# Welcome

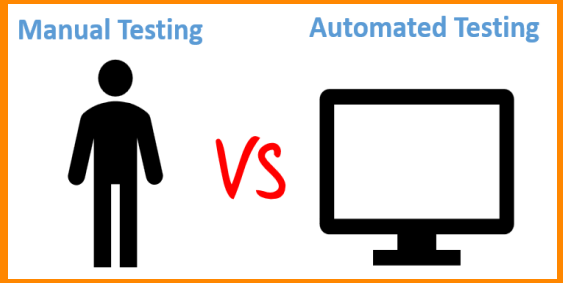
# HELLO!

I AM JAYALAKSHMI

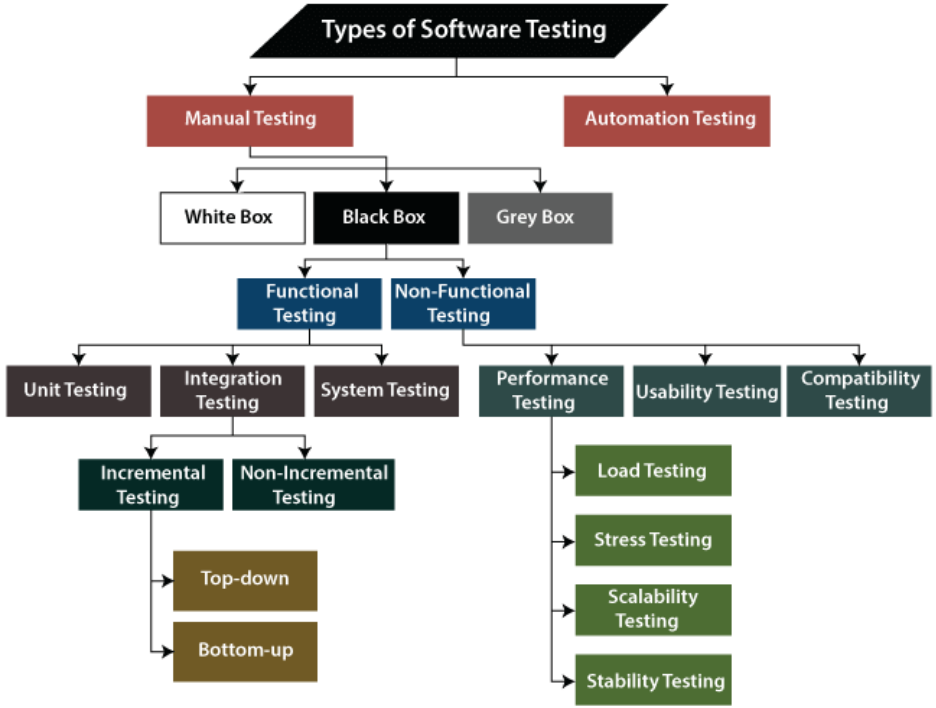
I AM HERE TO EXPLAIN ABOUT TESTING


TESTING

## Types of Software Testing

# TYPES OF SOFTWARE TESTING



# MANUAL TESTING

Manual testing is the process of identifying bugs and defects in software without the help of software testing automation tools. In this procedure, QA manual testers execute test cases manually while considering the end user's perspective.

# WHY WE NEED MANUAL TESTING

- Whenever an application comes into the market, and it is unstable or having a bug or issues or creating a problem while end-users are using it.
- If we don't want to face these kinds of problems, we need to perform one round of testing to make the application bug free and stable and deliver a quality product to the client, because if the application is bug free, the end-user will use the application more conveniently.
- If the test engineer does manual testing, he/she can test the application as an end-user perspective and get more familiar with the product, which helps them to write the correct test cases of the application and give the quick feedback of the application.

# ADVANTAGES OF MANUAL TESTING

- It is excellent for accurate user interface testing.
- Software testers don't need to rewrite the entire to resolve quick fixes in the application.
- Manual testing is less extensive and has a smaller immediate cost when compared to automated testing.
- Manual testing can help us replicate the accurate user experience both mobile and apps.
- It is easier to resolve extremely complex test cases by manual testing rather than automated testing.

# DISADVANTAGES OF MANUAL TESTING

- Manual Testing is time-consuming mainly while doing regression testing.
- Manual testing is less reliable compared to automation testing because it is conducted by humans. So there will always be prone to errors and mistakes.
- Expensive over automation testing in the long run.

