Levels of Testing

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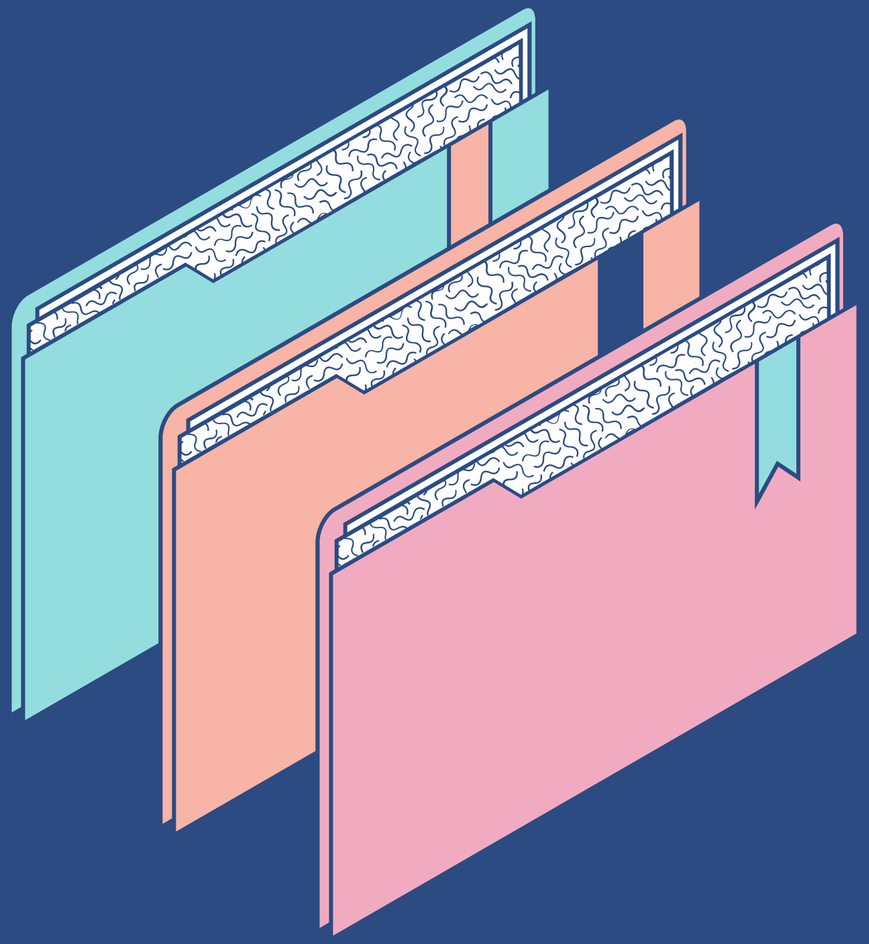
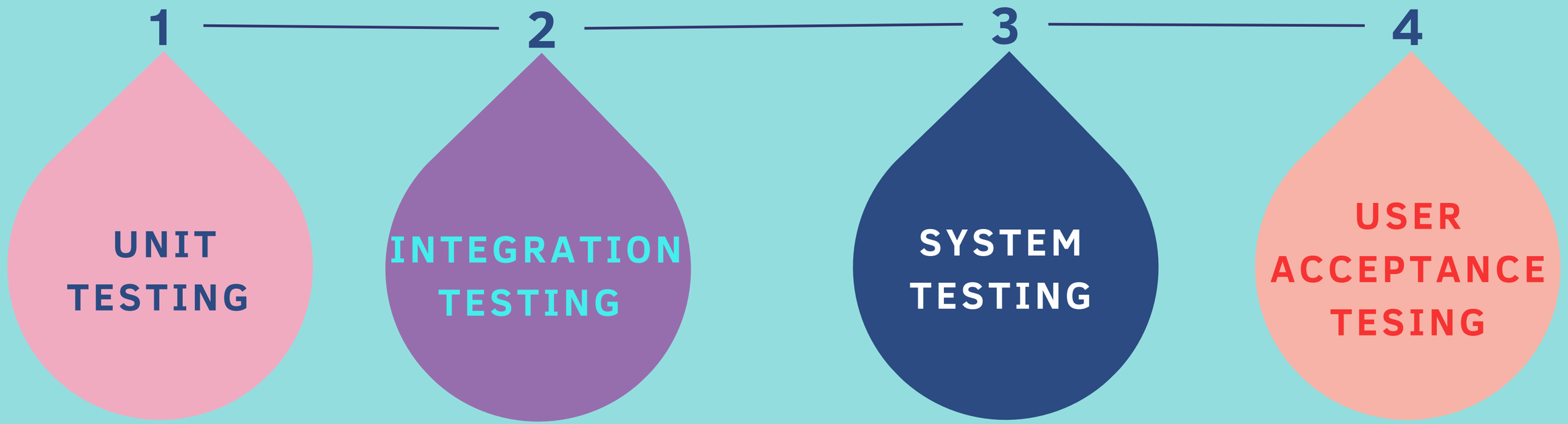


