Test Driven Development in PHP

Why do we write tests?

Daniel Verner

www.danielwerner.dev

@danielwerner@phpc.social

Introduction

Who am I? :)

- Senior software engineer, writing code since 2005
- Owner and lead developer **@WDev**
- Lead developer **@42coders**
- Clean code and TDD enthusiast
- Find me on

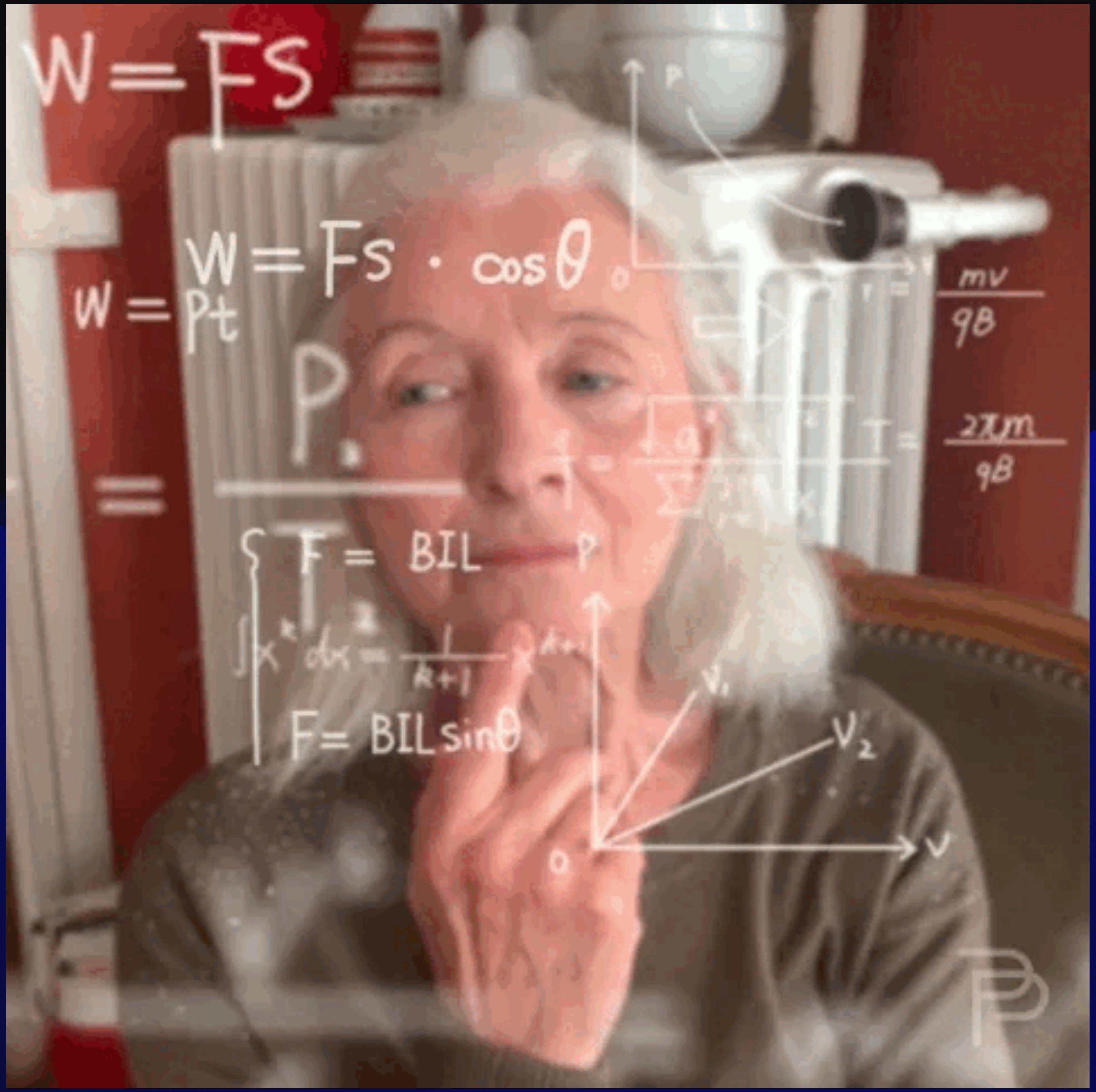
  Mastodon **@danielwerner@phpc.social**
  Linkedin **daniel-werner-su**

Daniel Verner

Why developers don't write tests?

