Data Analytics

Practice 2 - Python Basics

Variables | Datatypes | Datastructures

Create a new Jupyter-Notebook or Python script, where you can work on the following tasks.

Tasks:

1. Calculate the following and have the results printed out in the console:
    a. Calculate (3+4)/2
    b. Add 3^4 to 5^2 and divide the result by 2
    c. Take the square root of 16 and multiply the result with 2.1

    (Note: Try to use the special operators you have learned in the Python introduction lecture)

2. Store your future desired income in a variable income. Save in another variable control the taxes to be paid on it at a tax rate from 40%. Now calculate your *net_salary* and store it in a variable *net_salary*. Have the result displayed. (Use the variables!)

3. Create two variables firstname and lastname and assign values to each value (Strings!). Put the two strings together and print the concatenated string with the print command. Now let's see the output concatenated string in upper case only.

4. Make a list of all your majors this semester.
    a. Get the list.
    b. Use indexing to find your favorite subject from the list.
    c. Add another subject to the list (Use a method for this) and print out the new list.
    d. Delete the subject you like least from the list (Use a method for this).

5. Create an empty dictionary and store it in a variable.
    a. Add three keys to the dictionary, each with a type of fruit as a value. Have the output of the dictionary printed out afterward.
    b. Get all types of fruit using one method.

6. 10 students were asked about their favorite travel destination in Europe. Save the following result in a tuple: Italy, Spain, Greece, Croatia, Italy, Croatia, Norway, Spain, Sweden, Italy
    a. Let the tuple print out.
    b. Find out how many times "Italy" was given as an answer.
    c. Use the .append() function you know from the lists to wrap the tuple around

    Add your favorite travel destination: What error message do you get and why do you get it in this case.