

What is Testing?

- Testing evaluates software quality and risk
- Testing provides information, not absolute proof
- Quality includes functional and non-functional attributes

References: <https://www.istqb.org/certifications/certified-tester-foundation-level> | <https://iso25000.com/index.php/en/iso-25000-standards/iso-25010>

Quality Attributes (ISO 25010)

- Key attributes include performance, security, maintainability
- Functional correctness is only one part of quality
- Test strategy should map to target attributes

References: <https://iso25000.com/index.php/en/iso-25000-standards/iso-25010>

Testing Principles (ISTQB-oriented)

- Early testing saves cost and rework
- Defects cluster in a small number of modules
- Tests wear out and need regular review

References: <https://www.istqb.org/certifications/certified-tester-foundation-level>

Static vs Dynamic Testing

- Static: reviews, walkthroughs, linters, SAST
- Dynamic: executing software with test cases
- Both are complementary and should coexist

References: <https://www.istqb.org/certifications/certified-tester-foundation-level> | <https://owasp.org/www-project-top-ten/>

Test Levels and Types

- Levels: component, integration, system, acceptance
- Types: functional, non-functional, structural
- Select level/type based on risk and feedback speed

References: <https://martinfowler.com/articles/practical-test-pyramid.html> | <https://www.selenium.dev/documentation/>

