





Silex: From Micro to Full Stack



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Silex is a micro framework for PHP. Join this session for an introduction to Silex and find out how to leverage Silex for your next application. We will start with the basics of a Silex application and explore how Silex can be evolved into a full-stack framework for advanced applications. Not sure about when to use components, Silex, or Symfony? Join this session and find out!

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Silex is known as a micro-framework built on top of the Symfony2 components. But can it be used as a full-stack framework? Learn how you can grow your Silex applications when the need arises.

Dustin Whittle

- Consultant + Trainer @ **Sensio**Labs



<https://connect.sensiolabs.com/profile/dustinwhittle>

<http://guru.sensiolabs.com/>

What is Silex?

- Do you know Sinatra, Express, or Flask?
- Silex is a micro framework for PHP 5.3.3+
 - Based on Symfony components
 - Easy installation with Composer
 - Created by Fabien Potencier + Igor Wiedler
 - MIT License
- <http://silex.sensiolabs.org/>



<http://silex.sensiolabs.org/doc/intro.html>

<http://symfony.com/components>

<http://fabien.potencier.org/>

<https://igor.io/>

<http://silex.sensiolabs.org/license>

Silex Philosophy

- Silex, being a micro-framework, has some limitations. Silex will never support the following:
 - A CLI tool + any feature that would introduce the need for a CLI tool
 - Any feature that needs mandatory external files (XML/YAML configuration files)
 - Any feature that is not PHPish (annotations)
 - Any feature that adds a lot of code to Silex
 - Any feature to the "core" (Application class)



Why use Silex?

- A full-stack framework is overkill for a simple task
 - Map routes to controllers
 - Silex != Symfony2
- Concise
- Extensible
- Testable




Silex is a PHP microframework for PHP 5.3. It is built on the shoulders of Symfony2 and Pimple and also inspired by sinatra.

A microframework provides the guts for building simple single-file apps. Silex aims to be:

- *Concise*: Silex exposes an intuitive and concise API that is fun to use.
- *Extensible*: Silex has an extension system based around the Pimple micro service-container that makes it even easier to tie in third party libraries.
- *Testable*: Silex uses Symfony2's HttpKernel which abstracts request and response. This makes it very easy to test apps and the framework itself. It also respects the HTTP specification and encourages its proper use.

Clone and follow along

PUBLIC  **dustinwhittle / Silex-SymfonyLive-2012** [Pull Request](#) [Unwatch](#) [Star](#) 0 [Fork](#) 0

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Code for my Silex talk at SymfonyLive 2012 — [Read more](#)

[Clone in Mac](#) [ZIP](#) [HTTP](#) [SSH](#) [Git Read-Only](#) <https://github.com/dustinwhittle/Silex-SymfonyL> [Read+Write access](#)







[branch: master](#) **Files** Commits Branches 1 Tags Downloads

Latest commit to the **master** branch

updated README + added references

 **dustinwhittle** authored 2 days ago [commit 774694c4f9](#)

Silex-SymfonyLive-2012 /

name	age	message	history
 Silex-Backbone-Todolist	2 days ago	added silex backbone todo list app [dustinwhittle]	
 Silex-HelloWorld	2 days ago	added Silex-HelloWorld [dustinwhittle]	
 Silex-Kitchen-Edition	2 days ago	added silex kitchen sink example [dustinwhittle]	
 Silex-Skeleton	2 days ago	added silex skeleton [dustinwhittle]	
 .gitignore	4 days ago	Initial commit [dustinwhittle]	
 README.md	2 days ago	updated README + added references [dustinwhittle]	

README.md

Silex @ SymfonyLive SF 2012

Code for my Silex talk at SymfonyLive 2012

- [Silex-HelloWorld](#)
- [Silex-Skeleton](#)
- [Silex-Kitchen-Edition](#)
- [Silex-Backbone-Todolist](#)



git clone <https://github.com/dustinwhittle/Silex-SymfonyLive-2012.git>



```
$ curl -s https://getcomposer.org/installer | php
```

