Behavior-Driven Development

Michał Marcinkowski

Jaka jest rola testów?

JAKA JEST ROLA TESTÓW?

- Sprawdzanie czy kod działa zgodnie z założeniami
- Wyznaczanie zadań i kryteriów akceptacji
- Sprawdzanie czy kod po zmianach dalej działa zgodnie z założeniami

Jakie są zalety pisania testów?

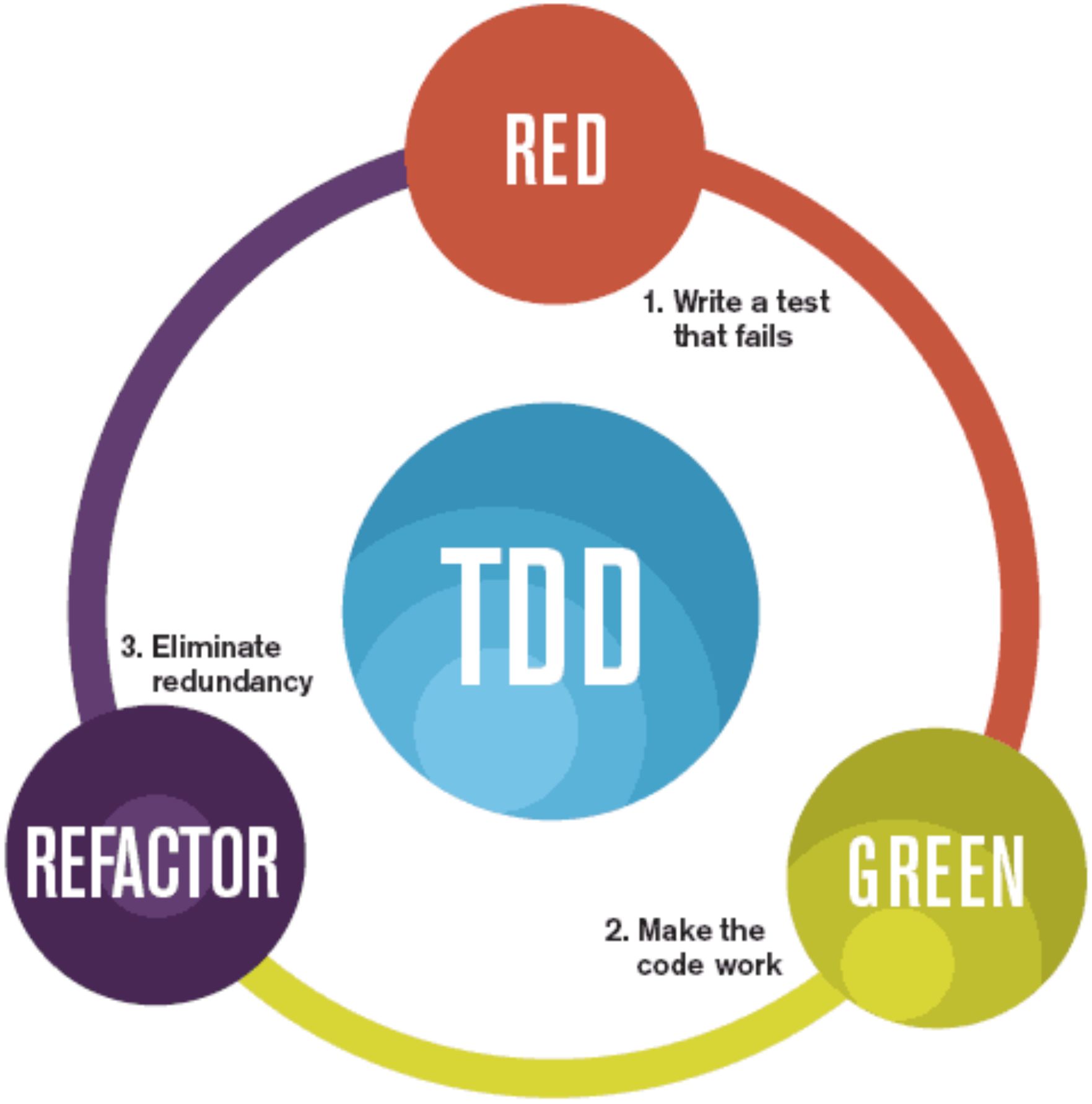
JAKIE SĄ ZALETY PISANIA TESTÓW?

- Redukują czas debugowania
- Wymuszają dokładną analizę
- Pomagają projektować architekturę
- Wymuszają pisanie poprawnego kodu
- Zapobiegają regresji
- Służą jako dokumentacja, która zawsze jest aktualna
- Pomagają zrozumieć aplikację

TEST-DRIVEN DEVELOPMENT

Technika, która wykorzystuje zautomatyzowane testy jednostkowe do projektowania oprogramowania i wymuszania oddzielania się od zależności.

Jej idea jest
“get something working now and perfect it later.”



