Standard Glossary of Terms used in Software Testing

Version 3.2

Foundation (New) Terms

International Software Testing Qualifications Board

acceptance criteria

Ref: ISO 24765

The criteria that a component or system must satisfy in order to be accepted by a user, customer, or other authorized entity.

acceptance testing

Ref: After ISO 24765   **See Also:** user acceptance testing

Formal testing with respect to user needs, requirements, and business processes conducted to determine whether or not a system satisfies the acceptance criteria and to enable the user, customers or other authorized entity to determine whether or not to accept the system.

accessibility

Ref: After ISO 25010

The degree to which a component or system can be used by people with the widest range of characteristics and capabilities to achieve a specified goal in a specified context of use.

accessibility testing

Ref: Gerrard

Testing to determine the ease by which users with disabilities can use a component or system.

actual result

Synonyms: actual outcome

The behavior produced/observed when a component or system is tested.

ad hoc reviewing

Ref: After ISO 20246

A review technique carried out by independent reviewers informally, without a structured process.

alpha testing

Simulated or actual operational testing conducted in the developer's test environment, by roles outside the development organization.

anomaly

Ref: IEEE 1044   **See Also:** defect, error, fault, failure, incident, problem

Any condition that deviates from expectation based on requirements specifications, design documents, user documents, standards, etc., or from someone's perception or experience. Anomalies may be found during, but not limited to, reviewing, testing, analysis, compilation, or use of software products or applicable documentation.

audit

Ref: After IEEE 1028

An independent examination of a work product, process, or set of processes that is performed by a third party to assess compliance with specifications, standards, contractual agreements, or other criteria.

availability

Ref: After ISO 25010

The degree to which a component or system is operational and accessible when required for use.

behavior

The response of a component or system to a set of input values and preconditions.

beta testing

Synonyms: field testing

Simulated or actual operational testing conducted at an external site, by roles outside the development organization.

black-box test technique

Synonyms: black-box technique , specification-based technique , specification-based test technique

A procedure to derive and/or select test cases based on an analysis of the specification, either functional or non-functional, of a component or system without reference to its internal structure.

boundary value

A minimum or maximum value of an ordered equivalence partition.

boundary value analysis

See Also: boundary value

A black-box test technique in which test cases are designed based on boundary values.

burndown chart

A publicly displayed chart that depicts the outstanding effort versus time in an iteration. It shows the status and trend of completing the tasks of the iteration. The X-axis typical represents days in the sprint, while the Y-axis is the remaining effort (usually either in ideal engineering hours or story points).

checklist-based reviewing

Ref: ISO 20246

A review technique guided by a list of questions or required attributes.

checklist-based testing

An experience-based test technique whereby the experienced tester uses a high-level list of items to be noted, checked, or remembered, or a set of rules or criteria against which a product has to be verified.

code coverage

An analysis method that determines which parts of the software have been executed (covered) by the test suite and which parts have not been executed, e.g., statement coverage, decision coverage or condition coverage.

commercial off-the-shelf (COTS)

Synonyms: off-the-shelf software

A software product that is developed for the general market, i.e. for a large number of customers, and that is delivered to many customers in identical format.

compatibility

The degree to which a component or system can exchange information with other components or systems.

complexity

See Also: cyclomatic complexity

The degree to which a component or system has a design and/or internal structure that is difficult to understand, maintain and verify.

compliance

Ref: IEEE 730

The capability of the software product to adhere to standards, conventions or regulations in laws and similar prescriptions.

component

Synonyms: module , unit

A minimal part of a system that can be tested in isolation.

component integration testing

Synonyms: link testing

Testing performed to expose defects in the interfaces and interactions between integrated components.

component specification

A description of a component's function in terms of its output values for specified input values under specified conditions, and required non-functional behavior (e.g., resource utilization).

component testing

Ref: ISO 24765

Synonyms: module testing , unit testing

The testing of individual hardware or software components.

condition

See Also: condition testing

Synonyms: branch condition

A logical expression that can be evaluated as True or False, e.g., A>B.

configuration

The composition of a component or system as defined by the number, nature, and interconnections of its constituent parts.

configuration item

Ref: ISO 24765

An aggregation of work products that is designated for configuration management and treated as a single entity in the configuration management process.

configuration management

Ref: ISO 24765

A discipline applying technical and administrative direction and surveillance to identify and document the functional and physical characteristics of a configuration item, control changes to those characteristics, record and report change processing and implementation status, and verify compliance with specified requirements.

configuration management tool

A tool that provides support for the identification and control of configuration items, their status over changes and versions, and the release of baselines consisting of configuration items.

