

# Testing with Codeception

by Hafid Mukhlisin



# Disclaimer!

I am newbie 😊

Get this presentation : <https://github.com/hscstudio/slides/JAKDIVA>

# What's testing?

Why should we do code testing? testing dependency code

# When do we testing?

test after coding (commonly), test before coding (Test-Driven Development)

# It's about repetitive work

Please, Don't Repeat Yourself (DRY)



Modern PHP testing for everyone <http://codeception.com>

# Testing type that we can do

- ✓ Unit testing - verifies that a single unit of code is working as expected.
- ✓ Functional testing - verifies scenarios from a user's perspective via browser emulation.
- ✓ Acceptance testing - verifies scenarios from a user's perspective in a browser. We can test Javascript code
- ✓ etc.

# Code Testing Yii base on Codeception

- its's located in @app/test directory

C:\Bitnami\wampstack\apache2\htdocs\jakdiva\tests		
Name	Date modified	Type
codeception	2/28/2016 3:24 AM	File folder
codeception.yml	2/28/2016 3:24 AM	YML File
README.md	2/28/2016 3:24 AM	Markdown Docu...




C:\Bitnami\wampstack\apache2\htdocs\jakdiva\tests\codeception		
Name	Date modified	Type
_output	2/28/2016 3:24 AM	File folder
_pages	2/28/2016 3:24 AM	File folder
acceptance	2/28/2016 4:42 AM	File folder
bin	2/28/2016 3:24 AM	File folder
config	2/28/2016 3:24 AM	File folder
fixtures	2/28/2016 3:24 AM	File folder
functional	2/28/2016 4:42 AM	File folder
templates	2/28/2016 3:24 AM	File folder
unit	2/28/2016 4:42 AM	File folder
.gitignore	2/28/2016 3:24 AM	Text Document
_bootstrap.php	2/28/2016 3:24 AM	JetBrains PHP
acceptance.suite.yml	2/28/2016 3:24 AM	YML File
functional.suite.yml	2/28/2016 3:24 AM	YML File
unit.suite.yml	2/28/2016 3:24 AM	YML File



# Where we begin?

# Install Yii 2.0.7

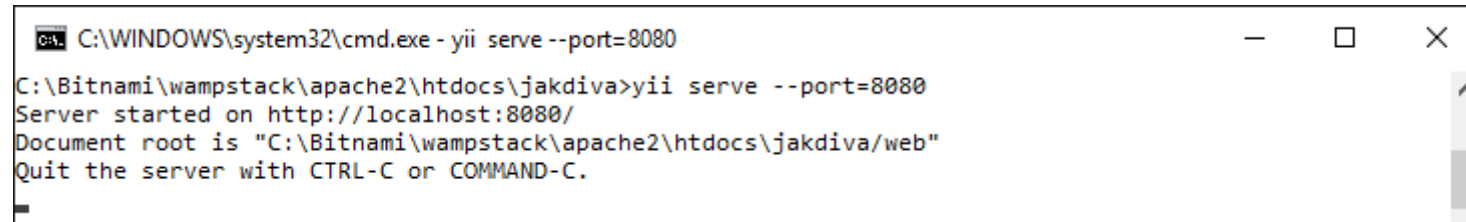
```
composer global require "fxp/composer-asset-plugin:~1.1.1"  
composer create-project yiisoft/yii2-app-basic jakdiva 2.0.7
```



```
C:\WINDOWS\system32\cmd.exe  
C:\Bitnami\wampstack\apache2\htdocs>composer create-project yiisoft/yii2-app-basic jakdiva 2.0.7  
Installing yiisoft/yii2-app-basic (2.0.7)  
- Installing yiisoft/yii2-app-basic (2.0.7)  
  Downloading: 100%  
  
Created project in jakdiva  
Loading composer repositories with package information  
Installing dependencies (including require-dev)  
- Installing yiisoft/yii2-composer (2.0.4)  
  Loading from cache  
  
- Installing yiisoft/yii2-faker (2.0.3)  
  Downloading: 100%  
  
Writing lock file  
Generating autoload files  
> yii\composer\Installer::postCreateProject  
chmod('runtime', 0777)...done.  
chmod('web/assets', 0777)...done.  
chmod('yii', 0755)...done.  
C:\Bitnami\wampstack\apache2\htdocs>
```

