Introduction to Python Programming

1 – Overview & Instructions

Josef van Genabith (Stephan Thater)
Dept. of Language Science & Technology
Universität des Saarlandes

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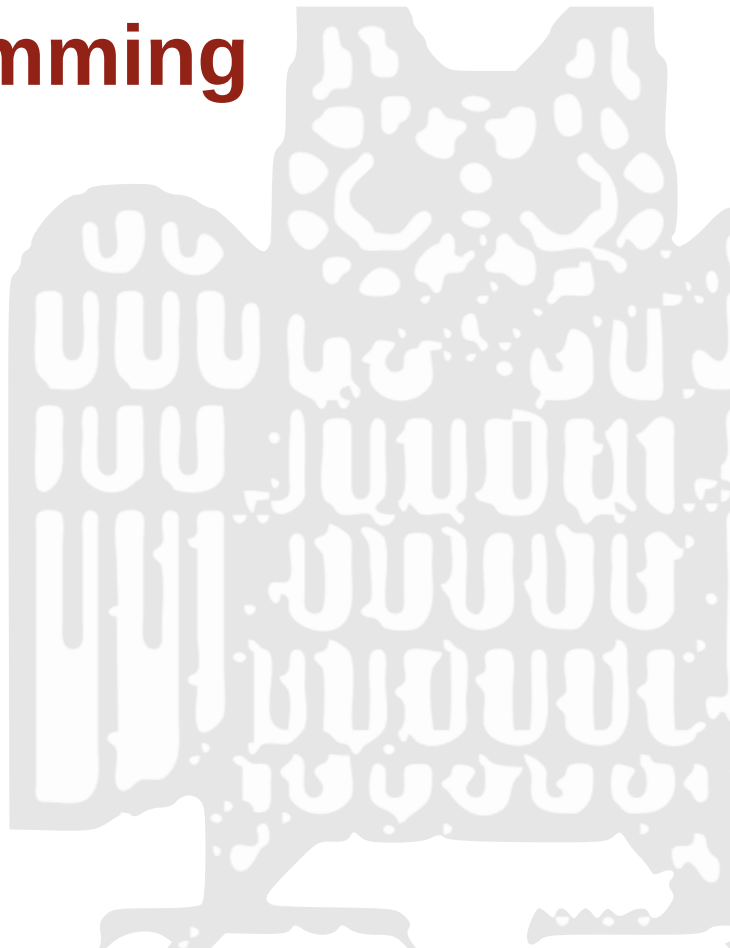


Acknowledgements:

- All slides originally from Dr. Stefan Thater (and colleagues)
- Some changes, additions etc.

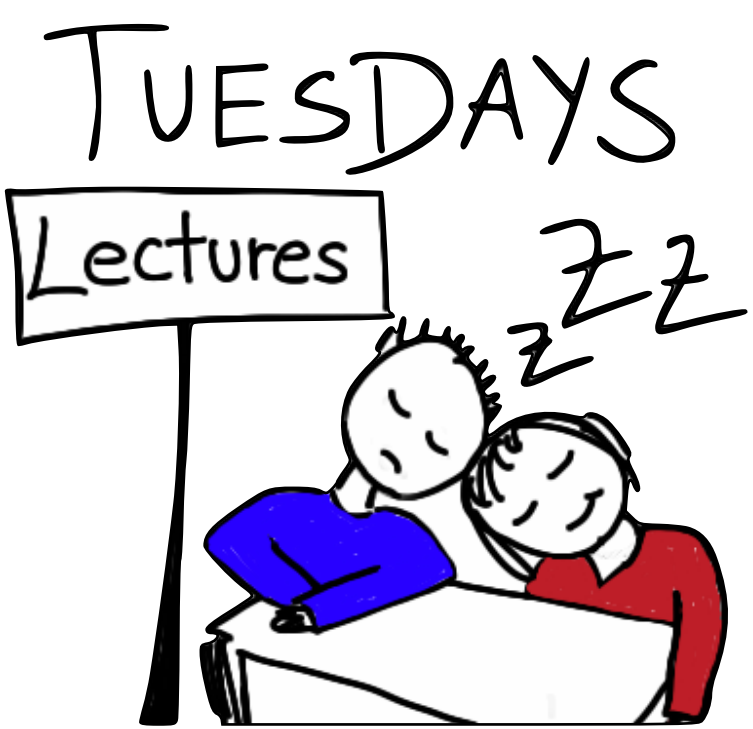
Goals

At the end of the semester, you will be able to …

- write simple, well-structured Python programs
  ⇒ procedural programming
- write well-designed, re-usable and easily maintainable code
  ⇒ object orientation
- solve simple problems in the domain of computational linguistics

You will be prepared for the Python II/NLP Algorithms class (Stefan Thater), where we will learn how to implement more advanced NLP algorithms.

