

AUTOMATTIC
WordPress, Akismet, WooCommerce, Jetpack, and other icons

Thanks to Our Sponsors

RingCentral[®]

twilio

nexmo[®]
The Vonage[®] API Platform

OSMI

mailchimp

wayfair[®]

Stay Connected



Wifi

Network: LCC
PW: iluvmeeting

#phptek

WELCOME TO
THE TESTING
TRACK

EGO-CENTRIC
INTRODUCCION
GOES HERE

TEST-AFTER TECHNIQUES

TEST-AFTER TECHNIQUES

IF YOU HAVE ALREADY WRITTEN THE CODE
(AND IT WORKS) BUT YOU NEED TESTS, THE
APPROACH CHANGES

TEST-DRIVEN DEVELOPMENT

- TESTS COME BEFORE ANY CODE
- CODE IS WRITTEN WITH TESTS AS IMPLEMENTATION GUIDE
 - ONLY REAL WAY TO GET TO 100% CODE COVERAGE

TEST-AFTER TECHNIQUES

CODE ALREADY EXISTS AND WAS WRITTEN WITH
NO THOUGHT TOWARDS LOW-LEVEL TESTING

TEST-AFTER TECHNIQUES

- > YOU QUICKLY DISCOVER HOW HARD YOUR CODE IS TO TEST

TEST-AFTER TECHNIQUES

- > YOU GET ENAGRY AT PEOPLE LIKE ME TELLING YOU TO STOP SCREWING AROUND AND IT WILL NEVER BE EASIER TO WRITE TESTS THAN TODAY

COMMON FEATURES WITH TEST-DRIVEN DEVELOPMENT

- > STILL NEED A BOOTSTRAP SEQUENCE

COMMON FEATURES WITH TEST-DRIVEN DEVELOPMENT

- > STILL NEED TO USE REAL CODE

PICK A TEST IMPLEMENTATION GUIDELINE

> BUG FIXES?

PICK A TEST IMPLEMENTATION GUIDELINE

> NEW FEATURES?

PICK A TEST IMPLEMENTATION GUIDELINE

PICK ONE AND STICK WITH IT

OBSTACLES

CODE THAT WAS NOT WRITTEN WITH TESTABILITY IN MIND USUALLY REQUIRES REFACTORING OR POSSIBLY EVEN REWRITING

OBSTACLES
YOUR CODE IS NOT
ENVIRONMENT AWARE

OBSTACLES

YOUR CODE IS NOT ENVIRONMENT AWARE

- > DATABASE CREDENTIALS**
- > NOTIFICATION EMAIL ADDRESSES**
- > PASSWORD-PROTECTED RESOURCES**

SOLUTION

REFACTOR TOWARDS ENVIRONMENT VARIABLES
THAT ARE CONFIGURED DURING YOUR BOOTSTRAP
SEQUENCE

OBSTACLES

- > DEPENDENCIES THAT CANNOT BE ALTERED AT RUN-TIME

OBSTACLES

```
function process($standard)
{
    $converter = new Converter();
    $converter->initialize($standard);
    ?
```

SOLUTION

```
function process($standard, $converter = null)
{
    if ($converter === null) {
        $converter = new Converter();
    }

    $converter->initialize($standard);
}
```

OBSTACLES

**YOUR APPLICATION IS DIFFICULT TO INSTALL BECAUSE
ONLY ONE PERSON KNOWS HOW**

AUTOMATE THE BUILD

- > START WITH A SHELL SCRIPT PRETENDING TO BE A HUMAN

AUTOMATE THE BUILD

- > START WITH A SHELL SCRIPT PRETENDING TO BE A HUMAN
 - > THEN CREATE A TRIGGER FOR THAT SCRIPT

AUTOMATE THE BUILD

- > START WITH A SHELL SCRIPT PRETENDING TO BE A HUMAN
 - > THEN CREATE A TRIGGER FOR THAT SCRIPT
- > FINALLY HOOK IT UP TO REACT TO VERSION CONTROL EVENTS

AUTOMATE THE BUILD

THE GOAL IS TO ELIMINATE DIFFERENCES IN ENVIRONMENTS
IN ORDER TO GET RID OF BUGS RELATED TO OFTEN-SUBTLE
DIFFERENCES IN DEVELOPMENT ENVIRONMENTS

DUPLICATING THE BOOTSTRAP

**ANY WORK THAT NEEDS TO BE DONE BEFORE
THE FIRST BIT OF 'BUSINESS LOGIC' IS
EXECUTED IS THE BOOTSTRAP**

DUPLICATING THE BOOTSTRAP

YOUR TESTS NEED TO LIVE IN AN ENVIRONMENT
AS CLOSE TO PRODUCTION AS YOU CAN GET

DUPLICATING THE BOOTSTRAP

```
<phpunit  
    bootstrap="vendor/autoload.php"  
>
```

IDENTIFYING DEPENDENCIES

REAL CODE TIME

DEALING WITH SIDE-EFFECTS

> DATABASES

DEALING WITH SIDE-EFFECTS

CONGRATULATIONS, YOU ARE NOW A DBA

DEALING WITH SIDE-EFFECTS

- > FILES USED FOR INPUT OR OUTPUT

DEALING WITH SIDE-EFFECTS

CONGRATULATIONS, YOU ARE NOW A SYSADMIN

OBSTACLES

YOUR CO-WORKERS AREN'T CO-OPERATING

OBSTACLES

IT'S ABOUT RESOURCES AND MISSED OPPORTUNITIES

OBSTACLES

STORY TIME

TL:DR

TEST-AFTER USES A LOT OF THE SAME
TOOLS BUT ADDS NEW LAYERS OF COMPLEXITY

SLIDES

[HTTPS://GRUMPY-LEARNING.COM/PRESENTATIONS/TEK2019](https://grumpy-learning.com/presentations/tek2019)