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| TOOLS AND TECHNIQUES FOR SOFTWARE ENGINEERING |
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**GLOSSARY**

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# Glossary

**Accuracy:** The capability of the software product to provide the right or agreed results or effects with the needed degree of precision

**Actor:** A type of role played by an entity that interacts with the subject (e.g., by exchanging signals and data), but which is external to the subject

**Adaptability:** The capability of the software product to be adapted for different specified environments without applying actions or means other than those provided for this purpose for the software considered

**Algorithm:** A finite set of well-defined rules for the solution of a problem in a finite number of steps; for example, a complete specification of a sequence of arithmetic operations for evaluating sine x to a given precision.

**Assessment:** Activity of determination of quantitative or qualitative value of a product, service, activity, process in regard to given quality or acceptance criteria.

**Attribute:** A characteristic of an object.

**Baseline:** A specification or software product that has been formally reviewed or agreed upon, that thereafter serves as the basis for further development, and that can be changed only through a formal change control process.

**Big- O Notation:** A notation that expresses computing time (complexity) as the term in a function that increases most rapidly relative to the size of a problem.

**Bug:** a coding error in a computer program.

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

**Context:** System view from any useful perspective.

**Debugging:** The process of locating and fixing or bypassing bugs (errors) in computer program code or the engineering of a hardware device.

**Decision table:** A table showing combinations of inputs and/or stimuli (causes) with their associated outputs and/or actions (effects), which can be used to design test cases.

**Design pattern:** A written document that describes a general solution to a design problem that recurs repeatedly in many projects

**Efficiency:** The capability of the software product to provide appropriate performance, relative to the amount of resources used under stated conditions

**Error:** A human action that produces an incorrect result

**Function:** "A description of “what” a system does. A function has a corresponding implied purpose and is a fundamental part of a system description: a system consists of function attributes, performance attributes, resource (cost) attributes and design attributes. All attributes exist with respect to defined specified conditions. A function can often be decomposed into a hierarchical set of sub-functions."

**Functional specification:** A formal document used to describe in detail for software developers a product's intended capabilities, appearance, and interactions with users.

**Git:** A widely used distributed revision control system for software development.

**GitHub:** A web-based Git repository hosting service.

**Goal:** A desired state or result of an undertaken. Goals should be measurable and defined in time so that the progress can be monitored.

**Input:** Pertaining t o data received from an external source.

**Interaction overview diagram:** A variant of an activity diagram which overviews the control flow within a system or business process.

**Interview:** A conversational technique where the interviewer is asking the responder to obtain information on specified topic.

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

**Need:** Something desired by a defined stakeholder. Satisfying that need would have some value for some stakeholder. A need might not be agreed as a formal requirement, and it might not be prioritized such that it is actually acted upon (designed and implemented). Need is a term often used as a stakeholder view of a problem before requirements specification is carried out

**Output:** Pertaining to data transmitted to an external destination.

**Peer review:** A process used for checking the work performed by one's equals (peers) to ensure it meets specific criteria.

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

**Project planning:** A discipline for stating how to complete a project within a certain time frame, usually with defined stages, and with designated resources.

**Prototyping:** A systems development method (SDM) in which a prototype (an early approximation of a final system or product) is built, tested, and then reworked as necessary until an acceptable prototype is finally achieved from which the complete system or product can now be developed.

**Requirement:** A condition or capability needed by a user to solve a problem or achieve an objective.

**Risk analysis:** The process of assessing identified risks to estimate their impact and probability of occurrence

**Scenario:** A projected course of action, events or situations leading to specified result.

**Scope:** The extent of influence of something. Scope can apply to anything, like a specification, or a specified system or project

**Solution:** Solution is the implementation of the requirement.

**Stability:** The capability of the software product to avoid unexpected effects from modifications in the software

**Stakeholder:** Any person who has an interest in an project.

**Testability:** The capability of the software product to enable modified software to be tested

**Use Case:** A sequence of actions performed by a system, which yields an observable result of value to an actor of the system.

**User interface:** Everything designed into an information device with which a human being may interact -- including display screen, keyboard, mouse, light pen, the appearance of a desktop, illuminated characters, help messages, and how an application program or a Web site invites interaction and responds to it.

**User-Interface (UI):** Everything designed for the purpose of a user to interact with the program, including display screen, messages, buttons, etc.

**Wiki:** A piece of server software that allows users to freely create and edit Web page content using any Web browser.

# Glossary Updates History

--Established on 2016-02-02 Reviewed by Karl

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-- 2nd update: 2016-02-16 Reviewed by Dana

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