confirmation testing

Synonyms: re-testing

Dynamic testing conducted after fixing defects with the objective to confirm that failures caused by those defects do not occur anymore.

contractual acceptance testing

Acceptance testing conducted to verify whether a system satisfies its contractual requirements.

control flow

Ref: ISO 29119

The sequence in which operations are performed during the execution of a test item.

cost of quality

The total costs incurred on quality activities and issues and often split into prevention costs, appraisal costs, internal failure costs and external failure costs.

coverage

Ref: After ISO 29119

Synonyms: test coverage

The degree to which specified coverage items have been determined or have been exercised by a test suite expressed as a percentage.

coverage item

Ref: ISO 29119

An attribute or combination of attributes that is derived from one or more test conditions by using a test technique that enables the measurement of the thoroughness of the test execution.

coverage tool

Synonyms: coverage measurement tool

A tool that provides objective measures of what structural elements, e.g., statements, branches have been exercised by a test suite.

data flow

Ref: Beiser

An abstract representation of the sequence and possible changes of the state of data objects, where the state of an object is any of creation, usage, or destruction.

data-driven testing

Ref: Fewster and Graham   **See Also:** keyword-driven testing

A scripting technique that stores test input and expected results in a table or spreadsheet, so that a single control script can execute all of the tests in the table. Data-driven testing is often used to support the application of test execution tools such as capture/playback tools.

debugging

The process of finding, analyzing and removing the causes of failures in software.

decision

Ref: ISO 29119

A type of statement in which a choice between two or more possible outcomes controls which set of actions will result.

decision coverage

The coverage of decision outcomes.

decision outcome

The result of a decision that determines the next statement to be executed.

decision table

Ref: ISO 24765

Synonyms: cause-effect decision table

A table used to show sets of conditions and the actions resulting from them.

decision table testing

Ref: Egler63   **See Also:** decision table

A black-box test technique in which test cases are designed to execute the combinations of inputs and/or stimuli (causes) shown in a decision table.

decision testing

A white-box test technique in which test cases are designed to execute decision outcomes.

defect

Ref: After IEEE 1044

Synonyms: bug , fault

An imperfection or deficiency in a work product where it does not meet its requirements or specifications.

defect density

Ref: After ISO 24765

Synonyms: fault density

The number of defects per unit size of a work product.

defect management

See Also: incident management

The process of recognizing and recording defects, classifying them, investigating them, taking action to resolve them, and disposing of them when resolved.

defect management tool

See Also: incident management tool

Synonyms: bug tracking tool , defect tracking tool

A tool that facilitates the recording and status tracking of defects.

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defect report

See Also: incident report

Synonyms: bug report

Documentation of the occurrence, nature, and status of a defect.

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driver

Ref: After TMap

Synonyms: test driver

A software component or test tool that replaces a component that takes care of the control and/or the calling of a component or system.

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dynamic analysis

Ref: After IEEE 610

The process of evaluating behavior, e.g., memory performance, CPU usage, of a system or component during execution.

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dynamic analysis tool

A tool that provides run-time information on the state of the software code. These tools are most commonly used to identify unassigned pointers, check pointer arithmetic and to monitor the allocation, use and de-allocation of memory and to flag memory leaks.

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dynamic testing

Testing that involves the execution of the software of a component or system.

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effectiveness

Ref: ISO 9241   **See Also:** efficiency

Extent to which correct and complete goals are achieved.

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efficiency

Ref: ISO 9241   **See Also:** effectiveness

Resources expended in relation to the extent with which users achieve specified goals.

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entry criteria

Ref: Gilb and Graham

Synonyms: definition of ready

The set of conditions for officially starting a defined task.

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equivalence partition

Synonyms: equivalence class

A portion of the value domain of a data element related to the test object for which all values are expected to be treated the same based on the specification.

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equivalence partitioning

Ref: After ISO 29119

Synonyms: partition testing

A black-box test technique in which test cases are designed to exercise equivalence partitions by using one representative member of each partition.

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error

Ref: ISO 24765

Synonyms: mistake

A human action that produces an incorrect result.

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error guessing

Ref: ISO 29119

A test technique in which tests are derived on the basis of the tester's knowledge of past failures, or general knowledge of failure modes.

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executable statement

A statement which, when compiled, is translated into object code, and which will be executed procedurally when the program is running and may perform an action on data.

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exercised

A program element is said to be exercised by a test case when the input value causes the execution of that element, such as a statement, decision, or other structural elemer

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exhaustive testing

Synonyms: complete testing

A test approach in which the test suite comprises all combinations of input values and preconditions.

