MANUAL

SOFTWARE TESTING

Agenda

- Manual Testing
  - Phase1: Testing concepts(Theory) What?
  - Phase2: Project work(Practical) How?
- Automation Testing.

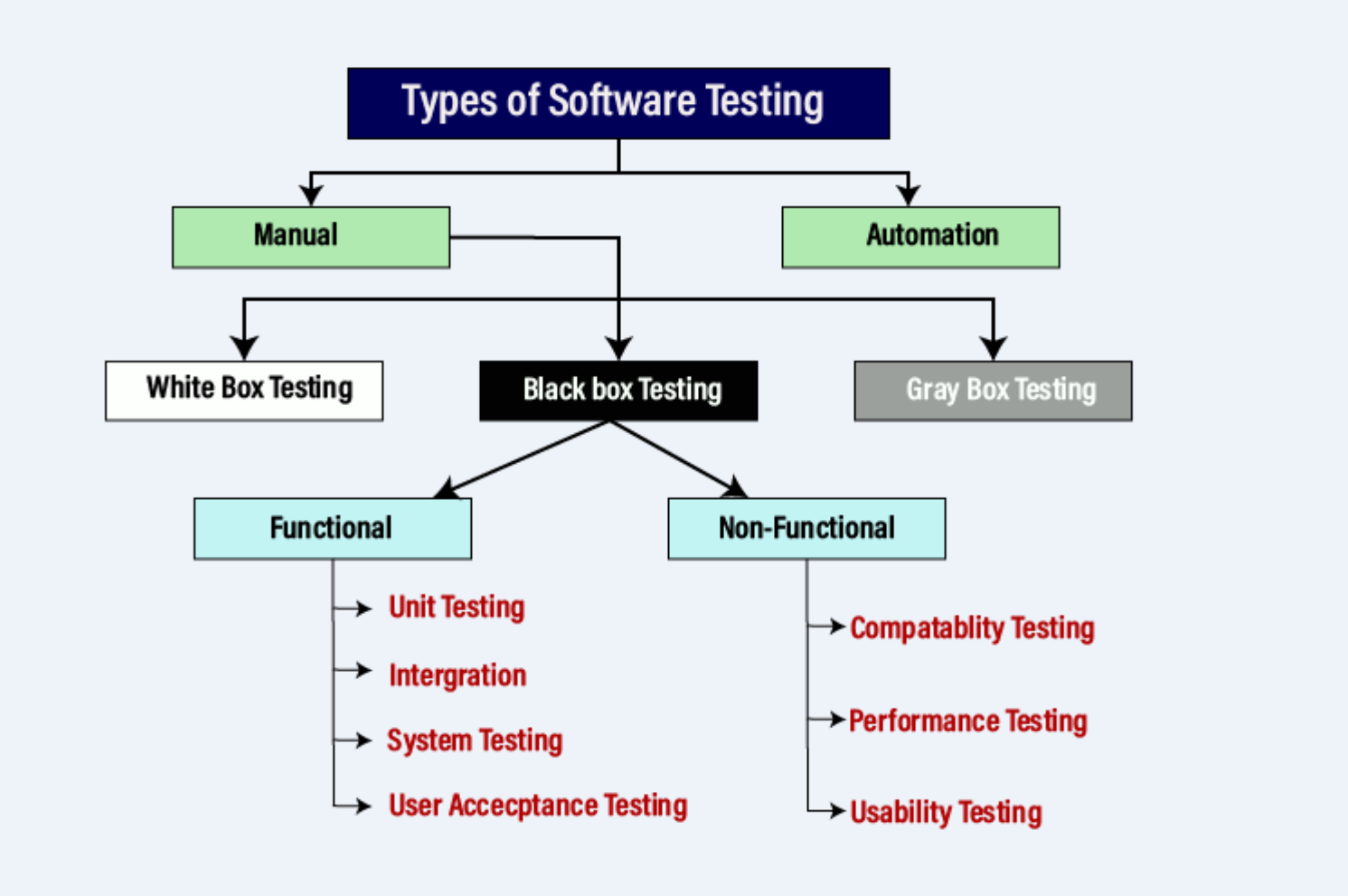
What is Software Testing?

- SoftwareTesting is a part of software development process.
- Testing is an activity to detect and identify the defects in the software.
- The objective of testing is to release quality product to the client.

Manual Testing Vs Automation Testing

- Testing Software Manually is called manual testing.
- All test cases executed by the tester manually according to the end user's perspective
- Testing Software using any Automation tools is called Test Automation.

