

### Programming Part 1 Guide:

This document intends to guide students for the first part of the programming workshop for the FoE CoP. Please keep in mind that these activities will also be helpful for Scenario 2.

For this first part, you have been provided a datacamp invitation link via Brightspace. This link allows you to take any course you like in datacamp for the next 6 months. As this might be overwhelming, the lecturer will provide you some courses that you should take. However, feel free to take any course you like.

The courses in datacamp contain videos and practice exercises to help you understand Python. Besides these courses, you can find different set of exercises and some small challenges in Brightspace designed by the lecturer. These exercises and challenges are intended to be more difficult than the ones in Brightspace. Challenges expect you to mix all the tools you learned in datacamp, to improve your logic, and your algorithm thinking. Solution in the form of code will not be provided. Only the desired output will be given.

A good strategy to tackle these exercises is to share the solutions and questions with your team members (or even other groups. At the end this is not a competition). This is helpful as there are many different ways to solve the same problem.

For this part, there is not official contact time allocated with your lecturer. However, after consulting with your peers, feel free to contact your lecturer either via email at [a.murrieta.mendez@hva.nl](mailto:a.murrieta.mendez@hva.nl), Teams or just walk to him and ask your question. Questions of the sort “I do not understand anything” or “I have absolutely no clue what the while method does” are not desired. Questions should be clear and direct. It should be obvious that the student put effort before asking the questions. For example, you should include in the question an explanation of what you understand or show and explain the written code.

The first three datacamp courses to follow are listed below:

- 1.- Introduction to Python.
- 2.- Intermediate Python.
- 3.- Python Data Science Toolbox (Part 1)
- 4.- Introduction to NumPy (Chapter: Understanding Numpy Arrays)
- 5.- Data Manipulation with Pandas.

Each course takes around 4 hours. You should be able to follow all by the end of September. The extra exercises and challenges are available in Brightspace and listed below. It is recommended that you solve them in this order.

- 1.- Exercises\_1
- 2.- Exercises\_2
- 3.- Exercises\_3
- 4.- Challenge\_1. (Recommended after you learn to use If, strings, and loops)
- 5.- Challenge\_2. (Recommended after you learn to use if, strings, and loops)
- 6.- Challenge\_3. (Recommended after you learn to use user defined functions)

I hope you enjoy your Python learning journey.

Alex