How to **NOT** reach the goal



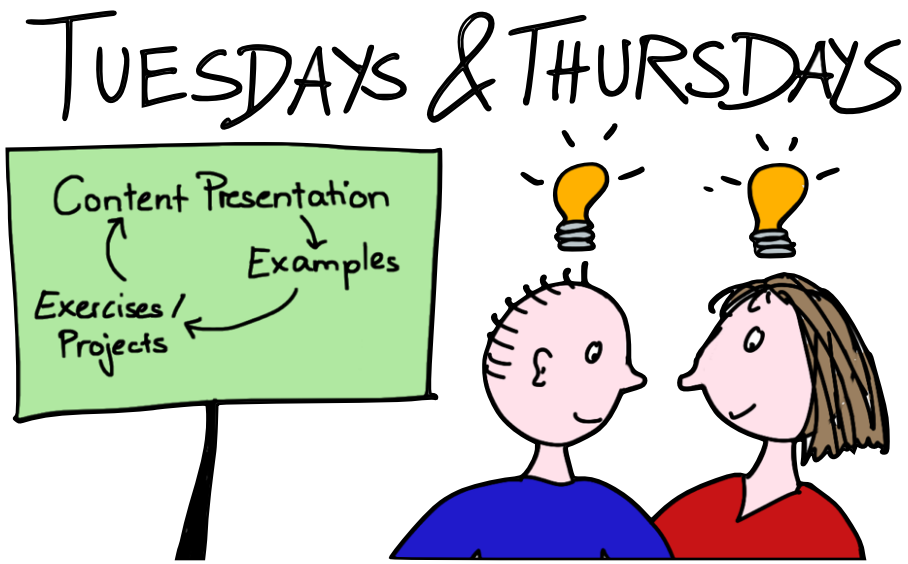
Instead …

We distribute lecture and exercise time over both sessions:

- Interactive lecture & exercise sessions
- include ungraded exercises

Graded exercise sheets are handed out after the corresponding content has been presented

- (not necessarily weekly)



Material

Please have your **laptop** (with the required installations), **pen** and **paper** ready on your desk at the start of each interactive session!

Examinations (Prüfungsleistungen)

Final exam:

- 50% of the final grade

Programming project:

- 50% of the final grade, due end of March 2022 (tbc).

To be admitted to the final **exam** and the **project**

- you have to get >50% of the points of the exercise sheets

Unter Vorbehalt / With reservation. Maybe we have to organize the examination differently. Let's see …

Exam Style

- (almost) no memorization questions
- our questions test whether
  - you **understand code**
  - you can **write code for simple tasks**.
  - you have an idea how to **approach a novel problem**
  - …

How to Prepare for the Exam

That is, how to learn programming (for your future life)

- don‘t just memorize
- program, program, program …

Learn programming together with your peers: work together!

Learning to learn: a wealth of resources on the web!

If you were not able to solve an exercise on your own, try the same exercise again the next day … until you can solve it on your own!

Learn by reading other people‘s programmes … but don‘t copy and paste, get ideas, but type yourself from scratch … once you get it running, try to vary it a bit … don‘t be scared

How to Register for the Exam: LSF

BA Language Science (elective)

BSc Computerlinguistik

- Register for „Programmierkurs I“

MSc Language Science and Technology

- Register for „Introduction to Python Programming“

Exam date and registration deadline: **Date in LSF**

Time Management

6 credit points (CP) ≈ 180 hours (average work load)

Sessions:

- 42 hours (3 hours per week)

Exercises:

- 84 hours (6 hours per week)

If you need longer (on average!), we highly recommend that you get help in the office hour!

Software project (semester break):

- 54 hours

Teaching assistants, tutors and researchers

- Leonie Harter, LST

  ⇒ Office hour: online TBA

- Ahana Ghosh, Max Plank Institute for Software Systems

- Mingh Tung Phung, Max Plank Institute for Software Systems

  ⇒ Python Clinics: online TBA

- Saad(ullah) Amine, DFKI

  ⇒ AIden chat bot

Course Website

Website:

- http://www.coli.uni-saarland.de/courses/programmierkurs

Moodle system:

- https://lms.sulb.uni-saarland.de/moodle/course/view.php?id=5473
- Course Material
- Exercises
- Submission system
- Feedback
- ...

Some Communication: LSF email

Course F2F and Streaming

Lectures face2face + streaming in ZOOM

Zoom 3 lädt Sie zu einem geplanten Zoom-Meeting ein.

Zoom-Meeting beitreten

https://zoom.us/j/9958144657?pwd=RFJzQUtUeGdaanZDcUxyMzhwSWg3Zz09

Meeting-ID: 995 814 4657

Kenncode: 252835

Kenncode: 252835

Ortseinwahl suchen: https://zoom.us/u/ab6L254epg

Preparation for our next meeting

- Install Python 3
  - www.python.org
  - PC, Mac, Linux
  - Mac users (< 10.15 aka „Catalina“) beware: native version is Python 2
  - Comes with IDLE (a simple programming environment, an IDE)
- Install PyCharm Community Edition
  - optional, more sophisticated IDE (Integrated Development Environment)
  - www.jetbrains.com/pycharm/
- Consider installing Linux on your Windows machine
  - virtual machine or dual boot

DON’T PANIC :-)

- Many concepts are very abstract and you might not understand them at first. Don’t worry – you will understand them more and more as we go along.
  - BUT: Please **ask questions** whenever something is unclear!
- Learning a programming language is like learning a natural language. Humans learn language through interaction with other humans.
  - You will learn programming **only** by interacting with your computer.
- Good news: Python is (relatively) easy to learn. Everyone can become a “native speaker” in reasonable time.

Homework :-)

- Search the web for websites/videos
- Introduction to Python, Python for beginners
- Introduction to IDLE, how to use IDLE … (in Windows, Mac, Linux)
- Introduction to PyCharm, how to use …

- Enjoy !!!