

Homework – Python 101 (2020/21)

Deadline: Nov. 16th, 2020 at 10:59 AM.

Solution code **MUST** be submitted to Moodle as a single `surname_name_hw.zip` file.

All submissions will be checked for plagiarism. Plagiarized solutions will be awarded an F(0) grade.

Exercise – Wilma, a restaurant owner with a passion for web programming, needs your help to implement a RESTful reservation system for her restaurant, exposing the API reported on the next page. She has already coded a simple `ReservationSkeleton` based on the microservice skeleton that we have seen in class.

Particularly, Wilma provides you with:

- a `myservice/classes/reservation.py` module, which implements the basic `Reservation Class` as plain Python code;
- a `myservice/views/reservations.py` blueprint, which you **must complete** to offer all required functionalities of the *Reservation System* as a RESTful service;
- a `myservice/tests/tests.py` file, which you must run against your solution code by issuing the command `pytest` in the project folder (after running `pip install pytest`). When in doubt, use the tests as a contract interface to determine what to do.

Download the `ReservationSkeleton.zip` available from the Moodle and prototype the *Reservation System*, relying on the *Flask* micro-framework and working on the `myservice/views/reservations.py` file **only**¹.

The solution must pass all provided tests and must be uploaded to your GitHub.

Write a short report (300 words at most²) containing:

- 1 the link to the GitHub repository of the project, and
- 2 the screenshot of the successful execution of `myservice/tests/tests.py`,
- 3 the screenshots of the tests provided in `tests.py`, performed with [PostMan](#) for **all** operations.

Upload to the Moodle **both** the report and your new `reservations.py` file.

Learning Outcomes

- ✓ Revise programming concepts with Python.
- ✓ Revise command-line usage.
- ✓ Get familiar with the Flask microframework and Postman.
- ✓ Get familiar with GitHub.

¹ The API must not be changed nor adapted.

² Submitted solutions which exceed the words limit for the report will incur in grading penalties.

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URI	ReqType	Description
/reservations	POST	Creates a new reservation and gets the reservation identifier back.
	GET	Retrieves all future reservations.
/reservations/count	GET	Returns the number of future reservations currently present in the system
/reservation/<id>	GET	Retrieves the reservation identified by <id>.
	DELETE	Deletes the reservation identified by <id> from the system. [Requires psw] [must be a future reservation]
/reservation/<id>/guests	GET	Retrieves the number of guests for the reservation identified by <id>.
	PUT	Edits the guests for the reservation identified by <id>. [Requires psw] [must be a future reservation]