

Manual Testing V/S Automated Testing

Beneficial For

We welcome to those engineers who are entering into the market to make their career in Software Testing, to being a part of this challenging job and give their input to make quality project for the organization. There are many philosophies in testing but the concept of testing is one "To give the better quality to the project". The engineers get some key techniques from this document, which helps them for better testing.

➤ Summary

Both manual and automated testing is different technique to test an application, manual testing is easy process as comparing to automated testing, manual testing time taken and it is possible up to certain level but in automated every type of testing is possible using different types of tools. Automated testing is more expensive as comparing to manual testing. Mostly small project is used manual testing because is easily and cover up in limited time line. Manual testing is based on concept, functions of project but the automated tool support to limited languages.

Key Features

-➤ Advantage and disadvantage of manual and automated testing techniques
-➤ Diagram of both manual and automated testing
-➤ Formal Information about Tools and Its Support Languages.

Manual Testing: - Manual testing is a testing technique, where test engineer test the software manually. The test engineer, who carries out all the test cases and executes on the application manually, step by step and indicates whether a particular step was accomplished successfully or whether it failed, performs manual testing. At the time of manual testing tester need only test case and with the information how to execute those test case. Test Complete gives you an opportunity to create and manage manual tests when testing your application. After adding a Manual Testing project item to your project, you can create a collection of steps to be performed when the application is being tested, with a description and detailed instructions for each step. Test case is also written for all type of testing according to test strategy of test plan. Test engineer writes test cases on base of design document of the software. Manual testing is always a part of any testing effort. It is especially useful in the initial phase of software development, when the software and its user interface are not stable enough, and beginning the automation does not make sense.

Advantage:-

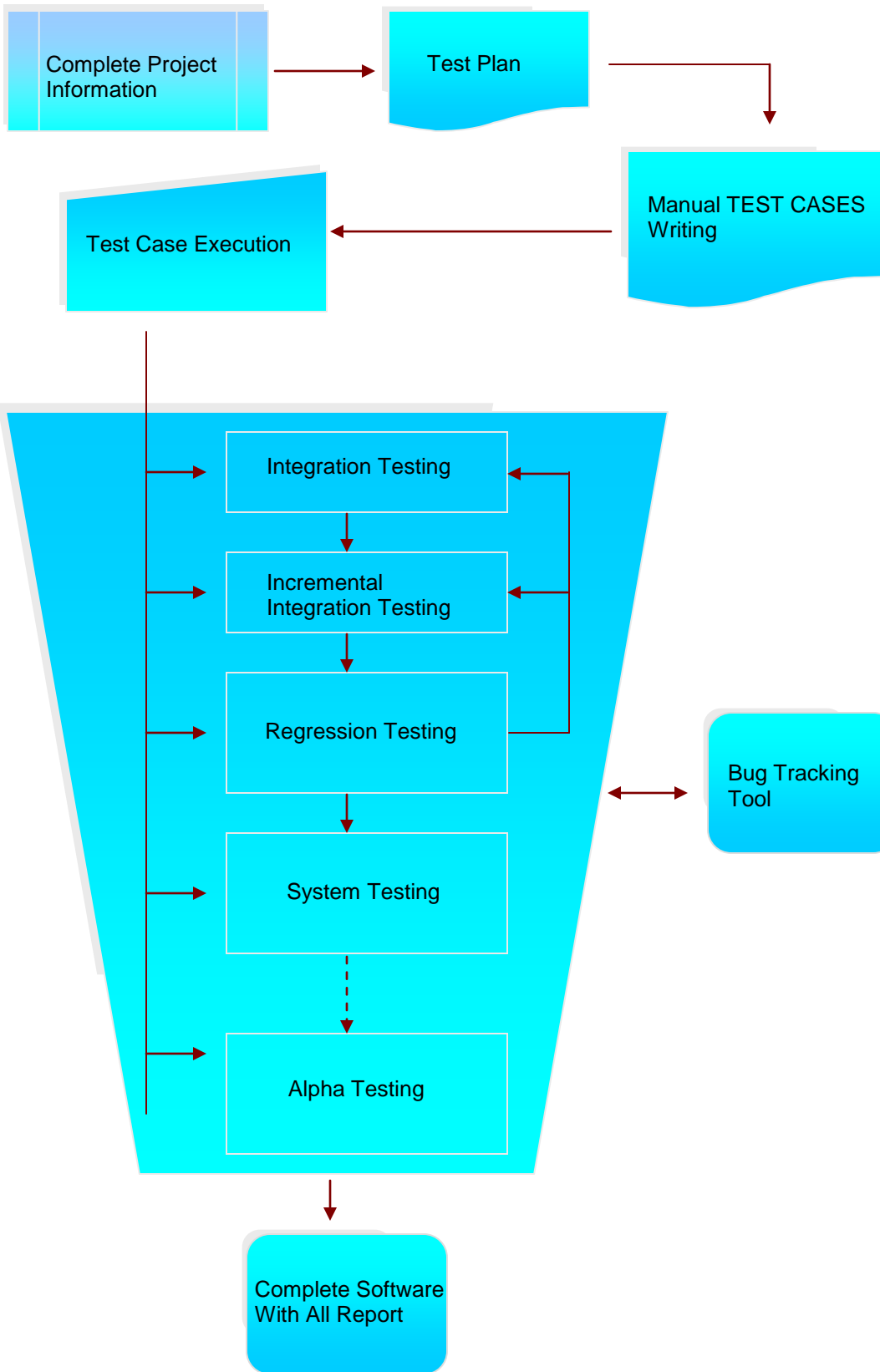
1. Manual testing can be use in both small and big project,
2. Easily we reduce and added our test case according to project movement.
3. It is covered in limited cost.
4. Easy to learn for new people who are entered in manual testing.
5. Manual is more reliable then automated (in many cases automated not cover all cases)
6. It allows the tester to perform more ad-hoc. In my experiences, more bugs are found via ad-hoc than via automation. And, the more time a tester spends playing with the feature of the software so he gets few user level bugs.

