

Chapter 8: Testing Strategies



Tuesday, February 11, 2025

QA Should Find Nothing

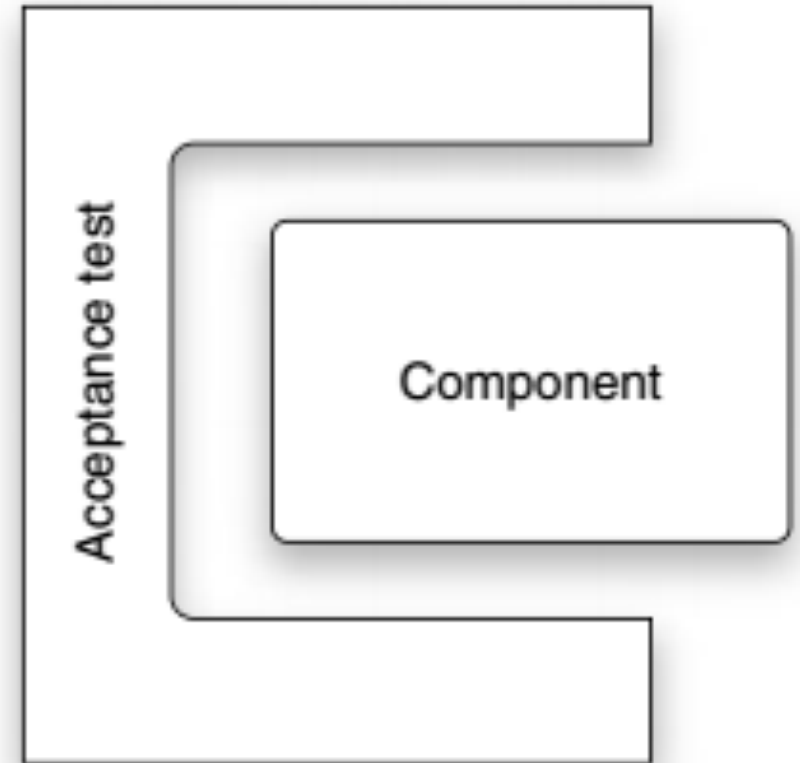
- QA is Part of The Team
 - QA and Development should be working together to ensure the quality of the system.
- QA as Specifiers
 - QA's role to work with business to create the automated acceptance tests that become the true specification and requirements document for the system.
 - Business writes the happy-path tests, while QA writes the corner, boundary, and unhappy-path tests.
- QA as Characterizers
 - to use the discipline of exploratory testing to characterize the true behavior of the running system and report that behavior back to development and business.

Unit Tests

- Written by programmers, for programmers, in the programming language of the system.
- Specify the system at the lowest level
- Developers write these tests before writing production code to specify what they are about to write.
- They are executed as part of Continuous Integration to ensure that the intent of the programmers' is upheld.