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exit criteria

Ref: After Gilb and Graham

Synonyms: completion criteria , test completion criteria , definition of done

The set of conditions for officially completing a defined task.

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expected result

Ref: After ISO 29119

Synonyms: expected outcome , predicted outcome

The predicted observable behavior of a component or system executing under specified conditions, based on its specification or another source.

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experience-based test technique

Synonyms: experience-based technique

A procedure to derive and/or select test cases based on the tester's experience, knowledge and intuition.

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experience-based testing

Testing based on the tester's experience, knowledge and intuition.

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exploratory testing

Ref: After ISO 29119

An approach to testing whereby the testers dynamically design and execute tests based on their knowledge, exploration of the test item and the results of previous tests.

Extreme Programming (XP)

See Also: Agile software development

A software engineering methodology used within Agile software development whereby core practices are programming in pairs, doing extensive code review, unit testing of al code, and simplicity and clarity in code.

facilitator

Ref: After IEEE 1028   **See Also:** moderator

The leader and main person responsible for an inspection or review process.

fail

A test is deemed to fail if its actual result does not match its expected result.

failure

Ref: After ISO 24765

An event in which a component or system does not perform a required function within specified limits.

failure rate

Ref: ISO 24765

The ratio of the number of failures of a given category to a given unit of measure.

feature

Ref: After IEEE 1008

Synonyms: software feature

An attribute of a component or system specified or implied by requirements documentation (for example reliability, usability or design constraints).

finding

A result of an evaluation that identifies some important issue, problem, or opportunity.

formal review

Ref: ISO 20246

A form of review that follows a defined process with a formally documented output.

functional integration

See Also: integration testing

An integration approach that combines the components or systems for the purpose of getting a basic functionality working early.

functional requirement

Ref: ISO 24765

A requirement that specifies a function that a component or system must be able to perform.

functional suitability

Ref: After ISO 25010

Synonyms: functionality

The degree to which a component or system provides functions that meet stated and implied needs when used under specified conditions.

functional testing

Ref: ISO 24765   **See Also:** black-box testing

Testing conducted to evaluate the compliance of a component or system with functional requirements.

GUI

Acronym for Graphical User Interface.

high-level test case

See Also: low-level test case

Synonyms: abstract test case , logical test case

A test case without concrete values for input data and expected results.

IDEAL

An organizational improvement model that serves as a roadmap for initiating, planning, and implementing improvement actions. The IDEAL model is named for the five phase it describes: initiating, diagnosing, establishing, acting, and learning.

impact analysis

Ref: After ISO 24765

The identification of all work products affected by a change, including an estimate of the resources needed to accomplish the change.

incident report

Ref: ISO 29119

Synonyms: deviation report , software test incident report , test incident report

Documentation of the occurrence, nature, and status of an incident.

incremental development model

Ref: After PMBOK   **See Also:** iterative development model

A development lifecycle model in which the project scope is generally determined early in the project lifecycle, but time and cost estimates are routinely modified as the projec team understanding of the product increases. The product is developed through a series of repeated cycles, each delivering an increment which successively adds to the functionality of the product.

independence of testing

Ref: After DO-178b

Separation of responsibilities, which encourages the accomplishment of objective testing.

informal group review

Ref: ISO 20246   **See Also:** informal review

An informal review performed by three or more persons.

informal review

Ref: ISO 20246

A type of review without a formal (documented) procedure.

input

Ref: ISO 24765

Data received by a component or system from an external source.

inspection

Ref: After ISO 20246

A type of formal review to identify issues in a work product, which provides measurement to improve the review process and the software development process.

installation guide

Supplied instructions on any suitable media, which guides the installer through the installation process. This may be a manual guide, step-by-step procedure, installation wizard, or any other similar process description.

integration

The process of combining components or systems into larger assemblies.

integration testing

See Also: component integration testing, system integration testing

Testing performed to expose defects in the interfaces and in the interactions between integrated components or systems.

interoperability

Ref: After ISO 25010

The degree to which two or more components or systems can exchange information and use the information that has been exchanged.

interoperability testing

See Also: functionality testing

Synonyms: compatibility testing

Testing to determine the interoperability of a software product.

iterative development model

A development lifecycle where a project is broken into a usually large number of iterations. An iteration is a complete development loop resulting in a release (internal or external) of an executable product, a subset of the final product under development, which grows from iteration to iteration to become the final product.

keyword-driven testing

See Also: data-driven testing

Synonyms: action word-driven testing

A scripting technique that uses data files to contain not only test data and expected results, but also keywords related to the application being tested. The keywords are interpreted by special supporting scripts that are called by the control script for the test.

