**What is Load testing?**

Load testing is the process that simulates actual user load on any application or website. It checks how the application behaves during normal and high loads. This type of testing is applied when a development project nears to its completion. This testing usually measures the speed and capacity of the application. Thus whenever we modify the load, we monitor the behavior of the system under various conditions.

Example of Load testing are Test of a word processor by make change in the large volume of data,

test a printer by transferring heavy data.

Check mail server with thousands of concurrent users.

PURPOSE: To generate the increased load on a web application is the main aim of load testing.

## What is Stress testing?

Stress testing is a type of testing that determines the stability and robustness of the system. It is a non-functional testing technique.  A most prominent use **of stress testing is to determine the limit, at which the system or software or hardware breaks**. It also checks whether the system demonstrates effective error management under extreme conditions.

Example of Stress testing is casually shut down and restart ports of a large network.

PURPOSE: To ensure that under a sudden high load for a considerable duration the servers don’t crash.

## What is Performance testing?

Performance testing is a type of testing for determining the speed of a computer, network or device. It checks the performance of the components of a system by passing different parameters in different load scenarios.

Example of performance testing are : Checking concurrent users, HTTP connections or checking  
Suitable response time.

PURPOSE: is to get an indication of how an application behaves under regular parameters.

## White Box Testing Techniques:

* **Statement Coverage -** This technique is aimed at exercising all programming statements with minimal tests.
* **Branch Coverage -**This technique is running a series of tests to ensure that all branches are tested at least once.
* **Path Coverage -**This technique corresponds to testing all possible paths which means that each statement and branch is covered.

**Statement testing** A test strategy in which each statement of a program is executed at least once. It is a weaker testing strategy than [path testing](https://www.encyclopedia.com/computing/dictionaries-thesauruses-pictures-and-press-releases/path-testing) or [branch testing](https://www.encyclopedia.com/computing/dictionaries-thesauruses-pictures-and-press-releases/branch-testing) because it (usually) requires the least number of test cases.

This technique is aimed at exercising all programming statements with minimal tests.

## What is Branch Testing?

Branch coverage is a testing method, which aims to ensure that each one of the possible branch from each decision point is executed at least once and thereby ensuring that all reachable code is executed.

That is, every branch taken each way, true and false. It helps in validating all the branches in the code making sure that no branch leads to abnormal behaviour of the application.

his technique is running a series of tests to ensure that all branches are tested at least once.

**Decision coverage** or**Branch coverage** is a**testing** method, which aims to ensure that each one of the possible**branch** from each**decision** point is executed at least once and thereby ensuring that all reachable code is executed. That is, every**decision**is taken each way, true and false. It helps in validating all the**branches** in the code making sure that no**branch**leads to abnormal behaviour of the application.

## Please Explain; even the flow chat

## FORMULAR

Branch Testing = (Number of decisions outcomes tested / Total Number of decision Outcomes) x 100 %

Read A

Read B

IF A+B > 10 THEN

Print "A+B is Large"

ENDIF

If A > 5 THEN

Print "A Large"

ENDIF

**Branch Condition Combination Testing:** Is a **white-box test design technique** in which test cases are designed to execute combinations of single condition outcomes (within one statement).

Multiple Condition Coverage is also known as Condition Combination Coverage.

In Multiple Condition Coverage for each decision all the combinations of conditions should be evaluated.

**Lets take an example:**

**if (A||B)  
then  
print C**

Here we have 2 Boolean expressions A and B, so the test set for Multiple Condition Coverage will be:

**TEST CASE1: A=TRUE, B=TRUE  
TEST CASE2: A=TRUE, B=FALSE  
TEST CASE3: A=FALSE, B=TRUE  
TEST CASE4: A=FALSE, B=FALSE**

As you can see that there are 4 test cases for 2 conditions. Similarly there will be 8 test cases for 3 conditions.

Modified condition/decision coverage ( MC/DC) is a **code coverage criterion used in software testing** . MC/DC requires all of the below during testing: Each condition in a decision takes every possible outcome Each condition in a decision is shown to independently affect the outcome of the decision. Modified condition/decision coverage ( MC/DC) is a **code coverage criterion used in software testing** . MC/DC requires all of the below during testing: Each condition in a decision takes every possible outcome Each condition in a decision is shown to independently affect the outcome of the decision.

# **Linear code sequence and jump**

Linear code sequence and jump (LCSAJ), in the broad sense, is a software analysis method used to identify structural units in code under test.

Data Flow Testing is a specific strategy of software testing that focuses on data variables and their values. It makes use of the control flow graph. When it comes to categorization Data flow testing will can be considered as a type of white box testing and structural [types of testing](https://www.testbytes.net/blog/types-of-software-testing/). It keeps a check at the data receiving points by the variables and its usage points. It is done to cover the path testing and branch testing gap.

The process is conducted to [detect the bugs](https://www.testbytes.net/blog/how-to-find-bugs-in-your-app/) because of the incorrect usage of data variables or data values.