Homework 01

The goal of this homework is to

- Download a Sentinel-2 tile
- Extract a valid sub-region
- Select and visualize a band
- Apply morphological operators to the selected band
- Create a binary mask that highlights an object(s) of your choice (for example: river, sea, forests, etc.)
  - The pixel value "0" is used to indicate the absence of the object
  - The pixel value "1" is used to indicate the presence of the object
- Visualization of the "masked/overlayed" RGB image

For this homework, we are providing you a Jupyter notebook as a template. Complete the tasks in the jupyter notebook and submit the source `ipynb` file compressed as an `zip` archive.

Submission (Deadline 31.05.2022):

- Follow the instructions mentioned in the notebook.
- You are *not* allowed to install other libraries.
  - The submitted jupyter notebook should be able to run as-is on paperspace and/or the provided Docker image.
- Explain the steps that went into the decision making of the specific values.
- It is essential that each homework should be done individually!
- The notebook should have been executed once before submitting it
  - The notebook should *not* be *cleaned* before submitting

Each student should submit the following materials to the ISIS system:

- One `zip` file containing the jupyter notebook named as:
  - `IP4RS2022-HW1_<NAME_SURNAME>.zip`