Disadvantage:-

1. GUI object size difference and color combination etc is not easy to find out in manual testing.
2. Actual load and performance is not possible to cover in manual testing for large number of users.
3. Running test manually is very time consuming job.

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Automated Testing: - Automated testing is a technique, where test engineer run the script on any testing tool for testing. This is not an easy process for new test engineer to test the software using script in automated tools, the engineer should have a good programming knowledge, and then they can write a good script against any test case. Here these people follow the plan and make various script for various testing. It is totally a time taking work to convert test case into a script. When they run the script, before that we have to set an environment on tool to run the test case, the test script are very important because, a single change may a cause to fail the script. All the scripts are important reason GUI object of the screen are key information during writing a test script, so at the time of script execution the frame should have same.

Note: - Test automation is expensive and it is an addition but not a replacement to manual testing.

Advantage:-

- 1- Easy to cover up all cases in a limited time period.
- 2- You check all type of case like load, performance of software by using tool.
3. - In case of Regression testing (Repeatedly testing), it is a best choice.
- 4- When a website requires immediate evaluation, automated testing should be used.

Automated testing saves a huge amount of time. Testing results for a webpage can be obtained in short of time period.

- 5- Automated testing can be performed on different operating systems simultaneously.
- 6- Automated tools are easy for volume testing.
- 7- Automated testing is good for website for those projects, which have not time constraints.