Type of Software testing

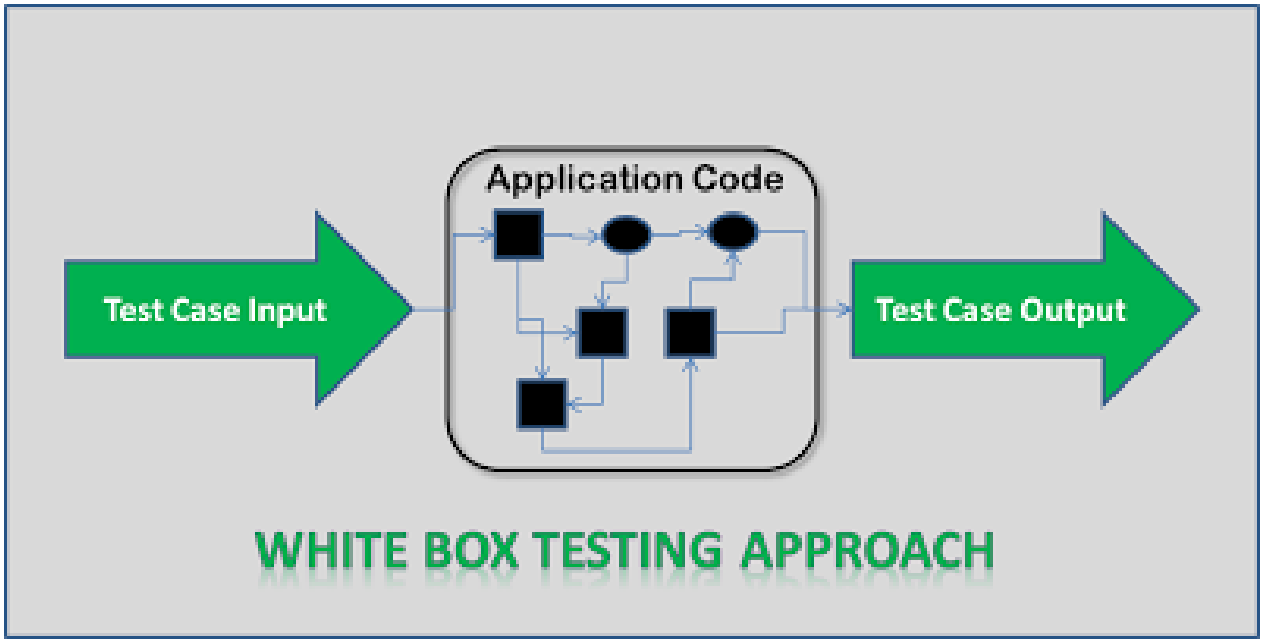


Testing Methodologies

- White box Testing
- Black box Testing
- Grey box Testing

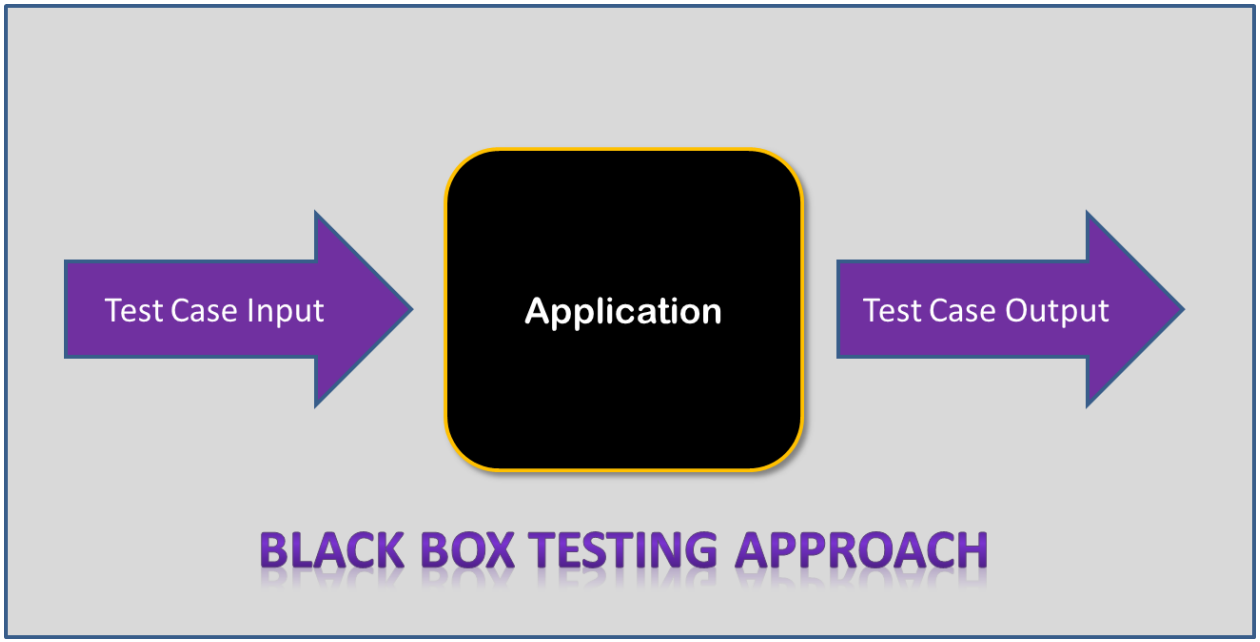
White Box Testing

- The white box testing is done by Developer
- White Box Testing conducts on internal logic of the programs.
- Programming Skills are required.
  - Ex: Unit Testing & Integration Testing



Black Box Testing