lifecycle model

Ref: CMMI   **See Also:** software lifecycle

A description of the processes, workflows, and activities used in the development, delivery, maintenance, and retirement of a system.

load testing

Ref: After ISO 29119   **See Also:** performance testing, stress testing

A type of performance testing conducted to evaluate the behavior of a component or system under varying loads, usually between anticipated conditions of low, typical, and peak usage.

low-level test case

See Also: high-level test case

Synonyms: concrete test case

A test case with concrete values for input data and expected results.

maintainability

Ref: After ISO 25010

The degree to which a component or system can be modified by the intended maintainers.

maintenance

Ref: After ISO 14764

The process of modifying a component or system after delivery to correct defects, improve quality attributes, or adapt to a changed environment.

maintenance testing

Testing the changes to an operational system or the impact of a changed environment to an operational system.

master test plan

See Also: test plan

A test plan that is used to coordinate multiple test levels or test types.

maturity

Ref: ISO 25010

(1) The capability of an organization with respect to the effectiveness and efficiency of its processes and work practices. (2) The degree to which a component or system mee needs for reliability under normal operation.

measure

Ref: After ISO 25040

The number or category assigned to an attribute of an entity by making a measurement.

measurement

Ref: After ISO 25040

The process of assigning a number or category to an entity to describe an attribute of that entity.

memory leak

A memory access failure due to a defect in a program's dynamic store allocation logic that causes it to fail to release memory after it has finished using it, eventually causing the program and/or other concurrent processes to fail due to lack of memory.

metric

A measurement scale and the method used for measurement.

milestone

A point in time in a project at which defined (intermediate) deliverables and results should be ready.

model-based testing (MBT)

Testing based on or involving models.

moderator

See Also: facilitator

Synonyms: inspection leader

A neutral person who conducts a usability test session.

monitoring tool

Ref: ISO 24765   **See Also:** dynamic analysis tool

A software tool or hardware device that runs concurrently with the component or system under test and supervises, records and/or analyzes the behavior of the component or system.

non-functional requirement

Ref: After ISO 24765

A requirement that describes how the component or system will do what it is intended to do.

non-functional testing

Testing conducted to evaluate the compliance of a component or system with non-functional requirements.

operational acceptance testing

See Also: operational testing

Synonyms: production acceptance testing

Operational testing in the acceptance test phase, typically performed in a (simulated) operational environment by operations and/or systems administration staff focusing on operational aspects, e.g., recoverability, resource-behavior, installability and technical compliance.

operational environment

Hardware and software products installed at users' or customers' sites where the component or system under test will be used. The software may include operating systems, database management systems, and other applications.

output

Ref: After ISO 24765

Data transmitted by a component or system to an external destination.

pass

A test is deemed to pass if its actual result matches its expected result.

path

Synonyms: control flow path

A sequence of events, e.g., executable statements, of a component or system from an entry point to an exit point.

peer review

Ref: After ISO 20246

A form of review of work products performed by others qualified to do the same work.

performance efficiency

Ref: After ISO 25010

Synonyms: time behavior , performance

The degree to which a component or system uses time, resources and capacity when accomplishing its designated functions.

performance indicator

Ref: CMMI

Synonyms: key performance indicator

A high-level metric of effectiveness and/or efficiency used to guide and control progressive development, e.g., lead-time slip for software development.

performance testing

See Also: efficiency testing

Testing to determine the performance of a software product.

performance testing tool

A test tool that generates load for a designated test item and that measures and records its performance during test execution.

perspective-based reading

Ref: After ISO 20246

Synonyms: perspective-based reviewing

A review technique whereby reviewers evaluate the work product from different viewpoints.

planning poker

See Also: Agile software development, Wideband Delphi

A consensus-based estimation technique, mostly used to estimate effort or relative size of user stories in Agile software development. It is a variation of the Wideband Delphi method using a deck of cards with values representing the units in which the team estimates.

portability

Ref: ISO 9126

The ease with which the software product can be transferred from one hardware or software environment to another.

portability testing

Synonyms: configuration testing

Testing to determine the portability of a software product.

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postcondition

The expected state of a test item and its environment at the end of test case execution.

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precondition

The required state of a test item and its environment prior to test case execution.

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priority

The level of (business) importance assigned to an item, e.g., defect.

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probe effect

The effect on the component or system by the measurement instrument when the component or system is being measured, e.g., by a performance testing tool or monitor. For example performance may be slightly worse when performance testing tools are being used.

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problem

Ref: ISO 24765

An unknown underlying cause of one or more incidents.

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process

Ref: ISO 12207

A set of interrelated activities, which transform inputs into outputs.