# Run Built-in PHP Web Server

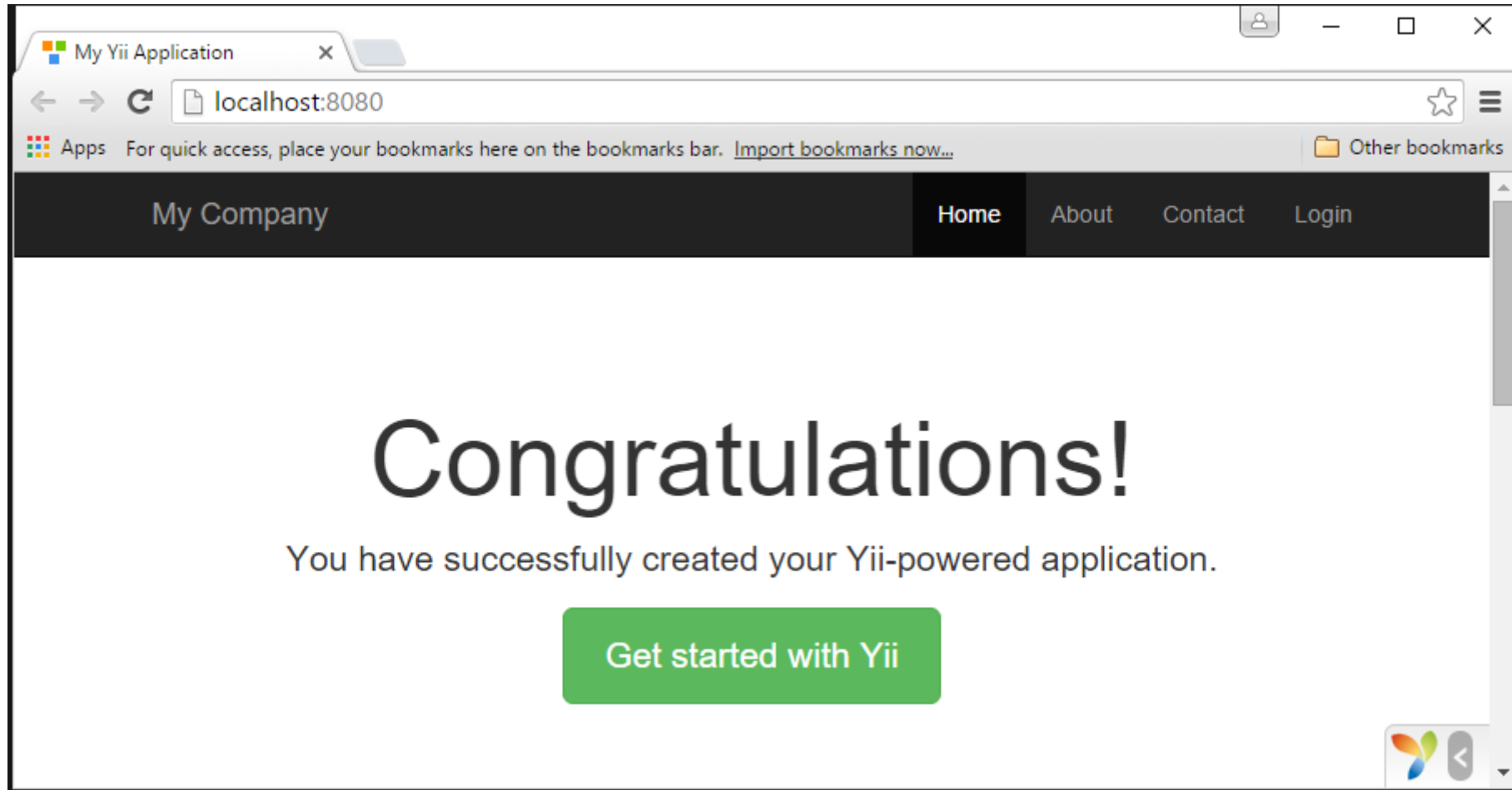
```
cd jakdiva  
yii serve --port=8080
```



```
C:\WINDOWS\system32\cmd.exe - yii serve --port=8080  
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>yii serve --port=8080  
Server started on http://localhost:8080/  
Document root is "C:\Bitnami\wampstack\apache2\htdocs\jakdiva\web"  
Quit the server with CTRL-C or COMMAND-C.
```

