

# Homework Python Language

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## General informations

Particular attention will be paid to:

- your understanding of the question and what is being asked
- your code quality and **compilation of your program**.
- work must be returned **before 29 may at midnight (no exceptions)**.
- Exception: 5 directories/files for the 5 exercices, zipped into one zip, named like this: **firstName.lastName\_py.zip**.

## Exercise 1: OOP

Create a class called **Person** with the following attributes:

- name (string)
- age (integer)
- gender (string)

The class should have a method called **introduce** that prints out a string introducing the person with their name, age, and gender.

## Exercise 2: Lists

Given a list of integers, write a function that returns the sum of all prime numbers in the list.

We recall that a prime number  $p$  is a number that is divisible only by 1 or by itself. Expect for the number 1.

### Exercise 3: Dictionnaires

Create a dictionary called `students` with the following key-value pairs:

- "Alice": 85
- "Bob": 72
- "Charlie": 90
- "David": 65

Write a function that takes in a dictionary and returns the key corresponding to the highest value in the dictionary. In this case, the function should return "Charlie".

### Exercise 4: Sets

Write a function that takes in two lists of integers and returns a set containing the common elements between the two lists.

### Exercise 5: Tuples

Create a tuple containing the first five even numbers. Write a function that takes in a tuple and returns a list containing the squares of all the even numbers in the tuple.

Good luck ♥