ISTQB foundation level

SDLC -> Software Development Life Cycle Models like Waterfall and Agile

SRS -> Software Requirements Specification

HLD -> High Level Design

Planning for testing is the most important part of testing.

Difference of Vocabularies:

Quality Assurance: Adherence to process, it is `proactive and prevents`, are we doing the right thing

Quality Control: Testing, test design, test execution. `Reactive and detects`. So Testing lives IN the quality Control.

Main umbrella is Quality Management, under which is QA, under which is QC, under which is Testing.

Error, Defect, and Failure are not the same thing.

Error is a mistake. lets say customer and software team are not on the same page on understanding stuff.

Defect is Bug. It is a mistake `in the software.`

A bug(defect) may or may not lead to the failure of a software product.

Failure is simply an observable defect.

These should be caught in testing.

7 Testing Principles

- Testing shows the presence of defects, not their absence.
- Exhaustive testing is impossible, nor practical. An important sampling and testing on it is smart choice.
- Early testing saves money and time.
- Defects cluster together(1 cause another)
- Pesticide Paradox: To find new bugs, you need to make reviews and changes to the test.
- Testing is content dependent. Which app requires more security testing.
- Absence of error is fallacy. Meaning even if you catch tons of defects, you cannot guarantee there is not anymore.

Test Process Fundamentals.

- Test Planning

What test techniques do you use and how? Schedule and deadlines?

- Test Monitoring and Control

What was planned vs what is actually happening? Are we on track on plan and deadlines?

- Test Analysis

Business requirement, functional and non-funcional requrements, designs, documenation,code etc.

All of these are test basis upon which the tests will be written.

- Test Design and Implementation

All so far was to analyze what to test. Now it is time to how to test.

This process entails designing and prioritizing the tests cases, identifying test data.

Design is how to test, implementation is `Do we have eveything we need to test?`

Implemenattion entails creating procedures and automated test scripts, setting up environment,preparing test data.

- Test Execution and Completion

SUT -> System Under Test.

In this step you execute the designed and implemented tests and compare the results with the expected results.

Test completion means creating a test report, also ensureing that all defetc report are documented.