LAB 6 – REST IN PYTHON

GETTING STARTED

The goal of this set of exercises is to design and implement a set of REST APIs for the todo list manager.

Recap:
1. *Fork your own copy of the Git repository associated with this lab (https://github.com/AmI-2018/python-lab6) to your personal GitHub space*
2. *Open PyCharm Professional and select Checkout from Version Control > Git in the "Welcome to PyCharm" window, to clone your (forked) repository*
3. *Fill the requested fields (repository URL, location on disk, …) and press the "Clone" button*
4. *Once the project is open, you can create a new Python file by right clicking on the project name (Project tab, on the left) and selecting New > Python File*
5. *Commit and push the changes you made back to GitHub, from the VCS menu in PyCharm*

EXERCISE 1 – API DESIGN

Design a set of APIs for the todo list manager developed in the previous laboratories. The APIs should allow to:

a) Retrieve the list of available tasks
b) Create a new task
c) Retrieve the task identified by the given task id
d) Update an existing task
e) Delete an existing task

A task is composed by the following fields:

* id: the unique identifier of the task, modeled as an integer number
* description: the task content, modeled as a string
* urgent: whether the task is urgent or not, modeled as a boolean

You are strongly encouraged to follow the design method presented in the lesson "REST services with Python and Flask: a case study" (https://elite.polito.it/files/courses/01QZP/2018/slide/Web-04-restapi.pdf) and inspired on the Google API Design Guide (https://cloud.google.com/apis/design/)

EXERCISE 2 – IMPLEMENT THE DESIGNED API

Implement the designed APIs in a REST server. As in the previous laboratories, the server should use a database to store the task information.

EXERCISE 3 – IMPLEMENT A SIMPLE CLIENT FOR GETTING TASKS

Develop a python script to test the implemented APIs. For this purpose, you can use the *request* module, as shown in the in-class example (https://github.com/AmI-2018/restapi).