<http://getcomposer.org/>

Install with Composer.json

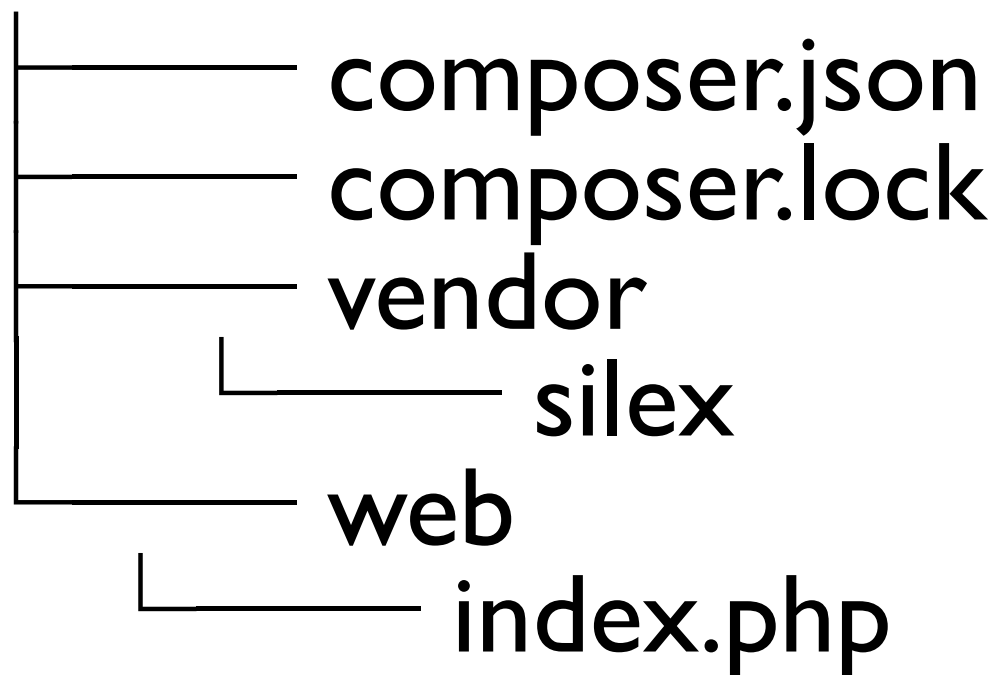
```
{  
    "name": "dustinwhittle/Silex-HelloWorld",  
    "require": {  
        "php": ">=5.3.3",  
        "silex/silex": "1.0.*"  
    },  
    "minimum-stability": "dev",  
    "autoload": {  
        "psr-0": { "": "src/" }  
    }  
}
```

\$ php composer.phar install



<http://getcomposer.org/>

A simple app structure



Fix spacing!

Hello World!

```
<?php
```

```
require_once __DIR__.'../vendor/autoload.php';
```

```
$app = new Silex\Application();
```

```
$app->get('/hello/{name}', function ($name) use ($app) {  
    return 'Hello '.$app->escape($name);  
});
```

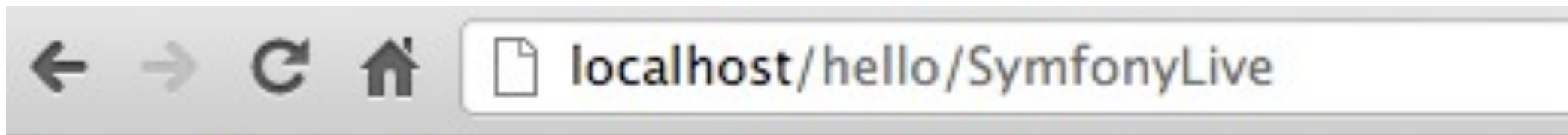
```
$app->run();
```



<http://silex.sensiolabs.org/doc/intro.html>

Nothing happens until you call `->run()`

```
php -S 0.0.0.0:80 -t web
```



Hello SymfonyLive



Bootstrap with Composer

```
$ composer.phar create-project fabpot/silex-skeleton
```



<https://github.com/fabpot/Silex-Skeleton>

This skeleton includes default libraries twig by default.

An app structure for Silex

Config:

config/dev.php

config/prod.php

App:

console

src/app.php

src/console.php

src/controllers.php

Views:

templates/404.html

templates/500.html

templates/index.html

templates/layout.html

Front Controller:

web/index.php

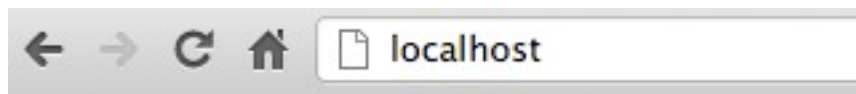
web/index_dev.php



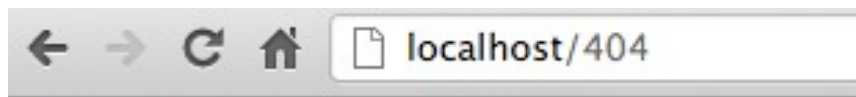
<https://github.com/fabpot/Silex-Skeleton>

```
$app['debug'] = true  
dev/prod = error handler
```

