

Exercise: simple data transformation with pandas

Note: you can find the complete set of demos, exercises and solutions, as well as recommendations for the runtime environment [here](https://github.com/wodecki/ASI_2022).

https://github.com/wodecki/ASI_2022

In this exercise, you will create and run a simple docker container that allows you to load data from an existing csv file, multiply it by 2, and write such a transformed data frame to a new file.

Checklist.

- ☐ Python script `app1.py`:
 - ☐ Loads the pandas package in the correct version and prints this version on the screen.
 - ☐ Loads the contents of the `/input/input.csv` file into the data frame, and prints it on the screen
 - ☐ Multiplies this content x2, assigns it to a new data frame, and prints the result on the screen
 - ☐ Saves the new frame to the text file `/output/output.csv`.
- ☐ A `Dockerfile` image specifier file that copies the complete set of necessary data, but does not run the `app1.py` script (so that the container does not stop when it starts)
- ☐ A docker image named `app1`.
- ☐ README.md file with user instructions showing,
 - ☐ how to build the image
 - ☐ how to run the container so that the user can view and modify the files inside the container (the `app1.py` component and the `inputinput.csv` artifact).
 - ☐ Tip: in order to enable file editing, the editor of your choice must be installed in the container after it is launched. For example, for the `nano` editor, run:
 - ☐ `$ apt-get update`.
 - ☐ `$ apt-get install nano`.
 - ☐ how to run the `app1.py` script available inside the running container?