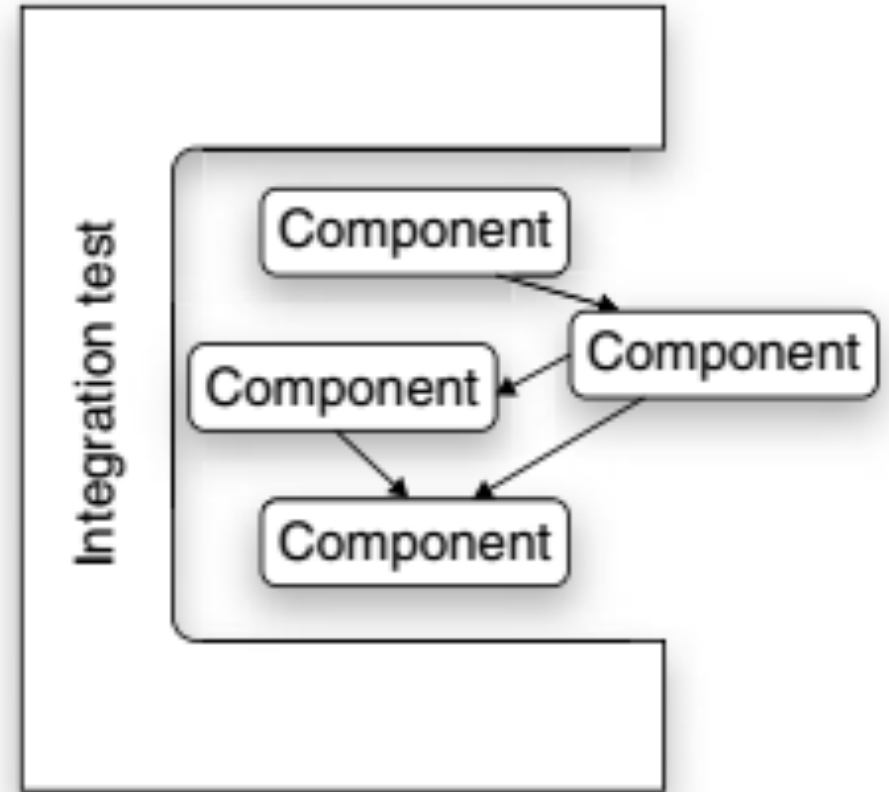
Component Tests

- Generally, they are written against individual components of the system.
- The components of the system encapsulate the business rules, so the tests for those components are the acceptance tests for those business rules
- Component tests are written by QA and Business with assistance from development.
- Directed towards “happy path” situations



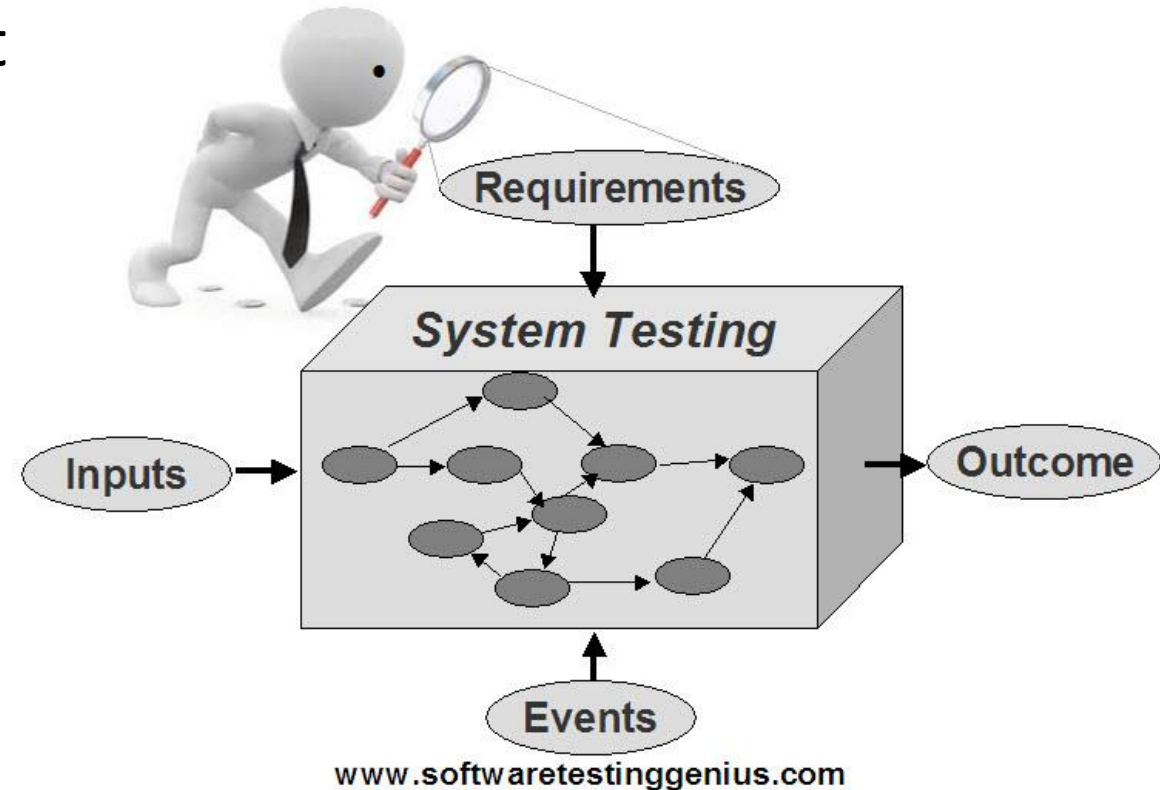
Integration Tests

- These tests only have meaning for larger systems that have many components.
- Integration tests are choreography tests.
 - Do not test business rules
- The tests ensure that the architectural structure of the system is sound.
- Written by system architects or lead designers
- Run periodically



