

**SOFTWARE TESTING & AUTOMATION**

**ASSINGMENT  
MODULE-5**

**AUTOMATION AND SELENIUM**

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1. **What is Automation Testing?**

**Ans.** Manual tests may find many defects in a software application, it is a laborious and time consuming process. In addition it may not be effective in finding certain classes of defects.Test automation is a process of writing a computer program to do testing that would otherwise need to be done manually.

Automation testing is the process of using software tools to automatically test a product for quality. It's used to verify that a product meets certain standards for functionality, code style, and user experience.

Automation Testing is the use of software tools and scripts to automate testing in [software development](https://www.lambdatest.com/learning-hub/software-development-process" \t "https://www.lambdatest.com/_blank) and [quality assurance](https://www.lambdatest.com/learning-hub/quality-assurance" \t "https://www.lambdatest.com/_blank). It involves creating scripts or test cases that can be automatically executed, improving efficiency, effectiveness, and test coverage while reducing human errors and saving time.

1. **Which Are The Browsers Supported By Selenium IDE? **

Selenium IDE is an open-source extension that allows users to automate tests using record and playback.

Currently, Fire fox, Chrome, Edge, IE, and Safari are supported and the Selenium IDE has great documentation on how to configure your environment. Code generation: With the Code Export feature, users can export a test or test suite to Web Driver code.

1. **What are the benefits of Automation Testing?**

**Speed**–Automation Scripts run very fast when compared to human users.

**Reliable**–Tests perform precisely the same operations each time the where run,

There by eliminating human error.

**Repeatable**– We can test how the application reacts after repeated execution of the same operation.

**Comprehensive**–We can build a suite of tests that cover severy feature in our application

**Reusable**–We can reuse tests on different versions of an application,even if the user interface changes. Automate your testing procedure when you have lot of regression work. Automate your load testing work for creating virtual user so check load Capacity of your application.

And **Automation testing** is more reliable as it is perform by Tools/Script. Automation testing is executed by software tools so it is significantly faster than a manual approach.  ****

1. **What are the advantages of Selenium ?**

Selenium is a free (open source) automated testing suite for web applications Across different browsers and platforms.

**It** is very easy to use and install. No programming language experience required through knowledge of HTML and DOM needed. It is also provide supports for extensions

* **Cross-browser compatibility**: Selenium works with major browsers like Chrome, Fire-fox, Safari, Edge, and Opera.
* **Multi-platform support**: Selenium can test web applications across different platforms.
* **Supports multiple programming languages**: Selenium allows developers to write scripts in languages like Java, Python, C#, Ruby, PHP, Perl, and JavaScript.
* **User-friendly interface**: Selenium has a user-friendly interface that makes it easy to create and run tests.
* **Scalability and parallel testing**: Selenium Grid allows users to distribute tests across multiple machines, which can run different browsers and operating systems.
* **Community support**: Selenium has a community of users who provide support and resources.
* **Flexibility in test case design**: Selenium allows users to create reusable test files.
* **Real-world browser testing**: Selenium allows users to automate browser interactions to test web applications in real-world scenarios.

1. **Why testers should opt for Selenium and not QTP?**

Because is QTP is Commercial software and Selenium is Open Source and free to use.

It is also can be run in windows only support mobile device using 3rd party software. Needs to have application under test. Can only execute in parallel but using quality center which is again a paid product.