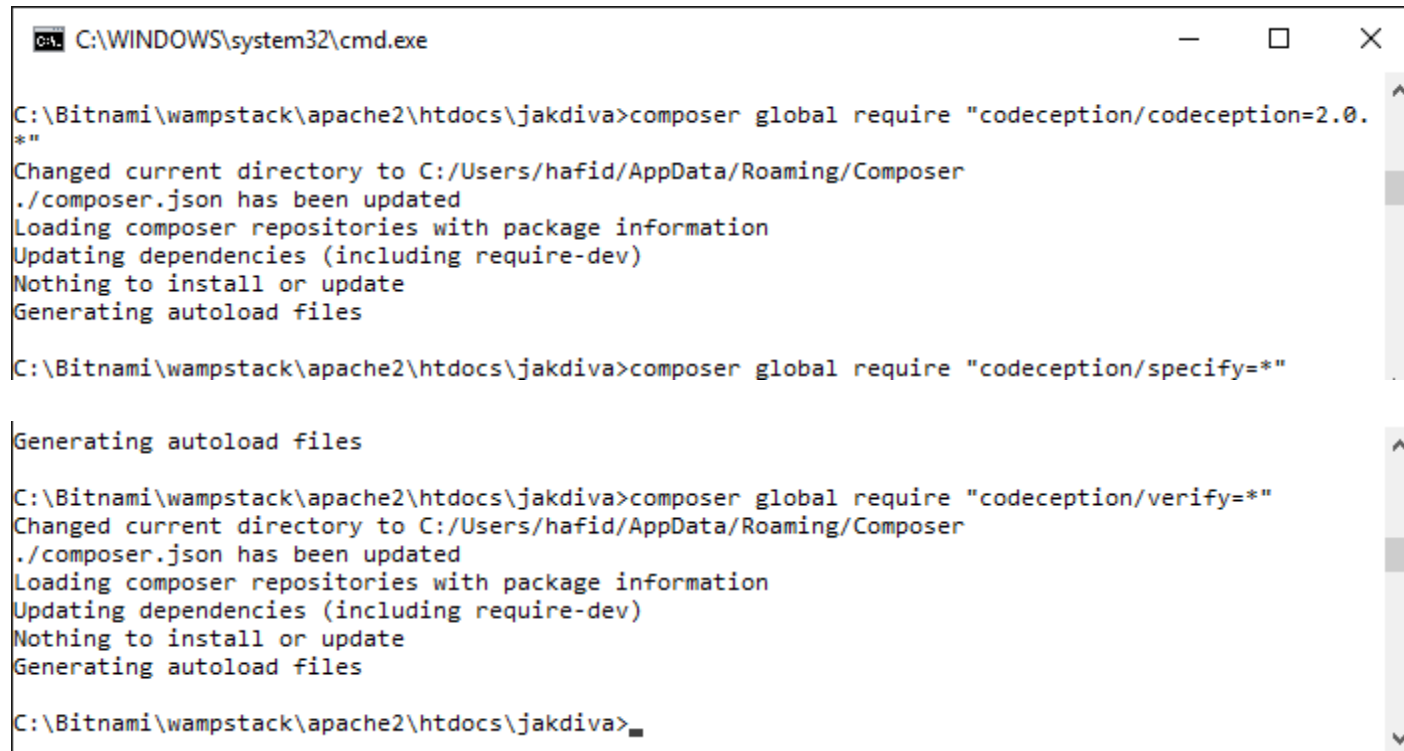
# Running Yii Application

`http://localhost:8080`



# Install Codeception

```
composer global require "codeception/codeception=2.0.*"  
composer global require "codeception/specify=*"  
composer global require "codeception/verify=*"
```

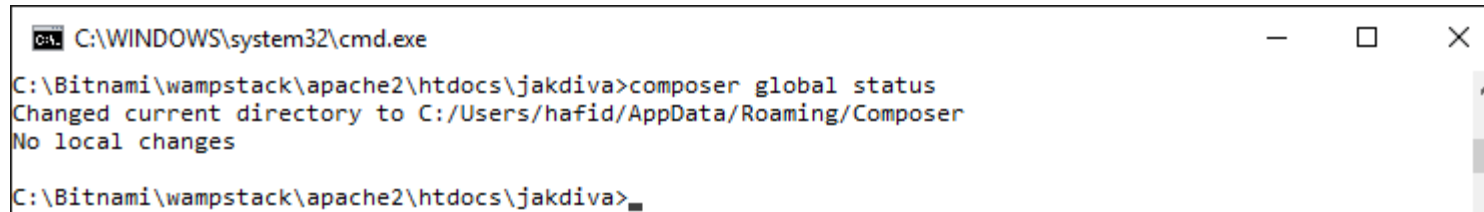


```
C:\WINDOWS\system32\cmd.exe  
  
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>composer global require "codeception/codeception=2.0.*"  
Changed current directory to C:/Users/hafid/AppData/Roaming/Composer  
./composer.json has been updated  
Loading composer repositories with package information  
Updating dependencies (including require-dev)  
Nothing to install or update  
Generating autoload files  
  
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>composer global require "codeception/specify=*"  
Generating autoload files  
  
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>composer global require "codeception/verify=*"  
