

EXERCISE 0

Checkout and do composer install

<https://github.com/lmuzinic/phpday-pragmatic-tdd>

```
git clone git@github.com:lmuzinic/phpday-pragmatic-tdd.git
cd phpday-pragmatic-tdd
composer install
vendor/bin/phpunit
```

OK (1 test, 1 assertion)

There is <10 MB of packages to download, so you can use your mobile data if WIFI does not work.



PRAGMATIC TDD

HELLO



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@lmuzinic



bit.ly/phpday-codementor



@code4hire



2018.webcampzg.org

WORKSHOP RULES

ASK QUESTIONS

IF YOU STILL DO NOT UNDERSTAND, ASK QUESTIONS AGAIN

DISCUSS RIGHT NOW, DO NOT WAIT FOR THE “RIGHT MOMENT”

WHY WE NEED TESTING?



**WHY AM I
HERE?**

**ARE WE
SOFTWARE TESTERS?**

**AND YET
WE KEEP ON SAYING
WE WRITE TESTS...**

**WHERE CAN I GET
MORE OF THOSE
TESTS?**



EXCUSES, EXCUSES

TESTS SLOW US DOWN

WE WILL NEVER GET TO 100% CODE COVERAGE

WE DO NOT HAVE TIME TO LEARN TESTING, WE'RE TOO BUSY SHIPPING CODE

EXCUSES, EXCUSES

TESTS SLOW US DOWN?

STOP TESTFILEING

DO YOU OFTEN DO THIS?

