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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Systems and software engineering - Software testing - Part 1:
Concepts and definitions**

系统与软件工程 软件测试 第1部分：概念和定义

(English Translation)

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1 Scope

This part of GB/T 38634 specifies the concept and definition of software testing.

This section applies to the software test process, test documents and test technology of GB/T 38634.

2 Compliance

GB/T 38634.1 is informative content and does not include compliance requirements.

The GB/T 38634 software test standard includes three parts that can declare conformity.

---Testing process;

---Test documents;

---testing technology.

GB/T 38634.4. Compliance is specifically proposed by GB/T 38634.2, GB/T 38634.3 and

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Accessibility test

A type of usability testing. Used to measure the extent to which a certain test item can be used by the user, where the user should cover the largest range Individuals with various characteristics and different abilities.

3.2 Results of testing

The behavior and state set of the test item, or related data, and the state set of the test environment can be obtained as the result of test execution.

Examples. output to hardware, changes to data, generation and display of reports, and sending of communication messages.

3.3 Backup and recovery test

A type of reliability test. In the event of failure, within the specified time, cost, completeness and accuracy parameters, the measurement system The extent to which the system state can be restored from backup.

3.4 Black box testing

See test based on specifications (3.39).

3.5 Capacity test

A type of performance efficiency test. It is used to evaluate the ability level and performance of the test item when increasing the load (users, transactions, data storage, etc.) Need to maintain the performance compromise.

3.6 Compatibility test

When sharing the environment (coexistence) with other independent products, and when it is necessary to exchange information (interoperability) with other systems or components, test The extent to which the measurement items meet the requirements.

3.7 Coverage item

See test coverage item (3.54).

3.8 Determination

Make a choice among two or more possible outcomes, and determine the sentence type of the action set.

Note: Typical judgments include simple choices (for example, if-then-else), deciding when to exit the loop (for example, while-loop), and multiple switch statements (for example, For example, case-1-2-3-...-n).

3.9 Dynamic Testing

Need to run the test of the test item.

3.10 Durable test

A type of performance efficiency test. It is used to evaluate whether the test item can sustain the required load in a specified period of time.

3.11 Equivalence class

A subset of the range of a variable or variable set. In the test item or its interface, it is expected that the test item will handle all in the subset in the same way. Some values (that is, considered "equivalent").

3.12 Equivalence category coverage

The test set covers the proportion of identified equivalence classes in the test items.

Note: In many cases, the equivalence class identification is subjective (especially in the "invalid" equivalence class), so it is not possible to explicitly count the equivalence class of the test item can.

3.13 Equivalence class division

A type of test design technique. Use one or more representative members of each equivalence class to design test cases.

3.14 Wrong guess

A type of test design technique. Derive test cases based on previous failure experience or common sense of failure modes.

Note: Relevant knowledge can be obtained through personal experience, or packaged in the form of a defect database or "defect classification".

3.15 Expected results

According to specifications or other sources, the expected behavior of the test item that can be obtained under specific conditions.

3.16 Exploratory test

An experience-based test. Testers based on their existing relevant knowledge and preliminary exploration of test items (including previous test results)

As well as heuristic "rules of thumb" about common software behavior and failure types, tests are designed and executed spontaneously.

Note: Exploratory testing looks for hidden attributes (including hidden behaviors). Although the possibility of its own harm is very small, it may interfere with other aspects of the software under test. Other attributes, and therefore the risk of software failure.

3.17 Feature set

The collection of test conditions including test items can be collected from aspects such as risks, requirements, functions, and models.

Note: It may be all the features of the item (its full feature set), or a subset (functional feature set, etc.) identified for a specific purpose.

3.18 Incident report

Documentation of the occurrence, nature and status of the event.

Note: Event reports are also called exception reports, error reports, defect reports, error reports, problem reports, etc.

3.19 Ease of installation test

A type of portability test. Used to evaluate whether one or a group of test items can be installed in all specified environments.

3.20 Load test

A type of performance efficiency test. It is used to evaluate the behavior of test items under expected varying loads. Between peak usage expectations.

3.21 Maintenance test

Evaluate the effectiveness and efficiency of modifying test items.