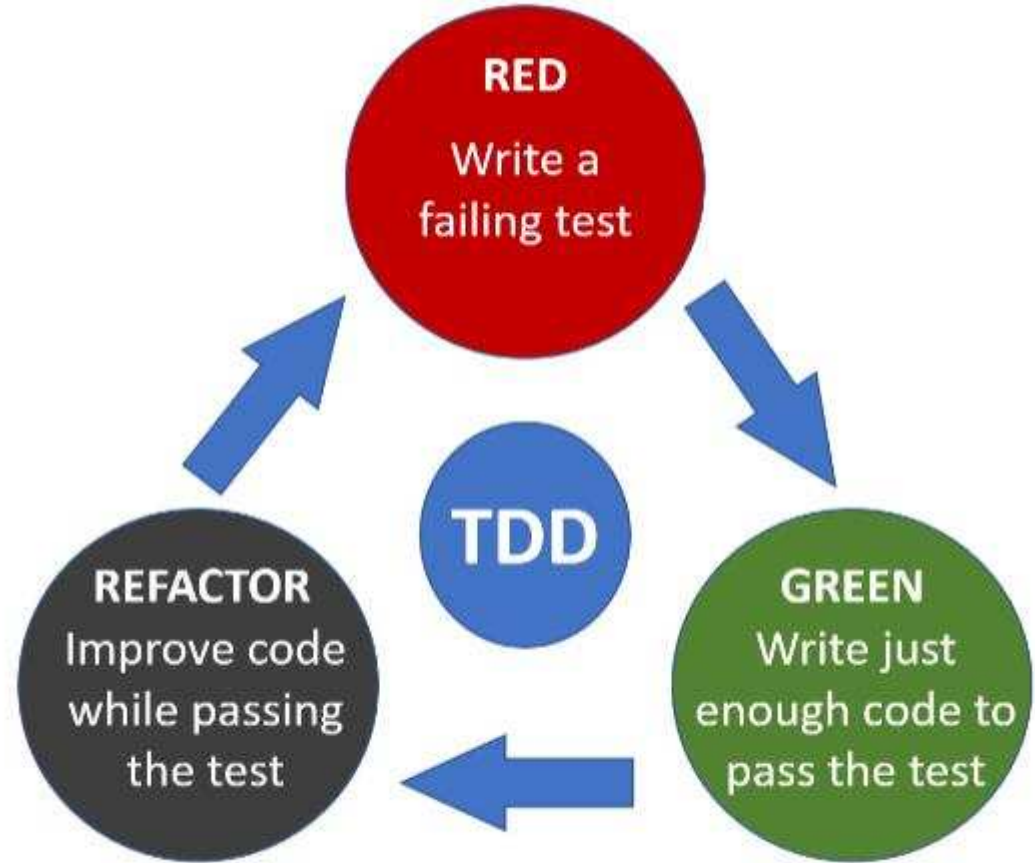# Alcor academy
Training programme
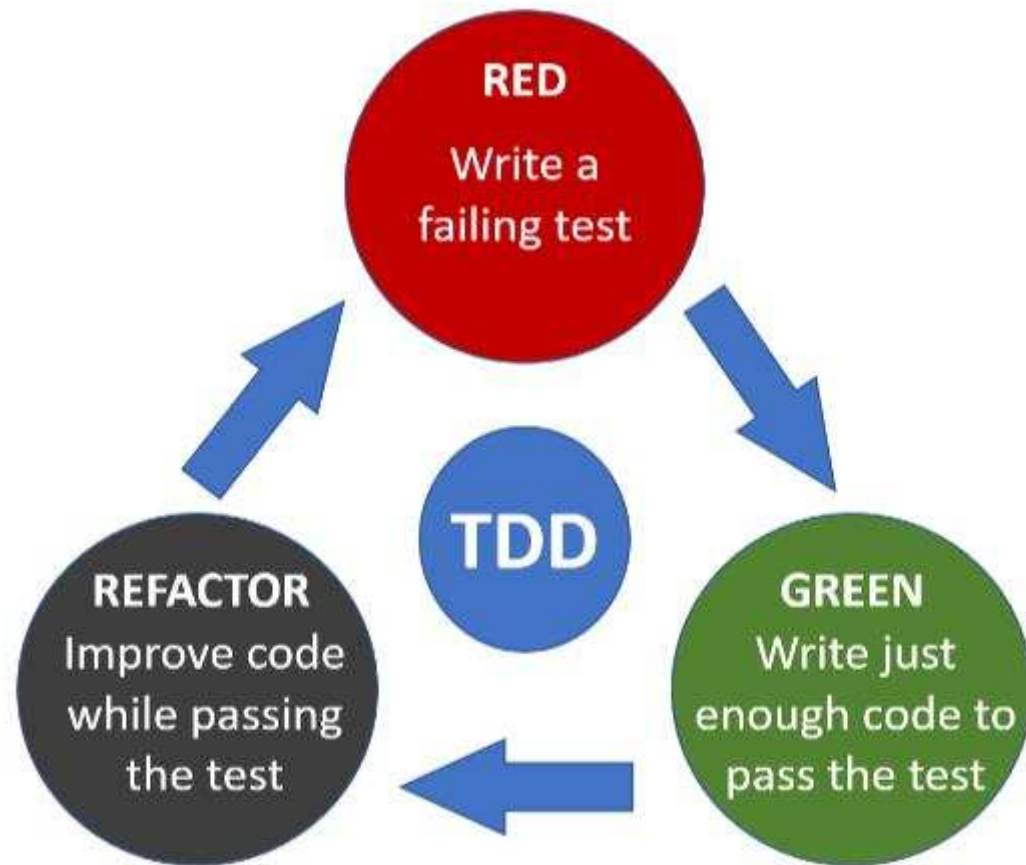# Test driven development