Changed current directory to C:/Users/hafid/AppData/Roaming/Composer  
./composer.json has been updated  
Loading composer repositories with package information  
Updating dependencies (including require-dev)  
Nothing to install or update  
Generating autoload files  
  
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>
```

# Add Directory of Codeception to Path

- ❑ Check location of codeception directory

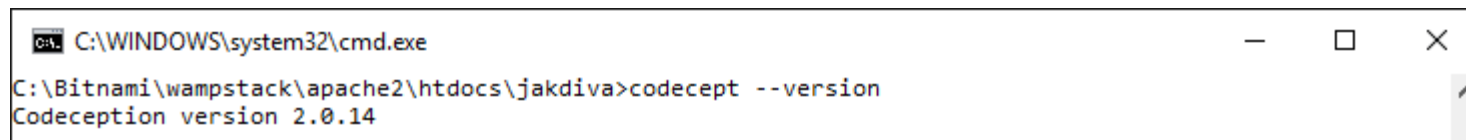
```
composer global status
```



```
C:\WINDOWS\system32\cmd.exe
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>composer global status
Changed current directory to C:/Users/hafid/AppData/Roaming/Composer
No local changes
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>
```

C:/Users/hafid/AppData/Roaming/Composer/vendor/bin

- ❑ Add directory of codeception to Path or Global Environment Variabel
- ❑ So we can run codeception only with “codecept”



```
C:\WINDOWS\system32\cmd.exe
C:\Bitnami\wampstack\apache2\htdocs\jakdiva>codecept --version
Codeception version 2.0.14
```

