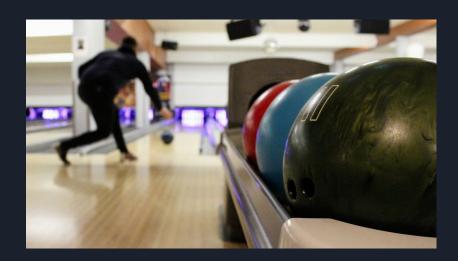
# Test driven Development The Bowling Game Kata

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## Agenda

- Introduction to TDD
- What is a Coding Kata?
- Hands-on The bowling Game Kata





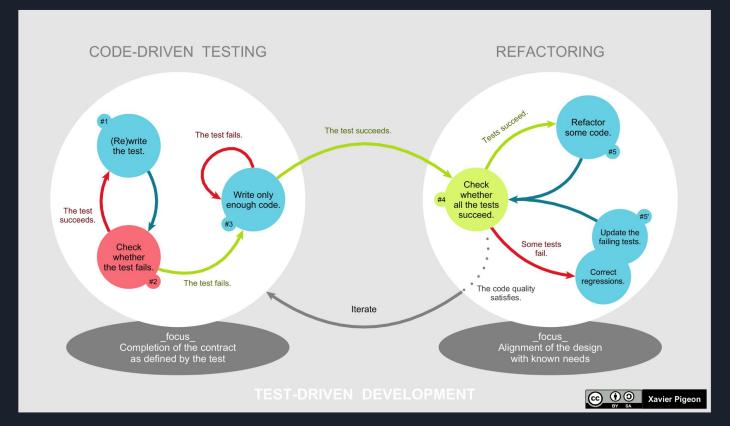
## Introduction to TDD

#### Introduction to TDD

- Test Driven Development
- In other words: Write your tests first!
- TDD is a software development life cycle.
- Increases test coverage.
- Increases code quality.
- Ensures a minimal code base.



#### Introduction to TDD

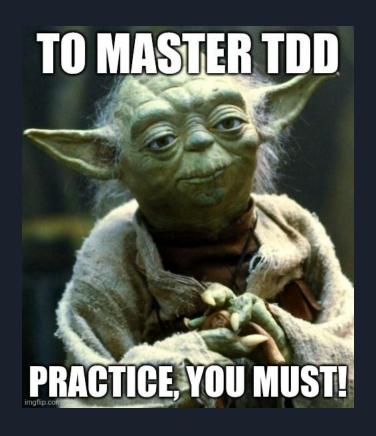


#### Introduction into TDD - Disclaimer

- TDD is just a tool! Use it for the right jobs!
- TDD fixiates the software according to the requirements
- There are use cases where TDD makes no sense like
  - Working on a proof of concept
  - (Rapid) Prototyping



#### Introduction to TDD - Most important aspect



What is a coding Kata?

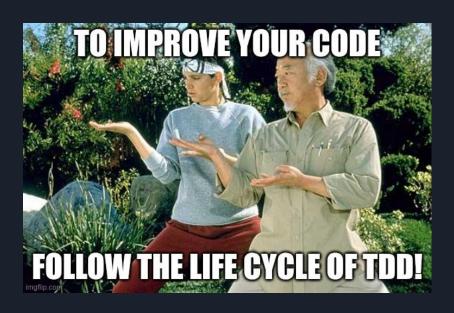
### What is a coding kata?

- A "Kata" is a structured sequence of movements and techniques practiced in martial arts to develop form, precision, and muscle memory, often simulating combat scenarios.
- Goal: Memorization and perfection of the movement
- Coding Katas
  - Small coding exercises
  - Learning and experimenting
  - Improve your programming skills

Hands-on The Bowling Game Kata

### Hands-on - The Bowling Game Kata

- Based on <u>Uncle Bobs "Bowling Game Kata"</u>
- Implement a bowling game using TDD.
- Goal: Practice TDD and experiment!
- It is not the goal to finish the Kata!
- <u>Take your time!</u>



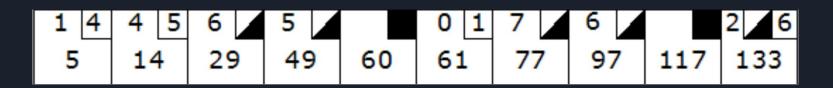
#### Hands-on - The Bowling Game Kata - Boilerplate

- https://github.com/svettwer/bowling-game-kata
- Maven project + maven wrapper
- Contains test class and class under test
- Execute your tests
  - o Via IDE
  - Via command line
    - On Linux: ./mvnw clean test
    - On Windows: \.mvnw.cmd clean test



#### Hands-on - The Bowling Game Kata - Rules

- A game consists of 10 frames.
- There are 10 pins per frame.
- A player has to tries per frame to knock down all the pins.
- The scope of the frame is the amount of knocked down pins + Bonus points.
  - Strike: 10 pins down after the first try
    - Bonus: Amount of knocked down pins of the **next two tries**.
  - Spare: 10 pins down after the second try
    - Bonus: Amount of knocked down pins of the **next try**.
  - Tenth Frame: Spare or Strike unlock a third try.



Thank you!