

TDD IN PYTHON

WITH PYTEST AND MOCK

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ABOUT ME

Born in 1977 with Star Wars, bash, Apple][, BSD, finger, Zork, Galaxy Express 999, Little Pollon, Dire Straits, The Police, Rumours, The Silmarillion, Squad Leader.

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 programmed in Z80 and x86 Assembly, GW-Basic, Logo, Borland Turbo Pascal, Prolog, C, C++, PHP, Lisp, Ada, Objective-C, bash, Python, Erlang, Clojure, Scala, JavaScript.

I love mathematics and cryptography.

tl; dr

ME = NERD + CODER

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@THE DIGICAT

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

An iceberg floating in the ocean. The tip of the iceberg is visible above the water surface, while the much larger, submerged part is visible below. The sky is blue with light clouds, and the water is a deep blue. The iceberg is white and jagged.

**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?

NOT ENOUGH!

MORE!

HOW MANY ISSUES DID WE SOLVE?

HOW MANY ISSUES DO YOU WANT US TO SOLVE?

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

AND PERHAPS BLA BLA...

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

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

NICE IDEA! LET'S TRY IT!

TEST FIRST
CODE LATER

COVERAGE

EVERY LINE OF CODE HAS A REASON

REGRESSIONS

PAST TESTS ARE ALWAYS RUN

DOCS

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

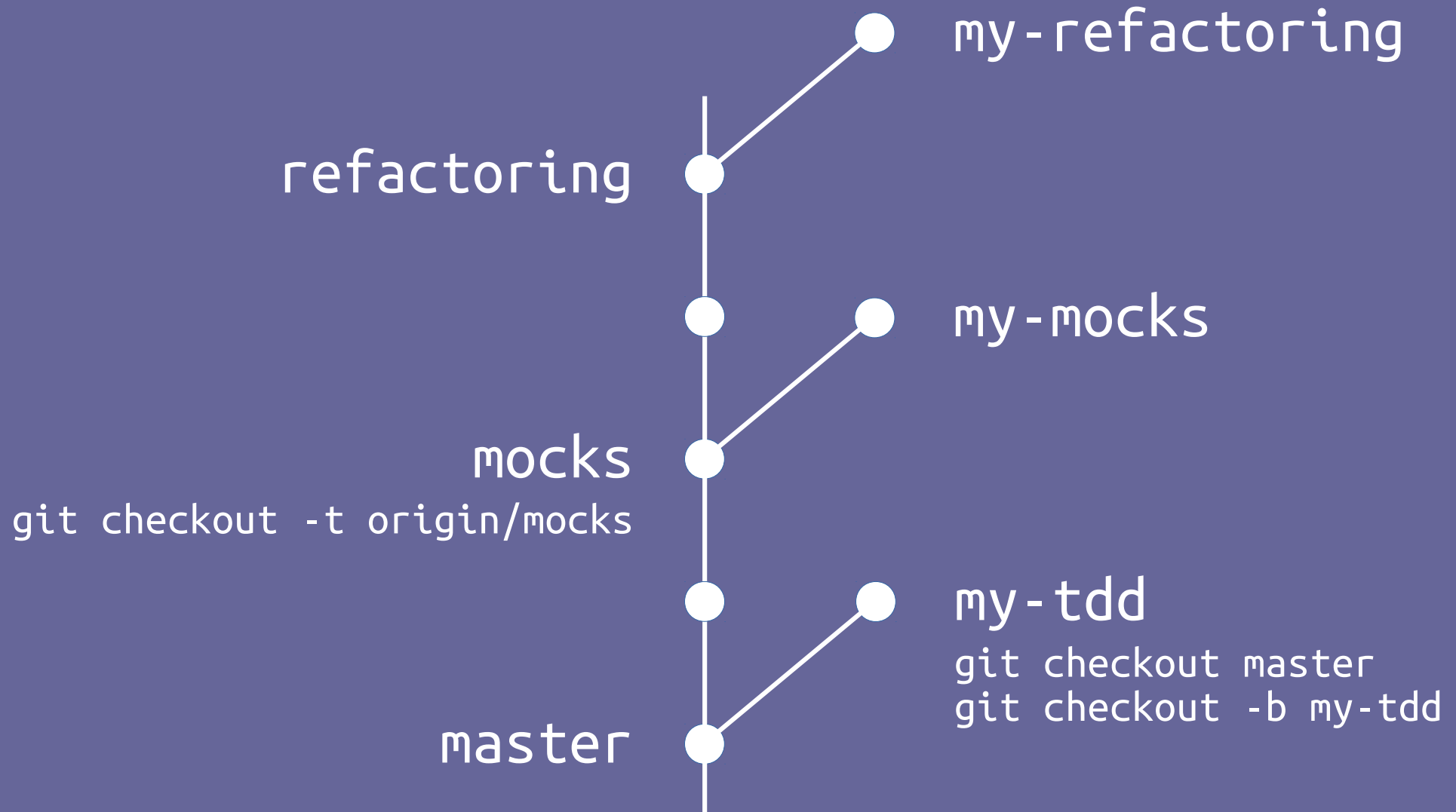
**IF THE TEST YOU WROTE DOESN'T FAIL
ASK YOURSELF
“IS THIS TEST USEFUL?”**

(WHICH DOESN'T MEAN “THE TEST IS USELESS”, IT MEANS “DOUBLE CHECK IT”)

**WRITE CODE
THAT WORKS**

BE REASONABLE

STRUCTURE OF THE REPOSITORY



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>

THANK YOU

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