**Codeception ready to use!**

# We can do testing

Yii have make sample of code testing



# Part of unit testing sample

@app\tests\codeception\unit\models\LoginFormTest.php

```
public function testLoginNoUser()
{
    $model = new LoginForm([
        'username' => 'not_existing_username',
        'password' => 'not_existing_password',
    ]);

    $this->specify('user should not be able to login, when there is no identity',
        function () use ($model) {
            expect('model should not login user', $model->login())->false();
            expect('user should not be logged in', Yii::$app->user->isGuest)->true();
        });
}
```

# Part of functional testing sample

@app\tests\codeception\functional>LoginCept.php

```
use tests\codeception\_pages>LoginPage;

/* @var $scenario Codeception\Scenario */

$I = new FunctionalTester($scenario);
$I->wantTo('ensure that login works');

$loginPage = LoginPage::openBy($I);

$I->see('Login', 'h1');

$I->amGoingTo('try to login with empty credentials');
$loginPage->login('', '');
$I->expectTo('see validations errors');
$I->see('Username cannot be blank.');
$I->see('Password cannot be blank.');
```

# Part of acceptance testing sample

@app\tests\codeception\acceptance>LoginCept.php

```
use tests\codeception\_pages>LoginPage;

/* @var $scenario Codeception\Scenario */

$I = new AcceptanceTester($scenario);
$I->wantTo('ensure that login works');

$loginPage = LoginPage::openBy($I);

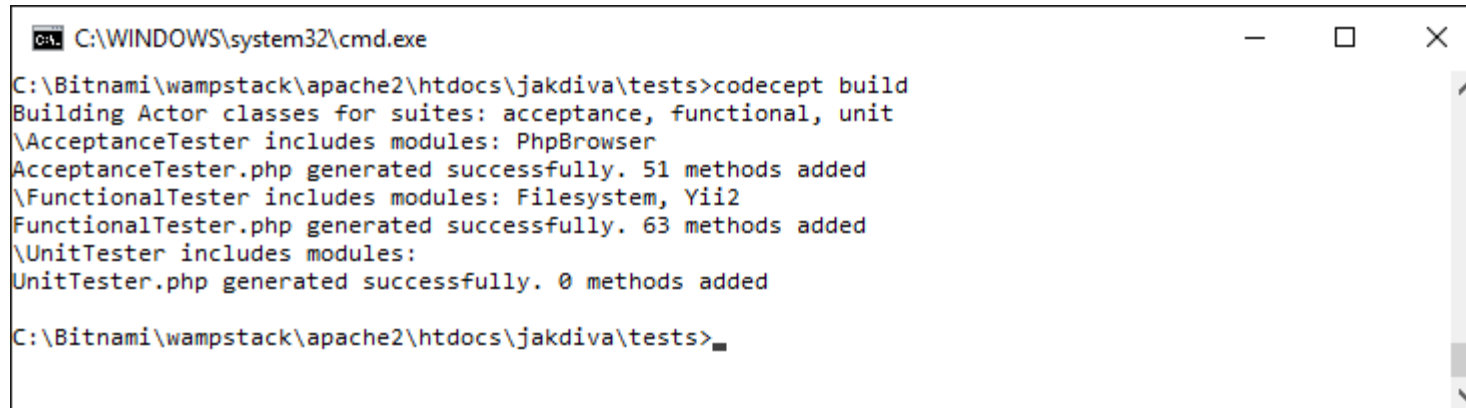
$I->see('Login', 'h1');

$I->amGoingTo('try to login with empty credentials');
$loginPage->login('', '');
if (method_exists($I, 'wait')) {
    $I->wait(3); // only for selenium
}
$I->expectTo('see validations errors');
$I->see('Username cannot be blank.');
$I->see('Password cannot be blank.');
```

