

Selenium WebDriver Automation

Introduction To Automation Testing

What's Test Automation

Test Automation is the activity of transferring Test cases into scripts using one of the programming languages with the help of one of the Automation Testing tools

Example

Test Steps	Test data	Expected Result
Navigate to URL	https://www.facebook.com/	Facebook Login Page opens up
Enter Valid Username	User name: Automation	Username is shown
Enter Valid Password	Password: P@ssw0rd	Password is masked (****)
Click on SignIn Button		1- User logged in successfully 2- Home Page is displayed

Test Automation Goals

One major goal of automation is to save time, effort, and avoid human mistakes.

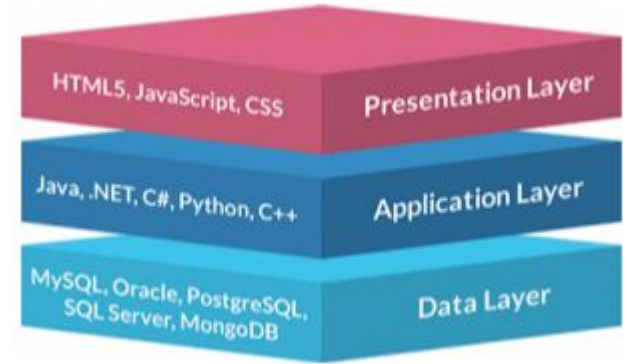
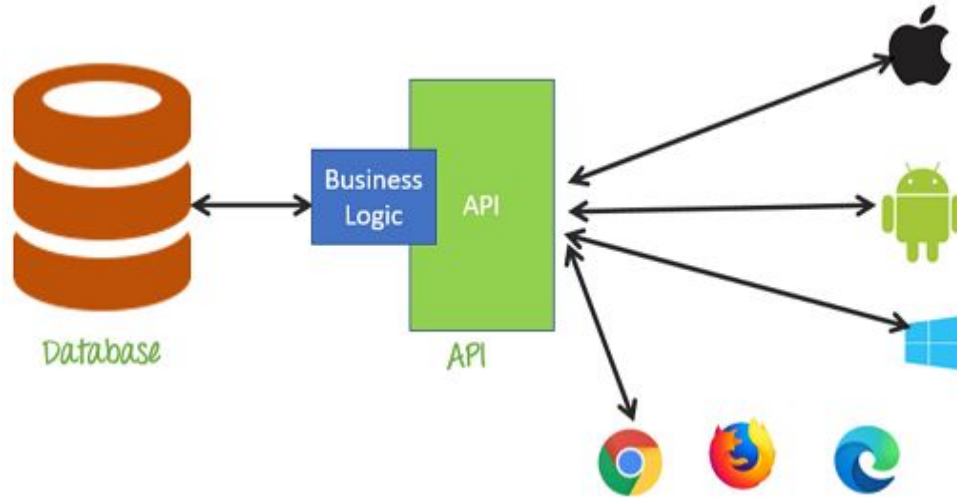
- Increases test execution speed and test coverage.
- Reporting and share test execution results generated by tool which have total no of test executed, passed, failed and total time.
- More software releases are expected.
- Reusability of scripts on other applications having similar functionality.

Disadvantages of Test Automation

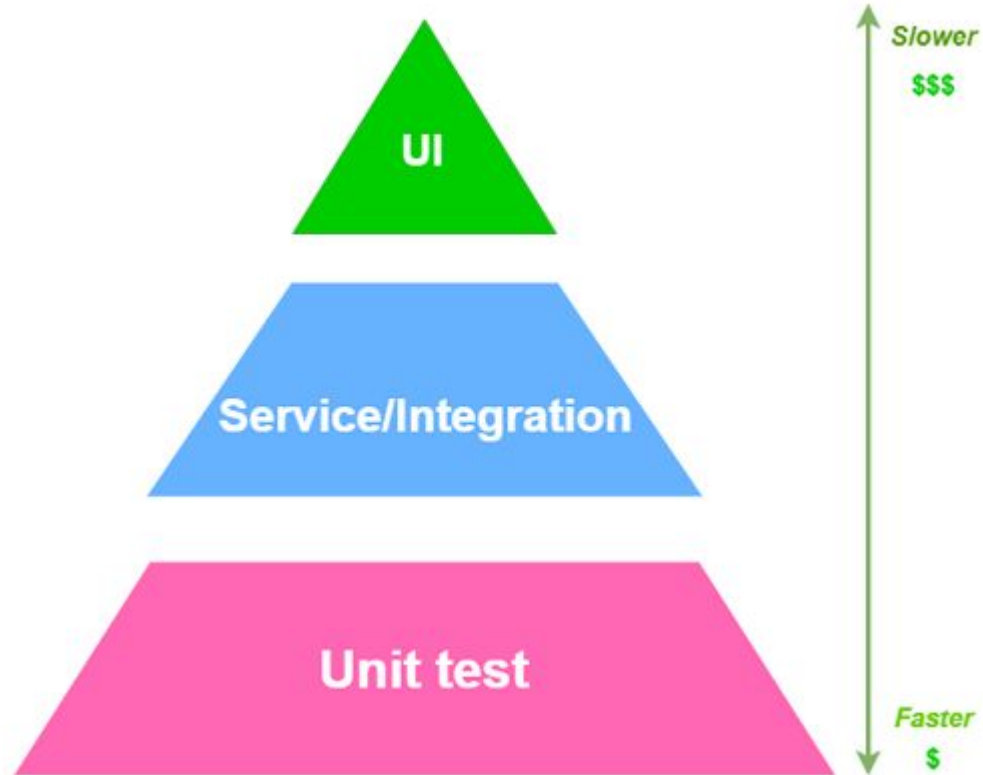
Automation Testing is a Double-edged sword.

- Proficiency is needed to write the automation test scripts.
- Debugging test scripts could be a major issue, If it's not depending on an well-structured design pattern.
- Sometimes changes applied on the application calls more test scripts maintenance.

Test Automation Pyramid



Test Automation Pyramid



Test Automation Pyramid

Unit Tests are the smallest automated test possible.

- It tests the behaviour of just one function or method, and is written directly in the application code.
- Unit Test is the widest section of the pyramid, which should comprise the largest number of tests
- Unit Tests run very quickly and they are the closest to the code.

Test Automation Pyramid

Service Tests are tests that check the web services (often APIs) that are used in our code.

- The middle section of the pyramid is for the API tests,
- Service Tests run quickly but depend on the back-end data store.

Test Automation Pyramid

UI tests verify that end-user activities work correctly. These are the tests that actions like fill out text fields and click buttons are take place.

- It's the smallest section of the test pyramid, which should comprise the smallest number of tests due to their slow speed and multiple dependencies.