- The black box testing is done by the Test Engineer.
- In this, the code is not visible while performing the testing that's why it is known as black-box testing.
- Ex: System Testing & UAT Testing



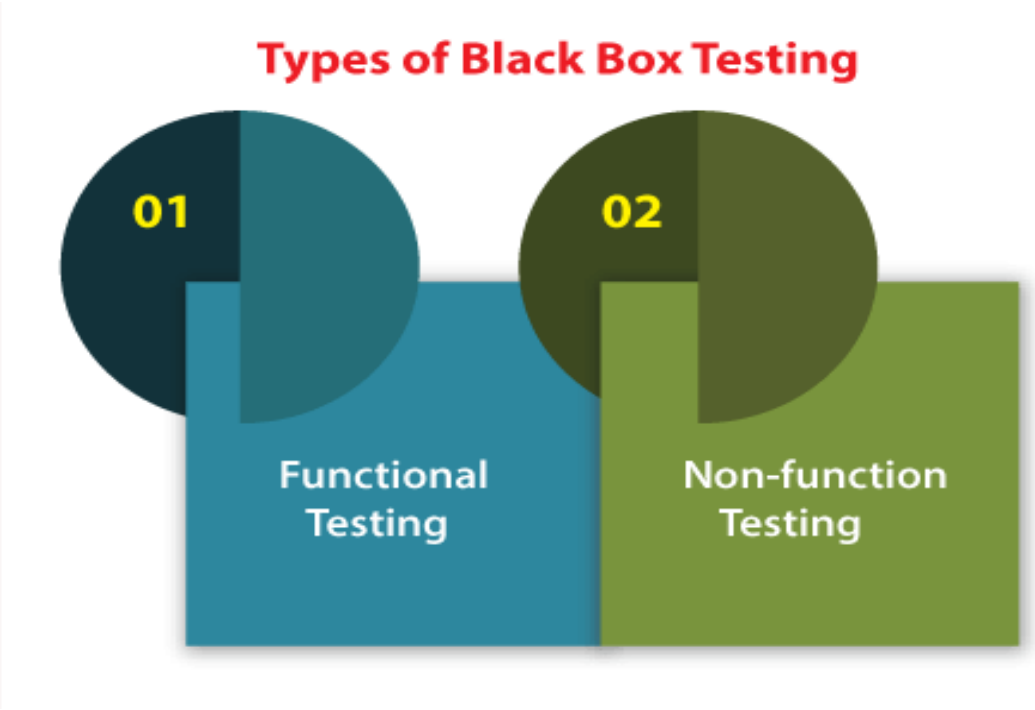
Grey Box Testing

- Both combination of white box and black box testing
- It can be performed by a person who knew both coding and testing..
  - Ex: Database Testing