php -S 0.0.0.0:80 -t web



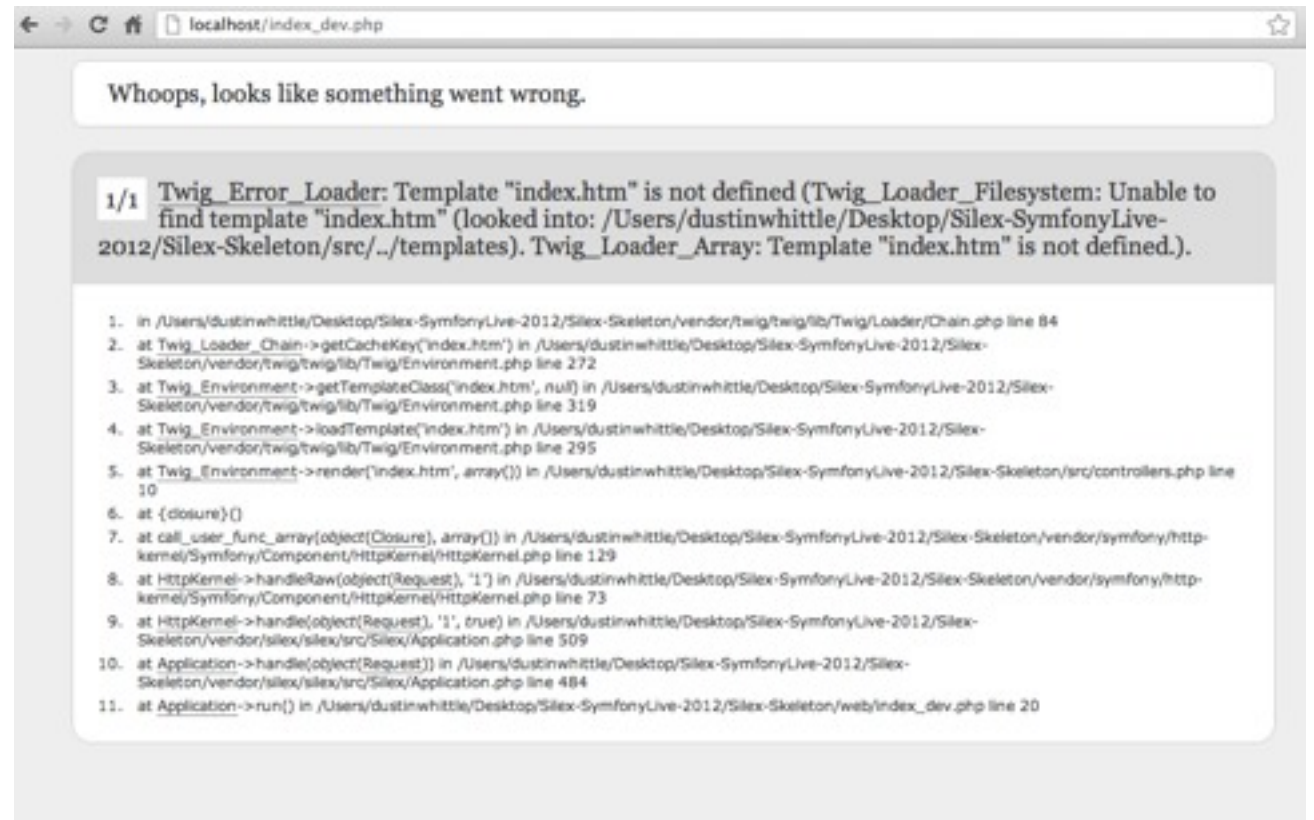
Welcome to your new Silex Application!



Page not found.



Internal server error.



