1.1 - Selenium components

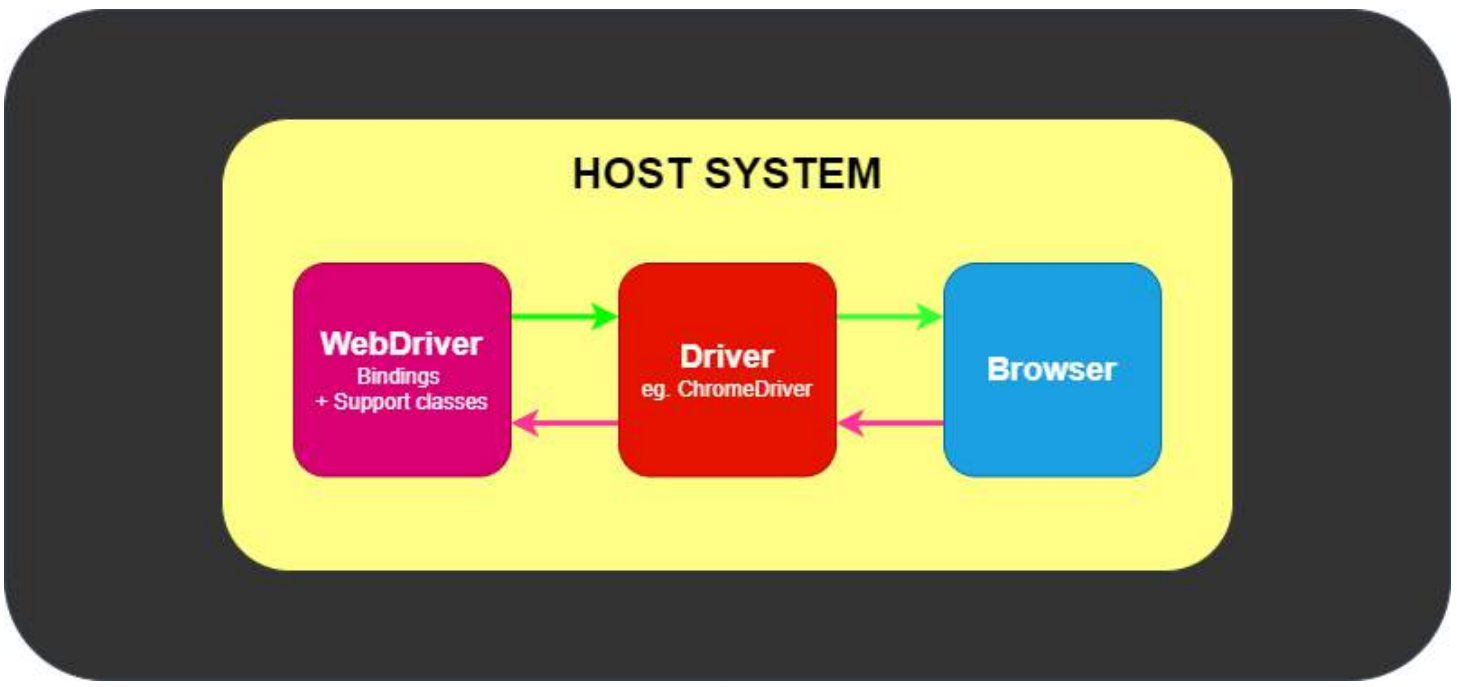
Building a test suite using WebDriver will require you to understand and effectively use several components. As with everything in software, different people use different terms for the same idea. Below is a breakdown of how terms are used in this description.

Terminology

- **API:** Application Programming Interface. This is the set of “commands” you use to manipulate WebDriver.
- **Library:** A code module that contains the APIs and the code necessary to implement them. Libraries are specific to each language binding, eg .jar files for Java, .dll files for .NET, etc.
- **Driver:** Responsible for controlling the actual browser. Most drivers are created by the browser vendors themselves. Drivers are generally executable modules that run on the system with the browser itself, not the system executing the test suite. (Although those may be the same system.) NOTE: *Some people refer to the drivers as proxies.*
- **Framework:** An additional library that is used as a support for WebDriver suites. These frameworks may be test frameworks such as JUnit or NUnit. They may also be frameworks supporting natural language features such as Cucumber or Robotium. Frameworks may also be written and used for tasks such as manipulating or configuring the system under test, data creation, test oracles, etc.

The Parts and Pieces

At its minimum, WebDriver talks to a browser through a driver. Communication is two-way: WebDriver passes commands to the browser through the driver, and receives information back via the same route.



The driver is specific to the browser, such as ChromeDriver for Google’s Chrome/Chromium, GeckoDriver for Mozilla’s Firefox, etc. The driver runs on the same system as the browser. This may or may not be the same system where the tests themselves are executed.

This simple example above is *direct* communication. Communication to the browser may also be *remote* communication through Selenium Server or RemoteWebDriver. RemoteWebDriver runs on the same system as the driver and the browser.