Black Box Testing Types

- FunctionalTesting

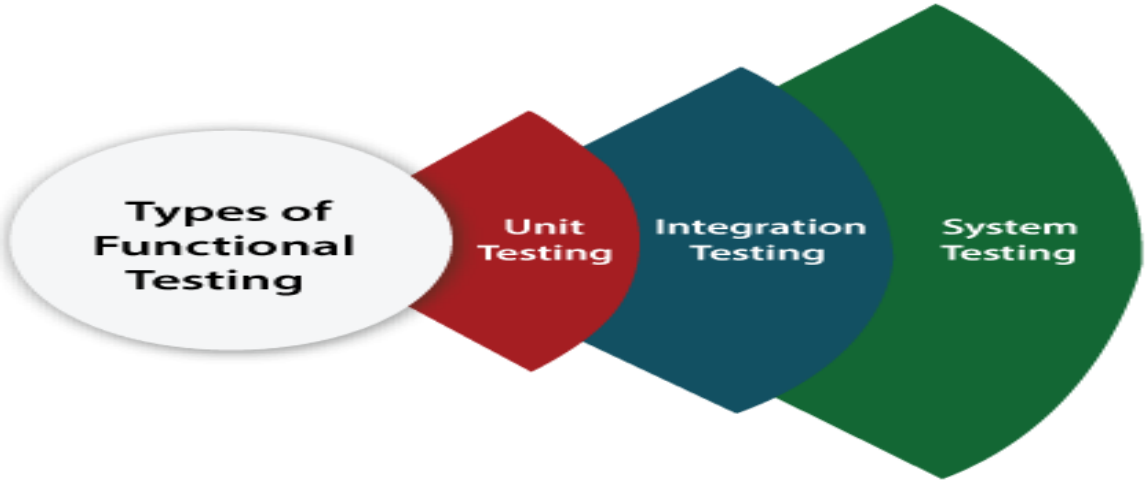
- Non-FunctionalTesting



Functional Testing

- All the components systematically against requirement specifications
- Also known as Component testing.

- **Types of Functional Testing**



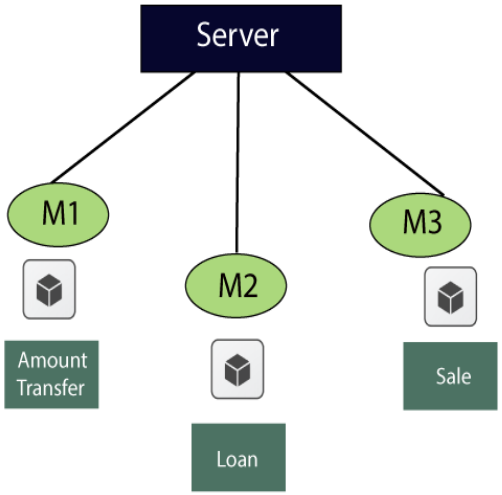
1. Unit Testing

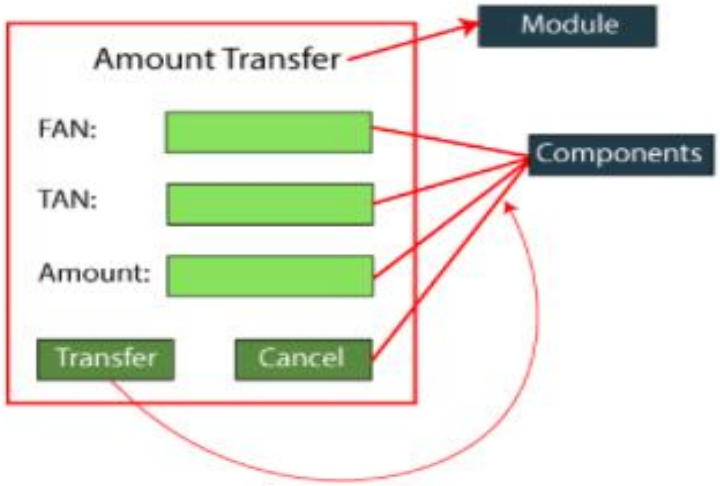
- Unit testing involves the testing of each unit or an individual component of the software application..
- A unit component is an individual function or code of the application.
- Rules of Unit testing
- To start unit testing, at least we should have one module.
- Test for positive values
- Test for negative values
- No over testing
- No assumption required