Levels of Testing

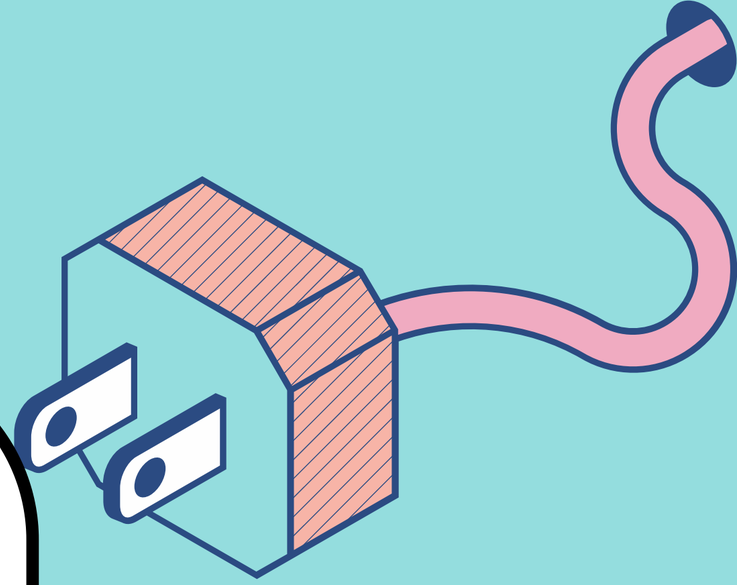
Software testing is the process of evaluating a system with the intent of finding bugs. It is performed to check if the system satisfies its specified requirements.

- Can be performed at different levels
- Early identification of bugs
- Better quality of software product
- Finds missing areas and avoids overlaping and repetion
- Each levels has a specific purpose

Levels of Testing



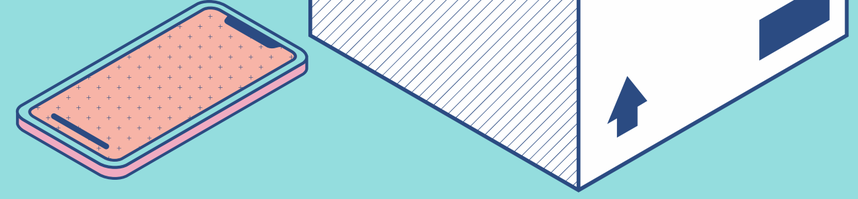
Unit Testing



- First level of testing
- Also known as component testing
- Tests individual components or module
- Performed by the developers during developmental phase
- Saves money and time
- Comes under White Box Testing