# AUTOMATION TESTING

- Automation testing is a process of changing any manual test case into the test scripts by using automation testing tools, and scripting or programming language is called automation.
- Automation testing is used to increase the efficiency, effectiveness, and coverage of Software testing.
- Automation test engineer uses automation testing tools to automate the manual design test cases without any human interference.
- And these testing tools can control the execution of tests, access the test data, and compares the actual result against the expected result.

# ADVANTAGES OF AUTOMATION TESTING

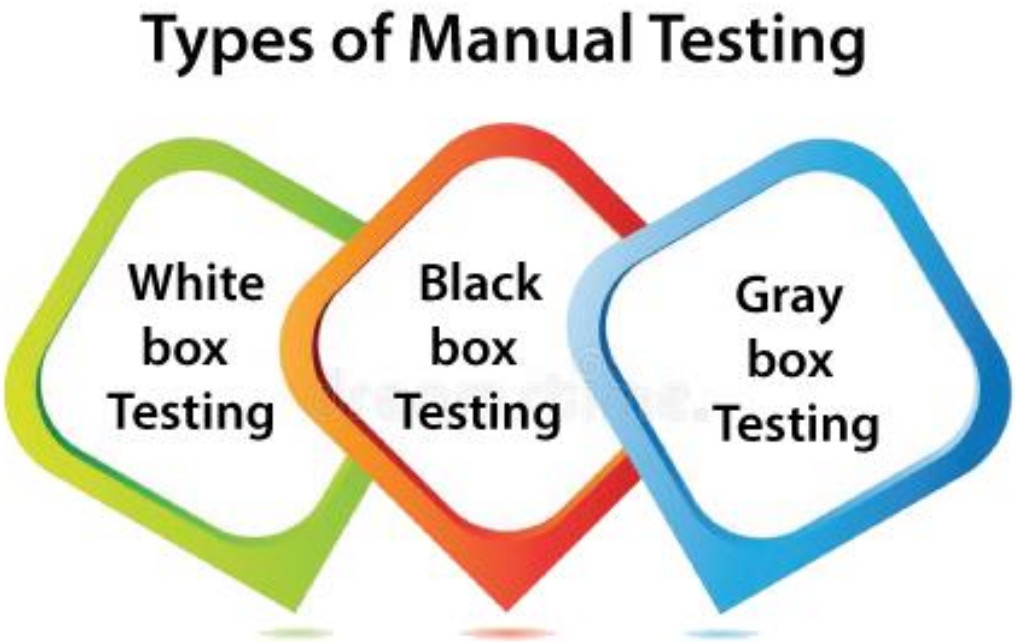
- Automated testing provides round the clock coverage as automated tests can be run all time in 24*7 environment.
- Automated testing takes far less resources in execution as compared to manual testing.
- It helps to train the test engineers to increase their knowledge by producing a repository of different tests.
- Automated testing has less chances of error hence more reliable.
- As with automated testing test engineers have free time and can focus on other creative tasks.

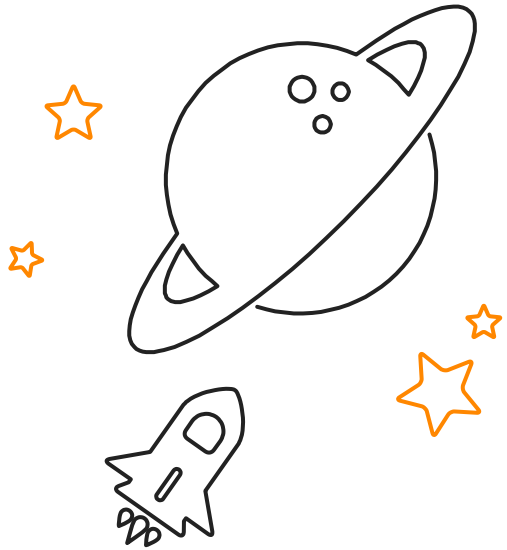
# DISADVANTAGES OF AUTOMATION TESTING

- Automated testing is very much expensive than the manual testing.
- It also becomes inconvenient and burdensome as to decide who would automate and who would train.
- It has limited to some organisations as many organisations not prefer test automation.
- Automated testing only removes the mechanical execution of testing process, but creation of test cases still required testing professionals.

# TYPES OF MANUAL AND AUTOMATION TESTING

There are many different types of testing.
Many of these types of testing can be done manually — or they can be automated.