We don't have time for it!

It is complicated



It is boring

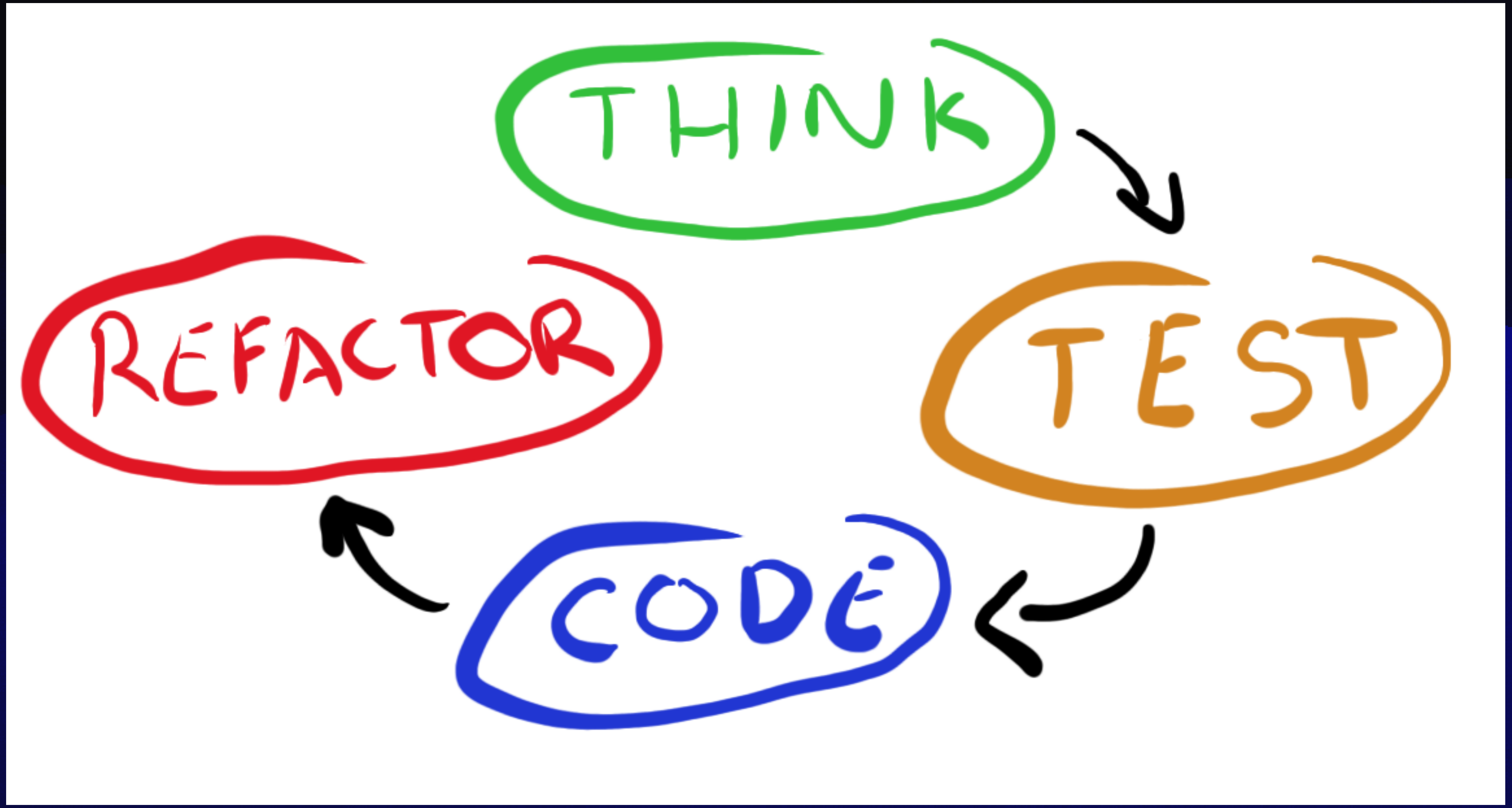
I already tested it manually

Why do we need tests?