# Build Test Suite

- ❑ run `codecept build` to build test suite

```
codecept build
```

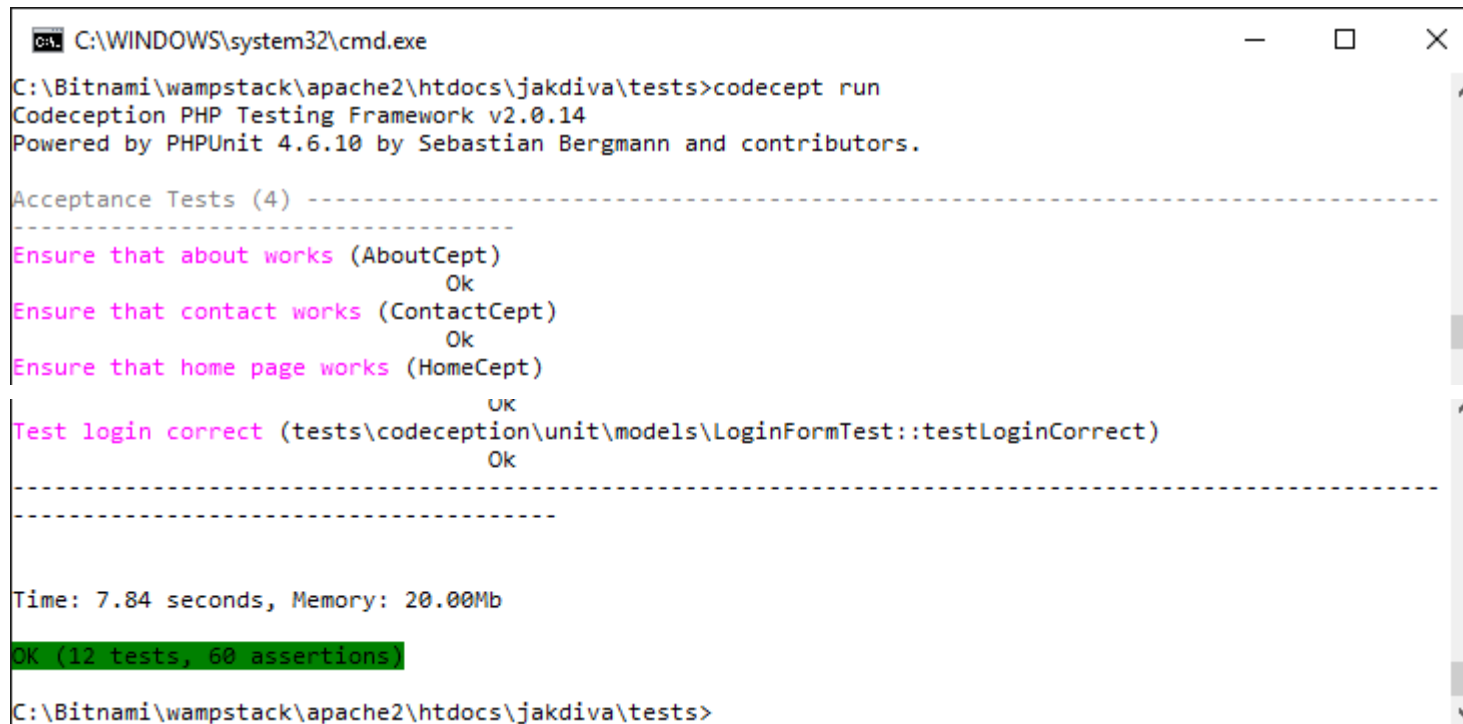


```
C:\WINDOWS\system32\cmd.exe
C:\Bitnami\wampstack\apache2\htdocs\jakdiva\tests>codecept build
Building Actor classes for suites: acceptance, functional, unit
\AcceptanceTester includes modules: PhpBrowser
AcceptanceTester.php generated successfully. 51 methods added
\FunctionalTester includes modules: Filesystem, Yii2
FunctionalTester.php generated successfully. 63 methods added
\UnitTester includes modules:
UnitTester.php generated successfully. 0 methods added
C:\Bitnami\wampstack\apache2\htdocs\jakdiva\tests>
```