Unit Testing Example

we will start performing the unit testing on the different components such as…

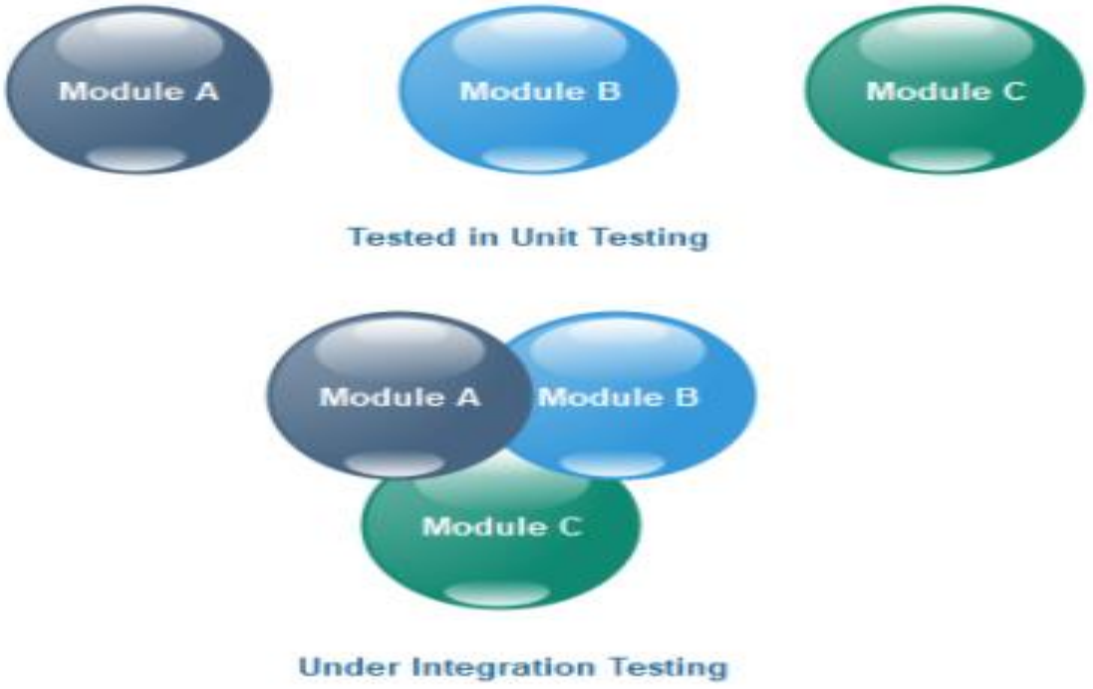
- From account number(FAN)
- To account number(TAN)
- Amount
- Transfer
- Cancel





2. Integration Testing

- Once all the components or modules are working independently, then we need to check the data flow between the dependent modules is known as integration testing.



Integration Testing Example

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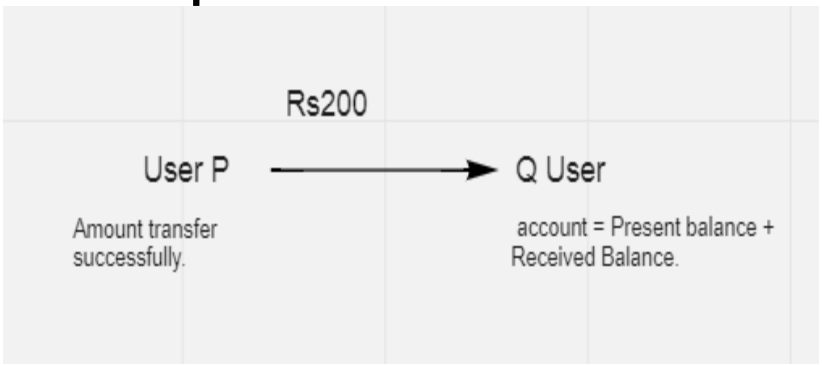
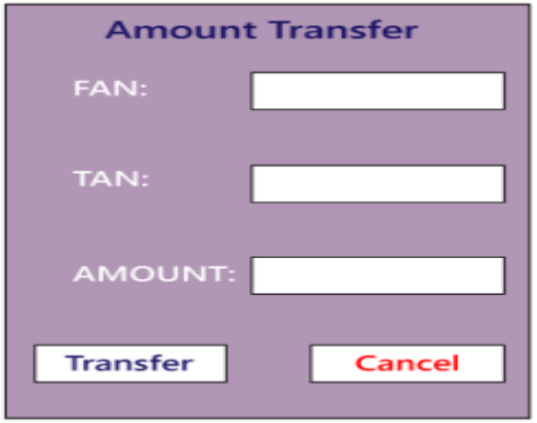
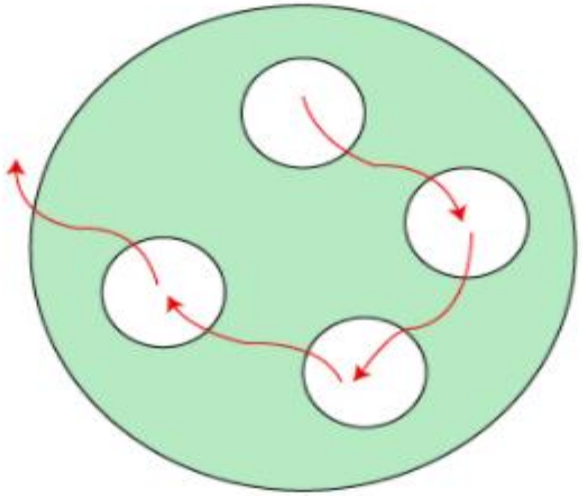




- If the amount of balance has reduced by Rs200 in P user account.
- P and Q, the message should be displayed regarding the data and time of the amount transfer.

2. System Testing

- System Testing includes testing of a fully integrated software system.
- To check the end-to-end flow of an application or the software as a user is known as System testing.
- The testing environment is similar to the production environment.



Testing any application...