Assignment 3&4

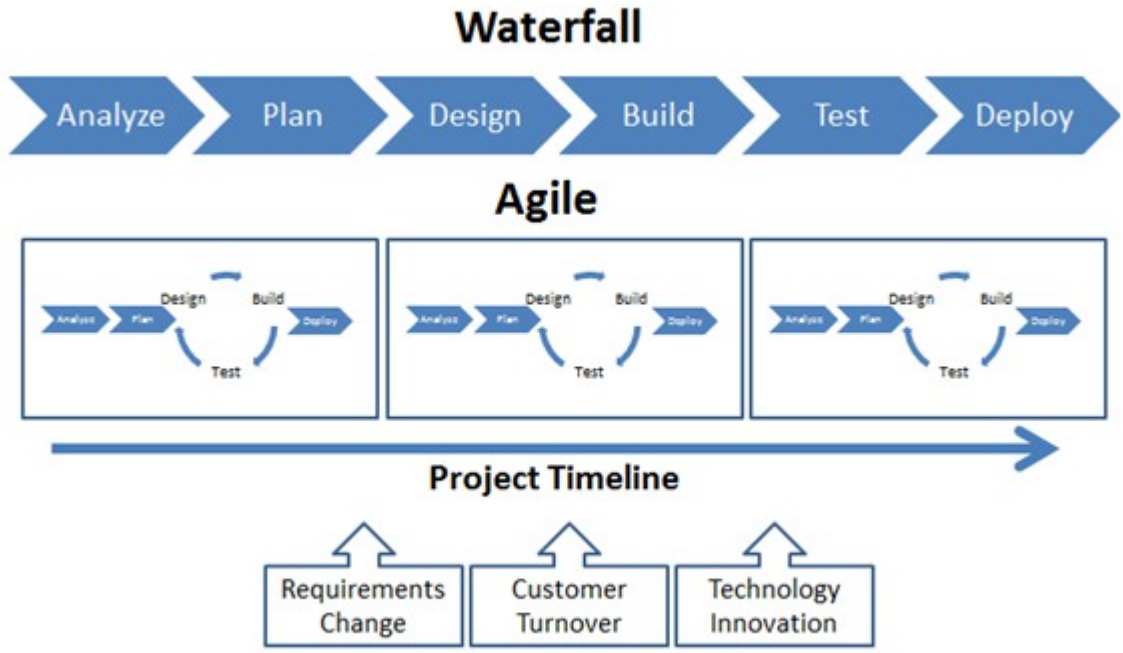
Q-1. Which software development technique is good for systems that have third party API calls, cron jobs, data exports/imports, etc.

Ans. For systems that have third party API calls, cron jobs, data exports/imports, etc., Test Driven Development (TDD) is a good solution. TDD is a software development technique that involves writing automated test cases prior to writing functional pieces of the code. This is popular in agile methodologies as it drives delivering a shippable product at the end of a sprint. Following sequence is followed:

1) Add a test defining a function or improvements of a function.
2) Run all the tests and see if any test fails. The new test should fail and rest should pass as code for it is not written yet. This rules out the possibility of new test is flawed in the manner that it always passes.
3) Write the code that causes new test to pass without breaking the old ones.
4) Run tests, now all should pass.
5) Refactor code, that is, clean up the code, improve readability, do documentation.

Q-2. Where does Test Automation fit in the Software Life Cycle? Explain with diagram.

Ans. Considering the software life cycles such as the waterfall model/Agile model, the test automation appears during the development and testing phase.



Q-3. Can we skip the manual testing and why?

Ans. No, we cannot skip manual testing because

1) Usability testing can't be automated. Usability testing requires human brain. We still can't train a computer to identify “good” vs “bad” usability.
2) Automated testing only tests what is predictable.
3) Exploratory testing can't be automated. It enables us to ask questions like “what if I do this instead?”.
4) Automated tests can contain bugs/errors. They can give false positives. The manual tester can identify these errors and make sure, testing is not buggy.
5) Technical limitations can come into play as some test scenarios are just too complicated or downright impossible to automate. It can be very costly also it it can't be reused.

Q-4. Give the names of selector?

Ans. Selectors are:

1) Universal selector
2) Type selectors
3) Descendant selectors
4) Child selectors
5) Adjacent sibling selectors
6) Attribute selectors
7) Id selector

Q-5. What is the modular framework?

Ans. In the modular testing framework, testers create test scripts module wise by breaking down the complete application under test into smaller, independent tests. In simple words, testers divide the application into multiple modules and create separate test scripts for each of them. These individual test scripts can be combined to make larger test scripts by using a master script to achieve required scenarios. This master script is used to invoke the individual modules to run end to end test scenarios. In this framework, testers write function libraries to use it when ever required.

Q-6. Explain the Open source tool.

Ans. Open source tool is a software/tool/program in which the source code is openly published and is available for and use and/or modification from its original origin, free of charge. Open source tools are typically created as a collaborative efforts in which programmers improve upon the code and share the changes within the community. The tools use licenses issued by the Open Source Initiative. Open source tools can be viable alternatives to popular closed-source applications and some open source tools offers features and performance benefits that surpass their commercial counterparts. Well known examples include Hadoop, Open Office, linux etc.

Q-7. What is Hybrid framework?

Ans. A hybrid framework is a combination of 2 or more framework's within it. In the field of testing, it is a combination of both data-driven test framework and keyword-driven test framework. In data-driven frameworks, all of our test data is generated from some external files like Excel, CSV, XML or some database table. In keyword-driven frameworks, all the operations and instructions are written in some external file like Excel worksheet.

Q-8. Write a name of record and replay tool.

Ans. Cross browser testing tool.

Q-9. What is the difference between BDD and Cucumber?

Ans. Behaviour-driven design (BDD) is a way to write code based on tests. Cucumber is a BDD tool. Cucumber is a framework for writing and executing high level descriptions of your software's functionality. BDD is really more for developers to write the story and ensure the proper functionality instead of something most testers would like to be involved in, other than writing the tests.

Q-10. Can we replace the Regression testing from Test automation and how?

Ans. The terms “automated” and “regression testing” go hand-in-hand. Regression testing is a must in test automation. Regression tests are naturally good candidates for automation. In general automated tests should be stable, simple and worth maintaining. Approaches include retesting all, retesting a subset of tests, prioritizing test cases.

Q-11. How many A's test script has? Explain them.

Ans. In test automation, we write scripts. Scripting is basically about three As:

1) ARRANGEMENT: We identify objects (buttons, dropdowns etc.) either by their ids, names or by their Window Titles etc. In case of web application, we identify by user id, or by Xpath or by CSS or by class name etc. If nothing works, we then identify objects by using mouse coordinates but is not a reliable method of object identification.

2) ACTION: When the objects are identified, we perform some kind of actions on it either by mouse or by keyboard. For example, either we click, or we double-click, or we mouse hover it or sometimes we drag-drop. Sometimes we write on text boxes. So any kind of action we perform on these objects are covered in this second step.

3) ASSERTION: The assertion is basically checking the object with some expected result. For example, if we press 2+3 on the calculator, the screen should show 5. In this case, our expected output is 5.