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CHAPTER 1

Introduction

this is homunculus
2.1 Overview

Let’s make a simple web application as an example. We will be using python/wsgi/flask, so we assume that the reader has a basic understanding of python and wsgi.

2.2 Installing homunculus_cli

To create a homunculus environment on the development machine, we use the homunculus command line interface.

Install it via:

```sh
$ sudo pip install homunculus_cli
```

and check the success via:

```sh
$ homunculus-runner.py --help
```

Usage: homunculus-runner.py [options]

...

2.3 Project Layout

We create files like this:

```
homunculus.yaml
greeter/__init__.py
```

The homunculus.yaml describes the app and it’s needed interfaces for homunculus and is neccessary to create a package, and is used by homunculus to provide the neccessary infrastructure.

In our case, the infrastructure needed is

- python
- flask
- a public url that our app is mounted to

We get this with the following contents:
version: dev-01  # version, for identifying purposes
features:
    python:  # request the 'python'-feature
        dependencies:
            - flask==0.10  # the app needs the 'flask' package, installed from PyPI
        wsgi:
            greeter: /  # the app provides WSGI, that must be mounted as "/

The contents of the python package is pretty straightforward, if you’re familiar with python and flask:

```python
from flask import Flask

# the wsgi application
application = Flask(__name__)

@application.route("/")
def index():
    """ this function handles requests to "/" ""
    return 'Hello, world!'
```

### 2.4 Running the application

Run the application with:

```
$ homunculus-runner.py
```

Homunculus will now create the environment in which your application is run. This is a one-time-task, if you run it later again, it should be much faster.

You should see something like this:

```
New python executable in .homunculus/virtualenv/bin/python
Installing setuptools............done.
Installing pip...............done.
Downloading/unpacking flask==0.10
   Downloading Flask-0.10.tar.gz (544kB): 544kB downloaded
   Running setup.py egg_info for package flask

Downloading/unpacking Werkzeug>=0.7 (from flask==0.10)
   Downloading Werkzeug-0.9.4.tar.gz (1.1MB): 1.1MB downloaded
   Running setup.py egg_info for package Werkzeug

Downloading/unpacking Jinja2>=2.4 (from flask==0.10)
   Downloading Jinja2-2.7.2.tar.gz (378kB): 378kB downloaded
   Running setup.py egg_info for package Jinja2

Downloading/unpacking itsdangerous>=0.21 (from flask==0.10)
   Downloading itsdangerous-0.24.tar.gz (46kB): 46kB downloaded
   Running setup.py egg_info for package itsdangerous

Downloading/unpacking markupsafe (from Jinja2>=2.4->flask==0.10)
   Downloading MarkupSafe-0.19.tar.gz
   Running setup.py egg_info for package markupsafe

Installing collected packages: flask, Werkzeug, Jinja2, itsdangerous, markupsafe
   Running setup.py install for flask
   Running setup.py install for Werkzeug
```
Running setup.py install for Jinja2
Running setup.py install for itsdangerous
Running setup.py install for markupsafe
Successfully installed flask Werkzeug Jinja2 itsdangerous markupsafe
Cleaning up...
{"/": <Flask 'greeter'>}
* Running on http://localhost:8080/
* Restarting with reloader
{"/": <Flask 'greeter'>}

Note: If somehow something goes wrong and you’re left in a fault state, you can reset the environment by simply removing it via:

$ rm -rf .homunculus
CHAPTER 3

Indices and tables

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- modindex
- search