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process improvement

Ref: CMMI

A program of activities designed to improve the performance and maturity of the organization's processes, and the result of such a program.

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product risk

See Also: risk

A risk impacting the quality of a product.

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project

Ref: ISO 9000

A project is a unique set of coordinated and controlled activities with start and finish dates undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources.

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project risk

See Also: risk

A risk that impacts project success.

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quality

Ref: ISO 24765

The degree to which a component, system or process meets specified requirements and/or user/customer needs and expectations.

quality assurance

Ref: ISO 9000

Part of quality management focused on providing confidence that quality requirements will be fulfilled.

quality characteristic

Ref: ISO 24765

Synonyms: quality characteristic , software product characteristic , software quality characteristic , quality attribute

A category of product attributes that bears on quality.

quality control

Ref: after ISO 8402

The operational techniques and activities, part of quality management, that are focused on fulfilling quality requirements.

quality management

Ref: ISO 9000

Coordinated activities to direct and control an organization with regard to quality. Direction and control with regard to quality generally includes the establishment of the quality policy and quality objectives, quality planning, quality control, quality assurance and quality improvement.

quality risk

See Also: quality characteristic, product risk

A product risk related to a quality characteristic.

Rational Unified Process (RUP)

A proprietary adaptable iterative software development process framework consisting of four project lifecycle phases: inception, elaboration, construction and transition.

regression

A degradation in the quality of a component or system due to a change.

regression testing

Testing of a previously tested component or system following modification to ensure that defects have not been introduced or have been uncovered in unchanged areas of the software, as a result of the changes made.

regulatory acceptance testing

Acceptance testing conducted to verify whether a system conforms to relevant laws, policies and regulations.

reliability

Ref: After ISO 25010

The degree to which a component or system performs specified functions under specified conditions for a specified period of time.

reliability growth model

A model that shows the growth in reliability over time during continuous testing of a component or system as a result of the removal of defects that result in reliability failures.

requirement

Ref: ISO 24765

A provision that contains criteria to be fulfilled.

requirements management tool

A tool that supports the recording of requirements, requirements attributes (e.g., priority, knowledge responsible) and annotation, and facilitates traceability through layers of requirements and requirements change management. Some requirements management tools also provide facilities for static analysis, such as consistency checking and violations to pre-defined requirements rules.

result

See Also: actual result, expected result

Synonyms: outcome , test outcome , test result

The consequence/outcome of the execution of a test. It includes outputs to screens, changes to data, reports, and communication messages sent out.

retrospective meeting

Synonyms: post-project meeting

A meeting at the end of a project during which the project team members evaluate the project and learn lessons that can be applied to the next project.

review

Ref: After IEEE 1028

A type of static testing during which a work product or process is evaluated by one or more individuals to detect issues and to provide improvements.

review plan

A document describing the approach, resources and schedule of intended review activities. It identifies, amongst others: documents and code to be reviewed, review types to be used, participants, as well as entry and exit criteria to be applied in case of formal reviews, and the rationale for their choice. It is a record of the review planning process.

reviewer

Ref: After ISO 20246

Synonyms: checker , inspector

A participant in a review, who identifies issues in the work product.

risk

A factor that could result in future negative consequences.

risk analysis

The overall process of risk identification and risk assessment.

risk level

Synonyms: risk exposure

The qualitative or quantitative measure of a risk defined by impact and likelihood.

risk management

Ref: ISO 31000

The coordinated activities to direct and control an organization with regard to risk.

risk mitigation

Synonyms: risk control

The process through which decisions are reached and protective measures are implemented for reducing or maintaining risks to specified levels.

risk type

Synonyms: risk category

A set of risks grouped by one or more common factors.

risk-based testing

Ref: After ISO 29119

Testing in which the management, selection, prioritization, and use of testing activities and resources are based on corresponding risk types and risk levels.

robustness

Ref: ISO 24765   **See Also:** error-tolerance, fault-tolerance

The degree to which a component or system can function correctly in the presence of invalid inputs or stressful environmental conditions.

role-based reviewing

Ref: After ISO 20246

A review technique where reviewers evaluate a work product from the perspective of different stakeholder roles.

root cause

Ref: CMMI

A source of a defect such that if it is removed, the occurrence of the defect type is decreased or removed.

root cause analysis

Synonyms: causal analysis

An analysis technique aimed at identifying the root causes of defects. By directing corrective measures at root causes, it is hoped that the likelihood of defect recurrence will be minimized.

safety

Ref: After ISO 24765

The capability that a system will not, under defined conditions, lead to a state in which human life, health, property, or the environment is endangered.

