TDD in Python with pytest and mock

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ABOUT ME


Interested in operating systems and computer languages, photography, fantasy and science fiction, video- and boardgames, guitar playing, climbing, horseback riding, Aikido, fencing, rollerskating, drawing, painting, bookbinding.


I love mathematics and cryptography.

tl; dr

ME = NERD + CODER
AMQP - architectures - C - Clojure - compilers - concurrent programming - C++ - decorators - Django - Erlang - functional programming - generators - Git - metaclasses - metaprogramming - Notebook - OOP - operating systems - Python - Python2 - Python3 - RabbitMQ - Scala - TDD - testing - versioning
AGENDA

INTRODUCTION

PART 1 - WRITE A LIBRARY IN TDD

PART 2 - MOCKS AND COMPLEX TESTS

PART 3 - REFACTORING AND LEGACY CODE
WHAT YOU ARE GOING TO LEARN TODAY

WHAT YOU CAN LEARN IN THE NEXT YEARS
WHAT IS TDD?
IT IS NOT A TOOL
IT IS NOT A LANGUAGE
IT IS NOT A BOOK
IT IS A MINDSET
We are working too slowly, we solved too few issues last month! Can you increase the productivity of the developers?

How many issues did we solve?

Not enough!

How many issues do you want us to solve?

More!
LAST MONTH WE SOLVED 10 ISSUES, AND WE NEED TO SOLVE AT LEAST 30 OF THEM EVERY MONTH. CAN YOU DO SOMETHING?

WELL, SINCE EVERY DEVELOPER WORKS ON AVERAGE ONE WEEK ON AN ISSUE, AND WE HAVE 3 DEVELOPERS WE COULD BLA BLA...

AND PERHAPS BLA BLA...

NICE IDEA! LET'S TRY IT!

I'LL KEEP AN EYE ON THE ISSUE COUNTER. THANKS.
Test First

Code Later
Every line of code has a reason.
REGRESSIONS
PAST TESTS ARE ALWAYS RUN
There are examples, at least
REFACTORING
NEVER WITHOUT TESTS
TDD WORKFLOW

PICK A BUG/MISSING FEATURE
WRITE A TEST
WRITE CODE THAT Passes THE TEST
IF THE TEST YOU WROTE DOESN’T FAIL
ASK YOURSELF
“IS THIS TEST USEFUL?”

(WHICH DOESN’T MEAN “THE TEST IS USELESS”, IT MEANS “DOUBLE CHECK IT”)
WRITE CODE THAT WORKS
BE REASONABLE
`git checkout master`

`git checkout -b my-tdd`

`git checkout -t origin/mocks`

**STRUCTURE OF THE REPOSITORY**

```
refactoring
```

```
mocks
```

```
master
```

```
my-refactoring
```

```
my-mocks
```

```
my-tdd
```

TDD IN PYTHON - LEONARDO GIORDANI - @LGIORDANI
WHERE TO GO NOW

**PYTEST**
https://docs.pytest.org

**UNITTEST.MOCK**
https://docs.python.org/3/library/unittest.mock.html

**TOX**
https://tox.readthedocs.io/

**TRAVIS.CI**
https://travis.ci