Adding features with providers

- A provider exposes functionality to a Silex application
- Pimple is a simple dependency injection container
- Use community providers to add functionality the isn't available by default
 - Just like Symfony2 bundles



```
$app == container  
$app['service'] == service
```

Core Service Providers

- URL Generator
- Session
- Validator
- Form
- Security
- Translation
- HTTP Cache
- Twig
- Monolog
- Doctrine
- SwiftMailer



<http://silex.sensiolabs.org/doc/providers.html>

Adding a router to Silex

```
/* Add url generator support */
```

```
$app->register(new Silex\Provider\UrlGeneratorServiceProvider());
```

```
/* Add controllers for app */
```

```
$app->get('/', function () use ($app) {  
    return $app['twig']->render('index.html.twig', array());  
})->bind('homepage');
```

```
/* Generate a url */
```

```
$app->get('/navigation', function () use ($app) {  
    return '<a href="'. $app['url_generator']->  
>generate('homepage'). '">Home</a>';  
});
```



http://silex.sensiolabs.org/doc/providers/url_generator.html

Highlight bind

Adding sessions to Silex

```
/* Add session support */
```

```
$app->register(new Silex\Provider\SessionServiceProvider());
```

```
/* Save something in session */
```

```
$app['session']->set('user', array('username' => 'symfonylive'));
```

```
/* Fetch something in session */
```

```
$user = $app['session']->get('user')
```



<http://silex.sensiolabs.org/doc/providers/session.html>

Integrating Twig

```
/* Add twig support */
```

```
$app->register(new Silex\Provider\TwigServiceProvider(), array(  
    'twig.path' => __DIR__.'/../templates',  
));
```

```
/* Add controllers for app */
```

```
$app->get('/', function () use ($app) {  
    return $app['twig']->render('index.html.twig', array());  
})->bind('homepage');
```



<http://silex.sensiolabs.org/doc/providers/twig.html>

Adding translations to Silex

```
/* Add translation support */
$app->register(new Silex\Provider\TranslationServiceProvider(), array(
    'locale_fallback' => 'en',
));

$app['translator.domains'] = array(
    'messages' => array(
        'en' => array(
            'hello'      => 'Hello %name%',
            'goodbye'    => 'Goodbye %name%',
        ),
        'fr' => array(
            'hello'      => 'Bonjour %name%',
            'goodbye'    => 'Au revoir %name%',
        ),
    ),
);

$app->get('/{_locale}/{message}/{name}', function ($message, $name) use ($app) {
    return $app['translator']->trans($message, array('%name%' => $name));
});
```



<http://silex.sensiolabs.org/doc/providers/translation.html>

Adding a form to Silex

```
$app->register(new Silex\Provider\FormServiceProvider());

$app->match('/contact', function (Request $request) use ($app) {
    $data = array(
        'name' => 'Your name',
        'email' => 'Your email',
    );

    $form = $app['form.factory']->createBuilder('form', $data)
        ->add('name')
        ->add('email')
        ->add('gender', 'choice', array(
            'choices' => array(1 => 'male', 2 => 'female'),
            'expanded' => true,
        ))
        ->getForm();

    if ('POST' == $request->getMethod()) {
        $form->bind($request);

        if ($form->isValid()) {
            $data = $form->getData();
            return $app->redirect('...');
        }
    }
    return $app['twig']->render('index.twig', array('form' => $form->createView()));
});
```



<http://silex.sensiolabs.org/doc/providers/form.html>

Adding a validator to Silex

```
use Symfony\Component\Validator\Constraints as Assert;

$app->register(new Silex\Provider\ValidatorServiceProvider());
$app->register(new Silex\Provider\TranslationServiceProvider(), array(
    'translator.messages' => array(),
));

$form = $app['form.factory']->createBuilder('form')
    ->add('name', 'text', array(
        'constraints' => array(new Assert\NotBlank(), new Assert\MinLength(5))
    ))
    ->add('email', 'text', array(
        'constraints' => new Assert\Email()
    ))
    ->add('gender', 'choice', array(
        'choices' => array(1 => 'male', 2 => 'female'),
        'expanded' => true,
        'constraints' => new Assert\Choice(array(1, 2)),
    ))
    ->getForm();
```



http://silex.sensiolabs.org/doc/providers/http_cache.html

Adding a form to Silex

```
<form action="#" method="post">
    {{ form_widget(form) }}

    <input type="submit" name="submit" />
</form>
```



