

What is Automation Testing?

Automation testing is a technique uses an application to implement entire life cycle of the software in less time and provides efficiency and effectiveness to the testing software.

Automation testing is an Automatic technique where the tester writes scripts by own and uses suitable software to test the software. It is basically an automation process of a manual process. Like regression testing, Automation testing also used to test the application from load, performance and stress point of view.

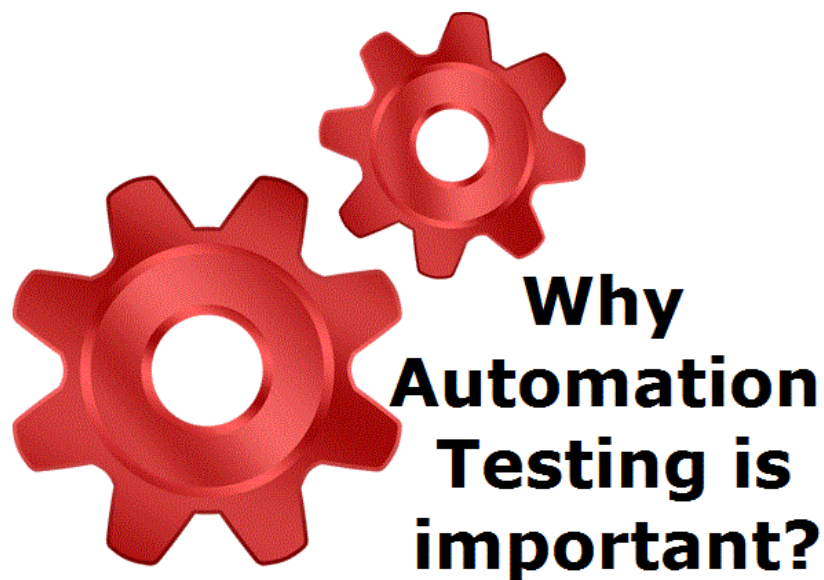
In other word, Automation testing uses automation tools to write and execute test cases, no manual involvement is required while executing an automated test suite. Usually, testers write test scripts and test cases using the automation tool and then group into test suites.

The main goal of Automation testing is to increase the test efficiency and develop software value.

What kinds of functions to automate using Automation testing tools:

It's true that everything is not to be automated using Automation testing process, things to be automated are; login forms, registration forms, and the place where numbers of users access the Software simultaneously can be automated. Moreover, all GUI items, connections with databases, field validations and many-more can be efficiently tested automatically rather than manually.

Why Automation Testing is important?



Suppose any software has come up with new releases and bug fixes, then how will you ensure about that the new released software with bug fixes has not introduced any new bug in previous working functionality? So it's better to test the software with old functionalities too. It is difficult to test manually all functionalities of the software every time with the addition of some bug fixes or new functionalities. So, it is better to test software every time by Automation testing technique using Automation Tool efficiently and effectively. It is effective in terms of cost, resources, Time etc.

Do automation testing at the time of lots of regression work– A web application where thousands of users access the application simultaneously. It is always difficult to think that how will you test such application and how to create those many users manually and simultaneously. So, it is better to go for Automation testing.

Automate your testing work when GUI is same but you have lot of often functional changes. That means test that application where codes changes / function changes frequently in particular GUI. More functional changes increase the testing work.

When to automate an application:

