### **Technical Test Part 2**

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### 1. What is the difference between Quality Assurance, Quality Control and testing?

**QA**: QA will Focus to the process and the process element of some product development and focus to preventing some defect to happen when the product is being developed, like ensuring that some development process meet their objective and fulfilling all the elements process needed so defect will not arrise. QA also ensuring that the methodology used in the process is right and effective and give the final decision that a product is feasible to be released or not. **So, QA is focusing on ensuring the quality of the process where product is developed to prevent the defect to happen.** 

QC: Quality Control is product oriented and focus on defect identification of some product. QC is a process to evaluate and validate the final result of some product is as expected and meets the standards, like identifying defects after development process but before it's released. So, QC process will focusing on ensuring the quality of the product and identifying and correcting the defect of the product after development but before releasing.

**Testing**: Testing is a part of QC process. Testing is the process done by execute a system to find defects or the gap where there may be an error to be fixed later. Usually testing done by making a plan or case and scenarios to trap the defects. **So, testing is focusing on forecasting an error by making scenarios to trap an error or defect on a system.** 

## 2. Can you explain the software testing life cycle?



### **Requirement Analysis Phase:**

During this phase tester will do the feasibility study of the requirements of the test that will perform. They will analyze that the requirement are testable or not, and also identify testing scope.

## **Test Planning Phase:**

In this phase Tester plan the strategy of the test, gather the idea of what will be tested and then create the test plan, decide method and tools (for automation) for testing, decide test effort estimation, planning the resource and deciding the role and responsibilities of the test.

### **Test Case Development Phase:**

In this phase tester will create or designing test cases, test script (for automation test), and test data and then they will review to verify that all test case are meet the requirements and also already covered what's in the test plan.

### **Environment Setup Phase:**

In this phase tester will decide the environment like software and hardware conditions where the product tested. Tester will set the environment have a similar condition as close as possible to the original condition when the product being used by customers. Also tester should prepare some test to check the readiness of the environment.

#### **Test Execution Phase:**

Tester will start executing the test cases based on the test plan made in test planning phase. If there's defect found, tester will reported to the developer to be fixed later and then retest the fixed defect. But if it defect found on test script, in this phase tester can update their scripts too.

### **Test Cycle Closure Phase:**

This is the final phase of the cycle. In this phase test team will discuss and analyse result of the test. Test team also will evaluate the cycle completion criteria based on several aspects that will become a consideration for the next strategy implemented in the future.

## 3. How do you define a format of writing a good test case?

On writing a good test case we should pay attention to several aspects

- 1) Write it simple, test cases should be write in simple way and easy to understand.
- 2) Focus to one goal, it is better to set only one goal on each test case, so we know what to focus on that cases and make it easier to tracks the error or the result.
- 3) Always stick to the specification documents.
- 4) Consistent, always follow same rule or using same pattern.
- 5) Make it short and clear, directly to the point. It helps minimize error occur during testing because of having too many steps of test.
- 6) Test case should be reusable in the future for other project, so it will help to save the time in the next projects.
- 7) Review the test case so it won't be something missing in the test cases.

# 4. What would you do if you have a large suite to execute in less time?

If I only have less time to execute large suite, what would I do is decide which part is a mandatory part or have major functionality. Then I will test only a major flow of the major function of a system.

### 5. What is negative testing? How is it different from positive testing?

Negative testing is testing process that execute by put an invalid data as the inputs to check if the application behaviour is like what is expected if given invalid input, making sure that the apps return an error when it's supposed to and the opposite. While the Positive testing is a testing process that performed on the system with a valid data as the inputs to check if the application is running as what it is supposed to do and for check the normal behaviour of the apps.

## 6. How would you ensure that your testing is complete and has good coverage?

- 1) Make sure the requirements document are correct
- 2) Read and Understand the requirement
- 3) Prepare a clear scope of testing based on product documents.
- 4) Prepare simple test plan but cover all the aspect that would tested
- 5) Decide most effective methodology and tools
- 6) Prepare test case based on the test plan
- 7) Ensure that testcase cover all the requirements in document
- 8) Ensure that no changes in test environment during testing
- 9) Create test scenarios based on test cases
- 10) When there is a bug fixed make sure to update the test script if necessary
- 11) Always create the documentation of all the result (for future use, when something happen we can compare the result)
- 12) Create a detail report of every test case and scenarios
- 13) Create final report cleary, state the limitation and what the test coverage, give status of the fix.

### 7. What are the different artifacts you refer when you write the test cases?

Test artifacts is one of important things in testing software, to make everybody clear about requirement of the test and to make everybody involved know the progress of

testing. But, when in testing process we found different artifacts it should refer to Requirements document, test strategy, test data, table of matrix test, test coverage matrix, test script, test log and defect bug report.

#### 8. What is regression tests?

if developer develop a system and already tested and then they have change or update to the system then it should be tested again. This test is running to make sure that the older program still works with the new updates, if not works after a change it must be a regression in the code. Usually regression test consist of test cases that will test the major functionality of some apps. This test can be done if we only have less time because only focus on test the major flow of some system.

## 9. Have You used any automation tools? What is automation tools, btw?

To be honest no, because in my current job I do automation test by making script based a test plan or traceability matrix with an internal tools provided by my company, and what I test is low level (embedded software for smart card chip) so the scripting based on C++ programing.

The tools that I know for web application testing is Selenium, but I never use it (currently still learn and watch tutorial video of basic auatomation test using Selenium)

### **Bonus: Automation Test**

Let say we have these acceptance criterias for website http://qlue.co.id:

- 1) The website should render perfectly in Chrome Browser
- 2) The website should render six menus (home, about us, projects, city partners, alliances, we're hiring!)
- 3) The website should render products page with three products displayed (Qlue x MyCity, QlueWork, QlueVision) when user click Projects menu
- 4) The website should have address "Jalan Pejaten Barat No. 13, RT.1/RW.8, Pejaten Barat, Pasar Minggu, Kota Jakarta Selatan, Daerah Khusus Ibukota Jakarta 12510" in all pages

Please create automation test covers all above scenario with your favorites tools and exported into command-line compatible (headless or without running browser UI) scripts so you can run it without clicking the website every time you have to run this scenarios.