Types of Manual Testing
White box Testing
Black box Testing
Gray box Testing



## WHITE-BOX TESTING:-

The white box testing is done by Developer, where they check every line of a code before giving it to the Test Engineer. Since the code is visible for the Developer during the testing, that's why it is also known as White box testing.

## BLACK BOX TESTING:-

The black box testing is done by the Test Engineer, where they can check the functionality of an application or the software according to the customer /client's needs. In this, the code is not visible while performing the testing; that's why it is known as black-box testing.

## GRAY BOX TESTING:-

Gray box testing is a combination of white box and Black box testing. It can be performed by a person who knew both coding and testing. And if the single person performs white box, as well as black-box testing for the application, is known as Gray box testing.

# MANUAL VS AUTOMATED TESTING

| Manual Testing | Automated Testing |
| --- | --- |
| • Manual testing is not accurate at all times due to human error, hence it is less reliable.<br>• Manual testing is time-consuming, taking up human resources.<br>• Investment is required for human resources.<br>• Manual testing is only practical when the test cases are run once or twice, and frequent repetition is not required.<br>• Manual testing allows for human observation, which may be more useful if the goal is user-friendliness or improved customer experience. | • Automated testing is more reliable, as it is performed by tools and/or scripts.<br>• Automated testing is executed by software tools, so it is significantly faster than a manual approach.<br>• Investment is required for testing tools.<br>• Automated testing is a practical option when the test cases are run repeatedly over a long time period.<br>• Automated testing does not entail human observation and cannot guarantee user-friendliness or positive customer experience. |

# TYPES OF TESTING

Functional Testing

VS

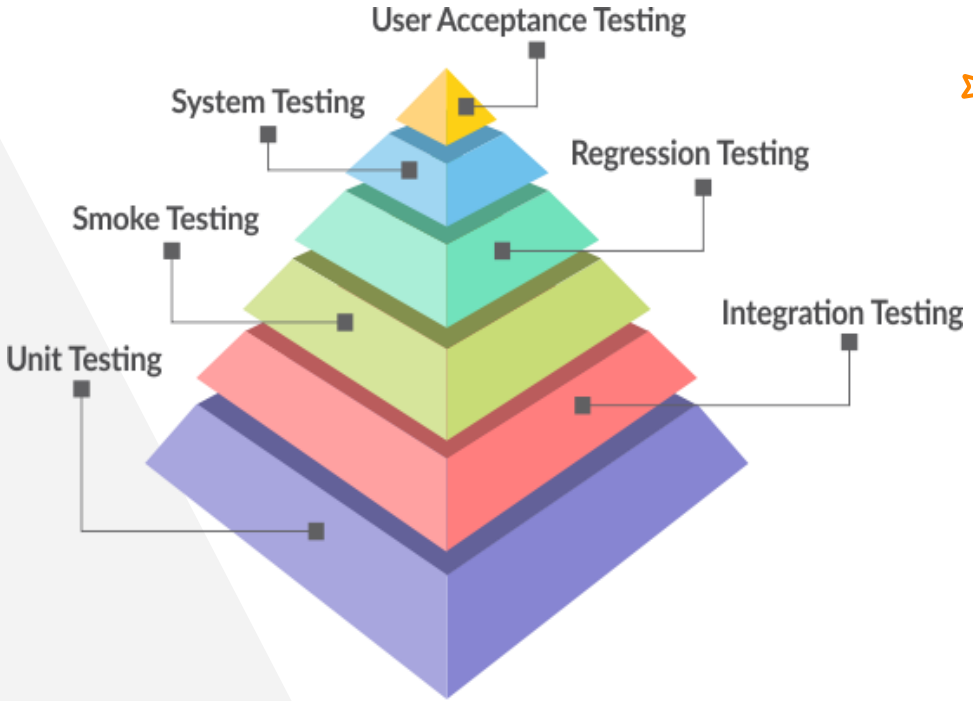
Non-Functional Testing

# FUNCTIONAL TESTING

It is a type of software testing which is used to verify the functionality of the software application, whether the function is working according to the requirement specification. In functional testing, each function tested by giving the value, determining the output, and verifying the actual output with the expected value. Functional testing performed as black-box testing which is presented to confirm that the functionality of an application or system behaves as we are expecting. It is done to verify the functionality of the application.

Functional testing also called as black-box testing, because it focuses on application specification rather than actual code. Tester has to test only the program rather than the system.