Disadvantages

- Exhaustive testing is possible.
- Integration issues will not be detected



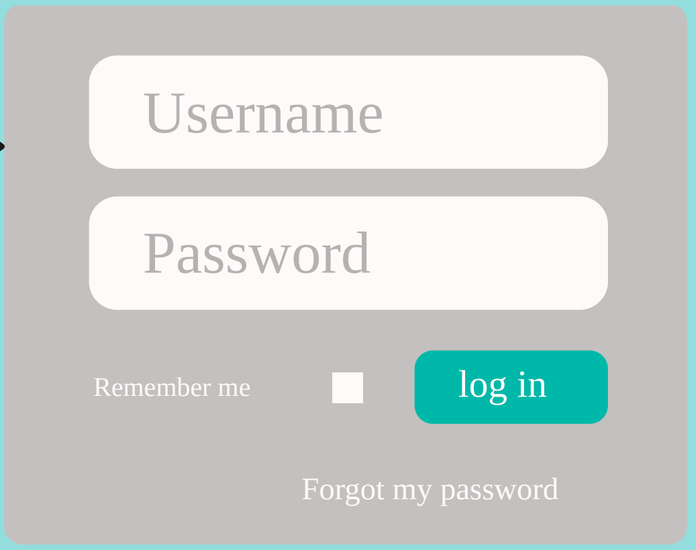
Banking app

Login module

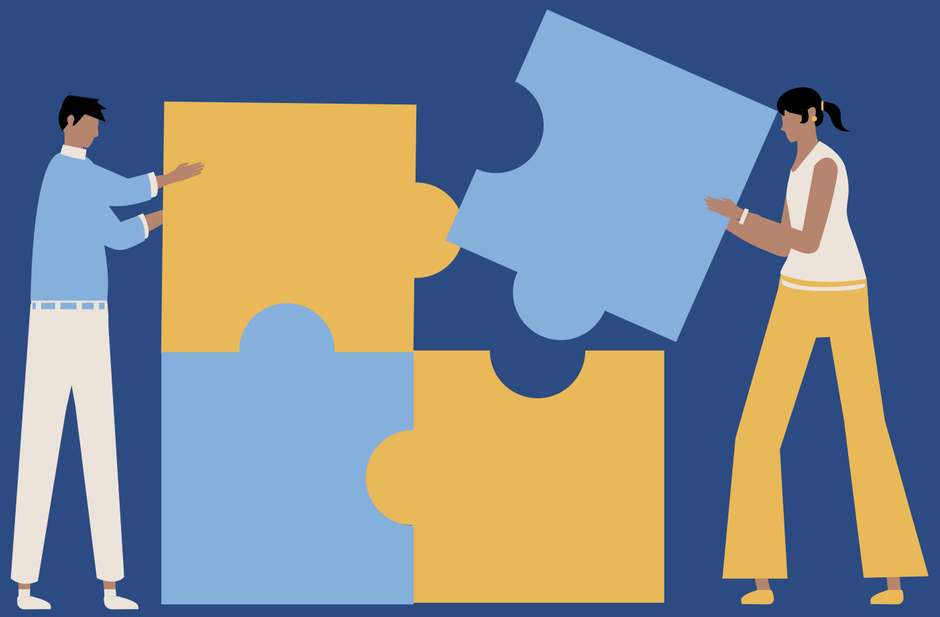
Current bal module

Withdrawl module

Deposit module



Integration Testing



- Second level of testing
- Different modules combined and are tested
- Finds interfacing issues betwn the modules
- Comes under both Black Box and White Box Testing
- Performed by either testers or developers

INTEGRATION TESTING TYPES

1 BIG BANG INTEGRATION

- All modules are developed and integrated
- Integrated unit will be tested as a whole
- Time consuming activity
- Costly

2 TOP-DOWN INTEGRATION TESTING

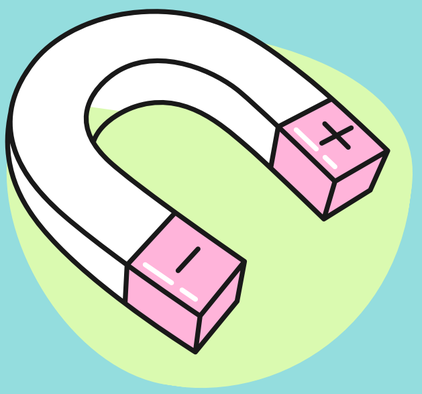
- Based on Incremental approach
- Testing flow in hierarchal order from top to bottom
- Dummy/Stubs module used if low level module not developed

3 BOTTOM-UP INTEGRATION TESTING

- Also an incremental testing
- Tests in hierarchal order
- Test starts at earlier stage from lower-level-modules to upper-level-level modules
- Drivers used if high level module not developed

4 HYBRID INTEGRATION TESTING

- Also called the Sandwich integration approach
- Combination of both top-down and bottom-up integration testing.
- Integration starts from the middle layer, and testing is carried out in both directions
- Both stubs and drivers can be used

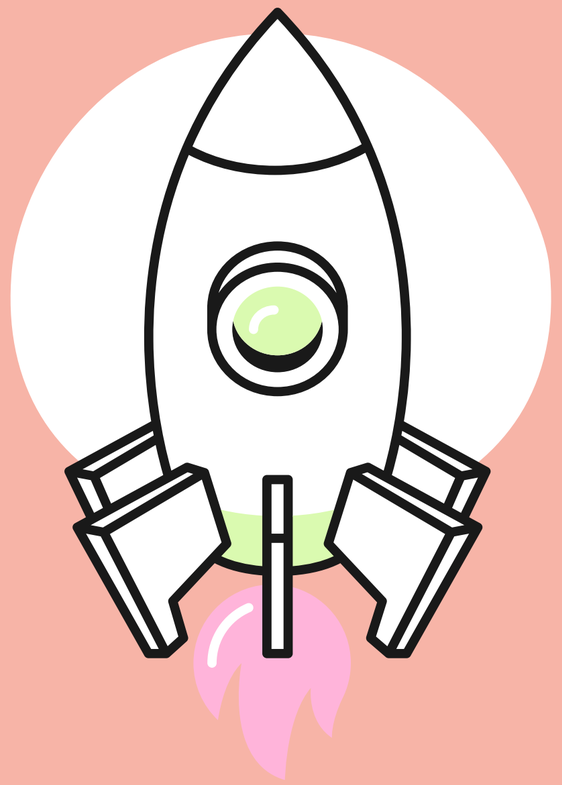


System Testing

- Third level of testing.
- Checks how component interact with one another and a system as a whole
- Confirms business requirements
- Evaluates both functional and non-functional needs for the testing.
- Evaluates end-to-end specification
- There are more than 50 types of system testing
- the typical types used by business are
- Usability, stress, regression and functional

User Acceptance Testing

- Final and most important levels
- Performed by end user or client
- Done after application completion and before production
- It will validate end to end business flow
- Does not focus on cosmetic errors , spelling mistakes



Two types

1. Alpha Testing
2. Beta Testing

THANKYOU