Automated Testing

What is Test Automation

○ a sort of **software** that had been particularly designed **for the testing purpose.** Mainly the test had been designed for the automation, execution of the tests. This is the entire process testing where the **outcomes are pre determined and hence as a result they are matched with the actual results**. It has been defined as the manual test process. If this software had been implemented then as a result the effectiveness and the efficiency of the testing is increased which as a result gives positive results.

Q1 What is not a different between automated testing and manual testing?

A)   Test case

B)   Timing

C)   Depending on the requirement.

D)   What to test.

Remark (Uwe) Group proposed right answer should be C)

When to automated testing ?

- Run regularly--daily or even every milestone.

- A rule of thumb, run more than twice during a product cycle.

- After tested manually once before writing the test automation for the feature.

- The cost of test development ensures that test automated should build.

- Accelerate the testing process

Remark (Uwe)
Source should be given, e.g.
http://smartbear.com/products/qa-tools/automated-testing/manager-overview/

Why automated testing ?

- Saves Time and Money.

- Improves Accuracy.

- Increases Test Coverage.

- Working on What Manual Testing Cannot Do.

- Helps Developers and Testers.

- Improves Team Morale.

Q2. When we should use automated testing?

A)   Every time tester need

B)   Every time After tested manually

C)   Every time Before tested manually.

D)   Every time when have to test the repeated task.

Types of testing with specific intentions:

- 1) **Functional Testing** – on operations which perform as per the expectations.

- 2) **Regression Testing** – on the behavior of the system which has not been changed.

- 3) **Exception or Negative Testing** – thereby forcing error conditions in the system.

- 4) **Stress Testing** – to determine the absolute capacities of the application and operational infrastructure.

- 5) **Performance Testing** – to provide assurance that the performance of the system will be adequate for both batch runs and online transactions in relation to business projections and requirements.

- 6) **Load Testing** – to determine the points at which the capacity and performance of the system become degraded to the situation that hardware or software upgrades would be required.

Process of tool evaluation

3 phases :

- Requirements Gathering.
- Tool Selection.
- POC using selected tool

Requirement Gathering Phase

- What problems will the tool solve?

- What technical capabilities will the tool need, to be compatible with your environment?

- What type of testing problems do you want the testing tool to address?

Tool selection phase

- It is important to remember that no single tool will satisfy all the requirements.

- All tools that meet most of the evaluation criteria can considered for evaluation

- Do a feature categorization by listing each tool according to the following features it provides:

  - Mandatory : goal meet your requirements within the constraints
  - Desirable : Distinguish the best tool from the other
  - Irrelevant : Not important and not benefit

POC Using selected tool Phase

- The last phase of tool evaluation is doing a proof of concept.

- it is necessary to try the tool for a few test scenarios / cases in the product.

- The scenarios chosen for POC are very important. They should be chosen in such a way that the scenarios cover most of the controls and a few common features present across the product.

Basic Step of Using a Tool1/2

- Get Familiar with the Tools.

- Have at Least One Programmer on Your Team.

- Set Some Standards.

  - Naming standards.
  - Coding standards.
  - Environment standards.
  - Procedures for error and defect tracking.

Basic Step of Using a Tool2/2

- Figure Out What You're Testing and Keep It Simple.

- Baseline a Script.

- Look for Ways to Modularize Your Script.

- Document Everything.

- Use Data pools.

- A Review of the Road Map

Q3 According to this presentation, how many phase of tool selection?

A)   3

B)   4

C)   5

D)   6

Benefit of automated testing

○ **1) Reliable:** Tests perform precisely the same operations each time they are run, thereby eliminating human error

○ **2) Repeatable:** You can test how the software reacts under repeated execution of the same operations.

○ **3) Programmable:** You can program sophisticated tests that bring out hidden information from the application.

○ **4) Comprehensive:** You can build a suite of tests that covers every feature in your application.

○ **5) Reusable:** You can reuse tests on different versions of an application, even if the user interface changes.

○ **6) Better Quality Software:** Because you can run more tests in less time with fewer resources

○ **7) Fast:** Automated Tools run tests significantly faster than human users.

○ **8) Economical:** As the number of resources for regression test are reduced.

Disadvantage

- Proficiency is required to write the automation test scripts.

- Debugging the test script is major issue. If any error is present in the test script, sometimes it may lead to deadly consequences.

- Test maintenance is costly in case of playback methods. Even though a minor change occurs in the GUI, the test script has to be re-recorded or replaced by a new test script.

- Maintenance of test data files is difficult, if the test script tests more screens.

Q4. According to the story, what kind of test that Mr. have to work on?

A)   Automated testing

B)   Manual testing

C)   Testing that always repeat the similar things again and again

D)   A and B are correct

Producer and editor

- Thanayos Tungtanayongsuk 5210546187
- Pattarika Sookkasem 5210546241
- Chanyanut Mimak 5210546292
- Apinapa Ounon 5210546853