Python in practice

On-spot course

Day 1

12/09/2022

Introductions, PyCharm, variables, operators, print, input

Decision making, loops

Integrated development environment:

Web: *https://www.jetbrains.com/pycharm/*

Download: https://www.python.org/downloads/

Help: https://www.jetbrains.com/help/pycharm/quick-start-guide.html

Supporting material for the topics:

- Basics of syntax
  - https://www.tutorialspoint.com/python/python_basic_syntax.htm
  - https://perso.limsi.fr/pointal/_media/python:cours:mementopython3-english.pdf
- Variables
  - https://www.tutorialspoint.com/python/python_variable_types.htm
  - https://www.tutorialspoint.com/python/python_numbers.htm
  - https://www.tutorialspoint.com/python/python_strings.htm
  - https://www.tutorialspoint.com/python/python_lists.htm
  - https://www.tutorialspoint.com/python/python_tuples.htm
  - https://www.tutorialspoint.com/python/python_dictionary.htm
  - https://www.tutorialspoint.com/python/python_date_time.htm
- Operators
  - https://www.tutorialspoint.com/python/python_basic_operators.htm
- Cycles
  - https://www.tutorialspoint.com/python/python_loops.htm
- Decision making
  - https://www.tutorialspoint.com/python/python_decision_making.htm
- Functions
  - https://www.tutorialspoint.com/python/python_functions.htm
- Modules
  - https://www.tutorialspoint.com/python/python_modules.htm
- Other
  - http://wiki.mai.kvk.uni-obuda.hu/category/informatika-2/
  - https://www.tutorialspoint.com/python/python_files_io.htm

Short tasks – Warm-up

a) Try the IDE. Write your name on the standard output.
b) How to write a one-line comment in Python? Insert the missing part(s)!

    One-line comment

c) How to write a multi-line comment in python? Insert the missing part(s)!

    Multi-line

    comment

d) Create a variable named var and assign the value 123 to it.
e) Add any 2 float variables and display the result!

Programming tasks

1. Try the IDE. Write your name on the standard output.
2. Write a function that calculates the area of a rectangle based on the given sides a, b.
3. Write a function that gets the sides a and b of a rectangle from the user and then calculates the perimeter of the rectangle.
4. Write a function that calculates the average of the elements in a list.
5. Write a function that counts the occurrences of "6" number in a list.
6. Write a function whose input is an operator and two operands. The function performs the specified operation on the operands.