Homework 2:
Object-oriented Programming

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Symbolische Programmiersprache

Due: Thursday November 3, 2022, 12:00 (noon)

In this exercise you will:

- Practice creating simple classes and objects with Python.

- For working on this week's homework please download the file from moodle and push them into your group's GitLab repository.

Exercise 1:   Bank account class [5 points]

1. Using the slides & the script, put together a file containing the complete Account class. Each method must have a documentation string at the beginning which describes what the method is doing.

2. Create a main application where you create a number of accounts. Play around with depositing / withdrawing money. Change the account holder of an account using a setter method.

3. Change the withdraw function such that the minimum balance allowed is -1000.

4. Write a function `apply_interest(self)` which applies an interest rate of 1.5% to the current balance and call it on your objects.

5. Implement the `__str__` magic method.

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*Credit: Exercises are based on previous iterations from Katerina Kalouli.

Exercise 2:   Employee class [5 points]

1. Write the complete code for the Employee class (including constructor, `__str__`,...)

2. Create a main application, create a few employee objects and show how you can manipulate them using the methods.

3. Create a department dictionary (dictionary of string to lists or sets of employees) with at least two departments (e.g. *accounting, sales,...*) with each at least two employees. Print for each employee in the dictionary:
<*department*> <*employee name*>.