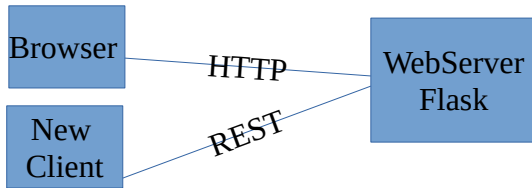


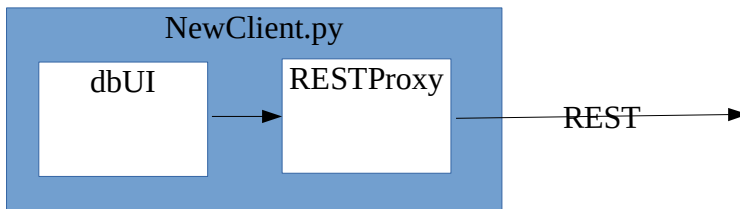
MEEC - ASInt
Laboratory 7
6/7 November 2018

Change the project from the last laboratory so that a command line client can also interact with the book database:



The new Client is a python application (Just like the one done in the first laboratories) that interacts with the library using a REST webservice.

The architecture of the New Client should be:



The flask server should offer the same functionality as the server from last laboratory and add a set of endpoints the export resources using a REST API.

REST Web Service development

Using the project from the last laboratory, implement a REST service that exports all possible data (books and authors).

Defines the possible URI for each resource:

- List of books (e.g. /API/books)
- List of authors
- Single author
- Single books
- List of books of an author
- List of books by an author on a single year

Using the regular python data types define the representation of each resource, take into consideration the data types returned by the library class

In order to transform basic python data types to json, students can use the flask jsonify function:

- <http://blog.luisrei.com/articles/flaskrest.html>

When accessing a certain resource verify if it exists and return the correct HTTP error code:

- <http://flask.pocoo.org/docs/1.0/quickstart/#redirects-and-errors>

REST client

IN order to easily do REST call from a python programe you can install the **requests** library (<http://docs.python-requests.org>):

- **pip3 install --user requests** or **sudo pip3 install requests**

The basic usage for thi slibrary is:

GET

```
import requests
r = requests.get(URI)
print(r.status_code)
data = r.json()
```

```
print data
```

POST

```
import requests
payload = {'ids': [12, 3, 4, 5, 6] }
r = requests.post("http://httpbin.org/post", json=payload)
r = requests.post(url, data=json.dumps(payload))
print(r.text)
```

POSTMAN

To test the API without a specific client, students can use the postman application

- <https://www.getpostman.com/apps>

or similar plugin for the web browsers.

- <https://chrome.google.com/webstore/detail/postman/fhbjgbiflinjbdggehcdcbncdddop>

More information in:

<https://realpython.com/blog/python/api-integration-in-python/>
<http://rest.elkstein.org/2008/02/using-rest-in-python.html>