

**2) Programming Language Support**

* Selenium supports multiple programming languages such as Java, Python, C#, Ruby, PHP, JavaScript, etc.
* QTP mainly supports VBScript only, which limits flexibility.

**3) Browser & Platform Support**

* Selenium works on all major browsers (Chrome, Firefox, Safari, Edge, etc.) and across different operating systems (Windows, macOS, Linux).
* QTP is limited to Internet Explorer and Windows OS only, so it lacks cross-platform compatibility.

**4) Integration with Other Tools**

* Selenium integrates well with modern tools such as Maven, Jenkins, Git, Docker, and CI/CD pipelines. This makes it perfect for Agile and DevOps environments.
* QTP has limited integration capabilities and is mostly used in traditional setups.

**5) Community Support & Popularity**

* Selenium has a huge global community, lots of tutorials, forums, and open-source libraries. This makes learning and troubleshooting easier.
* QTP has comparatively smaller community support, and being a paid tool, resources are not as widely available.

**6) Test Execution Speed**

* Selenium WebDriver is generally faster and more efficient in execution compared to QTP.
* QTP tends to be slower because of its heavy architecture.

**7) Future Scope & Career Growth**

* Since most companies (especially product-based and startups) prefer Selenium due to cost-effectiveness and flexibility, testers with Selenium skills have higher demand and better career growth.
* QTP is becoming outdated, and fewer companies are using it now.