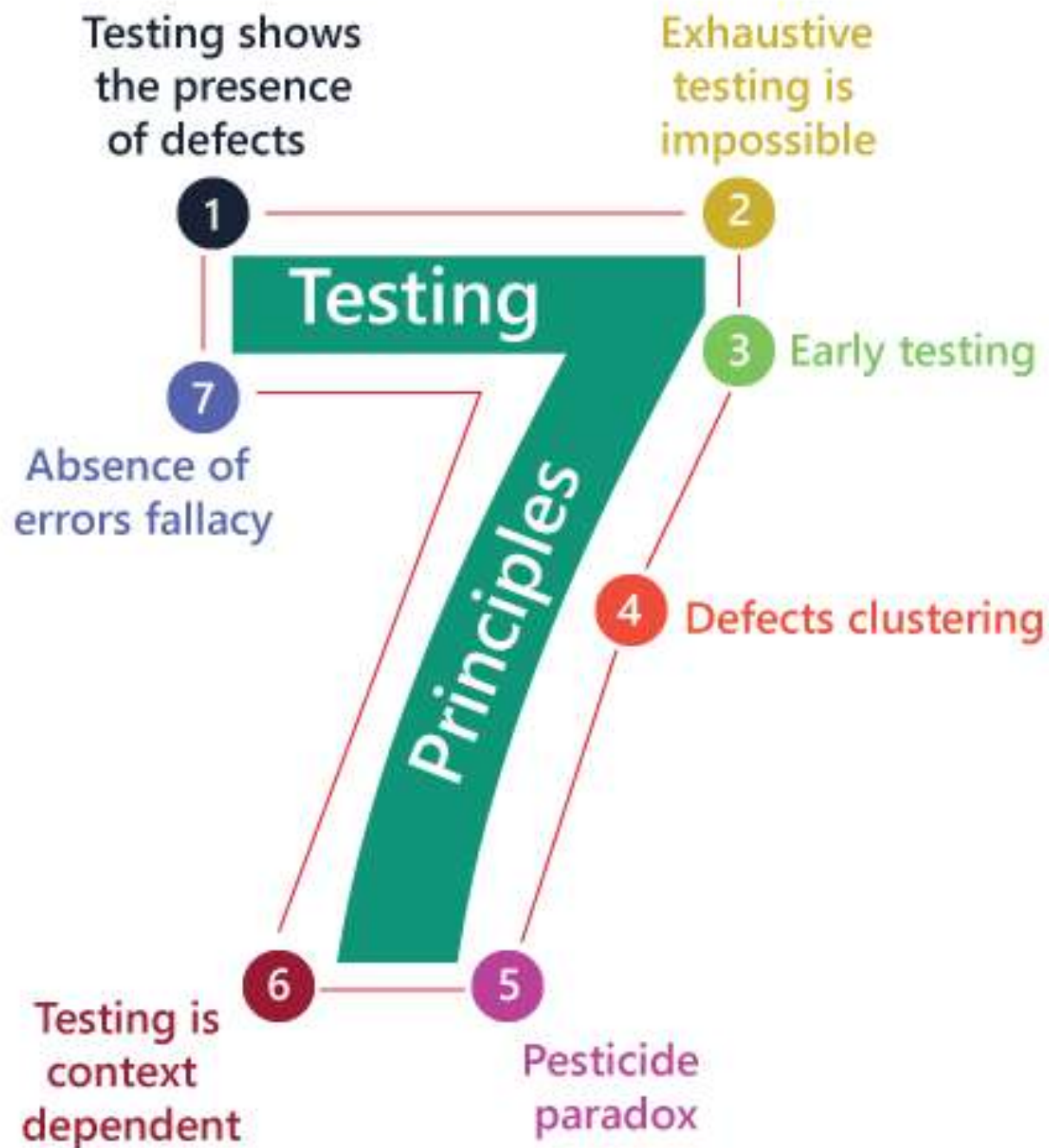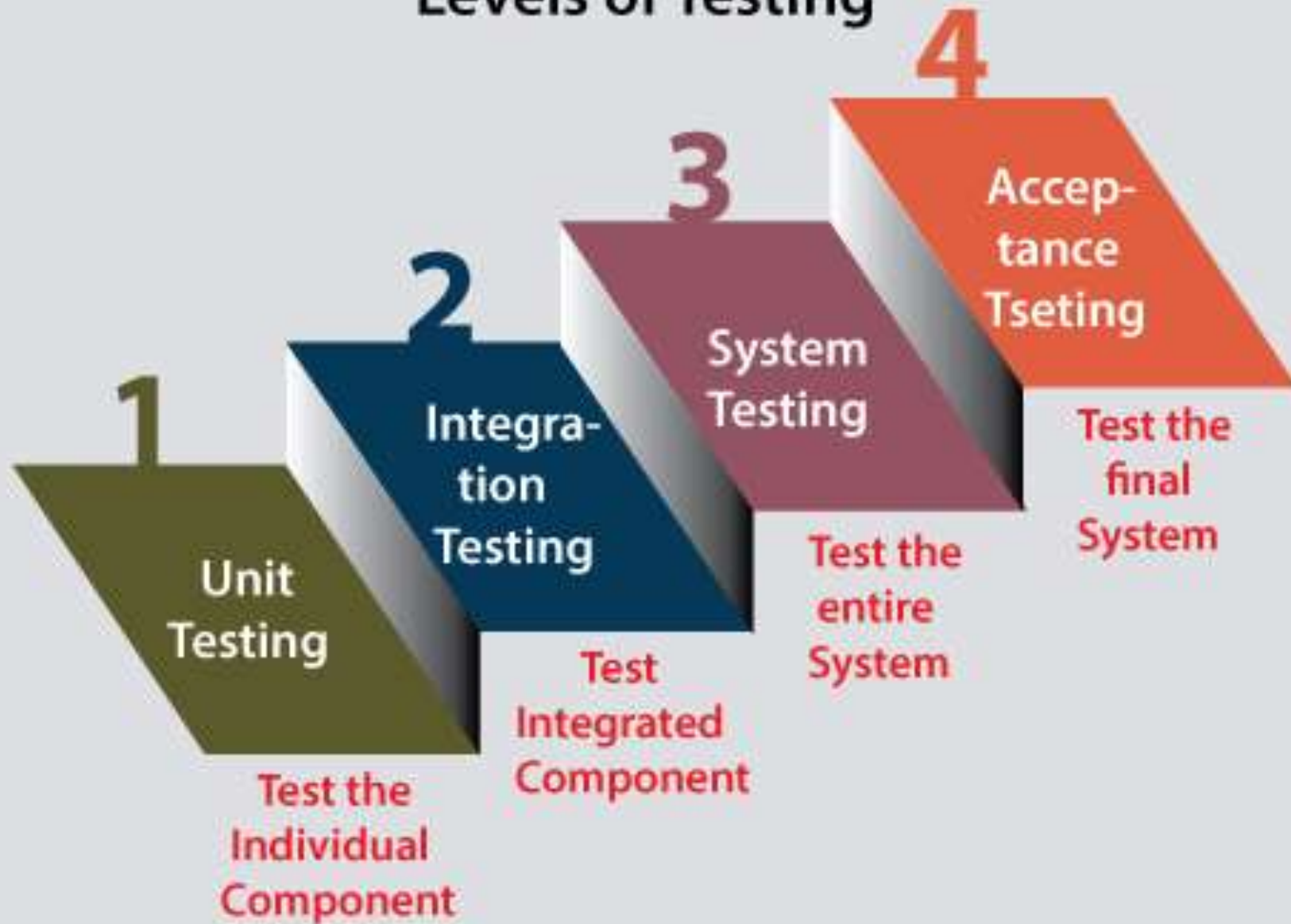# Testing