# Types Functional Testing



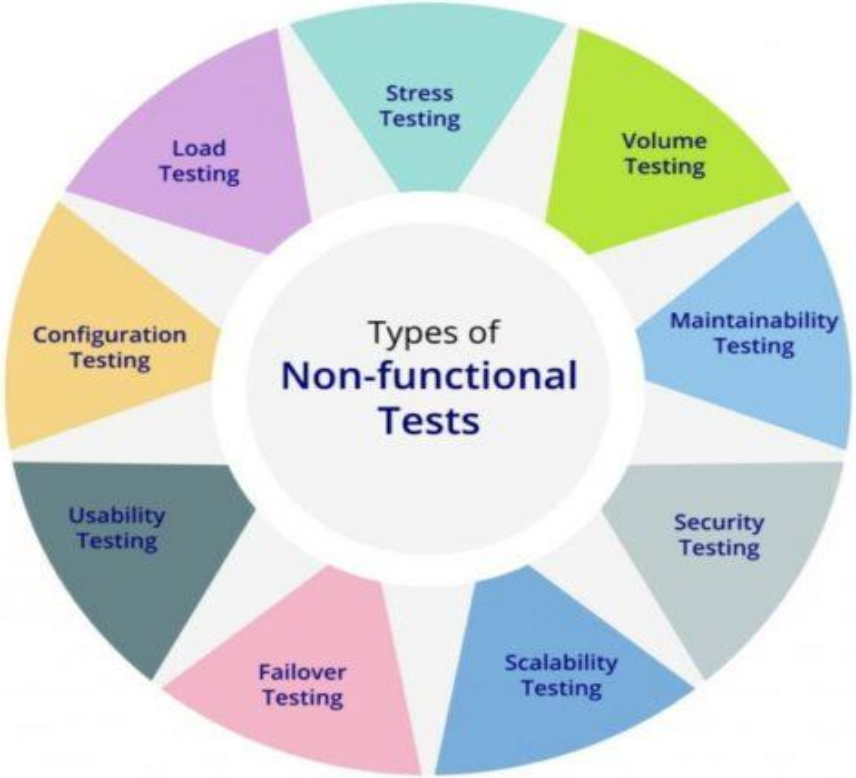

# NON-FUNCTIONAL TESTING

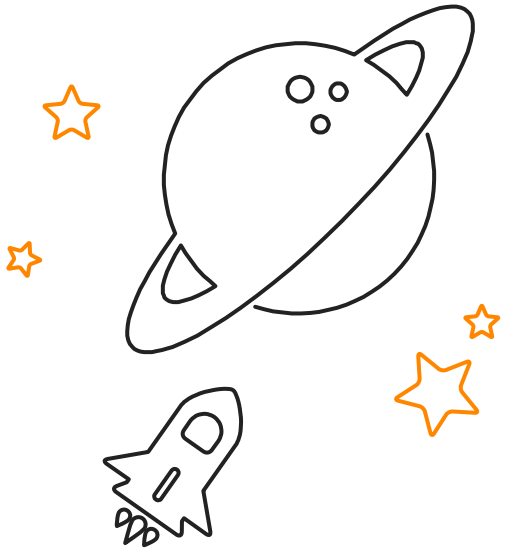
Non-functional testing is a type of software testing to test non-functional parameters such as reliability, load test, performance and accountability of the software. The primary purpose of non-functional testing is to test the reading speed of the software system as per non-functional parameters. The parameters of non-functional testing are never tested before the functional testing.

Non-functional testing is also very important as functional testing because it plays a crucial role in customer satisfaction.

For example, non-functional testing would be to test how many people can work simultaneously on any software.

# Types Non Functional Testing




TEST
CASE

# TEST CASE

A test case template is a document that comes under one of the test artifacts, which allows testers to develop the test cases for a particular test scenario in order to verify whether the features of an application are working as intended or not. Test cases are the set of positive and negative executable steps of a test scenario which has a set of pre-conditions, test data, expected results, post-conditions, and actual results.

# THE PROCESS TO WRITE TEST CASE

The method of writing a test case can be completed into the following steps, which are as below:

## SYSTEM STUDY:-

In this, we will understand the application by looking at the requirements or the SRS, which is given by the customer.

## IDENTIFY ALL SCENARIOS:-

- When the product is launched, what are the possible ways the end-user may use the software to identify all the possible ways.
- I have documented all possible scenarios in a document, which is called test design/high-level design.
- The test design is a record having all the possible scenarios.

