**PRINCIPAL OF TESTING**

1.defect clustering

2.pesticide paradox

3.no exhaustive testing

4.testing to find defect

5.bug free software is not possible

6.early testing

7.context based

**Black box and white box testing**

**Black Box Testing**

Black Box Testing is a software testing method in which the functionalities of software applications are tested without having knowledge of internal code structure, implementation details and internal paths.

Black Box Testing mainly focuses on input and output of software applications and it is entirely based on software requirements and specifications. It is also known as Behavioral Testing.

Input output

Black box

**Types of Black Box Testing**

There are many types of Black Box Testing but the following are the prominent ones –

* **Functional testing**

This black box testing type is related to the functional requirements of a system; it is done by software testers.

* **Non-functional testing**

This type of black box testing is not related to testing of specific functionality, but non-functional requirements such as performance, scalability, usability.

* **Regression testing**

[Regression Testing](https://www.guru99.com/regression-testing.html) is done after code fixes, upgrades or any other system maintenance to check the new code has not affected the existing code.

## White Box Testing

**White Box Testing** is a testing technique in which software’s internal structure, design, and coding are tested to verify input-output flow and improve design, usability, and security.

In white box testing, code is visible to testers, so it is also called Clear box testing, Open box testing, Transparent box testing, Code-based testing, and Glass box testing.

## Types of White Box Testing

* **Unit Testing:**

It is often the first type of testing done on an application unit testing  is performed on each unit or block of code as it is developed.

* **Testing for Memory Leaks**:

Memory leaks are leading causes of slower running applications. A QA specialist who is experienced at detecting memory leaks is essential in cases where you have a slow running software application.