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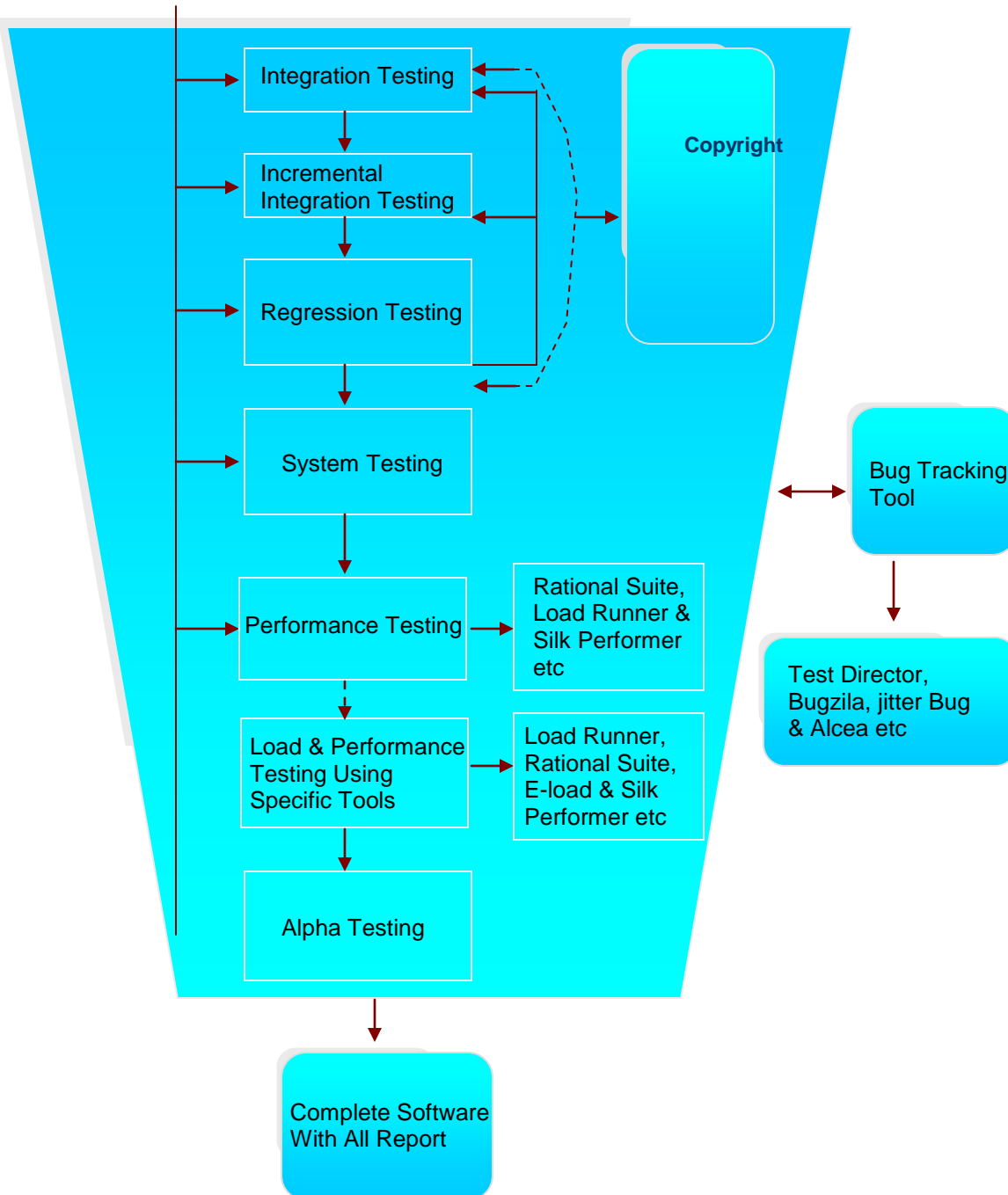
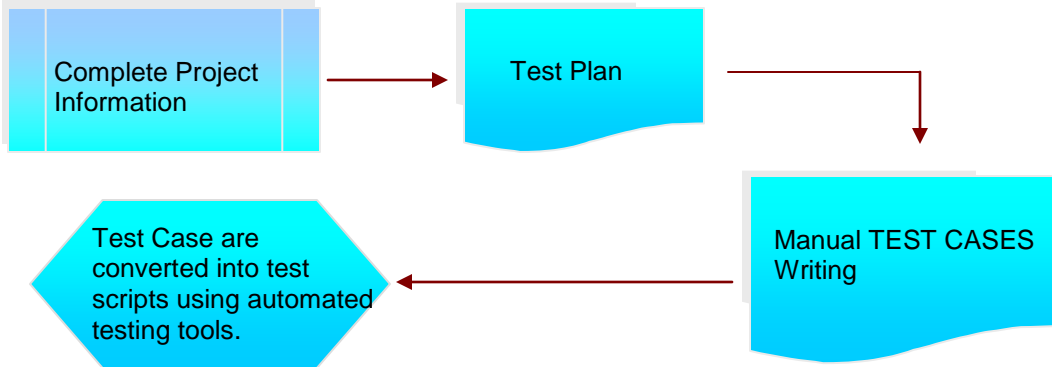
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Disadvantage:-

1. It is huge time taking work, all test case convert into script & case of updating test script.
2. Automation testing is more expensive work as comparing with manual testing
3. Language wise there is many tools to test various type of software, means all tools not support to all language of software.
4. Information that is conveyed with green and red is hard to find not only to the blind but also to users who are colorblind. Automated testing tools cannot detect this and other color-related issues.
5. Automated tool may not identify missing heading tags since it cannot read the content.
6. Is although a testing tool can detect attributes for graphics, it cannot determine if the attributes are descriptive enough. The same applies to frame titles and field labels. Only a human tester can provide feedback on these issues.
7. The tool cannot determine whether a website is comprehensible and functional if Browsers do not support style sheets and scripts or if users disable them.
8. It is not support to testing any video and mp3 file.

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Software organization is two types 1 – product base 2 – project base

Product Base – company make his own software , after that he sale this product in market or customize in product according to client, in this organization it is possible to start a automation testing , reason the business logic and new changes are company own responsible. Here company can use automated tool for own software because tools are available in very high cost, so company can maintain this cost.

Project Base – The whole organization working procedure are depends on client movement. Nothing is complete at the time of start a work, that’s why they are added new functional in the project during development. In project base company use tools on request of client, reason client have to pay the charge for tools. If we make script after some time, if client needed some changes, then all the script will be affected, this is a very complex work.

Note: - At present few new languages are introduces in market, now the growing companies are using that technology to make best software with in limited period. As comparatively the automated tool provider companies are introduce his new testing tool for new languages with new technology, that’s why this is not easy to all test engineers to use that product directly.

Formal Information about Tools and Its Support Languages.

- Win Runner : Web, Java, and Visual Basic
- QTP : .NET, Web services, JAVA, ERP/CRM, mainframe, and Windows applications
- Load Runner : Java, Citrix MetaFrame, XML
- Rational : Visual Basic, PowerBuilder, SQL Windows, SAP/R3, Oracle Developer 2000, Borland - Delphi, Web-based applications (WebTest), Java, Natstar, ILOG Views, Magic, dotNet, and ALL Mainframe
- Silk Test : vb.net, Asp.net, java & web browser
- Test Director : Bug tracking tool
- JUnit : Java



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