scenario-based reviewing

Ref: ISO 20246

A review technique where the review is guided by determining the ability of the work product to address specific scenarios.

scribe

Ref: After IEEE 1028

Synonyms: recorder

A person who records information during the review meetings.

scrum

See Also: Agile software development

An iterative incremental framework for managing projects commonly used with Agile software development.

security

Ref: After ISO 25010

The degree to which a component or system protects information and data so that persons or other components or systems have the degree of access appropriate to their types and levels of authorization.

security testing

See Also: functionality testing

Testing to determine the security of the software product.

sequential development model

A type of development lifecycle model in which a complete system is developed in a linear way of several discrete and successive phases with no overlap between them.

session-based testing

An approach to testing in which test activities are planned as uninterrupted sessions of test design and execution, often used in conjunction with exploratory testing.

severity

The degree of impact that a defect has on the development or operation of a component or system.

simulation

Ref: ISO 2382

The representation of selected behavioral characteristics of one physical or abstract system by another system.

simulator

Ref: ISO 24765   **See Also:** emulator

A device, computer program or system used during testing, which behaves or operates like a given system when provided with a set of controlled inputs.

software

Ref: ISO 24765

Computer programs, procedures, and possibly associated documentation and data pertaining to the operation of a computer system.

software development lifecycle

The activities performed at each stage in software development, and how they relate to one another logically and chronologically.

software lifecycle

The period of time that begins when a software product is conceived and ends when the software is no longer available for use. The software lifecycle typically includes a concept phase, requirements phase, design phase, implementation phase, test phase, installation and checkout phase, operation and maintenance phase, and sometimes, retirement phase. Note these phases may overlap or be performed iteratively.

software quality

Ref: After ISO 9126   **See Also:** quality

The totality of functionality and features of a software product that bear on its ability to satisfy stated or implied needs.

specification

Ref: After IEEE 610

A document that specifies, ideally in a complete, precise and verifiable manner, the requirements, design, behavior, or other characteristics of a component or system, and, often, the procedures for determining whether these provisions have been satisfied.

stability

Ref: ISO 25010

The degree to which a component or system can be effectively and efficiently modified without introducing defects or degrading existing product quality.

standard

Ref: After CMMI

Formal, possibly mandatory, set of requirements developed and used to prescribe consistent approaches to the way of working or to provide guidelines (e.g., ISO/IEC standards, IEEE standards, and organizational standards).

state diagram

Ref: After ISO 24765

Synonyms: state transition diagram

A diagram that depicts the states that a component or system can assume, and shows the events or circumstances that cause and/or result from a change from one state to another.

state transition

A transition between two states of a component or system.

state transition testing

See Also: N-switch testing

Synonyms: finite state testing

A black-box test technique using a state transition diagram or state table to derive test cases to evaluate whether the test item successfully executes valid transitions and blocks invalid transitions.

statement

Synonyms: source statement

An entity in a programming language, which is typically the smallest indivisible unit of execution.

statement coverage

The percentage of executable statements that have been exercised by a test suite.

statement testing

A white-box test technique in which test cases are designed to execute statements.

static analysis

Ref: After ISO 24765

The process of evaluating a component or system without executing it, based on its form, structure, content, or documentation.

static testing

Testing a work product without code being executed.

structural coverage

Coverage measures based on the internal structure of a component or system.

stub

Ref: After IEEE 610

A skeletal or special-purpose implementation of a software component, used to develop or test a component that calls or is otherwise dependent on it. It replaces a called component.

system

Ref: After ISO 24765

A collection of interacting elements organized to accomplish a specific function or set of functions.

System Integration Testing

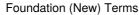Testing the combination and interaction of systems.

system testing

Ref: Hetzel

Testing an integrated system to verify that it meets specified requirements.

system under test (SUT)

A type of test object that is a system.

technical review

Ref: Gilb and Graham, IEEE 1028

A formal review type by a team of technically-qualified personnel that examines the suitability of a work product for its intended use and identifies discrepancies from specifications and standards.

test

A set of one or more test cases.

test analysis

The activity that identifies test conditions by analyzing the test basis.

test approach

The implementation of the test strategy for a specific project.

test automation

The use of software to perform or support test activities, e.g., test management, test design, test execution and results checking.

test basis

Ref: After TMap

The body of knowledge used as the basis for test analysis and design.

test case

Ref: After ISO 29119

A set of preconditions, inputs, actions (where applicable), expected results and postconditions, developed based on test conditions.

test case specification

Ref: ISO 29119   **See Also:** test specification

Documentation of a set of one or more test cases.

