1. **What is the test automation framework? What is selenium?  how does it work? and why do you need it?**

**What is the test automation framework?**A test automation framework is a set of tools used to perform automated software testing. Test automation frameworks provide significant advantages over manual testing and are commonly used in rapid software development. These frameworks allow software developers to create tests, execute tests and analyze test results. A test automation framework might be driven by code, data, a graphical user interface (GUI) or a combination of these.The most commonly used type of framework is the code-driven framework, which is used to perform white-box testing. Code-driven frameworks require developers to write small snippets of code, in the form of unit tests, to test software functionality or performance.

**What is selenium?**  
Selenium is a free (open-source) automated testing framework used to validate web applications across different browsers and platforms. You can use multiple programming languages like Java, C#, Python etc to create Selenium Test Scripts. Testing done using the Selenium testing tool is usually referred to as Selenium Testing.  
Selenium Software is not just a single tool but a suite of software, each piece catering to different Selenium QA testing needs of an organization.

**How does it works?**You use selenium tool to write test scripts, which are executed by Java. Selenium is not an executable application (like MS word or Excel) and cannot run on its own. It needs a programming environment to work. Some of the programming environments supported by Selenium are Java, Ruby, PHP, C# (.NET).

**Why do you need it?**  
The WebDriver object triggers real events in the browser: mouse clicks, button clicks, entering text, and events from the keyboard. Think of each step as a building block. Stacked together, they can enable a technical team to do some powerful things. Here are a few of the more common reasons for using WebDriver. Building Automated Checks, Taking Over Long-Running Tasks.

1. **The most common tools that are used for configuration management are pacer and ansible. You need to concisely compare both of them.**

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| --- | --- | --- |
| **Project/Factor** | **Packer** | **Ansible** |
| Source code | Packer.io | Ansible.com |
| @Mentions | 31 | 172 |
| Stars | 13, 449 | 52, 074 |
| Growth | 0.7% | 1.8% |
| activity | 9.5 | 9.9 |
| Language | Go | Python |
| License | Mozilla Public License 2.0 | GNU General Public License v3.0 only |

**References**

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