The process or method of finding error/s in a software application or program so that the application functions according to the end user's requirement is called Software Testing.
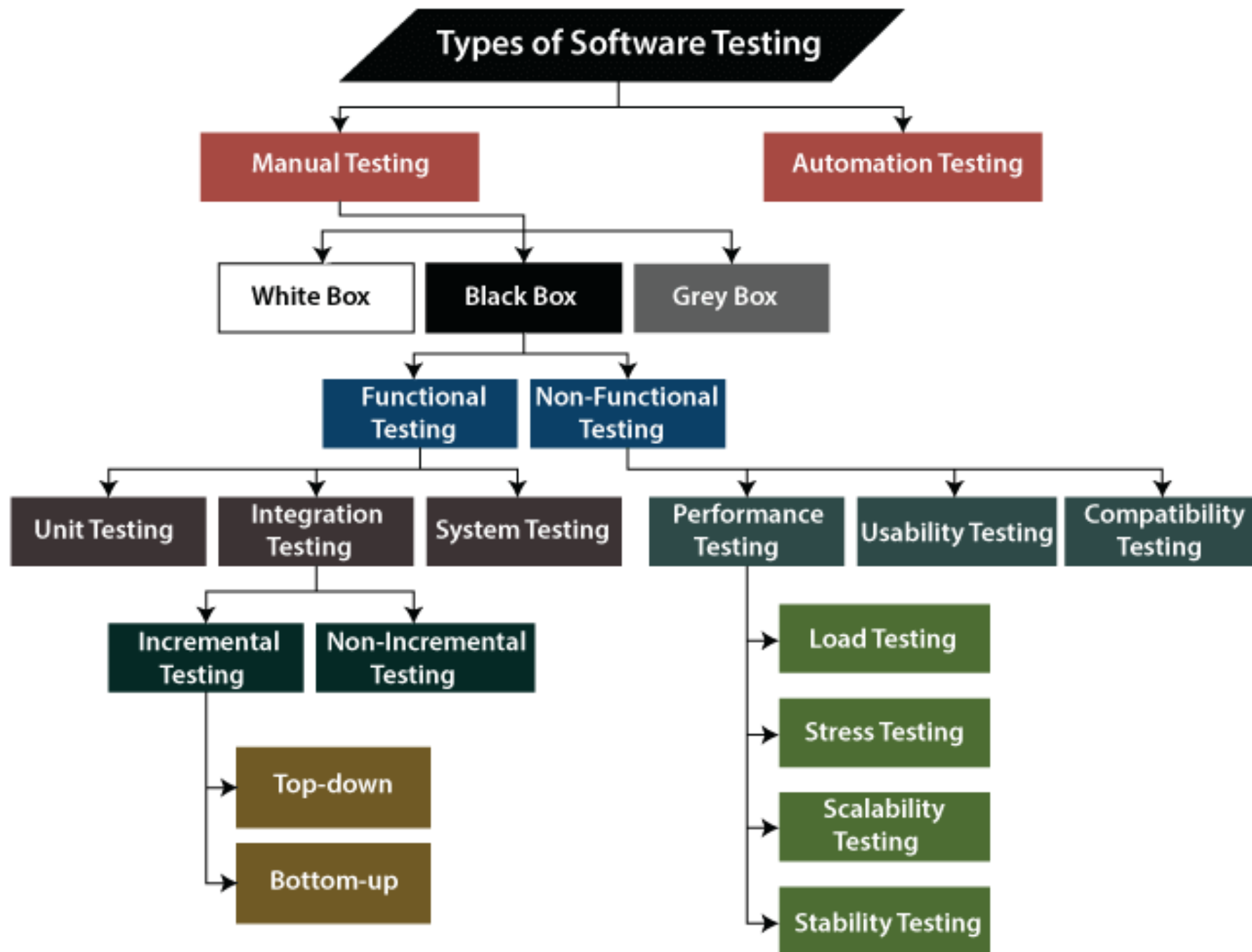
The major objectives of Software Testing are as follows:

- **Finding defects** that may get created by the programmer while developing the software.

- **Gaining confidence** in and providing information about the level of quality.

- To **prevent defects**.

- To **make sure** that the end result meets the business and user requirements.

- To **ensure** that it satisfies the **SRS** i.e. Software Requirement Specifications.
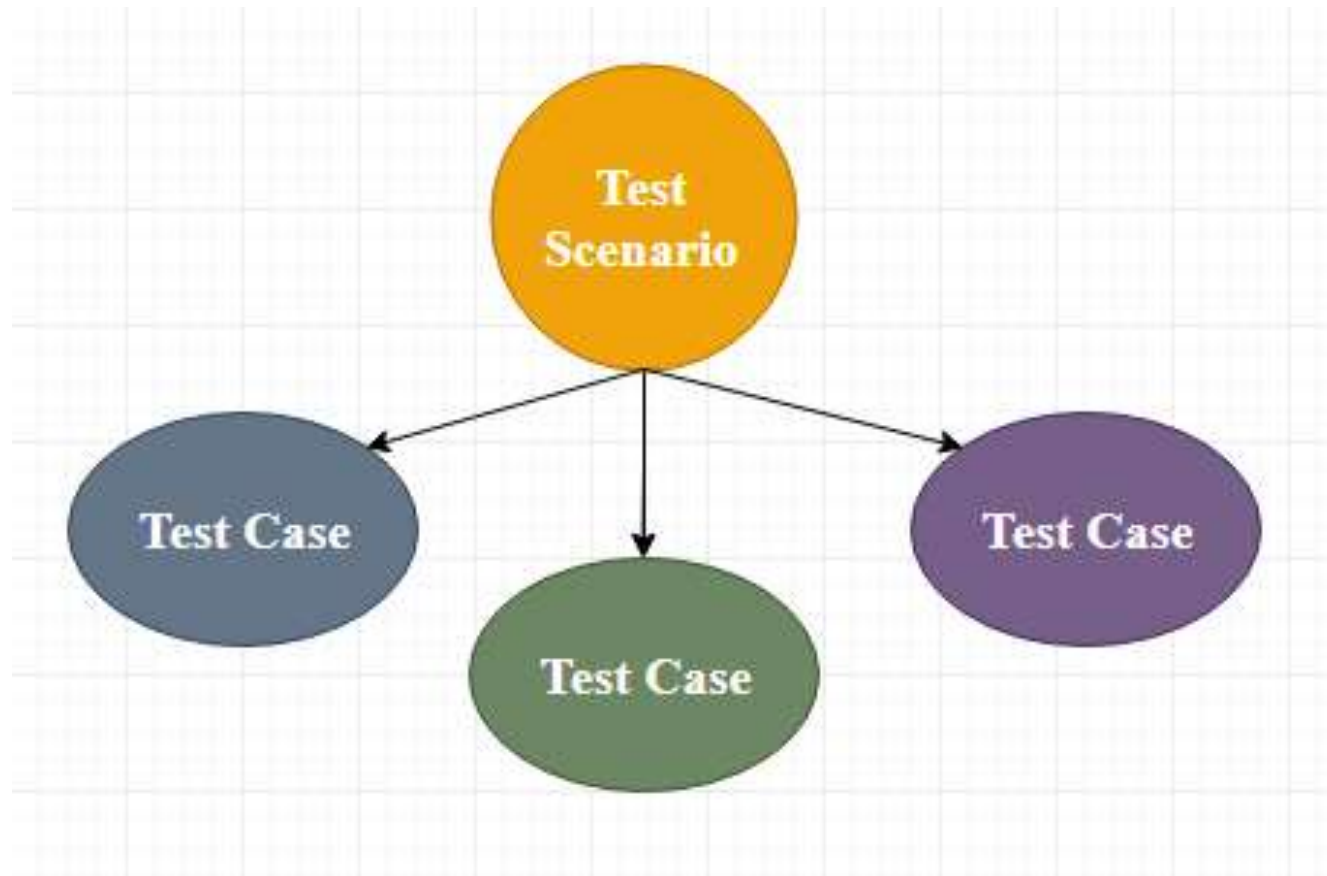
Testing shows the presence of defects