<http://silex.sensiolabs.org/doc/providers/form.html>

Adding caching to Silex

```
use Symfony\Component\HttpFoundation\Response;

/* Add http cache support */
$app->register(new Silex\Provider\HttpCacheServiceProvider(),
    array(
        'http_cache.cache_dir' => __DIR__.'/cache',
    ));

$app->get('/', function() {
    return new Response('Foo', 200, array(
        'Cache-Control' => 's-maxage=5',
    ));
});
```



http://silex.sensiolabs.org/doc/providers/http_cache.html

Integrating Doctrine DBAL

```
/* Add doctrine dbal support */  
$app->register(new Silex\Provider\DoctrineServiceProvider(), array(  
    'db.options' => array(  
        'driver' => 'pdo_sqlite',  
        'path' => __DIR__.'/app.db',  
    ),  
));
```

```
/* Execute a sql query */  
$data = $app['db']->fetchAssoc('SELECT * FROM table');
```



<http://silex.sensiolabs.org/doc/providers/doctrine.html>

Simple JSON API

```
$app->get('/todo/{id}', function ($id) use ($app) {  
  
    $sql = 'SELECT * FROM todo WHERE id = ?';  
    $todo = $app['db']->fetchAssoc($sql, array((int) $id));  
  
    if (!$todo) {  
        $app->abort(404, sprintf('Todo %s does not exist.', $id));  
    }  
  
    return $app->json($todo);  
  
});
```



Integrating Monolog

```
/* Add monolog support */  
$app->register(new Silex\Provider\MonologServiceProvider(), array(  
    'monolog.logfile' => __DIR__.'../log/app.log',  
));
```

```
/* Write to log */  
$app['monolog']->addDebug('OMG! SymfonyLive...');
```



<http://silex.sensiolabs.org/doc/providers/monolog.html>

Integrating SwiftMailer

```
/* Add swiftmailer support */
$app->register(new Silex\Provider\SwiftmailerServiceProvider());

$app->post('/feedback', function () use ($app) {

    $message = \Swift_Message::newInstance()
        ->setSubject('[YourSite] Feedback')
        ->setFrom('noreply@symfony.com')
        ->setTo('feedback@symfony.com')
        ->setBody($app['request']->get('message'));

    $app['mailer']->send($message);

    return new Response('Thank you for your feedback!', 201);
});
```



<http://silex.sensiolabs.org/doc/providers/swiftmailer.html>

Adding security to Silex

```
/* Add security support */
$app->register(new Silex\Provider\SecurityServiceProvider());

$app['security.firewalls'] = array(
    'admin' => array(
        'pattern' => '^/admin/',
        'form' => array('login_path' => '/login', 'check_path' =>
'/admin/login_check'),
        'users' => array(
            'admin' => array('ROLE_ADMIN', '...'),
        ),
    ),
);

/* Fetch user token */
$token = $app['security']->getToken();
```



<http://silex.sensiolabs.org/doc/providers/security.html>

If you need the security system you should just use Symfony2

What is a full stack framework?

- Default Structure
- Default Conventions
- Configuration (yml, xml, ini, etc)
- Symfony2 you remove features
- Silex you add them



Scaling Silex for larger apps

- Exposing new functionality with service providers
 - Moving out of a single file
 - Controllers in different files
 - Using twig for templates
 - Adding support for database + cache + ...



Silex Extensions

- <https://github.com/fabpot/Silex/wiki/Third-Party-ServiceProviders>
- <https://github.com/fate/Silex-Extensions>
 - Assetic
 - Memcache
 - MongoDB
 - Redis
 - Markdown



Creating your own provider

- Integrate any third party library easily by adding a service to the container
 - Facebook SDK



Dependency Injection

Symfony2 DIC

Compiler

XML/Yaml

Loader

Extension

Builder

Container

Pimple

(ServiceProvider)

Container



Adding a Facebook Service Provider

```
$app['facebook.app_id'] = 'xxx';  
$app['facebook.secret'] = 'xxx';
```

```
$app['facebook'] = $app->share(function ()  
use ($app) {  
    return new \Facebook(array(  
        'appId' => $app['facebook.app_id'],  
        'secret' => $app['facebook.secret'],  
    ));  
});
```



Adding a Facebook Service Provider

```
namespace SymfonyLive\Provider;

use Silex\Application;
use Silex\ServiceProviderInterface;

class FacebookServiceProvider implements ServiceProviderInterface
{
    public function register(Application $app)
    {
        $app['facebook'] = $app->share(function () use ($app) {
            return new \Facebook(array(
                'appId' => $app['facebook.app_id'],
                'secret' => $app['facebook.secret'],
            ));
        });
    }

    public function boot(Application $app)
    {
    }
}
```



