What is Pyramid

Pyramid is a general, open source, web application development framework built in python. It allows python developers to create web applications with ease.

Pyramid is an open source WSGI web framework based on the Model-View-Controller (MVC) architectural pattern.

Why to use Pyramid

With Pyramid you can write very small applications without needing to know a lot. And by learning a bit more, you can write very large applications too, basically Pyramid is very useful for highly scalable applications.

How is Pyramid different

Simplicity : Pyramid is designed to be easy to use. You can get started even if you don't understand it all
Minimalism : Out of the box, Pyramid provides only the core tools needed for nearly all web applications: mapping URLs to code, security, and serving static assets (files like JavaScript and CSS)
Speed: Pyramid is designed to be noticeably fast.
Reliability: Pyramid is developed conservatively and tested exhaustively

Installation

The installation of pyramid is fairly simple and quick. It can be installed using Pip as below,

```
$ pip install
```

```
pyramid
```

Example

Here is a simple pyramid 'hello world' application

```python
from wsgiref.simple_server import make_server
from pyramid.config import Configurator
from pyramid.response import Response


def hello_world(request):
    return Response('Hello World!')


if __name__ == '__main__':
    with Configurator() as config:
        config.add_route('hello', '/hello')
        config.add_view(hello_world, route_name='hello',
request_method='GET')
        app = config.make_wsgi_app()
    server = make_server('0.0.0.0', 6500, app)
    server.serve_forever()
```

You can run the example program with the following command in the terminal

```
python helloworld.py
```

When you visit the following URL on the browser "Hello World!" will be printed on the screen, this will however only work for the 'GET' method call from the browser or any other application like Postman, for other request methods like 'POST' or 'PUT' it will return a 404 error.

```
http://localhost:6500/hello
```

Advantages

- Pyramid is highly effective when it comes to scalable applications
- SQLAlchemy support
- Supports single file applications and same URL generation for multiple views
- Views contexts can be defined with functions as well as classes
- No specific coding style or project architecture
- WSGI compliant

Disadvantages

- No code layout
- Minimal admin interface

Comparison with other Frameworks

Flask and Django are the frameworks with close resemblance to Pyramid. Django comes with features to simplify and speed up web application development, whereas Pyramid provides features to simplify development and deployment of real-world web applications. Flask on the other hand is one of the most famous python microframeworks which is reliable and fast. Django and Pyramid both come with bootstrapping tools built in. Flask includes nothing of the sort because Flask's target audience isn't trying to build large MVC applications. When it comes to community Django has the biggest among these.