

5th SPSP 2020

Group work Python & LaTeX

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1 Objective

These tutorials are designed to explain the fundamentals of Python -as a programming language and LaTeX -as a system for technical writing. Even though the time constraints would not allow us to go into the details of each part, by the end of the course, the student will be able to analyze simple data set using Python, and then report them in a report that will be written by LaTeX.

2 Tutorials

2.1 Python

Python is a programming language that can be used in different applications (e.g., numerical modelling, data analysis and web development). More info can be found <https://www.python.org/about/>

What you will learn

- Introduction, and Python main commands.
- Data plotting.
- Customize the plot.
- Solve the first-order differential equation -depending on the time.
- Discuss reflectometry project to measure the plasma profile in Tokamaks -depending on the time.

2.2 LaTeX

LaTeX is a high quality typing system; it includes features that enables high performance in the scientific and technical writing.

What you will learn

- Create a report in LaTeX.
- Add author list and affiliation.
- Create the table of content, list of figures, and the list of tables.
- Add figure, table, and equations in the report
- Add bibliography and citation.

3 Software and installation

Both software is open source and can be downloaded. However, you can bring your USB stick to take your copy. Please bring your laptop, and we will install the software together.