Software Testing Mentor

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ISTQB Foundation Level and Software Testing Training

Module 3
Static Test Techniques

Session 1 – Reviews and the Test Process

What is static testing?

Testing of a component or system at specification or implementation level without executing the code is known as static testing (**Walkthrough, Technical Reviews, Inspection)**

During static testing software products are examined manually or with some tools but there is no execution done

Static testing helps to verify the software deliverables for which dynamic testing techniques cannot be applied (like, design document, SRS, test plan etc.)

More about Static Testing

Static testing technique provides a powerful way to improve quality of software

Objective of static testing technique is to improve the software quality by assisting developers to recognize issues early in SDLC

Static testing is not a replacement for dynamic testing

All organizations should implement static testing techniques to improve software quality

Static Testing Vs Dynamic Testing

Static testing examines software deliverable without execution
Dynamic testing verifies the software by executing it
Static testing finds the cause of failures
Dynamic testing finds the software failures
Static testing technique is know as verification
Dynamic testing technique is known as validation

Static Testing Vs Dynamic Testing Cont.

Static Testing

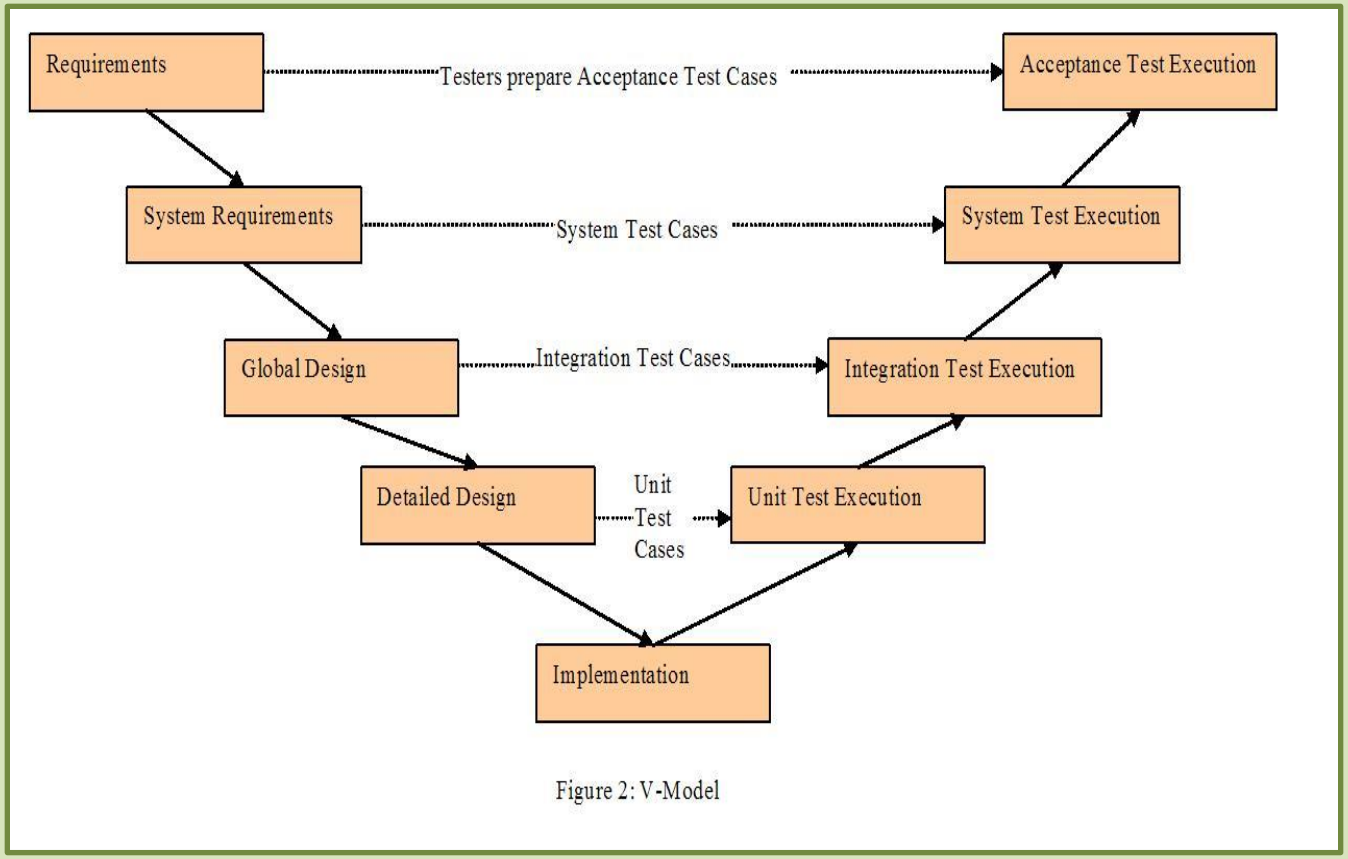

Figure 2: V-Model

Dynamic Testing

Static testing technique: Reviews

An evaluation of a product or project to ascertain discrepancies from planned results and to recommend improvements. (For example – Informal review, technical review, inspection and walkthrough)

Review is a static testing technique and tests the software products without executing them and can be performed before dynamic test execution

Objective of reviews is informational/educational where participants learn about software work products and plan for future work according to their role

Defects found by reviews are cheaper to fix as they are found early in SDLC than those detected during dynamic testing

Typical defects found by Static Testing

Common defects which can be found by reviews are:

- Invalid or incomplete Requirements
- Untestable requirements
- Incorrect Software/System design
- Incorrect UI designs
- Deviations from regulations or standards

Software Work Products tested by Static Testing

Any software work product can be tested by static testing, Some of the documents are:

- Software Requirements Specification Document (SRS)
- High Level Design / Low Level Design documents
- UI Specifications Document
- UI Wireframes
- Software Code
- Test Strategy
- Test plans
- Test cases
- Manual/Automation Test scripts
- Install guides, Quick reference guides, User guides

Advantages of Reviews

Early defect detection and correction	• *Since static testing starts early it is c*heaper to fix defects in earlier stages like in the requirements, design documents
Early feedback on quality issues	• *Since static testing starts early so feedback on quality issues is established early*
Less rework costs	• *As defects are found in early stages cost of fixing those defects is less*
Increase in development productivity	• Less rework is required which increases development productivity
Reduction in Dynamic testing timeframe	• *Since most of the issues are rectified at earlier stages good* quality code is delivered which has fewer issues and which save time and cost for defect fixing
Reduced Cost in Maintenance Activities	• *Since most of the issues are resolved in earlier phases post implementation issues are very less which reduce maintenance cost*

THANK YOU!!!