3. Reading: Types of software testing

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DRAG THE WORDS

Software testing is an essential stage of the software development . It helps to ensure the quality, security, and functionality of a software product or system. However, there are different types of software testing that can be applied different levels and of development. Two of the most common types are black box testing and box testing.

Black box testing is a technique that tests the software from an external or perspective. It does not require access to the code or the internal structure of the software. It focuses on the behavior and output of the software a set of inputs. Black box testing can be applied to unit, integration, system, and acceptance testing. Some black box testing techniques are equivalence partitioning, error guessing, boundary value analysis, and decision table testing.

White box testing is a that tests the software from an internal or perspective. It requires access to the source code and the internal structure of the software. It focuses the data flow, logic, and processing of the software. White box testing can be applied unit and integration testing. Some common white box testing techniques are statement coverage, branch coverage, path coverage, and mutation testing.

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Glossary

- **API**: Application Programming Interface, a set of protocols and tools for building software applications.
- **Black Box Testing:** A method of testing where the tester does not have any knowledge of the internal workings of the software. The tester only focuses on the inputs and outputs of the system.
- **Buffer Overflow:** A type of software vulnerability that occurs when a program tries to write more data to a buffer than it can hold, causing the excess data to overwrite adjacent memory locations. (Desbordamiento de búfer)
- **Code Analyzer:** A tool used in white box testing to identify potential vulnerabilities or defects in the software's source code.
- **Database schema:** The structure or blueprint of a database that defines how data is organized and stored.
- **Grey Box Testing:** A method of testing where the tester has partial knowledge of the internal workings of the software. The tester has access

to some of the code but not all of it.

- **Internal Workings**: Refers to the inner workings of a system, such as the algorithms, data structures, and processes that make up the system. (Funcionamiento interno)
- **Overflow**: A condition where a system, buffer or storage area has exceeded its capacity.
- **Overlooked**: Refers to something that was missed or not noticed, often in the context of software testing, where a defect or issue was not identified during testing. (Pasado por alto)
- **Reliability**: The ability of a system to consistently perform its intended function under specific conditions.
- **Regression Testing:** A type of testing that ensures that changes made to the software do not inadvertently introduce new defects or errors. This type of testing involves retesting the software after changes have been made to ensure that the software still functions correctly.
- **Thoroughly**: Refers to doing something in a comprehensive and complete manner, leaving no stone unturned. In software testing, this might refer to testing all possible scenarios, or testing a system or component to a high degree of detail and rigor. (A fondo)
- **Vulnerability**: A weakness in the software that can be exploited by an attacker to gain unauthorized access or perform malicious actions.
- **White Box Testing:** A method of testing where the tester has complete knowledge of the internal workings of the software. The tester can access the code and the system's architecture.

EXTRA

Acceptance Testing

Acceptance Testing is a software testing technique that involves testing the software application with the end-user in mind. This technique is used to ensure that the software application meets the requirements and expectations of the end-user.

Boundary Value Analysis

Boundary Value Analysis is a software testing technique that involves testing the boundaries of input values to determine if the software application behaves correctly. This technique is used to identify defects that may occur at the limits of the input values.

Branch Coverage

Branch Coverage is a testing technique that involves testing every possible branch in the source code of the software application. This technique is used to ensure that every possible decision point in the source code is tested.

Decision Table Testing

Decision Table Testing is a software testing technique that involves creating a table that shows the possible inputs and the corresponding actions

that should be taken by the software application. This technique is used to test the logic of the software application.

Equivalence Partitioning

Equivalence Partitioning is a software testing technique that involves dividing a set of test conditions into groups or partitions that can be considered equivalent. This technique is used to reduce the number of test cases required to test the software application.

Error Guessing

Error Guessing is a software testing technique that involves guessing and testing the areas of the software application that are likely to contain errors. This technique is based on the tester's experience and intuition, and it is used to identify defects that may not be found by other testing techniques.

Integration Testing

Integration Testing is a software testing technique that involves testing the interaction between different units or components of the software application. This technique is used to ensure that the different units or components of the software application are working together correctly.

Mutation Testing

Mutation Testing is a software testing technique that involves making small changes to the source code of the software application to create a set of mutant programs. These mutant programs are then tested to determine if the software application is able to detect the changes.

Path Coverage

Path Coverage is a testing technique that involves testing every possible path through the source code of the software application. This technique is used to ensure that every possible sequence of statements in the source code is tested.

Statement Coverage

Statement Coverage is a testing technique that involves testing every statement in the source code of the software application. This technique is used to ensure that every statement in the source code is executed at least once during testing.

Unit Testing

Unit Testing is a software testing technique that involves testing individual units or components of the software application. This technique is used to ensure that each unit or component of the software application is working correctly.