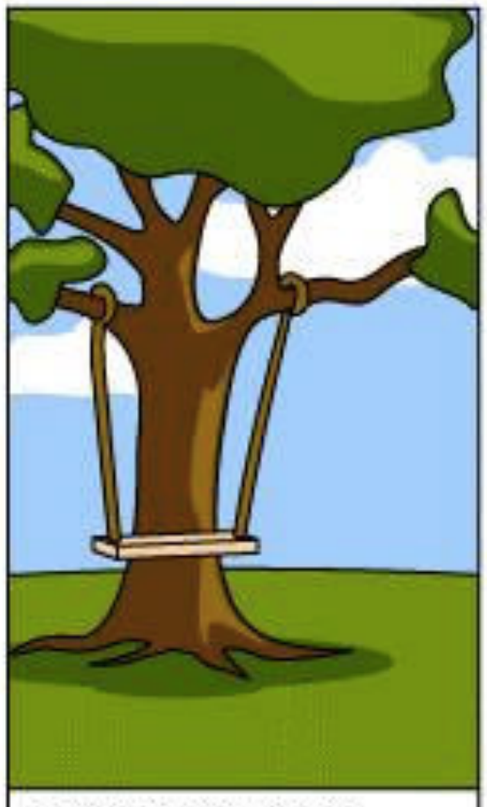
The mantra of Test-Driven Development (TDD) is "red, green, refactor."

BEHAVIOR-DRIVEN DEVELOPMENT

- Ogólne techniki i zasady **TDD**
- Jest czynnością projektowania
- Skupia się na opisywaniu zachowań

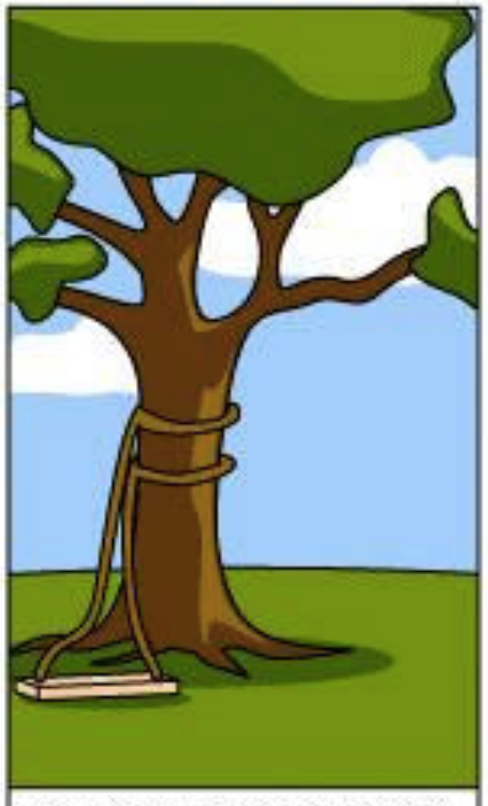
Jak zwykle wygląda proces rozwoju oprogramowania?