test charter

See Also: exploratory testing

Synonyms: charter

Documentation of test activities in session-based exploratory testing.

test completion

Ref: After ISO 29119

The activity that makes test assets available for later use, leaves test environments in a satisfactory condition and communicates the results of testing to relevant stakeholders

test condition

Synonyms: test requirement , test situation

An aspect of the test basis that is relevant in order to achieve specific test objectives.

test control

See Also: test management

A test management task that deals with developing and applying a set of corrective actions to get a test project on track when monitoring shows a deviation from what was planned.

test cycle

Execution of the test process against a single identifiable release of the test object.

test data

Ref: After ISO 29119

Data created or selected to satisfy the execution preconditions and inputs to execute one or more test cases.

test data preparation tool

Synonyms: test generator

A type of test tool that enables data to be selected from existing databases or created, generated, manipulated and edited for use in testing.

test design

Ref: After ISO 29119   **See Also:** test design specification

The activity of deriving and specifying test cases from test conditions.

test design tool

A tool that supports the test design activity by generating test inputs from a specification that may be held in a CASE tool repository, e.g., requirements management tool, from specified test conditions held in the tool itself, or from code.

test environment

Ref: ISO 24765

Synonyms: test bed , test rig

An environment containing hardware, instrumentation, simulators, software tools, and other support elements needed to conduct a test.

test estimation

The calculated approximation of a result related to various aspects of testing (e.g., effort spent, completion date, costs involved, number of test cases, etc.) which is usable even if input data may be incomplete, uncertain, or noisy.

test execution

The process of running a test on the component or system under test, producing actual result(s).

test execution schedule

A schedule for the execution of test suites within a test cycle.

test execution tool

A test tool that executes tests against a designated test item and evaluates the outcomes against expected results and postconditions.

test harness

A test environment comprised of stubs and drivers needed to execute a test.

test implementation

The activity that prepares the testware needed for test execution based on test analysis and design.

test infrastructure

The organizational artifacts needed to perform testing, consisting of test environments, test tools, office environment and procedures.

test input

The data received from an external source by the test object during test execution. The external source can be hardware, software or human.

test item

See Also: test object

A part of a test object used in the test process.

test leader

See Also: test manager

Synonyms: lead tester

On large projects, the person who reports to the test manager and is responsible for project management of a particular test level or a particular set of testing activities.

test level

Ref: After ISO 29119

Synonyms: test stage

A specific instantiation of a test process.

test management

Ref: ISO 29119

The planning, scheduling, estimating, monitoring, reporting, control and completion of test activities.

test management tool

A tool that provides support to the test management and control part of a test process. It often has several capabilities, such as testware management, scheduling of tests, the logging of results, progress tracking, incident management and test reporting.

test manager

The person responsible for project management of testing activities and resources, and evaluation of a test object. The individual who directs, controls, administers, plans and regulates the evaluation of a test object.

test monitoring

See Also: test management

A test management activity that involves checking the status of testing activities, identifying any variances from the planned or expected status, and reporting status to stakeholders.

test object

See Also: test item

The component or system to be tested.

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test objective

A reason or purpose for designing and executing a test.

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test oracle

Ref: After Adrion

Synonyms: oracle

A source to determine expected results to compare with the actual result of the system under test.

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test plan

Ref: After ISO 29119

Documentation describing the test objectives to be achieved and the means and the schedule for achieving them, organized to coordinate testing activities.

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test planning

The activity of establishing or updating a test plan.

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test policy

Synonyms: organizational test policy

A high-level document describing the principles, approach and major objectives of the organization regarding testing.

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test procedure

Ref: ISO 29119   **See Also:** test script

A sequence of test cases in execution order, and any associated actions that may be required to set up the initial preconditions and any wrap up activities post execution.

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test process

The set of interrelated activities comprising of test planning, test monitoring and control, test analysis, test design, test implementation, test execution, and test completion.

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test process improvement

Ref: After CMMI

A program of activities designed to improve the performance and maturity of the organization's test processes and the results of such a program.
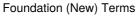
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test progress report

Synonyms: test status report

A test report produced at regular intervals about the progress of test activities against a baseline, risks, and alternatives requiring a decision.

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test report

Documentation summarizing test activities and results.

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test reporting

See Also: test process

Collecting and analyzing data from testing activities and subsequently consolidating the data in a report to inform stakeholders.

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test schedule

A list of activities, tasks or events of the test process, identifying their intended start and finish dates and/or times, and interdependencies.

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test script

See Also: test procedure

A sequence of instructions for the execution of a test.