Using Facebook Service Provider

```
$app = new Silex\Application();

$app->register(new SymfonyLive\FacebookServiceProvider(), array(
    'facebook.app_id' => 'xxx',
    'facebook.secret' => 'xxx',
));

$app->get('/', function () use ($app) {

    $user = $app['facebook']->getUser();

    return $app->json($user);

});
```



Bootstrap the kitchen sink

- composer.phar create-project lyrixx/Silex-Kitchen-Edition
 - HTML5 Boilerplate + Twitter Bootstrap
 - Providers + Examples
 - Twig, Cache, Form, Session, Security, Translation, Assetic, Doctrine



<http://lyrixx.github.com/Silex-Kitchen-Edition/>

Logout

Info flash message



Success flash message



Warning flash message



Error flash message



Hello email@example.com [Logout](#)

Choice3

choice a

choice b

choice c

Choice4

choice a

Country

Afghanistan

Language

abkhaze

Locale

afrikaans

Timezone

Abidjan

Date

2001

-

01

-

01

Datetime

2001

-

01

-

01

00

:

00

Time

00

:

00

Birthday

1891

-

01

-

01

Checkbox

☐

File

Choose File

No file chosen

Silex + Backbone Todo List

- <https://github.com/yohang/silex-backbone-todolist>
 - Silex + Twig + TwigJS
 - Backbone + Bootstrap



<https://github.com/yohang/silex-backbone-todolist>

localhost/index_dev.php/#/todo

Todo Manager

List

New

Todo List

Id	Title	Finished?	Delete
3	SymfonyLive Talk!	<div></div>	<div></div>
4	Give away swag!	<div></div>	<div></div>
1	SymfonyLive Slides	Done!	<div></div>
2	SymfonyLive Review	Done!	<div></div>

<https://github.com/yohang/silex-backbone-todolist>

New Todo

Title

 SymphonyLive Talk!

The title of the todo

Save

Cancel

When Silex makes sense?

- Simple applications
- RESTful API applications
- Silex can replace Symfony2



Who uses Silex?

 white
October


NetStream

L//P



Tanukis

nelm.io


BBC
NEWS

 Knp labs

and many more...

 ACD Systems

SensioLabs



When to use a full stack?

- You have a large application that requires the structure of Symfony2
- You need an ORM
- You need a more powerful service container
- ...



Support

- Mailing list
 - <http://groups.google.com/group/silex-php>
- IRC
 - #silex-php on irc.freenode.net
- Github
 - <http://github.com/fabpot/Silex/issues>



SILEX

The PHP micro-framework
based on the Symfony2 Components

[DOCUMENTATION](#)[DOWNLOAD](#)[DEVELOPMENT](#)[CONTRIBUTORS](#)

A PHP micro-framework standing on the shoulder of giants

Silex is a PHP microframework for PHP 5.3. It is built on the shoulders of Symfony2 and Pimple and also inspired by sinatra.

A microframework provides the guts for building simple single-file apps. Silex aims to be:

- *Concise*: Silex exposes an intuitive and concise API that is fun to use.
- *Extensible*: Silex has an extension system based around the Pimple micro service-container that makes it even easier to tie in third party libraries.
- *Testable*: Silex uses Symfony2's HttpKernel which abstracts request and response. This makes it very easy to test apps and the framework itself. It also respects the HTTP specification and encourages its proper use.

In a nutshell, you define controllers and map them to routes, all in one step:

```
require_once __DIR__.'/../vendor/autoload.php';

$app = new Silex\Application();

$app->get('/hello/{name}', function($name) use($app) {
    return 'Hello '.$app->escape($name);
});

$app->run();
```

[LEARN MORE →](#)[INSTALL NOW ↓](#)

<http://silex.sensiolabs.org/>



Documentation

- <http://silex.sensiolabs.org/>
- Cookbooks
 - <http://silex.sensiolabs.org/doc/cookbook/index.html>
- Providers
 - <http://silex.sensiolabs.org/doc/providers.html>



<http://silex.sensiolabs.org/pdf/Silex.pdf>



Contribute

- Github
 - <https://github.com/fabpot/Silex>
- <http://silex.sensiolabs.org/doc/contributing.html>





Questions?



Special thanks to @fabpot,
@hhamon, @igorwesome



Get in touch!

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- [@dustinwhittle](https://twitter.com/dustinwhittle)





Symphony

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