Software Testing Methodologies

Difference between similar terminologies

AGENDA

Difference between-

1. Verification & Validation
2. QA and QC
3. Static & Dynamic Testing

Static Testing Vs Dynamic Testing

Static Testing	Dynamic Testing
A form of software testing where the software isn't actually used.	A form of software testing where the software must actually be compiled and run.
It is generally not detailed testing, but checks mainly for the sanity of the code, algorithm, or document. It is primarily syntax checking of the code or and manually reading of the code or document to find errors	Dynamic analysis refers to the examination of the physical response from the system to variables that are not constant and change with time
It is about prevention	It is about cure
Can be done before compilation	can take place only after compilation and linking.

Static Testing Vs Dynamic Testing

Static Testing	Dynamic Testing
This type of testing can be used by the developer who wrote the code, in isolation. Code reviews, inspections and walkthroughs are also used.	Some of dynamic testing methodologies include unit testing, integration testing, system testing and acceptance testing.
This is the verification portion of Verification and Validation	Dynamic testing is the validation portion of Verification and Validation.
These are verification activites. Code Reviews, inspection and walkthroughs are few of the static testing methodologies.	These are the Validation activities. Unit Tests, Integration Tests, System Tests and Acceptance Tests are few of the Dynamic Testing methodologies.

Quality Assurance

Quality Assurance is a planned and systematic set of activities necessary to provide adequate confidence that products and services will conform to specified requirements and meets user needs

- It is process oriented
- Defect prevention based
- Throughout the Life Cycle
- It’s a management process

Quality Control

Quality control is the process by which product quality is compared with the applicable standards and the action taken when non conformance is detected

- It is product oriented
- Defect detection based

QA vs. QC

Quality Control-

- Quality Control makes sure the results of what we've done are what we expected
- QC focuses on testing for quality and hence detecting defects
- QC deals with product
- QC is for testing part in SDLC
- QC is corrective process

Quality Assurance-

- Quality Assurance makes sure that we are doing the right things, the right way
- QA focuses on building in quality and hence preventing defects
- QA deals with process
- QA is for entire life cycle
- QA is preventive process

Thankyou!