# Run Testing

- ❑ run `codecept run` to run 3 types testing (unit, functional, acceptance)

codecept run



```
C:\WINDOWS\system32\cmd.exe
C:\Bitnami\wampstack\apache2\htdocs\jakdiva\tests>codecept run
Codeception PHP Testing Framework v2.0.14
Powered by PHPUnit 4.6.10 by Sebastian Bergmann and contributors.

Acceptance Tests (4) -----
-----
Ensure that about works (AboutCept)
                        Ok
Ensure that contact works (ContactCept)
                        Ok
Ensure that home page works (HomeCept)
                        Ok
Test login correct (tests\codeception\unit\models\LoginFormTest::testLoginCorrect)
                        Ok
-----
-----

Time: 7.84 seconds, Memory: 20.00Mb
OK (12 tests, 60 assertions)

C:\Bitnami\wampstack\apache2\htdocs\jakdiva\tests>
```

# run test per test type

```
codecept run unit
```

```
codecept run functional
```

```
codecept run acceptance
```

# run test per file or function

```
codecept run unit models/LoginFormTest
```

```
codecept run unit models/LoginFormTest:testLoginNoUser
```

# Install Selenium for Acceptance

<http://codeception.com/docs/modules/WebDriver>



# Step By Step Installing Selenium

- ✓ Download selenium <http://docs.seleniumhq.org/download/>
- ✓ Run Selenium Server

```
java -jar selenium-server-standalone-2.xx.xxx.jar
```

or we can use selected browser

```
java -jar selenium-server-standalone-2.xx.xxx.jar -  
Dwebdriver.firefox.bin="D:\Program Files (x86)\Mozilla  
Firefox\Firefox.exe"
```

- ✓ Enable module WebDriver @app/tests/codeception/acceptance.suite.yml

# Running selenium server

```
C:\WINDOWS\system32\cmd.exe - java -jar tool...
C:\Bitnami\wampstack\apache2\htdocs\github\slides\2016\2\JAK
DIVA>java -jar tools\selenium-server-standalone-2.52.0.jar
14:29:48.877 INFO - Launching a standalone Selenium Server
14:29:49.068 INFO - Java: Oracle Corporation 25.65-b01
14:29:49.069 INFO - OS: Windows 10 10.0 amd64
14:29:49.081 INFO - v2.52.0, with Core v2.52.0. Built from r
evision 4c2593c
14:29:49.143 INFO - Driver class not found: com.opera.core.s
ystems.OperaDriver
14:29:49.145 INFO - Driver provider com.opera.core.systems.O
peraDriver is not registered
14:29:49.156 INFO - Driver provider org.openqa.selenium.safa
ri.SafariDriver registration is skipped:
registration capabilities Capabilities [{browserName=safari,
version=, platform=MAC}] does not match the current platfor
m WIN10
14:29:49.434 INFO - RemoteWebDriver instances should connect
to: http://127.0.0.1:4444/wd/hub
14:29:49.436 INFO - Selenium Server is up and running
```

# Enable module WebDriver

## @app/tests/codeception/acceptance.suite.yml

```
modules:
  enabled:
    - WebDriver
# you can use WebDriver instead of PhpBrowser to test javascript and ajax.
# This will require you to install selenium. See http://codeception.com/docs/04-AcceptanceTests#Selenium
# "restart" option is used by the WebDriver to start each time per test-file new session and cookies,
# it is useful if you want to login in your app in each test.
#
#   - WebDriver
  config:
    PhpBrowser:
# PLEASE ADJUST IT TO THE ACTUAL ENTRY POINT WITHOUT PATH INFO
      url: http://localhost:8080
    WebDriver:
      url: http://localhost:8080/index-test.php
      browser: firefox
      restart: true
```

# Build n Run Testing

- Build Test Suite (because we enable/modify test module)

```
codecept build
```

- Run Acceptance Test

```
codecept run acceptance
```

**Any Question?**

# Thank You

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