Exhaustive testing is impossible

Testing 7 Principles

1

2

3 Early testing

7 Absence of errors fallacy

4 Defects clustering

6 Testing is context dependent

5 Pesticide paradox

Types of Software Testing

- Manual Testing
  - White Box
  - Black Box
    - Functional Testing
      - Unit Testing
      - Integration Testing
        - Incremental Testing
          - Top-down
          - Bottom-up
        - Non-Incremental Testing
      - System Testing
    - Non-Functional Testing
      - Performance Testing
        - Load Testing
        - Stress Testing
        - Scalability Testing
        - Stability Testing
      - Usability Testing
      - Compatibility Testing
  - Grey Box
- Automation Testing

Test Case

The test case is defined as a group of conditions under which a tester determines whether a software application is working as per the customer's requirements or not. Test case designing includes preconditions, case names, input conditions, and expected results.

Why test cases ?

- To require consistency in the test case execution

- To make sure a better test coverage

- It depends on the process rather than on a person

- To avoid training for every new test engineer on the product

Test case template

Header

Test Case Name/ID :-Release - Version - Application Name - Module

Test Case Type:-

F.T.C	I.T.C	S.T.C

Requirement Number:-

Module:-

Serverity:- Critical/Major/Minor

Status:-

Release:-

Version:-

Pre-condition:-

Test Data:-

Summary:-

Body

Step No.	Descri-pation	Inputs	Expected Result	Actual Reasult	Status	Comments
...	...	...	...	...	...	...
...	...	...	...	...	...	...

Footer

Author:- Reviewd By:-

Date:- Approved By:-

Test case tamplate

test case name	Delta-3.0-ICICI-Login	
test case type	Functional test case	
requirement no		1
module	login	
status	XXX	
severity	critical	
release	Delta	
version		3
pre-condition	required one login	
test data	username-abc, password-123	
summary	to check the functionality of login	

Steps no	Description	Inputs	Expected result	Actual results	Status	Comments
	1 open "Browser" and enter the "Url"	https://QA/Main//	"Login page must be display	As Expected	pass	XXX
	2 enter the following values for "Username" :					
	Valid(abc)	abc	Accpect	Login page must be disp	pass	XXX
	Invalid	555	Error message "invalid login"	not as expected	fail	bug #1
	Blank	Null	Error message username cannot t	not as expected	fail	
	Symbols	2 alphabet	Error message invalid login	not as expected	fail	
	3 enter the following values for "Password":					
	valid	123	Accpect	Login page must be disp	pass	XXX
	invalid	xy3	Error message invalid login	not as expected	fail	
	Blank		Error message password cannot t	not as expected	fail	
	4 enter the valid username and password and click on "OK" button	abc,123	"home Pag " must be displayed	home page is displayin	pass	
	5 enter the valid username and password and click on "Cancel" button	abc,123	all field must be cleard	the entered data is clea	pass	XXX
author	test engineer name					
date	1/4/2020					
reviewed by	ryan					
apporved by	jessica					

The process to write test cases