

Information Retrieval Spring 2024

Exercise Session



Exercise sessions

- Discussion of solution from last weeks exercises
- Possible recap of lecture
- Tips for next week's exercises
- Looking at old exam questions
- Place for you to ask questions

Exercises overview

- Theoretical and practical
 - Theoretical: Moodle
 - Practical: Python programming using Jupyter notebooks
- Solving exercises highly recommended
- Example solution uploaded after submission deadline
- Bonus points
 - Solve 2 out of 3 bonus exercises to get 0.25 bonus on the exam
 - Moodle based, Involving theory and programming part
 - 22.03 (Tolerant Retrieval)
 - 19.04 (Index Compression)
 - 03.05 (Vector Space Model)

Element forum

- Place to communicate with TA team, discuss lecture ...
- Use **Element** instead of E-Mail
 - Faster responses: All TAs, Prof & students

Moodle

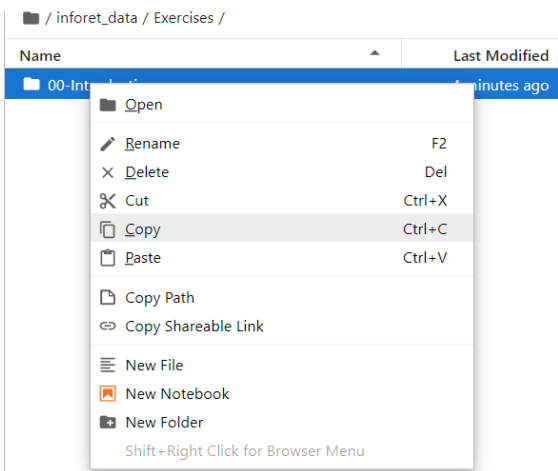
- <https://moodle-app2.let.ethz.ch/course/view.php?id=22303>
- Moodle Forum for Questions
 - Provides overview of questions
 - Allows for votes on answers
- Slides
- General Infos
- Theoretical part of exercises

Jupyter server

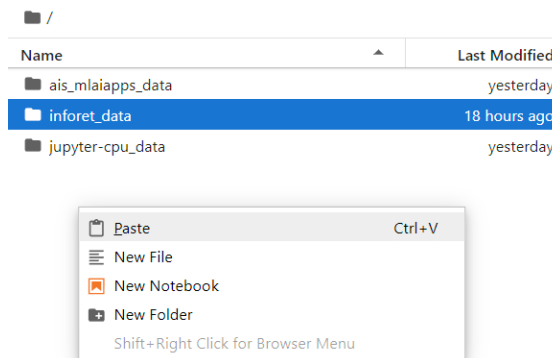
- <https://student-jupyter.inf.ethz.ch/>
- Login credentials: Your ETH credentials
- 120min sessions
 - If time runs out, just start a new session
- Jupyter uses notebooks
 - Each time you click on the exercise, notebook is started
 - Remember to shut down and save when finished

How to work on notebook

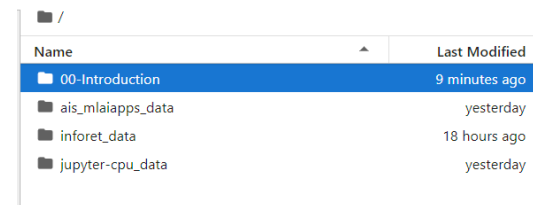
- Navigate to the /inforet_data/Exercises folder (read only)
- Copy them into your home directory, work on your version of the Notebook
- Do NOT work on the Notebook inside /inforet_data/Exercises folder since you won't be able to save your progress



1. Select exercise folder in inforet_data → right-click → copy



2. Go back to home directory → right-click → paste



3. Now you can work on your copy in the home directory

Jupyter: Tips

- Code segments all connected
 - Can refer to variable defined in earlier segments
 - Order of execution shown by numbers next to code segment

```
In [1]: 1 print("Hello, world!")
```

```
Hello, world!
```

- Save your work when taking a break
- Rerun all necessary code segments in correct order when continuing the exercises
 - E.g. when using variables declared in earlier segments

Exercise 0: Python introduction

- No theoretical questions
- Exercise divided into 3 parts
 - Introduction
 - Control flow
 - Data structures
- Choose according to your python skills
- Useful reference for further exercises

Part A: Introduction

- Numbers and operators
- Strings
- Lists
- While statement

Part B: Control Flow

- if statements
- for statements
- range function
- break, continue
- pass statements
- Functions
 - Argument values
 - Lambda expressions
 - Documentation strings and function annotations
- Coding style

Part C: Data structures

- More on lists
- Tuples and sequences
- Sets
- Dictionaries
- Looping techniques
- Conditions and comparing

Questions?