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**AUTOMATION TESTING**

Automation testing is the process of testing the software using an automation tools to find the defects. In this process, executing the test scripts and generating the results are performed automatically by automation tools. Automated testing entirely relies on the pre-scripted test which runs automatically to compare actual result with the expected results. This helps the tester to determine whether or not an application performs as expected.

It is true that test automation reduces the testing time, but it is not possible to start test automation at any time during software development. Also 100% automation testing is not possible this makes manual testing essential. Test automation should be started when the software has been manually tested and is stable to some extent.

Automated testing allows you to execute repetitive task and regression test without the intervention of manual tester. Even though all processes are performed automatically, automation requires some manual effort to create initial testing scripts.

**We do Automation testing in the following areas:**

* Regression Testing
* Unit Testing
* Integration Testing
* System Testing
* Acceptance Testing
* Load Testing
* Performance Testing

**Advantages of automated testing:**

* Automation testing is faster in execution
* It is cheaper compared to manual testing in a long run
* Automated testing is more reliable
* Automated testing is more powerful and versatile
* It is mostly used for regression testing
* It is reusable because automation process can be recorded
* It does not require human intervention. Test scripts can be run unattended
* It helps to increase the test coverage
* It can easily increase productivity because it provides fast & accurate testing result

**Disadvantages of Automated Testing:**

* It is recommended only for stable products
* Automation testing is expensive initially
* Most of the automation tools are expensive
* It has some limitations such as handling captcha, getting visual aspects of UI such as fonts, color, sizes
* Debugging the test script can be another major issue in the automated testing.
* Huge maintenance in case of repeated changes in the requirements

**Differences**

* Manual Testing is done manually by QA analyst (Human) whereas Automation Testing is done with the use of script, code and automation tools (computer) by a tester.
* Manual Testing process is not accurate because of the possibilities of human errors whereas the Automation process is reliable because it is code and script based.
* Manual Testing is a time-consuming process whereas Automation Testing is very fast.
* Manual Testing is possible without programming knowledge whereas Automation Testing is not possible without programming knowledge.
* Manual Testing allows random Testing whereas Automation Testing doesn’t allow random Testing.