

Python Tutorial 4b: Add-on to object-oriented programming

US Administration

For a news portal, a software shall be developed to administrate persons of public interest. The following class already exists (see file `trump_template.py` of the course website):

```
class Person:
    def __init__(self, prename, name):
        self.prename = prename
        self.name = name

    def printData(self):
        print("dummy data")

    def getName(self):
        return (self.prename, self.name)
```

- (a) Obviously, the US President is a person of public interest. Implement a class `POTUS` (President Of The United States) which inherits from `Person` and calls in its constructor the constructor of the base class. Furthermore, an additional private object variable `number` should exist and get a corresponding parameter value in the constructor.
- (b) Extend the class `POTUS` of task (a) by a method `printData()` which outputs the values of all existing object variables.

- (c) The following class `FBIInvestigator` is given:

```
class FBIInvestigator(Person):
    def __init__(self, prename, name):
        Person.__init__(self, prename, name)
        self.targetPersons = []
```

Implement an additional method `furtherTargetPerson()` which adds a parameter `person` to the corresponding object variable!

Furthermore, implement a method `printTargetPersons()` which prints a header "Target persons are" to the command line followed by detailed information of the class `Person` via the corresponding function for all stored target persons.

- (d) Extend the class `FBIInvestigator` of task (c) by an additional static method `getEmployer()` which returns the string `'FBI'`.

- (e) Explain what the following implementation of the class `SpecialInvestigator` realises:

```
class SpecialInvestigator(FBIInvestigator):
    def __init__(self, prename, name, zielperson, kontakte):
        FBIInvestigator.__init__(self, name, prename)
        self.targetPersons = [zielperson]
        self.__vermuteteKontakte = kontakte
```

- (f) Let the following code be given:

```
obama = POTUS("Barack", "Obama", 44)
obama.printData()
trump = POTUS("Donald", "Trump", 45)
trump.printData()
```

What is the necessary Python code to generate an object of class `SpecialInvestigator` of task (e) which gets as name "Robert Muller" and which analyses the contacts of the person `trump` w.r.t. Russia? Call the method to print the target persons on this object!