1. In terms of whether they care about the internal structure

(1) White box test: also known as structure test or logic driven test, it is a test method to design test data and complete the test according to the internal logic structure and coding structure of the program.

(2) Black box test: also known as data-driven test, it regards the test object as an invisible black box. Without considering the internal structure and processing process of the program, the tester only considers the requirements and specifications of the program function to determine the test cases and infer the correctness of the test results. It is a test based on the corresponding relationship between the input data and the output data from the perspective of using software or program.

(3) Grey box test: it is a comprehensive test method, which combines "black box" test with "white box" test. It is a test technology based on the external performance of the program running time and combined with the internal logical structure to design use cases, execute the program and collect path execution information and external user interface results.

2. From whether to execute code

(1) Static test: refers to checking the correctness of the program by analyzing or checking the syntax, structure, process, interface, etc. of the source program without running the tested program itself.

(2) Dynamic test: it refers to checking the difference between the running results and the expected results by running the tested program, and analyzing the performance indicators such as running efficiency, correctness and robustness.

3. From the development process level

(1) Unit test: also known as module test, it is a test to verify the correctness of the smallest unit of software design - program module or function module. Its purpose is to check whether there are various errors in each module of the program, whether it can correctly realize its function and meet its performance and interface requirements.

(2) Integration test: also known as assembly test or joint test, it is a multi-level extension of unit test and an orderly test based on unit test. The purpose is to test the interface relationship between software units, in order to find the problems between the interfaces of each software unit through the test, and finally form the tested units into software that meets the design requirements.

(3) System test: it is a test activity for the integrated software and hardware system to judge whether the system meets the requirements. It combines the integrated software system as an element based on the whole computer system with other system elements such as computer hardware, peripherals, some supporting software, personnel, data and so on, Carry out a series of assembly tests and validation tests on the computer system.

4. From the perspective of whether manual intervention is required in the implementation process

(1) Manual testing: it means that testers manually input and execute one by one according to the test cases written in advance to cover the requirements of the tested software and the test steps and methods described in the test outline, including interacting with the tested software (such as inputting test data, recording test results, etc.), and then observe the test results to see whether there are problems in the tested program or whether there will be a problem in the execution process, It is a relatively original but necessary step.

(2) Automated testing: in fact, it is to hand over a large number of repetitive testing work to the computer to complete, usually using automated testing tools to simulate manual testing steps, Execute the process written in a programming language (full-automatic test refers to the whole process of the test automatically completed by the program without manual intervention in the process of automatic test; semi-automatic test refers to the process in which the test case needs to be manually input or the test path needs to be selected, and then the automatic test program completes the automatic test according to the requirements specified manually)

5. From the perspective of test implementation organization

(1) Development tests: tests performed by developers

(2) User test: the test conducted by the user

(3) Third party test: different from the test conducted by developers or users, the test undertaken by a professional third party is to ensure the objectivity of the test work

6. From the test environment

(1) Alpha test: it is a test conducted by a user in the development environment, or it can be conducted by users within the company in the simulated actual operation environment

(2) Beta test: it is a typical end user of all aspects organized by the user company. In daily work, the user actually uses beta version and requires the user to report

7. Other test types

(1) Regression testing refers to the use case of repeating the test of the previous version when testing the new version of software.

(2) Smoke testing refers to verifying whether the basic functions of the software are realized and testable before large-scale testing of a new version.

(3) Random testing refers to that all input data in the test are randomly generated. Its purpose is to simulate the real operation of users and find some marginal errors.