System Tests

- Automated tests that execute against the entire integrated system.
- Do not test business rules directly.
- Test that the system has been wired together correctly and its parts interoperate according to plan.
- Written by system architects and technical leads.
- Executed infrequently
- Test correct system construction



Manual Exploratory Tests

- These tests are not automated, nor are they scripted.
- The intent of these tests is to explore the system for unexpected behaviors while confirming expected behaviors.
- Day or two of “bug hunting” in which as many people as possible, including managers, secretaries, programmers, testers, and tech writers, “bang” on the system to see if they can make it break.



The Test Automation Pyramid

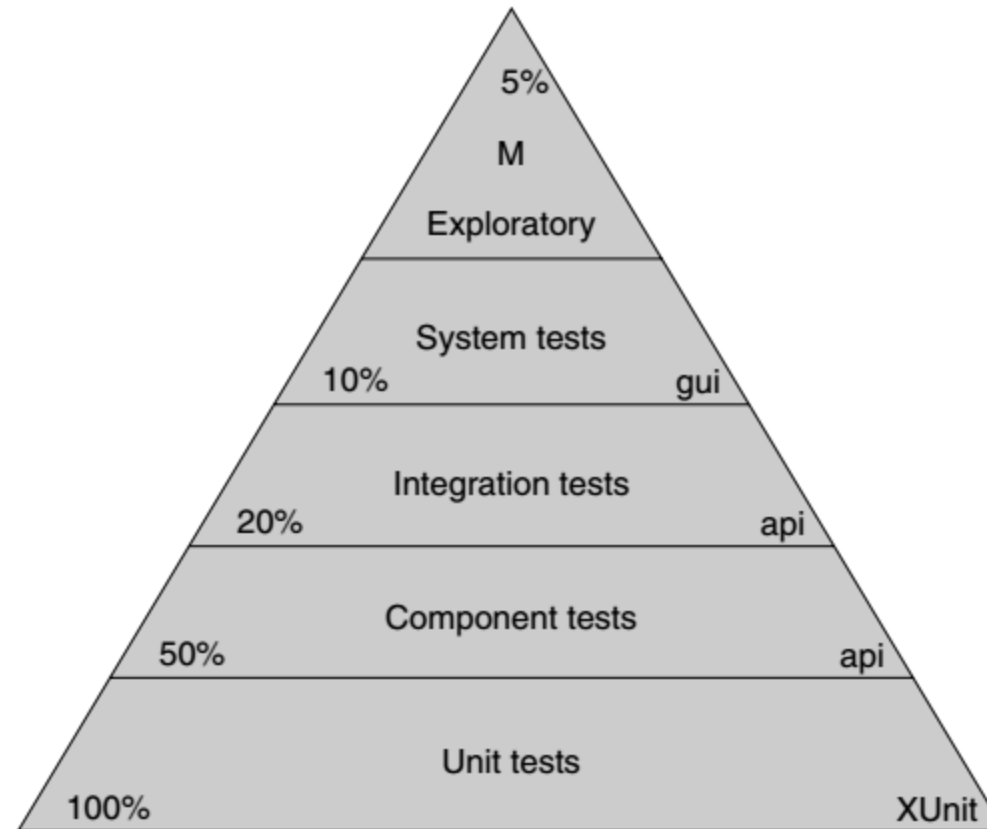


Figure 8-1 The test automation pyramid

Chapter 8: Key Points

- TDD and Acceptance Tests are valuable ways to express and enforce requirements and are part of the overall total testing strategy.
- QA should find nothing
- Tests should be run frequently as possible to provide maximum feedback and to ensure the system remains continuously clean.

Professional Tip of the Day #3: Working for a startup vs. large corporation

- Benefits:
 - Work directly impacts the product
 - Experience gained so you can someday own your own start-up
 - High risk high reward
 - Quickly gain a number of valuable skills for your resume
- Drawbacks:
 - Diminished work-life balance
 - Lower salaries and benefits
 - High stress
 - Job stability & security



"Since we're a startup, we were hoping you would pay us to work here."