## WRITE TEST CASES:-

Convert all the identified scenarios to test claims and group the scenarios related to their features, prioritize the module, and write test cases by applying test case design techniques and use the standard test case template, which means that the one which is decided for the project.

## REVIEW THE TEST CASES:-

Review the test case by giving it to the head of the team and, after that, fix the review feedback given by the reviewer.

## TEST CASE APPROVAL:-

After fixing the test case based on the feedback, send it again for the approval.

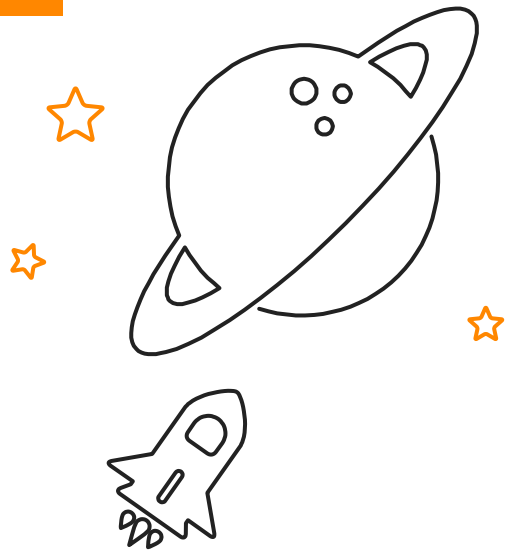
## STORE IN THE TEST CASE REPOSITORY:-

After the approval of the particular test case, store in the familiar place that is known as the test case repository.

# TEST CASE TEMPLATE

Follow the below steps to write the test cases.

- TS- id
- TC-id
- Test Scenario
- Pre-Requisites
- Test Case Description
- Test Steps
- Test Data
- Expected Result
- Actual Result
- Status
- Comment
- Executed Date



# TEST CASE DESIGN TEMPLATE FORMAT

| TS_id | TC_id | Test Scenario | Pre-Requisites | Test Case Description | Test Steps | Test Data | Expected Result | Actual Result | Status | Comment | Executed Date |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | TC_001 | Verify that the details on Home page | https://www.amazon.in/[Browser should be installed internet connection should be present | Verify that the home page is displayed after login or not | Verify that the Browser is Opened | Browser Should be opened | Browser should be Opened | Browser_Opened | PASS | | 07.04.2022 |
| | | | | | Verify that the URL is Opened | Amazon Website should be opened | Amazon_Website should be Opened | Website Opened | PASS | | 1. |
| | | | | | Verify that the homepage is displayed | Home page should be displayed | Home page should be Displayed after login | Homepage Displayed | PASS | | |
| | TC_002 | Verify that the details on Home page | "https://www. Amazon .in/[Browser should be installed internet connection should be present | Verify that the username is displayed after on homepage or not | Verify that the Browser is Opened | Browser Should be opened | Browser should be Opened | Browser_Opened | PASS | | 07.04.2022 |
| | | | | | Verify that the URL is Opened | Amazon Website should be opened | Amazon_Website should be Opened | Website Opened | PASS | | |
| | | | | | Verify that the username is entered | Username is entered | User should be able to input Username | Input User Name | | | |
| | | | | | Verify that the password is entered | Password is entered | User should be able to input Password | Input Password | | | |
| TS_001 | | | | | Verify that the login button is clicked | Login Button is Clicked | User should be displayed after login and user name should_be displayed on home page | User Name displayed | | | |
| | | | | | Verify that Sing Out | Sing Out is clicked | User should be Sing out after login | Sing out close | PASS | | |
| | TC_003 | Verify that the details on Home page | https://www. Amazon . in/[Browser should be installed internet connection should be present | Verify that product are displayed on_home page | Verify that the product search | Search Should be opened | User should be able to Search the product | Product search | PASS | | 07.04.2022 |
| | | | | | verify that the product Name is entered | Product Name is entered | User should be able to input Product name | input Product Name | PASS | | |
| | | | | | verify that the product Name "i phone" is entered | Product Name "iphone" is entered | User should be able to input Product name "i phone" | input Product Name "i phone" | PASS | | |
| | | | | | Verify that the product is opened | Product Should be Opened | User should be able to Open_the Product | Product Opened | PASS | | |
| | | | | | | | | | | | |

# THANKYOU!