Depends on the situation

(probably we don't)

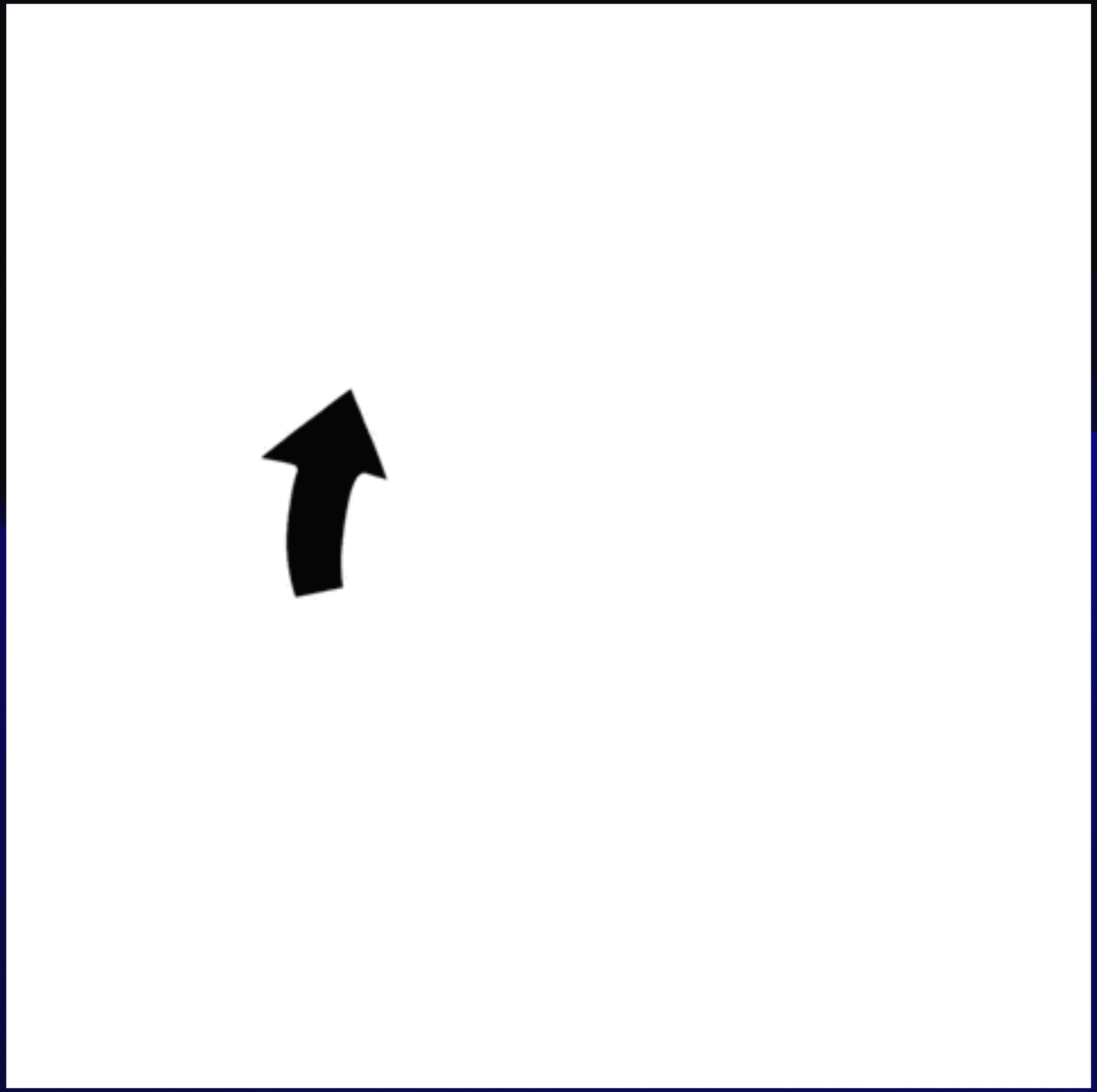
Easy and confident refactoring



Prevent bugs

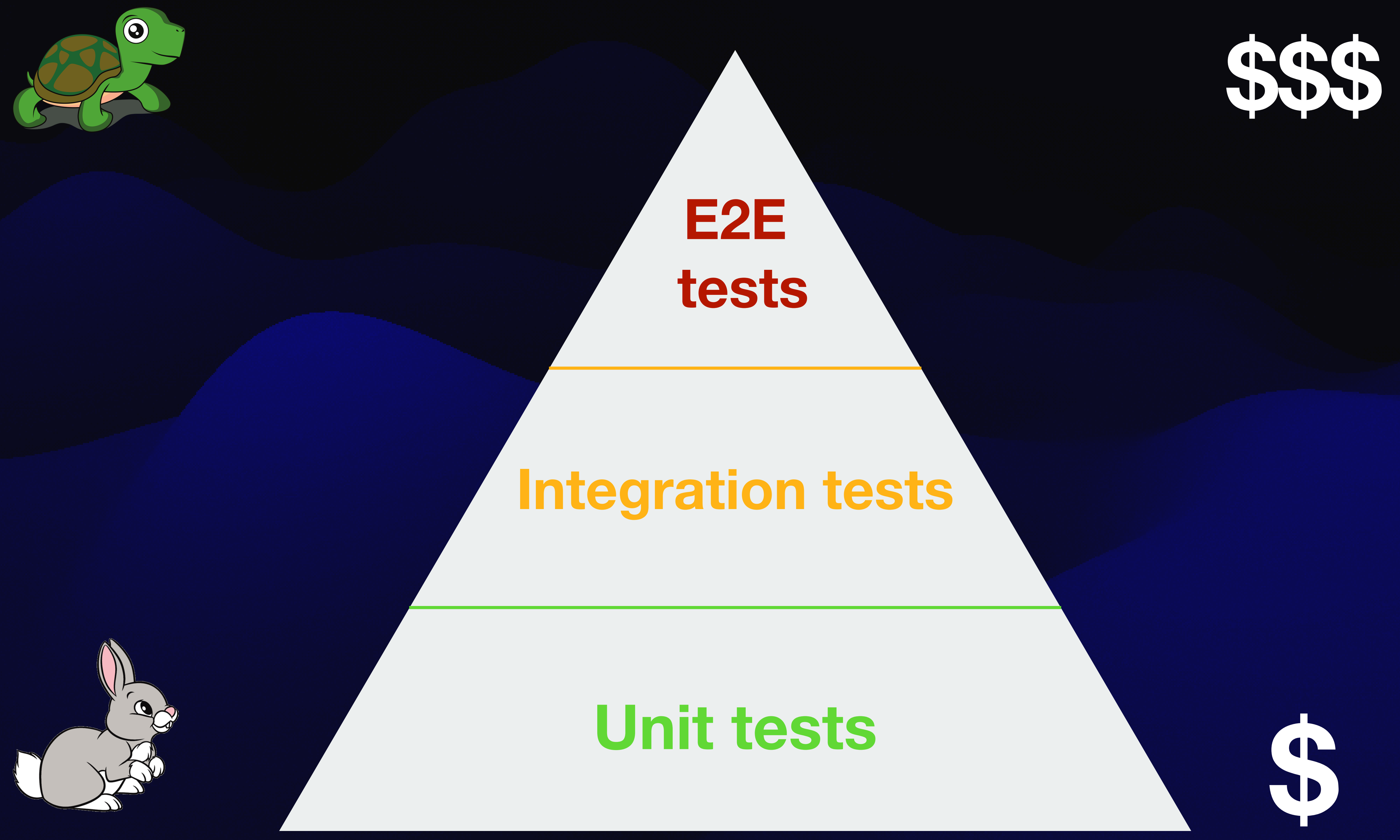
Prevent breaking something else

Test cases are reproducible



Ok, but what kind of tests?

The testing pyramid



Test both
frontend and backend (End To End),
usually browser tests

Test functionality
usually backend, for example
HTTP or API tests

Test code pieces (units) individually
for example classes or functions

What should we use?

PHPUnit

Codeception

Let's see some

CODE

already!

What Laravel provides us?

Built in mocking for Facades:

- Mail::fake()
- Storage::fake()
- Event::fake()
- Queue::fake()

Built in http test

- GET
- POST
- PUT

Service container

Be careful with testing

Common pitfalls

Check the settings in **.env.testing**
e.g. don't send out emails to real users :)

Use the service container
instead of the new keyword

- expect a class or interface as an argument
  in the built in classes, or
- **app(Product::class)** vs **new Product()**

Avoid random values
when initialising required objects or DB tables - it can cause randomly failing tests (and random headaches for the developers :)

Further resources

- https://phpunit.de/documentation.html
- https://laravel.com/docs/9.x/testing
- https://www.danielwerner.dev/lets-do-tdd
- Examples on GitHub:
  - https://github.com/daniel-werner/lets-do-tdd-php
  - https://github.com/daniel-werner/lets-do-tdd-laravel

Questions?

Thank you!