0.1 (E) Structure of the exercises

This is the exercise for the lecture Protein Prediction I for Computer Scientists. Each lesson will have different sections:

- A talk to rehearse and explain things from the lecture. This may also include background material which was not covered in the lecture, but we consider necessary and helpful.
- A discussion of the previous sheet’s programming homework
- Questions & answers
- A introduction to the new programming tasks

Infrastructure: To offer you an individual learning experience everybody is encouraged to submit the programming tasks. This semester we will use the ArTEMiS system development by the Chair for Software Engineering.

0.2 (E) Common Rules

- Python as mandatory programming language
- Strict compliance with the input/output specification and requested program or function names
- Submit homework to earn the bonus before next Thursday 10 a.m.
- Unless otherwise stated, all sequence positions are 0-based (starting with 0)
- If you earn 50% of all possible points from the exercise sheets you can earn a bonus of 0.3 subtracted from your exam grade, if you passed with at least 4.0.

0.3 (E) ArTEMiS

We will use AuTomated assEssment Management System for Interactive Learning (ArTEMiS) during our exercises. Log into the system’s website at [http://artemis.ase.in.tum.de/](http://artemis.ase.in.tum.de/) using your
TUM online credentials (use your ga99xxx TUM ID and the corresponding password). Go to the Coursespage. Click on the 'Start exercise' button for the corresponding exercise, then click on the 'Clone repository' button to checkout repository containing code template via Git. Modify code to satisfy the requirements described in the worksheet, commit your changes into the master branch and push them. Pushing your changes will trigger a test runner and you will be provided with a summary of test execution.

0.4 (E) TUMonline

Lecture Slots:
- Tuesday, 10.30-12.00, MW1801, Ernst-Schmidt lecture hall
- Thursday, 10.30-12.00, MW1801, Ernst-Schmidt lecture hall

Please try to evenly distribute on all four exercise slots:
- Thursday, 12.30-14.00, MI Lecture hall 3 (00.06.011)
- Thursday, 13.00-14.30, MW 2250 Seminar room B8
- Tuesday, 13.00-14.30, MW 2250 Seminar room B8
- Tuesday, 14.00-15.30, MI Lecture hall 3 (00.06.011)

0.5 (H) Quick Intro to Python Basics

You will have to write Python code to do the exercises. If you do not know this language, please check out the Python tutorial at [https://docs.python.org/3/tutorial/](https://docs.python.org/3/tutorial/).

0.6 (H) Quick Intro to Git

You will have to use Git version control system to do the exercises. If you do not know how to use Git, please complete the quick Git tutorial at [https://try.github.io/](https://try.github.io/).

0.7 (H) First exercise

First exercise is mainly aimed at testing your capability to successfully work with ArTEMiS and Git. Start the exercise in ArTEMiS and clone the repository, then modify method 'complementary' in the 'main.py' file such that it returns a string of complementary DNA nucleobases for a given string. For example, it should return 'T' for 'A', 'C' for 'G', 'ATGC' for 'TACG'. Commit your changes and, hopefully, you will see a score of 100% in the ArTEMiS web-interface.