PROTEIN PREDICTION 1
FOR COMPUTER SCIENTISTS

EXERCISES
**ADMINISTRATIVE MATTERS**

- All correspondence via pp1ex@rostlab.org
- All emails to other addresses will be silently ignored
- **DO NOT WRITE EMAILS TO DR. KRUSCHE, PROF. BRUEGGE OR PRESIDENT OF THE UNIVERSITY**
- Standard exercise group will be deleted soon
- Register for one of the groups “Group 1, ..., Group 4”
STRUCTURE OF THE EXERCISE

- Rehearsing and explaining lecture material
- Discussion of the previous homework
- Q&A
- Introduction of the new homework
CODING EXERCISES

- Python 3
- Strict compliance with the naming scheme and input/output specification
- Homework worksheets are published on rostlab.org each Thursday
- Submit homework before:
  - Thursday group – next Thursday 10 a.m.
  - Tuesday group – same week Thursday 10 a.m.
- Exception for the first exercise: deadline May, 1st
- Earning 50% of all possible points gives a bonus of 0.3 to the exam grade (if passed)
- We will not publish the test cases
If you are new to Python, complete the tutorial at https://docs.python.org/3/tutorial/
ARTEMIS

- AuTomated assEssment Management System for Interactive Learning
- https://artemis.ase.in.tum.de/
- Log in using your TUM online credentials
ARTEMIS

https://artemis.ase.in.tum.de

Sign in

TUM ID

ga99xxx

Password

************

Remember me

Sign in
### Protein Prediction 1 (Summer 2018)

<table>
<thead>
<tr>
<th>Exercise</th>
<th>Due date</th>
<th>Results</th>
<th>Actions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Exercise 01</td>
<td></td>
<td>You have not started this exercise yet.</td>
<td>Start exercise</td>
</tr>
</tbody>
</table>
Users have to be manually added to ArTEMiS

Everybody registered for the class before the first lecture has already been added

If you are unable to access ArTEMiS, write an email with your TUM-online identifier to pp1ex@rostlab.org

Do not expect to be added immediately
If you are new to Git, complete the tutorial at https://try.github.io/
FIRST EXERCISE (EXERCISE 01)

- Mainly aimed at testing that you have a working setup
- Start the exercise in ArTEMiS & clone the repository
- Modify method ‘complementary’ in the ‘main.py’ file s.t. 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 push*
FIRST EXERCISE (EXERCISE 01)

You have not started this exercise yet.
# Protein Prediction 1 for Computer Scientists

## First Exercise (Exercise 01)

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<tbody>
<tr>
<td>Exercise 01</td>
<td></td>
<td>No results</td>
<td><img src="https://example.com/clonerepository" alt="Clone repository" /></td>
</tr>
</tbody>
</table>

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*Note: The image shows a screenshot of the exercise's interface, including a link to clone the repository.*
FIRST EXERCISE (EXERCISE 01)

Clone your personal repository for this exercise:

https://ga99xxx@repobrugge.in.tum.de/scm/pp1cs18ex01/pp1cs18ex01-template-ga99xxx.git

Clone In SourceTree  Atlassian SourceTree is the free Git client for Windows or Mac.
FIRST EXERCISE (EXERCISE 01)

```python
cOMPLEMENTS = {
    'A': 'T',
    'T': 'A',
    'C': 'G',
    'G': 'C'
}

def complementary(strand):
    return ''.join(COMPLEMENTS[character] for character in strand.upper())
```
FIRST EXERCISE (EXERCISE 01)

- Commit and push.
FIRST EXERCISE (EXERCISE 01)

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<td>Exercise 01</td>
<td></td>
<td>✔ 5 passed, Score: 100%, Submission: 7 hours ago</td>
<td>Clone repository</td>
</tr>
</tbody>
</table>
FIRST EXERCISE (EXERCISE 01)

- Syntax error

Feedback

Error in method `tests.test_main`:

```
collection failure
```

- Check for syntax errors by running your code

```
dmitriinechaev @ python3 ~ python main.py
    File "main.py", line 9
      return ''.join(COMPLEMENTS[character]) for character in strand.upper())
                     ^
SyntaxError: invalid syntax
```