~ `php test.php`

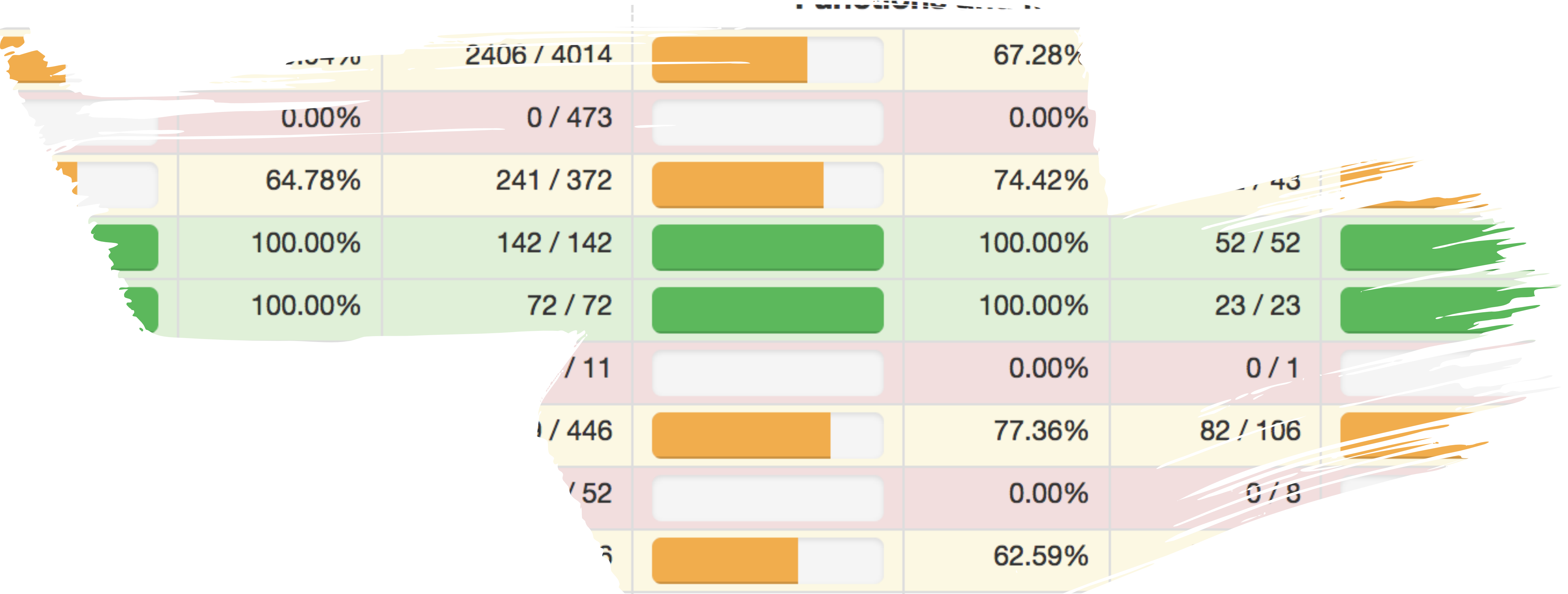
OR THIS

`http://localhost/test_problem.php`

EXCUSES, EXCUSES

**WE WILL NEVER GET TO 100%
CODE COVERAGE**

CODE COVERAGE






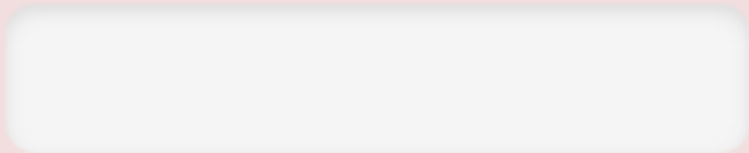
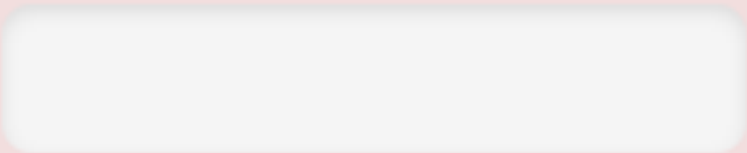
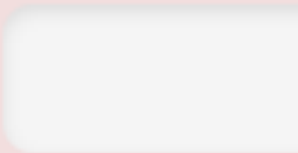















CODE COVERAGE

Classes and Traits		
<div><div></div></div>	56.88%	62 / 109
<div><div></div></div>	0.00%	0 / 8
<div><div></div></div>	64.29%	9 / 14
<div><div></div></div>	100.00%	9 / 9
<div><div></div></div>	100.00%	5 / 5
<div><div></div></div>	76.47%	13 / 17
<div><div></div></div>	48.15%	26 / 54
	n/a	0 / 0








CODE COVERAGE

Code Coverage					
Functions and Methods			Classes and Traits		
<div><div></div></div>	67.28%	368 / 547	<div><div></div></div>	56.88%	62 / 109
<div><div></div></div>	0.00%	0 / 28	<div><div></div></div>	0.00%	0 / 8
<div><div></div></div>	74.42%	32 / 43	<div><div></div></div>	64.29%	9 / 14
<div><div></div></div>	100.00%	52 / 52	<div><div></div></div>	100.00%	9 / 9
<div><div></div></div>	100.00%	23 / 23	<div><div></div></div>	100.00%	5 / 5
<div><div></div></div>	77.36%	82 / 106	<div><div></div></div>	76.47%	13 / 17
<div><div></div></div>	62.59%	179 / 286	<div><div></div></div>	48.15%	26 / 54
	n/a	0 / 0		n/a	0 / 0

CODE COVERAGE

Code Coverage						
Lines			Functions and Methods			
	59.94%	2406 / 4014		67.28%	368 / 547	
	0.00%	0 / 473		0.00%	0 / 28	
	64.78%	241 / 372		74.42%	32 / 43	
	100.00%	142 / 142		100.00%	52 / 52	
	100.00%	72 / 72		100.00%	23 / 23	
	67.04%	299 / 446		77.36%	82 / 106	
	67.54%	1652 / 2446		62.59%	179 / 286	
	n/a	0 / 0		n/a	0 / 0	