Geir Ingi Sigurðsson

Classic TDD

1. You are not allowed to write any production code unless it is for making a failing unit test pass

2. You are not allowed to write any more of a unit test than is sufficient to fail. (compilation failure is a failure)

3. You are not allowed to write any more production code than is sufficient to pass the one failing unit test.

RED
Write a failing test

GREEN
Write just enough code to pass the test

REFACTOR
Improve code while passing the test

TDD

Baby steps

Fake implementation
When you hard code exactly the value you need to pass the test
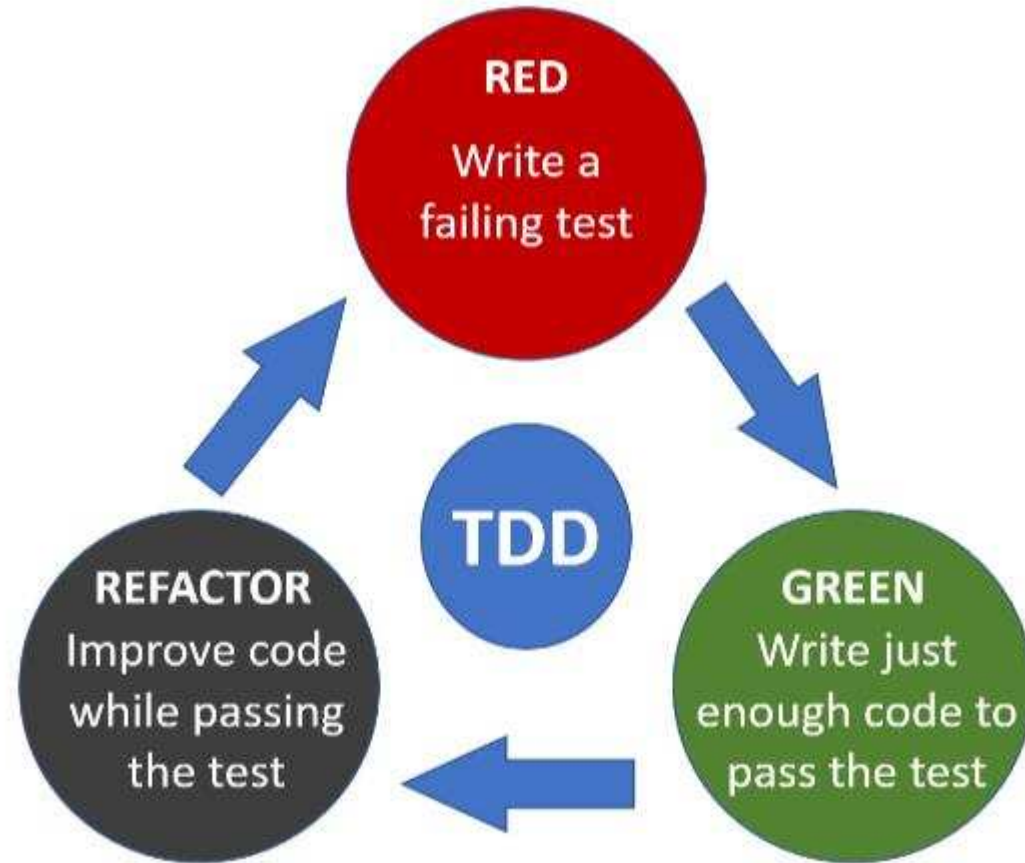
Obvious implementation
When you are sure of the code you need to write. This is what you will be using more often to move forward quickly.

Triangulation with the next test
When you want to generalize a behavior but are not sure how to do it. Starting with fake implementation and then adding more tests will force the code to be more and more generic. Complete one dimension first and then move on the next one with another test case.

Transformation Priority Premise

#	TRANSFORMATION
1	{} => nil
2	nil => constant
3	constant => constant+
4	constant => scalar
5	statement => statements
6	unconditional => conditional
7	scalar => array
8	array => container
9	statement => recursion
10	conditional => loop
11	recursion => tail recursion
12	expression => function
13	variable => mutation
14	switch case

RED
Write a failing test

TDD

GREEN
Write just enough code to pass the test

REFACTOR
Improve code while passing the test

Test behavior not implementation!

- Will make the tests easier to write

- Usually, alot fewer tests needed

- Tests become more robust

- The implementation details are may not be important from the user's(be that a user that wants to use a component or a user using a system) perspective, but the behavior and end result always is

Questions?

| | References | https://kentcdodds.com/blog/
 https://www.codewars.com/
 https://blog.cleancoder.com/uncle-bob |

| | Thank you! | |