How the customer explained it



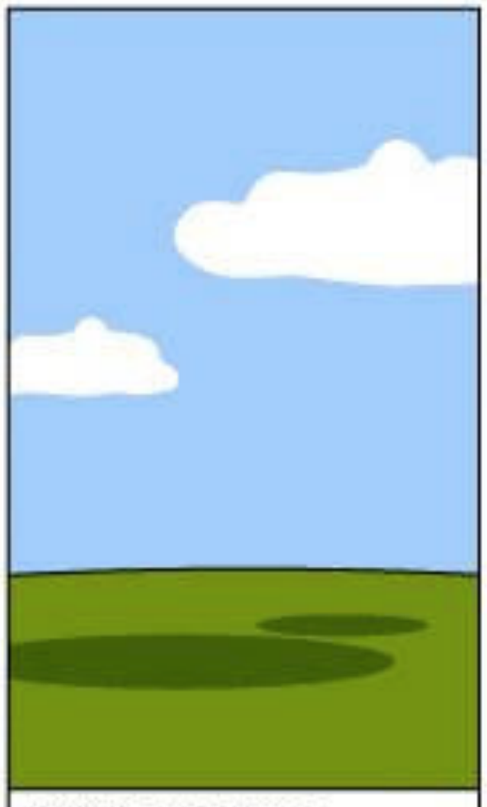
How the Project Leader understood it

How the Analyst designed it

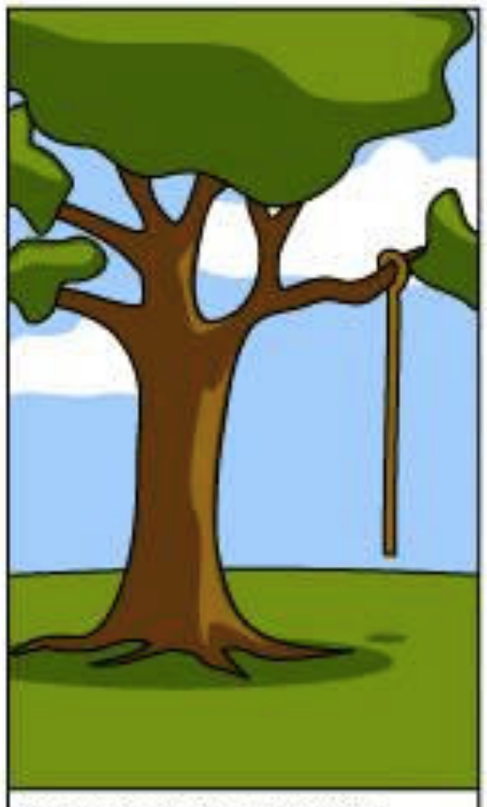


How the Programmer wrote it

How the Business Consultant described it

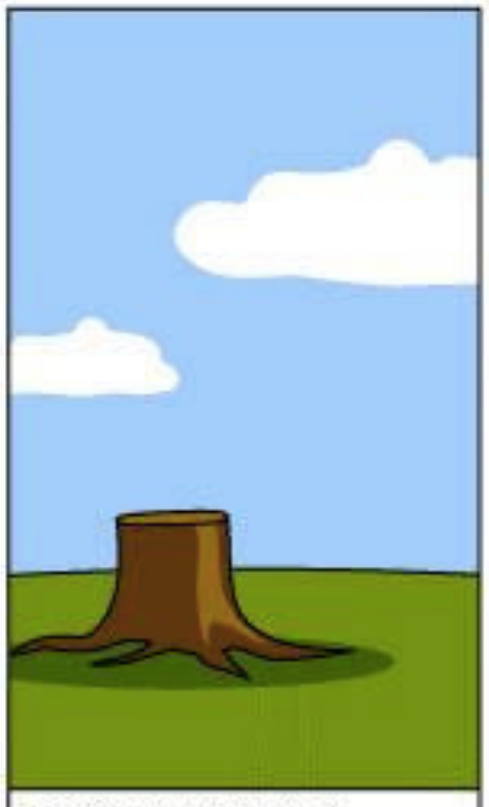


How the project was documented



What operations installed

How the customer was billed



How it was supported

What the customer really needed

ZALETY BDD

- Zapewnia funkcjonalną dokumentację
- Określa zachowania systemu
- Ułatwia proces komunikacji
- Redukuje koszt procesu tłumaczenia
- Pozwala lepiej zrozumieć biznes

HOW?

- Who?
- What?
- How?

HOW?

- Who benefits?
- The business value.
- Feature description.

GHERKIN

A structured language to describe a feature.

```
Feature: Account Holder withdraws cash
In order to get money when the bank is closed
As an Account Holder
I want to withdraw cash from an ATM
```

STORYBDD

Feature: Account Holder withdraws cash

In order to get money when the bank is closed

As an Account Holder

I want to withdraw cash from an ATM

STORYBDD

Feature: (feature title)

In order to (the business value)

As (the person who benefits)

I want (feature description)

STORYBDD

```
Feature: Account Holder withdraws cash

  In order to get money when the bank is closed
  As an Account Holder
  I want to withdraw cash from an ATM

Scenario: Account has sufficient funds
    Given the account balance is $100
      And the card is valid
      And the machine contains enough money
    When the Account Holder requests $20
    Then the ATM should dispense $20
      And the account balance should be $80
      And the card should be returned
```

STORYBDD

Feature: Account Holder withdraws cash

In order to get money when the bank is closed

As an Account Holder

I want to withdraw cash from an ATM

Scenario: Account has sufficient funds

Given the account balance is $100

And the card is valid

And the machine contains enough money

When the Account Holder requests $20

Then the ATM should dispense $20

And the account balance should be $80

And the card should be returned

STORYBDD

Scenario: (scenario title)

Given (initial state of the system

And (can be added to create multiple…)

And (… Given/When/Then lines)

When (action taken by the person/role)

Then (observable system state…)

And (…after the action has been performed)

And (multiple outcomes)

STORYBDD

```
Scenario: Account has insufficient funds
    Given the account balance is $10
      And the card is valid
      And the machine contains enough money
    When the Account Holder requests $20
     Then the ATM should not dispense any money
     And the ATM should say there are insufficient funds
     And the account balance should be $20
     And the card should be returned
```

```
Scenario: Card has been disabled
    Given the card is disabled
    When the Account Holder requests $20
    Then the ATM should retain the card
     And the ATM should say the card has been retained
```

BEHAT

Maps each step
(Gherkin sentence) to
a PHP callback.

Linus Torvalds didn't write Linux using BDD

But we can

SPECBDD

- Określanie zachowania
- Projektowanie przez opisywanie
- Testowanie – efekt uboczny

BDD WITH JAVA

- StoryBDD
  - Cucumber
  - JBehave
- SpecBDD
  - JSpec

STAŻE WAKACYJNE

- Cykl szkoleń
  - OOP
  - Clean code
  - Metodyki prowadzenia projektów (Scrum)
  - Testowanie (BDD)
  - GIT
  - Symfony2

LAKION

careers@lakion.com

@micmarcinkowski

@Lakion

www.lakion.com