20 > 80

	Code Coverage				Cod
		Lines		Function	
Total	<div><div></div></div>	59.94%	2406 / 4014	<div><div></div></div>	
 Command	<div><div></div></div>	0.00%	0 / 473	<div><div></div></div>	
 Controller	<div><div></div></div>	64.78%	241 / 372	<div><div></div></div>	
 Entity	<div><div></div></div>	100.00%	142 / 142	<div><div></div></div>	
 Model	<div><div></div></div>	100.00%	72 / 72	<div><div></div></div>	
 Repository	<div><div></div></div>	67.04%	299 / 446	<div><div></div></div>	
 Service	<div><div></div></div>	67.54%	1652 / 2446	<div><div></div></div>	
 AppBundle.php		n/a	0 / 0		

EXCUSES, EXCUSES

**WE DO NOT HAVE TIME TO LEARN TESTING,
WE'RE TOO BUSY SHIPPING CODE**

//@TODO: STANDSTILL

DON'T BE SCARED OF PHPUNIT*

IT IS JUST A CODE RUNNER

UNIT, INTEGRATION OR ACCEPTANCE TESTS

SMOKE TESTS

WEBSITE SCRAPER

...

TESTS ANSWER QUESTIONS

IS MY CODE WORKING CORRECTLY?

WILL MY CODE WORK CORRECTLY?

HOW IS MY CODE SUPPOSE TO WORK?

IS MY CODE DESIGNED WELL?

CAN I REFACTOR MY CODE?

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DISCUSSION

IMPLEMENT A FOOTBALL LEAGUE MANAGEMENT APP

– We want to display standings table on our website

WHAT IS YOUR BIGGEST CONCERN?

HOW TO WRITE TESTS?

GIVEN WHEN THEN

SETUP EXERCISE VERIFY TEARDOWN

ANATOMY OF PHPUNIT TEST CASE

```
class TeamTest extends PHPUnit\Framework\TestCase;
{
    private $team;

    public function setUp()
    {
        $this->team = Team::create('Hellas Verona');
    }

    public function testGetName()
    {
        $name = $this->team->getName();

        $this->assertEquals('Hellas Verona', $name);
    }
}
```

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```
cd phpday-pragmatic-tdd
```

```
composer install
```

```
vendor/bin/phpunit
```

OK (1 test, 1 assertion)

EXERCISE 1

WRITE A FUNCTIONAL TEST FOR OUR APP

- main goal of the test is to show how our code is supposed to work**
- let us play with with the design, try out how it feels**
- decide how the output is going to look**

EXERCISE 2

RUN TEST

- understand why it is failing, look at error messages

DECIDE WHAT IS CRITICAL TO WORK

- estimate if you have time to write tests now

WRITE A TEST FOR THAT

- create a separate test file as our focus is shifting

GOTO RUN TEST :)

EXERCISE 3

TIE IT ALL TOGETHER

- make all tests green

QUESTIONS? /r/AMA?



Luka Muzinic

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luka.muzinic.net/talks

bit.ly/phpday-codementor

twitter.com/code4hire

joind.in/talk/186e2

HOMEWORK

READING LIST

Reading list

<https://www.devmynd.com/blog/five-factor-testing/>

<https://martinfowler.com/articles/practical-test-pyramid.html>

<https://dev.to/theobendixson/the-problem-that-unit-tests-solve-b2l>

<https://blog.liplex.de/testing-private-and-protected-methods-with-phpunit/>

Libraries

<https://github.com/sebastianbergmann/phpunit>

<https://github.com/phpspec/phpspec>

<https://github.com/Codeception/Codeception>

<https://github.com/phpstan/phpstan>

<https://github.com/infection/infection>

HOMEWORK

WRITE ANOTHER TEST

- given a scenario where two teams have played a tie**
- implement the feature**

REFACTOR

- given a scenario where RuleBook also defines how much points should each team get after match win, write additional test case where each win gets you 2 points**
- implement the feature**

KTHXBAI

Photos by Les Anderson, Joshua Earle, Ian Espinosa and Tom Roberts on Unsplash