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test session

See Also: exploratory testing

An uninterrupted period of time spent in executing tests. In exploratory testing, each test session is focused on a charter, but testers can also explore new opportunities or issues during a session. The tester creates and executes on the fly and records their progress.

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test strategy

Ref: After ISO 29119

Synonyms: organizational test strategy

Documentation that expresses the generic requirements for testing one or more projects run within an organization, providing detail on how testing is to be performed, and is aligned with the test policy.

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test suite

Synonyms: test case suite , test set

A set of test cases or test procedures to be executed in a specific test cycle.

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test summary report

Ref: ISO 29119

Synonyms: test report

A test report that provides an evaluation of the corresponding test items against exit criteria.

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test technique

Synonyms: test case design technique , test specification technique , test technique , test design technique

A procedure used to derive and/or select test cases.
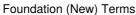
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test tool

Ref: TMap   **See Also:** CAST

A software product that supports one or more test activities, such as planning and control, specification, building initial files and data, test execution and test analysis.

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test type

Ref: After TMap

A group of test activities based on specific test objectives aimed at specific characteristics of a component or system.

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testability

Ref: After ISO 25010

The degree of effectiveness and efficiency with which tests can be designed and executed for a component or system.

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testable requirement

Ref: After IEEE 610

A requirements that is stated in terms that permit establishment of test designs (and subsequently test cases) and execution of tests to determine whether the requirement ha been met.

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tester

A skilled professional who is involved in the testing of a component or system.

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testing

The process consisting of all lifecycle activities, both static and dynamic, concerned with planning, preparation and evaluation of software products and related work products determine that they satisfy specified requirements, to demonstrate that they are fit for purpose and to detect defects.

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testware

Ref: After ISO 29119

Work products produced during the test process for use in planning, designing, executing, evaluating and reporting on testing.

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traceability

Ref: After ISO 19506   **See Also:** horizontal traceability, vertical traceability

The degree to which a relationship can be established between two or more work products.

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understandability

Ref: ISO 9126   **See Also:** usability

The capability of the software product to enable the user to understand whether the software is suitable, and how it can be used for particular tasks and conditions of use.

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unit test framework

Ref: Graham

A tool that provides an environment for unit or component testing in which a component can be tested in isolation or with suitable stubs and drivers. It also provides other support for the developer, such as debugging capabilities.
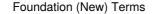
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unreachable code

Synonyms: dead code

Code that cannot be reached and therefore is impossible to execute.

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usability

Ref: After ISO 25010

The degree to which a component or system can be used by specified users to achieve specified goals in a specified context of use.

usability testing

Ref: After ISO 25010

Testing to evaluate the degree to which the system can be used by specified users with effectiveness, efficiency and satisfaction in a specified context of use.

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use case

A sequence of transactions in a dialogue between an actor and a component or system with a tangible result, where an actor can be a user or anything that can exchange information with the system.

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use case testing

Synonyms: scenario testing , user scenario testing

A black-box test technique in which test cases are designed to execute scenarios of use cases.

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user acceptance testing

See Also: acceptance testing

Acceptance testing conducted in a real or simulated operational environment by intended users focusing their needs, requirements and business processes.

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user interface

All components of a system that provide information and controls for the user to accomplish specific tasks with the system.

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user story

See Also: Agile software development, requirement

A high-level user or business requirement commonly used in Agile software development, typically consisting of one sentence in the everyday or business language capturing what functionality a user needs and the reason behind this, any non-functional criteria, and also includes acceptance criteria.

V-model

A sequential development lifecycle model describing a one-for-one relationship between major phases of software development from business requirements specification to delivery, and corresponding test levels from acceptance testing to component testing.

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validation

Ref: ISO 9000

Confirmation by examination and through provision of objective evidence that the requirements for a specific intended use or application have been fulfilled.

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variable

An element of storage in a computer that is accessible by a software program by referring to it by a name.

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verification

Ref: ISO 9000

Confirmation by examination and through provision of objective evidence that specified requirements have been fulfilled.

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walkthrough

Ref: After ISO 20246   **See Also:** peer review

Synonyms: structured walkthrough

A type of review in which an author leads members of the review through a work product and the members ask questions and make comments about possible issues.

white-box test technique

Synonyms: structural test technique , structure-based test technique , structure-based technique , white-box technique

A procedure to derive and/or select test cases based on an analysis of the internal structure of a component or system.

white-box testing

Synonyms: clear-box testing , code-based testing , glass-box testing , logic-coverage testing , logic-driven testing , structural testing , structure-based testing

Testing based on an analysis of the internal structure of the component or system.

Wideband Delphi

An expert-based test estimation technique that aims at making an accurate estimation using the collective wisdom of the team members.