

Software Testing ISO Standards

Many organizations around the globe are developing and implementing different Standards to improve the quality needs of their Software. The next section briefly describes some of the widely used standards related to Quality Assurance and Testing. Here is a definition of some of them:

ISO/IEC 9126

This standard deals with the following aspects to determine the quality of a software application:

- Quality model
- External metrics
- Internal metrics
- Quality in use metrics

This standard presents some set of quality attributes for any Software such as:

- Functionality
- Reliability
- Usability
- Efficiency
- Maintainability
- Portability

The above mentioned quality attributes are further divided into sub-factors which you can study when you will go in detail of the standard.

ISO/IEC 9241-11

Part 11 of this standard deals with the extent to which a product can be used by specified users to achieve specified goals with Effectiveness, Efficiency and Satisfaction in a specified context of use.

This standard proposed a framework which describes the usability components and relationship between them. In this standard the usability is considered in terms of user performance and satisfaction. According to ISO 9241-11 usability depends on context of use and the level of usability will change as the context changes.

ISO/IEC 25000:2005

ISO/IEC 25000:2005 is commonly known as the standard which gives the guidelines for Software product Quality Requirements and Evaluation (SQuaRE). This standard helps in organizing and enhancing the process related to Software quality requirements and their evaluations. In reality, ISO-25000 replaces the two old ISO standards i.e. ISO-9126 and ISO-14598.

SQuaRE is divided into sub parts such as:

- ISO 2500n - Quality Management Division.
- ISO 2501n - Quality Model Division.
- ISO 2502n - Quality Measurement Division.
- ISO 2503n - Quality Requirements Division.
- ISO 2504n - Quality Evaluation Division.

The main contents of SQuaRE are:

- Terms and definitions.
- Reference Models.
- General guide.
- Individual division guides.
- Standard related to Requirement Engineering (i.e. specification, planning, measurement and evaluation process)

ISO/IEC 12119

This standard deals with Software packages delivered to the client. It does not focus or deal with the client.s (the person/organization whom Software is delivered) production process. The main contents are related to the following items:

- Set of Requirements for Software packages.
- Instructions for testing the delivered Software package against the requirements.

Miscellaneous

Some of the other standards related to QA and Testing processes are mentioned below:

S.N.	Standard & Description
1	IEEE 829 A standard for the format of documents used in different stages of software testing.
2	IEEE 1061 A methodology for establishing quality requirements, identifying, implementing, analyzing, and validating the process and product of software quality metrics is defined.
3	IEEE 1059 Guide for Software Verification and Validation Plans.
4	IEEE 1008

	A standard for unit testing.
5	IEEE 1012 A standard for Software Verification and Validation.
6	IEEE 1028 A standard for software inspections.
7	IEEE 1044 A standard for the classification of software anomalies.
8	IEEE 1044-1 A guide to the classification of software anomalies.
9	IEEE 830 A guide for developing system requirements specifications.
10	IEEE 730 A standard for software quality assurance plans
11	IEEE 1061 A standard for software quality metrics and methodology.
12	IEEE 12207 A standard for software life cycle processes and life cycle data.
13	BS 7925-1 A vocabulary of terms used in software testing.
14	BS 7925-2 A standard for software component testing.

Source:

http://www.tutorialspoint.com/software_testing/testing_iso_standards.htm