Do the Automation testing in the following scenario of the Software,

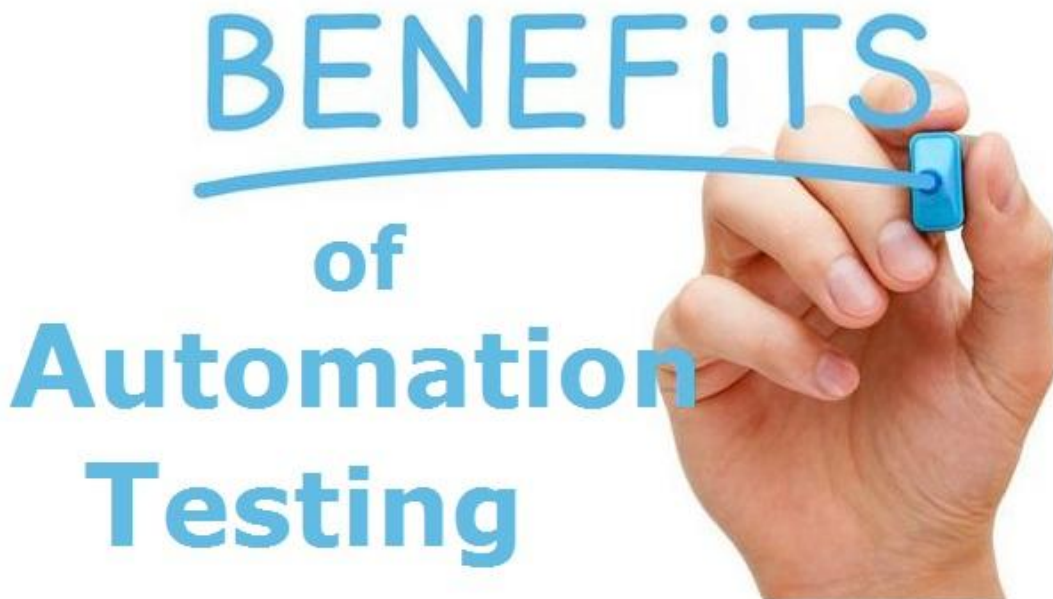
- Requirements do not change frequently
- Access the application for load and performance with many virtual users
- Steady Software with respect to manual testing
- Obtainability of time
- Huge and serious projects
- Projects that need to test the same areas often

Simple Steps to follow in Automation testing:

There are lots of helpful tools to write automation scripts, before using those tools it's better to identify the process which can be used to automate the testing,

- Identify areas within software to automate
- Choose the appropriate tool for test automation
- Write test scripts
- Develop test suits
- Execute test scripts
- Build result reports
- Find possible bugs or performance issue

Benefits of Automation Testing:



- Increase productivity
- Saves money
- Increases software quality
- Reduces testing time
- Support various applications
- Increase testing coverage
- Reduction of repetitive work
- Greater consistency

Different Software testing tools Available in Automation Testing:

These are some tools which can be helpful in Automation testing,

- HP Quick Test Professional
- Selenium
- Visual Studio Test Professional
- WATIR
- IBM Rational Functional Tester
- TestComplete
- Testing Anywhere
- WinRunner
- LoadRunner

- SilkTest

Risks involved in Automation testing:

In some situations where Automation testing is important, but how much it is comfortable that much it is risky too. So that, if you decided to do Automation testing then think of following scenarios first,

Starting cost for Automation is very high – Any big project requires numbers of testers, hiring number of manual testers are really cost effective, for this reason you can choose Automation testing. Automation cost is more for initial setup like; automation tool purchasing cost, training and maintenance of test scripts cost is very high.

Because of this reason, some companies are worried of take decision to automate their work. They think that, if they spend lots of money in the initial stage and won't get sufficient tools to fulfill automation requirement then it is just a loss of money.

Automation is not 100% – Automation testing cannot be 100% and don't think of that. Surely you have areas like performance testing, regression testing, and load/stress testing where you can have scope of reaching near to 100% automation. Areas like User interface, documentation, installation, compatibility and recovery where testing must be done manually.

Do not automate unfixed UI – Be careful before automating user interface. If user interface is changing always, cost associated with script maintenance will be very high. Basic UI automation is enough in such cases.

Is your application is constant sufficient to automate additional testing work – It would be corrupt indication to automate testing work in early development cycle (Unless it is agile environment). Script maintenance cost will be very high in such cases.

Tester should have good programming knowledge – Good tester should have good programming knowledge, tester who really has good programming knowledge can use the Automation tool better and resolve applications issue better, otherwise it is just a time pass on tools.

Conclusion:

Automation testing is a best way to fulfill most of the testing goals with effective resources and time. But be careful before purchasing the automation tool that fulfills the requirement of the application because no any tool can fulfill 100% requirement. You should be having skilled staff before taking decision to automate the application. So get the tool that matches to your requirement and for rest part do the manual testing.

Source:

<http://www.softwaretestingclass.com/what-is-automation-testing/>