



# Comparing TDD and ATDD

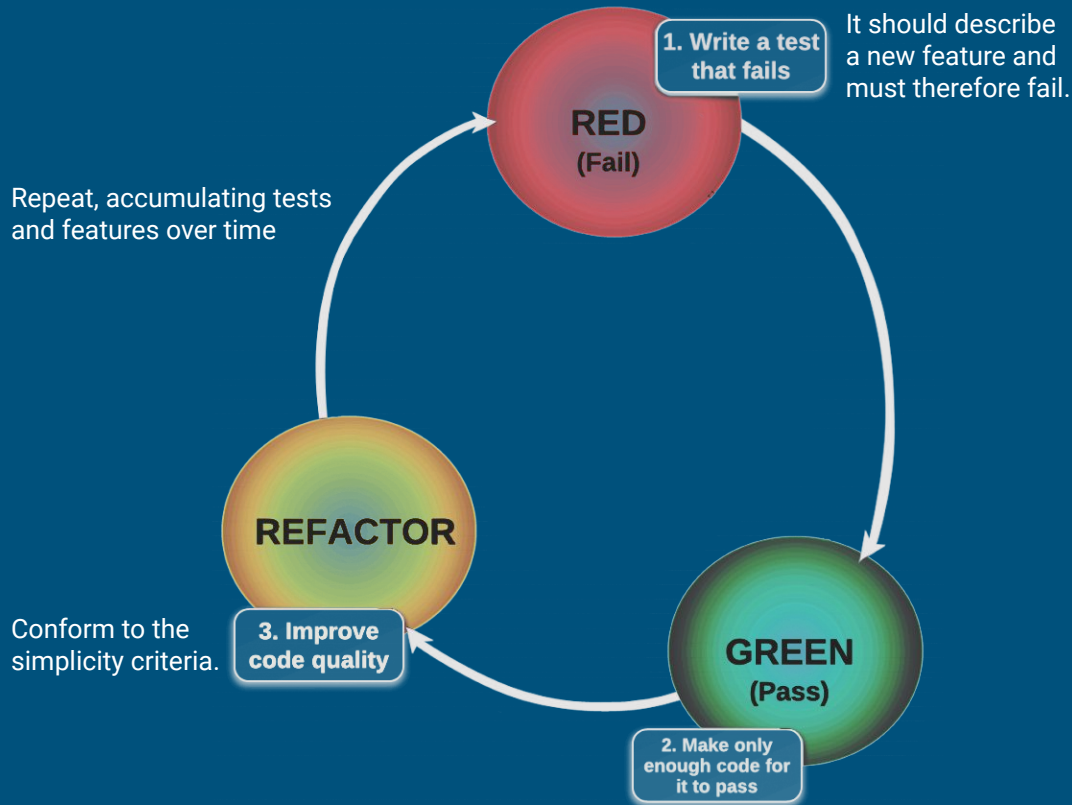
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# Test-Driven Development (TDD)

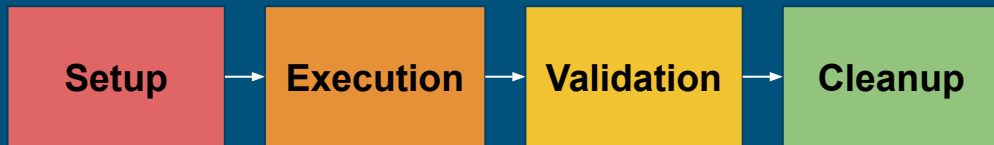
- A set of principles to create correct, modular and testable code



# TDD Practices

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- Keep test units small, cohesive and loosely-coupled
- Common test structure:



- Separate common test setup and cleanup logic
- Avoid tests that rely on previously run tests
- Avoid testing implementation details

# TDD Pros

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- Features are guaranteed to work
- New code with negative side effects is caught immediately
- Tests are easier to understand and debug

# TDD Cons

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- Time overhead
- Tests and code may share "blind spots"
- Full functionality tests are not covered

# ATDD

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- Acceptance Test Driven Development
- Same basic concept
- Different scope

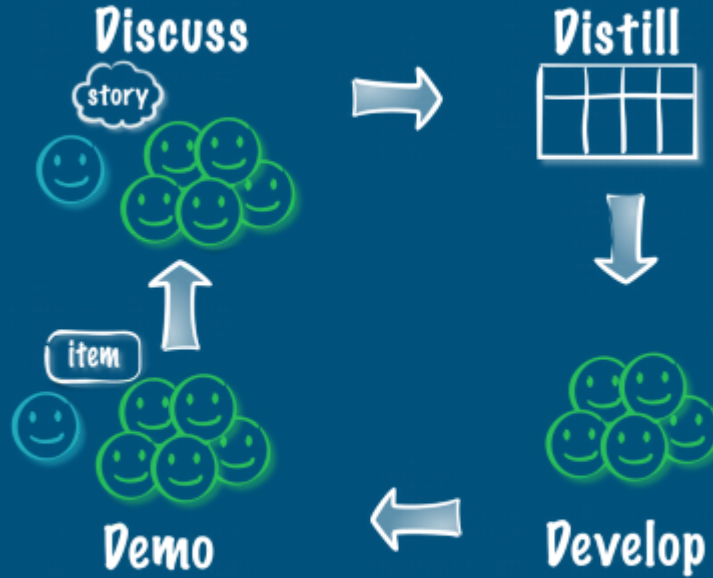
# Acceptance testing

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- Testing to determine if requirements of a specification are met
- Format
  - Setup
  - Trigger
  - Verification
- Specification made through collaboration between customer, developer and tester

# ATDD Process

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# The Three Amigos

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How will it be done?



What is to be done?

How do I break it?

# Combined process

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1. Discuss a new feature
2. Distill into acceptance tests
3. Develop
  - 3.1. Write tests
  - 3.2. Write code
  - 3.3. Refactor
  - 3.4. Repeat
4. Demo results to verify acceptance tests
5. Repeat

# Example - Mobile News App

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Feature: notify users of  
local news stories



# Example - ATDD

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- Setup
  - The user is at some location
- Trigger
  - A news story occurs at the same location
- Verification
  - A push notification is sent to the user's phone

# Example - TDD

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Let's test if judging a user as local works. In other words, a local user must receive a local news notification.

## Setup

Create an user and news.  
Ensure the location of  
them are local.\*

## Execution

Push the news and get  
the list of the user's  
notifications.

## Validation

Assert that said notification  
and nothing else has  
been received.

## Cleanup

Delete the user and  
news. Reset GPS.

Key points: This case must fail. It is not exhaustive. \*=set GPS using mocks.  
Separate user creation/deletion.

# Summary

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- Define tests first
- TDD
  - Concerns the architecture
  - Involves mostly developers
- ATDD
  - Concerns the functionality
  - Involves the three amigos

